



Regular Meeting
Wednesday August 19, 2020- 7:00PM

The Orrock Township Board met in regular session, on Wednesday August 19, 2020, at the Orrock Town Hall, 26401 – 180th St. NW, Big Lake, Minnesota.

In attendance were Chair Corrie Silverberg, Supervisors Bryan Adams, Paul Ellinger, Eric Peterson and Clerk Kimberly-Maas. Also, in attendance were Deputy Clerk Chris Weber, Darryl Waletzko – Town Contractor, Town Engineer Mike Nielson and five audience members. Tele-conferencing into the meeting were Supervisor Bob Hassett and Treasurer Gary Goldsmith. Roll Call was taken by Chair Silverberg.

A quorum was present, the meeting was called to order by Chair Silverberg, at 7:00PM and the Pledge of Allegiance to the United States of America was recited.

Meeting Agenda Approval

Supervisor Paul Ellinger added under Clerk’s Business, Letter F - WH Security and Supervisor Adams added under Roads, Letter D – Culverts. Treasurer Goldsmith changed Treasurer’s Business, Item 2 – Eagle Lake Estates Claim.

Motion/Second to accept the revised agenda by: Adams/Peterson. In favor: Adams, Ellinger, Hassett, Peterson & Silverberg. Opposed: none. Abstained: None.

Motion prevailed, and the meeting proceeded in accordance with the revised agenda.

Approval of Meeting Minutes

Motion/Second to approve the July Regular Minutes by: Ellinger/Hassett. In favor: Adams, Ellinger, Hassett, & Silverberg. Opposed: none. Abstained: Peterson. Motion Prevailed.

Motion/Second to approve the July Emergency Meeting Minutes by: Adams/Ellinger. In favor: Adams, Ellinger, Hassett & Silverberg. Opposed: none. Abstained: Peterson Motion Prevailed.

Sheriff’s Report

Commander Doran reported that there were 144 calls in the last month - down 2 from the previous month. There were 3 domestics and 2 sexual assaults. They investigated two homicides outside of jurisdiction. Supervisor Adams asked Commander Doran if “donuts” were happening in other areas as well as Orrock Township. Commander Doran stated that a lot of “donuts” have been occurring around the county, not just Orrock Township. Supervisor Silverberg told Commander Doran that there have been resident complaints regarding parking along 75 near the Eagle Lake public access and asked who at the county should these concerns be sent to. Commander Doran stated that they tried to come up with a plan with the DNR last summer to reconfigure that parking lot at the Eagle Lake access, as it is a safety issue. He said if a resident has an issue, they should contact the county and they will address the problem and get information to the DNR. Their hope is that the DNR addresses the issue.

Open Forum

There were no open forum items.

Clerk's Business

Kobilka Variance – Discussion/Action

Deputy Clerk Weber presented a shoreland variance request from Robert and Mary Kobilka for PID 35-401-1445 at 18821 232nd Ave NW Big Lake. Their existing house is 0 feet from the top of a bluff where a 30 ft. setback is required. The Kobilkas are proposing 240 sq. ft. addition to their house and are requesting 30' variance in setback from the top of the bluff for this addition.

Supervisor Adams confirmed with the Kobilkas that they are building the addition over the existing patio. The existing patio is 15' out from the building and the addition will be a two-story addition 10' onto the existing patio. Supervisor Adams asked Mary Kobilka how they plan to address erosion issues. Mary Kobilka stated that the construction company has worked on other projects on Eagle Lake and will do erosion control. She also noted that they will be installing gutters and that there are no existing erosion issues.

The board recommended approval, contingent upon meeting and following county guidelines.

Warnke Variance – Discussion/Action

Deputy Clerk Weber presented a request for road setback variance request and a shoreland setback variance request for Tom and Heidi Warnke for PID 35-408-0110 at 16453 253 ½ Ave NW, Big Lake, MN. They are requesting a 46' variance in setback from the right-of-way of 253 ½ Ave NW for construction of a new house and a 49' variance in setback from the OWHL of Ann Lake. The required setback from a recreational development lake is 100'.

Dan Berning from Ziegler Custom Homes was representing Tom and Heidi Warnke. Supervisor Adams asked Dan Berning what design changes were made from the previously approved building permit. Dan stated that he was not aware of what changes were made. He had recommended that the Warnkes remove the existing foundation and build on a new foundation. Supervisor Adams stated that, on lakeshore, the county typically wants the footprint to stay the same and that the impervious surface must be at 25% or less. Dan Berning stated the current design is 15 or 20 square feet less than where the Warnkes were previously at for impervious surface. Supervisor Silverberg asked if the width of the building project has changed. Dan stated that the existing foundation is 20' with a 2-foot cantilever (22-feet total). The new foundation is 26' wide. Supervisor Ellinger confirmed with Dan Berning that the new foundation will be 4' wider and that the impervious surface will be at 24.9%.

Supervisor Adams stated that he does not think the property owners will satisfy numbers 4 & 5 when they go in front of the Board of Adjustment. They will have to convince the county that they can satisfy items #4 (The exceptional or extraordinary circumstances do not result from the actions of the current or previous owner(s) under the current Ordinance or State law & # 5 (The variance requested is the minimum variance which would alleviate the practical difficulty).

The Warnkes already have an approved plan and Bryan asked what the practical difficulty is that requires a new building plan. Dan Berning stated that they were cleaning up the structure. Chair Silverberg stated that some neighbors have a concern with the increased width of the structure. Supervisor Ellinger asked if the new structure is taller than the existing structure. Dan Berning stated that the new building is 8" taller and has the same number of bedrooms, therefore the original septic design is approved. Supervisor Adams asked what the Warnkes were going use to build a sidewalk. Dan Berning stated that the sidewalk is going to be made of wood chips.

The board approved the variances with comments regarding the concerns of impervious surface calculation and ensuring that they satisfy items #4 and 5 and 10.

Bev Aubol – Request to Change Lot Types – Discussion

Deputy Clerk Weber presented a request from Bev Aubol to trade the final platting status of two lots in Heritage Trails. Bev is proposing that Lot 3 Blk 1 (on 109th Street NW) is named Outlot E, Blk 3 (on 249th Ave), and Outlot E, Blk 3 is named Lot 3 Blk 1.

Supervisor Adams asked Bev what she is trying to accomplish by re-platting the lots. Bev stated Lot 3 block 1 is marketable but she does not intend to market that lot and plans to leave it unsold and that she would like to market Outlot E, Block 3, due to its location.

Mike Nielson stated that he does not believe there is a drainage issue with either lot, and that the lots are on built roads. 249th Avenue is built, and the township has adopted that road. Mike Nielson asked Bev what the purpose was of having outlots and Bev responded that she did not want to plat those outlots. Mike Nielson's concern is having an outlot

in the middle of the block, as it will not get built on and the township will not get tax revenue from that lot. The board confirmed that this change will not affect the number of outlots in Heritage Trails, it is only switching two lots and their names. Mike Nielson does not have an issue, if Bev is not creating any additional lots. Supervisor Peterson stated the reason that the plat is the way that it is it was to get the roads done in the development and that Bev was only allowed to sell a certain number of lots in the development.

The Board has no issues with the lot change.

Elections – Report/Feedback

- Primary Election – August 11, 2020
 - Deputy Clerk Weber informed the board 220 residents voted on the August 11 primary. The Trail Shed worked out well for the election and the judges appreciated having the space to work. She also informed the board that she intends to order two flag signs for the November 3 election so that voters can more easily see the driveway and will be ordering “park here” signs. Traffic Directors will also be needed at the General Election. The building was cleaned after the election and will be cleaned prior to and after the November 3 election. Supervisor Ellinger asked if the trail association had sent a bill. Deputy Clerk Weber will reach out to the trail association to get an invoice for rental of the trail shed.
- Affidavits of Candidacy Filers
 - Deputy Clerk Weber informed the board that Gregg Felber filed for the Supervisor C seat, which is currently Eric Peterson’s seat. Corrie Silverberg filed for Supervisor D, his current seat, and Chris Weber filed for the Clerk position.

Beaudry Oil Pre-Buy – Discussion/Action

Deputy Clerk Weber presented a 2020-2021 Propane Pre-Buy contract from Beaudry Oil & Propane. The pre-buy price per gallon is \$1.199 and the pre-buy contract is due on August 20th.

Treasurer Goldsmith informed that board that the township paid \$1.699 per gallon in February and \$1.499 per gallon in May. He also stated that the only downside of a pre-buy is if the price goes down. The township typically uses 590 gallons and his recommendation is to pre-buy 600 gallons in the amount \$671.40

Motion/Second to authorize the pre-buy purchase of 600 gallons of propane in the amount of \$671.40 from Beaudry Oil and Propane by: Ellinger/Peterson. In favor: Adams, Ellinger, Hassett, Peterson & Silverberg. Opposed: None Abstained: None Motion Prevailed.

WH Security – Information

Treasurer Goldsmith told the board that the finance committee met with WH Security to discuss the security needs at the township. The WH proposal includes a touch keypad on the main door, door opening sensors on both doors and two motions detectors. It would also include a panic button. The price of the system, including installation is \$969.95. The monthly monitoring fee is \$35.90, including the \$10 fee for Wi-Fi. Supervisor Hassett confirmed that each user would have their own access code and the codes can be deleted when there is a change of users. At this time, the security system will only be installed at the town hall, not the storage shed. The system is wireless and could be moved to a new building in the future. The finance committee recommended the purchase and installation of the security system.

Motion/Second to purchase and install the security system at a cost of \$969.95 and approve monitoring for three years at a cost of \$35.90 per month from WH Security by Ellinger/Silverberg, In favor: Adams, Ellinger, Hassett, Peterson & Silverberg. Opposed: None Abstained: None Motion Prevailed.

Roads

Trimming Quotes – Review/Award Contract

Clerk Kimberly-Maas informed the board that two tree trimming quotes that were received. Waletzko, LLC’s quote was \$30,000 and North Metro Tree Service’s quote was \$25,500. Supervisor Adams had met with both Waletzko, LLC and North Metro Tree Service. Supervisor Ellinger asked if Bryan knew anything about North Metro Tree Service. Supervisor Adams stated that North Metro Tree Service had contracted a lot of local utility work.

Motion/Second to accept the North Metro Tree trimming quote by Adams/Ellinger. In favor: Adams, Ellinger, Hassett, Peterson & Silverberg. Opposed: None Abstained: None Motion Prevailed.

2020 Road Improvements - Pay Voucher #2 – Kruger Discussion

Mike Nielson presented pay voucher #2 from OMG Midwest in the amount of \$31,366.82. He informed the board that the project will come in under the original contract price by approximately \$39,000.00.

Motion/Second to approve Pay Voucher #2 in the amount of \$31,366.82 by: Silverberg/Peterson. In favor: Adams, Ellinger, Hassett, Peterson & Silverberg. Opposed: None Abstained: None Motion Prevailed.

Shores of Eagle Lake Road Improvements

Supervisor Adams asked Mike Nielson to look at the roads and estimate the cost to bring the roads up to township standards. The approximate cost is approximately \$82,035.07. Treasurer Goldsmith had discussed with Bev Harvey and Bev does not think he should have to pay the full cost to bring the roads up to standard. Bev had offered to give up a portion of his escrow to the bring roads up to standards. Gary also stated that Bev is in a contract with a developer from Maple Grove and that the agreement is that the developer would buy “x” numbers of lots for several years. Gary is not sure how many lots (“x”) or the number of years. Mike Nielson stated that if the roads are not chip sealed soon, they will be beyond the point of chip seal and will need an overlay. He also noted that there is a lot of exposed aggregate and that the road seems to be aging rapidly. There is no developer’s agreement that is recorded with the county. Clerk Kimberly-Maas also noted that the roads are nearing the end of their life span. Supervisor Silverberg stated that this project has been a mess from the “get go” and that the township has never adopted the roads. Over \$200,000 in escrow money was returned to the original developer. Treasurer Goldsmith’s opinion is that, as a matter of good governance, it would be advisable to take the roads over on the best terms that the township can get. Supervisor Adams noted that the development sat empty for 15 years with no tax revenue and now that homes are being built asked how should the township move forward. Bryan’s opinion is that it is not the township’s responsibility to bail out a builder. Supervisor Ellinger also noted that it would be expensive for the township to take the roads over, with no guarantee of the number of homes to be built in the development. He also stated that it would be the homeowner’s association’s responsibility to take care of the roads if the township does not take them over. Treasurer Goldsmith recommended that this issue go back to the finance and road committees. He also stated that Bev does not want to pay the entire cost of the chip seal. Chair Silverberg wants to work with Bev Harvey and feels that a discussion needs to be had with Bev Harvey. Mike Nielson recommended assessing the improvements and financing over 5 years. Supervisor Adams recommended that Bev Harvey, Chair Silverberg and Mike Nielson meet to discuss. Treasurer Goldsmith noted that, at this time, the roads are private roads. Mike Nielson stated that, at some time, these houses would be generating a good amount of tax revenue for the township. Supervisor Peterson stated that Bev Harvey purchased the development to make money, and that it should not be the township’s problem.

The board recommended that Chair Silverberg and Mike Nielson schedule a meeting with Bev Harvey.

Darryl Waletzko told the board that he put the signs up and put boulders out in the Shores of Eagle Lake Development. Darryl found jersey barriers and the cost is \$800 total for purchase, delivery and set up.

Road Bids

Mike Nielson presented the 2021 road improvement bids. He told the board that four bids were received, and the lowest bid was from OMG Midwest in the amount of \$405,772.80 - approximately \$5,000 below the engineers estimate. The bid price is the same for fall construction or spring construction. OMG Midwest (formerly Hard Drives), completed the 2020 road improvement projects. Mike’s original recommendation is that the board try to complete the improvements this fall as it would put some money into the economy. Treasurer Goldsmith stated that the bank has given the township interest rates of 4.5%, 7% and 6%, generating approximately \$2,000 per month in interest. Based on the interest rates that the township is receiving, Mike then recommended that the board wait until next spring to complete the projects.

Motion/Second to award the 2021 Road Improvement bid to OMG Midwest for spring construction by Adams/Peterson. In favor: Adams, Ellinger, Hassett, Peterson & Silverberg. Opposed: None Abstained: None Motion Prevailed.

Culverts

Supervisor Adams told the board that Mike Nielson is recommending a culvert policy based on the MNDOT drainage manual. Mike stated that the big difference between the county and the township is the depth of ditches. Sherburne County's ditches are 8' deep and 20' wide, Orrock Township's are two to two and a half feet wide and not very deep. His concern is that, if there is a lot of rain, water will be flowing onto the road, causing vehicles to hydroplane. Mike Nielson presented a draft policy, which is attached to the minutes. Mike is proposing that the developer maintain the ditch for a year following the issuance of Certificate of Occupancy for each lot, after that point, the homeowner shall assume maintenance and liability for erosion control and turf establishment.

Supervisor Adams asked if there are criteria if a homeowner wants to put in a second driveway. Mike Nielson's opinion is if there is a culvert, either upstream or downstream, the homeowner should put in a culvert. Supervisor Adams asked if such criteria could be put in the culvert policy. Clerk Kimberly-Maas asked Darryl Waletzko how he determines the need for a culvert. He stated that he looks at the ditch and the location of the homeowner's driveway. He confirmed that the township is now mandating the need of a culvert unless it is obvious that there is not a need for a culvert.

Clerk Kimberly-Maas stated that if a culvert policy becomes township wide, the township will get to the point that they need additional staff to administer the policy. Clerk Kimberly-Maas believes a culvert policy should be in the developer's agreement and Supervisor Silverberg agreed. Mike Nielson stated that he never messes with drainage – if there is a pipe there, it stays there. Supervisor Ellinger asked Darryl what the next step is if a homeowner does not agree with Darryl's requirement to put in a culvert. It would come back to the board.

The culvert policy will go to roads and bridge committee to put in the developer's agreement. Mike will put a draft culvert policy for the roads committee. The policy will be given to the developer and it will be their decision whether to put in culverts.

Supervisor Updates / Committee Reports

Supervisor Adams informed the board that catch basins have been cleaned except for 253 ½ on Ann Lake. He noted that the catch basin on 253 ½ is blocked up. Darryl stated that the township should put a grate on that basin as some of the grate is no longer there. There is a curb inlet on that catch basin. It appears this inlet is being intentionally filled in, so it does not make sense to clean out the catch basin. Mike Nielson will look at the catch basin on Ann Lake. Mike Nielson and Darryl Waletzko will work on a solution for this catch basin.

Supervisor Ellinger told the board that ZLFD representatives, Chair Silverberg, Treasurer Goldsmith and Supervisor Ellinger are meeting on September 17th at 5:30 to discuss the ZLFD contract and any other items that need to be discussed.

Treasurer Goldsmith reported that the finance committee met to discuss electronics needs at town hall. They had discussed a large format monitor, microphone system and the merits of projection verses television. Gary is going to reach out to one of the state vendors and Brenda will be reaching out to the Big Lake Township vendor for recommendations. Supervisor Ellinger reiterated that he believes the board should seriously look at the merits of the electronics – it would be more engaging for meeting attendees and reduce the amount of paper and toner that the township uses. The finance committee will make an audio/visual equipment recommendation to the board at the September meeting.

Supervisor Hassett requested that Treasurer Goldsmith compile a list of recommendations from board members that would drive the equipment needs. Treasurer Goldsmith will send an email to the supervisors to ask for their recommendations and needs.

Chair Silverberg had asked if the road committee has had any further discussions regarding the purchase of an ice crusher. Supervisor Adams asked if Darryl has the equipment and if the township has the financing for it. Chair Silverberg's opinion is that it would benefit the township to have an ice crusher as winter ice on the roads is one of the biggest complaints of township residents. The cost for the ice crusher is approximately \$35,000-\$40,000. Chair Silverberg also mentioned the prospect of renting the ice crusher out to other townships. Darryl Waletzko told the board

that a tandem axle truck is not practical for use in Orrock Township as it does not turn sharp enough, due to the number of cul-de-sacs. Chair Silverberg stated that there are some challenges but would like to have it re-evaluated and that he does not want it to fall off the radar. He also stated that he would like to have it discussed at the annual meeting if it does not get purchased this year. Clerk Kimberly-Maas asked if the board wants to purchase the equipment and lease the equipment to Darryl or is the township purchasing the equipment for the vendor and financing for the vendor. She does not believe that financing for the vendor is a good fiscal decision.

Chair Silverberg told the board that he does not want the installation of swing-away mailboxes to get dropped. Mike Nielson said that the board could do a separate mailbox contract and that the mailboxes cost approximately \$75 each. Supervisor Ellinger believes that installing swing-away mailboxes is a good idea. Darryl Waletzko suggested that the board pick a development, start there, and install "x" number of mailboxes per year. Clerk Kimberly-Maas told the board that the township has approximately 1,700 houses.

The Road committee will discuss at their next meeting.

Supervisor Adams asked Supervisor Hassett how the sign replacement project is going. Supervisor Hassett stated that he is working with County GIS and how to use the map. He plans to have a Google Earth Map with locations of all the signs. He will also place stickers on the signs. Clerk Kimberly-Maas and Supervisor Hassett stated that no signs were scheduled for replacement in 2020 but are scheduled for 2021. Bob has the spreadsheet with the dates of signs that have been replaced.

Treasurer's Business

Claims Approval – Routine, Individual and Payroll

Claims and payroll were electronically sent to the Board for review and were available for public review during the meeting.

Routine Claims

Motion/Second to approve routine claims and CARES fund highlighted claims by: Ellinger/Adams. In favor: Adams, Ellinger, Hassett, Peterson & Silverberg. Opposed: none. Abstained: None. Motion Prevailed.

Newman Signs Claim

Treasurer Goldsmith presented a claim from Newman Signs in the amount of \$231.53 for E911 signs.

Motion/Second to approve the Newman Signs Claim in the amount of \$231.53 by: Silverberg/Peterson. In favor: Adams, Ellinger, Hassett, Peterson & Silverberg. Opposed: none. Abstained: None. Motion Prevailed.

WSB Claim

Treasurer Goldsmith presented a claim from WSB in the amount \$20,848 for services provided in July, which includes the engineering fees for the 2021 road project design.

Motion/Second to approve the WSB Claim in the amount of \$20,848 by: Adams/Peterson. In favor: Adams, Ellinger, Hassett, Peterson & Silverberg. Opposed: none. Abstained: None. Motion Prevailed.

Eagle Lake Estates Claim

Treasurer Goldsmith presented a claim for Eagle Lake Estates for reimbursement of crack filling in the amount of \$4,200.00.

Motion/Second to approve ratify and approve the Eagle Lake Estates claims in the amount of \$4,200 by: Silverberg/Adams. In favor: Adams, Ellinger, Hassett, Peterson & Silverberg. Opposed: none. Abstained: None. Motion Prevailed.

Payroll Claims – August 2020

Treasurer Goldsmith presented the Board with the payroll claims for the month of August, which included election judge pay. There were five payroll claims being partially charged to the CARES Act Funding.

Motion/Second to approve payroll claims by: Ellinger/Silverberg. In favor: Adams, Ellinger, Hassett, Peterson & Silverberg. Opposed: none. Abstained: None. Motion Prevailed.

Treasurer Goldsmith informed the board The CARES Act grant money was received in August and will be reflected in the August financial reports.

Treasurer's Report

Town Funds balances as of July 31, 2020:

General Fund:	\$108,906.73	Road & Bridge:	\$711,686.77
Fire:	\$29,140.44	Capital Reserve:	\$191,125.52
CARES:	(\$2,073.95)		

All escrows are unchanged.

Motion/Second to accept the Treasurer's Report date ending 07/31/2020 by: Silverberg/Peterson. Approved by: Adams, Ellinger, Hassett, Peterson and Silverberg. Opposed: None. Abstained: None. Motion Carried.

Cash Control Statement and Investment Update

Treasurer Goldsmith presented the Board with the Cash Control statement. Ending cash balance after reconciling the books with the bank statements: \$ 1,218,057.30.

Motion/Second to accept the July Cash Control Statement: Ellinger/Adams. Approved by: Adams, Ellinger, Hassett, Peterson and Silverberg. Opposed: None. Abstained: None. Motion Carried.

Investment Update

Gary informed the board that the CD's interest rates are 4.5%, 7% and 6% - well above the bank's regular rates.

Supervisor Ellinger asked if the township could purchase another CD for a couple of months. Treasurer Goldsmith stated that it would be feasible to purchase CD's. He noted that, in December, the township will receive another tax payment and that the cash flow should be good. He also stated that he would most likely not purchase a CD over the amount of \$200,000.

Motion/Second to authorize Gary to purchase a CD at the best rate that he can get from the bank with the amount of the CD to be determined by Treasurer Goldsmith by: Ellinger/Hassett. Approved by: Adams, Ellinger, Hassett, Peterson and Silverberg. Opposed: None. Abstained: None. Motion Carried.

Motion to establish CARES Act fund

Treasurer Goldsmith requested that board pass a motion to establish a separate CARES act fund on the township's accounting system.

Motion/Second to ratify and approve the establishment of the CARES Act Fund by: Adams/Hassett. Approved by: Adams, Ellinger, Hassett, Peterson and Silverberg. Opposed: None. Abstained: None. Motion Carried.

Announcements

There were no announcements.

Adjournment

Motion/Second to adjourn the regular meeting by: Peterson/Hassett. In favor: Adams, Ellinger, Hassett, Peterson & Silverberg. Opposed: none. Abstained: None.

Motion Passed, adjourning the Regular Monthly Meeting, on Wednesday August 19, 2020 at 9:15PM.

Respectfully Submitted,
Chris Weber
Town of Orrock, Deputy Clerk

Accepted this 16th day of September 2020 by the Orrock Township Board of Supervisors.

Corrie Silverberg, Chair

Attest: _____
Brenda Kimberly-Maas, Town Clerk

Memorandum

To: Orrock Township Board

From: Mike Nielson, PE

Date: 8/19/2020

Re: Driveway Culvert Policy.
WSB Project No. R-013556-000

There has been some discussion about the necessity of requiring driveway culverts in all circumstances. Sherburne County does not require driveway culverts for residential driveways based on the sandy soils in the county. I have been asked to evaluate modifying our current policy culvert requirements.

I am recommending the following for all new subdivision requirements.

As a means to promote groundwater infiltration and reduce long term maintenance costs for homeowner and township driveway culverts will not be required at driveways where the developers engineer can demonstrate the following.

1. The runoff from all sub catchment areas draining to a ditch shall be contained within the ditch without overtopping the driveway or encroaching onto the road shoulder for storms with a flood frequency in accordance the following table.

<u>Projected ADT</u>	<u>Minimum Overtopping Flood Frequency</u>
0-10	2 year
11-49	5 year
50-399	10 Year
400-1499	25 year
1500 and up	50 year

In addition to meeting the flood requirements due to rain events the overtopping requirements shall be met during the 10-day snow melt as defined in the MnDOT Drainage Manual.

2. Storm events and flood frequency shall be as defined in the current MnDOT drainage manual.
3. Where no culverts exist, water shall infiltrate, leaving no standing water within 48-hours following any rain event.
4. The Developer shall be responsible all ditch erosion for a period of 1-year following the issuance of the Certificate of Occupancy of each lot.
5. The homeowner shall assume all maintenance liability for erosion control and turf establishment after the developer's commitment has been met.

6. Failure to maintain the ditch will result in the Township completing the necessary work and assessing the costs to the abutting parcel.
 - a. **The Township will need to adopt a policy that allows assessments. Similar to a lawn mowing ordinance.**

The following is taken from the MnDOT Drainage Manual

- Design recommendations for flood frequency, See Hydrology Chapter for Additional Information.
 - Use 50 year design frequency for minor culverts 48" or less in diameter. The overtopping flood need not be computed. A more conservative design frequency (I.E. 100 year flood event) may be required if there is significant flood damage potential upstream.
 - Minimum overtopping flood frequency for risk assessment is based on projected average daily traffic (ADT)

<u>Projected ADT</u>	<u>Minimum Overtopping Flood Frequency</u>
0 - 10	2 year
11 - 49	5 year
50 - 399	10 year
400 - 1499	25 year
1500 and up	50 year

- Risk assessment shall be completed for all major culverts greater than 48". The 500-year flood or overtopping flood shall be computed, whichever is less.

<u>Road Classification</u>	<u>Size</u>	<u>Design Frequency</u>
All Centerline	> 48 inches	Need Risk Assessment
All Centerline	≤ 48 inches	50 year
Median Drain	15 inch minimum	50 year
Entrance	15 inch minimum	10 year

5.2.4 Design Features

Basic design features and considerations which must be considered include: culvert size and shape, number of barrels, material selection, end treatment for both inlet and outlet, improved inlets, safety and performance curves.

- The culvert size and shape selected shall be based on engineering and economic criteria related to site conditions. All culverts should be designed to provide adequate hydraulic capacity. However land use requirements and debris or ice potential may dictate a larger or different barrel geometry than required for hydraulic design alone. The following minimum sizes shall be used to avoid maintenance problems and clogging:

<u>Type of Road</u>	<u>Minimum Size</u>
Trunk Highway Centerline	24 inches
CSAH Centerline	18 inches
Local Roads Centerline	18 inches
Ramps, Loops, Rest Area	18 inches
Side Culverts	15 inches
Median Drains	15 inches
Entrances	15 inches