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#22

JUNE 21, 1965

REPORT

CD. NO. 22

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REPORT ON FIELD & OFFICE STUDY OF ANOKA COUNTY DITCH #22
FROM MATERIAL ON FILE IN THE OFFICE OF THE ANOKA COUNTY SURVEYOR:

COUNTY DITCH #22, DATED 1893, ESTIMATED COST \$467.96, AMOUNT
ASSESSED BENEFITTED PROPERTY \$446.76.

FEEDING INTO COUNTY DITCH #10, DATED 1890, ESTIMATED COST \$1325.72,
AMOUNT ASSESSED BENEFITTED PROPERTY \$1345.85.

THEREFORE, THE TOTAL AMOUNT ASSESSED BENEFITTED PROPERTY FOR
THIS PORTION OF THE COUNTY DITCH SYSTEM FROM 1/2 MILE INTO COLUMBUS
TOWNSHIP TO MARSHAM LAKE WAS \$1761.61, ALL, OF COURSE, IN 1890
DOLLARS.

IN THE FIELD, ON JUNE 16, ROSS SANDERSON, CALVIN BEHR, AND JARED
RICHARDSON WALKED AND PHOTOGRAPHED C.D. #22 AND THE AFFECTED
PORTION OF C.D. #10, LEADING INTO MARSHAM LAKE. ALSO, IN THE FIELD,
ON JUNE 19, ROSS SANDERSON RECHECKED SOME POINTS IN PREPARATION
FOR REPORT WRITING. AGAIN IN THE FIELD, ON JUNE 21, E.J. LUNDHEIM
AND ROSS SANDERSON VIEWED DITCH #22 AND AFFECTED PORTIONS OF
DITCH #10. WE FOUND:

A. THE APPROXIMATELY 1/2 MILE OF THE ORIGINAL DITCH IN SECTION 32,
COLUMBUS TWP., PHOTOS (3) & (1), IS FREE OF OBSTRUCTION, HAS FEW
WILLOWS AND NO SERIOUS TREE PROBLEM. THE PIPE CROSSING THE
TOWNSHIP LINE ROAD IS 18" R.C. WITH 1.7' COVER AND ROAD DITCH FLOW
LINE. EITHER A TWIN PIPE OR A 24" PIPE COULD BE INSTALLED HERE
IF WATER BACK UP GIVES TROUBLE IN THIS HALF SECTION. HOWEVER,
THE COMMENT OF ONE RESIDENT WAS "WE LIKE IT THIS WAY".

- B. THE APPROXIMATELY 5/8 MILE OF THE ORIGINAL DITCH IN SECTION 5 LINO, PHOTOS (2) & (4), IS FLOWING WELL BUT SOME MINOR TREE REMOVAL MAY BE ADVISABLE TO AVOID A FUTURE OBSTRUCTION.
- C. THE APPROXIMATELY 1/4 MILE OF THE ORIGINAL DITCH STILL IN USE IN SECTION 6 LINO IS WORKING, APPEARS ADEQUATE FOR THE EXISTING DEPTH UPSTREAM, AND HAS A COMPARATIVELY LARGE NUMBER OF SMALL WILLOWS STARTING. THE PIPE CROSSING 4th AVENUE IS R.C.P. 24" WITH 1.2' COVER, SKEWED TO FLOW LINE OF THE DITCH. IF WATER BACK UP UPSTREAM FROM 4th AVENUE IS A PROBLEM, A TWIN PIPE WOULD OFFER SOME RELIEF. THIS PORTION OF THE ORIGINAL DITCH NOW FEEDS INTO A PRIVATE DITCH. PHOTO (5).
- D. THE BALANCE OF THE ORIGINAL DITCH IN SECTION 6 HAS DISAPPEARED AND HAS BEEN REPLACED BY AN ELABORATE PRIVATE DITCH SYSTEM AT A LOWER LEVEL THAN THE ORIGINAL DITCH, PHOTOS (6),(7)& (8). THIS SYSTEM FEEDS INTO A PRIVATE DITCH SYSTEM IN SECTION 7, AND ON INTO MARSHAM LAKE. IF AN OVERFLOW IS DEEMED DESIRABLE AN OVERFLOW DITCH COULD BE DUG SOUTH FROM THE RUBBISH PILE IN PHOTO (6) TO FEED INTO THE C.S.A.H. 14 CROSS PIPE WHICH IS 30" R.C.P. WITH 2.7' COVER AND SOME CORRECTION 1/4 MILE SOUTH OF C.S.A.H. 14. THE NORMAL FLOW OF THE UPSTREAM WATER WOULD STILL BE INTO THE PRIVATE DITCH SYSTEM.

WORK IS NOW IN PROGRESS ON WIDENING AND DEEPENING THE PRIVATE DITCH SYSTEM ACCORDING TO THE START SHOWN IN PHOTO (18), DATED JUNE 16. ON INSPECTION JUNE 19, THE PRIVATE DITCH

WORK HAD PROGRESSED APPROXIMATELY 1000 FT. TO THE NORTH. E. IN SECTION 7 THE WATER LOAD IS SUBSTANTIALLY TAKEN OVER BY PRIVATE DITCHES FEEDING INTO THE 72" C.M.P. AT THE INTERSECTION OF T.H. 53 & T.H.326.

CONCLUSIONS:

WE FOUND A WORKING DITCH SYSTEM WHICH EVEN IN MIDJUNE IS MOVING A GOOD AMOUNT OF WATER. WE REALIZE THAT THE PAST SPRING WAS A SEASON OF ABNORMALLY HIGH WATER.

THAT PORTION OF THE ORIGINAL DITCH STILL IN SERVICE WAS CONSTRUCTED SEVENTY FIVE YEARS AGO BY HAND TOOLS AND HORSE DRAWN PLOWS AND SLUSHERS. DITCHING BY THESE METHODS MEANDERED HERE AND THERE TO SAVE EXCAVATION AND TO DRAIN POTHoles WITH A MINIMUM OF DITCH DEPTH. APPARENTLY, THE DITCH SERVED ITS PURPOSE FOR FIFTY YEARS OR MORE.

IF WE ASSUME THE BENEFITTED AREAS FOR THE ORIGINAL COUNTY DITCHES #22 & #10 AS 8 SECTIONS AND THE TOTAL COST OF THE TWO DITCHES AS \$1800.00, THE ORIGINAL COST TO EACH QUARTER SECTION AMOUNTS TO \$57.00, ALL OF COURSE, IN 1890 DOLLARS. AGAIN, THE ORIGINAL COST WAS \$14.00 FOR EACH 40 ACRE PLOT.

THE PRIVATE DITCH SYSTEM EXISTING, AND MORE SO AS IT IS NOW BEING IMPROVED, BENEFITS THE DITCH UPSTREAM FROM THE EXISTING JUNCTION IN SECTION 6. THE WATER MOVES NORTH, THEN WEST, THEN SOUTH, BUT IT IS MOVING, ON PRIVATE PROPERTY.

FROM AN ENGINEERING POINT OF VIEW, IF THE ORIGINAL PORTION OF

THE DITCH NOW IN USE IS TO BE MAINTAINED AS IS, AND IF BACKUP IN AN ABNORMAL SEASON IS A PROBLEM TO BE MINIMIZED, THE CORRECTIONS IN A, C, & D COULD BE CONSTRUCTED AND ASSESSED AGAINST BENEFITTED PROPERTIES. IF CLEANING AND DEEPENING OF THIS PORTION IS DESIRED, THE SAME PROVISIONS SHOULD APPLY.

THERE IS NO MONEY AVAILABLE TO DO ANY DITCH CLEANOUT.

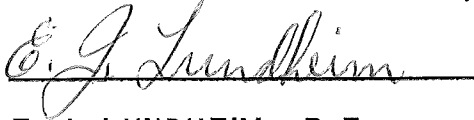
SUMMARY:

THE PRESENTLY OPERATING SECTION OF ORIGINAL DITCH #22 WAS ONLY DEEP ENOUGH TO TAKE OFF THE SURFACE WATER IN AN ESSENTIALLY FLAT AREA. ROADS AND STREETS OF COMPARATIVELY RECENT CONSTRUCTION INTERSECT THIS DITCH WITH ROAD DITCHES DEEPER THAN THE DRAINAGE DITCH BUT STILL DESIGNED TO REMOVE ONLY SURFACE WATER. ROAD DITCHES ARE EVIDENTLY SERVING THEIR PURPOSE WITH THE USUAL ANOKA COUNTY DEPENDENCE ON VERTICAL DRAINAGE FOR ASSISTANCE.

A COPY OF THE COUNTY AUDITORS NOTES FROM BOARD MEETING MINUTES IS ATTACHED.

A COPY OF A 1962 LETTER MENTIONING C.D. #10 IS ATTACHED.

RESPECTFULLY SUBMITTED,



E. J. LUNDHEIM, P.E.
COUNTY ENGINEER
ANOKA COUNTY
JUNE 21, 1965