Alternative NameCProblem DescriptionOStrategyA	STB-1 verbank floo dd detentior	oding along basin dow	g Cal Sag T vnstream of	ributary B Timber Ln.				
District Minimum	let							
Criteria for Funding: Recommended N	o							
						Maint.	Replacemen	t
		Unit	Ouantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Channel treatment: Excavation		yd3	8443	\$11	\$90,171	\$0	\$0	6 ft deep, side slope of 3:1, pond footprint 164 ft x 276 ft
Channel treatment: Material to be offsite	hauled	yd3	7101	\$12	\$83,437	\$0	\$0	Volume of excavation minus that used for embankment
Embankment construction, gradin restoration: Compaction of fill	ng and	yd3	1342	\$5	\$7,166	\$0	\$0	build up berm on 3 sides 604 ft long, 3:1 slope, top width of 3ft , 4 ft high
Pipe in earth (city): 36 inches or l	ess	lf	20	\$217	\$4,336	\$4,032	\$0	outlet/inlet pipe, 3ft diameter
Inlet structures (Headwall): 36 incless	ches or	each	1	\$2,600	\$2,600	\$2,418	\$0	US headwall
Outlet structures (Headwall): 36 i less	nches or	each	1	\$2,600	\$2,600	\$2,418	\$0	DS headwall
Channel treatment: Soil stabilizative cover	ion and	yd2	1703	\$14	\$23,643	\$21,988	\$5,661	Perimeter of 808 LF, width of 19 LF
Outlet structures: Concrete swale		yd2	100	\$98	\$9,825	\$9,137	\$0	weir, length of 50 LF, width of 6 LF
Land Acquisition: Purchase of Pro	operty *	dollar	237174	\$1	\$237,174	\$0	\$0	1.64 acres at \$144,618/acre for detention basin
* Indicates item excluded from sub	ototal (e.g. la	nd acquisi	tion, buyou	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditior	าร			4 % 5%	<b>\$223,779</b> \$8,951 \$11,189	\$39,994	\$5,661	
Subtotal with Percent Allowan Contingency	ces			30%	<b>\$243,919</b> \$73,176			
Profit				5%	\$15,855			
Probable Construction Cost E	stimate				\$332,949			
Design Engineering, Geotechni and Construction Management	cal,			10%	\$33,295			
Property Acquisition Cost:					\$237,174			
Total Conceptual Cost Estima	te				\$649,073			
Additional Comments								

Alternative Name	CSTB-3											
Strategy District Minimum Criteria for Funding: Recommended	2 new detention basins, increase sizes of 2 culverts, and expand one existing detention basin Met Yes											
		∐nit	Quantity	Unit Cost	Rasa Cost	Maint. Cost	Replacemen Cost	t Notos/Issuos				
Channel treatment: Excavatio	on	yd3	8443	\$11	\$90,171	\$0	\$0	Pond downstream of Timber Lane; 6 LF deep, side slope of 3:1, pond footprint 164 LF x 276 LF				
Channel treatment: Material t offsite	o be hauled	yd3	7101	\$12	\$83,437	\$0	\$0	Pond downstream of Timber Lane; volume of excavation minus that used for embankment				
Embankment construction, gr restoration: Compaction of fi	rading and ll	yd3	1342	\$5	\$7,166	\$0	\$0	Pond downstream of Timber Lane; berm on 3 sides 604 LF long, 3:1 slope, top width of 3 LF, 4 LF high				
Pipe in earth (city): 36 inches	or less	lf	30	\$217	\$6,503	\$6,048	\$0	Pond downstream of Timber Lane; outlet pipe, 2 ft diameter				
Inlet structures (Headwall): 3 less	6 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond downstream of Timber Lane; US headwall				
Outlet structures (Headwall): less	36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond downstream of Timber Lane; DS headwall				
Channel treatment: Soil stabil vegetative cover	lization and	yd2	1703	\$14	\$23,643	\$21,988	\$5,661	Pond downstream of Timber Lane; perimeter of 810 LF x 19 LF wide				
Outlet structures: Concrete sv	vale	yd2	100	\$98	\$9,825	\$9,137	\$0	Pond downstream of Timber Lane; weir for inlet from stream to pond, length of 50 LF, width of 6 LF				
Pipe in earth (city): 36 inches	or less	lf	20	\$217	\$4,336	\$4,032	\$0	Pond upstream of Timber Lane; Outlet pipe, 12 in diameter pipe				
Channel treatment: Material t offsite	to be hauled	yd3	4451	\$12	\$52,299	\$0	\$0	Pond upstream of Timber Lane; excavation minus embankment				
Embankment construction, gr restoration: Compaction of fi	ading and	yd3	2477	\$5	\$13,228	\$0	\$0	Pond upstream of Timber Lane; 530.8 length berm, 7 LF high, 2 sides, 3 LF top width, 3:1 side slope				
Inlet structures (Headwall): 3 less	6 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond upstream of Timber Lane: Inlet Structure				
Outlet structures (Headwall): less	36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond upstream of Timber Lane; Outlet Structure				
Channel treatment: Soil stabil vegetative cover	lization and	yd2	2268	\$14	\$31,482	\$29,278	\$7,539	Perimeter of 1100 LF x 19 LF wide area vegetated				

#### Alternative Name

CSTB-3

Yes

#### Problem Description Strategy District Minimum Criteria for Funding: Recommended

2 new detention basins, increase sizes of 2 culverts, and expand one existing detention basin Met

Maint. Replacement Cost Cost Unit Quantity Unit Cost **Base Cost** Notes/Issues lf \$44,154 \$0 Replace 119th Street Pipe under pavement (county): 72 to 84 78 \$609 \$47,479 inches / box culvert (28 to 38 ft2) culvert with 5 ft x 6 ft box culvert \$0 Replace 119th Street Outlet structures (Headwall): 42 to 66 each 1 \$4,758 \$4,758 \$4,424 inches culvert with 5 ft x 6 ft box culvert Replace 119th Street 1 Inlet structures (Headwall): 42 to 66 inches each \$4,758 \$4,758 \$4,424 \$0 culvert with 5 ft x 6 ft box culvert Land Acquisition: Purchase of Property \* dollar 41108 \$1 \$41,108 \$0 \$0 0.64 acres required for detention, \$61,458/acre dollar 322310 \$1 \$0 Buyout of residence for Buyout: Property \* \$322,310 \$0 detention Buyout: Property \* dollar 235782 \$1 \$235,782 \$0 \$0 Buyout of residence for detention Buyout: Property \* dollar \$1 \$0 \$0 Buyout of residence for 235782 \$235,782 detention Land Acquisition: Purchase of Property \* \$1 1.64 acres required for dollar 237174 \$237,174 \$0 \$0 detention, \$144,618/acre Pipe under pavement (city): 42 to 66 lf 35 \$292 \$10,204 \$9,489 \$0 Replace Timber Lane inches / box culvert (15 to 27 ft2) culvert with 3.5-ft diameter culvert \$11 Channel treatment: Excavation \$2,606 \$0 \$0 For existing detention yd3 244 basin expansion Channel treatment: Material to be hauled \$12 yd3 244 \$2,867 \$0 \$0 For existing detention offsite basin expansion \$1,499 Channel treatment: Vegetative cover only \$9 \$5,822 yd2 733 \$6,260 For existing detention basin expansion Outlet structures (Headwall): 42 to 66 each 2 \$4,758 \$9,515 \$8,849 \$0 For existing detention inches basin expansion Channel treatment: Excavation yd3 7873 \$11 \$84,084 \$0 \$0 Pond upstream of Timber Lane; 4.88 ac-ft of storage \$98 Outlet structures: Concrete swale yd2 100 \$9,825 \$9,137 \$0 Pond upstream of Timber Lane; weir for inlet from stream to pond, length of 50 LF, width of 6 LF Pipe in earth (city): 36 inches or less lf 20 \$217 \$0 Pond upstream of Timber \$4,336 \$4,032 Lane; inlet pipe, 1 ft x 2 ft box culvert Outlet structures (Headwall): 42 to 66 1 \$4,758 \$4,424 \$0 Replace Timber Lane each \$4,758 inches culvert with 3.5-ft diameter culvert Inlet structures (Headwall): 42 to 66 inches each 1 \$4,758 \$4,758 \$4,424 \$0 Replace Timber Lane culvert with 3.5-ft

diameter culvert

Alternative Name

CSTB-3

i fitter nutive i vunite	COTE 5
<b>Problem Description</b>	
Strategy	2 new detention basins, increase sizes of 2 culverts, and expand one existing detention basin
District Minimum	Met
Criteria for Funding:	Wet
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g. la	nd acquis	ition, buyout	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$528,696</b> \$21,148 \$26,435	\$179,337	\$14,699	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$576,279</b> \$172,884 \$37,458			
Probable Construction Cost Estimate Design Engineering, Geotechnical, and Construction Management Property Acquisition Cost:			10%	<b>\$786,621</b> \$78,662 \$1,072,156			
Total Conceptual Cost Estimate				\$2,131,475			
Additional Comments							

Alternative Name Problem Description Strategy District Minimum Criteria for Funding: Recommended	CSTC-1 Throughout t Provide 37 ac Met No	he system o c-ft of deter	downstream ntion upstrea	am of Central A	ve. Lower and	l widen chann	el into an onlin	e pond
						Maint.	Replacement	t
Channel treatment: Excavatio	n	Unit yd3	Quantity 55000	Unit Cost \$11	Base Cost \$587,400	Cost \$0	Cost \$0	<b>Notes/Issues</b> Excavation of pond with exception of existing channel, 7.5 acres, 5 ft
Channel treatment: Material to	o be hauled	yd3	55000	\$12	\$646,250	\$0	\$0	deep Haul away excess material
Channel treatment: Biostabiliz	zation	yd2	850	\$64	\$54,460	\$50,647	\$13,040	low flow channel restoration, 750 ft long, 10 ft wide
Channel treatment: Soil stabil vegetative cover	ization and	yd2	33500	\$14	\$464,980	\$432,424	\$111,341	finished grading, topsoil and seeding, 7 acres
Pipe under pavement (city): 7 inches / box culvert (28 to 38	2 to 84 ft2)	lf	100	\$425	\$42,502	\$39,526	\$0	New outlet for Central Ave sewer
Outlet structures (Headwall): inches	42 to 66	each	2	\$4,758	\$9,515	\$8,849	\$0	New outlet for Central Ave sewer
Land Acquisition: Permanent	Easement *	dollar	745609	\$1	\$745,609	\$0	\$0	Permanent Easement for pond area, 7.5 acres at \$198,829/acre
* Indicates item excluded from	subtotal (e.g. la	and acquisi	tion, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Cond	itions			4 % 5%	<b>\$1,805,107</b> \$72,204 \$90,255	\$531,446	\$124,381	
Subtotal with Percent Allow Contingency	vances			30%	<b>\$1,967,566</b> \$590,270			
Profit				5%	\$127,892			
Probable Construction Cos	st Estimate				\$2,685,728			
Design Engineering, Geotec and Construction Manageme	hnical, ent			10%	\$268,573			
Property Acquisition Cost:					\$745,609			
Total Conceptual Cost Esti	mate				\$4,355,736			
Additional Comments								

Alternative Name	IMCA-1							
Strategy	IMTT and K.	A Steel out	tlets					
District Minimum	Met							
Criteria for Funding:	Ves							
Recommended								
		TT •4	0			Maint. Cost	Replacement Cost	t N. i. (T
D:	00 += 0(	Unit	Quantity	Unit Cost	Base Cost	¢02.212	cost	Notes/Issues
inches / hox culvert (30 to 50 t	: 90 to 96 #2)	II	150	\$661	\$99,155	\$92,212	20	IM11; 3 - 50 LF 5 π x 10 ft box culverts
Outlet structures: Concrete sw	ale	vd2	444	\$98	\$43 666	\$40,609	\$0	IMTT headwall
outer structures. concrete sw	uic	9 42		ψ20	\$15,000	\$10,009	φ0	structures - 2 @ 50 ft
								wide by 20 ft deep x 6 ft
								tall
Channel treatment: Excavation	1	yd3	8889	\$11	\$94,933	\$0	\$0	KA Steel - excavate an 8
								ft deep, 30 ft wide, 1000 ft
Channel treatment: Material to	ha haulad	vd3	8880	\$12	\$104 444	\$0	\$0	long channel
offsite	o de nauleu	yus	0009	\$12	\$104,444	\$0	\$0	excavated material must
onone								be hauled offsite
Pipe under pavement (county)	: 90 to 96	lf	100	\$661	\$66,103	\$61,475	\$0	KA Steel; 2 - 50 LF 5 ft x
inches / box culvert (39 to 50 t	ft2)							10 ft box culverts
Outlet structures: Concrete sw	ale	yd2	296	\$98	\$29,111	\$27,073	\$0	KA Steel headwall
								structures - 2 @ 33 ft
								wide by 20 ft deep x 6 ft
Channel treatment: Vegetative	cover only	vd2	4444	\$9	\$37,956	\$35,298	\$9,089	vegetated cover for
6	2	5						surface of channel - 40 ft
								wide by 1,000 ft long
* Indicates item excluded from	subtotal (e.g. l	and acquis	ition, buyout	s)				
Subtotal (direct costs)					\$475,369	\$256,667	\$9,089	
Utility Relocation	e.			4%	\$19,015 \$23,768			
Mobilization \ General Condi	tions			5%	\$25,700			
Subtotal with Percent Allow	ances			200/	<b>\$518,152</b>			
Contingency				30%	\$155,446			
Profit				5%	\$33,680			
Probable Construction Cos	t Estimate				\$707,277			
Design Engineering, Geotech	hnical,			10%	\$70,728			
and Construction Manageme	ent				\$0			
Property Acquisition Cost:					20			
Total Conceptual Cost Estin	mate				\$1,043,761			
Additional Comments								

Alternative Name Problem Description Strategy District Minimum	LDDT-1 Flooding between Increase detention	Lucas poten	Diversion	Ditch and Robe Ed and some Pa	ets Road ark District land	l to the West	of Lucas Diver	sion Ditch
Criteria for Funding: Recommended	No							
						Maint.	Replacement	
	Uı	nit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Channel treatment: Excavation		yd3	27426	\$11	\$292,910	\$0	\$0	Pond LDD1_915- excavation of 17 acre ft of additional detention
Channel treatment: Material to offsite	be hauled	yd3	27426	\$12	\$322,256	\$0	\$0	Pond LDDT_915- material to be hauled off site
Channel treatment: Vegetative of	cover only	yd2	17230	\$9	\$147,144	\$136,842	\$35,234	Vegetation of LDDT_915
Land Acquisition: Permanent E	asement * d	lollar	450340	\$1	\$450,340	\$0	\$0	Permanent easement on 3.56 acres of land valued at \$253,000/acre
Outlet structures (Headwall): 36 less	6 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond LDDT_915
Inlet structures (Headwall): 36 i less	inches or a	each	1	\$2,600	\$2,600	\$2,418	\$0	Inlet Structure for pond LDDT_915
* Indicates item excluded from s	ubtotal (e.g. land a	cquisi	tion, buyout	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Condition	ons			4 % 5%	<b>\$767,510</b> \$30,700 \$38,376	\$141,678	\$35,234	
Subtotal with Percent Allowa	ances			30%	<b>\$836,586</b> \$250,976			
Profit				5%	\$54,378			
Probable Construction Cost	Estimate				\$1,141,940			
Design Engineering, Geotechi and Construction Managemer	nical, nt			10%	\$114,194			
Property Acquisition Cost:					\$450,340			
Total Conceptual Cost Estim	nate				\$1,883,386			

**Additional Comments** 

Alternative Name Problem Description	LDDT-2 Overbank flo	oding betw	een Lucas I	Diversion Ditch :	and Roberts Ro	oad		
Strategy District Minimum Criteria for Funding: Recommonded	Detention Fa Met No	cilities to sl	nave flow p	eak from Lucas	Diversion Ditc	h		
Kecommenueu								
		TT •4	0			Maint. Cost	Replacemen Cost	t
Channel treatment: Execution	n	Unit	Quantity	Unit Cost	Sase Cost	cost	cost ¢0	Notes/Issues
Channel treatment. Excavatio	11	yus	27420	511	\$292,910	20	20	excavation of 17 acre ft of additional detention
Channel treatment: Material to offsite	o be hauled	yd3	27426	\$12	\$322,256	\$0	\$0	Pond LDDT_915- material to be hauled off
Channel treatment: Vegetative	e cover only	vd2	17230	\$9	\$147,144	\$136,842	\$35,234	Vegetation of LDDT 915
Land Acquisition: Permanent	Easement *	dollar	450340	\$1	\$450,340	\$0	\$0	Permanent easement on
								3.56 acres of land valued at \$253,000 / acre
Outlet structures (Headwall):	36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond LDDT_915
Channel treatment: Excavation	n	yd3	16133	\$11	\$172,300	\$0	\$0	Pond LDDT_917- 10 acre ft
Channel treatment: Material to offsite	o be hauled	yd3	16133	\$12	\$189,563	\$0	\$0	Pond LDDT_917, 10 acre ft hauled away
Channel treatment: Vegetative	e cover only	yd2	11301	\$9	\$96,511	\$89,753	\$23,110	Pond LDDT_917: topsoil
Inlet structures (Headwall): 30	6 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	& seeding Pond LDDT_917
Outlet structures (Headwall): less	36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond LDDT_917
Pipe in earth (city): 36 inches	or less	lf	90	\$217	\$19,510	\$18,144	\$0	Pond LDDT_917
Outlet structures: Concrete sw	vale	yd2	10	\$98	\$983	\$914	\$0	Pond LDDT_917: overflow weir
Land Acquisition: Permanent	Easement *	dollar	207000	\$1	\$207,000	\$0	\$0	Land acquisition of 2.3 acres valued at \$180,000/acre
Channel treatment: Excavatio	n	yd3	58080	\$11	\$620,294	\$0	\$0	Pond LDDT_71- Excavation of 36 acre ft
								detention location
Channel treatment: Material to	o be hauled	yd3	58080	\$12	\$682,440	\$0	\$0	Pond LDDT_71, 36 acre
Channel treatment: Vegetative	e cover only	yd2	30008	\$9	\$256,268	\$238,326	\$61,364	Pond LDDT_71: topsoil & seeding of 6.2 acres
Inlet structures (Headwall): 30 less	6 inches or	each	2	\$2,600	\$5,201	\$4,837	\$0	Pond LDDT_71: pipes from pond, enough for
Outlet structures (Headwall): less	36 inches or	each	2	\$2,600	\$5,201	\$4,837	\$0	two openings Pond LDDT_71: discharge pipes, enough
Pipe in earth (city): 36 inches	or less	lf	180	\$217	\$39,020	\$36,288	\$0	for two openings Pond LDDT_71: twin 90ft
Land Acquisition: Permanent	Easement *	dollar	334800	\$1	\$334,800	\$0	\$0	Acquisition of 6.2 acres valued at \$108,000 per

acre

Alternative Name	LDDT-2
Problem Description	Overbank flooding between Lucas Diversion Ditch and Roberts Road
Strategy	Detention Facilities to shave flow peak from Lucas Diversion Ditch
District Minimum	Met
Criteria for Funding:	
Recommended	No

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g. l	and acquis	sition, buyou	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$2,857,401</b> \$114,296 \$142,870	\$537,195	\$119,708	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$3,114,567</b> \$934,370 \$202,447			
Probable Construction Cost Estimate				\$4,251,385			
Design Engineering, Geotechnical, and Construction Management			10%	\$425,138			
Property Acquisition Cost:				\$992,140			
Total Conceptual Cost Estimate				\$6,325,566			
Additional Comments							

Alternative Name	LDDT-3							
Problem Description Strategy	Overbank flo Detention Fa	oding betw cilities to sl	een Lucas I nave flow p	Diversion Ditch a lack from Lucas	and Roberts Ro Diversion Ditc	oad h and convey	ance improven	nent
District Minimum	Met							
Criteria for Funding: Recommended	Yes							
						Maint.	Replacemen	t
Outlet structures (Headwall):	36 inches or	each	Quantity 1	Unit Cost \$2,600	Base Cost \$2,600	\$2,418	\$0	Notes/Issues Pond LDDT_915
Channel treatment: Excavatio	n	yd3	27426	\$11	\$292,910	\$0	\$0	Pond LDDT_915- excavation of 17 acre ft
Channel treatment: Material t offsite	o be hauled	yd3	27426	\$12	\$322,256	\$0	\$0	Pond LDDT_915- material to be hauled off site
Channel treatment: Vegetativ	e cover only	yd2	17230	\$9	\$147,144	\$136,842	\$35,234	Vegetation of LDDT_915
Land Acquisition: Permanent	Easement *	dollar	450340	\$1	\$450,340	\$0	\$0	Permanent easement on 3.56 acres of land valued at \$253,000 / acre
Channel treatment: Excavatio	'n	yd3	16133	\$11	\$172,300	\$0	\$0	Pond LDDT_917- 10 acre ft
Channel treatment: Material t offsite	o be hauled	yd3	16133	\$12	\$189,563	\$0	\$0	Pond LDDT_917, 10 acre ft hauled away
Channel treatment: Vegetativ	e cover only	yd2	11301	\$9	\$96,511	\$89,753	\$23,110	Pond LDDT_917: topsoil & seeding
Inlet structures (Headwall): 3 less	6 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond LDDT_917
Outlet structures (Headwall): less	36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond LDDT_917
Pipe in earth (city): 36 inches	or less	lf	90	\$217	\$19,510	\$18,144	\$0	Pond LDDT_917
Outlet structures: Concrete sv	vale	yd2	10	\$98	\$983	\$914	\$0	Pond LDDT_917: overflow weir
Land Acquisition: Permanent	Easement *	dollar	207000	\$1	\$207,000	\$0	\$0	Land acquisition of 2.3 acres valued at \$180 000/acre
Channel treatment: Excavatio	n	yd3	58080	\$11	\$620,294	\$0	\$0	Pond LDDT_71- Excavation of 36 acre ft detention location
Channel treatment: Material t offsite	o be hauled	yd3	58080	\$12	\$682,440	\$0	\$0	Pond LDDT_71, 36 acre ft hauled away
Channel treatment: Vegetativ	e cover only	yd2	30008	\$9	\$256,268	\$238,326	\$61,364	Pond LDDT_71: topsoil & seeding of 6.2 acres
Inlet structures (Headwall): 3- less	6 inches or	each	2	\$2,600	\$5,201	\$4,837	\$0	Pond LDDT_71: pipes from pond, enough for two openings
Outlet structures (Headwall): less	36 inches or	each	2	\$2,600	\$5,201	\$4,837	\$0	Pond LDDT_71: discharge pipes, enough for two openings
Pipe in earth (city): 36 inches	or less	lf	180	\$217	\$39,020	\$36,288	\$0	Pond LDDT_71: twin 90ft long pipes
Land Acquisition: Permanent	Easement *	dollar	334800	\$1	\$334,800	\$0	\$0	Acquisition of 6.2 acres valued at \$108,000 per

acre

Alternative Name	LDDT-3							
Problem Description Strategy	Overbank flo Detention Fac	oding betw cilities to sl	veen Lucas I have flow p	Diversion Ditch eak from Lucas	and Roberts Roberts Roberts Roberts Roberts	oad h and convey	ance improven	nent
District Minimum Criteria for Funding:	Met							
Recommended	Yes							
		Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacemen Cost	t Notes/Issues
maintenance: Large Channe	l Maintenance	lf	1400	\$100	\$140,000	\$130,198	\$33,523	2800 ft of "medium channel maintenance"- thus reduced the quantity by half
Channel treatment: Material offsite	to be hauled	yd3	2074	\$12	\$24,370	\$0	\$0	Assume removal of debris and sediment for 2800 ft x 1 ft in depth x 20 ft width
Inlet structures (Headwall): less	36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Inlet Structure for LDDT_915
* Indicates item excluded from	m subtotal (e.g. la	and acquisi	tion, buyout	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Con	ditions			4 % 5%	<b>\$3,024,371</b> \$120,975 \$151,219	\$669,811	\$153,231	
Subtotal with Percent Allo Contingency	owances			30%	<b>\$3,296,565</b> \$988,969			
Profit				5%	\$214,277			
Probable Construction Co	ost Estimate				\$4,499,811			
Design Engineering, Geote and Construction Manager	echnical, ment			10%	\$449,981			
Property Acquisition Cost:					\$992,140			

\$6,764,974

**Total Conceptual Cost Estimate** 

**Additional Comments** 

Alternative Name	LDDT-4
Problem Description	throughout LDDT & LUDT
Strategy	Detention facilities gather overflow from LDDT to shave off peak flows and reduce flooding in both creeks.
District Minimum	Met
Criteria for Funding:	
Recommended	No

Channel treatment: Material to be hauled offsite Channel treatment: Vegetative cover only Inlet structures (Headwall): 36 inches or less Outlet structures (Headwall): 36 inches or less Pipe in earth (city): 36 inches or less Land Acquisition: Permanent Easement *	Unit yd3 yd2 each each If	<b>Quantity</b> 58080 30008 2 2	Unit Cost \$12 \$9 \$2,600 \$2,600	Base Cost \$682,440 \$256,268 \$5,201	Cost \$0 \$238,326 \$4,837	Cost \$0 \$61,364 \$0	Notes/Issues Pond LDDT_71, 36 acre ft hauled away Pond LDDT_71: topsoil & seeding of 6.2 acres Pond LDDT_71: pipes
Channel treatment: Material to be hauled offsite Channel treatment: Vegetative cover only Inlet structures (Headwall): 36 inches or less Outlet structures (Headwall): 36 inches or less Pipe in earth (city): 36 inches or less Land Acquisition: Permanent Easement *	yd3 yd2 each each lf	58080 30008 2 2	\$12 \$9 \$2,600 \$2,600	\$682,440 \$256,268 \$5,201	\$0 \$238,326 \$4,837	\$0 \$61,364 \$0	Pond LDDT_71, 36 acre ft hauled away Pond LDDT_71: topsoil & seeding of 6.2 acres Pond LDDT_71: pipes
offsite Channel treatment: Vegetative cover only Inlet structures (Headwall): 36 inches or less Outlet structures (Headwall): 36 inches or less Pipe in earth (city): 36 inches or less Land Acquisition: Permanent Easement *	yd2 each each lf	30008 2 2	\$9 \$2,600 \$2,600	\$256,268 \$5,201	\$238,326 \$4,837	\$61,364 \$0	ft hauled away Pond LDDT_71: topsoil & seeding of 6.2 acres Pond LDDT 71: pipes
Channel treatment: Vegetative cover only Inlet structures (Headwall): 36 inches or less Outlet structures (Headwall): 36 inches or less Pipe in earth (city): 36 inches or less Land Acquisition: Permanent Easement *	yd2 each each lf	30008 2 2	\$9 \$2,600 \$2,600	\$256,268 \$5,201	\$238,326 \$4,837	\$61,364 \$0	Pond LDDT_71: topsoil & seeding of 6.2 acres Pond LDDT 71: pipes
Inlet structures (Headwall): 36 inches or less Outlet structures (Headwall): 36 inches or less Pipe in earth (city): 36 inches or less Land Acquisition: Permanent Easement *	each each lf	2 2	\$2,600 \$2,600	\$5,201	\$4,837	\$0	& seeding of 6.2 acres Pond LDDT 71: pipes
Inlet structures (Headwall): 36 inches or less Outlet structures (Headwall): 36 inches or less Pipe in earth (city): 36 inches or less Land Acquisition: Permanent Easement *	each each lf	2	\$2,600 \$2,600	\$5,201	\$4,837	\$0	Pond LDDT 71: pipes
Outlet structures (Headwall): 36 inches or less Pipe in earth (city): 36 inches or less Land Acquisition: Permanent Easement *	each lf	2	\$2,600				
Outlet structures (Headwall): 36 inches or less Pipe in earth (city): 36 inches or less Land Acquisition: Permanent Easement *	each lf	2	\$2,600				from pond, enough for
Pipe in earth (city): 36 inches or less Land Acquisition: Permanent Easement *	lf	2	\$2,000	\$5 201	\$1 827	\$0	two openings
Pipe in earth (city): 36 inches or less Land Acquisition: Permanent Easement *	lf			\$5,201	\$4,037	\$0	discharge nines_enough
Pipe in earth (city): 36 inches or less Land Acquisition: Permanent Easement *	lf						for two openings
Land Acquisition: Permanent Easement *		180	\$217	\$39,020	\$36.288	\$0	Pond LDDT 71: twin 90ft
Land Acquisition: Permanent Easement *			•	+ <u>)</u> -	*,	• •	long pipes
	dollar	334800	\$1	\$334,800	\$0	\$0	acquisition of 6.2 acres at
							108,000 per acre
Channel treatment: Excavation	yd3	41400	\$11	\$442,152	\$0	\$0	Pond LDDT_916
							Excavation of material
Channel treatment: Material to be hauled	yd3	40660	\$12	\$477,755	\$0	\$0	Pond LDDT_916: Haul
offsite							away equals excavation
Embankment construction grading and	vd2	740	¢14	\$10.271	\$0	\$0	minus berm material
restoration: Additional fill	yus	/40	\$14	\$10,271	\$0	\$0	placement: 1 200 ft long
							ton width 5 ft 4.1 side
							slopes. 1.5 vertical feet
							above existing bank
							elevation.
Embankment construction, grading and	yd3	740	\$5	\$3,952	\$0	\$0	Pond LDDT_916 berm
restoration: Compaction of fill							compaction
Channel treatment: Vegetative cover only	yd2	30108	\$9	\$257,122	\$239,120	\$61,569	Pond LDDT_916: topsoil
			<b>†•</b> < • • •	<b>**</b> < • • •	<b>** * * *</b>	<b>\$</b> 0	& seeding
Inlet structures (Headwall): 36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond LDDT_916
less Outlet structures (Headwall): 26 inches or	aaah	1	\$2 600	\$2 600	\$2 119	\$0	LDDT 016
less	each	1	\$2,000	\$2,000	\$2,410	\$0	LDD1_910
Pipe in earth (city): 36 inches or less	lf	95	\$217	\$20.594	\$19,152	\$0	Piping into LDDT 916
Outlet structures: Concrete swale	vd2	10	\$98	\$983	\$914	\$0	Pond LDDT 916
Suffer structures. Concrete swite	yu2	10	ψνο	ψ905	Ψ	φυ	overflow weir
Land Acquisition: Permanent Easement *	dollar	690000	\$1	\$690,000	\$0	\$0	Pond LDDT 916, 9.2
				,			acres for parcel including
							potential pond, valued at
							\$150,000 per acre
Outlet structures (Headwall): 36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond LDDT_915 Outlet
less	10	0.7 10 1	<b>*</b> • •	<b>#2</b> 0 <b>2 2</b> 10	**	<b>*</b> *	Structure
Channel treatment: Excavation	yd3	2/426	\$11	\$292,910	\$0	\$0	Pond LDDT_915-
							excavation of 17 acre ff
less Channel treatment: Excavation	yd3	27426	\$11	\$292,910	\$0	\$0	Structure Pond LDDT_915- excavation of 17 acre ft

Alternative Name	LDDT-4
<b>Problem Description</b>	throughout LDDT & LUDT
Strategy	Detention facilities gather overflow from LDDT to shave off peak flows and reduce flooding in both creeks.
District Minimum	Met
Criteria for Funding:	
Recommended	No

					Maint.	Replacemen	t
	Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Channel treatment: Material to be hauled	yd3	27426	\$12	\$322,256	\$0	\$0	Pond LDDT_915-
offsite							material to be hauled off
							site
Land Acquisition: Permanent Easement *	dollar	450340	\$1	\$450,340	\$0	\$0	Permanent easement on
							3.56 acres of land valued
							at \$253,000 / acre
Inlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond LDDT_915
Channel treatment: Vegetative cover only	yd2	17230	\$9	\$147,144	\$136,842	\$35,234	Vegetation of LDDT_915
Inlet structures (Headwall): 36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Pond LDDT_917
less	aaah	1	\$2 600	\$2 600	\$2 /10	¢0.	Dand LDDT 017
less	each	1	\$2,000	\$2,000	\$2,418	20	Polid LDD1_917
Pipe in earth (city): 36 inches or less	lf	90	\$217	\$19,510	\$18,144	\$0	Pond LDDT_917
Outlet structures: Concrete swale	yd2	10	\$98	\$983	\$914	\$0	Pond LDDT_917: overflow weir
Land Acquisition: Permanent Easement *	dollar	207000	\$1	\$207,000	\$0	\$0	Land acquisition of 2.3 acres valued at \$180,000 /
							acre
Channel treatment: Excavation	yd3	58080	\$11	\$620,294	\$0	\$0	Pond LDDT_917, 10 acre-ft
Channel treatment: Material to be hauled offsite	yd3	58080	\$12	\$682,440	\$0	\$0	Pond LDDT_917, 10 acre-ft hauled away
Pump Station: 10ac-ft per day interior	each	1	\$800,000	\$800,000	\$743,988	\$0	Proposed pump station
drainage							to evacuate LDDT_916
Pump Station: 10ac-ft per day interior drainage * Indicates item excluded from subtotal (e.g. la	each	I tion. buvout	\$800,000	\$800,000	\$/43,988	\$0	to evacuate LDDT_916

(e.g. and acquisition, cujous)				
Subtotal (direct costs)		\$5,102,097	\$1,457,870	\$158,167
Utility Relocation	4 %	\$204,084		
Mobilization \ General Conditions	5%	\$255,105		
Subtotal with Percent Allowances		\$5,561,286		
Contingency	30%	\$1,668,386		
Profit	5%	\$361,484		
Probable Construction Cost Estimate		\$7,591,156		
Design Engineering, Geotechnical, and Construction Management	10%	\$759,116		
Dranarty Acquisition Cost		\$1.682.140		
Property Acquisition Cost.		• , , -		
Total Conceptual Cost Estimate		\$11,648,448		
Additional Comments				

Alternative Name	LDDT-5							
Problem Description	Overbank floo	oding betw	een Lucas I	Diversion Ditch	and Roberts R	oad		
Strategy District Minimum	Detention Fac	ilities redu	ice peak flo	ws in Lucas Di	version Dtich a	nd channel clo	earing downsti	eam.
Criteria for Funding:	Met							
Recommended	No							
						Maint.	Replacemen	ıt
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Land Acquisition: Permanent	Easement *	dollar	207000	\$1	\$207,000	\$0	\$0	Land acquisition of 2.3 acres valued at \$180 000/acre
Channel treatment: Excavation	n	yd3	58080	\$11	\$620,294	\$0	\$0	Pond LDDT_71- Excavation of 36 acre ft detention location
Channel treatment: Material to offsite	be hauled	yd3	58080	\$12	\$682,440	\$0	\$0	Pond LDDT_71, 36 acre ft hauled away
Channel treatment: Vegetative	e cover only	yd2	30008	\$9	\$256,268	\$238,326	\$61,364	Pond LDDT_71: topsoil & seeding of 6.2 acres
Inlet structures (Headwall): 36 less	5 inches or	each	2	\$2,600	\$5,201	\$4,837	\$0	Pond LDDT_71: pipes from pond, enough for two openings
Outlet structures (Headwall): less	36 inches or	each	2	\$2,600	\$5,201	\$4,837	\$0	Pond LDDT_71: discharge pipes, enough for two openings
Pipe in earth (city): 36 inches	or less	lf	180	\$217	\$39,020	\$36,288	\$0	Pond LDDT_71: twin 90ft long pipes
Land Acquisition: Permanent	Easement *	dollar	334800	\$1	\$334,800	\$0	\$0	Acquisition of 6.2 acres valued at \$108,000 per acre
maintenance: Large Channel I	Maintenance	lf	1400	\$100	\$140,000	\$130,198	\$33,523	2800 ft of "medium channel maintenance"- thus reduced the quantity by half
Channel treatment: Material to offsite	be hauled	yd3	2074	\$12	\$24,370	\$0	\$0	Assume removal of debris and sediment for 2800 ft x 1 ft in depth x 20 ft width
Inlet structures (Headwall): 36 less	5 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Inlet Structure for LDDT_915
* Indicates item excluded from	subtotal (e.g. la	nd acquisi	tion, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Condi	tions			4 % 5%	<b>\$1,775,394</b> \$71,016 \$88,770	\$416,903	\$94 <b>,</b> 887	
Subtotal with Percent Allow Contingency	vances			30%	<b>\$1,935,180</b> \$580,554			
Profit				5%	\$125,787			
Probable Construction Cos	st Estimate				\$2,641,520			
Design Engineering, Geotec and Construction Manageme	hnical, ent			10%	\$264,152			
Property Acquisition Cost:					\$541,800			
Total Conceptual Cost Esti	mate				\$3,959,263			

**Additional Comments** 

Alternative Name Problem Description	LRCR-1 Long Run Cr	eek overba	nk flooding	just near Will-C	Cook road	Duine Lool	1	
Strategy District Minimum	Mot	ee along L	ong Kun Cr	eek near 139th a		- Kaise bank	elevation to ke	ep now in
Criteria for Funding:	No							
Recommended	1N0							
						Maint.	Replacemen	t
Embankment construction, gr restoration: Material hauled f	rading and rom offsite	Unit yd3	Quantity 1000	Unit Cost \$11	Base Cost \$10,680	Cost \$0	Cost \$0	Notes/Issues Levee construction assuming 4ft height, 3ft top width, and 3:1 side slope. Length (450ft)
Embankment construction, gr	rading and	yd3	1000	\$5	\$5,340	\$0	\$0	Place fill for levee
restoration: Compaction of fi Embankment construction, gr restoration: Compaction of fi	ll rading and ll	yd3	1000	\$5	\$5,340	\$0	\$0	Compact levee material
Channel treatment: Vegetativ	e cover only	yd2	1415	\$9	\$12,084	\$11,238	\$2,894	Seed levee surface
Land Acquisition: Purchase of	of Property *	dollar	26031	\$1	\$26,031	\$0	\$0	0.09 acres required at \$289,236/acre
Channel treatment: Excavatio	m	yd3	4455	\$11	\$47,579	\$0	\$0	Volume calculated using GIS length approximation, 3:1 slopes (H:V) and depth of 7ft (using 685ft as bottom elevation).
Channel treatment: Material t offsite	to be hauled	yd3	4455	\$12	\$52,346	\$0	\$0	,
Channel treatment: Soil stabil vegetative cover	lization and	yd2	1905	\$14	\$26,441	\$24,590	\$6,331	
Land Acquisition: Permanent	Easement *	dollar	115694	\$1	\$115,694	\$0	\$0	Aquire land north of Long Run Creek. 0.4 acres required at \$289,236/acre
* Indicates item excluded from	n subtotal (e.g. l	and acquisi	tion, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Cond	litions			4 % 5%	<b>\$159,811</b> \$6,392 \$7,991	\$35,828	\$9,225	
Subtotal with Percent Allor Contingency	wances			30%	<b>\$174,194</b> \$52,258			
Profit				5%	\$11,323			
Probable Construction Co	st Estimate				\$237,775			
Design Engineering, Geotec and Construction Managem	chnical, ient			10%	\$23,778			
Property Acquisition Cost:					\$141,725			
Total Conceptual Cost Est	imate				\$448,331			
Additional Comments								

Alternative Name Problem Description Strategy District Minimum Criteria for Funding: Recommended	LRCR-5 143rd road flo raise road to p Met Yes	ooded preventflo	oding and in	clude culvert and	d weir to keep	hydraulics of	stream the sam	ie.
		Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	t Notes/Issues
Demolition: Brick, concret construction	e, or stone	ft2	1070	\$4	\$4,569	\$0	\$0	1010 of roadway length at 1 deep and culvert area (60)
Embankment construction, restoration: Additional fill	grading and	yd3	5413	\$14	\$75,132	\$0	\$0	1010 of roadway length, 24 wide and 4 of additional depth plus an additional amount of fill for a $3V$ :1H side slope along both sides and additional amount for culvert. culvert = $2x$ 15x24
Embankment construction, restoration: Compaction of	grading and fill	yd3	5413	\$5	\$28,905	\$0	\$0	1010 of roadway length, 24 wide and 4 of additional depth plus an additional amount of fill for a $3V$ :1H side slope along both sides and additional amount for culvert. culvert = $2x$ 15x24
Embankment construction, restoration: Material haule	grading and d from offsite	yd3	5413	\$11	\$57,811	\$0	\$0	1010 of roadway length, 24 wide and 4 of additional depth plus an additional amount of fill for a $3V$ :1H side slope along both sides and additional amount for culvert. culvert = $2x$ 15x24
Paving: Asphalt Pavement ft wide, 2 ft C&G, 1 ft Exc	Installation (24 avation	lf	1010	\$148	\$149,955	\$139,456	\$0	2 lane rd. 1010 long
Pipe under pavement (cour inches / box culvert (28 to	nty): 72 to 84 38 ft2)	lf	98	\$609	\$59,653	\$55,476	\$0	Two 49 LF 7.5 by 5 culverts side by side
Outlet structures (Headwal	l): 42 to 66	each	2	\$4,758	\$9,515	\$8,849	\$0	DS headwall for box culvert
Inlet structures (Headwall)	: 42 to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	US headwall for box culvert
Concrete: Cast in place		yd3	9	\$250	\$2,125	\$0	\$0	weir 2 deep, 25 wide, 4.72 tall with 2 2 diameter orifices

Alternative Name	LRCR-5
<b>Problem Description</b>	143rd road flooded
Strategy	raise road to preventflooding and include culvert and weir to keep hydraulics of stream the same.
District Minimum	Met
Criteria for Funding:	
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g.	land acquis	sition, buyou	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$397,180</b> \$15,887 \$19,859	\$212,629	\$0	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$432,926</b> \$129,878 \$28,140			
Probable Construction Cost Estimate				\$590,944			
Design Engineering, Geotechnical, and Construction Management			10%	\$59,094			
Property Acquisition Cost:				\$0			
Total Conceptual Cost Estimate				\$862,668			
Additional Comments							

Alternative Name	LUDT_1							
Problem Description	Shallow floodi Excavated stor	ing north o rage on Hi	of 103rd Str ickory Hills	eet between Lu Golf Course to	cas Ditch and I reduce dischar	Lucas Diversions of the second s	on Ditch Road Storm S	ewer / Lucas
Criteria for Funding: Recommended	Met No							
						Maint.	Replacemen	t
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Channel treatment: Excavation		yd3	283688	\$11	\$3,029,788	\$0	\$0	7 acre site excavated to bottom elevation of 614
Embankment construction, grad restoration: Material hauled from	ing and n offsite	yd3	283688	\$11	\$3,029,788	\$0	\$0	7 acre site excavated to bottom elevation of 614
Channel treatment: Vegetative c	over only	yd2	33880	\$9	\$289,335	\$269,077	\$69,282	7 acre of vegetative cover
Outlet structures (Headwall): 36 less	inches or	each	2	\$2,600	\$5,201	\$4,837	\$0	
Pipe in earth (city): 42 to 66 incl culvert (15 to 27 ft2)	hes / box	lf	120	\$208	\$24,989	\$23,239	\$0	Pipe connecting storage area to overland flow route to Roberts Road Sewer
Land Acquisition: Purchase of P	roperty *	dollar	1771000	\$1	\$1,771,000	\$0	\$0	7 acres @ 253,000 dollars per acre
Inlet structures (Headwall): 36 in less	nches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Inlet structure for detention basin
* Indicates item excluded from su	ıbtotal (e.g. laı	nd acquisi	tion, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditio	ons			4 % 5%	<b>\$6,381,701</b> \$255,268 \$319,085	\$299,571	\$69,282	
Subtotal with Percent Allowa Contingency	nces			30%	<b>\$6,956,054</b> \$2,086,816			
Profit				5%	\$452,143			
Probable Construction Cost	Estimate				\$9,495,013			
Design Engineering, Geotechr and Construction Managemen	nical, t			10%	\$949,501			
Property Acquisition Cost:					\$1,771,000			
Total Conceptual Cost Estim	ate			:	\$12,584,368			
Additional Comments								

Alternative Name	LUDT-2							
Problem Description Strategy	Shallow flood	ing north o orage on H	of 103rd Str lickory Hills	eet between Lue s Golf Course to	cas Ditch and I reduce discha	Lucas Diversion rge to Robert	on Ditch s Road Storm	Sewer / Lucas
District Minimum	Met		lickory min	s don course a	, reduce disena		5 Roud Storin	Sewer / Edeus
Criteria for Funding:	No							
						Maint.	Replacemen	ıt
Channel treatment: Execution		Unit	Quantity	Unit Cost	Base Cost	CUSI	CUSI	Notes/Issues
Channel treatment. Excavation	L	yus	13000	511	\$136,640	50	\$0	proposed storage area to provide additional storage
Channel treatment: Compaction	n	yd3	13000	\$7	\$97,240	\$0	\$0	Compaction of berm
Channel treatment: Vegetative	cover only	yd2	14520	\$9	\$124,001	\$115,319	\$29,692	Revegation of 3 acre excavated area
Outlet structures (Headwall): 3 less	6 inches or	each	2	\$2,600	\$5,201	\$4,837	\$0	Double pipe exiting reservoir
Pipe in earth (city): 42 to 66 in culvert (15 to 27 ft2)	ches / box	lf	120	\$208	\$24,989	\$23,239	\$0	Pipe connecting flow to overland flow route to Roberts Road Sewer
Land Acquisition: Purchase of	Property *	dollar	3289000	\$1	\$3,289,000	\$0	\$0	13 acres @ \$253,000 dollars per acre
Channel treatment: Vegetative	cover only	yd2	6000	\$9	\$51,240	\$47,652	\$12,270	600 ft long; 42 ft wide on the 1:3 side slopes and 6 ft wide on the top of the embankment
Concrete: Cast in place		yd3	33	\$250	\$8,333	\$0	\$0	Concrete spillway: 50 ft in length by 6 ft in width by 3 ft in depth
Inlet structures (Headwall): 42	to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	Inlet structure outlet pipe from storage area
* Indicates item excluded from s	subtotal (e.g. la	nd acquisi	tion, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Condit	ions			4 % 5%	<b>\$459,358</b> \$18,374 \$22,968	\$199,896	\$41,962	
Subtotal with Percent Allow Contingency	ances			30%	<b>\$500,700</b> \$150,210			
Profit				5%	\$32,546			
Probable Construction Cost	t Estimate				\$683,455			
Design Engineering, Geotech and Construction Manageme	nnical, nt			10%	\$68,346			
Property Acquisition Cost:					\$3,289,000			
Total Conceptual Cost Estin	nate				\$4,282,659			
Additional Comments								

	Alternative Name	LUDT-3							
Met         Met           Cherning in parameter (city) 90 to 96         if         Parameter (city) 90 to 96         Parameter (city) 90 to 9	Problem Description Strategy	Lucas Ditch ( Diversion con	Overbank F Iduit to inc	Flooding rease conve	yance to Stony (	Creek. Constru	ict 28 ac-ft of	storage to mitig	gate
There is recommendedNoMaint.Replacement CostReplacement CostNote estimated StatetecommendedUnitQuantityUnit Cost IfBase CostCostNote-State CostNote-State StatePipe in derify 19 to 96 inches / box cuber (19 to 50 102)If1560S435S678,038S630,565S096" Pipe along Palos DriveOutlet structures (Headwall): 42 to 66 incheseach2S4,758S7,136S6,637S0Outlet structures (Note Note) events Note Note)Channel treatment: Excavationyd32647S11S28,270S0S0Assume that elevations above 594 ft require excess recurstating 10 ft 	District Minimum	Met							
Vinit Pipe under pavement (city): 90 to 9 (inchs / box culvert (39 to 50 ft2) Pipe in carth (city): 90 to 96 inches / box culvert (39 to 50 ft2)If1240S609S754,849S701.998S096° Pipe along 83rd Ave inches / box DriveOutlet structures (Headwall): 42 to 66 incheseach2\$4,758\$7,136\$6,637500Outlet structures (Headwall): 42 to 66 available; markup via quantifyChannel treatment: Excavationyd32647\$11\$28,270\$0\$0\$0Same that elevations above 594 ft raging Palos creat: 96° item not available; markup via quantifyChannel treatment: Excavationyd32647\$11\$28,270\$0\$0\$0Assume that elevations above 594 ft raging creat: 86° item not available; markup via quantifyChannel treatment: Compactionyd32647\$7\$19,800\$0\$0\$0Assume that elevations above 594 ft are excavated and the compacted; calculate south of 107th street assuming 10 ft wide cut radical calculate south of 107th street assuming 10 ft wide cutLand Acquisition: Permanent Easement *dollar16500\$1\$16,500\$0\$0\$0Permanent casement of a street valued based upon nearby roperty value of street valued based upon nearby roperty val	Criteria for Funding: Recommended	No							
$\begin{tabular}{ c c c c c } \hline $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $									
UnitQuantityUnit CostBase CostCostCostNotes/IssuesIppe under pavent (city): 90 to 96If1240S609\$754,849\$701,998\$096" Pipe along 83rd AvePipe in carth (city): 90 to 96 inches / boxIf1560\$435\$678,038\$630,656\$096" Pipe along PalosOutlet structures (Headwall): 42 to 66each2\$4,758\$7,136\$6,637\$0Outlet structure to StonyIncheswailable;markup viaquantity\$2,877\$11\$28,270\$0\$0Assume that elevationsavailable;markup viaquantity\$2,647\$51\$28,270\$0\$0Assume that elevationsabox 594 ft requireexcess exceavationyd32,647\$7\$19,800\$0\$0Assume that elevationsabox 594 ft requireexcess excavationyd32,647\$7\$19,800\$0\$0Assume that elevationsabox 594 ft requireexcess excavationyd32,647\$7\$19,800\$0\$0Assume that elevationsabox 594 ft areexcess excavationexcess excavationexcess excavationexcess excavationeccetChannel treatment: Compactionyd32,647\$7\$19,800\$0\$0\$0Assume that elevationsabox 594 ft areexavatieassume that elevationsexavatieassume that elevationsabox 594 ft areLand Acquisition: Permanent Easement *dollar16500\$1\$16							Maint.	Replacement	:
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Channel treatment: Excavation yd3 45173 \$11 \$482,448 \$0 \$0 Excavation of 28 ac ft of storage Channel treatment: Material to be hauled yd3 45173 \$12 \$530,783 \$0 \$0 Haul excavated materials offsite Channel treatment: Vegetative cover only yd2 19360 \$9 \$165,334 \$153,758 \$39,590 Vegetative cover on 4 acre excavated area for detention Inlet structures (Headwall): 36 inches or each 1 \$2,600 Excavation of 28 ac ft of structure for pipe less excavated area for to detention Pond Outlet structures (Headwall): 36 inches or each 1 \$2,600 Excavated									nearby property value of
Channel treatment: Excavation yd3 45173 \$11 \$482,448 \$0 \$0 Excavation of 28 ac ft of storage Channel treatment: Material to be hauled yd3 45173 \$12 \$530,783 \$0 \$0 Haul excavated materials offsite Channel treatment: Vegetative cover only yd2 19360 \$9 \$165,334 \$153,758 \$39,590 Vegetative cover on 4 acre excavated area for detention Inlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Inlet structure for pipe less to detention Pond Outlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Outlet structure for pipe less Connecting Stony Creek to detention Pond									\$300,000 / acre
Channel treatment: Material to be hauled yd3 45173 \$12 \$530,783 \$0 \$0 Haul excavated materials offsite Channel treatment: Vegetative cover only yd2 19360 \$9 \$165,334 \$153,758 \$39,590 Vegetative cover on 4 acre excavated area for detention Inlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Inlet structure for pipe connecting Stony Creek to detention Pond Outlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Outlet structure for pipe connecting Stony Creek to detention Pond Substructures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Outlet structure for pipe connecting Stony Creek to detention Pond	Channel treatment: Excavatio	n	yd3	45173	\$11	\$482,448	\$0	\$0	Excavation of 28 ac ft of
Channel treatment: Material to be hauled yd3 45173 \$12 \$530,783 \$0 \$0 Haul excavated materials offsite offsite Channel treatment: Vegetative cover only yd2 19360 \$9 \$165,334 \$153,758 \$39,590 Vegetative cover on 4 acre excavated area for detention Inlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Inlet structure for pipe connecting Stony Creek to detention Pond Outlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Outlet structure for pipe less			10	45170	¢10	<b>\$520.702</b>	<b>\$</b> 0	<b>\$</b> 0	storage
Channel treatment: Vegetative cover only yd2 19360 \$9 \$165,334 \$153,758 \$39,590 Vegetative cover on 4 acre excavated area for detention Inlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Inlet structure for pipe less to detention Pond Outlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Outlet structure for pipe less connecting Stony Creek	Channel treatment: Material t	to be hauled	yd3	45173	\$12	\$530,783	\$0	\$0	Haul excavated materials
Chainer neument vegetative cover only       yd2       19500       \$105,554       \$155,750       \$059,550       vegetative cover only         Inlet structures (Headwall): 36 inches or       each       1       \$2,600       \$2,418       \$0       Inlet structure for pipe connecting Stony Creek to detention Pond         Outlet structures (Headwall): 36 inches or       each       1       \$2,600       \$2,418       \$0       Outlet structure for pipe connecting Stony Creek to detention Pond         Ess         \$2,600       \$2,418       \$0       Outlet structure for pipe connecting Stony Creek to detention Pond	Channel treatment: Vegetativ	e cover only	vd2	19360	\$9	\$165 334	\$153 758	\$39 590	Vegetative cover on 4
Inlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Inlet structure for pipe connecting Stony Creek to detention Pond Outlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Outlet structure for pipe ess	Chamer treatment. Vegetativ	e cover only	yuz	17500	ψŸ	\$105,55T	\$155,750	\$57,570	acre excavated area for
Inlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Inlet structure for pipe connecting Stony Creek to detention Pond Outlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Outlet structure for pipe less									detention
less connecting Stony Creek Outlet structures (Headwall): 36 inches or each 1 \$2,600 \$2,600 \$2,418 \$0 Outlet structure for pipe less connecting Stony Creek	Inlet structures (Headwall): 3	6 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Inlet structure for pipe
Outlet structures (Headwall): 36 inches oreach1\$2,600\$2,600\$2,418\$0Outlet structure for pipe connecting Stony Creek	less								connecting Stony Creek
Outlet structures (Headwall): 36 inches oreach1\$2,600\$2,600\$2,418\$0Outlet structure for pipe connecting Stony Creek									to detention Pond
less connecting Stony Creek	Outlet structures (Headwall):	36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Outlet structure for pipe
1. 1	less								connecting Stony Creek
to detention Pond Pipe in earth (city): 36 inches or less If 315 \$217 \$68,286 \$63,505 \$0 36" nine connecting flow	Pine in earth (city). 26 inches	or less	1£	315	¢717	868 786	\$63 505	ደባ	36" nine connecting flow
$\frac{1}{100} \text{ m carm (every). 50 mences of ress} \qquad 11  515 \qquad 9217  900,200  905,505 \qquad 90  50  \text{pipe connecting flow}$	r ipe in earth (eng). 50 menes	01 1035	11	515	\$∠1/	φ00,200	<i>403,303</i>	ΦU	from STCR to detention
HOLE STAR ID DEPENDIOL									pond
noil STCK to detention									pond

Alternative Name LUDT-3	
Problem Description Lucas Ditch	Overbank Flooding
Strategy Diversion co	nduit to increase conveyance to Stony Creek. Construct 28 ac-ft of storage to mitigate
District Minimum Met	
Criteria for Funding:	
Recommended No	

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g. l	and acquis	ition, buyout	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$2,747,280</b> \$109,891 \$137,364	\$1,567,936	\$39,590	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$2,994,536</b> \$898,361 \$194,645			
Probable Construction Cost Estimate				\$4,087,541			
Design Engineering, Geotechnical, and Construction Management			10%	\$408,754			
Property Acquisition Cost:				\$616,500			
Total Conceptual Cost Estimate				\$6,720,321			
Additional Comments		Increased constorage alt	onveyance to S	STCR- requires	implementati	on with STCR	

Alternative Name Problem Description Strategy District Minimum Criteria for Funding: Recommended	LUDT-4 Shallow flood Storage in the Met No	ling north o	of 103rd stre f Lucas Ditc	eet between Luc h watershed trib	as Ditch and L butary to Rober	ucas Diversio ts Road, com	on Ditch. bined with a 96	5" diversion
						Maint.	Replacemen	t
Channel treatment: Excavation	1	Unit yd3	Quantity 13000	Unit Cost \$11	Base Cost \$138,840	Cost \$0	Cost \$0	Notes/Issues Excavate fill for earthen berm to impound area west of 82nd Ave. Excavated material provides approximately 8 ac-ft of additional storage
Channel treatment: Compactio	'n	yd3	13000	\$7	\$97,240	\$0	\$0	Compact soil to form earthen berm with top elevation of 637 ft. 6 ft wide at top with 3:1 side slopes
Channel treatment: Vegetative	cover only	yd2	6000	\$9	\$51,240	\$47,652	\$12,270	600 ft long; 42 ft wide on the bottom, 1:3 side slopes and 6 ft wide on the top of the embankment
Channel treatment: Vegetative	cover only	yd2	14520	\$9	\$124,001	\$115,319	\$29,692	vegetative stabilization
Outlet structures (Headwall): 3 less	36 inches or	each	2	\$2,600	\$5,201	\$4,837	\$0	Outlet structure from reservoir to overland
Pipe in earth (city): 42 to 66 in culvert (15 to 27 ft2)	iches / box	lf	120	\$208	\$24,989	\$23,239	\$0	Pipe connecting flow to overland flow route to Roberts Road Sewer
Land Acquisition: Purchase of	Property *	dollar	3289000	\$1	\$3,289,000	\$0	\$0	13 acres \$ 253,000 dollars per acre for property on Hickory Hills golf course
Concrete: Cast in place		yd3	33	\$250	\$8,333	\$0	\$0	Concrete spillway: 50 ft in length by 6 ft in width
Pipe under pavement (city): 90	) to 96	lf	1240	\$609	\$754,788	\$701,941	\$0	96" Pipe along 83rd Ave
Pipe in earth (city): 90 to 96 in culvert (39 to 50 ft2)	iches / box	lf	1560	\$435	\$678,038	\$630,565	\$0	96" Pipe along Palos Drive
Outlet structures (Headwall): 4 inches	42 to 66	each	2	\$4,758	\$7,136	\$6,637	\$0	Outlet structure to Stony Creek; 96" item not available; markup via quantity
Channel treatment: Excavation	1	yd3	2647	\$11	\$28,270	\$0	\$0	Assume that elevations above 594 ft require excess excavation; calculate south of 107th street assuming 10 ft

wide cut

Alternative Name	LUDT-4
Problem Description	Shallow flooding north of 103rd street between Lucas Ditch and Lucas Diversion Ditch.
Strategy	Storage in the portion of Lucas Ditch watershed tributary to Roberts Road, combined with a 96" diversion
District Minimum	Met
<b>Criteria for Funding:</b>	
Recommended	No

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Compaction	yd3	2647	\$7	\$19,800	\$0	\$0	Assume that elevations above 594 ft are excavated and then compacted; calculate south of 107th street assuming 10 ft wide cut
Land Acquisition: Permanent Easement *	dollar	16500	\$1	\$16,500	\$0	\$0	1600 ft x 60 ft easement for pipe (2.2 acre). Adjacent undeveloped land value = \$14,972 / acre
Inlet structures (Headwall): 42 to 66 inches	each	2	\$4,758	\$7,136	\$6,637	\$0	Inlet for diversion conduit
Inlet structures (Headwall): 36 inches or less	each	2	\$2,600	\$5,201	\$4,837	\$0	Inlet structure for outlet from detention area

\* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)	\$1,950,212	\$1,541,663	\$41,962
Utility Relocation 4 %	\$78,008		
Mobilization \ General Conditions 5%	\$97,511		
Subtotal with Percent Allowances	\$2,125,731		
Contingency 30%	\$637,719		
Profit 5%	\$138,173		
Probable Construction Cost Estimate	\$2,901,623		
Design Engineering, Geotechnical, 10% and Construction Management	\$290,162		
Property Acquisition Cost:	\$3,305,500		
Total Conceptual Cost Estimate	\$8,080,910		
Additional Comments			

Alternative Name	LUDT-5									
Problem Description	Flooding of p	Flooding of properties near confluence of Lucas Ditch Build laws with 3' freehoard to restrict floodwaters from inundating structures near Story Creak confluence								
Strategy District Minimum	Build levee w	ith 3' free	board to res	trict floodwatei	rs from inundat	ing structures	near Stony Cre	eek confluence		
Criteria for Funding:	Ves									
Recommended	1 05									
						Maint.	Replacemen	t		
Ender Lander and the state		Unit	Quantity	Unit Cost	Base Cost	Cust	Cust	Notes/Issues		
restoration: Additional fill	rading and	yd3	584	\$14	\$8,106	\$0	20	Embankment Construction along STCR/LUDT		
Embankment construction, g	rading and	yd3	584	\$5	\$3,119	\$0	\$0	Embankment		
restoration: Compaction of fi	11							Construction along east bank of LUDT near		
Embankment construction g	rading and	vd3	584	\$11	\$6 237	\$0	\$0	Embankment		
restoration: Material hauled f	from offsite	yuu		¢11	φ <b>σ,</b> ,	ψŪ	ψũ	Construction along east bank of LUDT near conflunece		
Land Acquisition: Permanen	t Easement *	dollar	51652	\$1	\$51,652	\$0	\$0	Permanent Easement: 600 ft long by 50 ft wide estimated at \$150,00 /		
Channel treatment: Excavation	on	yd3	15327	\$11	\$163,692	\$0	\$0	acre Construction of 9.5 ac-ft detention pond to offset lost floodplain storage		
Channel treatment: Material offsite	to be hauled	yd3	15327	\$12	\$180,092	\$0	\$0	Construction of 9.5 ac-ft detention pond to offset lost floodplain storage		
Channel treatment: Vegetativ	e cover only	yd2	18392	\$9	\$157,068	\$146,071	\$37,610	Cover for approximately 3.8 acres of detention		
Pump Station: 10ac-ft per da drainage	y interior	each	1	\$800,000	\$800,000	\$743,988	\$0	Pump Station- 2 20 hp pumps for interior drainage behind levee		
* Indicates item excluded from	n subtotal (e.g. la	and acquisi	tion, buyou	ts)						
Subtotal (direct costs) Utility Relocation Mobilization \ General Cond	ditions			4 % 5%	<b>\$1,318,314</b> \$52,733 \$65,916	\$890,058	\$37,610			
Subtotal with Percent Allo Contingency	wances			30%	<b>\$1,436,962</b> \$431,089					
Profit				5%	\$93,403					
Probable Construction Co	st Estimate				\$1,961,453					
Design Engineering, Geote and Construction Managem	chnical, nent			10%	\$196,145					
Property Acquisition Cost:					\$51,652					
Total Conceptual Cost Est	timate				\$3,136,919					
Additional Comments										

Alternative Name Problem Description Strategy District Minimum Criteria for Funding: Recommended	LUDT-6 Lucas Ditch ( Diversion con Met No	Overbank F aduit to inc	Tooding rease conve	yance to Stony (	Creek combine	d with dredgi	ng upstream of	103rd Street
						Maint.	Replacement	
Pipe under pavement (city):	90 to 96 0 ft2)	Unit lf	Quantity 1240	Unit Cost \$609	Base Cost \$754,849	\$701,998	<b>Cost</b> \$0	<b>Notes/Issues</b> 96"Pipe along 83rd Ave
Pipe in earth (city): 90 to 96 culvert (39 to 50 ft2)	inches / box	lf	1560	\$435	\$678,038	\$630,565	\$0	96" Pipe along Palos Drive
Outlet structures (Headwall)	): 42 to 66	each	2	\$4,758	\$7,136	\$6,637	\$0	Outlet structure to Stony Creek; 96" item not available; markup via quantity
Channel treatment: Excavat	ion	yd3	2647	\$11	\$28,270	\$0	\$0	Assume that elevations above 594 ft require excess excavation; calculate south of 107th street assuming 10 ft wide cut
Channel treatment: Compac	tion	yd3	2647	\$7	\$19,800	\$0	\$0	Assume that elevations above 594 ft are excavated and then compacted; calculate south of 107th street assuming 10 ft wide cut
Inlet structures (Headwall):	42 to 66 inches	each	2	\$4,758	\$7,136	\$6,637	\$0	Inlet for Diversion Conduit
Land Acquisition: Permaner	nt Easement *	dollar	16500	\$1	\$16,500	\$0	\$0	1600 ft x 60 ft easement for pipe (2.2 acre). Adjacent undeveloped land value = \$14,972 / acre
Channel treatment: Excavat	ion	yd3	2074	\$11	\$22,150	\$0	\$0	Dredging of creek- 2800
Channel treatment: Material offsite	to be hauled	yd3	2074	\$12	\$24,370	\$0	\$0	Haul dredged material from site
maintenance: Small Channe (Brush and debris removal)	l Maintenance	lf	2800	\$5	\$14,000	\$13,020	\$3,352	removal of debris along dredged area
Channel treatment: Vegetati	ive cover only	yd2	3111	\$9	\$26,568	\$24,708	\$6,362	revegetation along dredged area. 2800 ft by 10 ft
Land Acquisition: Permaner	nt Easement *	dollar	600000	\$1	\$600,000	\$0	\$0	Permanent easement of 4 acres valued based upon nearby property value of \$300,000 / acre
Channel treatment: Excavat	ion	yd3	45173	\$11	\$482,448	\$0	\$0	Excavation of 28 ac ft of storage
Channel treatment: Material offsite	to be hauled	yd3	45173	\$12	\$530,783	\$0	\$0	Haul excavated materials offsite
Channel treatment: Vegetati	ive cover only	yd2	19360	\$9	\$165,334	\$153,758	\$39,590	Vegetative cover on 4 acre excavated area for

detention

Alternative Name	LUDT-6
Problem Description	Lucas Ditch Overbank Flooding
Strategy	Diversion conduit to increase conveyance to Stony Creek combined with dredging upstream of 103rd Street
District Minimum	Met
Criteria for Funding:	
Recommended	No

	Unit	Ouantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Inlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Inlet structure for pipe connecting Stony Creek to detention Pond
Outlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Outlet structure for pipe connecting Stony Creek to detention Pond
Pipe in earth (city): 36 inches or less	lf	315	\$217	\$68,286	\$63,505	\$0	36" pipe connecting flow from STCR to detention pond
* Indicates item excluded from subtotal (e.g. la	and acquisi	tion, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$2,834,368</b> \$113,375 \$141,718	\$1,605,664	\$49,304	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$3,089,461</b> \$926,838 \$200,815			
Probable Construction Cost Estimate				\$4,217,115			
Design Engineering, Geotechnical, and Construction Management			10%	\$421,711			
Property Acquisition Cost:				\$616,500			

\$6,910,294

Total Conceptual Cost Estimate

**Additional Comments** 

Alternative Name LU	JDT-7							
Problem Description Sh Strategy Im District Minimum M Criteria for Funding:	nallow flooding npounded stora	g north o ge on H	of 103rd Str lickory Hills	eet between Luc Golf Course to	cas Ditch and I reduce discha	Lucas Diversion rge to Robert	on Ditch s Road Storm	Sewer / Lucas
Recommended Ye	es							
						Maint.	Replacemen	ıt
	I	Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Channel treatment: Excavation		yd3	13000	\$11	\$138,840	\$0	\$0	Excavate berm material in proposed storage area to provide additional storage
Channel treatment: Compaction		yd3	13000	\$7	\$97,240	\$0	\$0	Compaction of berm
Channel treatment: Vegetative cov	ver only	yd2	14520	\$9	\$124,001	\$115,319	\$29,692	Revegation of 3 acre excavated area
Outlet structures (Headwall): 36 in less	nches or	each	2	\$2,600	\$5,201	\$4,837	\$0	Double pipe exiting reservoir
Pipe in earth (city): 42 to 66 inche culvert (15 to 27 ft2)	s / box	lf	120	\$208	\$24,989	\$23,239	\$0	Pipe connecting flow to overland flow route to Roberts Road Sewer
Land Acquisition: Purchase of Pro	operty *	dollar	3289000	\$1	\$3,289,000	\$0	\$0	13 acres @ \$253,000 dollars per acre
Channel treatment: Vegetative cov	ver only	yd2	6000	\$9	\$51,240	\$47,652	\$12,270	600 ft long; 42 ft wide on the bottom, 1:3 side slopes and 6 ft wide on the top of the embankment
Concrete: Cast in place		yd3	33	\$250	\$8,333	\$0	\$0	Concrete spillway: 50 ft in length by 6 ft in width by 3 ft in depth
Inlet structures (Headwall): 42 to 6	66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	Inlet structure outlet pipe from storage area
Channel treatment: Excavation		yd3	2074	\$11	\$22,150	\$0	\$0	Dredging of creek- 2800 ft by 20 ft by 1 ft in depth
Channel treatment: Material to be offsite	hauled	yd3	2074	\$12	\$24,370	\$0	\$0	Haul dredged material from site
maintenance: Small Channel Mair (Brush and debris removal)	ntenance	lf	2800	\$5	\$14,000	\$13,020	\$3,352	removal of debris along dredged area
Channel treatment: Vegetative cov	ver only	yd2	3111	\$9	\$26,568	\$24,708	\$6,362	revegetation along dredged area. 2800 ft by

10 ft

Alternative Name	LUDT-7
Problem Description	Shallow flooding north of 103rd Street between Lucas Ditch and Lucas Diversion Ditch
Strategy	Impounded storage on Hickory Hills Golf Course to reduce discharge to Roberts Road Storm Sewer / Lucas
District Minimum	Met
<b>Criteria for Funding:</b>	
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g.	land acquis	sition, buyou	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$546,446</b> \$21,858 \$27,322	\$237,623	\$51,676	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$595,626</b> \$178,688 \$38,716			
Probable Construction Cost Estimate				\$813,029			
and Construction Management Property Acquisition Cost:			10%	\$81,303 \$3,289,000			
Total Conceptual Cost Estimate				\$4,472,631			
Additional Comments							

Alternative Name	MACR-1									
Strategy District Minimum Criteria for Funding: Recommended	117 ac-ft detention basin Met Yes									
						Maint.	Replacement	t		
		Unit	Quantity	Unit Cost	<b>Base Cost</b>	Cost	Cost	Notes/Issues		
Channel treatment: Excavation	I	yd3	257232	\$11	\$2,747,238	\$0	\$0	17 acre area footprint of top of pond, 10 ft deep, with side slopes of 4:1. Additional 19.7 ac-ft of excavation needed on west side to slope down to detention basin		
Channel treatment: Material to offsite	be hauled	yd3	257129	\$12	\$3,021,266	\$0	\$0	excavated material minus material used for embankment		
Embankment construction, gra restoration: Compaction of fill	ding and	yd3	103	\$5	\$550	\$0	\$0	build up berm on east side 127 LF, 4:1 slope, top width of 3 ft, 2 ft high		
Embankment construction, gra restoration: Material hauled fro	ding and offsite	yd3	0	\$11	\$0	\$0	\$0	used material from excavation		
Pipe in earth (city): 36 inches	or less	lf	30	\$217	\$6,503	\$6,048	\$0	outlet/inlet pipe, 3ft diameter		
Inlet structures (Headwall): 36 less	inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	US headwall		
Outlet structures (Headwall): 3 less	6 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	DS headwall		
Channel treatment: Soil stabili vegetative cover	zation and	yd2	18842	\$14	\$261,527	\$243,216	\$62,623	Perimeter of 4100 ft, width of 40 ft of vegetated area		
Land Acquisition: Purchase of	Property *	dollar	5780000	\$1	\$5,780,000	\$0	\$0	17 acres at \$340,000/acre		
* Indicates item excluded from	subtotal (e.g. la	nd acquisi	tion, buyout	s)						
Subtotal (direct costs) Utility Relocation Mobilization \ General Condit	tions			4 % 5%	<b>\$6,042,285</b> \$241,691 \$302,114	\$254,101	\$62,623			
Subtotal with Percent Allow Contingency	vances			30%	<b>\$6,586,090</b> \$1,975,827					
Profit				5%	\$428,096					
Probable Construction Cos	t Estimate				\$8,990,013					
Design Engineering, Geotecl and Construction Manageme	nnical, ent			10%	\$899,001					
Property Acquisition Cost:					\$5,780,000					
Total Conceptual Cost Estin	nate			5	\$15,985,738					
Additional Comments										

Alternative Name Problem Description Strategy District Minimum Criteria for Funding: Recommended	MEDT-1 Erosion threatening structure, infrastructure, and channel banks along Melvina Ditch Combination of hard and soft armoring to address erosion problem Met Yes								
						Maint.	Replacement	:	
Channel treatment: Reinforced concrete wall	l one sided	Unit yd3	<b>Quantity</b> 900	Unit Cost \$587	<b>Base Cost</b> \$528,615	<b>Cost</b> \$491,604	Cost \$126,578	<b>Notes/Issues</b> 2700 ft length, 8 inch thick concrete wall and 13.5 ft high channel on west side of the channel	
Channel treatment: Excavation	n	yd3	3200	\$11	\$34,176	\$0	\$0	Excavation of west channel to allow construction of vertical wall embedded in the west bank	
Channel treatment: Compactio	on	yd3	2400	\$7	\$17,952	\$0	\$0	75 % of fill excavated channel material placed back in channel following construction of	
Channel treatment: Material to offsite	be hauled	yd3	800	\$12	\$9,400	\$0	\$0	Hauling of excess extracted material from	
Channel treatment: Biostabiliz	zation	yd2	2700	\$64	\$172,989	\$160,877	\$41,423	Assume half of the east bank of Melvina Ditch can be secured using	
Channel treatment: Reno gabi	ons	yd3	900	\$267	\$240,282	\$223,459	\$57,536	Assume half of the east bank of Melvina Ditch can be secured using reno gabions (1 ft x 1350 ft x 18 ft)	
Channel treatment: Excavation	n	yd3	900	\$11	\$9,612	\$0	\$0	Excavation of 1 ft along half of the east bank	
Channel treatment: Material to	be hauled	yd3	900	\$12	\$10,575	\$0	\$0	Hauling of Excavated	
Channel treatment: Vegetative	e cover only	yd2	3244	\$9	\$27,704	\$25,764	\$6,634	Revegetation of the portion of the channel excavated on west bank of channel	

Alternative Name	MEDT-1
Problem Description	Erosion threatening structure, infrastructure, and channel banks along Melvina Ditch
Strategy	Combination of hard and soft armoring to address erosion problem
District Minimum	Met
Criteria for Funding:	
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g.	land acquis	sition, buyou	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$1,051,305</b> \$42,052 \$52,565	\$901,704	\$232,171	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$1,145,922</b> \$343,777 \$74,485			
Probable Construction Cost Estimate				\$1,564,184			
Design Engineering, Geotechnical, and Construction Management			10%	\$156,418			
Property Acquisition Cost:				\$0			
Total Conceptual Cost Estimate				\$2,854,477			
Additional Comments							

Alternative Name Problem Description Strategy District Minimum	MEDT-2 Road and structures at risk due to erosion Enclose Melvina Ditch in double barrel 102" sewer Met									
Recommended	No									
		Unit	Over	Unit Cost	Dage Cost	Maint. Cost	Replacement Cost	Notes/Issues		
Channel treatment: Excavatio	n	yd3	1684	\$11	\$17,985	\$0	\$0	The difference between the 2-102 inch pipes with 1.5 feet clearance on each side between the trench wall and the pipe and 1 foot separation between the two pipes.		
Pipe in earth (city): 90 to 96 in culvert (39 to 50 ft2)	nches / box	lf	5600	\$435	\$2,433,984	\$2,263,568	\$0	Twin 102" pipes installed in existing Melvina Ditch		
Outlet structures (Headwall): inches	42 to 66	each	4	\$4,758	\$19,030	\$17,698	\$0	Twin 102" pipes must be made to join with with existing bridge crossing 99th Street		
Embankment construction, gr restoration: Material hauled fi	ading and rom offsite	yd3	20591	\$11	\$219,912	\$0	\$0	Assume 2800 ft of channel 12 ft wide at bottom, 40 at top. Subtract area of pipes, and subtract the excavated material on either side of the pipes		
Channel treatment: Additiona	l fill	yd3	20591	\$14	\$285,803	\$0	\$0	Assume 2800 ft of channel 12 ft wide at bottom, 40 at top. Subtract area of pipes, and subtract the excavated material on either side of the pipes		
Channel treatment: Compaction	on	yd3	18907	\$7	\$141,424	\$0	\$0	Compaction of material above newly placed pipes		
Channel treatment: Vegetative	e cover only	yd2	14311	\$9	\$122,216	\$113,659	\$29,265	46 feet wide, 2800 feet long. Includes a buffer outside of the existing channel.		
Channel treatment: Dumped r	ock	yd3	82	\$67	\$5,517	\$5,131	\$1,321	Riprap placed 22 ft long, 2 ft deep, 50 ft longon downstream side of 99th street crossing as erosion protection		

Alternative Name	MEDT-2
Problem Description	Road and structures at risk due to erosion
Strategy	Enclose Melvina Ditch in double barrel 102" sewer
District Minimum	Met
Criteria for Funding:	
Recommended	No

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g.	land acquis	sition, buyou	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$3,245,871</b> \$129,835 \$162,294	\$2,400,055	\$30,586	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$3,538,000</b> \$1,061,400 \$229,970			
Probable Construction Cost Estimate				\$4,829,370			
Design Engineering, Geotechnical, and Construction Management Property Acquisition Cost:			10%	\$482,937 \$0			
Total Conceptual Cost Estimate				\$7,742,948			
Additional Comments							

Alternative Name	MICR-1			-							
Problem Description Strategy District Minimum Criteria for Funding:	Multiple detention ponds and conveyance increase Met										
Recommended											
		Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacemen Cost	t Notes/Issues			
Channel treatment: Vegetativ	e cover only	yd2	6684	\$9	\$57,085	\$53,088	\$13,669	3760 ft perimeter times 16 ft width for south pond			
Channel treatment: Excavation	on	yd3	165303	\$11	\$1,765,436	\$0	\$0	South pond			
Channel treatment: Material t offsite	to be hauled	yd3	82280	\$12	\$966,790	\$0	\$0	South pond; assume half of excavation hauled offsite			
Outlet structures (Headwall): less	36 inches or	each	2	\$2,600	\$5,201	\$4,837	\$0	South pond outlet structure			
Pipe under pavement (city): 3 less	36 inches or	lf	500	\$304	\$152,175	\$141,520	\$0	2 - 4 ft diameter pipes from outlet of south pond to discharge point on Mill Creek tributary			
Pipe under pavement (city): 7 inches / box culvert (28 to 38	72 to 84 ft2)	lf	840	\$425	\$357,017	\$332,020	\$0	Pipes at inlet to south pond			
Land Acquisition: Purchase of	of Property *	dollar	1639256	\$1	\$1,639,256	\$0	\$0	For south pond			
Pipe under pavement (city): 9 inches / box culvert (39 to 50	90 to 96 ft2)	lf	1060	\$609	\$645,222	\$600,047	\$0	Replace 7 culverts along Southwest Highway with 5-ft x 10-ft box culverts			
Channel treatment: Vegetativ	e cover only	yd2	3555	\$9	\$30,360	\$28,234	\$7,270	2000 ft perimeter times 16 ft width for north pond			
Channel treatment: Excavation	n	yd3	95582	\$11	\$1,020,816	\$0	\$0	For north pond			
Channel treatment: Material t offsite	to be hauled	yd3	47590	\$12	\$559,183	\$0	\$0	For north pond; assume half of spoil must be hauled away			
Channel treatment: Compacti	on	yd3	82280	\$7	\$615,454	\$0	\$0	For south pond; assume half of spoil can remain on site			
Channel treatment: Compacti	on	yd3	47590	\$7	\$355,973	\$0	\$0	For north pond; assume half of spoil can remain			
Pipe under pavement (city): 3	36 inches or	lf	55	\$304	\$16,739	\$15,567	\$0	North pond outlet pipe			
Pipe under pavement (city): 7 inches / box culvert (28 to 38	72 to 84 ft2)	lf	140	\$425	\$59,503	\$55,337	\$0	North pond inlet pipe			
Outlet structures (Headwall): less	36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	North pond outlet structure			
Inlet structures (Headwall): 4	2 to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	South pond inlet structure			
Inlet structures (Headwall): 4	2 to 66 inches	each	1	\$4,758	\$4,758	\$4,424	\$0	North pond inlet structure			
Land Acquisition: Purchase of	of Property *	dollar	451930	\$1	\$451,930	\$0	\$0	For north pond			

Alternative Name	MICR-1							
Problem Description Strategy District Minimum Criteria for Funding: Recommended	Multiple deter Met No	ntion pond	s and conve	yance increase	;			
						Maint.	Replacement	
		Unit	Quantity	Unit Cost	<b>Base Cost</b>	Cost	Cost	Notes/Issues
Inlet structures (Headwall): 42	to 66 inches	each	14	\$4,758	\$66,605	\$61,942	\$0	Replace 7 culverts along Southwest Highway with 5-ft x 10-ft box culverts; assumed two inlet structures per culvert to account for larger size needed
Outlet structures (Headwall): 4 inches	42 to 66	each	14	\$4,758	\$66,605	\$61,942	\$0	Replace 7 culverts along Southwest Highway with 5-ft x 10-ft box culverts; assumed two inlet structures per culvert to account for larger size needed
* Indicates item excluded from	subtotal (e.g. la	nd acquisi	tion, buyou	ts)				
Subtotal (direct costs)		-	-		\$6,757,036	\$1,370,225	\$20,939	
Utility Relocation Mobilization \ General Condition	tions			4 % 5%	\$270,281 \$337,852			
Subtotal with Percent Allow Contingency	/ances			30%	<b>\$7,365,169</b> \$2,209,551			
Profit				5%	\$478,736			
Probable Construction Cos	t Estimate				\$10,053,456			
Design Engineering, Geotecl and Construction Manageme	hnical, ent			10%	\$1,005,346			
Property Acquisition Cost:					\$2,091,186			
Total Conceptual Cost Estin	mate				\$14,541,152			
Additional Comments								

						L		
Alternative Name	MICR-2							
Problem Description								
Strategy	Construct lev	ee to protec	cting houses	s and construct	compensatory s	storage		
District Minimum	Met							
Criteria for Funding:	Yes							
Recommended								
						Maint.	Replacemen	nt
		Unit	Quantity	Unit Cost	<b>Base Cost</b>	Cost	Cost	Notes/Issues
Embankment construction, gr	ading and	yd3	2333	\$14	\$32,387	\$0	\$0	6ft high, 3:1 slope, 3ft top
restoration: Additional fill								width, 500 length
Embankment construction, gr	ading and	yd3	2333	\$5	\$12,460	\$0	\$0	6ft high, 3:1 slope, 3ft top
restoration: Compaction of fil	ll Inding and		2222	¢11	\$24.020	¢0.	\$0	width, 500 length
restoration: Material hauled f	rom offsite	yus	2333	\$11	\$24,920	\$0	<b>\$</b> 0	width 500 length
Channel treatment. Vegetativ	e cover only	vd2	2275	\$9	\$19 427	\$18.067	\$4 652	6ft high 3.1 slope 3ft top
		y a=		Ψ2	<i>(1)</i> , <i>(1<i>)</i>, <i>()</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1)</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1)</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1<i>)</i>, <i>(1)</i>, <i>(1<i>)</i>, <i>(1)</i>, <i>(1), <i>(1)</i>, <i>(1), <i>(</i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i>	\$10,007	\$ 1,002	width, 500 length
Land Acquisition: Purchase o	f Property *	dollar	71582	\$1	\$71,582	\$0	\$0	500 of length, footprint of 19,500 ft.
Channel treatment: Vegetativ	e cover only	yd2	3794	\$9	\$32,400	\$30,131	\$7,758	1030ft top perimeter, 10ft deep
Channel treatment: Excavation	n	yd3	26577	\$11	\$283,845	\$0	\$0	
Channel treatment: Material t offsite	o be hauled	yd3	26577	\$12	\$312,282	\$0	\$0	16.08 acre storage plus excavation to get down
Outlet structures (Headwall):	36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	12in diameter pipe
Inlet structures (Headwall): 3 less	6 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	12in diameter pipe
Pipe in earth (city): 36 inches	or less	lf	190	\$217	\$41,188	\$38,304	\$0	12in diameter pipe
Land Acquisition: Purchase of	f Property *	dollar	115510	\$1	\$115,510	\$0	\$0	2.13 acres of land for detention at \$54230/acre
Wetland: Construct / Mitigate outside Des Plaines watershee	e wetland d	acre	3	\$60,000	\$180,000	\$167,397	\$0	
* Indicates item excluded from	n subtotal (e.g. la	and acquisi	tion, buyout	ts)				
Subtotal (direct costs)					\$944,109	\$258,736	\$12,410	
Utility Relocation Mobilization \ General Cond	itions			4 % 5%	\$37,764 \$47,205			
Subtotal with Percent Allow	wances			30%	<b>\$1,029,079</b> \$308,724			
Profit				5%	\$66,890			
Probable Construction Co	st Estimate				\$1,404,692			
Design Engineering. Geotec	chnical.			100/	¢140.460			
and Construction Managem	ent			10%	\$140,469			
Property Acquisition Cost:					\$187,092			
Total Conceptual Cost Est	imate				\$2,003,400			
Additional Comments								

Alternative Name Problem Description	MICR-4							
Strategy	Multiple deter	ntion pond	s and conve	yance increase				
District Minimum	Met							
Criteria for Funding: Recommended	Yes							
		Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacemen Cost	t Notes/Issues
Pipe under pavement (city): 9 inches / box culvert (39 to 50	0 to 96 ft2)	lf	1060	\$609	\$645,222	\$600,047	\$0	Replace 7 culverts along Southwest Highway with 5-ft x 10-ft box culverts
Channel treatment: Vegetative	e cover only	yd2	3555	\$9	\$30,360	\$28,234	\$7,270	2000 ft perimeter times 16 ft width for north pond
Channel treatment: Excavatio	n	yd3	95582	\$11	\$1,020,816	\$0	\$0	For north pond
Channel treatment: Material troffsite	o be hauled	yd3	47590	\$12	\$559,183	\$0	\$0	For north pond; assume half of spoil must be hauled away
Channel treatment: Compaction	on	yd3	47590	\$7	\$355,973	\$0	\$0	For north pond; assume half of spoil can remain on site
Pipe under pavement (city): 3 less	6 inches or	lf	55	\$304	\$16,739	\$15,567	\$0	North pond outlet pipe
Pipe under pavement (city): 7 inches / box culvert (28 to 38	2 to 84 ft2)	lf	140	\$425	\$59,503	\$55,337	\$0	North pond inlet pipe
Outlet structures (Headwall): less	36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	North pond outlet structure
Inlet structures (Headwall): 42	2 to 66 inches	each	1	\$4,758	\$4,758	\$4,424	\$0	North pond inlet structure
Land Acquisition: Purchase o	f Property *	dollar	451930	\$1	\$451,930	\$0	\$0	For north pond
Inlet structures (Headwall): 4	2 to 66 inches	each	14	\$4,758	\$66,605	\$61,942	\$0	Replace 7 culverts along Southwest Highway with 5-ft x 10-ft box culverts; assumed two inlet structures per culvert to account for larger size needed
Outlet structures (Headwall): inches	42 to 66	each	14	\$4,758	\$66,605	\$61,942	\$0	Replace 7 culverts along Southwest Highway with 5-ft x 10-ft box culverts; assumed two inlet structures per culvert to account for larger size

needed

Alternative Name MICR-4

MICK-4

Yes

Multiple detention ponds and conveyance increase Met

District Minimum Criteria for Funding: Recommended

**Problem Description** 

Strategy

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g. la	and acquis	ition, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$2,828,363</b> \$113,135 \$141,418	\$829,911	\$7,270	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$3,082,916</b> \$924,875 \$200,390			
Probable Construction Cost Estimate				\$4,208,180			
Design Engineering, Geotechnical, and Construction Management			10%	\$420,818			
Property Acquisition Cost:				\$451,930			
Total Conceptual Cost Estimate				\$5,918,108			
Additional Comments							

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Alternative Name	NVCR-11							
Problem Description Strategy	Overbank floo Harlem Ave a	oding alon and Oak Pa	g Navajo Cr urk Ave Dive	eek ersion Conduits	s in combinatio	on		
District Minimum	Met							
Recommended	No							
						Maint.	Replacemer	nt
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Pipe under pavement (city): 7 inches / box culvert (28 to 38	72 to 84 ft2)	lf	3700	\$425	\$1,572,574	\$1,462,470	\$0	Oak Park Ave, 3700 LF, 6 ft diameter RCP
Inlet structures (Headwall): 4	2 to 66 inches	each	4	\$4,758	\$19,030	\$17,698	\$0	2 units chosen for each conduit because there was not a large enough single structure in the list
Outlet structures (Headwall): inches	42 to 66	each	4	\$4,758	\$19,030	\$17,698	\$0	2 units chosen for each conduit because there was not a large enough single structure in the list
Pipe under pavement (city): 7 inches / box culvert (28 to 38	72 to 84 ft2)	lf	7200	\$425	\$3,060,144	\$2,845,887	\$0	Harlem Ave, 7200 LF, 7 ft diameter RCP
* Indicates item excluded from	n subtotal (e.g. la	nd acquisi	tion, buyout	s)				
Subtotal (direct costs)					\$4,670,778	\$4,343,752	\$0	
Utility Relocation Mobilization \ General Cond	litions			4 % 5%	\$186,831 \$233,539			
Subtotal with Percent Allor Contingency	wances			30%	<b>\$5,091,148</b> \$1,527,344			
Profit				5%	\$330,925			
Probable Construction Co	st Estimate				\$6,949,417			
Design Engineering, Geotec and Construction Managem	chnical, ent			10%	\$694,942			
Property Acquisition Cost:					\$0			
Total Conceptual Cost Est	imate			:	\$11,988,111			
Additional Comments								

Alternative Name	NVCR-3							
Problem Description	Lake Arrowhe	ead overfl	ow flooding					
Strategy	Raise berm al	ong bike p	oath to preve	nt Lake Arrowh	ead from overt	opping for 10	00-year storm even	ıt
District Minimum	Met							
Recommended	Yes							
						Maint.	Renlacement	
		Unit	Quantity	Unit Cost	<b>Base Cost</b>	Cost	Cost	Notes/Issues
Embankment construction, gra restoration: Additional fill	ading and	yd3	933	\$14	\$12,950	\$0	\$0	10003/135003
Embankment construction, gra restoration: Compaction of fill	ading and l	yd3	933	\$5	\$4,982	\$0	\$0	
Embankment construction, gra restoration: Material hauled fro	ading and om offsite	yd3	933	\$11	\$9,964	\$0	\$0	
Paving: Asphalt Pavement Ins ft wide, 2 ft C&G, 1 ft Excava	tallation (24 tion	lf	167	\$148	\$24,794	\$23,059	\$0	
Channel treatment: Soil stabili vegetative cover	ization and	yd2	889	\$14	\$12,339	\$11,475	\$2,955	
* Indicates item excluded from	subtotal (e.g. la	nd acquis	ition, buyout	s)				
Subtotal (direct costs)					\$65,031	\$34,534	\$2,955	
Utility Relocation Mobilization \ General Condi	tions			4 % 5%	\$2,601 \$3,252			
Subtotal with Percent Allow Contingency	vances			30%	<b>\$70,883</b> \$21,265			
Profit				5%	\$4,607			
Probable Construction Cos	st Estimate				\$96,756			
Design Engineering, Geotech and Construction Manageme	hnical, ent			10%	\$9,676			
Property Acquisition Cost:					\$0			
Total Conceptual Cost Estin	mate				\$143,920			
Additional Comments								

Alternative Name	NVCR-5							
Problem Description Strategy	Overbank floo Harlem Ave I	oding alon Diversion (	g Navajo Cı Conduit	reek				
District Minimum	Met							
Recommended	Yes							
		Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Pipe under pavement (city): inches / box culvert (28 to 3	72 to 84 8 ft2)	lf	7200	\$425	\$3,060,144	\$2,845,887	\$0	7200 LF, 7 ft diameter RCP
Inlet structures (Headwall):	42 to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	2 units chosen because there was not a large enough single structure in the list
Outlet structures (Headwall) inches	): 42 to 66	each	2	\$4,758	\$9,515	\$8,849	\$0	2 units chosen because there was not a large enough single structure in the list
* Indicates item excluded fro	m subtotal (e.g. la	nd acquisi	tion, buyou	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Con	ditions			4 % 5%	<b>\$3,079,174</b> \$123,167 \$153,959	\$2,863,585	\$0	
Subtotal with Percent Allo Contingency	owances			30%	<b>\$3,356,300</b> \$1,006,890			
Profit				5%	\$218,159			
Probable Construction Co	ost Estimate				\$4,581,349			
Design Engineering, Geote and Construction Manager	echnical, ment			10%	\$458,135			
Property Acquisition Cost:					\$0			
Total Conceptual Cost Es	stimate				\$7,903,069			
Additional Comments								

Alternative Name	NVCR-7							
Problem Description								
Strategy	70th Ave Div	ersion Cor	nduit					
Criteria for Funding	Met							
Recommended	No							
						Maint.	Replacement	
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Inlet structures (Headwall):	42 to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	2 units chosen because 1 unit was not large enough
Outlet structures (Headwall inches	): 42 to 66	each	2	\$4,758	\$9,515	\$8,849	\$0	2 units chosen because 1 unit was not large enough
Pipe under pavement (city): inches / box culvert (28 to 3	: 72 to 84 38 ft2)	lf	5200	\$425	\$2,210,104	\$2,055,363	\$0	5200 LF, 4 ft diameter RCP
* Indicates item excluded fro	om subtotal (e.g. la	nd acquisi	tion, buyou	ts)				
Subtotal (direct costs)					\$2,229,134	\$2,073,060	<b>\$0</b>	
Utility Relocation Mobilization \ General Cor	nditions			4 % 5%	\$89,165 \$111,457			
Subtotal with Percent All	owances				\$2,429,756			
Contingency				30%	\$728,927			
Profit				5%	\$157,934			
Probable Construction C	ost Estimate				\$3,316,617			
Design Engineering, Geot and Construction Manage	echnical, ment			10%	\$331,662			
Property Acquisition Cost:					\$0			
Total Conceptual Cost Es	stimate				\$5,721,339			
Additional Comments								

Alternative Name	NVCR-8							
Problem Description Strategy	Overbank floo Oak Park Ave	oding alon Diversion	g Navajo Cr 1 Conduit	reek				
District Minimum	Met							
Recommended	No							
		Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Pipe under pavement (city): inches / box culvert (28 to 3	72 to 84 8 ft2)	lf	3700	\$425	\$1,572,574	\$1,462,470	\$0	3700 LF, 6 ft diameter RCP
Inlet structures (Headwall):	42 to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	2 units chosen because there was not a large enough single structure in the list
Outlet structures (Headwall) inches	): 42 to 66	each	2	\$4,758	\$9,515	\$8,849	\$0	2 units chosen because there was not a large enough single structure in the list
* Indicates item excluded fro	m subtotal (e.g. la	nd acquisi	tion, buyout	ts)				
Subtotal (direct costs)					\$1,591,604	\$1,480,167	<b>\$0</b>	
Utility Relocation Mobilization \ General Con	ditions			4 % 5%	\$63,664 \$79,580			
Subtotal with Percent Allo Contingency	owances			30%	<b>\$1,734,848</b> \$520,455			
Profit				5%	\$112,765			
Probable Construction Co	ost Estimate				\$2,368,068			
Design Engineering, Geote and Construction Manager	echnical, ment			10%	\$236,807			
Property Acquisition Cost:					\$0			
Total Conceptual Cost Es	stimate				\$4,085,042			
Additional Comments								

Alternative Name	OLCR-1							
Problem Description Strategy District Minimum Criteria for Funding: Recommended	Lake Oak Lav Met Yes	vn Expans	ion, 30 ac-fi	additional stor	age			
						Maint.	Replacemen	t
T 14 11/1 D 1	(D) / *	Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Land Acquisition: Purchase o	of Property *	dollar	4/5000	\$1	\$4/5,000 \$1.347.776	\$0 \$0	\$U \$322 729	0.5 acres ( <i>a</i> ) \$950K/acre
Channel treatment. Sheet phil	iig	yu2		\$303	\$1,547,770	φU	\$322,729	shoreline), 20 ft height
Channel treatment: Vegetativ	e cover only	yd2	2222	\$9	\$18,976	\$17,647	\$4,544	2000 ft surrounding additional length, 10 ft width
Demolition: Brick, concrete, construction	or stone	ft2	76600	\$4	\$327,082	\$0	\$0	Sum of areas that include park equipment and buildings, commercial property, and miscellaneous concrete
Channel treatment: Excavatio	on	yd3	72600	\$11	\$775,368	\$0	\$0	Excavation of 30 acre-ft for pond, and 15 acre-ft for normal water pool
Channel treatment: Material t offsite	to be hauled	yd3	72600	\$12	\$853,050	\$0	\$0	Assume all material needs to be hauled
Inlet structures (Headwall): 4	2 to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	Assume new inlet structures needed
Outlet structures (Headwall): inches	42 to 66	each	2	\$4,758	\$9,515	\$8,849	\$0	Assume new outlet structures needed
* Indicates item excluded from	n subtotal (e.g. la	nd acquisi	tion, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Cond	litions			4 % 5%	<b>\$3,341,282</b> \$133,651 \$167,064	\$35,345	\$327,273	
Subtotal with Percent Allow	wances			30%	<b>\$3,641,998</b> \$1,092,599			
Profit				5%	\$236,730			
Probable Construction Co	st Estimate				\$4,971,327			
Design Engineering, Geotec and Construction Managem	chnical, ient			10%	\$497,133			
Property Acquisition Cost:					\$475,000			
Total Conceptual Cost Est	imate				\$6,306,077			
Additional Comments								

Alternative Name	OLCR-3							
Problem Description Strategy District Minimum Criteria for Funding: Recommended	Channel Stab Met Yes	ilization						
						Maint.	Replacement	t
Channel treatment: Reinforced concrete channel	l trapezoidal	Unit yd3	<b>Quantity</b> 4672	Unit Cost \$587	Base Cost \$2,744,099	Cost \$2,551,970	Cost \$0	Notes/Issues 8" depth concrete wall, 86 ft width (perimeter of trapezoidal channel), 2200 ft length
Channel treatment: Vegetative	e cover only	yd2	978	\$9	\$8,352	\$7,767	\$2,000	2 ft wide buffer at top of bank, 2200 ft length (X 2 sides)
Channel treatment: Compactio	on	yd3	3504	\$7	\$26,210	\$0	\$0	6" depth, 86 ft width (perimeter of trapezoidal channel), 2200 ft length, compacted earth for stabilized base underneath concrete
Channel treatment: Excavation	1	yd3	7007	\$11	\$74,835	\$0	\$0	1 ft depth, 86 ft width (perimeter of trapezoidal channel) 2200 ft length
Channel treatment: Material to offsite	be hauled	yd3	3503	\$12	\$41,160	\$0	\$0	Difference between excavation and compaction.
* Indicates item excluded from	subtotal (e.g. la	ind acquis	tion, buyout	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Condi	tions			4 % 5%	<b>\$2,894,656</b> \$115,786 \$144,733	\$2,559,738	\$2,000	
Subtotal with Percent Allow Contingency	vances			30%	<b>\$3,155,175</b> \$946,553			
Profit				5%	\$205,086			
Probable Construction Cos	t Estimate				\$4,306,814			
Design Engineering, Geotec and Construction Manageme	hnical, ent			10%	\$430,681			
Property Acquisition Cost:					20			
Total Conceptual Cost Estin	mate				\$7,299,233			
Additional Comments								

Alternative Name Problem Description Strategy	SFDT-1 Overbank floo Convert existi	oding alon	g 71st Street on on Resur	t Ditch rection Cemete	ery to wetland to	o detain flows	s from Bridgev	iew storm sewer
District Minimum Criteria for Funding:	Met							
Recommended	Yes							
		Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacemen Cost	t Notes/Issues
Channel treatment: Excavation	on	yd3	96800	\$11	\$1,033,824	\$0	\$0	Assume 60 ac-ft of excavation
Channel treatment: Material offsite	to be hauled	yd3	87120	\$12	\$1,023,660	\$0	\$0	Assume 90 % of excavated materials to be hauled off site
Demolition: Brick, concrete, construction	or stone	ft2	960	\$4	\$4,099	\$0	\$0	Remove existing 120 ft of culvert beneath Archer Ave; Assume 120 ft * 8 ft wide
Inlet structures (Headwall): 4	42 to 66 inches	each	1	\$4,758	\$4,758	\$4,424	\$0	Inlet structure into detention basin
Pipe under pavement (city):	42 to 66 7 ft2)	lf	250	\$292	\$72,885	\$67,782	\$0	Cost for two (2) CMP pipes across Archer Ave
Outlet structures (Headwall) inches	: 42 to 66	each	1	\$4,758	\$4,758	\$4,424	\$0	Outlet structure from detention basin
Land Acquisition: Purchase	of Property *	dollar	1086000	\$1	\$1,086,000	\$0	\$0	6 acres valued at approximately \$181,000 per acre
Channel treatment: Vegetativ	ve cover only	yd2	29040	\$9	\$248,002	\$230,638	\$59,385	Revegetation of disturbed soils on 6 acre site
Embankment construction, g restoration: Compaction of f	rading and ill	yd3	9680	\$5	\$51,691	\$0	\$0	Compaction / regrading of 10% of excavated materials to provide berms / habitat
* Indicates item excluded from	n subtotal (e.g. la	nd acquisi	tion, buyout	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Cond	ditions			4 % 5%	<b>\$2,443,676</b> \$97,747 \$122,184	\$307,268	\$59,385	
Subtotal with Percent Allo Contingency	owances			30%	<b>\$2,663,607</b> \$799,082			
Profit				5%	\$173,134			
Probable Construction Co	ost Estimate				\$3,635,823			
Design Engineering, Geote and Construction Managen	chnical, nent			10%	\$363,582			
Property Acquisition Cost:					\$1,080,000			
Total Conceptual Cost Es	timate				\$5,452,059			
Additional Comments								

				_				
Alternative Name	SFDT-2							
Problem Description	Overbank floo	oding alon	g SFDT		1 10001			
Strategy District Minimum	Additional co	nveyance	to I&M Can	al from SFDT to	o lower WSEL	S		
Criteria for Funding:	Met							
Recommended	Yes							
						Maint.	Replacemen	t
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Outlet structures (Headwall): inches	42 to 66	each	1	\$4,758	\$4,758	\$4,424	\$0	
Pipe in tunnel: 42 to 66 inche	S	lf	162	\$1,495	\$242,200	\$225,242	\$0	162 ft is the length of the existing culvert
Inlet structures (Headwall): 4	2 to 66 inches	each	1	\$4,758	\$4,758	\$4,424	\$0	
Channel treatment: Excavation	on	yd3	2222	\$11	\$23,733	\$0	\$0	Assume 100 ft x 100 ft x 6 ft excavation for jacking pit
Channel treatment: Compacti	on	yd3	2222	\$7	\$16,622	\$0	\$0	Compact 100 ft x 100 ft x 6 ft of material excavated for jacking pit
Land Acquisition: Purchase of	of Property *	dollar	4600	\$1	\$4,600	\$0	\$0	0.23 acres valued at \$200,000 utilized as temporary easement
* Indicates item excluded from	n subtotal (e.g. la	nd acquisi	ition, buyout	ts)				
Subtotal (direct costs)					\$292,070	\$234,091	\$0	
Utility Relocation Mobilization \ General Cond	litions			4 % 5%	\$11,683 \$14,603			
Subtotal with Percent Allor Contingency	wances			30%	<b>\$318,356</b> \$95,507			
Profit				5%	\$20,693			
Probable Construction Co	st Estimate				\$434,556			
Design Engineering, Geotec and Construction Managem	chnical, ent			10%	\$43,456			
Property Acquisition Cost:					\$4,600			
Total Conceptual Cost Est	imate				\$716,703			

**Additional Comments** 

Alternative Name	SPCR-1							
Problem Description								
Strategy	Raise 157th s	treet to pro	event floodir	ng, place bike pa	th upstream w	hich acts hyd	raulically as th	e old road
District Minimum	Met							
Criteria for Funding:	Vas							
Recommended								
						Maint.	Replacemen	t
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Demolition: Brick, concrete, o construction	r stone	ft2	750	\$4	\$3,203	\$0	\$0	750 ft of roadway length at 1 ft deep
Embankment construction, gra restoration: Additional fill	ading and	yd3	6776	\$14	\$94,051	\$0	\$0	750 ft of roadway length, 24 ft wide and 4 ft of
								additional depth plus an additional amount of fill for a 3V:1H side slope along both sides and additional amount for
Embankment construction, gra restoration: Compaction of fill	nding and	yd3	6776	\$5	\$36,184	\$0	\$0	750 ft of roadway length, 24 ft wide and 4 ft of additional depth plus an additional amount of fill for a 3V:1H side slope along both sides and
Embankment construction, gra restoration: Material hauled fr	nding and om offsite	yd3	6776	\$11	\$72,368	\$0	\$0	additional amount for culvert 750 ft of roadway length, 24 ft wide and 4 ft of additional depth plus an additional amount of fill for a 3V:1H side slope along both sides and additional amount for
	. 11 .: (2.4	10	750	¢140	ф111.050	¢102.55(	<b>#</b> 0	culvert
f wide 2 ft C&G 1 ft Excava	tallation (24	II	/50	\$148	\$111,353	\$103,556	20	
Pipe under pavement (county)	: 72 to 84	lf	82	\$609	\$49,913	\$46,419	\$0	Two 41 ft 6 ft by 6 ft
Outlet structures (Headwall): 4	42 to 66	each	2	\$4,758	\$9,515	\$8,849	\$0	DS headwall for box
Inlet structures (Headwall): 42	to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	US headwall for box
Paving: Asphalt Pavement Ins ft wide, 2 ft C&G, 1 ft Excava	tallation (24 tion	lf	100	\$148	\$14,847	\$13,807	\$0	Calculated equivalent pavement for 300 LF bike path (assumed 8 ft wide bike path)
Embankment construction, gra	ading and	yd3	2450	\$14	\$34,006	\$0	\$0	berm volume = $2450 \text{ yd3}$ , 300  long
Embankment construction, gra	iding and	yd3	2450	\$5	\$13,083	\$0	\$0	berm volume = $2450 \text{ yd3}$ , 300  long
Embankment construction, gra	iding and	yd3	2450	\$11	\$26,166	\$0	\$0	berm volume = $2450 \text{ yd3}$ , 300  long
Pipe in earth (county): 42 to 66 box culvert (15-27 ft2)	6 inches /	lf	60	\$208	\$12,494	\$11,620	\$0	low flow pipe, 5ft diameter

Alternative Name	SPCR-1							
Strategy	Raise 157th st	reet to pre	vent floodir	ig, place bike pa	th upstream w	hich acts hydi	raulically as the	old road
District Minimum	Met							
Recommended	Yes							
		Unit	Quantity	Unit Cost	Daga Cast	Maint. Cost	Replacement Cost	Notes/Issues
Inlet structures (Headwall): 42	2 to 66 inches	each	Quantity 1	\$4,758	\$4,758	\$4,424	\$0	low flow pipe, 5ft diameter
Outlet structures (Headwall): inches	42 to 66	each	1	\$4,758	\$4,758	\$4,424	\$0	low flow pipe, 5ft diameter
Land Acquisition: Permanent	Easement *	dollar	39766	\$1	\$39,766	\$0	\$0	0.4 acres, \$198829/acre
* Indicates item excluded from	subtotal (e.g. la	nd acquisi	tion, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Cond	itions			4 % 5%	<b>\$496,212</b> \$19,848 \$24,811	\$201,948	\$0	
Subtotal with Percent Allow Contingency	vances			30%	<b>\$540,871</b> \$162,261			
Profit				5%	\$35,157			
Probable Construction Cos	st Estimate				\$738,289			
Design Engineering, Geotec and Construction Manageme	hnical, ent			10%	\$73,829			
Property Acquisition Cost:					\$39,766			
Total Conceptual Cost Esti	mate				\$1,053,833			
Additional Comments								

Alternative Name	STCR-10							
Problem Description	Erosion/Sedia	nentation	near conflue	nce of Stony C	reek with Oak	Lawn Creek		
Strategy District Minimum	Concrete Stat	oilization (	assume hard	-armored natur	al stabilization	techniques w	ould work as w	vell)
Criteria for Funding:	Met							
Recommended	Yes							
						Maint.	Replacemen	t
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Channel treatment: Reinforce concrete channel	ed trapezoidal	yd3	1698	\$587	\$997,320	\$927,493	\$0	8" depth concrete wall, 86 ft width (perimeter of trapezoidal channel), 800 ft length
Channel treatment: Vegetativ	ve cover only	yd2	356	\$9	\$3,037	\$2,824	\$727	2 ft wide buffer at top of bank, 800 ft length (X 2 sides)
Channel treatment: Compact	ion	yd3	1274	\$7	\$9,530	\$0	\$0	6" depth, 86 ft width (perimeter of trapezoidal channel), 800 ft length, compaction for soil beneath concrete
Channel treatment: Excavation	on	yd3	2548	\$11	\$27,213	\$0	\$0	1 ft depth, 86 ft width (perimeter of trapezoidal channel), 800 ft length, excavation for concrete
Channel treatment: Material offsite	to be hauled	yd3	1273	\$12	\$14,958	\$0	\$0	Difference between excavation and compaction.
Channel treatment: Excavatio	on	yd3	2777	\$11	\$29,658	\$0	\$0	Excavation of material that has fallen into Stony Creek and is causing blockage; very rough estimate based on field observation and cross-section information
Channel treatment: Material offsite	to be hauled	yd3	2777	\$12	\$32,630	\$0	\$0	Hauling of material that has fallen into Stony Creek and is causing blockage
* Indicates item excluded from	n subtotal (e.g. la	and acquis	ition, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Cond	ditions			4 % 5%	<b>\$1,114,345</b> \$44,574 \$55,717	\$930,317	\$727	
Subtotal with Percent Allo Contingency	wances			30%	<b>\$1,214,636</b> \$364,391			
Profit				5%	\$78,951			
Probable Construction Co	st Estimate				\$1,657,978			
Design Engineering, Geote and Construction Managem	chnical, nent			10%	\$165,798 \$0			
Property Acquisition Cost:					φυ			
Total Conceptual Cost Est	timate				\$2,754,820			
Additional Comments								

Alternative Name Problem Description	STCR-11							
Strategy	Stony Levee							
Criteria for Funding:	Met							
Recommended	No							
						Maint	Renlacement	
		Unit	Quantity	Unit Cost	Daga Cost	Cost	Cost	Notes/Isones
Embankment construction gra	ding and	vd3	Quantity 4702	Unit Cost \$14	\$65 264	\$0	\$0	Notes/Issues Embankment
restoration: Additional fill		yus	1702	φΤΤ	φ05,201	φσ	φυ	Construction along
								STCR/LUDT
Embankment construction, gra	ding and	yd3	4702	\$5	\$25,109	\$0	\$0	Embankment
restoration: Compaction of fill								Construction along
								STCR/LUDT
Embankment construction, gra	ding and	yd3	4702	\$11	\$50,217	\$0	\$0	Embankment
restoration: Material hauled fro	om offsite							Construction along
Pipe in earth (city): 42 to 66 in	ches / box	lf	75	\$208	\$15.618	\$14 525	\$0	Pipe to maintain outlet to
culvert (15 to 27 ft2)	enes, eex		75	\$200	\$10,010	¢11,525	40	Stony Creek from
								proposed levee
Channel treatment: Excavation	L	yd3	34848	\$11	\$372,177	\$0	\$0	Construction of 16.45
								ac-ft detention pond to
								offset lost floodplain
Channel tracture and Matanial to	h - h1 - d	12	24040	¢10	\$400.464	¢O	¢0	storage
Channel treatment: Material to	be hauled	yd3	34848	\$12	\$409,464	20	\$0	Construction of 16.45
olisite								offset lost floodplain
								storage
Channel treatment: Vegetative	cover only	yd2	69696	\$9	\$595,204	\$553,530	\$142,523	Cover for approximately
								4.7 acres of detention
* Indicates item excluded from	subtotal (e.g. lan	d acquisi	tion, buyout	s)				
Subtotal (direct costs)					\$1,533,052	\$568,055	\$142,523	
Utility Relocation				4 %	\$61,322			
Mobilization \ General Condit	ions			5%	\$76,653			
Subtotal with Percent Allow	ances				\$1,671,027			
Contingency				30%	\$501,308			
Profit				5%	\$108,617			
Probable Construction Cos	t Estimate				\$2,280,952			
Design Engineering, Geotech	nnical,			10%	\$228.095			
and Construction Manageme	nt			10,0				
Property Acquisition Cost:					\$0			
Total Conceptual Cost Estir	nate				\$3,219,625			
Additional Comments								

Alternative Name	STCR-2							
Problem Description Strategy	Extensive over Add approxir	erbank floo nately 400	ding along ac-ft of dete	Stony Creek ention on St. Ca	simir Cemeter	y property		
District Minimum	Met							
Recommended	Yes							
		∐nit	Quantity	Unit Cost	Basa Cost	Maint. Cost	Replacemen Cost	t Notes/Issues
Land Acquisition: Permanent	Easement *	dollar	8315348	\$1	\$8,315,348	\$0	\$0	40 acres at \$415,000/acre, 50% of value for permanent easement
Channel treatment: Vegetative	e cover only	yd2	30400	\$9	\$259,616	\$241,439	\$62,166	7200 ft perimeter (1200 ft wide x 1400 ft long) length, 38 ft width
Concrete: Cast in place		yd3	1333	\$250	\$333,250	\$0	\$0	Need 3 very large structures for inlet and outlet pipes (to accommodate up to 2 - 10 ft by 16 ft boxes)
Pipe under pavement (city): B (51 to 60 ft2)	ox culvert	lf	9200	\$661	\$6,081,476	\$5,655,680	\$0	Assumes 1400 LF from West Stony Creek and Cicero Ave, plus 2000 LF from Kilpatrick. 9200 ft is equivalent length of pipe to account for pipe area (10 x 16 ft box) and 2 barrels.
Pipe under pavement (city): 72 inches / box culvert (28 to 38	2 to 84 ft2)	lf	1500	\$425	\$637,530	\$592,893	\$0	Outlet Pipe
Wetland: Construct / Mitigate outside Des Plaines watershed	wetland	acre	6	\$60,000	\$360,000	\$334,794	\$0	Wetland mitigation 6 acres @ \$60,000
Channel treatment: Excavation	n	yd3	624360	\$11	\$6,668,165	\$0	\$0	307 ac-ft for pond, and 100 ac-ft for normal water pool
Channel treatment: Compaction	on	yd3	312180	\$7	\$2,335,106	\$0	\$0	Assume half of excavated material can be disposed of onsite
Channel treatment: Material to offsite	be hauled	yd3	312180	\$12	\$3,668,115	\$0	\$0	Assume half of excavated material needs to be hauled offsite

Alternative Name	STCR-2
Problem Description	Extensive overbank flooding along Stony Creek
Strategy	Add approximately 400 ac-ft of detention on St. Casimir Cemetery property
District Minimum	Met
Criteria for Funding:	
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g. l	and acquis	ition, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$20,343,258</b> \$813,730 \$1,017,163	\$6,824,806	\$62,166	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$22,174,151</b> \$6,652,245 \$1,441,320			
Probable Construction Cost Estimate				\$30,267,717			
Design Engineering, Geotechnical, and Construction Management			10%	\$3,026,772			
Property Acquisition Cost:				\$8,315,348			
Total Conceptual Cost Estimate				\$48,496,809			
Additional Comments							

Alternative Name	STCR-3							
Problem Description	Extensive ove	erbank floo	ding along	Stony Creek				
Strategy	Add approxin	nately 87 a	c-ft of deter	ntion at Wolfe	Wildlife Refuge	e		
District Minimum	Met							
Criteria for Funding: Recommended	Yes							
						Maint	Doulocomon	
		<b>U</b> :4	0			Cost	Cost	NT 4 DT
Channel treatment: Exceptatio	n	Unit vd2	Quantity	Unit Cost	Base Cost \$1,057,652	\$0	\$0	Notes/Issues
		yus	185501	\$11	\$1,937,032	30	\$0	volume of normal pool, and excavation for vegetated cover
Channel treatment: Material t offsite	to be hauled	yd3	148427	\$12	\$1,744,013	\$0	\$0	Material excavated minus what is needed for embankments
Embankment construction, gr restoration: Compaction of fil	ading and	yd3	32267	\$5	\$172,304	\$0	\$0	Assumed only material required for embankments can remain on-site.
Outlet structures (Headwall): less	36 inches or	each	2	\$2,600	\$5,201	\$4,837	\$0	Outlet structures from ponds to return flow to Stony Creek
Inlet structures (Headwall): 4	2 to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	Inlet structures to take flow from Stony Creek
Pipe under pavement (city): 7 inches / box culvert (28 to 38	72 to 84 ft2)	lf	100	\$425	\$42,502	\$39,526	\$0	Pipes to convey flow to and from Stony Creek
Wetland: Construct / Mitigate outside Des Plaines watershee	e wetland d	acre	7	\$60,000	\$396,000	\$368,274	\$0	6 acres of wetland mitigation at \$60,000/acre
Land Acquisition: Purchase o	of Property *	dollar	0	\$1	\$0	\$0	\$0	Land acquisition provided by Village of Oak Lawn and Oak Lawn Park District at no cost, 11.6 acres at \$0/acre
Channel treatment: Vegetativ	e cover only	yd2	7822	\$9	\$66,802	\$62,125	\$15,996	4400 ft perimeter length, 16 ft width
* Indicates item excluded from	n subtotal (e.g. la	nd acquisi	tion, buyou	ts)				
Subtotal (direct costs)					\$4,393,989	\$483,610	\$15,996	
Utility Relocation Mobilization \ General Cond	litions			4 % 5%	\$175,760 \$219,699			
Subtotal with Percent Allow Contingency	wances			30%	<b>\$4,789,448</b> \$1,436,834			
Profit				5%	\$311,314			
Probable Construction Cos	st Estimate				\$6,537,596			
Design Engineering, Geotec and Construction Managem	chnical, ent			10%	\$653,760			
Property Acquisition Cost:					\$0			
Total Conceptual Cost Est	imate				\$7,690,962			
Additional Comments								

Alternative Name	STCR-4							
Problem Description Strategy	Extensive ove Construct 39 a	erbank floo acre-ft dete	ding along sention pond	Stony Creek				
District Minimum	Met							
Recommended	Yes							
						Maint	Ronlacoment	
		Unit	0	Unit Cont	Dess Cast	Cost	Cost	N - 4 / <b>I</b>
Channel treatment: Vegetativ	e cover only	vd2	Quantity 7600	Unit Cost	S64 904	\$60.360	\$15.541	1800 ft perimeter v 38 ft
Chalmer treatment. Vegetativ	e cover only	yuz	7000	φ)	\$04,704	\$00,500	\$15,541	width for vegetation
Channel treatment: Excavatio	n	yd3	91960	\$11	\$982,133	\$0	\$0	Assumes 39 acre-feet for pond, 18 acre-ft for normal water pool
Channel treatment: Material t offsite	o be hauled	yd3	89960	\$12	\$1,057,030	\$0	\$0	Excavation minus material remaining on site
Embankment construction, gr restoration: Compaction of fil	ading and l	yd3	2000	\$5	\$10,680	\$0	\$0	Assumes 1800 ft long embankment around pond, 3 ft high, by 10 ft wide
Outlet structures (Headwall): less	36 inches or	each	1	\$2,600	\$2,600	\$2,418	\$0	Outlet structure from
Inlet structures (Headwall): 4	2 to 66 inches	each	1	\$4,758	\$4,758	\$4,424	\$0	Inlet structure to pond
Pipe under pavement (city): 4 inches / box culvert (15 to 27	2 to 66 ft2)	lf	25	\$292	\$7,289	\$6,778	\$0	Pipe to pond
Pipe under pavement (city): 3 less	6 inches or	lf	25	\$304	\$7,609	\$7,076	\$0	Outlet pipe from pond
Land Acquisition: Permanent	Easement *	dollar	733213	\$1	\$733,213	\$0	\$0	4 acres, land value estimated at \$366K/acre, 50% for perm easement
* Indicates item excluded from	ı subtotal (e.g. la	nd acquisi	tion, buyout	s)				
Subtotal (direct costs)					\$2,137,002	\$81,057	\$15,541	
Utility Relocation Mobilization \ General Cond	itions			4 % 5%	\$85,480 \$106,850			
Subtotal with Percent Allow Contingency	wances			30%	<b>\$2,329,332</b> \$698,800			
Profit				5%	\$151,407			
Probable Construction Cos	st Estimate				\$3,179,538			
Design Engineering, Geotec and Construction Managem	chnical, ent			10%	\$317,954			
Property Acquisition Cost:					\$733,213			
Total Conceptual Cost Est	imate				\$4,327,303			

**Additional Comments** 

Alternative Name	STCR-6							
Problem Description Strategy	Overbank flo Rerouting of	ooding along Melvina D	g Stony Cre itch at confl	ek uence with Stor	ny Creek			
District Minimum	Met							
Criteria for Funding: Recommended	No							
						Maint.	Replacement	t
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Land Acquisition: Purchase of	Property *	dollar	200000	\$1	\$200,000	\$0	\$0	1.0 acres for Melvina
								re-route, property purchase, \$200K/acre
Land Acquisition: Purchase of	Property *	dollar	2680000	\$1	\$2,680,000	\$0	\$0	13.4 acres for ponds,
								property purchase, \$200K/acre
Channel treatment: Excavation	1	yd3	8318	\$11	\$88,836	\$0	\$0	Excavation for channel
								only, 212 ft to pond and
								370 ft after pond = $572$ ft
								abannal is 5 ft wide at
								bottom and 10 ft deen
								with 3.1 side slopes
Channel treatment: Material to	be hauled	vd3	8318	\$12	\$97.737	\$0	\$0	Haul excavated material
offsite		5.00		+	<i>43 (, , e )</i>		÷-	from site
Channel treatment: Vegetative	e cover only	yd2	4203	\$9	\$35,896	\$33,383	\$8,595	channel is 65 ft wide top
								of slope to top of slope
Channel treatment: Excavation	ı	yd3	183920	\$11	\$1,964,266	\$0	\$0	Excavation for ponds,
								114 acre-feet of
								excavation for ponds
	1.1.1.1	12	176507	¢12	¢2 074 007	¢0.	¢0	plus normal water pool
Channel treatment: Material to	be hauled	yd3	1/658/	\$12	\$2,074,897	20	20	embankment
Channel treatment: Vegetative	e cover only	vd2	20000	\$9	\$170,800	\$158 841	\$40 899	Revertation for ponds
chamer deallent. Vegetative		942	20000	ψy	\$170,000	\$150,011	\$10,077	for side slope of ponds
Embankment construction, gra	ading and	yd3	7333	\$5	\$39,158	\$0	\$0	Embankment for ponds,
restoration: Compaction of fill								assume 5500 ft total
								length of embankments,
								6 ft high by 4 ft wide with
								3:1 side slopes (area = $36$
Outlat structures (II as develt).	12 += ((	<b>h</b>	4	¢ 1 750	¢10.020	¢17 (00	ድሳ	st) Outlet structures for
inches	+2 10 66	each	4	\$4,758	\$19,030	\$17,098	\$0	outlet structures for
Pine under navement (city): B	ox culvert	1f	93	\$661	\$61 694	\$57 374	\$0	80  LF of 7 ft x10 ft box
(51  to  60  ft2)			,5	0001	\$01,091	<i>\$51,511</i>	40	culvert (crosses under
( )								Janet Lane), multiplied
								by 70/60 to account for
								larger pipe area than
								largest box culvert in unit
				<b>.</b>	*****			cost data
Pipe under pavement (city): B	ox culvert	lf	128	\$661	\$84,810	\$78,872	\$0	2 - 55 ft long 7 ft by 10 ft
(51 to 60 ft2)								box culverts, cross under
								70/60 to account for
								larger nine area than
								largest box culvert in unit
								<b>.</b>

cost data

Alternative Name	STCR-6
Problem Description	Overbank flooding along Stony Creek
Strategy	Rerouting of Melvina Ditch at confluence with Stony Creek
District Minimum	Met
Criteria for Funding:	
Recommended	No

.....

					Maint.	Replacemen	ıt
	Unit	Quantity	Unit Cost	<b>Base Cost</b>	Cost	Cost	Notes/Issues
Channel treatment: Excavation	yd3	2222	\$11	\$23,731	\$0	\$0	Assume 100 ft x 100 ft x 6
							ft excavation for jacking
							pit
Channel treatment: Compaction	yd3	2222	\$7	\$16,621	\$0	\$0	Compact 100 ft x 100 ft x
							6 ft of material excavated
I and Acquisition: Temporary Easement *	dollar	3742	\$1	\$3 742	\$0	\$0	0.23 acres valued at
Land Acquisition. Temporary Easement	uonai	5742	φı	\$5,742	φŪ	<b>\$</b> 0	\$162 700 utilized as
							temporary easement @
							10%
Inlet structures (Headwall): 42 to 66 inches	each	4	\$4,758	\$19,030	\$17,698	\$0	Inlet structures for each
							of four ponds
* Indicates item excluded from subtotal (e.g. lan	d acquisit	tion, buyout	s)				
Subtotal (direct costs)				\$4,696,506	\$363,866	\$49,494	
Utility Relocation			4 %	\$187,860			
Mobilization \ General Conditions			5%	\$234,825			
Subtotal with Percent Allowances				\$5,119,191			
Contingency			30%	\$1,535,757			
Profit			5%	\$332,747			
Probable Construction Cost Estimate				\$6,987,696			
Design Engineering, Geotechnical,			10%	\$698 770			
and Construction Management			10/0				
Property Acquisition Cost:				\$2,883,742			
Total Conceptual Cost Estimate				\$10,983,568			

**Additional Comments** 

Alternative Name Problem Description Strategy District Minimum	STCR-7 Overbank floo Add two addir	oding along tional 7.1	g East Stony by 8' box cu	V Creek Ilverts to Califo	ornia Ave culv	ert at downstre	am end of Eas	t Stony Creek
Criteria for Funding: Recommended	Yes							
		Unit	Ouantity	Unit Cost	Base Cost	Maint. Cost	Replacemen Cost	t Notes/Issues
Outlet structures (Headwall):	42 to 66	each	2	\$4,758	\$9,515	\$8,849	\$0	Outlet Structures
Pipe under pavement (city): E (51 to 60 ft2)	Box culvert	lf	1050	\$661	\$694,082	\$645,485	\$0	525 LF of culvert under California Ave or pavement x 2 culverts
Pipe in earth (city): Box culve ft2)	ert (51 to 60	lf	1262	\$472	\$595,677	\$553,970	\$0	631 LF of culvert under earth x 2 culverts
Channel treatment: Excavatio	'n	yd3	2222	\$11	\$23,731	\$0	\$0	Assume 100 ft x 100 ft x 6 ft excavation for jacking pit
Channel treatment: Compacti	on	yd3	2222	\$7	\$16,621	\$0	\$0	Compact 100 ft x 100 ft x 6 ft of material excavated for jacking pit
Land Acquisition: Temporary	v Easement *	dollar	3742	\$1	\$3,742	\$0	\$0	0.23 acres valued at \$162,700 utilized as temporary easement @ 10%
Land Acquisition: Permanent	Easement *	dollar	0	\$1	\$0	\$0	\$0	Assume existing easement is wide enough for additional pipes
Inlet structures (Headwall): 4	2 to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	Inlet Structures
* Indicates item excluded from	ı subtotal (e.g. la	nd acquisi	tion, buyou	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Cond	itions			4 % 5%	<b>\$1,349,140</b> \$53,966 \$67,457	\$1,217,153	\$0	
Subtotal with Percent Allow Contingency	wances			30%	<b>\$1,470,562</b> \$441,169			
Profit				5%	\$95,587			
Probable Construction Cos	st Estimate				\$2,007,317			
Design Engineering, Geotec and Construction Managem	chnical, ent			10%	\$200,732			
Property Acquisition Cost:					\$3,742			
Total Conceptual Cost Est	imate				\$3,428,944			
Additional Comments								

Alternative Name	STCR-8							
Problem Description	Overbank floo	oding alon	g Stony Cre	ek				
Strategy	Construct 8' b	y 8' box ci	ulvert to Cal	-Sag Channel a	long COM EI	Oright-of-way		
District Minimum	Met							
Criteria for Funding: Recommended	Yes							
						Maint	Renlacement	·····
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Land Acquisition: Purchase of	f Property *	dollar	398366	\$1	\$398,366	\$0	\$0	50 ft wide x 4800 ft long permanent easement in Com-Ed right of way. Property value estimated at \$144,607/acre
Outlet structures (Headwall): - inches	42 to 66	each	1	\$4,758	\$4,758	\$4,424	\$0	
Pipe under pavement (city): B (51 to 60 ft2)	ox culvert	lf	100	\$661	\$66,103	\$61,475	\$0	Diversion conduit crosses four lane road to Cal Sag channel
Pipe in earth (city): Box culve ft2)	ert (51 to 60	lf	4700	\$472	\$2,218,447	\$2,063,122	\$0	Diversion conduit to Cal Sag Channel
Inlet structures (Headwall): 42	2 to 66 inches	each	1	\$4,758	\$4,758	\$4,424	\$0	C
* Indicates item excluded from	subtotal (e.g. la	and acquisi	tion, buyou	ts)				
Subtotal (direct costs)					\$2,294,065	\$2,133,445	\$0	
Utility Relocation Mobilization \ General Condi	itions			4 % 5%	\$91,763 \$114,703			
Subtotal with Percent Allow Contingency	vances			30%	<b>\$2,500,531</b> \$750,159			
Profit				5%	\$162,535			
Probable Construction Cos	st Estimate				\$3,413,225			
Design Engineering, Geotec and Construction Manageme	hnical, ent			10%	\$341,322			
Property Acquisition Cost:					\$398,366			
Total Conceptual Cost Esti	mate				\$6,286,358			

Additional Comments

Alternative Name	STCR-9									
Problem Description	Q	01.1	1	G., Cl., 1						
Strategy District Minimum	Construct 8 b	Construct o by o box curven to Cat-Sag Channel under Hartenn Ave								
Criteria for Funding:	Met									
Recommended	No									
						Maint.	Replacement			
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues		
Pipe under pavement (city): B (51 to 60 ft2)	Box culvert	lf	8000	\$661	\$5,288,240	\$4,917,982	\$0	8 ft x 8 ft box culvert under Harlem Avenue		
Outlet structures (Headwall): inches	42 to 66	each	1	\$4,758	\$4,758	\$4,424	\$0	Outlet Structure		
Inlet structures (Headwall): 42	2 to 66 inches	each	1	\$4,758	\$4,758	\$4,424	\$0	Inlet Structure		
* Indicates item excluded from	n subtotal (e.g. la	nd acquisi	tion, buyout	s)						
Subtotal (direct costs)					\$5,297,755	\$4,926,831	\$0			
Utility Relocation				4 %	\$211,910 \$264,888					
Mobilization \ General Cond	itions			5%	\$204,888					
Subtotal with Percent Allow Contingency	wances			30%	<b>\$5,774,553</b> \$1,732,366					
Profit				5%	\$375,346					
Probable Construction Cos	st Estimate				\$7,882,265					
Design Engineering, Geotec and Construction Managem	chnical, ent			10%	\$788,226					
Property Acquisition Cost:					\$0					
Total Conceptual Cost Esti	imate			:	\$13,597,322					
Additional Comments										

Alternative Name Problem Description Strategy District Minimum Criteria for Funding: Recommended	TICR-1 Tinley Creek 96" Relief Sev Met No	overbank : wer Under	flooding Central Ave	enue - Increasir	ng conveyance	from Tinley C	reek to Cal-Sag	Channel
		Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Pipe under pavement (city): inches / box culvert (39 to 50	90 to 96 ) ft2)	lf	3150	\$609	\$1,917,405	\$1,783,157	\$0	Length approximated using GIS
Inlet structures (Headwall):	42 to 66 inches	each	2	\$4,758	\$7,136	\$6,637	\$0	96" item not available; markup via quantity
Outlet structures (Headwall) inches	: 42 to 66	each	2	\$4,758	\$7,136	\$6,637	\$0	96" item not available; markup via quantity
* Indicates item excluded from	n subtotal (e.g. la	nd acquisi	tion, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Cond	ditions			4 % 5%	<b>\$1,931,678</b> \$77,267 \$96,584	\$1,796,431	\$0	
Subtotal with Percent Allo Contingency	owances			30%	<b>\$2,105,528</b> \$631,659			
Profit				5%	\$136,859			
Probable Construction Co	ost Estimate				\$2,874,046			
Design Engineering, Geote and Construction Managen	echnical, nent			10%	\$287,405			
Property Acquisition Cost:					\$0			
Total Conceptual Cost Es	timate				\$4,957,882			
Additional Comments								

Alternative Name Problem Description Strategy District Minimum Criteria for Funding:	TICR-2 Reduce peak Impoundment Met	TICR-2 Reduce peak flow downstream Impoundment in Forest Preserve upstream of Oak Park Ave Met									
Recommended	No										
Outlet structures: Concrete s	wale	Unit yd2	Quantity 130	Unit Cost \$98	Base Cost \$12,773	Maint. Cost \$11,878	Replacemen Cost \$0	Notes/Issues overflow weir with concrete drop structure, 60 ft wide weir with 4:1			
								side slopes up 4ft and a concrete slide down to channel 6 ft vertical at 4:1 side slopes			
Pipe in earth (county): Box c 60 ft2)	culvert (51 to	lf	100	\$472	\$47,201	\$43,896	\$0	base flow pipe, 5x5 box culvert			
Inlet structures (Headwall): 4	42 to 66 inches	each	1	\$4,758	\$4,758	\$4,424	\$0	upstream headwalls			
Outlet structures (Headwall) inches	: 42 to 66	each	1	\$4,758	\$4,758	\$4,424	\$0	downstream headwalls			
Land Acquisition: Permanen	tt Easement *	dollar	750000	\$1	\$750,000	\$0	\$0	Assume 10 acre site for area subject to two year inundation (estimated only). Land valued at \$150,000 per acre.			
Channel treatment: Excavati	on	yd3	9457	\$11	\$101,001	\$0	\$0	Excavation of material from upstream in Forest Preserve (roughly equivalent in cost to hauling from offsite, too)			
Channel treatment: Soil stab vegetative cover	ilization and	yd2	4444	\$14	\$61,689	\$57,370	\$14,772	Seed weir embankment ; stabilize structure			
Embankment construction, g restoration: Additional fill	grading and	yd3	9457	\$14	\$131,263	\$0	\$0	Impoundment upstream of Oak Park Ave; Volume calculated based on 50 ft wide structure up to elevation 645 ft.			
Embankment construction, g restoration: Compaction of f	grading and ill	yd3	9457	\$5	\$50,500	\$0	\$0	Compaction of impoundment;			
Wetland: Construct / Mitigat outside Des Plaines watershe	te wetland ed	acre	10	\$60,000	\$600,000	\$557,991	\$0	10 acres of wetland habitat may be impacted by proposed impoundments			

Alternative Name	TICR-2
<b>Problem Description</b>	Reduce peak flow downstream
Strategy	Impoundment in Forest Preserve upstream of Oak Park Ave
District Minimum	Met
Criteria for Funding:	
Recommended	No

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g.	land acquis	ition, buyout	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$1,013,942</b> \$40,558 \$50,697	\$679,984	\$14,772	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$1,105,196</b> \$331,559 \$71,838			
Probable Construction Cost Estimate				\$1,508,593			
Design Engineering, Geotechnical, and Construction Management			10%	\$150,859 \$750,000			
Property Acquisition Cost:				\$750,000			
Total Conceptual Cost Estimate				\$3,104,208			
Additional Comments							

Alternative Name Problem Description Strategy District Minimum Criteria for Funding: Recommended	TICR-3 Tinely Creek Build/Reinfo Met Yes	overbank f	flooding nor ith 3' freebo	th to Cal-Sag 6 bard on both side	es of bank upst	ream of Cent	ral Ave - Raise	bank elevation
						Maint.	Replacement	:
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues
Embankment construction, gra restoration: Material hauled fr	ading and rom offsite	yd3	3700	\$11	\$39,516	\$0	\$0	Levee construction assuming 4.5 ft height, 5ft top width, and 3:1 side slope. Length (1200ft) approximated with GIS.
Embankment construction, gra restoration: Additional fill	ading and	yd3	3700	\$14	\$51,356	\$0	\$0	Place fill for levee
Embankment construction, gra restoration: Compaction of fil	ading and l	yd3	3700	\$5	\$19,758	\$0	\$0	Compact levee material
Channel treatment: Vegetative	e cover only	yd2	3196	\$9	\$27,294	\$25,383	\$6,536	Seed levee surface
Land Acquisition: Permanent	Easement *	dollar	72715	\$1	\$72,715	\$0	\$0	1400 ft x 25 ft levee easement on propety estimated at value of \$181,000
Embankment construction, gra restoration: Material hauled fr	ading and om offsite	yd3	2186	\$11	\$23,346	\$0	\$0	Construct levee on SE side of river roughly 2,000 ft in length with average height of 1.8 ft (range 0-5) with average width of 16 ft, providing 3 ft of freeboard above estimated 100 vr WSEL
Embankment construction, gra restoration: Additional fill	ading and	yd3	2186	\$14	\$30,342	\$0	\$0	Place fill for levee
Embankment construction, gra restoration: Compaction of fil	ading and l	yd3	2186	\$5	\$11,673	\$0	\$0	Compact levee material
Channel treatment: Vegetative	e cover only	yd2	3427	\$9	\$29,267	\$27,217	\$7,008	Seed levee surface
Land Acquisition: Permanent	Easement *	dollar	191660	\$1	\$191,660	\$0	\$0	Permanent Easement 2000 ft in length by roughly 40 ft wide (avg width + 25 ft) (1.87 ac estimated at \$180,000)
Pump Station: 10ac-ft per day drainage	interior	each	1	\$800,000	\$800,000	\$743,988	\$0	Pumping station on SE side of stream to dewater area on other side of levee

Alternative Name	TICR-3
Problem Description	Tinely Creek overbank flooding north to Cal-Sag 6
Strategy	Build/Reinforce levee with 3' freeboard on both sides of bank upstream of Central Ave - Raise bank elevation
District Minimum	Met
Criteria for Funding:	
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g. la	and acquis	ition, buyout	s)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$1,032,552</b> \$41,302 \$51,628	\$796,588	\$13,544	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$1,125,481</b> \$337,644 \$73,156			
Probable Construction Cost Estimate				\$1,536,282			
Design Engineering, Geotechnical, and Construction Management			10%	\$153,628			
Property Acquisition Cost:				\$264,375			
Total Conceptual Cost Estimate				\$2,764,418			
Additional Comments							

Alternative Name	TICR-3B		alan Carald	<u>-</u> - <u>-</u> - <u>-</u> 12	741- 04							
Strategy	Build/Reinfo	Build/Reinforce 3' levee upstream of Central Ave with additional compensatory storage										
District Minimum	Met					pj						
Criteria for Funding:	Net											
Recommended	No											
						Maint.	Replacement					
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues				
Embankment construction, restoration: Material hauled	grading and I from offsite	yd3	3700	\$11	\$39,516	\$0	\$0	Levee construction assuming 4.5 ft height, 5ft top width, and 3:1 side slope. Length (1200ft) approximated with GIS				
Embankment construction, restoration: Additional fill	grading and	yd3	3700	\$14	\$51,356	\$0	\$0	Place fill for levee				
Embankment construction, restoration: Compaction of	grading and fill	yd3	3700	\$5	\$19,758	\$0	\$0	Compact levee material				
Channel treatment: Vegetat	ive cover only	yd2	3196	\$9	\$27,294	\$25,383	\$6,536	Seed levee surface				
Land Acquisition: Permane	nt Easement *	dollar	72715	\$1	\$72,715	\$0	\$0	1400 ft x 25 ft levee easement on propety estimated at value of \$181,000				
Channel treatment: Excavat	tion	yd3	112933	\$11	\$1,206,124	\$0	\$0	Excavation of 45 ac-ft of storage to mitigate for lost floodplain storage. Selected site requires 70 ac-ft of excavation				
Channel treatment: Materia offsite	l to be hauled	yd3	56466	\$12	\$663,476	\$0	\$0	Assume half of excavted materials are hauled off site, and the remainder regraded in adjacent areas				
Channel treatment: Vegetat	ive cover only	yd2	53240	\$9	\$454,670	\$422,836	\$108,872	Vegetation of 11 acre site				
Land Acquisition: Permane	nt Easement *	dollar	675000	\$1	\$675,000	\$0	\$0	Assume 9 acres necessary, at \$150,000				
Channel treatment: Compac	ction	yd3	56466	\$7	\$422,366	\$0	\$0	Half of excavated material is compacted in surrounding area				

Alternative Name	TICR-3B
<b>Problem Description</b>	Flooding upstream of Tinley Creek's crossing of 127th Street
Strategy	Build/Reinforce 3' levee upstream of Central Ave with additional compensatory storage
District Minimum	Met
Criteria for Funding:	Wet
Recommended	No

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g.	land acquis	sition, buyou	ts)				
Subtotal (direct costs) Utility Relocation Mobilization \ General Conditions			4 % 5%	<b>\$2,884,559</b> \$115,382 \$144,228	\$448,219	\$115,408	
Subtotal with Percent Allowances Contingency Profit			30% 5%	<b>\$3,144,169</b> \$943,251 \$204,371			
Probable Construction Cost Estimate				\$4,291,791			
Design Engineering, Geotechnical, and Construction Management			10%	\$429,179			
Property Acquisition Cost:				\$747,715			
Total Conceptual Cost Estimate				\$6,032,312			
Additional Comments							

Alternative Name	TICR-5									
Problem Description Strategy	Dredge appro	Dredge approximately 1500 ft downstream of Lake Lorin								
District Minimum Criteria for Funding: Recommended	Met									
	Yes									
		Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	t Notes/Issues		
maintenance: Small Channel Maintenance (Brush and debris removal)		lf	1500	\$5	\$7,500	\$6,975	\$1,796	removal of any derbis		
Channel treatment: Excavat	ion	yd3	2500	\$11	\$26,700	\$0	\$0	Assume 30 ft wide by 1.5 ft deep by 1500 ft long		
Channel treatment: Material offsite	l to be hauled	yd3	2500	\$12	\$29,375	\$0	\$0	Remove excavated material		
* Indicates item excluded fro	m subtotal (e.g. la	and acquis	ition, buyout	ts)						
Subtotal (direct costs) Utility Relocation Mobilization \ General Con	ditions			4 % 5%	<b>\$63,575</b> \$2,543 \$3,179	\$6,975	\$1,796			
Subtotal with Percent Alle Contingency	owances			30%	<b>\$69,297</b> \$20,789					
Profit				5%	\$4,504					
Probable Construction Co	ost Estimate				\$94,590					
Design Engineering, Geote and Construction Manager	echnical, ment			10%	\$9,459					
Property Acquisition Cost:					\$0					
Total Conceptual Cost Es	stimate				\$112,820					
Additional Comments										

	TICD 7									
Alternative Name Problem Description Strategy District Minimum	TICR-7 TICR erosion problem, concrete stabilization stabilize bank to prevent erosion for a total of 850 LF; 700 LF of stabilation on both sides of stream upstream									
Criteria for Funding:	Ves									
Recommended	105									
						Maint.	Replacement			
		Unit	Quantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues		
Channel treatment: Reinforced concrete channel	l trapezoidal	yd3	944	\$587	\$554,458	\$515,638	\$0	l depth concrete wall, 30ft width (perimeter of trapezoidal channel), 2300 ft length		
Channel treatment: Vegetative cover only		yd2	378	\$9	\$3,228	\$3,002	\$773	2 ft wide buffer at top of bank, 2300 ft length (x 2 sides)		
Channel treatment: Compactio	n	yd3	633	\$7	\$4,735	\$0	\$0	underneath concrete 1.5 ft depth, 30 ft width (perimeter of trapezoidal channel)		
Channel treatment: Excavation	1	yd3	1417	\$11	\$15,134	\$0	\$0	2300 ft length		
Channel treatment: Material to offsite	be hauled	yd3	784	\$12	\$9,212	\$0	\$0	difference between excavation and compaction		
* Indicates item excluded from	subtotal (e.g. la	nd acquis	ition, buyout	ts)						
Subtotal (direct costs)				,	\$586,767	\$518,640	\$773			
Utility Relocation Mobilization \ General Condit	tions			4 % 5%	\$23,471 \$29,338					
Subtotal with Percent Allow Contingency	ances			30%	<b>\$639,576</b> \$191,873					
Profit				5%	\$41,572					
Probable Construction Cos	t Estimate				\$873,021					
Design Engineering, Geotech and Construction Manageme	nnical, ent			10%	\$87,302					
Property Acquisition Cost:					\$0					
Total Conceptual Cost Estir	nate				\$1,479,736					
Additional Comments										

Alternative Name	TICR-8								
Problem Description Strategy	TICR erosion problem stabilize bank to prevent erosion. Total length of 1,775 LF of stabilization required: 450 LF upstream of 159th St								
District Minimum	Met								
Recommended	Yes								
						Maint	Renlacement		
		Unit	Ouantity	Unit Cost	Base Cost	Cost	Cost	Notes/Issues	
Channel treatment: Reinforced concrete channel	l trapezoidal	yd3	2958	\$587	\$1,737,381	\$1,615,738	\$0	1 depth concrete wall, 45ft width (perimeter of trapezoidal channel), 1,775 ft length	
Channel treatment: Vegetative	cover only	yd2	789	\$9	\$6,738	\$6,266	\$1,613	2 ft wide buffer at top of bank, 1775 ft length, compacteed earth for stabilized base	
Channel treatment: Compactio	n	yd3	1982	\$7	\$14,825	\$0	\$0	underneath concrete 1.5 ft depth, 45 ft width (perimeter of trapezoidal channel)	
Channel treatment: Excavation	1	yd3	4438	\$11	\$47,398	\$0	\$0	1775 ft length	
Channel treatment: Material to offsite	be hauled	yd3	2455	\$12	\$28,846	\$0	\$0	difference between excavation and compaction	
* Indicates item excluded from	subtotal (e.g. la	nd acquis	ition, buyout	s)					
Subtotal (direct costs) Utility Relocation Mobilization \ General Condit	tions			4 % 5%	<b>\$1,835,189</b> \$73,408 \$91,759	\$1,622,004	\$1,613		
Subtotal with Percent Allow Contingency	vances			30%	<b>\$2,000,356</b> \$600,107				
Profit				5%	\$130,023				
Probable Construction Cos	t Estimate				\$2,730,486				
Design Engineering, Geotech and Construction Manageme	nnical, ent			10%	\$273,049				
Property Acquisition Cost:					\$0				
Total Conceptual Cost Estir	nate				\$4,627,152				
Additional Comments									