NOTICE OF MEETING

PUBLIC IMPROVEMENTS
STREETS/SEWERS/DRAINAGE COMMITTEE
Tom Henderson, Chair
Paul Vincent
Dwight Clark

Tuesday, May 3, 2016
6:30 p.m.

Conference Room
Bay Village City Hall

Agenda

Bruce/Russell/Douglas and Sunset Sewer Projects

Bay Village City Council
Public Improvements Committee

Discussion Document for May 3, 2016

This document contains preliminary data, draft analyses and other information for review by the Public Improvements Committee; it contains no decisions, recommendations or approvals.

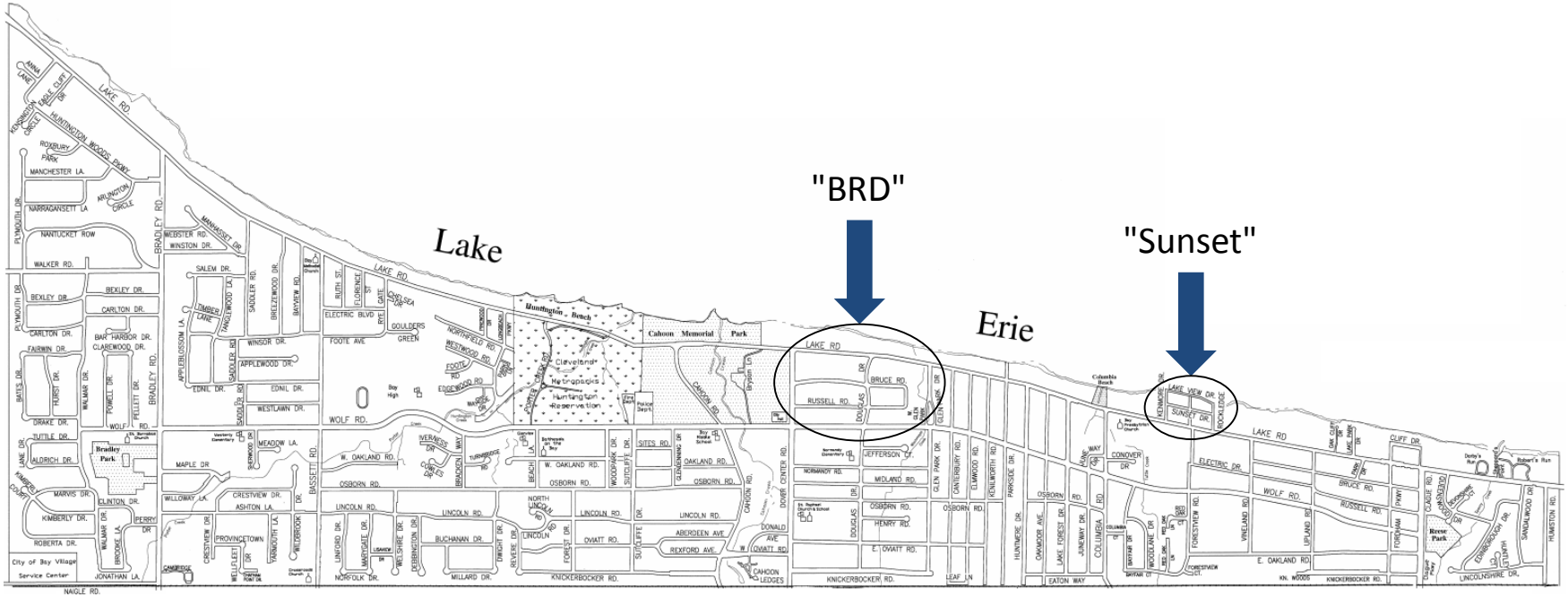
Discussion Outline

- Situation Review
- Bruce/Russell/Douglas
- Sunset
- Path Forward

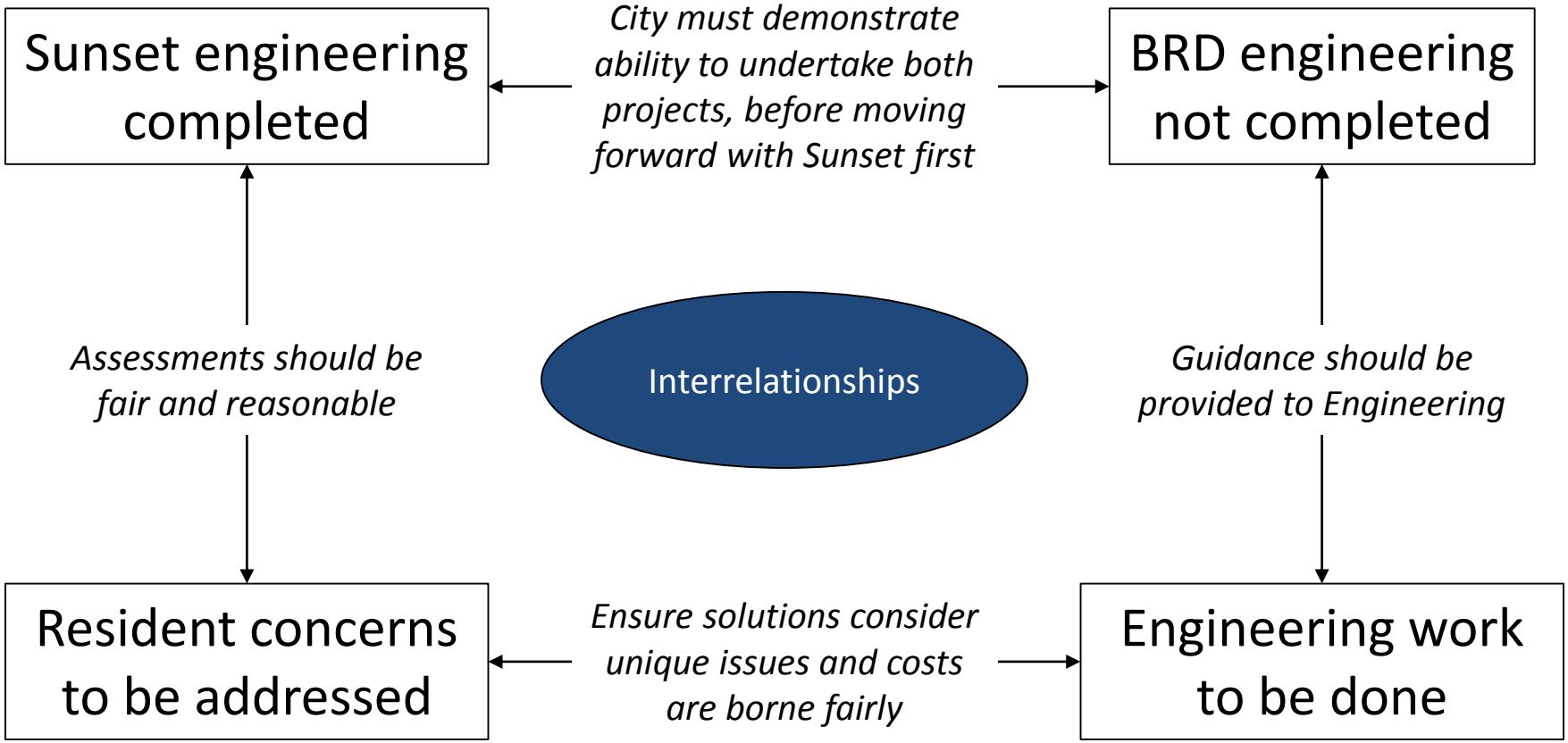
Situation Review

Situation Review

- Two projects: Bruce/Russell/Douglas area ("BRD") and the Sunset Neighborhood ("Sunset")
  - The BRD project addresses a US EPA administrative order dating back to 2009
  - The Sunset project addresses infrastructure issues dating back to at least the early 1980s
- Administration currently recommends:
  - Move forward with Sunset construction first, then begin BRD construction second
  - Simultaneously make progress on BRD engineering, even as Sunset ramps up



Situation Review: Project Interrelationships



Situation Review: Goals

1. Formalize support for one of the **BRD** "options" provided to Council so that engineering can move forward, with the understanding that further refinement will be required

2. Develop consensus that even under a worst case scenario (i.e., highest cost scenario) for BRD, the City will be able to afford to conduct **both projects**

3. Advance the 30+ year situation in **Sunset** by alleviating unprecedented assessments, while ensuring that the solution remains fair for all stakeholders

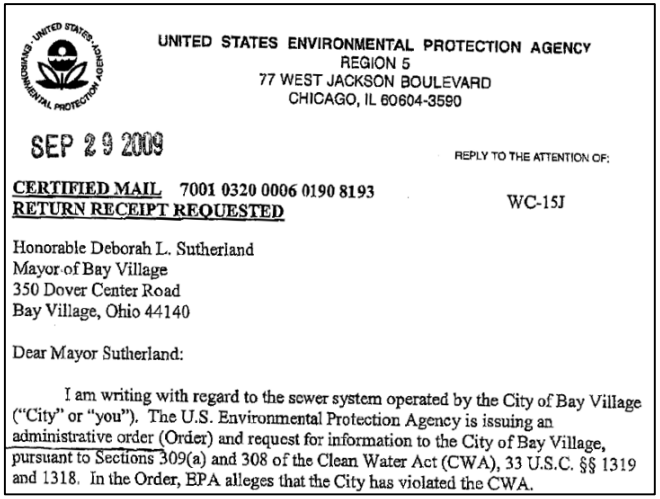
Bruce/Russell/Douglas

BRD: Benefits Associated with the BRD Project

- Resolve US **EPA administrative order** to address discharge of untreated sanitary waste in the form of sanitary sewer overflows ("SSOs")

- Under certain options, the project may reduce flow of clean water from Bay Village to the **Waste Water Treatment Plant (WWTP)**
  - Bay Village's portion of the WWTP's budget increased from 16% in a 2009 study to 25% in a 2013 study – increasing Bay's sewer bills
  - 71% of the water flowing from Bay to the WWTP is clean water
  - Reducing flow of clean water may reduce the WWTP's operating costs and/or reduce Bay Village's portion of the WWTP's budget

- Under certain options, the project may reduce the probability of **flooding**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

SEP 29 2009

REPLY TO THE ATTENTION OF:

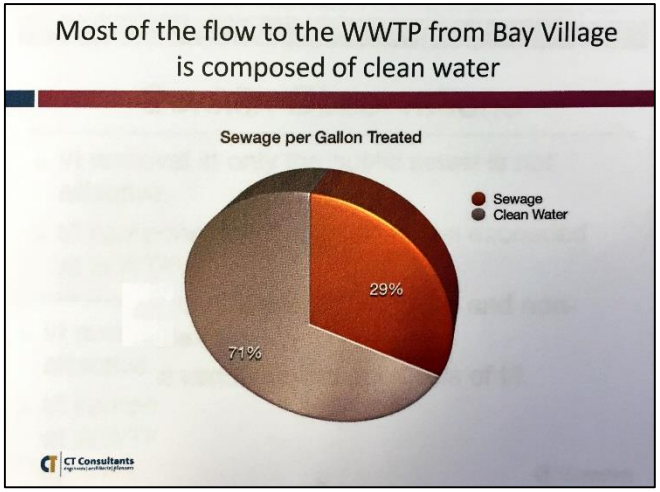
CERTIFIED MAIL 7001 0320 0006 0190 8193
RETURN RECEIPT REQUESTED

WC-15J

Honorable Deborah L. Sutherland
Mayor of Bay Village
350 Dover Center Road
Bay Village, Ohio 44140

Dear Mayor Sutherland:

I am writing with regard to the sewer system operated by the City of Bay Village ("City" or "you"). The U.S. Environmental Protection Agency is issuing an administrative order (Order) and request for information to the City of Bay Village, pursuant to Sections 309(a) and 308 of the Clean Water Act (CWA), 33 U.S.C. §§ 1319 and 1318. In the Order, EPA alleges that the City has violated the CWA.



BRD: Recent History

- Winter 2011: Sewers tested to check for leaks into the sanitary sewer
  - No leaks were found
- Spring 2012: Homes tested to determine if downspouts were connected to sanitary
  - 33% of homes were connected to sanitary instead of storm
- Summer 2014: Homes tested to determine if foundation drains were connected to sanitary
  - 80% of homes were connected to sanitary instead of storm
- Summer 2015: Engineering consultant engaged to provide potential solution
- September 2015: Town Hall Meeting at Dwyer Center regarding potential solution
  - The potential engineering solution and cost sharing plan was presented to residents
  - Residents communicated various concerns, including:
    - Concern that the solution may not reduce the probability of flooding
    - Belief that it was unfair to burden BRD-area residents with significant costs because resolving the EPA's order benefits all residents, not just those in the BRD-area
    - Belief that it was unfair to burden BRD-area residents with significant costs because reducing flow to the WWTP benefits all residents, not just those in the BRD-area
    - Belief that residents who had received authorization from the City to connect their drains to the sewer should not be required to update connections at their own expense

BRD: Three Options Presented to the PI Committee

- In response to concerns from residents and Council, the Administration presented three "Options" to the current Public Improvements Committee on January 25, 2016:
- The Administration recommends **Option 2** (increase size of storm sewer)

	Option 1	Option 2	Option 3
Core Concept	Increase **sanitary** size; large pump station; all in public right of way	Increase **storm** size; medium pump station; public & private work	Install **sump pumps**; medium pump station; all on private property
Address EPA Issue	Yes	Yes	Yes
Address WWTP clean water issue	No	Yes	Yes
Address Basement Flooding Issue	Partially	Partially	Yes, if pumps work
Considerations	Does not reduce flow of clean water to WWTP	Highest cost; requires work on private prop.	Major work on private prop.; execution risk
Cost	$3,420,000	$4,654,000	$806,000

BRD: Cost Breakdown

- All costs are **preliminary estimates**; further engineering is required once selection is finalized
- The Administration recommends **Option 2** (increase size of storm sewer)

	Option 1	Option 2	Option 3
Sanitary Sewer (100 Year Event Size)	$2,040,000		-
Storm Sewer (100 Year Event Size)*	-	$3,545,000	-
Pump Station	$830,000	$150,000	$150,000
Force Main	$150,000	$40,000	$40,000
Lateral Connections	-	$420,000	-
Private Property Corrections **	-	$250,000	$558,000
SUBTOTAL: Construction	**$3,020,000**	**$4,405,000**	**$748,000**
Engineering	$400,000	$249,000	$58,000
TOTAL: Construction and Engineering	**$3,420,000**	**$4,654,000**	**$806,000**

* The 100-Year Event Size is shown for full cost consideration (this costs $545,000 more than the 25 Year Event Size)

** Private property corrections represent connections to the new storm sewer in Option 2 and sump pumps in Option 3

BRD: Proposed Timeline

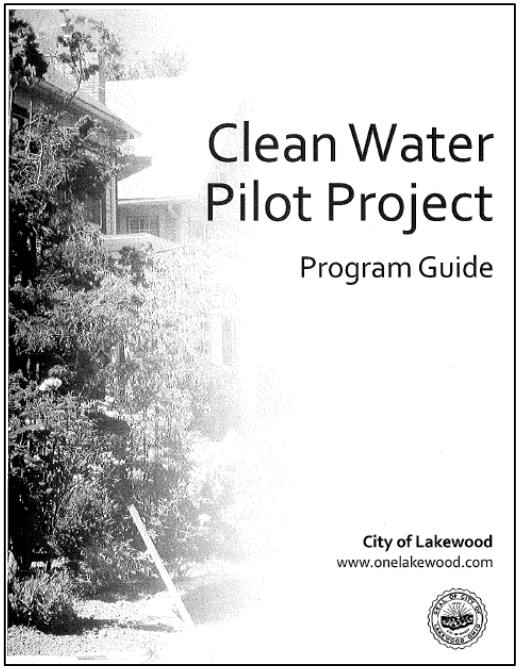
- The Administration recommends **Option 2** (increase size of storm sewer) across this timeline:

Item No.	Action	Time Frame	Date	Notes
1	Engineering of Storm Sewer Improvements	6/01/16 - 6/01/17		One year time frame
2	Advertisement for bids	Completion of engineering	6/1/2017	
3	Bids received and reviewed	Engineering review	7/30/2017	one month review
4	Council review and passage of ordiance to accept bid	Based on recommendation	8/1/2017	
5	Construction Agreement signed	30 days	8/30/2017	
6	Construction begins	anticipated 9 months	9/17-6/18	
7	Request for proposals from outside contractors for private property corrections.	This can begin during the construction process	3/1/2018	Review and homeowner waiver
8	Corrections on private property	6 month process	6/18-12/18	
9	Flow monitoring	Spring of 2019		

This document contains preliminary data, draft analyses and other information for review by the Public Improvements Committee; it contains no decisions, recommendations or approvals.

BRD: Similar Situation in Lakewood

- In 2015, **Lakewood** initiated a "**Clean Water Pilot Project**"
- Rationale included:
  - "The city's sewer system is plagued with significant inflow and infiltration … This results in sewage overflows…"
  - "…**administrative consent order with the U.S. EPA** …"
  - "The majority of rainfall that enters the sanitary sewer system comes from sources on private property."
- Scope included:
  - "The city has engaged its own employees and contractors to … access each basement and yard … inventory all sewer connections, identify design options for the correction of any violations and arrange for and conduct corrections…"
  - "[Solutions] may include installation of a **sump pump** … a pressure driven backup sump pump or battery powered backup sump pump … downspout diverters … lateral pipes … "
- Financing included:
  - "…the city will pay for 100% of initial property correction … you will be responsible to repay just **10% of the cost** of any correction per parcel … [over] 10 years at 0% interest"
  - "If you fail to opt in … you must bear the full expense of the corrections"



BRD: Potential Approach to Cost-Sharing Structure

- Lakewood's "Clean Water Pilot Project" offers a point of reference:
  - Resolution 8794-16 authorized funding for an amount not to exceed $900,000 for the pilot
  - 90% of the cost potentially assessable to residents is to be borne by the City of Lakewood
  - 10% of the cost potentially assessable to residents is to be borne by the residents
  - Actual costs per household expected to not exceed $7,500; some may be "much more"
  - 102 parcels are involved in the project

- Per discussions with CT Consulting, Lakewood felt it was not reasonable for the City to pay for 100% of the corrections on private property since residents would own the installed assets, but felt it was reasonable to pay for 90% of the corrections since it was a pilot project

- During Bay's September 2015 Town Hall Meeting, residents expressed the belief that it was unfair to burden BRD-area residents with project costs because benefits accrue to all residents
  - Resolving the EPA's administrative order benefits all residents
  - Reducing the amount of clean water flowing to the WWTP benefits all residents

- Bay Village could consider applying concepts from Lakewood's project (e.g., 90%/10% split)

BRD: Potential Cost Sharing Structure: Option 1

- The concept of sharing private property corrections is not applicable to Option 1 (bigger sanitary) because all of the work under this option occurs in the public right of way

	Option 1 City Cost	Option 1 Resident Cost	Option 1 Total Cost
Sanitary Sewer (100 Year Event Size)	$2,040,000	-	$2,040,000
Storm Sewer (100 Year Event Size)	-	-	-
Pump Station	$830,000	-	$830,000
Force Main	$150,000	-	$150,000
Lateral Connections	-	-	-
Private Property Corrections	-	-	-
SUBTOTAL: Construction	**$3,020,000**	**-**	**$3,020,000**
Engineering	$400,000	-	$400,000
TOTAL: Construction and Engineering	**$3,420,000**	**-**	**$3,420,000**

PI CMTE 05/03/16

BRD: Potential Cost Sharing Structure: Option 2

- If the cost private property corrections under Option 2 (bigger storm) were shared such that the City of Bay Village paid **90%** of the total cost and residents paid **10%** of the cost, then:

	Option 2 City Cost	Option 2 Resident Cost	Option 2 Total Cost
Sanitary Sewer (100 Year Event Size)	-	-	-
Storm Sewer (100 Year Event Size)*	$3,545,000	-	$3,545,000
Pump Station	$150,000	-	$150,000
Force Main	$40,000	-	$40,000
Lateral Connections	$420,000	-	$420,000
Private Property Corrections**	$225,000	$25,000	$250,000
SUBTOTAL: Construction	**$4,380,000**	**$25,000**	**$4,405,000**
Engineering	$249,000	-	$249,000
TOTAL: Construction and Engineering	**$4,629,000**	**$25,000**	**$4,654,000**

* The 100-Year Event Size is shown for full cost consideration (this costs $545,000 more than the 25 Year Event Size)

** Private property corrections represent connections to the new storm sewer in Option 2

BRD: Potential Cost Sharing Structure: Option 3

- If the cost private property corrections under Option 3 (sump pumps) were shared such that the City of Bay Village paid **90%** of the total cost and residents paid **10%** of the cost, then:

	Option 3 City Cost	Option 3 Resident Cost	Option 3 Total Cost
Sanitary Sewer (100 Year Event Size)	-	-	-
Storm Sewer (100 Year Event Size)	-	-	-
Pump Station	$150,000	-	$150,000
Force Main	$40,000	-	$40,000
Lateral Connections	-	-	-
Private Property Corrections**	$502,200	$55,800	$558,000
SUBTOTAL: Construction	**$692,200**	**$55,800**	**$748,000**
Engineering	$58,000	-	$58,000
TOTAL: Construction and Engineering	**$750,200**	**$55,800**	**$806,000**

** Private property corrections represent sump pumps in Option 3

BRD: Goals Review

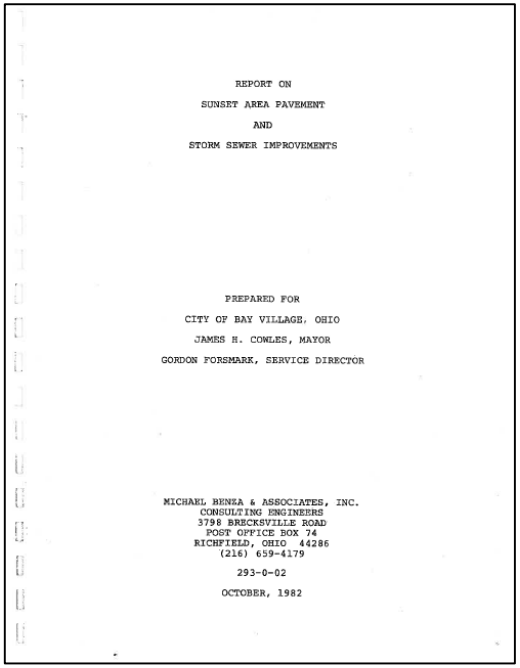
1. Formalize support for one of the **BRD** "options" provided to Council so that engineering can move forward, with the understanding that further refinement will be required
   - Option 1 does not reduce the flow of clean water to the WWTP
   - Option 2 is recommended by the Administration, but is the most expensive option
   - Option 3 is similar to Lakewood's program, but involves execution risk and would require an ordinance enabling the City to charge non-compliance penalties and to enable the City to cause violations of such ordinances to be abated (e.g., Chapter 913, Chapter 916)

2. Develop consensus that even under a worst case scenario (i.e., highest cost scenario) for BRD, the City will be able to afford to conduct **both projects**
   - Option #2 with 100-Year Event Storm has an estimated total cost of $4,654,000
   - This is the highest cost scenario. Therefore, it is a reasonable to consider this figure when determining whether the City will be able to afford to conduct both BRD and Sunset
   - The City should be able to demonstrate that it can afford both projects before moving forward with Sunset, since BRD is associated with an EPA administrative order
   - The next section of this document reviews the costs associated with Sunset
   - After the section on Sunset, the costs of BRD and Sunset will be combined
   - A debt capacity analysis considering the cost of both projects is then presented

Sunset

Sunset: Historical Perspective – 1982

- The Sunset neighborhood project has a long history
- An **October 1982** "Report on Sunset Area Pavement and Storm Sewer Improvements" report indicated:
  - "One of two remaining areas with the City of Bay Village that do not have permanent type pavements"
  - "Since there is no storm sewer in the area, it is suspected that many of those houses have their footer drains and/or downspouts connected to the sanitary"
- The consulting engineer recommended and stated:
  - $270,000 for construction of roadways
  - $200,000 for construction of a storm sewer line
  - No contingency was documented, but 10% is common
  - Total, including a 10% contingency = $517,000 in 1982
  - Due to inflation, $517,000 in 1982 is equivalent to **$1,313,180** today per the Engineering News Record Construction Cost Index (ENR-CCI)
  - "In the past, the City portion has averaged **15%** of the project cost" (i.e., **85%** assessed)



REPORT ON
SUNSET AREA PAVEMENT
AND
STORM SEWER IMPROVEMENTS

PREPARED FOR
CITY OF BAY VILLAGE, OHIO
JAMES H. COWLES, MAYOR
GORDON FORSMARK, SERVICE DIRECTOR

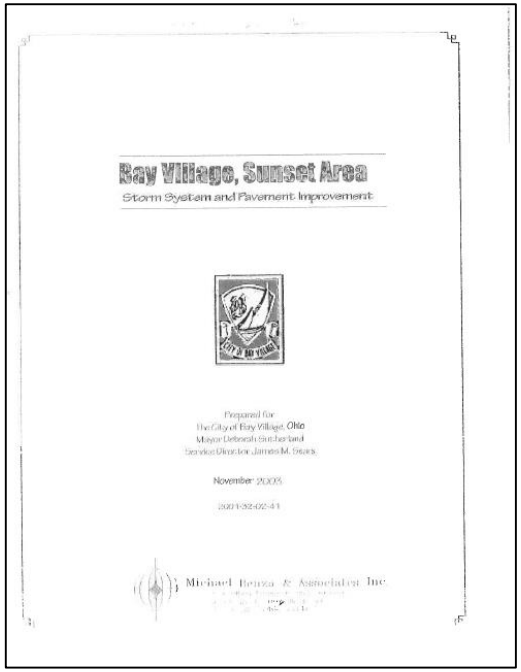
MICHAEL BENEA & ASSOCIATES, INC.
CONSULTING ENGINEERS
3798 BRECKSVILLE ROAD
POST OFFICE BOX 74
RICHFIELD, OHIO 44286
(216) 659-4179

293-0-02

OCTOBER, 1982

Sunset: Historical Perspective – 2003

- A **November 2003** report titled "Bay Village Sunset Area Storm System and Pavement Improvement" indicated:
  - "The existing pavement structure is referred to as chip and seal pavement … Normally, [this] is not considered to be permanent or structurally adequate pavement."
  - "The Sunset Area has no defined surface or subsurface storm water drainage system."
  - "In 1994 … a storm line was installed along Rockledge Drive … as part of the Lake Road Improvement [project]."
- The consulting engineer recommended and stated:
  - $821,000 for a storm sewer and concrete pavement
  - That figure includes engineering and contingency costs
  - Due to inflation, $821,000 in 2003 is equivalent to **$1,347,261** today per the Engineering News Record Construction Cost Index (ENR-CCI)
  - "We assume that the City will be responsible for **75%** of the total cost and the remaining **25%** would be assessed to the property owners."


Bay Village, Sunset Area

Storm System and Pavement Improvement

Prepared for
The City of Bay Village, Ohio
Mayor Deborah Sutherland
Service Director James M. Evans

November 2003

Michael Baumann & Associates, Inc.

Sunset: Recent History – 2015 (Uses of Funds)

- In 2015, CT Consultants proposed a project similar to past Sunset proposals, which included roadway and storm sewer installation

	Recent History (2015)
Roadway*	$521,777
Storm*	$446,515
Sanitary	-
Water	-
Miscellaneous	Not Avail.
Contingency	$86,378
SUBTOTAL: Construction	**$1,054,670**
Engineering, Inspection, Interest, etc.	$327,927
TOTAL: Construction and Engineering	**$1,382,597**

* Roadway and storm construction costs were not separately available for this document; values are based 2016 proposal (see subsequent pages). The total construction costs and engineering/etc. costs are directly from 2015 documentation.

Sunset: Recent History – 2015 (Sources of Funds)

- In 2015, CT Consultants proposed a project similar to past Sunset proposals, which included roadway and storm sewer installation; 65% of the cost was to be assessed to residents

	City	Residents	Total
Local share	$27,652	-	$27,652
Intersections	$211,751	-	$211,751
Excess of property valuations	$239,046	-	$239,046
Repair of sanitary sewers	N/A	N/A	N/A
Replacement of water mains	N/A	N/A	N/A
Soft costs & contingency for sanitary/water	N/A	N/A	N/A
Contribution to reduce assessments	N/A	N/A	N/A
Assessed to residents	-	$904,148	$904,148
Total	**$478,449**	**$904,148**	**$1,382,597**
Percent of Total	**35%**	**65%**	

Sunset: Recent History – 2015 (Assessments)

- In the 2015 proposal, the $904,148 of total assessments (65% of the total project cost) resulted in a mean assessment per parcel of $18,836 and a max per parcel of $48,257

House No	Last Name	First Name	Parcel Number	Frontage Based on Auditor's Legal Frontage	Frontage Based on Auditor's Effective Frontage	Assessible Frontage Used	Corner Lot Frontage Based on Auditor's Legal Frontage	Corner Lot Frontage Based on Auditor's Effective Frontage	Assessible Corner Lot Frontage Used	Total Assessible Frontage Used	Tentative Preliminary Frontage Assessment	Current Market Value	Maximum Assessment 33%	Preliminary Frontage Assessment	Maximum Assessment Exceeded?	Unassessed Amount to City Portion
Forestview Road																
328	Garrity	Regis	204-14-034	75.32	75.32	75.32	100	100	100	100.32	$ 25,830.29	$ 138,200	$ 45,606	$ 25,830.29		
Kenmore Drive																
300	Stearns	Kim	204-09-029	120	166	120				120	$ 30,897.47	$ 576,600	$ 190,278	$ 30,897.47		
320	Barack	William and Susan	204-09-030	80	80	80				80	$ 20,598.32		$ -	$ 20,598.32		
329	Foster	Jeffrey and Erin	204-09-020	74.66	74.66	74.66	100	100	100	99.66	$ 25,660.35	$ 197,300	$ 65,109	$ 25,660.35		
332	Galang	Anthony and Dawn	204-09-031	75	75	75				75	$ 19,310.92	$ 494,000	$ 163,020	$ 19,310.92		
336	Wise	Richard and Mary	204-09-032	78	78	78				78	$ 20,083.36	$ 185,000	$ 61,050	$ 20,083.36		
341	Hartman	Barbara	204-09-018	74.66	74.66	74.66	100	100	100	99.66	$ 25,660.35	$ 154,900	$ 51,117	$ 25,660.35		
342	Voss	Jennifer and Elwin	204-09-010	105	105	105	157.42	157.42	157.42	144.36	$ 37,168.37	$ 239,800	$ 79,134	$ 37,168.37		
Lake Road																
24744	Zimmerman	Donald	204-14-012	111.86	111.86	111.86	302.26	302.26	302.26	187.43	$ 48,257.99	$ 399,300	$ 131,769	$ 48,257.99		
24800	Krepop	Kevin	204-14-011	59.59	59.59	59.59	145.87	145.87	145.87	96.06	$ 24,732.78	$ 216,600	$ 71,478	$ 24,732.78		
24928	Davis	Edward and Mary	204-14-005	50	50	50	150	150	150	87.50	$ 22,529.41	$ 141,800	$ 46,794	$ 22,529.41		
25008	Denk, Sr	Josef K. Trustee	204-14-004	51.65	51.65	51.65	150	150	150	89.15	$ 22,954.25	$ 122,600	$ 40,458	$ 22,954.25		
25098	DeRubba	Diane	204-09-011	51.65	51.65	51.65	150	150	150	89.15	$ 22,954.25	$ 171,800	$ 56,694	$ 22,954.25		
Lakeview Drive																
24805	Krebs	Martha	204-14-044	130.5	130.5	130.5	72.95	72.95	72.95	105.58	$ 27,183.34	$ 460,100	$ 151,833	$ 27,183.34		
24815	Prendergast	Michael	204-14-047	43.5	43.5	43.5				43.5	$ 11,200.33	$ 197,900	$ 65,307	$ 11,200.33		
24901	Brill	David	204-14-048	83.5	84	84				84	$ 21,628.23	$ 210,300	$ 69,399	$ 21,628.23		
24913	Deutschman	Daniel	204-14-050	71.6	71.6	71.6				71.6	$ 18,435.49	$ 480,000	$ 158,400	$ 18,435.49		
24915	Marconi	James, Trustee	204-14-052	48.4	48.4	48.4	115	115	115	77.15	$ 19,864.50	$ 512,300	$ 169,059	$ 19,864.50		
25001	O'Malley	Judith, Trustee	204-14-053	37.33	37.33	37.33	100	100	100	62.33	$ 16,048.66	$ 387,500	$ 127,875	$ 16,048.66		
25005	Marquardt	Thomas	204-14-054	37.3	37	37.3				37.3	$ 9,603.96	$ 217,800	$ 71,874	$ 9,603.96		
25011	Stewart	Dorothy	204-14-055	93.3	93	93.3				93.3	$ 24,022.79	$ 246,800	$ 81,444	$ 24,022.79		
25021	Donahoo	Delbert, Trustee	204-09-024	74	74	74				74	$ 19,053.44	$ 247,500	$ 81,675	$ 19,053.44		
25029	Viezer	Timothy and Joani	204-09-025	55	55	55				55	$ 14,161.34	$ 431,500	$ 142,395	$ 14,161.34		
25033	McNulty	Dennis and Jill	204-09-026	37	37	37				37	$ 9,526.72	$ 477,000	$ 157,410	$ 9,526.72		
25035	Busdiecker	Kevin	204-09-027	37.35	37.35	37.35	100	100	100	62.35	$ 16,053.81	$ 394,200	$ 130,086	$ 16,053.81		
	Bay Park Beach Co		204-09-028	-	-	850				850	$ 218,857.11	$ 2,300	$ 759	$ 759.00	Yes, cap at $759	$ 218,098.11
Rockledge Drive																
301	Cook	John and Pamela	204-14-058	110.9	111	111				111	$ 28,580.16	$ 1,007,700	$ 332,541	$ 28,580.16		
Sunset Drive																
24801	Arvidson	Cynthia	204-14-020	40	40	40	100	100	100	65	$ 16,736.13	$ 119,300	$ 39,369	$ 16,736.13		
24805	Berente	Katherine	204-14-021	40	40	40				40	$ 10,299.16	$ 136,700	$ 45,111	$ 10,299.16		
24810	Maurer	Sue and Jeff	204-14-040	40	40	40				40	$ 10,299.16	$ 215,400	$ 71,082	$ 10,299.16		
24811	Battisti	Linda	204-14-022	58	58	58				58	$ 14,933.78	$ 202,400	$ 66,792	$ 14,933.78		
24817	Bennett	Marilyn	204-14-023	62	62	62				62	$ 15,963.70	$ 180,800	$ 59,664	$ 15,963.70		
24911	Marconi	Robert and Lisa	204-14-024	80	80	80				80	$ 20,598.32	$ 304,700	$ 100,551	$ 20,598.32		
24919	Mengerink	Bill and Anne	204-14-026	80	80	80	100	100	100	105	$ 27,035.29	$ 285,100	$ 94,083	$ 27,035.29		
24920	Lorton	Stephen	204-14-035	120	120	120	85	85	85	115	$ 29,610.08	$ 209,500	$ 69,135	$ 29,610.08		
25001	Bagnall	Suzanne	204-14-028	37.33	37.33	37.33	100	100	100	62.33	$ 16,048.66	$ 232,800	$ 76,824	$ 16,048.66		
25007	Nelson	Sue	204-14-029	74.7	74	74.7				74.7	$ 19,233.68	$ 290,100	$ 95,733	$ 19,233.68		
25015	Haas	Beverly	204-14-031	61.4	61.4	61.4				61.4	$ 15,809.21	$ 169,300	$ 55,869	$ 15,809.21		
25016	Coury	David	204-14-033	92.7	92	92.7				92.7	$ 23,868.30	$ 121,000	$ 39,930	$ 23,868.30		
25021	Kellerman	Jeffrey and Kristin	204-09-015	50.6	50.6	50.6				50.6	$ 13,028.44	$ 400,000	$ 132,000	$ 13,028.44		
25024	Coury	David	204-09-023	74	74	74				74	$ 19,053.44	$ 285,300	$ 94,149	$ 19,053.44		
25025	Vickers	F. Thomas	204-09-016	74.6	37	74.6				74.6	$ 19,207.93	$ 277,900	$ 91,707	$ 19,207.93		
25028	Kasik	Doris	204-09-022	56	56	56				56	$ 14,418.82	$ 189,500	$ 62,535	$ 14,418.82		
corner lot	Krebs	Martha	204-14-043	40	40	40	72.95	72.95	72.95	58.24	$ 14,994.93	$ 17,500	$ 5,775	$ 5,775.00	Yes, cap at 5,775	$ 9,219.93
	Krebs	Martha	204-14-042	40	40	40				40	$ 10,299.16	$ 18,000	$ 5,940	$ 5,940.00	Yes, cap at 5,940	$ 4,359.16
	Krebs	Martha	204-14-041	40	40	40				40	$ 10,299.16	$ 18,100	$ 5,973	$ 5,973.00	Yes, cap at 5,973	$ 4,326.16
	Brill	David	204-13-039	40	40	40				40	$ 10,299.16	$ 26,500	$ 8,745	$ 8,745.00	Yes, cap at 8,745	$ 1,554.16
	Brill	David	204-14-038	40	40	40				40	$ 10,299.16	$ 26,700	$ 8,811	$ 8,811.00	Yes, cap at 8,811	$ 1,488.16
Totals				**3108.4**		**3959**	**2201.45**		**2201.45**	**4439.95**	**$ 1,143,193.68**		**$ 3,972,342**	**$ 904,148**		**$ 239,045.67**

Sunset: Current Proposal – 2016

- This year (2016), a plan that also includes new sanitary sewers and water lines is proposed.
- Per the Service Director, the rationale for the increased scope includes:
  - The sanitary sewers were visually observed and determined to be in poor condition
  - The work required to install the storm sewer and construct the roadway may further damage the existing sanitary sewers and water lines (heavy trucks, open trenches, etc.)
  - The sanitary sewers and water lines will need to be replaced eventually; replacing them concurrently with the road and storm sewer installation minimizes disruption to residents
  - Replacing the sanitary sewers and water lines concurrently with the road and storm sewer installation is likely to cost less, in total, than undertaking the projects sequentially
  - The Cleveland Division of Water documented the following water main condition in its report titled "2012 Conditions Assessment of Water Mains" for the City of Bay Village:
    - Sunset: Poor
    - Lakeview: Fair
    - Kenmore: Very Poor (North of Sunset); Poor (South of Sunset)
    - Rockledge: Very Poor (North of Sunset); Poor (South of Sunset)

This document contains preliminary data, draft analyses and other information for review by the Public Improvements Committee; it contains no decisions, recommendations or approvals.

Sunset: Current Proposal – 2016 (Uses of Funds)

- The project proposed in 2015 included roadway and storm sewer installation
- The project proposed in 2016 also includes new sanitary sewers and water lines

	Recent History (2015)	Current Proposal (2016)
Roadway	$521,777	$521,777
Storm	$446,515	$446,515
Sanitary	-	$430,165
Water	-	$309,730
Miscellaneous	Not Avail.	$216,732
Contingency	$86,378	$192,492
SUBTOTAL: Construction	**$1,054,670**	**$2,117,411**
Engineering, Inspection, Interest, etc.	$327,927	$551,859
TOTAL: Construction and Engineering	**$1,382,597**	**$2,669,269**

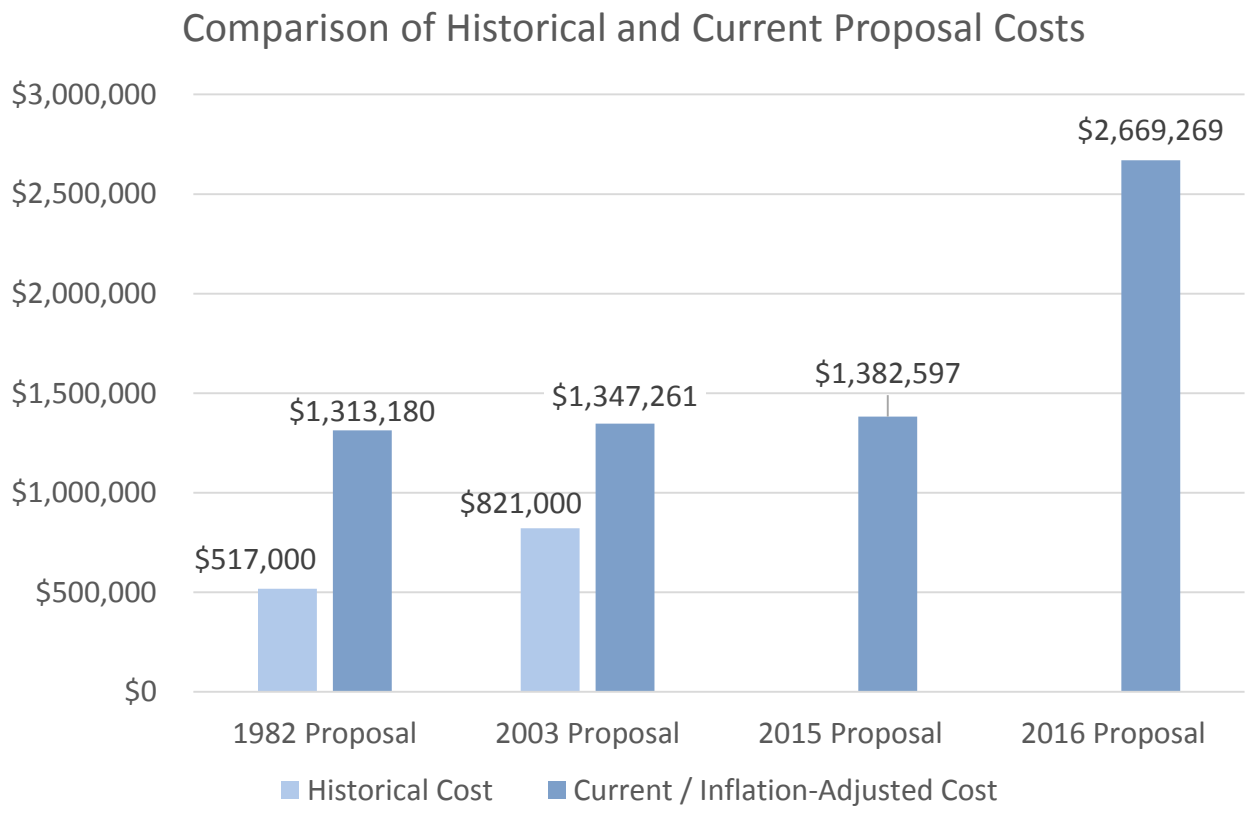
Sunset: Current Proposal – 2016 (Sources of Funds)

- The project proposed in 2016 also includes new sanitary sewers and water lines; 44% of the cost was to be assessed to residents (however, in dollar terms, the assessment increased)
- In this 2016 proposal, the $1,184,563 of total assessments (44% of the total project cost) would result in a mean assessment per parcel of $24,675 and a max per parcel of $63,217

	City	Residents	Total
Local share	$27,652	-	$27,652
Intersections	$211,751	-	$211,751
Excess of property valuations	$239,046	-	$239,046
Repair of sanitary sewers	$430,165	-	$430,165
Replacement of water mains	$309,730	-	$309,730
Soft costs & contingency for sanitary/water	$266,363	-	$266,363
Contribution to reduce assessments	N/A	N/A	N/A
Assessed to residents	-	$1,184,563	$1,184,563
Total	**$1,484,706**	**$1,184,563**	**$2,669,269**
Percent of Total	**56%**	**44%**	

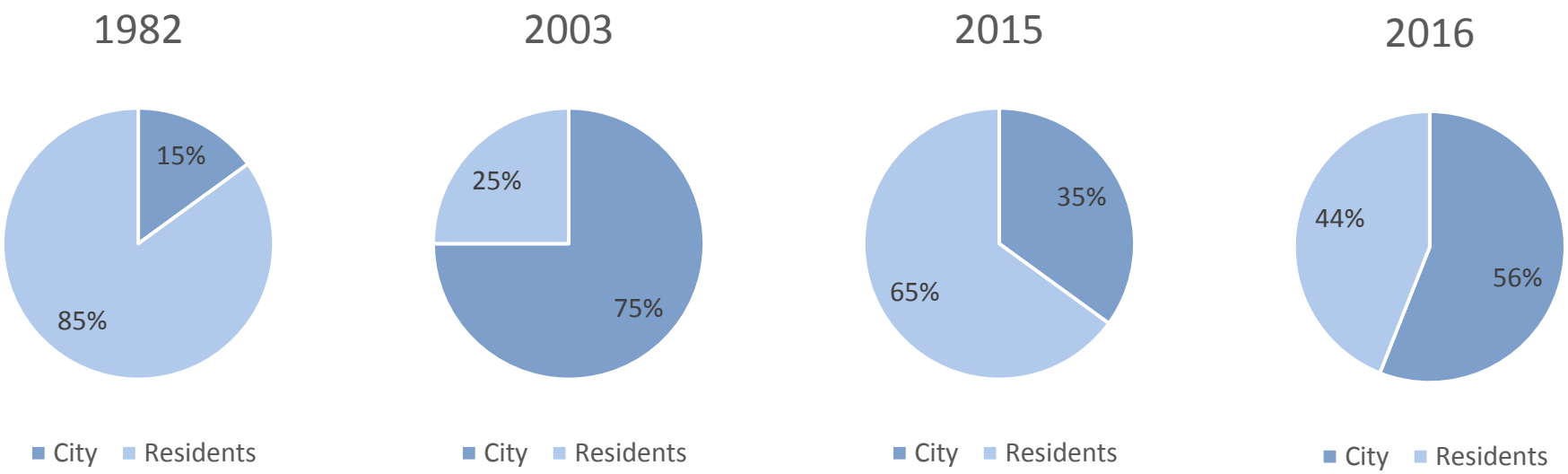
Sunset: Review of Historical and Current Proposal Costs

- On an inflation-adjusted basis, the cost of the project to improve the roadway and to install storm sewers has not changed materially (approximately $1.3 to $1.4 million)
- The inclusion of sanitary sewers and water mains in the 2016 plan increases the cost materially



Sunset: Review of Historical and Currently Proposal Assessments

- The sharing of costs for the project between the city and residents has varied widely



Current/Inflation-Adjusted Dollars	1982	2003	2015	2016
Total Project Cost	$1,313,180	$1,347,261	$1,382,597	$2,669,269
Assessed Cost	$1,116,203	$336,815	$904,148	$1,184,563
Mean Cost per Parcel	$23,254	$7,017	$18,836	$24,675

Sunset: Perspective

"I find it somewhat appalling that the City of Bay Village can rationalize a direct assessment of ~45% of the project cost to a small number of Sunset area residents"

Sunset Resident
Email, 2/5/16

Sunset: Historical Precedence

- In order to move forward, the Public Improvements Committee Chair requested the Finance Director to prepare an analysis of a prior project to use as a guideline. "1986 Cahoon" was identified as a reasonable guideline due to the nature and scale of the project.
  - The total cost of the project was $487,168 in 1986; equivalent to **$1,053,062** today (BLS CPI-U)
  - Residents were assessed 50% of the total in 1986; equivalent to **$526,531** today (BLS CPI-U)
  - The mean assessment/parcel was $4,309 in 1986; equivalent to **$9,314** today (BLS CPI-U)
  - The max assessment/parcel was $14,675 in 1986; equivalent to **$31,722** today (BLS CPI-U)

Project Information				Historical Assessment Information				Inflation-Adjusted Assessment Information		
Project	Project Year	Per Front Foot Assessment	Assessment Method	Address	Parcel No.	Frontage	Actual Assessment	Current Year	Inflation Factor (BLS CPI-U)	Inflation-Adjusted Assessment
Cahoon Road	1986	$52	Linear Feet	27807 Knickerbocker	203-08-063	39.32	$2,045	2016	2.1616	$4,420
Cahoon Road	1986	52	Linear Feet	620 Cahoon	203-08-064	65.32	$3,397	2016	2.1616	$7,342
Cahoon Road	1986	52	Linear Feet	618 Cahoon	203-08-065	60.30	$3,136	2016	2.1616	$6,778
Cahoon Road	1986	52	Linear Feet	614 Cahoon	203-08-066	55.09	$2,865	2016	2.1616	$6,192
Cahoon Road	1986	52	Linear Feet	610 Cahoon	203-08-067	59.53	$3,096	2016	2.1616	$6,691
Cahoon Road	1986	18	Linear Feet	602 Cahoon	203-08-068	66.78	$1,201	2016	2.1616	$2,597
Cahoon Road	1986	38	Linear Feet	600 Cahoon	203-08-069	61.21	$2,326	2016	2.1616	$5,028
Cahoon Road	1986	52	Linear Feet	596 Cahoon	203-08-070	66.78	$3,473	2016	2.1616	$7,506
Cahoon Road	1986	52	Linear Feet	592 Cahoon	203-08-071	63.43	$3,298	2016	2.1616	$7,130
Cahoon Road	1986	52	Linear Feet	584 Cahoon	203-08-072	66.78	$3,473	2016	2.1616	$7,506
Cahoon Road	1986	52	Linear Feet	580 Cahoon	203-08-073	61.21	$3,183	2016	2.1616	$6,880
Cahoon Road	1986	52	Linear Feet	576 Cahoon	203-08-074	74.57	$3,878	2016	2.1616	$8,382
Cahoon Road	1986	52	Linear Feet	572 Cahoon	203-08-075	61.64	$3,205	2016	2.1616	$6,929
Cahoon Road	1986	52	Linear Feet	560 Cahoon	203-06-018	66.79	$3,473	2016	2.1616	$7,508
Cahoon Road	1986	52	Linear Feet	558 Cahoon	203-06-017	56.50	$4,031	2016	2.1616	$8,713
Cahoon Road	1986	52	Linear Feet	556 Cahoon	203-06-016	63.81	$4,411	2016	2.1616	$9,535
Cahoon Road	1986	52	Linear Feet	550 Cahoon	203-06-015	64.20	$4,431	2016	2.1616	$9,578

[Truncated]

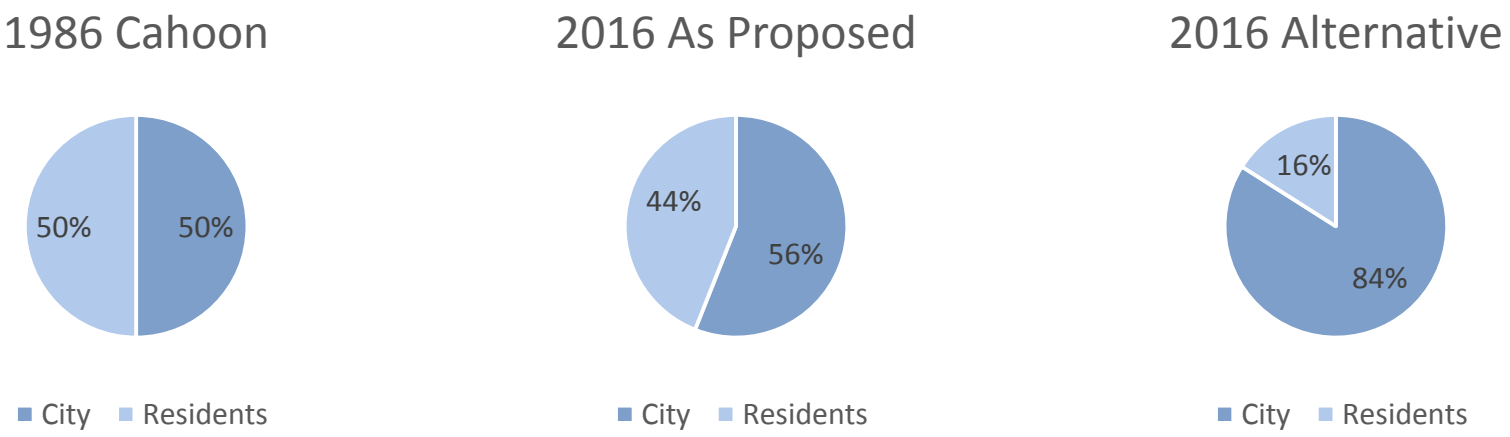
Sunset: 2016 "Alternative" (Source of Funds)

- Based on perspectives offered by residents and the historical precedence analysis from the Finance Director, the Consulting Engineer developed the following "**alternative**" proposal
- In this alternative proposal, $437,782 of total assessments (16% of the total project cost) would result in a mean assessment per parcel of **$9,120** and a max per parcel of **$22,886**

	City	Residents	Total
Local share	$19,407	-	$19,407
Intersections	$408,812	-	$408,812
Excess of property valuations	$104,368	-	$104,368
Repair of sanitary sewers	$430,165	-	$430,165
Replacement of water mains	$309,730	-	$309,730
Soft costs & contingency for sanitary/water	$266,363	-	$266,363
Contribution to reduce assessments	**$692,642**	**-**	**$692,642**
Assessed to residents	**-**	**$437,782**	**$437,782**
Total	**$2,231,487**	**$437,782**	**$2,669,269**
Percent of Total	**84%**	**16%**	

Sunset: Alternative Considerations

- The "alternative" proposal adjusts the cost-sharing such that the mean assessment cost per parcel is approximately equal to the inflation-adjusted 1986 Cahoon benchmark assessment



Current/Inflation-Adjusted Dollars	1986 Cahoon	2016 As Proposed	2016 Alternative
Total Project Cost	$1,053,062	$2,669,269	$2,669,269
Assessed Cost	$526,531	$1,184,563	$437,782
Mean Cost per Parcel	**$9,314**	$24,675	**$9,120**
Max Cost per parcel	$31,722	$63,217	$22,886

Sunset: Alternative Results

- In this alternative proposal, the $437,782 of total assessments (16% of the project cost) would result in a mean assessment per parcel of **$9,120** and a max per parcel of **$22,886**

House No	Last Name	First Name	Parcel Number	Frontage Based on Auditor's Legal Frontage	Frontage Based on Auditor's Effective Frontage	Assessible Frontage Used	Corner Lot Frontage Based on Auditor's Legal Frontage	Corner Lot Frontage Based on Auditor's Effective Frontage	Assessible Corner Lot Frontage Used	Total Assessible Frontage Used	Tentative Preliminary Frontage Assessment	Current Market Value	Maximum Assessment 33%	Preliminary Frontage Assessment	Maximum Assessment Exceeded?	Unassessed Amount to City Portion
Forestview Road																
328	Garrity	Regis	204-14-034	75.32	75.32	75.32	100	100	100	100.32	$ 12,249.80	$ 138,200	$ 45,606	$ 12,249.80		
Kenmore Drive																
300	Stearns	Kim	204-09-029	120	166	120				120	$ 14,652.87	$ 576,600	$ 190,278	$ 14,652.87		
320	Barack	William and Susan	204-09-030	80	80	80				80	$ 9,768.58		$ -	$ 9,768.58		
329	Foster	Jeffrey and Erin	204-09-020	74.66	74.66	74.66	100	100	100	99.66	$ 12,169.21	$ 197,300	$ 65,109	$ 12,169.21		
332	Galang	Anthony and Dawn	204-09-031	75	75	75				75	$ 9,158.04	$ 494,000	$ 163,020	$ 9,158.04		
336	Wise	Richard and Mary	204-09-032	78	78	78				78	$ 9,524.36	$ 185,000	$ 61,050	$ 9,524.36		
341	Hartman	Barbara	204-09-018	74.66	74.66	74.66	100	100	100	99.66	$ 12,169.21	$ 154,900	$ 51,117	$ 12,169.21		
342	Voss	Jennifer and Elwin	204-09-010	105	105	105	157.42	157.42	157.42	144.36	$ 17,626.79	$ 239,800	$ 79,134	$ 17,626.79		
Lake Road																
24744	Zimmerman	Donald	204-14-012	111.86	111.86	111.86	302.26	302.26	302.26	187.43	$ 22,885.95	$ 399,300	$ 131,769	$ 22,885.95		
24800	Krepop	Kevin	204-14-011	59.59	59.59	59.59	145.87	145.87	145.87	96.06	$ 11,729.31	$ 216,600	$ 71,478	$ 11,729.31		
24928	Davis	Edward and Mary	204-14-005	50	50	50	150	150	150	87.50	$ 10,684.38	$ 141,800	$ 46,794	$ 10,684.38		
25008	Denk, Sr	Josef K. Trustee	204-14-004	51.65	51.65	51.65	150	150	150	89.15	$ 10,885.86	$ 122,600	$ 40,458	$ 10,885.86		
25098	DeRubba	Diane	204-09-011	51.65	51.65	51.65	150	150	150	89.15	$ 10,885.86	$ 171,800	$ 56,694	$ 10,885.86		
Lakeview Drive																
24805	Krebs	Martha	204-14-044	130.5	130.5	130.5	72.95	72.95	72.95	105.58	$ 12,891.47	$ 460,100	$ 151,833	$ 12,891.47		
24815	Prendergast	Michael	204-14-047	43.5	43.5	43.5				43.5	$ 5,311.66	$ 197,900	$ 65,307	$ 5,311.66		
24901	Brill	David	204-14-048	83.5	84	84				84	$ 10,257.01	$ 210,300	$ 69,399	$ 10,257.01		
24913	Deutschman	Daniel	204-14-050	71.6	71.6	71.6				71.6	$ 8,742.88	$ 480,000	$ 158,400	$ 8,742.88		
24915	Marconi	James, Trustee	204-14-052	48.4	48.4	48.4	115	115	115	77.15	$ 9,420.57	$ 512,300	$ 169,059	$ 9,420.57		
25001	O'Malley	Judith, Trustee	204-14-053	37.33	37.33	37.33	100	100	100	62.33	$ 7,610.94	$ 387,500	$ 127,875	$ 7,610.94		
25005	Marquardt	Thomas	204-14-054	37.3	37	37.3				37.3	$ 4,554.60	$ 217,800	$ 71,874	$ 4,554.60		
25011	Stewart	Dorothy	204-14-055	93.3	93	93.3				93.3	$ 11,392.60	$ 246,800	$ 81,444	$ 11,392.60		
25021	Donahoo	Delbert, Trustee	204-09-024	74	74	74				74	$ 9,035.93	$ 247,500	$ 81,675	$ 9,035.93		
25029	Viezer	Timothy and Joani	204-09-025	55	55	55				55	$ 6,715.90	$ 431,500	$ 142,395	$ 6,715.90		
25033	McNulty	Dennis and Jill	204-09-026	37	37	37				37	$ 4,517.97	$ 477,000	$ 157,410	$ 4,517.97		
25035	Busdiecker	Kevin	204-09-027	37.35	37.35	37.35	100	100	100	62.35	$ 7,613.39	$ 394,200	$ 130,086	$ 7,613.39		
	Bay Park Beach Co		204-09-028	-	-	850				850	$ 103,791.14	$ 2,300	$ 759	$ 759.00	Yes, cap at $759	$ 103,032.14
Rockledge Drive																
301	Cook	John and Pamela	204-14-058	110.9	111	111				111	$ 13,553.90	$ 1,007,700	$ 332,541	$ 13,553.90		
Sunset Drive																
24801	Arvidson	Cynthia	204-14-020	40	40	40	100	100	100	65	$ 7,936.97	$ 119,300	$ 39,369	$ 7,936.97		
24805	Berente	Katherine	204-14-021	40	40	40				40	$ 4,884.29	$ 136,700	$ 45,111	$ 4,884.29		
24810	Maurer	Sue and Jeff	204-14-040	40	40	40				40	$ 4,884.29	$ 215,400	$ 71,082	$ 4,884.29		
24811	Battisti	Linda	204-14-022	58	58	58				58	$ 7,082.22	$ 202,400	$ 66,792	$ 7,082.22		
24817	Bennett	Marilyn	204-14-023	62	62	62				62	$ 7,570.65	$ 180,800	$ 59,664	$ 7,570.65		
24911	Marconi	Robert and Lisa	204-14-024	80	80	80				80	$ 9,768.58	$ 304,700	$ 100,551	$ 9,768.58		
24919	Mengerink	Bill and Anne	204-14-026	80	80	80	100	100	100	105	$ 12,821.26	$ 285,100	$ 94,083	$ 12,821.26		
24920	Lorton	Stephen	204-14-035	120	120	120	85	85	85	115	$ 14,042.33	$ 209,500	$ 69,135	$ 14,042.33		
25001	Bagnall	Suzanne	204-14-028	37.33	37.33	37.33	100	100	100	62.33	$ 7,610.94	$ 232,800	$ 76,824	$ 7,610.94		
25007	Nelson	Sue	204-14-029	74.7	74	74.7				74.7	$ 9,121.41	$ 290,100	$ 95,733	$ 9,121.41		
25015	Haas	Beverly	204-14-031	61.4	61.4	61.4				61.4	$ 7,497.38	$ 169,300	$ 55,869	$ 7,497.38		
25016	Coury	David	204-14-033	92.7	92	92.7				92.7	$ 11,319.34	$ 121,000	$ 39,930	$ 11,319.34		
25021	Kellerman	Jeffrey and Kristin	204-09-015	50.6	50.6	50.6				50.6	$ 6,178.63	$ 400,000	$ 132,000	$ 6,178.63		
25024	Coury	David	204-09-023	74	74	74				74	$ 9,035.93	$ 285,300	$ 94,149	$ 9,035.93		
25025	Vickers	F. Thomas	204-09-016	74.6	37	74.6				74.6	$ 9,109.20	$ 277,900	$ 91,707	$ 9,109.20		
25028	Kasik	Doris	204-09-022	56	56	56				56	$ 6,838.00	$ 189,500	$ 62,535	$ 6,838.00		
corner lot	Krebs	Martha	204-14-043	40	40	40	72.95	72.95	72.95	58.24	$ 7,111.22	$ 17,500	$ 5,775	$ 5,775.00	Yes, cap at 5,775	$ 1,336.22
	Krebs	Martha	204-14-042	40	40	40				40	$ 4,884.29	$ 18,000	$ 5,940	$ 4,884.29		
	Krebs	Martha	204-14-041	40	40	40				40	$ 4,884.29	$ 18,100	$ 5,973	$ 4,884.29		
	Brill	David	204-13-039	40	40	40				40	$ 4,884.29	$ 26,500	$ 8,745	$ 4,884.29		
	Brill	David	204-14-038	40	40	40				40	$ 4,884.29	$ 26,700	$ 8,811	$ 4,884.29		
Totals				**3108.4**		**3959**	**2201.45**		**2201.45**	**4439.95**	**$ 542,149.95**		**$ 3,972,342**	**$ 437,782**		**$ 104,368.36**

Sunset: Affordability and Fairness Considerations

- In this alternative proposal, the $437,782 of total assessments (16% of the project cost) would result in a mean assessment per parcel of **$9,120** and a max per parcel of **$22,886**
  - Residents could choose to pay the assessment up front or defer payment over 20 years
  - If payment is deferred and the parcel is sold, the purchaser would acquire the liability
  - If payment is deferred over 20 years, the assessments per parcel would equate to:
    - Mean assessment: **$456 per year** (the equivalent of $38 per month)
    - Max assessment: **$1,144 per year** (the equivalent of $95 per month)
    - These assessments are more "affordable" than the current (2016) proposal, but are not as affordable as the 2003 plan, which had a more limited scope (no water or sanitary)
    - This alternative proposal was designed to ensure that the mean assessment per parcel is **not unprecedented**. The mean is the same as the 1986 Cahoon project, on an inflation-adjusted basis. This is a potential "fairness" consideration issue
- This alternative requires a $692,642 "**assessment reduction contribution**" from the City and results in **16%** of the cost be assessed to residents. The remaining **84%** of the cost is borne by the City, which is funded by taxpayers. This is a potential "fairness" consideration issue
- Another alternative to promote affordability and fairness may be to reduce the project cost
- Identifying an outside source of funding for the water mains has been proposed by the Administration as another option to reducing the City's and residents' share of the cost

Sunset: Proposed Timeline for 2016 Project (Page 1 of 2)

- The Administration recommends initiating Sunset soon, on the following timeline:

Item No.	Action	Time Frame	Date	Notes
1	Authorization to prepare project plans, specifications, and cost estimates, together with route and termini descriptions for the project. Preparation of estimated assessment lists and assessment map.		Mar-2015	
2	Source of funds developed and confirmed	Concurrent with Item 1	6/1/2016	
3	Plans, specifications and estimates completed. Reviews and/or permits from regulatory agencies completed	Depends on complexity of project	6/1/2016	
4	File above with clerk of the legislative authority.	1 day	6/2/2016	
5	Estimated assessments developed based on funding, assessment method, assessment list, and statuatory requirements.	Based on Council's schedule	8/3/2016	<<<< The source of funds must be established by this date for the balance of the schedule to be valid.
6	Adoption of resolution of necessity (includes direction to clerk to serve notice based on the estimated assessments).	Based on Council's schedule	8/8/2016	
7	Service of notice of estimated assessments.	Completion of service is 14 days following evidence of receipt of last notice served	8/29/2016	
8	Filing of objections to assessments - amount and/or apportionment	Must be filed in writing within 2 weeks of the date of final service.	9/12/2016	
9	If no objections are filed:	Prepare ordinance to proceed	9/19/2016	
10	If objection(s) are filed: Council appoints an Assessment Equalization Board and sets date for hearing.	Notice must be given to objectors 5 days prior to hearing	9/30/2016	
11	Hold meeting of Assessment Equalization Board to hear objections.	The Board may hear the objections and make a decision the same night or it may take a longer period of time. However, it must report its findings to Council	10/5/2016-10/6/2016	
12	Assessment Equalization Board reports recommendations to City Council.		10/17/2016	

Sunset: Proposed Timeline for 2016 Project (Page 2 of 2)

Item No.	Action	Time Frame	Date
13	City Council approves or disapproves report (727.17 RC)	If the Board's report is accepted, Council may proceed with the ordinance determining to proceed. If the Board's report is rejected, Council must appoint a new Board and set the date for another hearing.	10/17/2016
14	City Council, if it approves report of Assessment Equalization Board, passes Ordinance to Proceed with Project (727.23).	Council Schedule	10/17/2016
15	Clerk of Council files Ordinance to Proceed with County Auditor pursuant to R.C. 319.61 within 15 days of passage in order to preserve priority of lien of assessments.		10/31/2016
16	Council passes resolution authorizing advertisement for bids.	Council Schedule	11/7/2016
17	Receive construction bids.	Minimum of 4 weeks, more for complex projects	12/7/2016
18	Bid accepted. If lowest and best bid for labor and materials exceeds the Engineer's estimate by 10% or more, Council holds hearing on whether to proceed (727.24).	Council schedule	12/12/2016
19	Construction Agreement signed.	30-60 days depending on complexity of outside funding.	1/12/2017
20	Complete construction of Project, determine final cost of Project (including "soft" costs of legal services, engineering and construction period financing costs) and prepare final assessment list.	12-24 months depending on complexity of project	2017
21	Passage of Assessing Ordinance levying assessments (727.25),	Council schedule	TBD
22	Publication of notice of passage of Assessing Ordinance (727.26).	1 day	TBD
23	Clerk of Council files Assessing Ordinance with County Auditor within 20 days of passage to create lien (319.61).	Within 20 days of passage to create lien (319.61).	TBD
24	Collect assessments paid in full during period specified in Assessing Ordinance	30 days	TBD
25	Determine amount of permanent financing after expiration of assessment payment period.	1 day	TBD
26	Clerk of Council, on or before the second Monday in September, certifies the special assessments, including portion representing interest due on the permanent financing during the 20-year period of the collection of the special assessments to the County Auditor (727.30),		TBD

Sunset: Goals Review

1. Formalize support for one of the **BRD** "options" provided to Council so that engineering can move forward, with the understanding that further refinement will be required
   - This requires an understanding of the timing interrelationship among the projects
   - This will be examined in the next section of this document ("Path Forward")

2. Develop consensus that even under a worst case scenario (i.e., highest cost scenario) for BRD, the City will be able to afford to conduct **both projects**
   - This requires an understanding of the funding interrelationship among the projects
   - This will be examined in the next section of this document ("Path Forward")

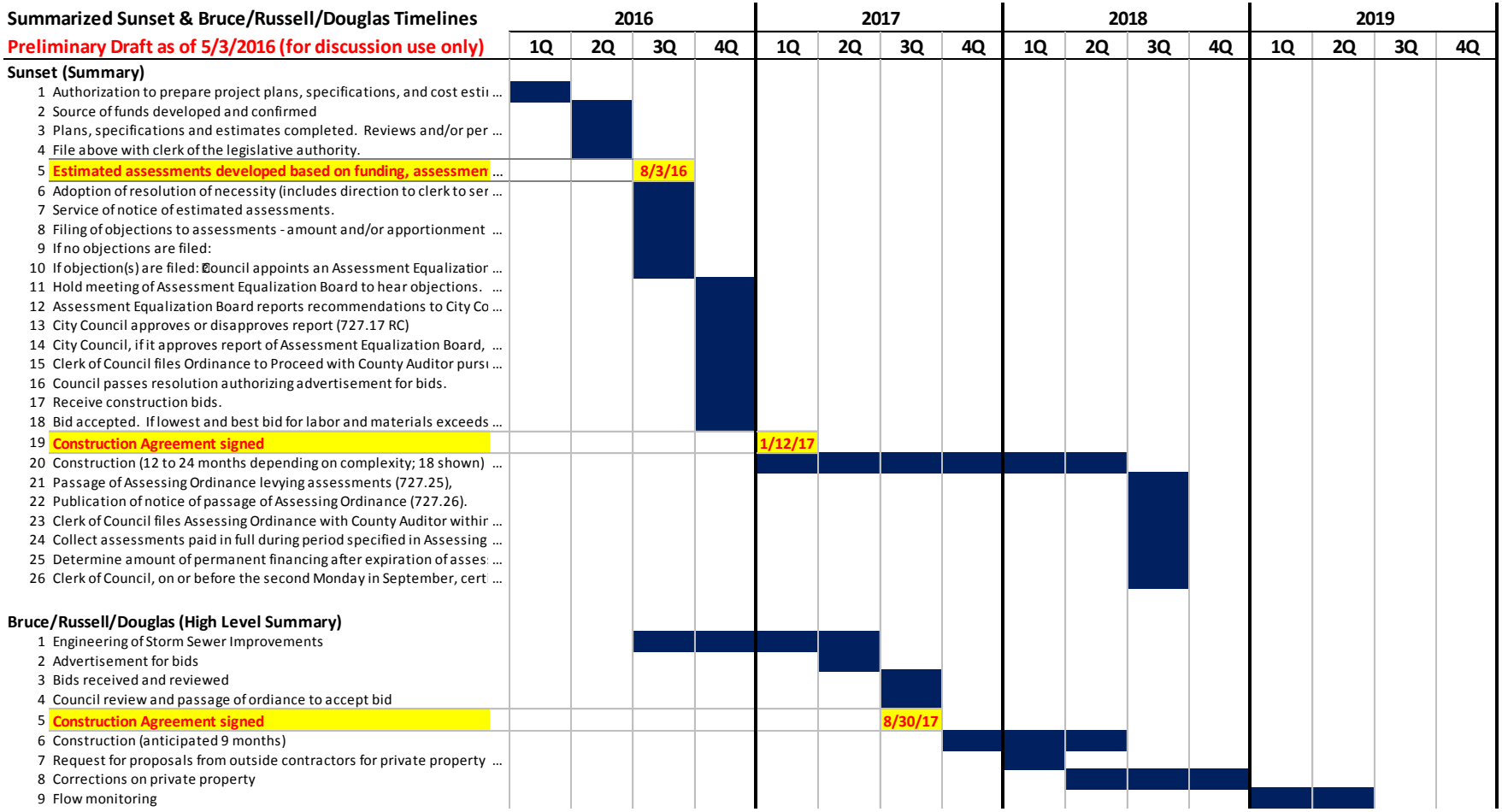
3. Advance the 30+ year situation in **Sunset** by alleviating unprecedented assessments, while ensuring that the solution remains fair for all stakeholders
   - The Sunset project has been under consideration since *at least* 1982
   - The City and residents have made good faith efforts, but the project remains unexecuted
   - The path forward will likely require compromise and, perhaps, unorthodox solutions while ensuring that the outcome is affordable for Sunset area residents and fair to every resident

This document contains preliminary data, draft analyses and other information for review by the Public Improvements Committee; it contains no decisions, recommendations or approvals.

Path Forward

Path Forward: Sunset & BRD Timing Interrelationship

- The Administration would like to initiate the Sunset project first and the BRD project second, while continuing to make progress on BRD's engineering as Sunset gets underway:



PI CMTE 05/03/16

Path Forward: Sunset & BRD Funding Interrelationship

- We must develop consensus that even under a worst case scenario (i.e., highest cost scenario) for BRD, the City will be able to afford to conduct **both projects**
- Sunset should proceed in advance of BRD only if it can be demonstrated that both projects can be undertaken because BRD is associated with a U.S. EPA administrative order

	BRD	Sunset	Both Projects
Total Cost	$4,654,000	$2,669,269	$7,323,269
City's Portion	$4,629,000	$2,231,487	**$6,860,487**
Assessed Portion	$25,000	$437,782	$462,782
Scenario	Option 2 with 100-Year Event Storm Sewer; City bearing 90% of cost of private property corrections	"Alternative" allocation of costs for 2016 version of project, including sanitary sewer and water mains	

This document contains preliminary data, draft analyses and other information for review by the Public Improvements Committee; it contains no decisions, recommendations or approvals.

Path Forward: Debt Capacity (Legal Limit)

- Per the City's Finance Director, "You will see from the worksheet that the more conservative legal level calculation would allow the City to borrow an additional $22 million."

City of Bay Village
Legal Level of Acceptable Debt

1	Tax valuation of the City (From Schedule A 12-3-15)	$ 539,826,390
2	Total principal amount all outstanding bonds and notes of the City (after 2016 issuance)	12,485,650
3	10.5% of tax valuation	56,681,771
4	Total principal of voted and unvoted bonds and notes subject to 10.5% debt limitation	12,485,650
5	Debt leeway within 10.5% limitation (3 minus 4)	44,196,121
6	5.5% of tax valuation	29,690,451
7	Total principal of voted and unvoted bonds and notes subject to 5.5% debt limitation	12,485,650
8	Debt leeway within 5.5% unvoted debt limitation (6 minus 7)	17,204,801
9	Cash balance of Bond Retirement Fund (fund balance 12/31/15)	4,788,344
10	Total available including amount in Bond Retirement Fund	$ 21,993,145

PI CMTE 05/03/16

Path Forward: Debt Capacity (Credit Rating Limit)

- Per the City's Finance Director, "One important thing [credit rating agencies] evaluate is the ability of the community to raise more funds if needed. We do have that ability … "
- " I don't believe a debt of $6.3 million[1] additional would be detrimental to our credit rating."

City of Bay Village
Internal Level of Acceptable Debt
2016

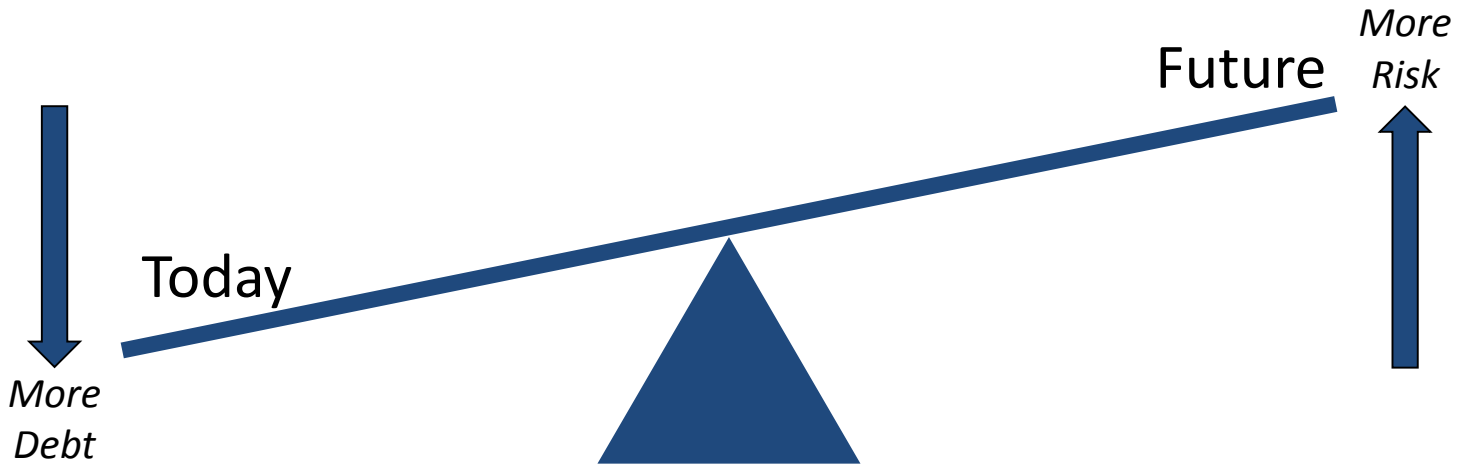
Total estimated receipts from property tax to Bond Retirement Fund	$ 2,107,600
Amount of Debt that will be refunded into 2016 debt	2,538,400
Debt payments (principal and interest) to be paid from Bond Retirement Fund	4,579,934
Net surplus/(deficit) to Bond Retirement Fund	$ 66,066

Debt rolling off (annual payment principal and interest amount)	
2016	180,075
2017	129,400
2022	218,060
Anticipated payment $6.3 million 20 year note 1% rate	350,000

[1] The $6.3 million figure was based on a preliminary estimate before this discussion document was formalized. It is analogous to the $6.9 million figure on a preceding page. The Finance Director's opinion is, of course, subject to change as plans are finalized.

Path Forward: Funding Alternatives

- **The City does have capacity to issue and service enough debt to undertake both projects**
- The debt could be serviced through the bond retirement fund, which is funded by taxes
- However, issuing debt reduces the City's ability to issue debt in the future for other projects
- Instead of relying on existing taxes, alternative revenue sources could be considered:
  - A "capital fee" on the sewer bill is one option (permanent or temporary/project-specific)
  - An outside source of funding for the water main component of Sunset is an option
  - Reducing the cost of the projects is an option (recall that BRD is illustrated as "worst case" and Sunset includes sanitary sewer and water main replacement, in contrast to prior plans)



Path Forward: Goals Review

1. Formalize support for one of the **BRD** "options" provided to Council so that engineering can move forward, with the understanding that further refinement will be required
   - A decision on which option to select must be made in a timely manner, but due diligence in examination of all the options must be thorough
   - Cost sharing considerations must take into account the situation in BRD, especially related to the benefits associated with the project (e.g., EPA resolution, WWTP flow reduction)

2. Develop consensus that even under a worst case scenario (i.e., highest cost scenario) for BRD, the City will be able to afford to conduct **both projects**
   - The City does have capacity to issue and service enough debt to undertake both projects
   - Continued access to additional capital in the future must be ensured; alternative funding sources for debt service should be evaluated

3. Advance the 30+ year situation in **Sunset** by alleviating unprecedented assessments, while ensuring that the solution remains fair for all stakeholders
   - The Administration is ready to move forward with this project, inclusive of roadway, storm sewer, sanitary sewer replacement and water main replacement
   - The solution must balance affordability for Sunset area residents and fairness to everyone

CITY OF BAY VILLAGE

Bay Village City Council
Public Improvements Committee

May 3, 2016 Appendix

Bruce/Russell/Douglas

- Descriptions of Options 1, 2 and 3 for BRD with five year capital budget plans (*for review*)
- Proposal from CT Consultants for Option 2 with 100-Year design dated 3/18/2016
- Lakewood's "Clean Water Pilot Project" program guide and resolution from 2015

Sunset

- 1982 Proposal for roadway and storm
- 2003 Proposal for roadway and storm
- 2015 Proposal for roadway and storm
- 2016 Proposal for roadway, storm, sanitary and water
- Historical Precedent Analysis of 1986 Cahoon Project
- Alternative Cost Sharing Structure for 2016 Proposal for roadway, storm, sanitary and water

Path Forward

- Debt Capacity Analysis Documentation

Descriptions of Options 1, 2 and 3 for BRD with five year capital budget plans (*for review*)

Option 1 – Construct larger sanitary sewers – no work on private property

- Perform no corrections on private property.
- Leave existing laterals connected to sanitary sewer.
- Replace the sanitary sewer with a larger diameter pipe to alleviate flooding potential (sewer size to be based on transporting I/I from private property).
- Reconstruct the Lake Road Pump Station to pump the peak wet weather flow (design storm to be determined).

Advantages:

- All sewer work is confined to the existing street Right of Way.
- No disturbance to private property.
- Potential greater public acceptance than Option 2 and Option 3.

Disadvantages:

- Residents continue to pay for treatment of clean water at the Rocky River WWTP through higher sewer rates.
- The City will need to construct a new larger sanitary pump station to replace the current Lake Road Pump Station. Current capacity is 0.06 MGD. The station would need to be expanded to a capacity of between 2.3 MGD (5 yr. storm) to 4.3 MGD (100 yr. storm).
- There remains potential for basement flooding from the sanitary sewer when design storm is exceeded.

Schedule:

- Design of sanitary sewers and Lake Road Pump Station – 12 months (2016)
- Permitting – 3 months (2017)
- Bidding – 3 months (2017)
- Construction – 18 months (2017-2019)

Construction Cost:

Assuming 100 yr. event:

Sanitary Sewers (15"-24" diameter):	$2,040,000
Lake Road Pump Station (4.3 MGD):	$830,000
Force Main (14" diameter):	$150,000
Present worth of treating clean water (20 yr):	$658,600
Total	$3,678,600

Option 2 – Construct storm sewers and correct connections on private property

- Construct larger storm sewer (design storm to be determined).
- Separate storm connection from sanitary connection on private property.
- Connect storm laterals to the new storm sewer (gravity connection) with homeowner option to connect foundation drains using a sump pump. Downspouts to be daylight or connected to storm sewer.
- Sanitary lateral to remain connected to existing sanitary sewer.
- Lake Road Pump Station to be reconstructed to pump peak sanitary sewage flow.

Advantages:

- Sump pumps are not *required* but are an option at the homeowner's expense.
- The City's cost for treating clean water at the Rocky River WWTP is eliminated for this neighborhood.
- The cost to reconstruct the Lake Road Pump Station is less than Option 1. Current capacity is 0.06 MGD. The station would need to be expanded to a capacity of 0.17 MGD.

Disadvantages:

- Private property corrections are required.
- Basement flooding potential from the storm sewer when design storm is exceeded.
- Potential less public acceptance than Option 1.

Schedule:

- Design of storm sewers – 9 months (2016)
- Bidding - 3 months (2016-2017)
- Construction of storm sewers – 9 months (2017)
- Property corrections – 6 months (2017-2018)
- Flow Monitoring – 3 months (2018)
- Analysis of flow data – 3 months (2018)
- Design of Pump Station – 9 months (2018-2019)
- Permitting – 3 months (2019)
- Bidding – 3 months (2019)
- Construction of pump station – 12 months (2019-2020)

Construction Cost:

Assuming 25 yr. event:

Storm Sewers (12"-36" diameter):	$3,000,000
Lake Road Pump Station (0.17 MGD):	$150,000
Force Main (4" diameter):	$40,000
Lateral Corrections for 186 homes:	$420,000
Total	$3,610,000

Option 3 – Perform corrections on private property

- No new sewer construction.
- Separate storm connection from sanitary connection on private property.
- Connect foundation drains to storm using a sump pump. Downspouts to be daylighted or connected to storm sewer.
- Sanitary lateral to remain connected to existing sanitary sewer.
- Lake Road Pump Station to be reconstructed to pump peak sanitary sewage flow.

Advantages:

- The City's cost for treating clean water at the Rocky River WWTP is eliminated for this neighborhood.
- The cost to reconstruct the Lake Road Pump Station is less than Option 1 (and the same as Option 2).
- Basement flooding threat from sanitary and storm sewers is eliminated.

Disadvantages:

- Private property corrections are required.
- Sump pumps are required for foundation drains.
- Street flooding potential from storm sewer when design storm is exceeded.

Schedule:

- Property corrections – 9 months (2016)
- Flow Monitoring – 3 months (2017)
- Analysis of flow data – 3 months (2017)
- Design of Pump Station – 9 months (2017-2018)
- Permitting – 3 months (2018)
- Bidding – 3 months (2018)
- Construction of pump station – 12 months (2018-2019)

Construction Cost:

Lake Road Pump Station (0.17 MGD):	$150,000
Force Main (4" diameter):	$40,000
Sump pumps for 186 homes:	$558,000
Total	$748,000

Five Year Plan - Sewer System OPTION 1

Category	Project	Budget	2016	2017	2018	2019	2020
Engineering	Computer model of Lake-Bradley sewer system including field investigation and recommendations	$20,000	$20,000				
	Computer model of Clague-Lake sewer system including field investigation and recommendations	$20,000		$20,000			
	Huntington/Longbeach Pump Station Electrical/Communication Improvements	$30,000	$30,000				
	Pump Station Communication Improvements	$30,000		$30,000			
	Sunset Area Improvements Construction Administration (Water mains, sanitary sewers, city obligation) (See Note 1)	$243,669	$121,835	$121,835			
	Lake Road Pump Station Improvements	$196,000		$196,000			
	Comprehensive Calibrated Sewer System Model (Sanitary)	$250,000		$250,000	$250,000		
	Comprehensive Calibrated Drainage Model (annual)	$375,000	$75,000	$75,000	$75,000	$75,000	$75,000
	Source Control Program	$200,000		$50,000	$50,000	$50,000	$50,000
	Bruce Douglas Russell - Option 1 (Sanitary Sewer Replacement)	$204,000	$204,000				
	Subtotal	$1,568,669	$450,835	$742,835	$375,000	$125,000	$125,000
Construction	Sewer System Cleaning	$40,000		$40,000			
	Saddler Sanitary Sewer	$0					
	Sunset Area Improvements (Water mains, sanitary sewers, city obligation) (See Note 2)	$1,292,335	$646,167	$646,167			
	Lake-Bradley Improvements Sanitary Sewer Improvements	$300,000		$300,000			
	Lake Road Pump Station Reconstruction	$980,000			$980,000		
	Bruce Douglas Russell - Option 1 (Sanitary Sewer Replacement)	$2,040,000		$2,040,000			
	Subtotal	$4,652,335	$646,167	$3,026,167	$980,000	$0	$0
	TOTAL	$6,221,004	$1,097,002	$3,769,002	$1,355,000	$125,000	$125,000

Note 1	Construction Administration and Inspection of the sanitary sewers, water mains, and city's portion of roadway and drainage costs.
Note 2	City's portion of roadway and drainage costs varies between $291,520 and $478,450 depending on assessment method selected. For the budget, the highest obligation was used.

OPTION 2

Five Year Plan - Sewer System

Category	Project	Budget	2016	2017	2018	2019	2020
Engineering	Computer model of Lake-Bradley sewer system including field investigation and recommendations	$20,000	$20,000				
	Computer model of Clague-Lake sewer system including field investigation and recommendations	$20,000		$20,000			
	Huntington/Longbeach Pump Station Electrical/Communication Improvements	$30,000	$30,000				
	Pump Station Communication Improvements	$30,000		$30,000			
	Sunset Area Improvements Construction Administration (Water mains, sanitary sewers, city obligation) (See Note 1)	$243,669	$121,835	$121,835			
	Lake Road Pump Station Improvements	$38,000		$38,000			
	Comprehensive Calibrated Sewer System Model (Sanitary)	$250,000		$250,000	$250,000		
	Comprehensive Calibrated Drainage Model (annual)	$375,000	$75,000	$75,000	$75,000	$75,000	$75,000
	Source Control Program	$200,000		$50,000	$50,000	$50,000	$50,000
	Bruce Douglas Russell - Option 2 (Storm Sewer Replacement) with lateral correction for 186 homes	$300,000	$300,000				
	Subtotal	$1,506,669	$546,835	$584,835	$375,000	$125,000	$125,000
Construction	Sewer System Cleaning	$40,000		$40,000			
	Saddler Sanitary Sewer	$0					
	Sunset Area Improvements (Water mains, sanitary sewers, city obligation) (See Note 2)	$1,292,335	$646,167	$646,167			
	Lake-Bradley Improvements Sanitary Sewer Improvements	$300,000		$300,000			
	Lake Road Pump Station Reconstruction	$190,000			$190,000		
	Bruce Douglas Russell - Option 2 (Storm Sewer Replacement) with lateral correction for 186 homes	$3,420,000		$3,420,000			
	Subtotal	$5,242,335	$646,167	$4,406,167	$190,000	$0	$0
	TOTAL	$6,749,004	$1,193,002	$4,991,002	$565,000	$125,000	$125,000

Note 1	Construction Administration and Inspection of the sanitary sewers, water mains, and city's portion of roadway and drainage costs.
Note 2	City's portion of roadway and drainage costs varies between $291,520 and $478,450 depending on assessment method selected. For the budget, the highest obligation was used.

OPTION 3

Five Year Plan - Sewer System

Category	Project	Budget	2016	2017	2018	2019	2020
Engineering	Computer model of Lake-Bradley sewer system including field investigation and recommendations	$20,000	$20,000				
	Computer model of Clague-Lake sewer system including field investigation and recommendations	$20,000		$20,000			
	Huntington/Longbeach Pump Station Electrical/Communication Improvements	$30,000	$30,000				
	Pump Station Communication Improvements	$30,000		$30,000			
	Sunset Area Improvements Construction Administration (Water mains, sanitary sewers, city obligation) (See Note 1)	$243,669	$121,835	$121,835			
	Lake Road Pump Station Improvements	$38,000		$38,000			
	Comprehensive Calibrated Sewer System Model (Sanitary)	$250,000		$250,000	$250,000		
	Comprehensive Calibrated Drainage Model (annual)	$375,000	$75,000	$75,000	$75,000	$75,000	$75,000
	Source Control Program	$200,000		$50,000	$50,000	$50,000	$50,000
	Bruce Douglas Russell - Option 3 (Corrections on private property)	$20,000	$20,000				
	Subtotal	$1,226,669	$266,835	$584,835	$375,000	$125,000	$125,000
Construction	Sewer System Cleaning	$40,000		$40,000			
	Saddler Sanitary Sewer	$0					
	Sunset Area Improvements (Water mains, sanitary sewers, city obligation) (See Note 2)	$1,292,335	$646,167	$646,167			
	Lake-Bradley Improvements Sanitary Sewer Improvements	$300,000		$300,000			
	Lake Road Pump Station Reconstruction	$190,000			$190,000		
	Bruce Douglas Russell - Option 3 (Corrections on private property)	$558,000	$558,000				
	Subtotal	$2,380,335	$1,204,167	$986,167	$190,000	$0	$0
	TOTAL	$3,607,004	$1,471,002	$1,571,002	$565,000	$125,000	$125,000

Note 1	Construction Administration and Inspection of the sanitary sewers, water mains, and city's portion of roadway and drainage costs.
Note 2	City's portion of roadway and drainage costs varies between $291,520 and $478,450 depending on assessment method selected. For the budget, the highest obligation was used.

Proposal from CT Consultants for Option 2 with 100-Year design dated 3/18/2016

CT Consultants
engineers | architects | planners

March 18, 2016

Mr. Scott Thomas
Director of Public Service and Properties
350 Dover Center Road
Bay Village, Ohio 44140

Re: ***Bruce-Douglas-Russell Neighborhood***
Storm Sewer Improvements Design Services
City of Bay Village, Ohio

Dear Mr. Thomas:

CT Consultants, Inc. is pleased to submit this letter proposal for professional services associated with the referenced project. We propose to provide professional surveying and design engineering services in accordance with the terms and conditions set forth herein.

Background

The recommendations contained in the "*Enhanced Pilot Study-Sewer Separation on Private Property*" study were used as the basis for this proposal. The Project Scope entails providing increased storm sewer capacities for a 100 year design storm in the referenced neighborhood. The storm sewers will still drain east on Lake Road to Wischmeyer Creek, and ultimately to Lake Erie. The project does not include storm improvements downstream of the Lake Road outlet. The project is limited to the existing storm sewer system, but does not include replacement and/or improvements to the existing private storm sewer laterals.

Task 1 - *Field Investigations*

- CT will perform topographic surveying for plan development that will include location and elevation information of the existing infrastructure located within the referenced improvement corridor. This includes existing public/private utility information, roadway and physical features within the Public ROW.
- The survey data collected will not include detailed property line data, with the exception of the area in and around the system discharge outlet north of Lake Road.
- Detailed property data will be collected and researched in the vicinity of the system outlet in case the City authorizes a separate fee for temporary or permanent Easement Documents that may be necessary at a later date.
- CT will perform a site review following the collection of data to verify the existing conditions base mapping and make adjustments as needed.

Task 2 - *Geotechnical Investigations*

- CT will subcontract with a Geotechnical Consultant to perform geotechnical investigations to determine soil conditions and groundwater conditions.
- Soils Investigations Reports will be provided to the City of Bay Village.
- An allowance has been included for this work. A signed agreement with the Geotechnical Consultant will be secured after our authorization for this project.

Task 3 - *Basis of Design Report*

CT will prepare a Basis of Design report for review by the City of Bay Village after the additional data collection phase. This report will summarize the data collected, further defining and outlining the project scope as outlined below.

- Base Drawings that include topographical data, right-of-way, graphic property lines, existing utilities and schematic storm sewer alignments.
- Design Standards/ Criteria (preliminary storm sewer calculations)
- Red flag summary
    1. Utility conflicts
    2. Storm sewer depth (deep and shallow concerns)
    3. Ecological
    4. Resident concerns (tree cutting, project restoration and maintenance of traffic)
- Preliminary design opinion of probable construction cost
- Easement needs
- Permitting requirements
- Project schedules and timelines

Task 4 – *Document Development*

- Preparation of improvement plans for the proposed storm sewer; including required roadway improvements; sanitary and water adjustments (if any) per Cuyahoga County and City of Bay Village Standards.
- Preparation of maintenance of traffic plans.
- Preparation of a Storm Water Pollution Prevention Plan including submittal to CSWCD for review.
- Preparation of a General Quantity Summary.
- Preparation of drainage plans and storm sewer calculations.
- Preparation of technical specifications and bidding documents.
- Preparation of an Opinion of Probable Construction Cost summary.
- Preparation and Submittal of a Ohio EPA Permit for sanitary sewers adjustments (if necessary), plan review submittals for water mains as required, and Notice of Intent for Coverage under Ohio General Construction Permit. (does not include USACE permitting, if required)

ADDITIONAL SERVICES

The following services may be required based on items encountered during design of the project or as may be needed by the City of Bay Village.

- Bidding assistance and coordination, pre-bid meetings, bid reviews and recommendations.
- Construction Administration service during the construction of the improvements.
- Construction Inspection Services including daily inspection observation during construction of the improvements.
- Preparation of as-built record drawings based on information from the Contractor and the City.
- Environmental remediation of hazardous materials.
- Construction staking services.
- Preparation of required temporary and permanent easements in accordance with the City of Bay Village Standard Requirements.
- Attendance at public meetings and preparation of display materials for public meetings.

FEE AND BILLING

We will accomplish the work outlined in the Scope of Services for the maximum not to exceed fees as follows:

Task 1 - Field Investigations	$ 42,000
Task 2 - Geotechnical Investigations	12,000
Task 3 - Basis of Design Report	20,000
Task 4 – Document Development	175,000
Total Tasks 1 - 4	**$249,000**

CT may alter the distribution of compensation between individual services noted herein to be consistent with services actually rendered, but shall not exceed the total authorized amount unless approved in writing by the City.

The above total fee is subject to adjustment for Client requested changes and it is not to be exceeded without further authorization. Any change from the proposed Scope of Services will require a change in authorized fee, whether such change increases or decreases the total proposed fee.

The above Scope of Services includes the following assumptions:

- The City of Bay Village will provide any necessary notifications to property owners prior to performing field survey.
- All work will be performed in accordance with applicable City of Bay Village, Cuyahoga County, and ODOT Design Standards.
- The City of Bay Village will provide all service connection information and internal sewer televising by the completion of Task 3, Basis of Design Report.

CONCLUSION

We appreciate the opportunity to submit our proposal on this project and look forward to working with the City of Bay Village. Should you have any questions or require additional information on this proposal, please do not hesitate to call.

Respectfully,

CT CONSULTANTS, INC.

Robert H. Greytak, P.E.

RHG/saa

cc: Clyde C. Hadden, P.E., P.S., CFM

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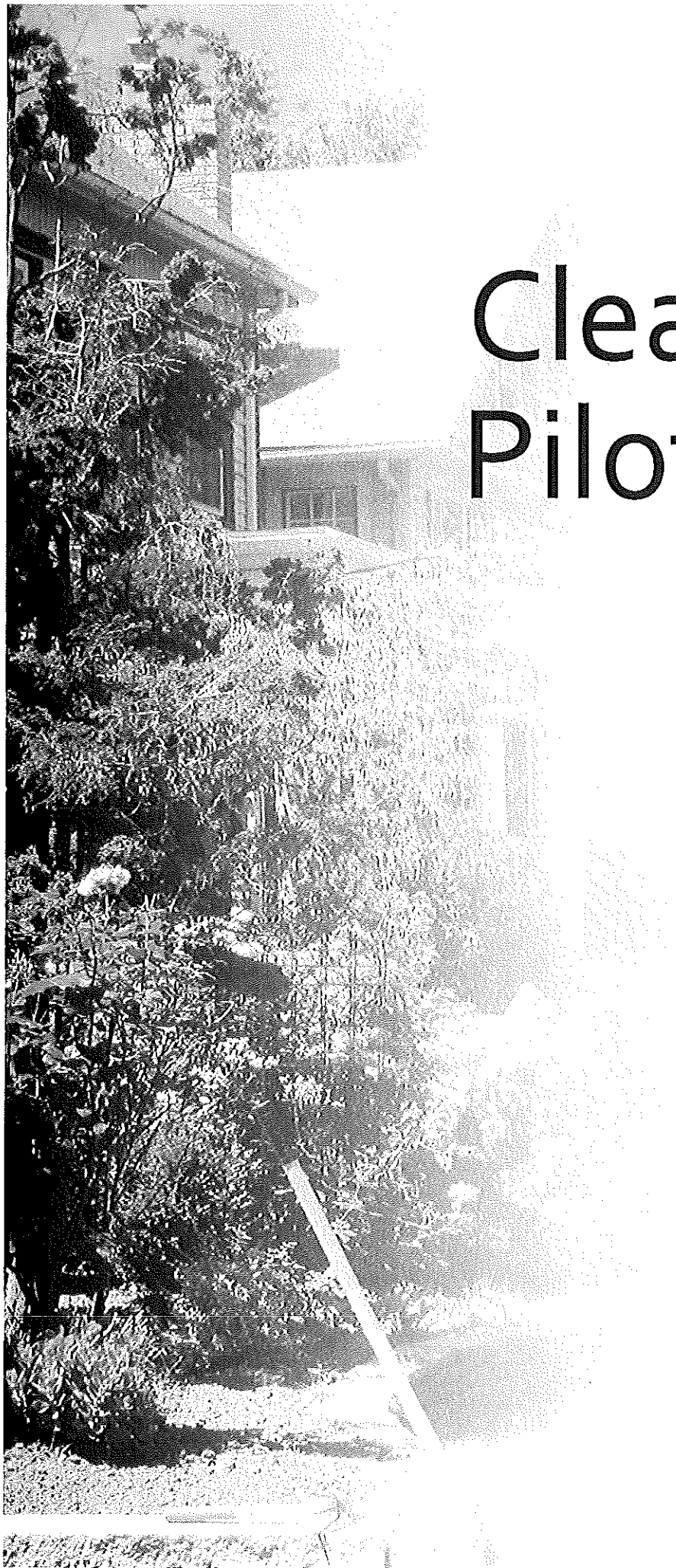
Lakewood's "Clean Water Pilot Project" program guide and resolution from 2015



Clean Water Pilot Project

Program Guide

City of Lakewood

www.onelakewood.com

City of Lakewood
Clean Water Pilot Project

Program Guide

A. **Pilot Project Area**. The pilot project area will be bordered by Hilliard Road to the north, Atkins Avenue to the west, Eldred Avenue to the east and Delaware Avenue to the south, and will include the following residential properties:

Parcel No.	Address	Street
313-11-018	2122	Atkins Ave.
313-12-044	2123	Atkins Ave.
313-11-019	2124	Atkins Ave.
313-12-043	2127	Atkins Ave.
313-11-020	2128	Atkins Ave.
313-12-042	2131	Atkins Ave.
313-11-021	2132	Atkins Ave.
313-11-022	2134	Atkins Ave.
313-12-041	2135	Atkins Ave.
313-13-001	2139	Atkins Ave.
313-11-023	2140-42	Atkins Ave.
313-13-002	2143-45	Atkins Ave.
313-11-024	2144	Atkins Ave.
313-13-003	2147-49	Atkins Ave.
313-11-025	2148	Atkins Ave.
313-13-004	2151-53	Atkins Ave.
313-11-026	2152	Atkins Ave.
313-13-005	2155-57	Atkins Ave.
313-11-027	2156	Atkins Ave.
313-11-029	2160	Atkins Ave.
313-13-006	2159-61	Atkins Ave.
313-11-030	2162	Atkins Ave.
313-13-007	2163-65	Atkins Ave.
313-11-031	2166	Atkins Ave.
313-13-008	2167	Atkins Ave.
313-11-032	2170	Atkins Ave.
313-13-009	2171-73	Atkins Ave.
313-13-010	2175	Atkins Ave.

Parcel No.	Address	Street
313-11-033	2176	Atkins Ave.
313-11-034	2178	Atkins Ave.
313-13-011	2179-81	Atkins Ave.
313-11-035	2180	Atkins Ave.
313-13-012	2183	Atkins Ave.
313-11-036	2184-86	Atkins Ave.
313-13-013	2185-87	Atkins Ave.
313-11-037	2188-90	Atkins Ave.
313-13-014	2191	Atkins Ave.
313-11-038	2192	Atkins Ave.
313-13-015	2193	Atkins Ave.
313-11-039	2196-98	Atkins Ave.
313-13-016	2197-99	Atkins Ave.
313-11-040	2200	Atkins Ave.
313-13-017	2203	Atkins Ave.
313-11-041	2204	Atkins Ave.
313-13-018	2205-07	Atkins Ave.
313-11-042	2208-10	Atkins Ave.
313-13-019	2209-11	Atkins Ave.
313-11-043	2212	Atkins Ave.
313-11-044	2214-16	Atkins Ave.
313-13-020	2215	Atkins Ave.
313-13-021	2217-19	Atkins Ave.
313-11-045	2218-20	Atkins Ave.
313-13-022	2221	Atkins Ave.
313-13-074	16611-13	Delaware Ave.
313-13-075	16615-17	Delaware Ave.
313-13-076	16619-21	Delaware Ave.

Parcel No.	Address	Street
313-13-077	16701-03	Delaware Ave.
313-13-025	16706	Delaware Ave.
313-13-078	16707	Delaware Ave.
313-13-024	16708	Delaware Ave.
313-13-079	16711	Delaware Ave.
313-13-023	16712-14	Delaware Ave.
313-11-046	16800	Delaware Ave.
313-11-047	16802-04	Delaware Ave.
313-11-048	16806-08	Delaware Ave.
313-11-049	16810-12	Delaware Ave.
313-11-050	16900-02	Delaware Ave.
313-11-051	16906-08	Delaware Ave.
313-11-052	16914	Delaware Ave.
313-11-053	17002	Delaware Ave.
313-13-042	2178	Eldred Ave.
313-13-055	2183	Eldred Ave.
313-13-041	2184-86	Eldred Ave.
313-13-056	2187	Eldred Ave.
313-13-040	2188-90	Eldred Ave.
313-13-057	2191	Eldred Ave.
313-13-058	2193-95	Eldred Ave.
313-13-039	2194-96	Eldred Ave.
313-13-038	2198-2200	Eldred Ave.

Parcel No.	Address	Street
313-13-059	2199-2201	Eldred Ave.
313-13-037	2202-04	Eldred Ave.
313-13-060	2203-05	Eldred Ave.
313-13-036	2206-08	Eldred Ave.
313-13-061	2207-09	Eldred Ave.
313-13-035	2210	Eldred Ave.
313-13-062	2211	Eldred Ave.
313-13-063	2215	Eldred Ave.
313-13-034	2216	Eldred Ave.
313-13-033	2220-22	Eldred Ave.
313-13-064	2221	Eldred Ave.
313-13-065	2223	Eldred Ave.
313-13-032	2224-26	Eldred Ave.
313-13-031	2230	Eldred Ave.
313-13-066	2231	Eldred Ave.
313-13-030	2233-35	Eldred Ave.
313-13-029	2234	Eldred Ave.
313-13-068	2238	Eldred Ave.
313-13-028	2239	Eldred Ave.
313-13-069	2242-44	Eldred Ave.
313-13-070	2245	Eldred Ave.
313-13-026	2249	Eldred Ave.
313-13-067	2250	Eldred Ave.

If your property is not listed above, you are not a part of the pilot project, although work may be occurring near your property and at your neighbors' property.

This area was chosen because it features a unique situation where all houses flow into a single point (the sewer interceptor by Harding Middle School); the homes were built in the same time period and are of similar design; we have very good data of the current state of sewer flows during dry and wet weather; and we can measure before and after flow volumes in a variety of dry weather and wet (storm) weather conditions.

B. **Rationale.** The rationale for the pilot project is as follows:

- The city's sewer system is plagued with significant inflow and infiltration, complicated by a complex network of separate and combined sewers. This results in sewage overflows to the Rocky River and Lake Erie.

- Lakewood recently entered into an administrative consent order with the U.S. EPA that stipulates the city eliminate all sanitary sewer overflows and basement backups.

- Lakewood recently was issued a renewal of its Ohio EPA NPDES permit dated September 1, 2014 that requires the development of a plan to reduce and eliminate sewage discharges to the environment.

- The majority of rainfall that enters the sanitary sewer system comes from sources on private property. These sources must be systematically removed. Each source is a small portion

of the enormous volume of water that enters the system, so it will take time before the removal of each source will produce a noticeable effect.

- Rain water enters the public sanitary sewer due to the age of the overall system and development in the city. The city needs to find and eliminate as many sources of rain water in its sanitary sewer system as possible.

- The city's sanitary sewers are properly sized for conveying sewage during dry weather. It is only during significant rainfall events that the sanitary and/or combined sewers become overloaded.

- Financing for rehabilitation and corrections on private property is worth analyzing. Costs often exceed normal expectations of what homeowners can absorb.

C. **Goals of the Program.** The goals of the pilot project are as follows:

- to improve water quality and achieve compliance with the federal Clean Water Act and Ohio law;

- to reduce the volume of surface and subsurface water entering the city's sanitary sewer system;

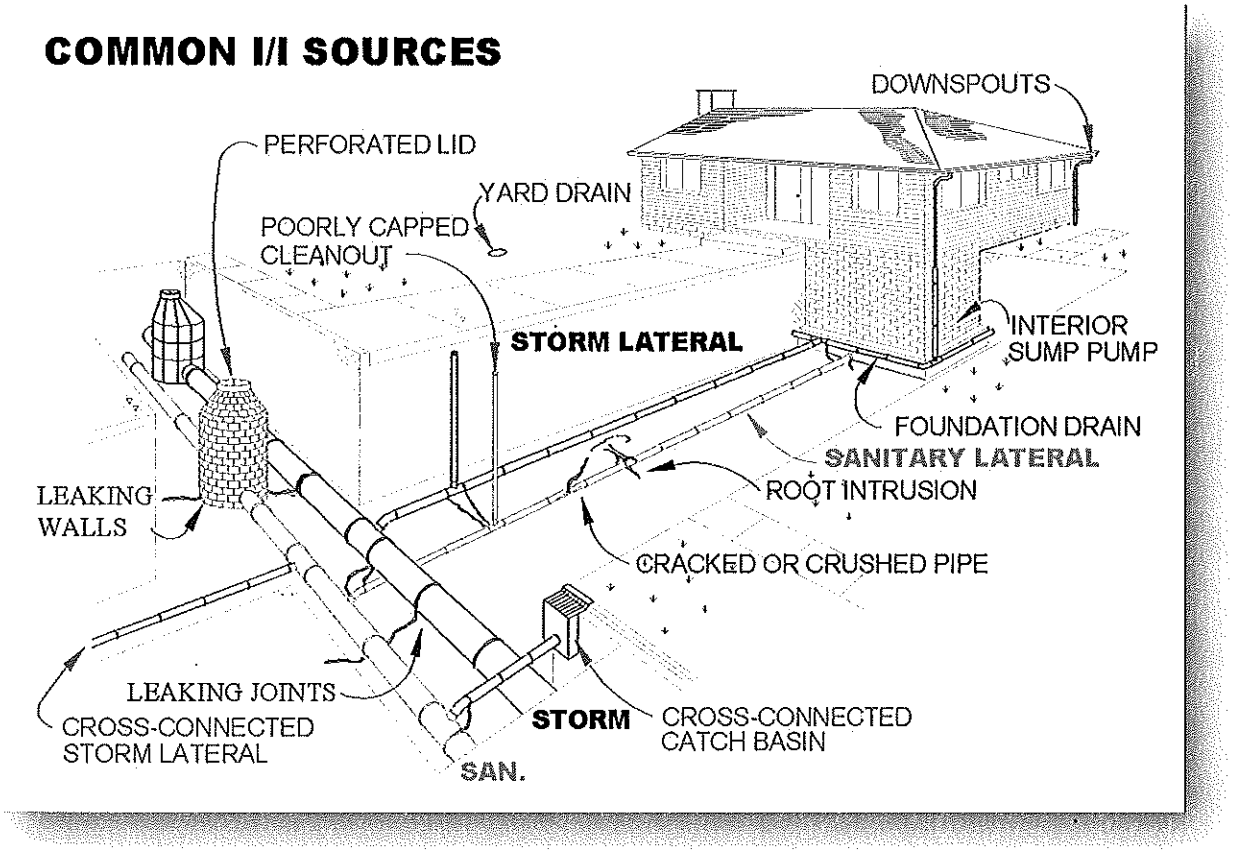
- to reduce overflows into the Rocky River and Lake Erie;

- to reduce the occurrence of basement flooding; and

- to develop a source-control program that considers the financial impact on the residents and technical effectiveness as the city looks toward future citywide programs, corrections and compliance initiatives.

D. **Authority for the Program.** The city is operating under the resolution establishing the pilot program in 2015. Under Chapters 901, 913 and 917 of the Codified Ordinances, the city may inspect, sample, test and order correction of all instances of improper sewer connections from private property to the city's sewer system, and the infiltration of storm water into the sanitary sewers on private property. The city may also require that all storm water goes from homes to the storm system, and all sanitary water goes from homes to the sanitary system. The pilot program will permit the city and homeowners to make necessary corrections on private property without having to impose some of the more difficult penalty provisions, such as injunctive relief, prosecution and the like, upon affected homeowners.

E. **Scope of the Program.** The city has engaged its own employees and contractors to conduct physical inspection and testing of sewer connections on properties included in the pilot program. They will access each basement and yard after arranging a time with you. They will attempt to video existing conditions in the pipes leading to and from your home. They will inventory all sewer connections, identify design options for the correction of any violations, and arrange for and conduct corrections of those violations. Some common inflow and infiltration sources to be addressed in the pilot program are illustrated in the following diagram:



The correction work includes activities that are directly attributable to the removal of clean water sources to the sanitary sewers and may include removal of dirty water to storm sewers. ***Examples of correction work*** may include installation of:

- a sump pump receptacle (sometimes referred to as a crock) to act as a storage well for water from the foundation (footer) drain;
- a sump pump or ejector pump in sumps or crocks located in the basement or exterior of the house;
- a water-pressure-driven backup sump pump or battery powered backup sump pump;
- downspout diverters or splash pads;
- sanitary and storm lateral pipes to replace existing pipes or to reconnect clean water sources to the storm sewer;
- liners in existing pipes to stop leaking into the pipe;
- upgrades to the house electrical system to support installation of pumps including wiring of a receptacle for the sump pump;
- revisions to the house plumbing system to support installation of a sump pump including installation of new sump-pump discharge piping;

- hangers, braces, supports, staples and other systems for routing and securing plumbing and electrical systems;
- redirecting floor drains to sanitary connection; and/or
- other corrections required to properly complete the project performed at the discretion of the city.

Corrections may require:

- open trenching or where feasible, trenchless construction methods;
- exterior excavation around selected portions of the house foundation;
- cutting and removal of concrete basement slabs and any associated floor covering;
- cutting and removal of sidewalks, driveways, patios, and other exterior hard surfaces;
- removal of plant materials and salvaging (where feasible) or replacing same with like plant materials;
- temporary alterations to irrigation systems;
- drilling, cutting or otherwise creating openings for electrical and plumbing work;
- cutting and repair of exterior foundation walls to allow redirection of foundation (footer) drains to the sump pump receptacle, and redirection of lateral sewer lines;
- localized water proofing of new exterior foundation walls;
- surveying, isolating and removing asbestos containing floor covering or insulation if there is the potential for creating air born asbestos fibers;
- air quality testing; and/or
- other appropriate industry standard methods of construction required to properly complete the project performed at the discretion of the city.

Corrections will not include improving any system, surface, structure, object, or facility not necessary to remove sources of clean water from the sanitary sewer system including:

- waterproofing old construction;
- replacing floor coverings other than those directly disturbed by construction;
- wall coatings and/or paint other than required to attempt to match new work with old construction;
- upgrading facilities not associated with the intent of the program;
- replacing dead, diseased or dangerously rotted plant material; or
- any activity considered purely decorative.

If your property is within the original pilot-study area and you have already made, at your expense, corrections to your sewer system after notice of the pilot study was provided in February 2014, the city may consider, on a case-by-case basis depending on a number of factors, awarding a credit against your water and sewer charges. This would be determined after the city has had an opportunity to determine a scope of work at your property.

F. **Ownership of Corrections.** When work is completed, you will own all property, devices and materials used to correct problems. Any general or specific warranties or other benefits owned by the city will be transferred, to the extent possible, to you. You will be responsible for future operation and maintenance including but not limited to all necessary electrical and power supply costs. The city will not be responsible for the corrections or any property, devices and materials used for the corrections. The payment of financial assistance by the city under this program shall not be deemed to give rise to any liability on the part of the city for work performed by a contractor or any other person.

G. **Payment for Corrections; Financing.** Once the evaluations are complete, and scope of work per property is determined, the following is the city's financial participation in the corrections to be made on your property:

- The city will provide you, as the homeowner, notice of the cost of correction with an itemized list of the corrections to be made. The notice will be made either by certified mail or residence service at the affected property. You can opt in and use the city's contractor for the corrections to be made after the notice is made. You will have 30 days to opt in, on a form approved by the city, after receipt of the notice.

- ***If you opt in,*** the city will pay for 100 percent for initial property correction at your home. It is estimated the total cost of correction at most parcels will not exceed $7,500. Work at some homes may cost much less; work at others may cost much more.

- If you opt in, you will be responsible to repay the city just 10 percent of the cost of any correction per parcel. You will have the opportunity to set up a payment plan for no more than 10 years at 0 percent interest. Amounts due under the payment plan will be added to your water and sewer bill. Your failure to make a scheduled payment will result in the balance being assessed to your property tax bill. The city may consider, on a case-by-case basis depending on a number of factors, awarding a full or partial credit for any repayment obligation or against your water and sewer charges based upon sewer corrections you may have already made, at your expense, after notice of this pilot study was provided in February 2014.

- If you contest the necessity of the corrections contemplated by the city, you will have 30 days from the date you receive notice within which to appeal to the city's Board of Building Standards and Building Appeals. Applications for appeals to the board cost $25 and must be submitted with the city's Division of Housing and Building and the board will hear your appeal in accordance with Article XIV of the city's charter and any applicable rules and regulations.

- ***If you fail to opt in*** within 30 days of receiving notice of the corrections, you must begin to correct the identified sewer connection issues within 90 days, failing which the city may enforce the penalty provisions of Chapters 901, 913 and 917 of the Codified Ordinances or take

other actions allowable by any applicable code. All necessary permits must be pulled for such work and you must bear the full expense of the corrections. If you fail to opt in, you must complete the work undertaken be completed by December 1, 2015, failing which the city may enforce the penalty provisions of Chapters 901, 913 and 917 of the Codified Ordinances or take other actions allowable by any applicable code, including abating the nuisance conditions on your property and assessing the cost to the property.

H. **Conditions of Financial Assistance.** Any sanitary sewer customer participating in this program must be the owner of the property, and as a condition to receiving the assistance, you must agree on the opt-in form to the following:

- ***Inspection***. The city, on reasonable notice, may inspect the corrections at any time.
- ***Maintenance and Repair***. You will operate and maintain the corrections and timely complete any repairs or replacement of the corrections.
- ***Discharge Modifications Prohibited***. You will not modify the sump pump discharge (if applicable) in any manner that would directly or indirectly contribute foundation drain flow and clear water flow to the sanitary sewer system.
- ***Agreement Runs with the Land***. You will agree that these conditions run with the property and may be recorded by the city; and that the city may maintain a record or database of properties governed by the agreement.

I. **After the Project is Completed.** Without written permission of the city, you will not be permitted to alter the plumbing or connection to the sanitary sewer system after the corrections are made, subject to the penalty provisions found within Chapters 901, 913 and 917 of the Codified Ordinances or other applicable law. If the city determines after the project is completed there is a modification of the system that permits clean water to enter the sanitary sewer, or a failure to maintain or replace a failed sump pump or other equipment that would allow an indirect or direct connection to the sanitary sewer system, or such other cause may allow a direct or indirect connection, the city may require further corrections by the property owner.

J. **Contact Information.** For more information, please contact the city's Division of Engineering at (216) 529-6692 or engineering@lakewoodoh.net.

FIRST READ 2/17/15. 2ND READING 3/2/15.

RESOLUTION NO. 8794-15 BY: Anderson, Bullock, Juris, Madigan, Marx, O'Leary.

A RESOLUTION to take effect immediately provided it receives the affirmative vote of at least five members of Council, or otherwise to take effect and be in force after the earliest period allowed by law, establishing a pilot program in western Lakewood to remove clean water sources from the City's sanitary sewer system in the furtherance of the City's permitting under the Ohio Environmental Protection Agency; authorizing the Mayor (Director of Public Safety), the Director of Public Works, the Director of Law, the Director of Finance and/or the Purchasing Manager to enter into contracts for professional services for the pilot program, and to advertise for bids and enter into contracts for the purchase of repair, maintenance and operating supplies, services and equipment for the pilot program as authorized by the Administrative Code of the City of Lakewood with the lowest and best bidder or bidders or as otherwise provided by law in an amount not to exceed $900,000.00; declaring a nuisance; and identifying resident payment options under the pilot program.

WHEREAS, the City of Lakewood was issued a renewal of the Ohio Environmental Protection Agency (Ohio EPA) NPDES Permit dated September 1, 2014 that requires the development of a plan to reduce and eliminate sewage discharges to the environment; and

WHEREAS, to timely meet its legal requirements, the City is undertaking a pilot study to remove clean water sources from the City's sanitary sewer system as one of the measures critical to the evaluation and development of an integrated plan; and

WHEREAS, the City strategically chose specific properties within the area bordered by Hilliard Road, Atkins Avenue, Eldred Avenue and Delaware Avenue in western Lakewood to undertake the pilot study; and

WHEREAS, the City of Lakewood, in order to properly evaluate the effectiveness of removing clean water sources on private property within the compliance schedule contained in the Ohio EPA NPDES Permit conditions, has determined the use of public funds, partially to be reimbursed to the City by the pilot project participants, to be in the best interests of the public; and

WHEREAS, Chapter 913 of the Codified Ordinances prohibits persons from discharging sewage, industrial waste or other waste into the City's wastewater disposal system contrary to the provisions of that chapter, federal or state pretreatment requirements, or any order of Council; and

WHEREAS, Chapter 913 of the Code prohibits persons from discharging or causing to be discharged any storm water, surface water, groundwater, roof runoff, subsurface drainage, uncontaminated cooling water or unpolluted industrial process waters to any sanitary sewer, and contemplates that doing so constitutes a public nuisance; and

WHEREAS, this Council desires to provide the authorization to the Mayor (Director of Public Safety), the Director of Public Works, the Director of Law, the Director of Finance, and/or the Purchasing Manager to enter into contracts for professional services for the pilot program, and to advertise for bids and enter into contracts for the purchase of repair, maintenance and operating supplies, services and equipment for the pilot program as authorized by the Administrative Code of the City of Lakewood with the lowest and best bidder or bidders or as otherwise provided by law in an amount not to exceed $900,000.00; and

WHEREAS, the City of Lakewood makes this determination solely and expressly for the aforementioned purpose and only for this specific pilot study area; and

WHEREAS, the City of Lakewood has determined it is in the best interest of the public; to protect the public health and welfare, that it is necessary to fund the correction and rehabilitation necessary on private property in the pilot study area as a critical and key element to the proper development of a comprehensive plan to reduce and eliminate sewage discharges to the environment; and

WHEREAS, pursuant to the Constitution of the State of Ohio and the Ohio Revised Code, municipalities have the power of local self-government, and the power to enact laws that are for the health, safety, welfare; and

WHEREAS, this Council by a vote of at least five of its members determines that this resolution is an emergency measure and that it shall take effect immediately, as set forth in Article III, Sections 10 and 13 of the Second Amended Charter of the City of Lakewood, and that it is necessary for the immediate preservation of the public property, health, and safety and to provide for the usual daily operation of municipal departments, in that the City must proceed to investigate and correct improper inflow and infiltration of stormwater into the sanitary system under the Ohio EPA NPDES permit immediately; now, therefore

BE IT RESOLVED BY THE CITY OF LAKEWOOD, OHIO:

Section 1. The City hereby establishes a pilot project in western Lakewood, within the area bounded by Hilliard Road to the north, Atkins Avenue to the west, Eldred Avenue to the east and Delaware Avenue to the south, to remove clean water sources from the City's sanitary sewer system in the furtherance of the City's permitting under the Ohio EPA, substantially under the conditions and specifications identified in the pilot project program guide attached hereto as **Exhibit A.**

Section 2. The Mayor (Director of Public Safety), the Director of Public Works, the Director of Law, the Director of Finance, and/or the Purchasing Manager be and are hereby authorized and directed to enter into contracts for professional services for the pilot program, and to advertise for bids and enter into contracts for the purchase of repair, maintenance and operating supplies, services and equipment for the pilot program as authorized by the Administrative Code of the City of Lakewood with the lowest and best bidder or bidders or as otherwise provided by law in an amount not to exceed $900,000.00.

Section 3. Within the pilot program area, any discharge of sewage, industrial waste or other waste into the City's wastewater disposal system contrary to the provisions Chapter 913, federal or state pretreatment requirements, or any order of Council; and any discharge or the causing of any discharge of any storm water, surface water, groundwater, roof runoff, subsurface drainage, uncontaminated cooling water or unpolluted industrial process waters to any sanitary sewer constitute and are hereby declared to be public nuisances.

Section 4. Owners of property included within the pilot program are required to participate in the program in accordance with the authority granted to the City, and under penalty imposed by, Chapters 901, 913 and 917 of the Codified Ordinances and all applicable code. Owners shall have the option to test and correct their sewer connections at their own expense using their own contractors, subject to the City's approval and inspection, and in accordance with the terms of the program, but in any event not later than December 1, 2015. For those corrections undertaken on private property by the City, the City is expected initially to bear the full cost of the corrections, and participants must repay the City 10 percent of such costs. The Director of Finance is authorized and directed to establish payment options available to those property owners who participate in order to lessen the financial impact of the corrections upon owners.

Section 5. The pilot program established in this resolution shall not cease except upon further action by Council.

Section 6. It is found and determined that all formal actions of this Council concerning and relating to the passage of this resolution were adopted in an open meeting of this Council and that all such deliberations of this Council and of any of its committees that resulted in such formal action were in meetings open to the public in compliance with all legal requirements.

Section 7. This resolution is hereby declared to be an emergency measure necessary for the immediate preservation of the public peace, property, health, safety and welfare in the City and for the usual daily operation of the City for the reasons set forth and defined in its preamble, and provided it receives the affirmative vote of at least five members of Council this resolution shall take effect and be in force immediately, or otherwise shall take effect and be in force after the earliest period allowed by law.

Adopted: March 16, 2015

President

Clerk

Approved: March 20, 2015

Mayor

1982 Proposal for roadway and storm

REPORT ON

SUNSET AREA PAVEMENT

AND

STORM SEWER IMPROVEMENTS

PREPARED FOR

CITY OF BAY VILLAGE, OHIO

JAMES H. COWLES, MAYOR

GORDON FORSMARK, SERVICE DIRECTOR

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293-0-02

OCTOBER, 1982

SUNSET AREA IMPROVEMENTS
BAY VILLAGE, OHIO

The purpose of this report is to evaluate various alternatives for installing storm sewers and road improvements in the area of Bay Village, commonly referred to as the Sunset Area. The location of the area is shown on Plate No. 1 attached hereto. The area includes Forestview Drive, Kenmore Drive, Rockledge Drive, Lakeview Drive and Sunset Drive. There are 45 houses in this area. Preparation of this report was authorized by the Bay Village Council on July 26, 1982. This was in response to a public meeting held on July 12, 1982 between the Bay Village Council and the Sunset Area Board of Trustees.

GENERAL

This area is one of the two remaining areas within the City of Bay Village that do not have permanent type pavements. The existing roadways in this area are chip-and-seal type pavements that are in a deteriorated condition. The area has been maintained by the City over the years through a process of chip-and-sealing and patching. The last patching was in July of 1982.

The existing streets are very narrow in width, most of them are approximately 16 - 18 feet wide. There are many large trees adjacent to the traveled roadway on almost every street. In many cases, the traveled roadway is limited by the proximity of these

trees. The pavement for Lakeview Drive has been moved so far north that portions are no longer in the public right-of-way.

At the present time, there is no defined surface or subsurface water drainage system. There are roadway culverts at the intersection of the roadways and some driveways have culverts. There is a ditch along Kenmore and Forestview Drive. These ditches discharge into culverts on Lakeview Drive and eventually into Lake Erie. However, the majority of the water travels overland directly to Lake Erie. Since there is no storm sewer in the area, it is suspected that many of the houses have their footer drains and/or downspouts connected to the sanitary sewer systems. The lack of an adequate storm drainage system has contributed to the continued failure of the pavement in the past.

This report will investigate and provide an analysis of 3 interrelated items. The items to be investigated are the typical roadway cross-section, the roadway pavement, and the storm water drainage system. Each of these items will be discussed in greater detail in the following paragraphs.

In addition to the investigation of various roadway improvements, we investigated the possibility of one-way operation in the area. We investigated 2 possible flow patterns as shown on Plates 2 and 3. Due to the residential nature of this area, it is our recommendation that one-way street operation not be instituted. This recommendation is based on the following:

(1) Most of the traffic utilizing these roads is generated by the local residents. The one-way operation would tend to confuse the stray visitors to the area. Also, many of the residents within the area, would tend to ignore the one-way patterns and utilize short cuts to their homes.

(2) The one-way operation would require that parking on the street be totally disallowed. This would be necessary unless a pavement width greater than 16 feet was installed.

TYPICAL CROSS-SECTION ALTERNATES

There were a total of 4 cross-sections investigated as possibilities in this particular area (see Plate 4). Alternates A, B, and C provide a traveled roadway of 20 foot whereas alternate D provides only a 16 foot roadway width.

Alternate A: This alternate will provide a depressed area on each side of the roadway that would act as a gutter section. These gutters would discharge into the storm water drainage system to be discussed under a separate alternate. The gutter section would be 2 feet on each side of the road, effectively making a 16 foot traveled roadway. The section would be very difficult to construct and maintain.

Alternate B: This alternate is an inverted crown section. In this section the center of the roadway is depressed and acts as a ditch to carry the water away from the pavement. This section is not normally used in the

Northern Ohio area due to problems of freezing water in the inverted crown and the rapid deterioration of the inverted crown section due to the freezing and thawing action of our spring weather. This typical cross-section would provide a traveled roadway width of 20 feet.

Alternate C: This alternate would provide a mountable curb and gutter section. The curb and gutter sections would act as a ditch to convey the surface water to the storm water drainage system. This is the section that is typical throughout the City of Bay Village. The curb and gutter section would be 2'-6" in width on either side of the roadway, however, the effective roadway width would be approximately 18 feet.

Alternate D: This alternate is similar to that which exists at the present time in the study area. There is a ditch line on either side of the roadway for the surface water drainage system. In this system a 16 foot traveled roadway would be the maximum possible due to conditions in the particular area. There will be no improvement in the surface water drainage system under this alternate.

PAVEMENT ALTERNATES

We investigated 5 typical pavement types for this particular area (see Plate 5). The pavement type and a brief description are as follows:

Type 1: 2" of asphaltic concrete, 6" aggregate base.

Type 2: 3" asphaltic concrete, 8" stabilized base.

Type 3: 1½" asphaltic concrete, 4" bituminous aggregate base.

Type 4: Double chip-and-seal, 8" stabilized base.

Type 5: 7" reinforced concrete, 3" granular base.

Each of the pavement types investigated, with the exception of type 4, have an assumed design life of 20 years. The type 4 pavement is assumed to have a design life of 10 years, after which time it will require a new chip-and-seal pavement. The design life does not mean that the pavement will not require periodic maintenance prior to that time. Each pavement type is susceptible to the varying loading patterns caused by the residents' vehicles and the larger vehicle for trash collection. The type 5 pavement is the one which is standard in the City of Bay Village and required of all new roadways installed within sub-divisions.

STORM SEWER

There were a total of 4 storm sewer alternatives investigated for possible installation in this area (see Plates 6, 7, 8, and 9). A fifth installation investigated, which is not a necessary part of this project, is the installation of a storm sewer in Forestview Drive, from Electric Drive to the north side of Lake Road. It is not necessary to install this storm sewer

as a part of this project, however, the water which it will convey, will have an impact on the size of the storm sewer in Forestview Drive. Alternates 1, 2, and 3 will not provide connections for the houses adjacent to the improvement. Alternate number 4 will provide for connections to the adjacent residences. A description of the alternates investigated are as follows:

Alternate No. 1: Storm sewer in Forestivew Drive from Lake Road north to the outlet, including storm sewers along north and south sides of Lake Road

Alternate No. 2: Culverts at all street and drive crossings. Necessary roadside ditches and discharge into the new storm water outlets.

Alternate No. 3: Storm sewer in Kenmore Drive, Forestview Drive, and Rockledge Drive from Sunset Drive to new outlets.

Alternate No. 4: Storm sewers in each of the roadways with sufficient depth to serve adjacent residences.

ASSESSMENTS

General

In any assessment type project not petitioned for by the affected property owners, the City must pay 2% of the project cost plus the cost of all work in the intersections. All remaining costs are assessed to the affected property owners. In

the past the City portion has averaged approximately 15% of the project cost. This value will be used for this preliminary report.

All corner lots are assessed for 100% of the address side and 25% of the other side. This procedure is followed only in the per foot assessment method. It is not applicable for area type assessments.

Paving

The cost of paving the streets in the area will be assessed on the "per foot of frontage" method. This is the most equitable method for paving projects. There is a total of 3,132 lineal feet of street to be paved and a total of approximately 4,000 lineal feet that can be assessed. The preliminary assessment for the alternates investigated are indicated in Table 1.

Storm Sewer

The assessment for the storm sewer will be based on the area of the property. In this method a large lot will have a larger assessment than a small lot.

The storm sewer in Forestview Drive from Lake Road to its outlet will be assessed against the contributing owners south of Lake Road as well as those north of Lake Road.

The estimated cost for the alternates varies with the pavement cross-section. This is due to the requirement for more or less pipe, catch basins, etc.

The assessment for the various storm sewer alternates is explained in the following paragraphs.

Alternate No. 1

The area in this assessment includes all the area south of Lake Road; the properties fronting on Lake Road; and those properties along Forestview Drive. The properties on Sunset, Kenmore, Rockledge and Lakeview will receive no benefit from this storm sewer. The area involved is approximately 1,100,000 square feet.

Alternate No. 2

The area to be assessed for this alternate is all the area north of Lake Road. The area south of Lake Road will receive no benefit from this alternate. This is an area of approximately 572,000 square feet.

Alternates No. 3 and 4

The area to be assessed for these alternates is all the contributing area north and south of Lake Road.

This is an area of approximately 1,357,600 square feet.

RECOMMENDATIONS

There are many possible combinations of roadway cross-sections, pavement type and storm sewers for this particular project. We have listed these in Table I in a matrix type format. The estimated cost shown does not include any contingencies such

as legal, engineering, or interest. Through the use of this Table, the many possible combinations of improvement can be selected. The least costly method is $68,700 while the most expensive is $446,200.

It is our recommendation that pavement cross-section "C" be selected, with pavement type No. 2 and storm sewer alternate No. 3 be installed in this area. This will provide a pavement type that is consistent with the City standards and a storm sewer system that will provide the drainage necessary for the area. This selection has an estimated construction cost of $270,000 plus project contingencies.

We further recommend that the storm sewer be extended south in Forestview Drive to Electric Blvd. This has an estimated project cost of $200,000.

TABLE I

IMPROVEMENT COST

TYPICAL CROSS-SECTION	PAVEMENT SECTION 1	2	3	4	5		STORM SEWER 1	2	3	4
A	71,300	57,200	71,700	*	169,500		126,000*	32,400*	177,000	269,000
**	15.15	12.15	15.15		36.01	***	0.10	.05	.11	.17
B	*	*	71,700	*	169,400		116,000*	23,400*	148,000	234,000
**			15.15		36.01	***	.09	.03	.09	.15
C	103,600	93,000	103,900	*	177,200		126,000*	32,400*	177,000	269,000
**	22.02	19.76	22.02		37.66	***	0.10	.05	.11	.17
D	57,100	45,800	57,400	22,300	135,500		134,000*	46,400	179,000	283,000
**	12.15	9.73	12.15	4.74	28.79	***	0.10	.07	.11	.18

* Not recommended

** Assessment Per Foot

*** Assessment Per Square Foot

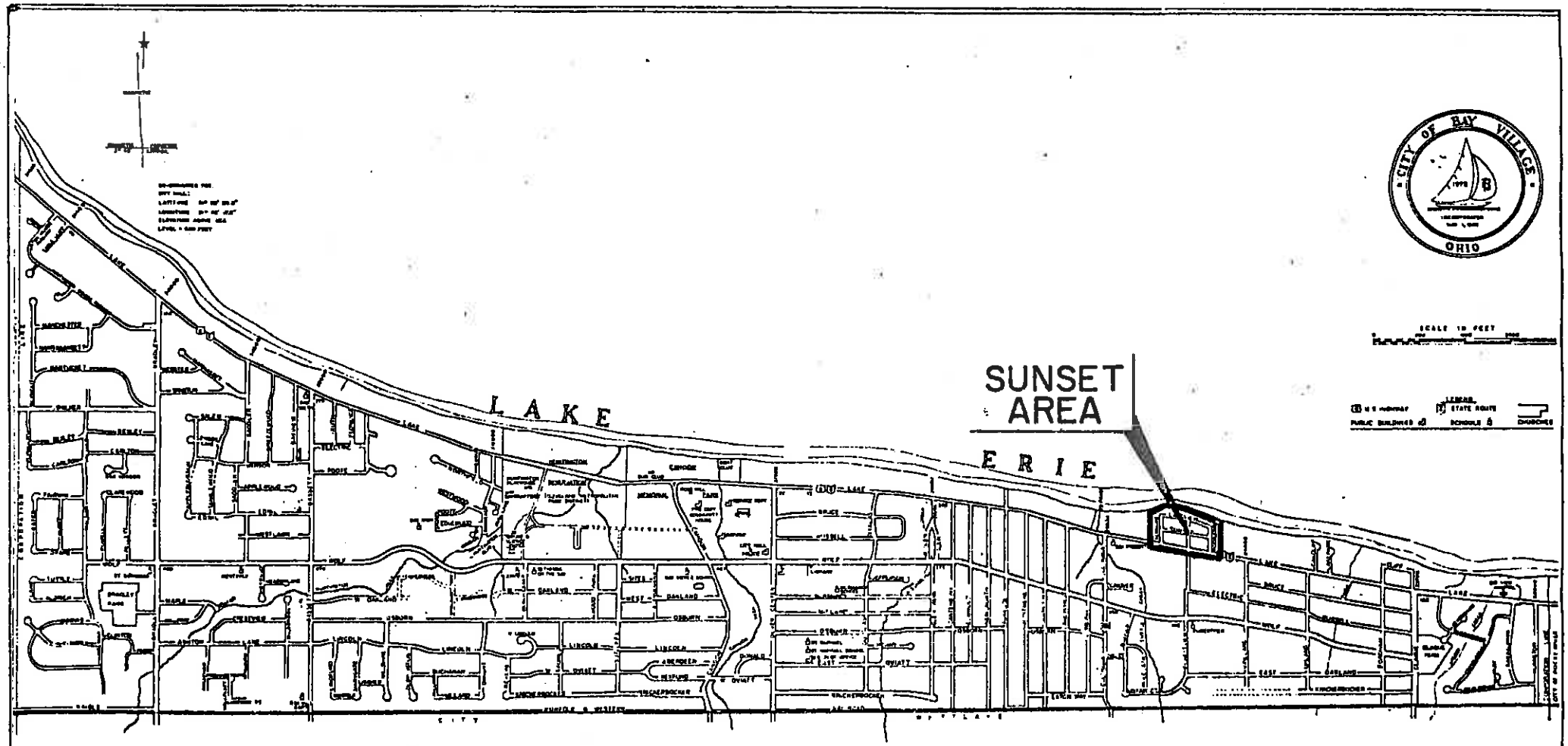


Plate: —

SUNSET AREA PROJECT LOCATION

MICHAEL BENZA & ASSOCIATES, INC.
CONSULTING ENGINEERS
PARMA RICHFIELD

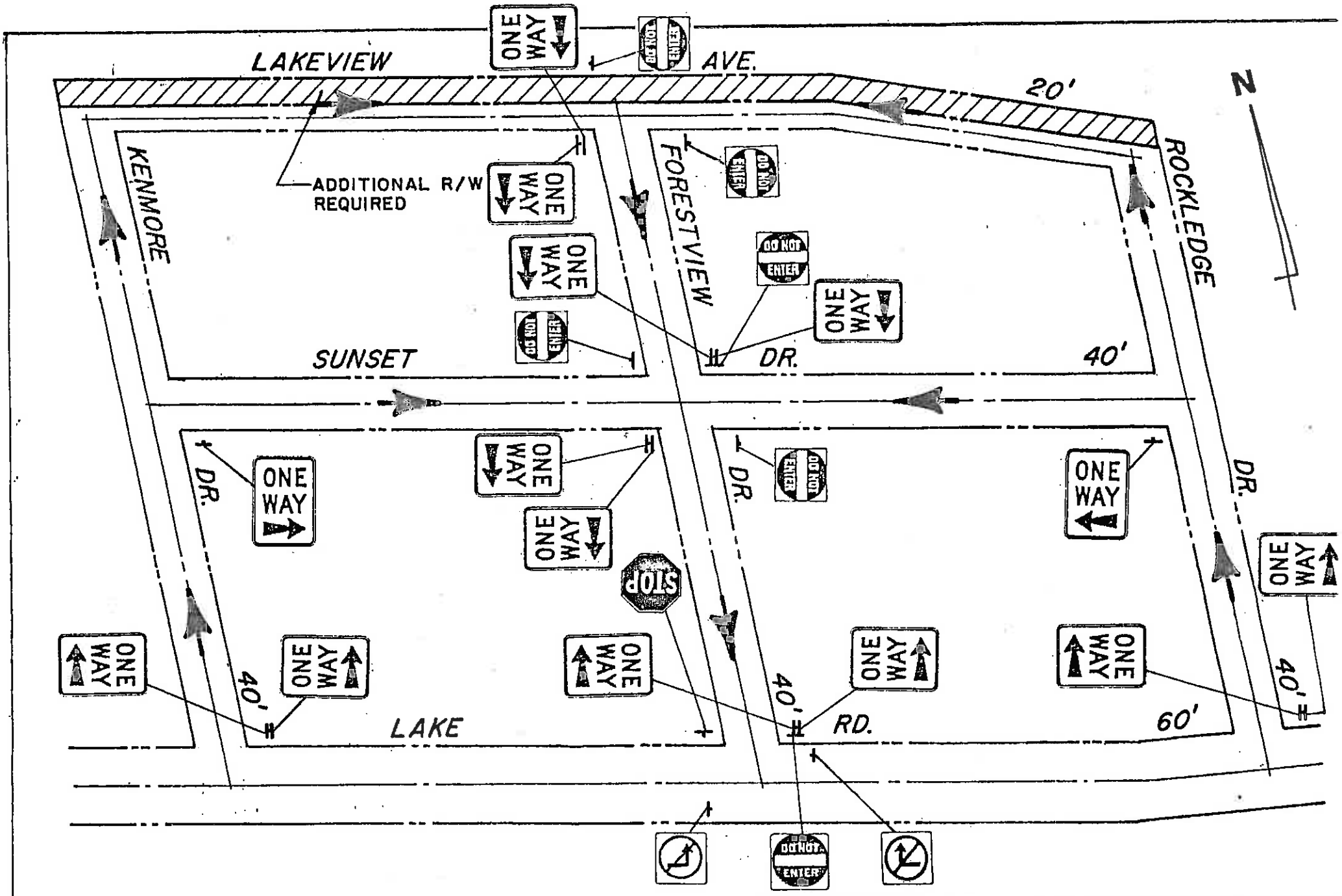


Plate 2

ONE-WAY OPERATION SCHEME I

MICHAEL BENZA & ASSOCIATES, INC.
CONSULTING ENGINEERS
PARMA
RICHFIELD

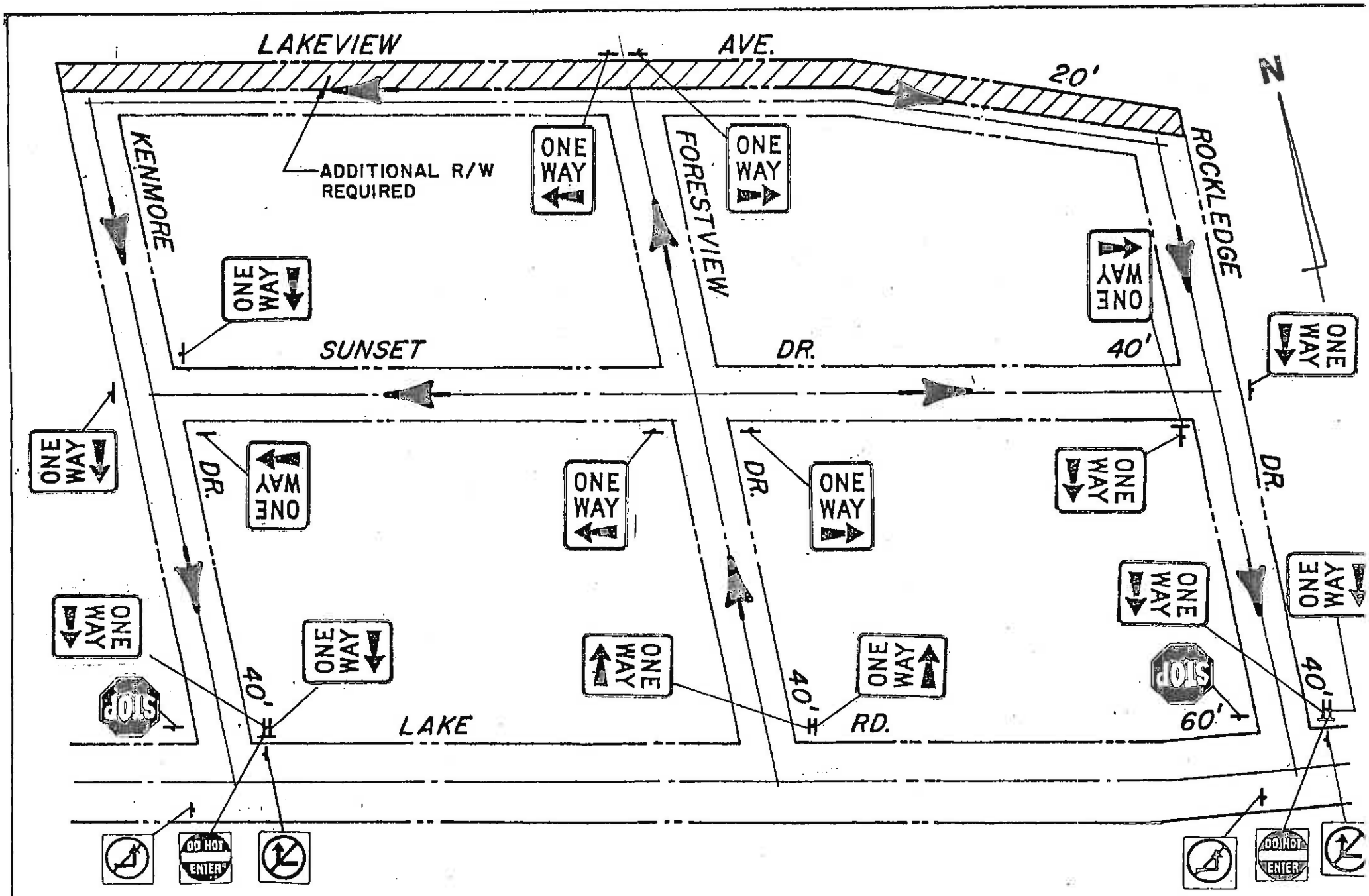
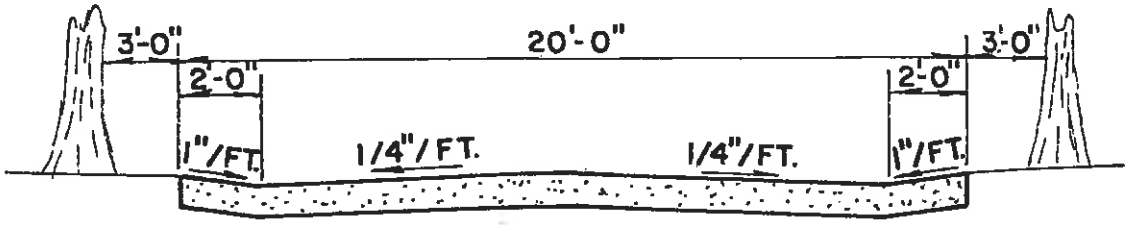


Plate: 3

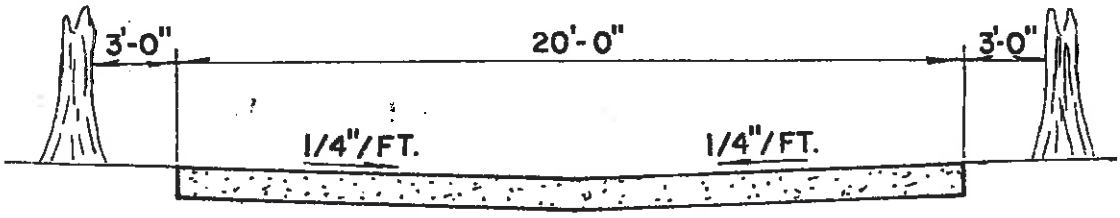
ONE-WAY OPERATION SCHEME 2

MICHAEL BENZA & ASSOCIATES, INC.
CONSULTING ENGINEERS

PARMA RICHFIELD



A



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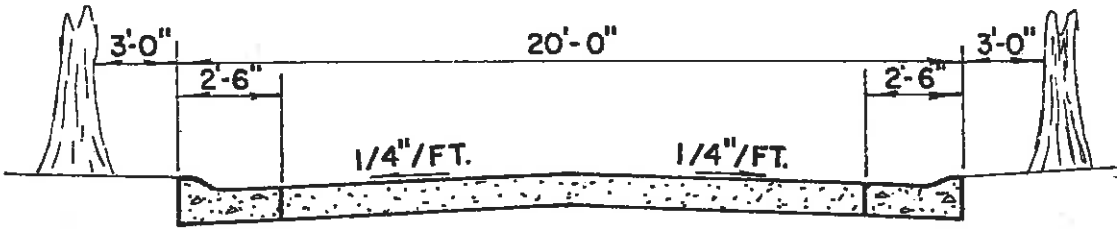
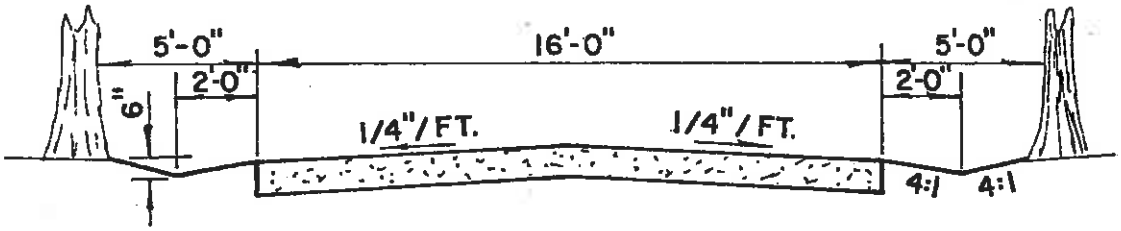
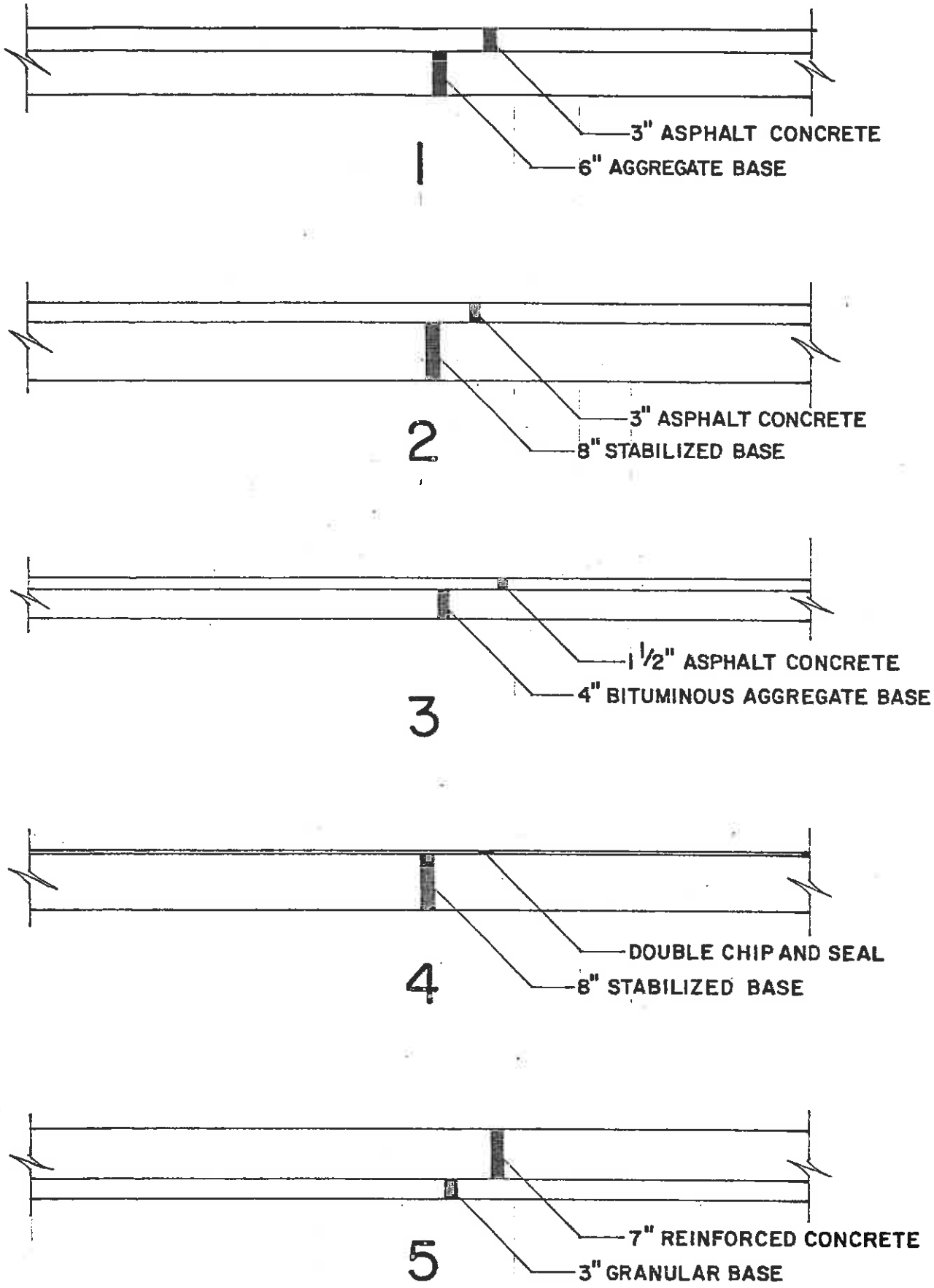


C



D

TYPICAL SECTION ALTERNATES	MICHAEL BENZA & ASSOCIATES, INC. CONSULTING ENGINEERS PARMA RICHFIELD	Plate: 4



PAVEMENT TYPE ALTERNATES	MICHAEL BENZA & ASSOCIATES, INC. CONSULTING ENGINEERS PARMA RICHFIELD	Plate: 5

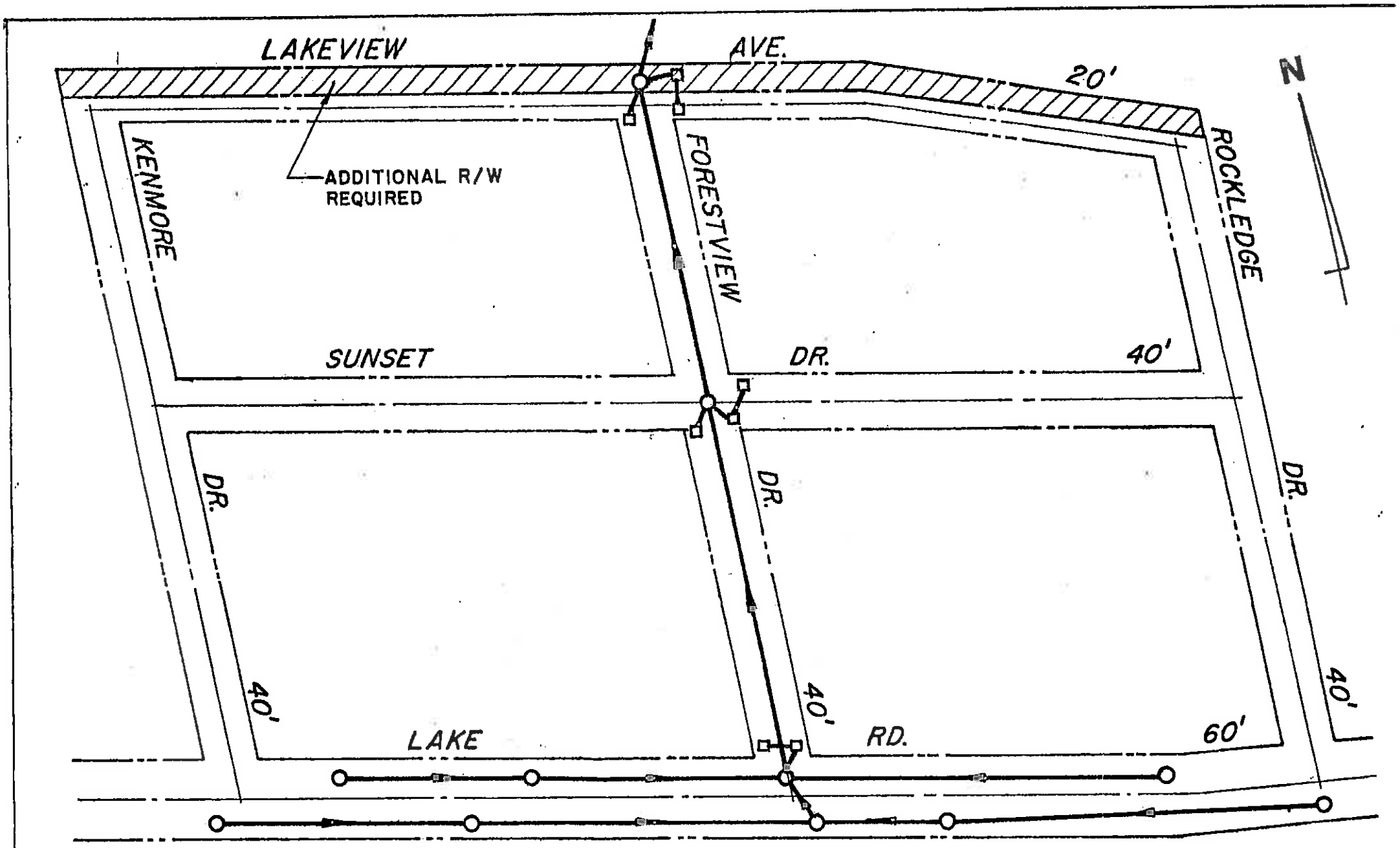


Plate: 6

STORM SEWER ALTERNATE I

MICHAEL BENZA & ASSOCIATES, INC.
CONSULTING ENGINEERS
PARMA RICHFIELD

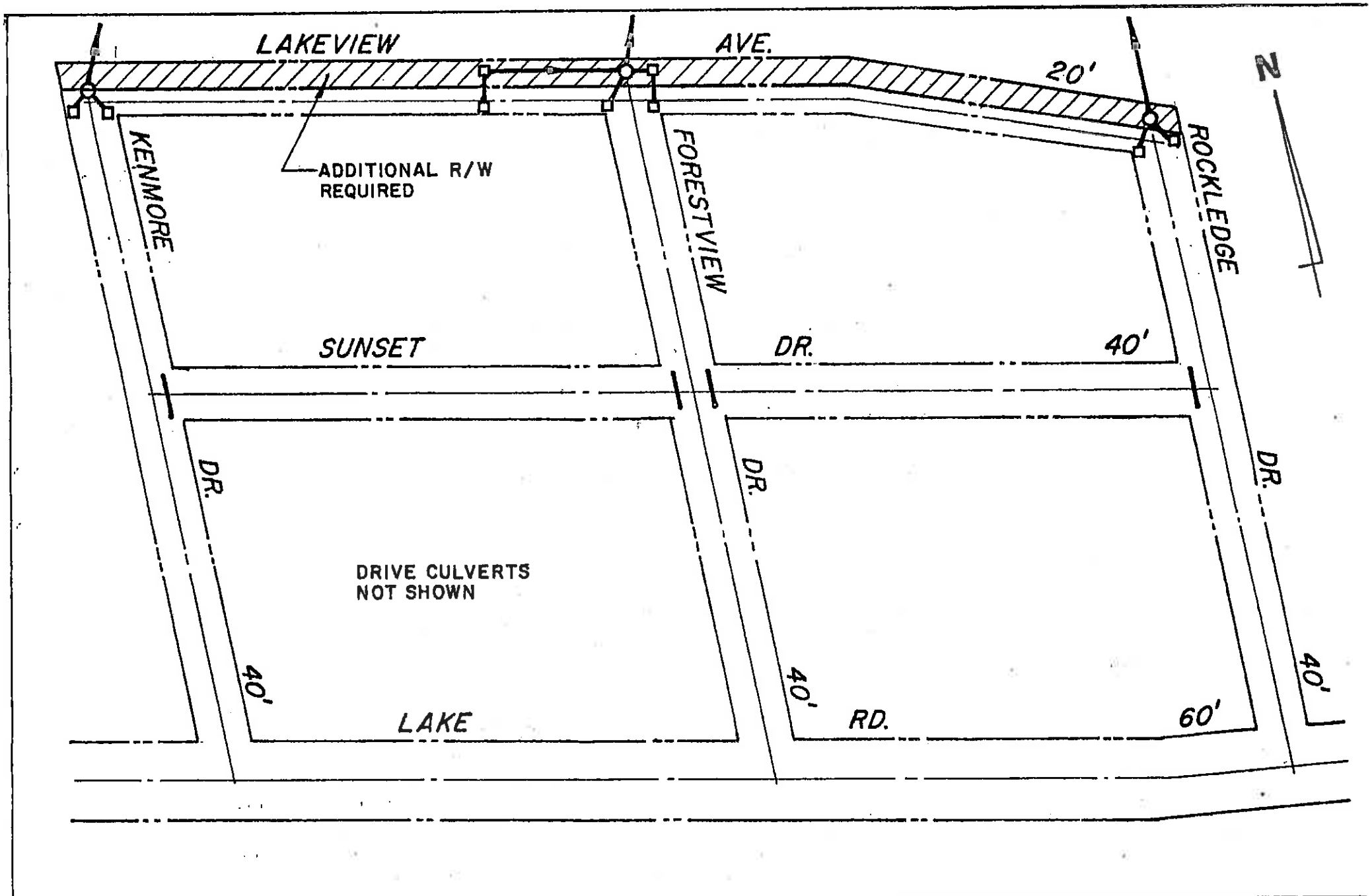


Plate: 7

STORM SEWER ALTERNATE 2

MICHAEL BENZA & ASSOCIATES, INC.
CONSULTING ENGINEERS

PARMA RICHFIELD

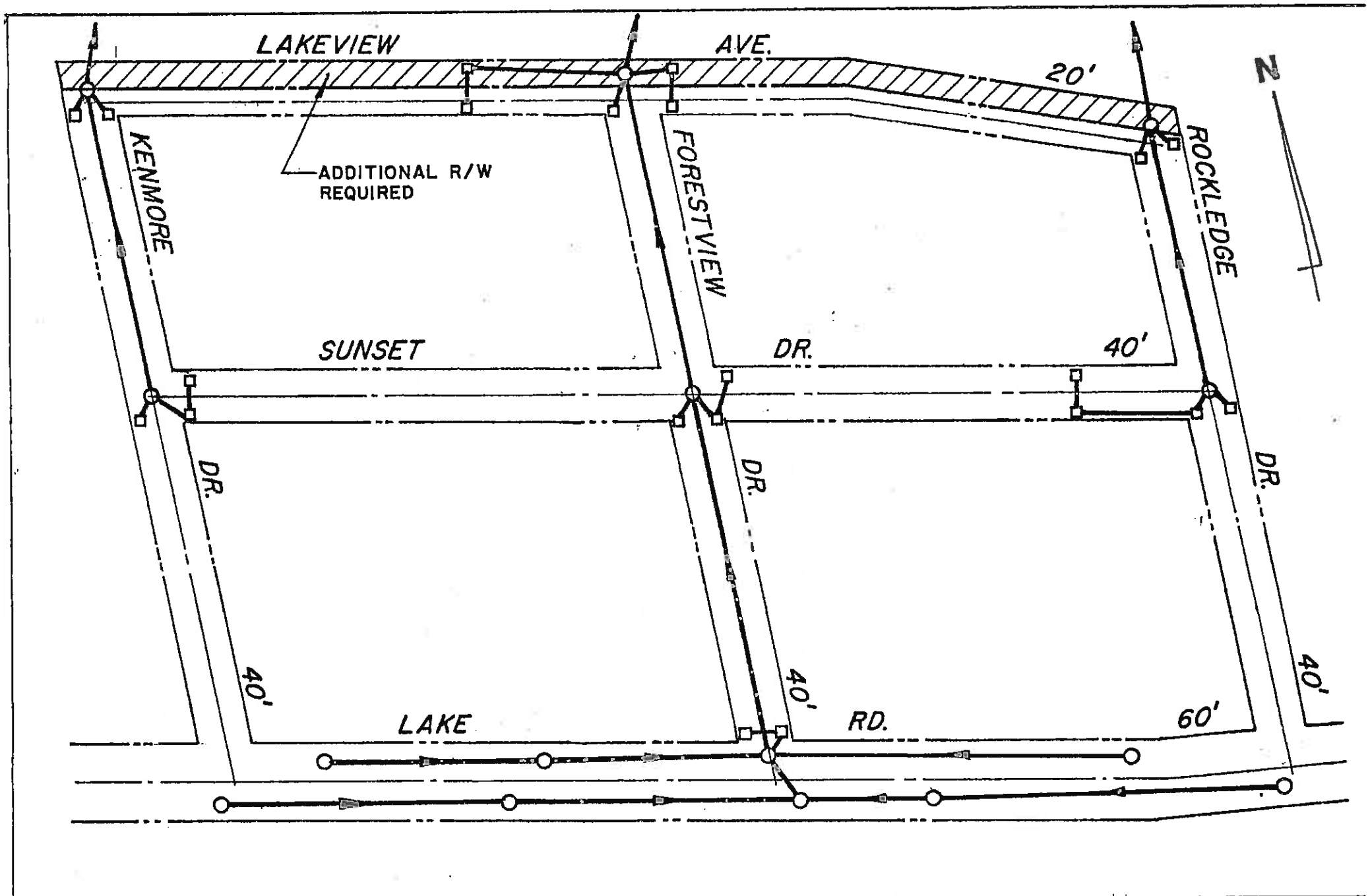


Plate: 8

STORM SEWER ALTERNATE 3

MICHAEL BENZA & ASSOCIATES, INC.
CONSULTING ENGINEERS

PARMA

RICHFIELD

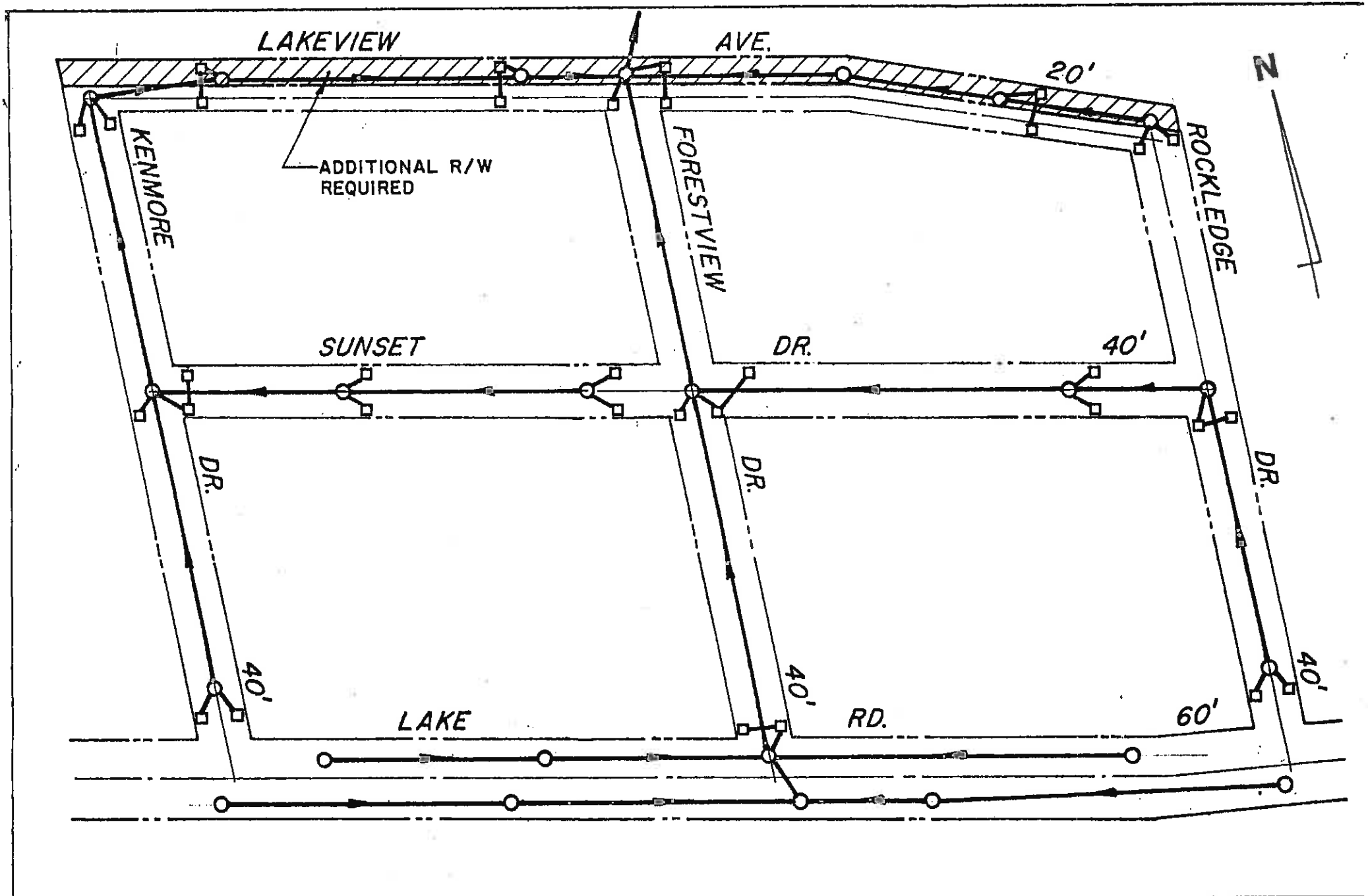


Plate: 9

STORM SEWER ALTERNATE 4

MICHAEL BENZA & ASSOCIATES, INC.
CONSULTING ENGINEERS

PARMA RICHFIELD

2003 Proposal for roadway and storm

Bay Village, Sunset Area

Storm System and Pavement Improvement

Prepared for
The City of Bay Village, Ohio
Mayor Deborah Sutherland
Service Director James M. Sears

November 2003

2001-32-02-41

Michael Benza & Associates Inc.

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Purpose:

This report will analyze and compare two alternatives for the storm sewer and pavement improvements for the "Sunset Area" in the City of Bay Village. The first alternate will address the installation of a storm drainage system and temporary pavement. The second alternate will consider installation of a storm drainage system and permanent pavement improvements. A wider roadway that can accommodate two-way traffic more efficiently and provide for parking, trash trucks, snowplows, and emergency vehicles will be considered as a part of each alternate improvement.

The improvement of this area has been under consideration by the City since the 1970's. This area is one of the remaining areas without a permanent pavement with curbs.

Lakeview Drive looking West

General:

The Sunset Area consists of 45 residential homes north of Lake Road and includes Forestview Drive, Kenmore Drive, Rockledge Drive, Lakeview Drive, and Sunset Drive. The area location is shown on Plate 1. A small private park is located between Lakeview Dr. and Lake Erie. A residential homeowners association, The Bay Park Beach Company, owns the park and beachfront. The local residents generate most of the traffic on these streets. The existing pavement structure in this area is referred to as chip and seal pavement. This pavement is typically constructed over a supporting base material by broadcasting aggregate over a layer of asphalt binder followed by compaction. This type of treatment is typically used as a surface course for maintenance type repairs on an existing permanent pavement structure. Normally, it is not considered to be a permanent or structurally adequate pavement. The pavement is maintained and repaired by the City of Bay Village. The last repair, in 1994, was by ODOT and the City in conjunction with the Lake Road improvement, and utilized a product known as Armorgard. Both maintenance methods provide only short-term alleviation to problems associated with deteriorating pavements.

The existing roadway width varies from approximately 16 to 18 feet wide. In many areas the traveled roadway is limited by the proximity of large trees. The intersections are too narrow for the large garbage trucks, requiring them to leave the pavement and enter the grassed area. The pavement in Lakeview Road is north of the dedicated right-of-way and is on the park property owned by the homeowners association.

The Sunset Area has no defined surface or subsurface storm water drainage system. Inadequate roadway drainage is one of the major contributing factors to pavement failure. The life of a pavement can be increased up to three times if it is adequately drained. The damage caused to flexible pavements that are inadequately drained includes extensive cracking from loss of sub-grade support and frost heave. These conditions are evident in the Sunset Area roadways.

In1994, 521 feet of 36" diameter storm line was installed along Rockledge Drive. This was part of the Lake Road improvement by the City and ODOT. Manholes were installed at the intersections of Rockledge Drive with SunsetDrive and Lake view Drive. These are to accept the future flow from west of Rockledge Road. The outlet passes through the existing bank and empties into Lake Erie.

36" diam. storm outlet that empties into Lake Erie

Project Concerns:

The Sunset Area is a unique neighborhood. The residents have a strong sense of community and neighborhood through the Bay Park Beach Company association. Their concerns are of great importance and consideration in the facilitation of a storm and/or pavement improvement project in their neighborhood.

The following concerns will be addressed:

- *Many trees are located adjacent to the existing roadway. Solutions to roadway widening must minimize the number of tree removals.*

- *The north portion of Lakeview Drive is not within the public right-of-way. The pavement is located on private property owned by The Bay Park Beach Company. If the pavement is to remain in this location a permanent easement will be required from the association.*

- *Residential drive restoration, including installation of drainage inlets, and seeding of disturbed areas must be included as part of these projects.*

- *The time period for construction must minimize disruption due to noise and accessibility inconveniences.*

Approximately 6.5 ft. of Lakeview Drive is not located on public Right-of Way

Widening the pavement will allow for adequate street parking and municipal vehicle access.

Sunset Drive looking East.

Kenmore Drive looking South.

Pavement Structure:

Two permanent and one temporary pavement structures were considered in this study:

- Asphalt permanent pavement section
- Concrete permanent pavement section
- Asphalt temporary pavement section

The asphalt permanent pavement section is composed of a 4" aggregate base, a 6" bituminous base, a 1 3/4" asphalt intermediate course and 1 1/4" asphalt surface course.

The concrete permanent pavement section is composed of a 3" aggregate base and 7" of reinforced concrete.

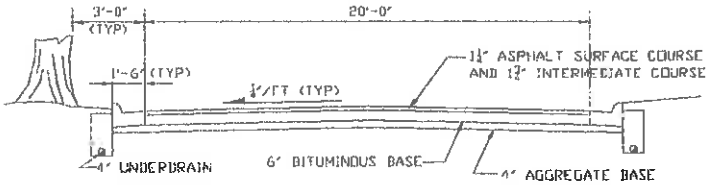
The asphalt temporary pavement section consists of a 6" aggregate base, 3" of asphalt, and graded ditch lines.

The installation of sidewalks is not a part of this project.

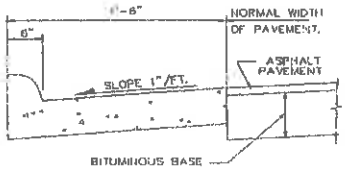
Both pavements sections are 20 ft. wide and utilize a center crown sloped at 1/4 inch/ft. Although 20 ft. is the recommended minimum pavement width to accommodate on street parking and municipal vehicles, a lesser width may be utilized on some streets due to the proximity and number of large trees that would need removed.

Three alternate gutter sections were investigated to convey water from the pavement to catch basins:

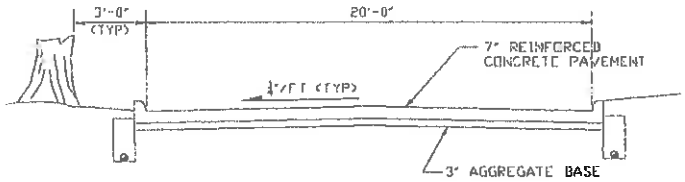
1. 1'-6" paved gutter/curb combination
2. 6" integral concrete vertical curb..
3. Graded ditch line.



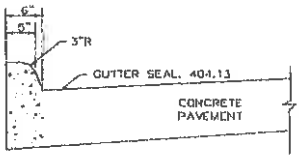
ASPHALT PAVEMENT SECTION
WITH COMBINATION CURB & GUTTER



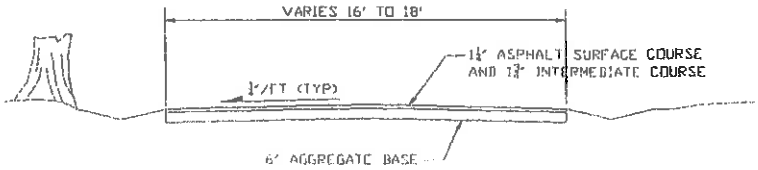
COMBINATION CURB AND GUTTER DETAIL



CONCRETE PAVEMENT SECTION
WITH INTEGRAL CURB



INTEGRAL CONCRETE CURB DETAIL



TEMPORARY ASPHALT PAVEMENT SECTION
WITH GRADED SIDE DITCHES

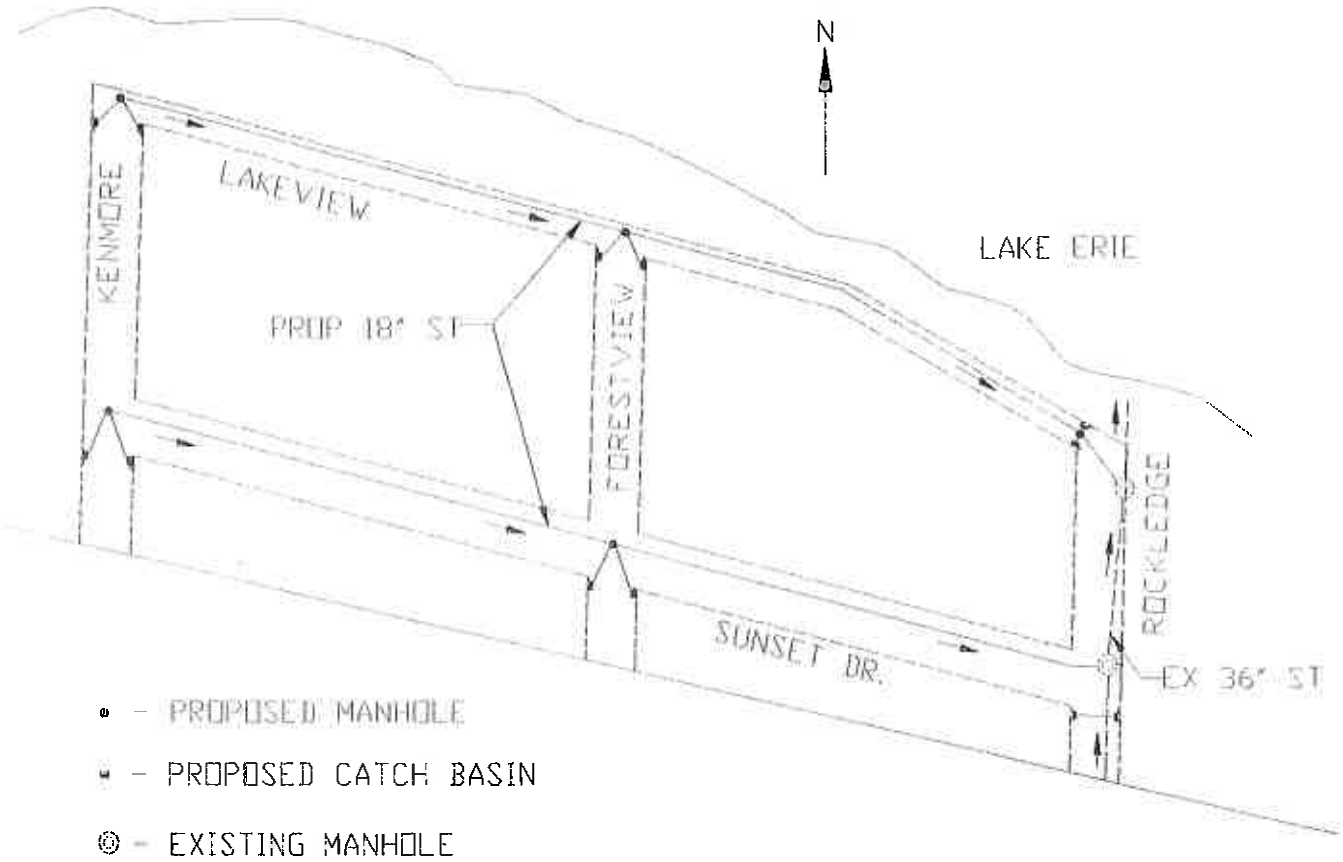
GRADED DITCH LINE

Storm System Plan:

The recommended plan for sub-surface drainage improvements is to install storm sewers along Lakeview Drive and Sunset Drive from Kenmore Road. Both storm lines would outlet into the existing 36" diameter storm sewer that runs along Rockledge Drive from Lake Road to Lake Erie. Catch basins would be constructed at all intersections with Lakeview and Sunset to collect the run-off from Kenmore and Forestview Roads.

Side ditch inlets would be installed between residential drives in Lakeview and Sunset and outlet into the proposed storm lines if there were no curb/ gutter section installed.

Approximately 6.5 ft of the north side of Lakeview Drive is located on property owned by the Bay Park Beach Company. An easement may be required to install the storm lines.



Alternative No. 1:

Alternative No.1 considers installing the new storm drainage system, including the construction of temporary pavement.

The heavy construction equipment required to build the storm system would cause extensive damage to the existing pavement. Repairing the pavement only in the trenched area would not be sufficient. Therefore, if constructed separately, the storm system project will include a total temporary pavement replacement for the Sunset Area streets. The minimum temporary pavement structure would include a 6" aggregate base with 3" of asphalt pavement (See Typical Temporary Pavement Section Sheet 3).

Storm Sewer Installation Estimated Cost

The estimated cost for the storm sewer installation, excluding temporary pavement, is $231,600.00 The estimated cost for temporary pavement is $205,800.00. The total cost for Project No. 1 is $437,400.00. (See page 8 for Storm Sewer Installation Opinion of Probable Cost).

Assessment Estimation Alternative No. 1

If the City assumes 100% of the cost of the temporary pavement and the property owners assume the cost of the storm sewer installation, $231,600.00 would be assessed to the property owners. Using a total drainage area of approximately 572,000 S.F. and an average lot size of 80' X 120' (9600 SF), assessment costs are as follows:

- Total cost to City = $205,800.00
- Total amount assessed = $231,600.00
- Average assessment cost per square foot: $0.40
- Average assessment cost per property owner: $3840.00.

Alternative No.2:

Alternative No.2 consists of performing the storm sewer and permanent pavement work in one project.

Two options for permanent pavement, asphalt and concrete, were considered for this Alternative (See Typical Asphalt and Concrete Sections on Sheet 3).

Estimated Total Costs

Storm Sewer and Asphalt Pavement:
$735,100.00

Storm Sewer and Concrete Pavement:
$821,000.00

(See pages 9 &10 for Storm and Pavement Opinion of Probable Cost).

Assessment Estimation Alternative No. 2

In the calculations below, we assume that the City will be responsible for 75% of the total cost and the remaining 25% would be assessed to the property owners.

Asphalt Pavement & Storm Sewer:

- Total cost to City = $551,325.00
- Total amount Assessed = $ 183,775.00
- Average assessment cost per square foot: $ 0.32
- Average assessment cost per property owner: $3072.00

Concrete Pavement & Storm Sewer:

- Total cost to City = $615,750.00
- Total amount Assessed = $ 205,250.00
- Average assessment cost per square foot: $ 0.36
- Average assessment cost per property owner: $3456.00.

Conclusions:

A summary of the costs associated with the proposed Alternatives is listed below.

	Alternate No. 1 Temporary Pavement	Alternate No.2 Asphalt Pavement	Alternate No. 2 Concrete Pavement
Total Cost	$437,400	$735,100	$821,000
Total Cost to City	$205,800	$551,325	$615,750
Total Cost to Property Owners	$231,600	$183,775	$205,250
Avg. Assessment per Property Owner	$3,840	$3,072	$3,456

The differences between costs to property owners for the various alternatives appear to be relatively minor. However, it must be noted that the cost of achieving a permanent pavement structure is not considered in Alternative No.1. It is expected that the temporary pavement would need to be replaced within 5 to 10 years and that interim maintenance would be required. The future cost and added inconvenience to property owners for the need to install a permanent pavement structure at a later date is avoided under Alternative No. 2.

Under Alternative No. 2, the City contributes a significantly larger portion of the total cost which reduces the cost to property owners. The advantages of Alternative No. 2 are listed below.

Advantages for Alternative No. 2:

- Significant reduced cost to property owners.
- The permanent pavement has more than double the life of temporary pavement.
- The proposed curbs and gutter lines will convey water to the drainage system more efficiently.
- Drive obstructions and other construction inconveniences will only occur once.
- The residents will be provided with a drainage system, a permanent pavement structure that will provide enhanced ridability, and a roadway that can accommodate parking and effective two way traffic.
- Reduced maintenance costs to the City.

ALTERNATIVE NO.1: Storm Sewer and Temporary Pavement Opinion of Probable Cost

Item	Approx. Quantity	Approx. Cost per unit	Total Cost
STORM SEWER			
Site Work	LUMP	LUMP	$ 32,000.00
18" Storm Sewer	1610 L.F.	$70/L.F.	$ 112,700.00
Catchbasin	12 EACH	$1400 /EACH	$ 16,800.00
Manhole	6 EACH	$3500 /EACH	$ 21,000.00
Side Ditch Inlet	30 EACH	$300/EACH	$ 9,000.00
Utility Allowance	LUMP	LUMP	$ 1,500.00
Engineering and Contingency	LUMP	LUMP	$ 38,600.00
		SUBTOTAL STORM:	**$231,600.00**
TEMPORARY PAVEMENT			
Ex. Catchbasin Adj. To Grade	2 EACH	$400/EA	$ 800.00
Ex. Manhole Adj. To Grade	10 EACH	$250 /EA	$ 2,500.00
Ex. Water Valve Adj. to Grade	10 EACH	$150 /EA	$ 1500.00
Ex. Water Service Box Adj. to Grade	10 EACH	$150 /EA	$ 1500.00
Pavement and Base Removal	5400 SY	$8 /SY	$ 43,200.00
6"Aggregate Base	900 CY	$25 /CY	$ 22,500.00
1 ¾" Asphalt Int.Course (402)	5400 SY	$3.5 /SY	$ 18,900.00
1 ¼" Asphalt Surface Course (401)	5400 SY	$5/SY	$ 27,000.00
Concrete Drive Apron	670 SY	$50/SY	$ 33,500.00
Side Ditch Inlet	15 EACH	$300/EA	$ 4,500.00
Utility Allowance	LUMP	LUMP	$ 3,500.00
Engineering and Contingency	LUMP	LUMP	$ 46,400.00
		SUBTOTAL TEMPORARY PAVEMENT:	**$205,800.00**
TOTAL COST:			**$ 437,400.00**

ALTERNATIVE NO.2: Storm Sewer and Asphalt Pavement Opinion of Probable Cost

Item	Approx. Quantity	Approx. Cost per unit	Total Cost
Site Work	LUMP	LUMP	$ 52,000.00
18" Storm Sewer	1610 L.F.	$70/L.F.	$ 112,700.00
Catchbasin	12 EACH	$1400 /EACH	$ 16,800.00
Manhole	6 EACH	$3500 /EACH	$ 21,000.00
Ex. Catchbasin Adj. To Grade	2 EACH	$400/EA	$ 800.00
Ex. Manhole Adj. To Grade	10 EACH	$250 /EA	$ 2,500.00
Ex. Water Valve Adj. to Grade	10 EACH	$150 /EA	$ 1500.00
Ex. Water Service Box Adj. to Grade	10 EACH	$150 /EA	$ 1500.00
Pavement and Base Removal	7000 SY	$10 /SY	$ 70,000.00
4"Aggregate Base	780 CY	$25 /CY	$ 19,500.00
6" Bituminous Base	7000 SY	$12 /SY	$ 84,000.00
1 ¾" Asphalt Int.Course (402)	7000 SY	$3.5 /SY	$ 24,500.00
1 ¼" Asphalt Surface Course (401)	7000 SY	$5/SY	$ 35,000.00
Concrete Drive Apron	670 SY	$50/SY	$ 33,500.00
Combination Curb & Gutter	6400 L.F.	$12/LF	$ 76,800.00
Hydrant Replaced	7 EACH	$5000/EA	$ 35,000.00
		SUBTOTAL:	**$587,100.00**
Utility Allowance	LUMP	LUMP	**$ 8000.00**
Engineering & Contingency	LUMP	LUMP	**$ 140,000.00**
TOTAL COST:			**$ 735,100.00**

N

ALTERNATIVE NO.2: Storm Sewer and Concrete Pavement Opinion of Probable Cost

Item	Approx. Quantity	Approx. Cost per unit	Total Cost
Site Work	LUMP	LUMP	$ 58,000.00
18" Storm Sewer	1610 L.F.	$70/L.F.	$ 112,700.00
Catchbasin	12 EACH	$1400 /EACH	$ 16,800.00
Manhole	6 EACH	$3500 /EACH	$ 21,000.00
Ex. Catchbasin Adj. To Grade	2 EACH	$400/EA	$ 800.00
Ex. Manhole Adj. To Grade	10 EACH	$250 /EA	$ 2,500.00
Ex. Water Valve Adj. to Grade	10 EACH	$150 /EA	$ 1500.00
Ex. Water Service Box Adj. to Grade	10 EACH	$150 /EA	$ 1500.00
Pavement and Base Removal	7000 SY	$10 /SY	$ 70,000.00
3" Aggregate Base	450 CY	$30/CY	$ 13,500.00
7" Reinforced Concrete Pavement	7000 SY	$35 /SY	$ 245,000.00
Integral Concrete Curb	6400 L.F.	$8/L.F.	$ 51,200.00
Concrete Drive Apron	670 SY	$50/SY	$ 33,500.00
Hydrant Replaced	7 EACH	$5000/EA	$ 35,000.00
		SUBTOTAL:	**$ 663,000.00**
Utility Allowance	LUMP	LUMP	**$ 8000.00**
Engineering & Contingency	LUMP	LUMP	**$ 150,000.00**
TOTAL COST:			**$ 821,000.00**

2015 Proposal for roadway and storm

City of Bay Village
Sunset Drive Storm Sewer and Roadway Improvments

Project Cost Calculation		
Opinion of Construction Cost	$	1,054,670
Surveying/Engineering/Bidding	$	117,550
Construction Inspection/Testing	$	63,050
Legal/Permits/Advertising	$	52,734
Capitalized Interest (3.25% of Loan Amount)	$	41,860
Contingency (additional 5% at predesign stage)(10% already in Construction Cost)	$	52,734
Total Project Cost	$	1,382,597

Frontage Assessment Calculation		
Total Project Cost	$	1,382,597
Less Ohio Public Works Commission (OPWC) Grant		
Less Local Share (2%)	$	27,652
Less Intersections	$	211,751
Assessable Project Cost	$	1,143,194

Summary of Assessments		
Frontage Assessments	$	904,148
Adjust for 33% limitation on property valuation	$	239,046
Total Assessments	$	1,143,194

Front Foot Assessment		
Assessable Frontage (private property)	4,440.0	lf
Assessable Frontage (private property and intersections)	5,120.0	lf
Front Foot Assessment (private property)	**$257.48**	/lf

Summary - Source of Funds			
State Funding (OPWC Grant)			
Construction Financing through OPWC (0% Loan)			
City Portion			
Local Share (2%)	$	27,652	$478,449.11
Intersections	$	211,751	
Excess portion of property valuation	$	239,046	
Assessments	**$**	**904,148**	
Total Source of Funds	**$**	**1,382,597**	

City of Bay Village
Planning Level Assessment Amounts based on Front Foot

House No	Last Name	First Name	Parcel Number	Frontage Based on Auditor's Legal Frontage	Frontage Based on Auditor's Effective Frontage	Assessible Frontage Used	Corner Lot Frontage Based on Auditor's Legal Frontage	Corner Lot Frontage Based on Auditor's Effective Frontage	Assessible Corner Lot Frontage Used	Total Assessible Frontage Used	Tentative Preliminary Frontage Assessment	Current Market Value	Maximum Assessment 33%	Preliminary Frontage Assessment	Maximum Assessment Exceeded?	Unassessed Amount to City Portion
Forestview Road																
328	Garrity	Regis	204-14-034	75.32	75.32	75.32	100	100	100	100.32	$ 25,830.29	$ 138,200	$ 45,606	**$ 25,830.29**		
Kenmore Drive																
300	Stearns	Kim	204-09-029	120	166	120				120	$ 30,897.47	$ 576,600	$ 190,278	**$ 30,897.47**		
320	Barack	William and Susan	204-09-030	80	80	80				80	$ 20,598.32		$ -	**$ 20,598.32**		
329	Foster	Jeffrey and Erin	204-09-020	74.66	74.66	74.66	100	100	100	99.66	$ 25,660.35	$ 197,300	$ 65,109	**$ 25,660.35**		
332	Galang	Anthony and Dawn	204-09-031	75	75	75				75	$ 19,310.92	$ 494,000	$ 163,020	**$ 19,310.92**		
336	Wise	Richard and Mary	204-09-032	78	78	78				78	$ 20,083.36	$ 185,000	$ 61,050	**$ 20,083.36**		
341	Hartman	Barbara	204-09-018	74.66	74.66	74.66	100	100	100	99.66	$ 25,660.35	$ 154,900	$ 51,117	**$ 25,660.35**		
342	Voss	Jennifer and Elwin	204-09-010	105	105	105	157.42	157.42	157.42	144.36	$ 37,168.37	$ 239,800	$ 79,134	**$ 37,168.37**		
Lake Road																
24744	Zimmerman	Donald	204-14-012	111.86	111.86	111.86	302.26	302.26	302.26	187.43	$ 48,257.99	$ 399,300	$ 131,769	**$ 48,257.99**		
24800	Krepop	Kevin	204-14-011	59.59	59.59	59.59	145.87	145.87	145.87	96.06	$ 24,732.78	$ 216,600	$ 71,478	**$ 24,732.78**		
24928	Davis	Edward and Mary	204-14-005	50	50	50	150	150	150	87.50	$ 22,529.41	$ 141,800	$ 46,794	**$ 22,529.41**		
25008	Denk, Sr	Josef K. Trustee	204-14-004	51.65	51.65	51.65	150	150	150	89.15	$ 22,954.25	$ 122,600	$ 40,458	**$ 22,954.25**		
25098	DeRubba	Diane	204-09-011	51.65	51.65	51.65	150	150	150	89.15	$ 22,954.25	$ 171,800	$ 56,694	**$ 22,954.25**		
Lakeview Drive																
24805	Krebs	Martha	204-14-044	130.5	130.5	130.5	72.95	72.95	72.95	105.58	$ 27,183.34	$ 460,100	$ 151,833	**$ 27,183.34**		
24815	Prendergast	Michael	204-14-047	43.5	43.5	43.5				43.5	$ 11,200.33	$ 197,900	$ 65,307	**$ 11,200.33**		
24901	Brill	David	204-14-048	83.5	84	84				84	$ 21,628.23	$ 210,300	$ 69,399	**$ 21,628.23**		
24913	Deutschman	Daniel	204-14-050	71.6	71.6	71.6				71.6	$ 18,435.49	$ 480,000	$ 158,400	**$ 18,435.49**		
24915	Marconi	James, Trustee	204-14-052	48.4	48.4	48.4	115	115	115	77.15	$ 19,864.50	$ 512,300	$ 169,059	**$ 19,864.50**		
25001	O'Malley	Judith, Trustee	204-14-053	37.33	37.33	37.33	100	100	100	62.33	$ 16,048.66	$ 387,500	$ 127,875	**$ 16,048.66**		
25005	Marquardt	Thomas	204-14-054	37.3	37	37.3				37.3	$ 9,603.96	$ 217,800	$ 71,874	**$ 9,603.96**		
25011	Stewart	Dorothy	204-14-055	93.3	93	93.3				93.3	$ 24,022.79	$ 246,800	$ 81,444	**$ 24,022.79**		
25021	Donahoo	Delbert, Trustee	204-09-024	74	74	74				74	$ 19,053.44	$ 247,500	$ 81,675	**$ 19,053.44**		
25029	Viezer	Timothy and Joani	204-09-025	55	55	55				55	$ 14,161.34	$ 431,500	$ 142,395	**$ 14,161.34**		
25033	McNulty	Dennis and Jill	204-09-026	37	37	37				37	$ 9,526.72	$ 477,000	$ 157,410	**$ 9,526.72**		
25035	Busdiecker	Kevin	204-09-027	37.35	37.35	37.35	100	100	100	62.35	$ 16,053.81	$ 394,200	$ 130,086	**$ 16,053.81**		
	Bay Park Beach Co		204-09-028	-	-	850				850	$ 218,857.11	$ 2,300	$ 759	**$ 759.00**	Yes, cap at $759	$ 218,098.11
Rockledge Drive																
301	Cook	John and Pamela	204-14-058	110.9	111	111				111	$ 28,580.16	$ 1,007,700	$ 332,541	**$ 28,580.16**		
Sunset Drive																
24801	Arvidson	Cynthia	204-14-020	40	40	40	100	100	100	65	$ 16,736.13	$ 119,300	$ 39,369	**$ 16,736.13**		
24805	Berente	Katherine	204-14-021	40	40	40				40	$ 10,299.16	$ 136,700	$ 45,111	**$ 10,299.16**		
24810	Maurer	Sue and Jeff	204-14-040	40	40	40				40	$ 10,299.16	$ 215,400	$ 71,082	**$ 10,299.16**		
24811	Battisti	Linda	204-14-022	58	58	58				58	$ 14,933.78	$ 202,400	$ 66,792	**$ 14,933.78**		
24817	Bennett	Marilyn	204-14-023	62	62	62				62	$ 15,963.70	$ 180,800	$ 59,664	**$ 15,963.70**		
24911	Marconi	Robert and Lisa	204-14-024	80	80	80				80	$ 20,598.32	$ 304,700	$ 100,551	**$ 20,598.32**		
24919	Mengerink	Bill and Anne	204-14-026	80	80	80	100	100	100	105	$ 27,035.29	$ 285,100	$ 94,083	**$ 27,035.29**		
24920	Lorton	Stephen	204-14-035	120	120	120	85	85	85	115	$ 29,610.08	$ 209,500	$ 69,135	**$ 29,610.08**		
25001	Bagnall	Suzanne	204-14-028	37.33	37.33	37.33	100	100	100	62.33	$ 16,048.66	$ 232,800	$ 76,824	**$ 16,048.66**		
25007	Nelson	Sue	204-14-029	74.7	74	74.7				74.7	$ 19,233.68	$ 290,100	$ 95,733	**$ 19,233.68**		
25015	Haas	Beverly	204-14-031	61.4	61.4	61.4				61.4	$ 15,809.21	$ 169,300	$ 55,869	**$ 15,809.21**		
25016	Coury	David	204-14-033	92.7	92	92.7				92.7	$ 23,868.30	$ 121,000	$ 39,930	**$ 23,868.30**		
25021	Kellerman	Jeffrey and Kristin	204-09-015	50.6	50.6	50.6				50.6	$ 13,028.44	$ 400,000	$ 132,000	**$ 13,028.44**		
25024	Coury	David	204-09-023	74	74	74				74	$ 19,053.44	$ 285,300	$ 94,149	**$ 19,053.44**		
25025	Vickers	F. Thomas	204-09-016	74.6	37	74.6				74.6	$ 19,207.93	$ 277,900	$ 91,707	**$ 19,207.93**		
25028	Kasik	Doris	204-09-022	56	56	56				56	$ 14,418.82	$ 189,500	$ 62,535	**$ 14,418.82**		
corner lot	Krebs	Martha	204-14-043	40	40	40	72.95	72.95	72.95	58.24	$ 14,994.93	$ 17,500	$ 5,775	**$ 5,775.00**	Yes, cap at 5,775	$ 9,219.93
	Krebs	Martha	204-14-042	40	40	40				40	$ 10,299.16	$ 18,000	$ 5,940	**$ 5,940.00**	Yes, cap at 5,940	$ 4,359.16
	Krebs	Martha	204-14-041	40	40	40				40	$ 10,299.16	$ 18,100	$ 5,973	**$ 5,973.00**	Yes, cap at 5,973	$ 4,326.16
	Brill	David	204-13-039	40	40	40				40	$ 10,299.16	$ 26,500	$ 8,745	**$ 8,745.00**	Yes, cap at 8,745	$ 1,554.16
	Brill	David	204-14-038	40	40	40				40	$ 10,299.16	$ 26,700	$ 8,811	**$ 8,811.00**	Yes, cap at 8,811	$ 1,488.16
Totals				**3108.4**		**3959**	**2201.45**		**2201.45**	**4439.95**	**$ 1,143,193.68**		**$ 3,972,342**	**$ 904,148**		**$ 239,045.67**

2016 Proposal for roadway, storm, sanitary and water

CAPITAL PROJECT REQUEST FORM

Capital Budget Year 2016

Check one

	new		renovation		expansion
X	replacement		repair		other

Dept.: Service Department

Project Name: Sunset Infrastructure Construction

Project Location: Sunset Drive, Lakeview, Kenmore, Rockledge

Project Description: Replace Sewer Infrastructure & Road Surface

Project Justification:

Department's Project Priority:

Mandates:

Estimated Purchase/Construction Cost $: $2,117,000.00

Source of Estimate: CT Consultants Cost Estimate

Pre-purchased maintenance included? **No** **$**

Disposition of Equipment/Vehicle being replaced:
Auction? **Trade-Ins?** **Keep in inventory?**

Rationale:

Estimated new annual operating cost: $ **Year**

Estimated new annual operating cost details:

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SUNSET DRIVE AREA INFRASTRUCTURE IMPROVEMENTS
CITY OF BAY VILLAGE, OHIO

DATE: **9/10/15**
PROJECT: **14474**

Item No.	Spec. No.	Item	Estimated Quantity	Unit of Measure	Unit Cost Total	Item Cost
1	202	CLEARING AND GRUBBING	1	LS	$50,000.00	$50,000.00
2	202	SANITARY SEWER REMOVED (8")	736	LF	$15.00	$11,040.00
3		SANITARY MANHOLE REMOVED	5	EA	$500.00	$2,500.00
4		WATERLINE REMOVED	2,626	LF	$10.00	$26,260.00
5	203	EXCAVATION (INCLUDING EXISTING ROAD REMOVAL)	1,464	CY	$20.00	$29,280.00
6	203	EMBANKMENT	275	CY	$10.00	$2,750.00
7	304*	AGGREGATE BASE (8" FOR UNDERCUT), INCLUDES REMOVAL OF UNSUITABLE MATERAIL	1,123	CY	$50.00	$56,150.00
8	204	SUBGRADE COMPACTION	5,054	SY	$1.00	$5,054.00
9	301	ASPHALT CONCRETE BASE, PG64-22 (6")	842	CY	$105.00	$88,410.00
10	304	AGGREGATE BASE (4")	561	CY	$45.00	$25,245.00
11	407	TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/SY	252	GAL	$2.00	$504.00
12	407	TACK COAT @ 0.075 GAL/SY	379	GAL	$2.00	$758.00
13	442	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446) (1.25")	175	CY	$170.00	$29,750.00
14	442	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446) (1.75")	245	CY	$140.00	$34,300.00
15	SPC	PERVIOUS PAVER ROADWAY SECTION	12,544	SF	$14.00	$175,616.00

*DENOTES CONTINGENCY ITEM - USE ONLY AT THE DIRECTION OF THE ENGINEER

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SUNSET DRIVE AREA INFRASTRUCTURE IMPROVEMENTS
CITY OF BAY VILLAGE, OHIO

DATE: **9/10/15**
PROJECT: **14474**

Item No.	Spec. No.	Item	Estimated Quantity	Unit of Measure	Unit Cost Total	Item Cost
16	448	ASPHALT DRIVEWAY REMOVAL AND REPLACEMENT, AS PER PLAN	253	SY	$80.00	$20,240.00
17	452	NON-REINFORCED CONCRETE PAVEMENT, MISC.: 7" PLAIN PORTLAND CEMENT CONCRETE DRIVEWAY REMOVAL & REPLACEMENT, AS PER PLAN	632	SY	$85.00	$53,720.00
18	SPC	MODIFICATIONS TO FRONT YARDS IMPACTED BY TYPICAL SECTION (66 SY PAVER DRIVES, IRRIGATION, LANDSCAPING, ETC.)	1	LS	$35,000.00	$35,000.00
19	SPC	BIO RETENTION AREAS	476	SF	$20.00	$9,520.00
20	605	6" SHALLOW PIPE UNDERDRAINS WITH FABRIC WRAP	580	LF	$12.50	$7,245.00
21	611	12" CONDUIT, TYPE B	1,350	LF	$50.00	$67,500.00
22	611	15" CONDUIT, TYPE B	130	LF	$55.00	$7,150.00
23	611	18" CONDUIT, TYPE B	120	LF	$60.00	$7,200.00
24	611	24" CONDUIT, TYPE B	720	LF	$70.00	$50,400.00
25	611	30" CONDUIT, TYPE B	785	LF	$80.00	$62,800.00
26	611	36" CONDUIT, TYPE B	530	LF	$90.00	$47,700.00
27	611	CATCH BASIN, NO. 2-2B (USE CHEAPER OPTION?)	46	EA	$1,500.00	$69,000.00
28	611	CATCH BASIN, NO. 2-3	9	EA	$2,000.00	$18,000.00
29	611	MANHOLE, NO. 3	30	EA	$3,000.00	$90,000.00
30	611	RECONSTRUCT EX. MANHOLE (ROCKLEDGE)	2	EA	$5,000.00	$10,000.00

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SUNSET DRIVE AREA INFRASTRUCTURE IMPROVEMENTS
CITY OF BAY VILLAGE, OHIO

DATE: **9/10/15**
PROJECT: **14474**

Item No.	Spec. No.	Item	Estimated Quantity	Unit of Measure	Unit Cost Total	Item Cost
31	SPC	8" SANITARY SEWER PIPE	775	LF	$135.00	$104,625.00
32	SPC	SANITARY SEWER SERVICE PIPE (INCLUDES CLEAN OUTS)	300	LF	$85.00	$25,500.00
33	SPC	SANITARY SEWER MANHOLE	6	EA	$3,250.00	$19,500.00
34	SPC	SANITARY SEWER LINING (8")	505	LF	$150.00	$75,750.00
35	SPC	SANITARY SEWER LINING (12")	1,275	LF	$150.00	$191,250.00
36	SPC	6" WATER MAIN (INCLUDES ALL BENDS & FITTINGS AND RECONNECTION OF EXISTING SERVICES)	2,577	LF	$110.00	$283,470.00
37	644	PAVEMENT MARKINGS	1	LS	$5,000.00	$5,000.00
38	659	SEEDING AND MULCHING	5,167	SY	$1.00	$5,167.00
39	671	EROSION CONTROL MAT	1,833	SY	$5.00	$9,165.00
		SUBTOTAL				**$1,812,519.00**
		MISCELLANEOUS				
40	614	MAINTENANCE OF TRAFFIC	1	LS	$25,000.00	$25,000.00
41	619	FIELD OFFICE, TYPE B	24	MTH	$1,350.00	$32,400.00
42	624	MOBILIZATION	1	LS	$25,000.00	$25,000.00
43	623	CONSTRUCTION LAYOUT STAKES	1	LS	$20,000.00	$20,000.00

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SUNSET DRIVE AREA INFRASTRUCTURE IMPROVEMENTS
CITY OF BAY VILLAGE, OHIO

DATE: 9/10/15
PROJECT: 14474

Item No.	Spec. No.	Item	Estimated Quantity	Unit of Measure	Unit Cost Total	Item Cost
44	832	STORMWATER POLUTION PREVENTION PLAN	1	LS	$10,000.00	$10,000.00
SUBTOTAL - MISCELLANEOUS						$112,400.00
OVERALL SUBTOTAL						$1,924,919.00
+10% (+/-) CONTINGENCY						$192,491.90

TOTAL	$2,117,410.90

This to use

SUNSET DRIVE AREA OPINION OF CONSTRUCTION COST BREAKDOWN

ROADWAY SUBTOTAL	$521,777.00
STORM SEWER SUBTOTAL	$446,515.00
SANITARY SEWER SUBTOTAL	$430,165.00
WATER MAIN SUBTOTAL	$309,730.00
MISCELLANEOUS SUBTOTAL	$216,732.00
CONTINGENCY SUBTOTAL	$192,491.90

968,282

10% of 2 of above

*DENOTES CONTINGENCY ITEM - USE ONLY AT THE DIRECTION OF THE ENGINEER

Sunset Area Infrastructure Improvements
Proposed Source of Funds

Property Owner Assessments			**$1,184,563**
City Obligation for Pavement, Drainage, Miscellaneous			
Local Share (2%)	$27,652		
Intersections	$211,751		
Excess portion of property valuation	$239,046		
City Obligation Subtotal	**$478,449**		
Repair of Sanitary Sewers - City Funding		$430,165	
Replacement of Water Mains - City Funding		$309,730	
Engineering/Legal/Advertising/other soft costs for sanitary sewers and water mains		$192,373	
Contingency for Sanitary Sewers and Water Lines		$73,990	
Other City Obligation Subtotal		**$1,006,257**	
Total City Obligation			**$1,484,706**
Total Source of Funds			**$2,669,269**

Sunset Area Infrastructure Improvements
Proposed Use of Funds

Roadway	$521,777		
Storm Sewer Improvements (new sewers, inlets)	$446,515		
Miscellaneous (Seeding, SWPP, Restoration, etc.)	$216,732		
Sanitary Sewer Lining and New Construction	$430,165		
Water Main Construction	$309,730		
Contingency	$192,492		
Subtotal Construction	**$2,117,411**		
Planning/Surveying/Engineering (8.4%)		$178,424	($52,446.68 balance as of 12/31/15)
Bidding/Construction Admin & Inspection/Testing (10%)		$192,492	
Capitalized Interest (3.25%)		$75,072	
Legal/Permits/Advertising (5%)		$105,871	
Total Use of Funds		**$2,669,269**	

Historical Precedent Analysis of 1986 Cahoon Project

Cahoon Road

Project Information				Historical Assessment Information				Inflation-Adjusted Assessment Information		
Project	Project Year	Per Front Foot Assessment	Assessment Method	Address	Parcel No.	Frontage	Actual Assessment	Current Year	Inflation Factor (BLS CPI-U)	Inflation-Adjusted Assessment
Cahoon Road	1986	$52	Linear Feet	27807 Knickerbocker	203-08-063	39.32	$2,045	2016	2.1616	$4,420
Cahoon Road	1986	52	Linear Feet	620 Cahoon	203-08-064	65.32	$3,397	2016	2.1616	$7,342
Cahoon Road	1986	52	Linear Feet	618 Cahoon	203-08-065	60.30	$3,136	2016	2.1616	$6,778
Cahoon Road	1986	52	Linear Feet	614 Cahoon	203-08-066	55.09	$2,865	2016	2.1616	$6,192
Cahoon Road	1986	52	Linear Feet	610 Cahoon	203-08-067	59.53	$3,096	2016	2.1616	$6,691
Cahoon Road	1986	18	Linear Feet	602 Cahoon	203-08-068	66.78	$1,201	2016	2.1616	$2,597
Cahoon Road	1986	38	Linear Feet	600 Cahoon	203-08-069	61.21	$2,326	2016	2.1616	$5,028
Cahoon Road	1986	52	Linear Feet	596 Cahoon	203-08-070	66.78	$3,473	2016	2.1616	$7,506
Cahoon Road	1986	52	Linear Feet	592 Cahoon	203-08-071	63.43	$3,298	2016	2.1616	$7,130
Cahoon Road	1986	52	Linear Feet	584 Cahoon	203-08-072	66.78	$3,473	2016	2.1616	$7,506
Cahoon Road	1986	52	Linear Feet	580 Cahoon	203-08-073	61.21	$3,183	2016	2.1616	$6,880
Cahoon Road	1986	52	Linear Feet	576 Cahoon	203-08-074	74.57	$3,878	2016	2.1616	$8,382
Cahoon Road	1986	52	Linear Feet	572 Cahoon	203-08-075	61.64	$3,205	2016	2.1616	$6,929
Cahoon Road	1986	52	Linear Feet	560 Cahoon	203-06-018	66.79	$3,473	2016	2.1616	$7,508
Cahoon Road	1986	52	Linear Feet	558 Cahoon	203-06-017	56.50	$4,031	2016	2.1616	$8,713
Cahoon Road	1986	52	Linear Feet	556 Cahoon	203-06-016	63.81	$4,411	2016	2.1616	$9,535
Cahoon Road	1986	52	Linear Feet	550 Cahoon	203-06-015	64.20	$4,431	2016	2.1616	$9,578
Cahoon Road	1986	52	Linear Feet	546 Cahoon	203-06-014	89.68	$5,756	2016	2.1616	$12,443
Cahoon Road	1986	52	Linear Feet	540 Cahoon	203-06-013	87.92	$5,665	2016	2.1616	$12,245
Cahoon Road	1986	52	Linear Feet	536 Cahoon	203-06-011	70.00	$4,733	2016	2.1616	$10,230
Cahoon Road	1986	52	Linear Feet	530 Cahoon	203-06-010	68.12	$3,542	2016	2.1616	$7,657
Cahoon Road	1986	52	Linear Feet	524 Cahoon	203-04-030	46.55	$3,513	2016	2.1616	$7,595
Cahoon Road	1986	52	Linear Feet	520 Cahoon	203-04-031	47.47	$3,561	2016	2.1616	$7,698
Cahoon Road	1986	52	Linear Feet	518 Cahoon	203-04-032	53.21	$3,860	2016	2.1616	$8,343
Cahoon Road	1986	52	Linear Feet	516 Cahoon	203-04-033	53.21	$3,860	2016	2.1616	$8,343
Cahoon Road	1986	52	Linear Feet	514 Cahoon	203-04-034	53.21	$3,860	2016	2.1616	$8,343
Cahoon Road	1986	52	Linear Feet	510 Cahoon	203-04-035	53.20	$2,766	2016	2.1616	$5,980
Cahoon Road	1986	52	Linear Feet	502 Cahoon	203-04-036	205.00	$10,660	2016	2.1616	$23,043
Cahoon Road	1986	52	Linear Feet	27725 Wolf	203-04-001	111.54	$5,800	2016	2.1616	$12,538
Cahoon Road	1986	52	Linear Feet	Vacant	203-12-005	282.21	$14,675	2016	2.1616	$31,722
Cahoon Road	1986	52	Linear Feet	Vacant	203-12-003	88.03	$4,578	2016	2.1616	$9,895
Cahoon Road	1986	52	Linear Feet	Vacant	203-12-002	104.96	$5,458	2016	2.1616	$11,798
Cahoon Road	1986	52	Linear Feet	27414 West Oviatt	203-11-024	145.71	$7,577	2016	2.1616	$16,379
Cahoon Road	1986	52	Linear Feet	27434 Donald	203-11-045	96.05	$4,995	2016	2.1616	$10,797
Cahoon Road	1986	52	Linear Feet	27430 Donald	203-11-044	57.00	$2,964	2016	2.1616	$6,407

Project Information				Historical Assessment Information				Inflation-Adjusted Assessment Information		
Project	Project Year	Per Front Foot Assessment	Assessment Method	Address	Parcel No.	Frontage	Actual Assessment	Current Year	Inflation Factor (BLS CPI-U)	Inflation-Adjusted Assessment
Cahoon Road	1986	52	Linear Feet	27420 Donald	203-11-046	32.28	$1,679	2016	2.1616	$3,628
Cahoon Road	1986	52	Linear Feet		203-11-047	187.40	$9,745	2016	2.1616	$21,065
Cahoon Road	1986	52	Linear Feet	557 Cahoon	203-11-048	125.70	$6,536	2016	2.1616	$14,129
Cahoon Road	1986	52	Linear Feet	551 Cahoon	203-11-049	139.10	$7,233	2016	2.1616	$15,636
Cahoon Road	1986	52	Linear Feet	547 Cahoon	203-10-006	102.15	$5,312	2016	2.1616	$11,482
Cahoon Road	1986	52	Linear Feet	541 Cahoon	203-10-010	101.50	$5,278	2016	2.1616	$11,409
Cahoon Road	1986	52	Linear Feet	537 Cahoon	203-10-007	106.53	$5,540	2016	2.1616	$11,975
Cahoon Road	1986	52	Linear Feet	533 Cahoon	203-10-008	130.88	$6,806	2016	2.1616	$14,712
Cahoon Road	1986	52	Linear Feet	529 Cahoon	203-09-024	53.28	$2,771	2016	2.1616	$5,989
Cahoon Road	1986	52	Linear Feet	527 Cahoon	203-09-026	50.00	$2,600	2016	2.1616	$5,620
Cahoon Road	1986	52	Linear Feet	525 Cahoon	203-09-034	50.00	$2,600	2016	2.1616	$5,620
Cahoon Road	1986	52	Linear Feet	521 Cahoon	203-09-033	50.00	$2,600	2016	2.1616	$5,620
Cahoon Road	1986	52	Linear Feet	517 Cahoon	203-09-023	50.00	$2,600	2016	2.1616	$5,620
Cahoon Road	1986	52	Linear Feet	511 Cahoon	203-09-022	50.00	$2,600	2016	2.1616	$5,620
Cahoon Road	1986	52	Linear Feet	503 Cahoon	203-09-025	103.00	$5,356	2016	2.1616	$11,578
Cahoon Road	1986	52	Linear Feet	501 Cahoon	203-09-035	50.00	$2,600	2016	2.1616	$5,620
Cahoon Road	1986	52	Linear Feet	497 Cahoon	203-09-032	50.00	$2,600	2016	2.1616	$5,620
Cahoon Road	1986	52	Linear Feet	495 Cahoon	203-09-031	61.09	$3,177	2016	2.1616	$6,867
Cahoon Road	1986	52	Linear Feet	487 Cahoon	203-09-020	58.68	$3,051	2016	2.1616	$6,596
Cahoon Road	1986	52	Linear Feet	Vacant	203-09-019	210.15	$7,833	2016	2.1616	$16,933
Cahoon Road	1986	52	Linear Feet	475 Cahoon	203-09-018	75.00	$3,900	2016	2.1616	$8,430
Cahoon Road	1986	52	Linear Feet	467 Cahoon	203-09-017	8.51	$443	2016	2.1616	$957

SUMMARY

Project	Project Year	Project Total Assessment	Total Count of Addresses		Minimum Inflation-Adjusted Assessment	Median Inflation-Adjusted Assessment	Mean Inflation-Adjusted Assessment	Maximum Inflation-Adjusted Assessment	Range of Inflation-Adjusted Assessments	Range of Inflation-Adjusted Assessments, % of Minimum
Cahoon Road	1986	$245,599	57		$957	$7,657	**$9,314**	**$31,722**	$30,765	3,216%

Alternative Cost Sharing Structure for 2016 Proposal for roadway, storm, sanitary and water

City of Bay Village
Sunset Area Utility and Roadway Improvments

Project Cost Calculation		
Opinion of Construction Cost	$	2,117,411
Surveying/Engineering/Bidding	$	178,424
Construction Inspection/Testing	$	192,492
Legal/Permits/Advertising	$	105,871
Capitalized Interest (3.25% of Loan Amount)	$	75,072
Total Project Cost	$	2,669,269

Frontage Assessment Calculation		
Total Project Cost	$	2,669,269
Less City Contribution	$	1,698,900
Less Local Share (2%)	$	19,407
Less Intersections	$	408,812
Assessable Project Cost	$	542,150

Summary of Assessments		
Frontage Assessments	$	437,782
Adjust for 33% limitation on property valuation	$	104,368
Total Assessments	$	542,150

Front Foot Assessment		
Assessable Frontage (private property)	4,440.0	lf
Assessable Frontage (private property and intersections)	5,120.0	lf
Front Foot Assessment (private property)	**$122.11**	/lf

Summary - Source of Funds			
State Funding (OPWC Grant)			
Construction Financing through OPWC (0% Loan)			
City Portion			
Local Share (2%)	$	19,407	$2,231,487.28
Intersections	$	408,812	
Excess portion of property valuation	$	104,368	
City contribution to reduce assessments	$	1,698,900	
Assessments	**$**	**437,782**	
Total Source of Funds	**$**	**2,669,269**	

City of Bay Village
Planning Level Assessment Amounts based on Front Foot

House No	Last Name	First Name	Parcel Number	Frontage Based on Auditor's Legal Frontage	Frontage Based on Auditor's Effective Frontage	Assessible Frontage Used	Corner Lot Frontage Based on Auditor's Legal Frontage	Corner Lot Frontage Based on Auditor's Effective Frontage	Assessible Corner Lot Frontage Used	Total Assessible Frontage Used	Tentative Preliminary Frontage Assessment	Current Market Value	Maximum Assessment 33%	Preliminary Frontage Assessment	Maximum Assessment Exceeded?	Unassessed Amount to City Portion
Forestview Road																
328	Garrity	Regis	204-14-034	75.32	75.32	75.32	100	100	100	100.32	$ 12,249.80	$ 138,200	$ 45,606	**$ 12,249.80**		
Kenmore Drive																
300	Stearns	Kim	204-09-029	120	166	120				120	$ 14,652.87	$ 576,600	$ 190,278	**$ 14,652.87**		
320	Barack	William and Susan	204-09-030	80	80	80				80	$ 9,768.58		$ -	**$ 9,768.58**		
329	Foster	Jeffrey and Erin	204-09-020	74.66	74.66	74.66	100	100	100	99.66	$ 12,169.21	$ 197,300	$ 65,109	**$ 12,169.21**		
332	Galang	Anthony and Dawn	204-09-031	75	75	75				75	$ 9,158.04	$ 494,000	$ 163,020	**$ 9,158.04**		
336	Wise	Richard and Mary	204-09-032	78	78	78				78	$ 9,524.36	$ 185,000	$ 61,050	**$ 9,524.36**		
341	Hartman	Barbara	204-09-018	74.66	74.66	74.66	100	100	100	99.66	$ 12,169.21	$ 154,900	$ 51,117	**$ 12,169.21**		
342	Voss	Jennifer and Elwin	204-09-010	105	105	105	157.42	157.42	157.42	144.36	$ 17,626.79	$ 239,800	$ 79,134	**$ 17,626.79**		
Lake Road																
24744	Zimmerman	Donald	204-14-012	111.86	111.86	111.86	302.26	302.26	302.26	187.43	$ 22,885.95	$ 399,300	$ 131,769	**$ 22,885.95**		
24800	Krepop	Kevin	204-14-011	59.59	59.59	59.59	145.87	145.87	145.87	96.06	$ 11,729.31	$ 216,600	$ 71,478	**$ 11,729.31**		
24928	Davis	Edward and Mary	204-14-005	50	50	50	150	150	150	87.50	$ 10,684.38	$ 141,800	$ 46,794	**$ 10,684.38**		
25008	Denk, Sr	Josef K. Trustee	204-14-004	51.65	51.65	51.65	150	150	150	89.15	$ 10,885.86	$ 122,600	$ 40,458	**$ 10,885.86**		
25098	DeRubba	Diane	204-09-011	51.65	51.65	51.65	150	150	150	89.15	$ 10,885.86	$ 171,800	$ 56,694	**$ 10,885.86**		
Lakeview Drive																
24805	Krebs	Martha	204-14-044	130.5	130.5	130.5	72.95	72.95	72.95	105.58	$ 12,891.47	$ 460,100	$ 151,833	**$ 12,891.47**		
24815	Prendergast	Michael	204-14-047	43.5	43.5	43.5				43.5	$ 5,311.66	$ 197,900	$ 65,307	**$ 5,311.66**		
24901	Brill	David	204-14-048	83.5	84	84				84	$ 10,257.01	$ 210,300	$ 69,399	**$ 10,257.01**		
24913	Deutschman	Daniel	204-14-050	71.6	71.6	71.6				71.6	$ 8,742.88	$ 480,000	$ 158,400	**$ 8,742.88**		
24915	Marconi	James, Trustee	204-14-052	48.4	48.4	48.4	115	115	115	77.15	$ 9,420.57	$ 512,300	$ 169,059	**$ 9,420.57**		
25001	O'Malley	Judith, Trustee	204-14-053	37.33	37.33	37.33	100	100	100	62.33	$ 7,610.94	$ 387,500	$ 127,875	**$ 7,610.94**		
25005	Marquardt	Thomas	204-14-054	37.3	37	37.3				37.3	$ 4,554.60	$ 217,800	$ 71,874	**$ 4,554.60**		
25011	Stewart	Dorothy	204-14-055	93.3	93	93.3				93.3	$ 11,392.60	$ 246,800	$ 81,444	**$ 11,392.60**		
25021	Donahoo	Delbert, Trustee	204-09-024	74	74	74				74	$ 9,035.93	$ 247,500	$ 81,675	**$ 9,035.93**		
25029	Viezer	Timothy and Joani	204-09-025	55	55	55				55	$ 6,715.90	$ 431,500	$ 142,395	**$ 6,715.90**		
25033	McNulty	Dennis and Jill	204-09-026	37	37	37				37	$ 4,517.97	$ 477,000	$ 157,410	**$ 4,517.97**		
25035	Busdiecker	Kevin	204-09-027	37.35	37.35	37.35	100	100	100	62.35	$ 7,613.39	$ 394,200	$ 130,086	**$ 7,613.39**		
	Bay Park Beach Co		204-09-028	-	-	850				850	$ 103,791.14	$ 2,300	$ 759	**$ 759.00**	Yes, cap at $759	$ 103,032.14
Rockledge Drive																
301	Cook	John and Pamela	204-14-058	110.9	111	111				111	$ 13,553.90	$ 1,007,700	$ 332,541	**$ 13,553.90**		
Sunset Drive																
24801	Arvidson	Cynthia	204-14-020	40	40	40	100	100	100	65	$ 7,936.97	$ 119,300	$ 39,369	**$ 7,936.97**		
24805	Berente	Katherine	204-14-021	40	40	40				40	$ 4,884.29	$ 136,700	$ 45,111	**$ 4,884.29**		
24810	Maurer	Sue and Jeff	204-14-040	40	40	40				40	$ 4,884.29	$ 215,400	$ 71,082	**$ 4,884.29**		
24811	Battisti	Linda	204-14-022	58	58	58				58	$ 7,082.22	$ 202,400	$ 66,792	**$ 7,082.22**		
24817	Bennett	Marilyn	204-14-023	62	62	62				62	$ 7,570.65	$ 180,800	$ 59,664	**$ 7,570.65**		
24911	Marconi	Robert and Lisa	204-14-024	80	80	80				80	$ 9,768.58	$ 304,700	$ 100,551	**$ 9,768.58**		
24919	Mengerink	Bill and Anne	204-14-026	80	80	80	100	100	100	105	$ 12,821.26	$ 285,100	$ 94,083	**$ 12,821.26**		
24920	Lorton	Stephen	204-14-035	120	120	120	85	85	85	115	$ 14,042.33	$ 209,500	$ 69,135	**$ 14,042.33**		
25001	Bagnall	Suzanne	204-14-028	37.33	37.33	37.33	100	100	100	62.33	$ 7,610.94	$ 232,800	$ 76,824	**$ 7,610.94**		
25007	Nelson	Sue	204-14-029	74.7	74	74.7				74.7	$ 9,121.41	$ 290,100	$ 95,733	**$ 9,121.41**		
25015	Haas	Beverly	204-14-031	61.4	61.4	61.4				61.4	$ 7,497.38	$ 169,300	$ 55,869	**$ 7,497.38**		
25016	Coury	David	204-14-033	92.7	92	92.7				92.7	$ 11,319.34	$ 121,000	$ 39,930	**$ 11,319.34**		
25021	Kellerman	Jeffrey and Kristin	204-09-015	50.6	50.6	50.6				50.6	$ 6,178.63	$ 400,000	$ 132,000	**$ 6,178.63**		
25024	Coury	David	204-09-023	74	74	74				74	$ 9,035.93	$ 285,300	$ 94,149	**$ 9,035.93**		
25025	Vickers	F. Thomas	204-09-016	74.6	37	74.6				74.6	$ 9,109.20	$ 277,900	$ 91,707	**$ 9,109.20**		
25028	Kasik	Doris	204-09-022	56	56	56				56	$ 6,838.00	$ 189,500	$ 62,535	**$ 6,838.00**		
corner lot	Krebs	Martha	204-14-043	40	40	40	72.95	72.95	72.95	58.24	$ 7,111.22	$ 17,500	$ 5,775	**$ 5,775.00**	Yes, cap at 5,775	$ 1,336.22
	Krebs	Martha	204-14-042	40	40	40				40	$ 4,884.29	$ 18,000	$ 5,940	**$ 4,884.29**		
	Krebs	Martha	204-14-041	40	40	40				40	$ 4,884.29	$ 18,100	$ 5,973	**$ 4,884.29**		
	Brill	David	204-13-039	40	40	40				40	$ 4,884.29	$ 26,500	$ 8,745	**$ 4,884.29**		
	Brill	David	204-14-038	40	40	40				40	$ 4,884.29	$ 26,700	$ 8,811	**$ 4,884.29**		
Totals				**3108.4**		**3959**	**2201.45**		**2201.45**	**4439.95**	**$ 542,149.95**		**$ 3,972,342**	**$ 437,782**		**$ 104,368.36**

Debt Capacity Analysis Documentation

City of Bay Village
Legal Level of Acceptable Debt

1	Tax valuation of the City (From Schedule A 12-3-15)	$ 539,826,390
2	Total principal amount all outstanding bonds and notes of the City (after 2016 issuance)	12,485,650
3	10.5% of tax valuation	56,681,771
4	Total principal of voted and unvoted bonds and notes subject to 10.5% debt limitation	12,485,650
5	Debt leeway within 10.5% limitation (3 minus 4)	44,196,121
6	5.5% of tax valuation	29,690,451
7	Total principal of voted and unvoted bonds and notes subject to 5.5% debt limitation	12,485,650
8	Debt leeway within 5.5% unvoted debt limitation (6 minus 7)	17,204,801
9	Cash balance of Bond Retirement Fund (fund balance 12/31/15)	4,788,344
10	Total available including amount in Bond Retirement Fund	$ 21,993,145

City of Bay Village
Internal Level of Acceptable Debt
2016

Total estimated receipts from property tax to Bond Retirement Fund	$ 2,107,600
Amount of Debt that will be refunded into 2016 debt	2,538,400
Debt payments (principal and interest) to be paid from Bond Retirement F	4,579,934
Net surplus/(deficit) to Bond Retirement Fund	$ 66,066

Debt rolling off (annual payment principal and interest amount)	
2016	180,075
2017	129,400
2022	218,060
Anticipated payment $6.3 million 20 year note 1% rate	350,000

Amount	6,300,000
Periods	20
Rate	1%
Payment	349,116

Years	Beginning	Payment	Interest	Principal	Ending Balance
1	6,300,000	349,116	63,000	286,116	6,013,884
2	6,013,884	349,116	60,139	288,978	5,724,906
3	5,724,906	349,116	57,249	291,867	5,433,038
4	5,433,038	349,116	54,330	294,786	5,138,252
5	5,138,252	349,116	51,383	297,734	4,840,518
6	4,840,518	349,116	48,405	300,711	4,539,807
7	4,539,807	349,116	45,398	303,718	4,236,089
8	4,236,089	349,116	42,361	306,756	3,929,333
9	3,929,333	349,116	39,293	309,823	3,619,510
10	3,619,510	349,116	36,195	312,921	3,306,589
11	3,306,589	349,116	33,066	316,051	2,990,538
12	2,990,538	349,116	29,905	319,211	2,671,327
13	2,671,327	349,116	26,713	322,403	2,348,924
14	2,348,924	349,116	23,489	325,627	2,023,296
15	2,023,296	349,116	20,233	328,884	1,694,413
16	1,694,413	349,116	16,944	332,172	1,362,240
17	1,362,240	349,116	13,622	335,494	1,026,746
18	1,026,746	349,116	10,267	338,849	687,897
19	687,897	349,116	6,879	342,238	345,660
20	345,660	349,116	3,457	345,660	0

Amount	6,900,000
Periods	20
Rate	1%
Payment	382,366

Years	Beginning	Payment	Interest	Principal	Ending Balance
1	6,900,000	382,366	69,000	313,366	6,586,634
2	6,586,634	382,366	65,866	316,499	6,270,135
3	6,270,135	382,366	62,701	319,664	5,950,471
4	5,950,471	382,366	59,505	322,861	5,627,610
5	5,627,610	382,366	56,276	326,090	5,301,520
6	5,301,520	382,366	53,015	329,350	4,972,170
7	4,972,170	382,366	49,722	332,644	4,639,526
8	4,639,526	382,366	46,395	335,970	4,303,555
9	4,303,555	382,366	43,036	339,330	3,964,225
10	3,964,225	382,366	39,642	342,723	3,621,502
11	3,621,502	382,366	36,215	346,151	3,275,351
12	3,275,351	382,366	32,754	349,612	2,925,739
13	2,925,739	382,366	29,257	353,108	2,572,631
14	2,572,631	382,366	25,726	356,639	2,215,991
15	2,215,991	382,366	22,160	360,206	1,855,786
16	1,855,786	382,366	18,558	363,808	1,491,978
17	1,491,978	382,366	14,920	367,446	1,124,532
18	1,124,532	382,366	11,245	371,120	753,411
19	753,411	382,366	7,534	374,832	378,580
20	378,580	382,366	3,786	378,580	0

RE: BRD/Sunset and PI Committee

Renee Mahoney

You replied on 4/27/2016 3:01 PM.

Sent: Wednesday, April 27, 2016 2:56 PM
To: Tom Henderson; Bob Greytak [bgreytak@ctconsultants.com]; Scott Thomas
Cc: Deborah Sutherland; Paul Koomar
Attachments: Copy of Historical Assessm~1.xls (305 KB) [Open as Web Page]; Debt-Schedule.xls (208 KB) [Open as Web Page]

Good Afternoon All,

Please find attached the requested worksheet that shows the total cost of the Cahoon and Bassett projects and the share the residents paid. Also please find the debt service workbook with a worksheet tab that shows our legal level of available debt along with an estimate of what I think would be acceptable debt payments for the City on an annual basis. You will see from the worksheet that the more conservative legal level calculation would allow the City to borrow an additional $22 million. The estimated annual payments of financing $6.3 million in debt would be about $350,000 over 20 years. By the end of 2017 we will have about $310,000 in annual debt payments ending which could fund the anticipated cost of $350,000 of annual debt payments if the $6.3 million was financed over 20 years at a 1% interest rate. This would mean keeping the City's borrowing for capital expenditures the same $1.3 million annually to keep the fund balance at the same level as it is currently.

Tom had asked what debt level would jeopardize our credit rating with the bond rating agencies. This isn't an easy answer to say because there are many things an agency such as Moody's would look at. One important thing they evaluate is the ability of the community to raise more funds if needed. We do have that ability in that we would be able to decrease the credit given on the City income tax and also we have .25 mills of property tax related to the fire levy that we are not collecting, both of which could be collected after a vote by Council. Not to say we need to do either just that we have additional resources available if needed. We also have a fairly nice balance in the debt service fund which would definitely help in a rating review. Our recent history of increased revenue in municipal income tax collections and an 8% increase in property tax collections all would be very positive credentials in a rating review. I don't believe a debt of $6.3 million additional would be detrimental to our credit rating. I do have a call in to our bond counsel to confirm and will share what his thoughts are once I hear from him.

If you have any further questions please let me know.

Renee Mahoney, CPA
Director of Finance
City of Bay Village
rmahoney@cityofbayvillage.com
440-899-3432

-----Original Message-----
From: Tom Henderson
Sent: Friday, April 22, 2016 12:08 PM
To: Bob Greytak; Renee Mahoney; Scott Thomas
Cc: Deborah Sutherland; Paul Koomar
Subject: BRD/Sunset and PI Committee

Scott, Renee & Bob -

Thanks again for a productive meeting this morning and for the robust, timely analysis this week. The muffins were delicious, too - kudos to your wife, Scott.

My goal is to compile all of your great work into a single storyboard by early next week, send that to you for review by the middle of next week, distribute it to the PI Committee via packets next Friday and then hold a PI Committee meeting the week of 5/2.

While our discussion is still fresh in my mind, I wanted to send out a quick email capturing the various items we discussed, which I'd like to include in the storyboard but need you to

END OF APPENDIX