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Public Works Department

**PUBLIC WORKS COMMITTEE**  
**Thursday, June 16, 2016**  
**7:00 PM**  
**South Conference Room**

**Agenda**

- 1) Call to Order, Roll Call
- 2) Discussion Items
  - a. 2016 Drainage Capital Improvement Program (CIP)

3) Adjourn

*Dated: June 16, 2016*

*/s/ Pamela Adams, Chair*

Notice is hereby given that a quorum of other governmental bodies may be present at this meeting to present, discuss and/or gather information about a subject over which they have decision-making responsibility, although they will not take formal action thereto at this meeting.

Persons with disabilities requiring accommodations for attendance at this meeting should contact the City Clerk's Office at 262-236-2914, twenty-four (24) hours in advance of the meeting.

Any questions regarding this agenda may be directed to the Public Works Department at 262-236-2913, Monday through Friday, 7:00 AM – 3:30 PM.



**TO: Public Works Committee**  
**FROM: James Keegan, Deputy Director of Engineering**  
**DATE: June 16, 2016**  
**SUBJECT: 2016 Drainage Capital Improvement Program (CIP)**

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### **Background**

In February of 2015, the City implemented modifications to the drainage policy that requires that Engineering Department staff provide the Public Works Committee with an annual review and approval of the prioritized drainage projects for both the Major and Secondary Drainage Way Program and Small Bridge and Culvert Replacement Program. The intent was to treat the Drainage CIP similar to the administration of the road program, whereas Staff brings forward the recommended Drainage CIP on an annual basis and the Public Works Committee reviews, modifies as necessary, and approves the program. The annual review provides the opportunity for residents and alderman to review and suggest changes to the annual program and to advocate for their projects. The resident or residents who provided the initial notification to the City of the drainage issue received a notification that the meeting would be held, were informed of the project priority number and were invited to attend the meeting to advocate for their project.

### **Analysis**

In order to properly identify and prioritize projects, as well as to formalize the administration of the drainage policy, Staff has formulated the 2016 Drainage CIP. The proposed CIP consists of a list of all identified drainage projects through the end of the 2015 calendar year, the estimated cost to be completed by a private contractor and the prioritization thereof.

There are a total of 44 projects included on the 2016 Drainage CIP that have been prioritized based upon severity and need. The attached template evaluation form is filled out for each project based upon a field evaluation and review of the site topography. Complaints are rated based upon 13 different criteria to establish the severity of the drainage issue. Given that the drainage issues are often corrected during the reconstruction of the adjacent roadway, certain projects have been highlighted that can be completed in conjunction with the 2016 Annual Road Program. Other projects have been highlighted if it is anticipated that the City will be reconstructing the adjacent roadway within the next five years.

Since 2012, the highest priority project has been the Pines-Haddonstone drainage project. In 2015, a project was bid out to install a new storm sewer system between the Haddonstone Pond and the northbound I-43 roadside ditch, crossing the Union Pacific Rail Line. The lowest bid received was more than double the engineer's estimate for the project, and bids were subsequently rejected. As directed by the Public Works Committee, the City moved forward in January and February utilizing City forces and installed 800 feet of storm sewer and two manholes, replacing the dilapidated 1930's era storm sewer that had caused backups in the two adjacent subdivision ponds. The next phase of the Pines-Haddonstone Drainage Project will occur once ground conditions permit access of the City's televising equipment to inspect the remaining portion of the existing storm sewer to ensure structural integrity. Depending on the outcome of the televising, the project will either be considered complete, or will require additional work.

The Pines-Haddonstone Drainage Project is recommended to remain as the top priority project, as it is nearing completion. Staff recommends that the south ditch along Sunnyside Drive is the second highest priority on the list, as the approximately 50 year old asphalt ditch has deteriorated and has caused large scale erosion issues and cannot be maintained. The 1415/1426 W Donges Bay Road drainage issue is recommended as the third highest priority, as the backup of storm water is causing property damage during large rain events.

Upon completion of the Pines-Haddonstone Drainage Project, Staff will include an action item on the Public Works Committee agenda to authorize the proposed solution for subsequent drainage projects.

**Fiscal Impact:**

The Pines/Haddonstone Drainage Project was constructed utilizing Highway Department staff rather than a hired contractor, which helped minimize the costs associated with the project. The cost to complete the project will not be known until the televising is complete and the final scope of work can be generated. If the existing storm sewer pipe under the UPRR line is not in a serviceable condition, substantial costs may be required to replace or rehabilitate the storm sewer under the railroad tracks. The Pines/Haddonstone Drainage Project is being funded out of the Major and Secondary Drainage Way Program.

The Major and Secondary Drainage Way Program portion of the Drainage CIP was funded at \$50,000 for 2016. With a balance of \$148,064.34 carried over from 2015 this gives the City \$198,064.34 of funding for the 2016 calendar year. The expectation with this fund is to complete the Pines/Haddonstone Drainage Project and to carry forth any available balance to fund subsequent priority projects.

No funding was requested for the Small Bridge and Culvert Replacement Program for 2016. Staff is working on a culvert inventory to inspect over 1600 culverts and large box structures throughout the city. Staff is in the process of categorizing these structures and developing an evaluation and monitoring record. Based upon these evaluation and observations, a proactive replacement program will be developed through which we can replace and/or improve a structure before it becomes a problem or presents an unsafe situation. Upon completion, Staff will make additional funding requests based upon need. The fund carried over a balance of \$57,705 balance from 2015.

**Recommendation**

It is staff's recommendation that the Public Works Committee review, make modifications as necessary and favorably endorse the 2016 Drainage CIP list of prioritized projects. Staff welcomes feedback on the list of prioritized projects and policy administration improvements that should be considered.

Attachments:

2016 Major and Secondary Drainage Way CIP List (PDF)

2016 Major and Secondary Drainage Way CIP Map (PDF)

Drainage Complaint Form (PDF)

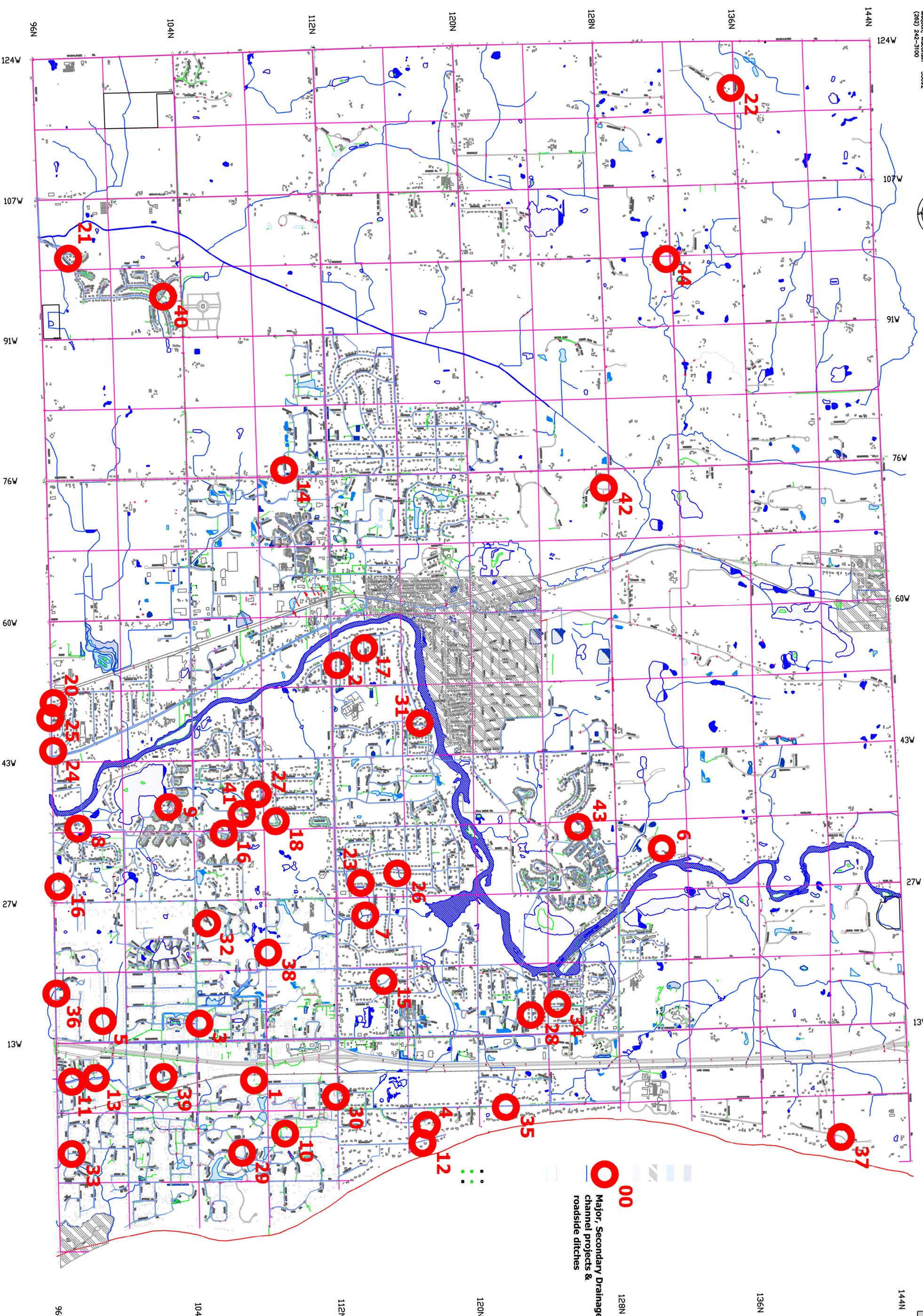
In conjunction with road program in 2016  
Possible Future Road Project

Priority Status	Map #	inquiry #	Address		Basin Size	Description/General Solution	Estimated Cost
1	1	common council		Haddonstone/Pines		Haddonstone/Pines Drainage Way	\$198,064.34
2	2	2011-30	5307 W	Sunnyside Dr.		asphalt ditch eroded/install 1360' - 24" Hdpe. Pipe & 8 tees and grates and replace cross road culvert	\$100,000.00
3	3	2010-13	1415/1426 W	Donges Bay Rd.		obtain easements and install 15" hdpe. - 2565' +/- -	\$120,000.00
4	4	2008-26	11739 N	Shorecliff Ln.		failed county drain tile starting at 11658N Pinehurst -need to replace +/- 400' pipe and install 2 MH's.	\$55,000.00
5	5	2010-34	1516 W	Fiesta Ln.		water flows over the road during heavy events/install 1000' 18" hdpe in ditch	\$100,000.00
6	6	2013-10	13040 N	West Shoreland Dr.		water drains over road and floods yard. - ditch both sides of road 220'	\$3,300.00
7	7	staff		Ranch/Hickory/Chestnut		Clear Drainage Easement to help water flow in heavy rain events	\$20,000.00
8	8	2010-42	3519 W	River Ct.		Drainage in court backing up in subdivision/install 120' - 18" Hdpe. pipe between ponds to east	\$12,000.00
9	44	2015-35	9855 W	Hawthorne Rd.	maj.	drainage from north floods yard during severe storms-water is diverted and shouldn't be	
10	9	2015-48	3609 W	Chantilly Ct.	maj.	regrade and rip-rap roadside ditch per plan at triangle outlot to drain - 270' - Le Grande and Le Mont Blvd.'s	\$4,000.00
11	10	2015-06	10843 N	Pebble Ln.	maj.	remove 6/7 large willow trees and stump out and regrade offroad drainageway 300'	\$25,000.00
12	11	staff		Fish Creek Drainage		restore erosion south of Katherine Kearney Park	\$80,000.00
13	12	2013-8	11628/50 N	Shorecliff Ln.		300' - 12" ADS Pipe into county tile to alleviate flooding	\$19,500.00
14	13	2013-21	9821 N	Courtland Dr.		grade swale through sewer easement at west side of property - water at NW corner	\$3,000.00
15	14	2015-15	7626 W	Knightsbridge Dr.	loc.	regrade roadside ditch and outlot to drain - 250'	\$3,000.00
16	15	2011-31	11430 N	Valley Dr.		ditch is very flat but remove any obstructions to help water flow 900'	\$13,500.00
17	16	2010-38	9633 W	Sunset Ln.		water floods yard/install ridge in backslope to divert water - 160' +/-	\$2,400.00
18	17	2013-3	5526 W	Elmhurst		grade roadside ditch 200'	\$3,000.00
19	18	2015-22	3607 W	Haven Ct.	loc.	grade 4 driveways to drain toward CB's	
20	19	2011-39	3419 W	Meadowview Ct.		Fairway Ln. ditch is eroded - install 350' - 6" tile and backfill	\$17,500.00
21	20	2015-05	4926 W	County Line Rd.	loc.	regrade roadside ditches per plan to drain - 300'	\$3,000.00
22	21	2012-19	10022 W	Huntington Dr.		regrade ditch 220'	\$3,300.00
23	22	2013-29	11811 W	Bonniwell Rd		regrade ditch per plan to +/- 150' west of drwy.	\$2,250.00
24	23	2015-40	11321 N	St. James Ln.	sec.	install rip-rap as needed to control erosion in drainageway +/- 150'	\$3,000.00
25	24	2003-47	9615 N	Cedarburg Rd.		ditch from W side of drwy. on County Line to 200' W-move ditch 4' north	\$3,000.00
26	25	2008-58	4904 W	County Line Rd.		roadside ditch needs to be regraded 500' +/-	\$7,500.00
27	26	2015-34	11552 N	Bobolink Ln.	sec.	install rip-rap as needed to control erosion in drainageway +/- 20'	\$1,000.00
28	27	staff	3828 W	Gazebo Hill Pkwy.		regrade ditch 100' at outlet of 12" Pvc. Pipe along Crestline Rd.	\$1,500.00
29	28	2014-30	1506 W	River Oaks Ln		water in ditch doesn't flow/regrade ditch	\$1,875.00
30	29	2010-41	115 W	Ironwood Ln.		regrade roadside ditch 175'	\$2,625.00
31	30	2011-41	701 W	Mequon Rd.		move ditch south at road rehab time or enclose ditch 300'	\$4,500.00
32	31	2013-13	11711 N	Austin Ave.		125' - minor ditch regrading	\$1,875.00
33	32	2014-4	10412 N	Sunflower Ct		minor erosion/rip-rap pipe outlet and restore erosion	\$1,500.00
34	33	2015-44	9648 N	Old Barn Rd.	loc.	fill water pocket in ditch per plan and restore - 45' +/-	
35	34	2014-17	12425N	Emily Ln.		water backing into yard/regrade ditch	\$1,200.00
36	35	2015-46	12126 N	Lake Shore Dr.	loc.	regrade roadside ditch per plan to drain - 350'	
37	36	2014-37	9615N	Greenview Ln.		ditch drains poorly/regrade ditch along county line Rd.	\$1,500.00
38	37	2014-40	14040N	Birchwood Ln		ditch drains poorly/replace driveway culvert and ditch	\$2,500.00
39	38	2013-34	2120 W	Sunnydale Ln.		regrade ditch per plan to 60' east of drwy. Culvert	\$900.00
40	39	2011-19	10211 N	La Cresta Dr.		enclose ditch, ditch is steep - approximately 40'	\$7,000.00
41	40	2011-36	9534 W	Stanford Dr.		regrade roadside ditch - 100'	\$1,500.00
42	41	2015-29	3628 W	Turnberry Ln.	loc.	ditch drains poorly/regrade ditch	\$2,000.00
43	42	2003-46	7247 W	Highland Ridge Dr.		regrade west roadside ditch to drain rd. at entrance restore all bad areas approximately 250'	\$3,750.00
44	43	staff	3467 W	Fleur De Lis Dr.		install CB behind curb to get surface water into storm-sewer	\$3,000.00



# City of Mequon

Attachment: 2016 Major and Secondary Drainage Way CIP Map (1704 : 2016 Drainage Capital Improvement Program (CIP))



00 Major, Secondary Drainage channel projects & roadside ditches



## DRAINAGE COMPLAINT EVALUATION CHECKLIST

MEQUON, WISCONSIN

Complainant Name: \_\_\_\_\_ Complaint #: \_\_\_\_\_  
 Address: \_\_\_\_\_ Date: \_\_\_\_\_

Telephone #'s: \_\_\_\_\_ Home: \_\_\_\_\_ Work: \_\_\_\_\_

Complaint Received By: \_\_\_\_\_ Via: \_\_\_\_\_

Complaint Description: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Check If Additional Notes Are On Back

DATE OF INSPECTION:		AMOUNT & DATE OF LAST RAINFALL					" on	
1	Depth of water in ditch?	WET-1"	2"-3"	3"-4"	4"-5"	5"-6"	x	2
		1	2	3	4	5		
COMMENTS:								
2	Does sump pump appear active?	NO		SLIGHTLY		YES	x	1
		1	2	3	4	5		
COMMENTS:								
3	Is ditch silted or filled in?	NO	2"-4"	4"-7"	7"-10"	OVER CULVERT	x	3
		1	2	3	4	5		
COMMENTS:								
4	Is erosion evident?	NO		MINOR		SEVERE	x	3
		1	2	3	4	5		
COMMENTS:								
5	Condition of ditch or drainageway?	GOOD				POOR	x	2
		1	2	3	4	5		
COMMENTS:								
6	Are driveway culverts heaving?	NO		SLIGHTLY		THROUGH DRIVEWAY	x	1
		1	2	3	4	5		
COMMENTS:								
7	Does drainage problem affect or flood private property?	NO		MINOR		SEVERE	x	6
		1	2	3	4	5		
COMMENTS:								
8	Degree that problem may adversely affect personal safety.	NONE		MINOR		MAJOR	x	6
		1	2	3	4	5		
IN WHAT WAY:								
9	Does drainage problem affect road?	NO		MINOR		SEVERE	x	5
		1	2	3	4	5		
COMMENTS:								
10	Does water drain, however poorly, without affecting property outside of R.O.W.?	YES		MINOR		NO	x	2
		1	2	3	4	5		
COMMENTS:								
11	Can resolution to roadside problem be made only by regrading off-road?	NO		MAYBE		YES	x	2
		1	2	3	4	5		
COMMENTS:								
12	Is resolution to problem beyond complainants property?	NO		MAYBE		YES	x	2
		1	2	3	4	5		
COMMENTS:								
13	Percentage of ditch or drainageway adversely affected by problem.	0%-10%	11%-25%	26%-50%	51%-75%	76%-100%	x	3
		1	2	3	4	5		
COMMENTS:								

MULTIPLY CHECKED CATEGORY BY GIVEN FACTOR (TOTAL = SEVERITY OF PROBLEM FOR PRIORITY RATING.)

Report: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Submitted by: \_\_\_\_\_ Check if there are attachments  Check If Additional Notes Are On Back

Will There Be Further City Action?	YES	NO	PRIORITY RANKING - TO HELP IN DETERMINING FURTHER CITY INVOLVEMENT	
If "No", Date Complainant Advised.			<b>TOTAL FROM ABOVE</b>	
Is Survey Work Needed?	YES	NO	FLOODING ROADS OR BUILDINGS.	A.S.A.P.
If "Yes", Date of Request.			HIGH	110 / 190
Date Referred To D.P.W.			MEDIUM	76 / 109
			LOW	0 / 75