Statewide Transportation Analysis & Research

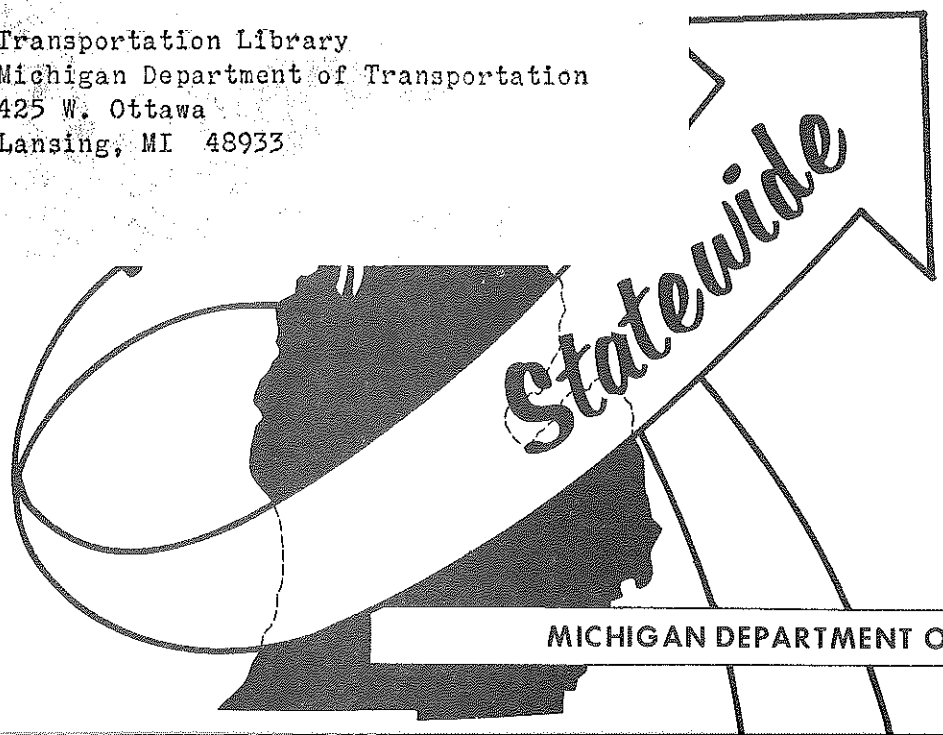
MICHIGAN'S STATEWIDE
TRANSPORTATION MODELING SYSTEM

VOLUME II-A

APPENDIX A: NETEDIT COMMAND DIRECTORY

STATEWIDE TRANSPORTATION
PLANNING PROCEDURES

JUNE, 1977



MICHIGAN DEPARTMENT OF TRANSPORTATION

MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

BUREAU OF TRANSPORTATION PLANNING

MICHIGAN'S STATEWIDE
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APPENDIX A: NETEDIT COMMAND DIRECTORY

BY TERRY L. GOTTS

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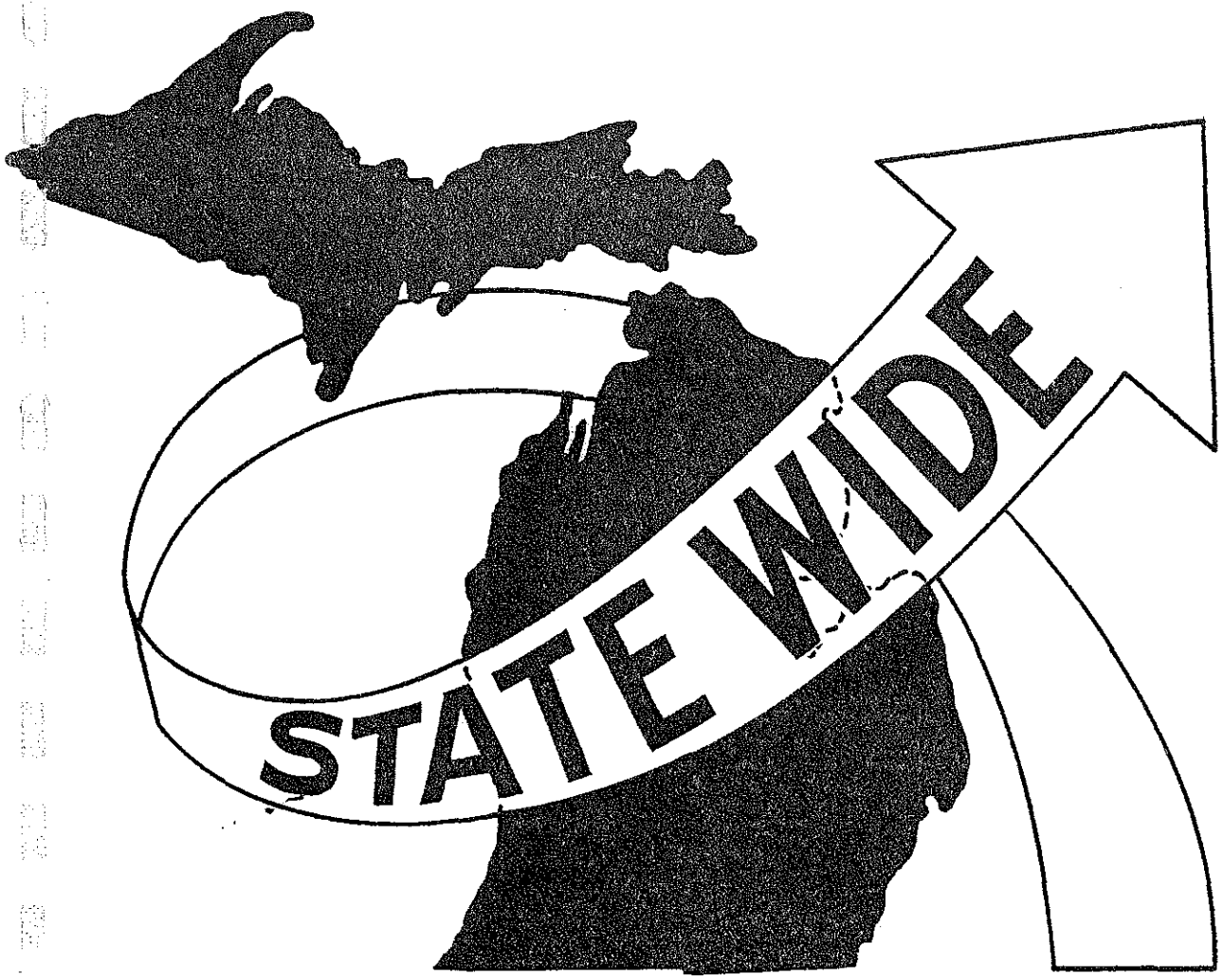
GENERAL INFORMATION



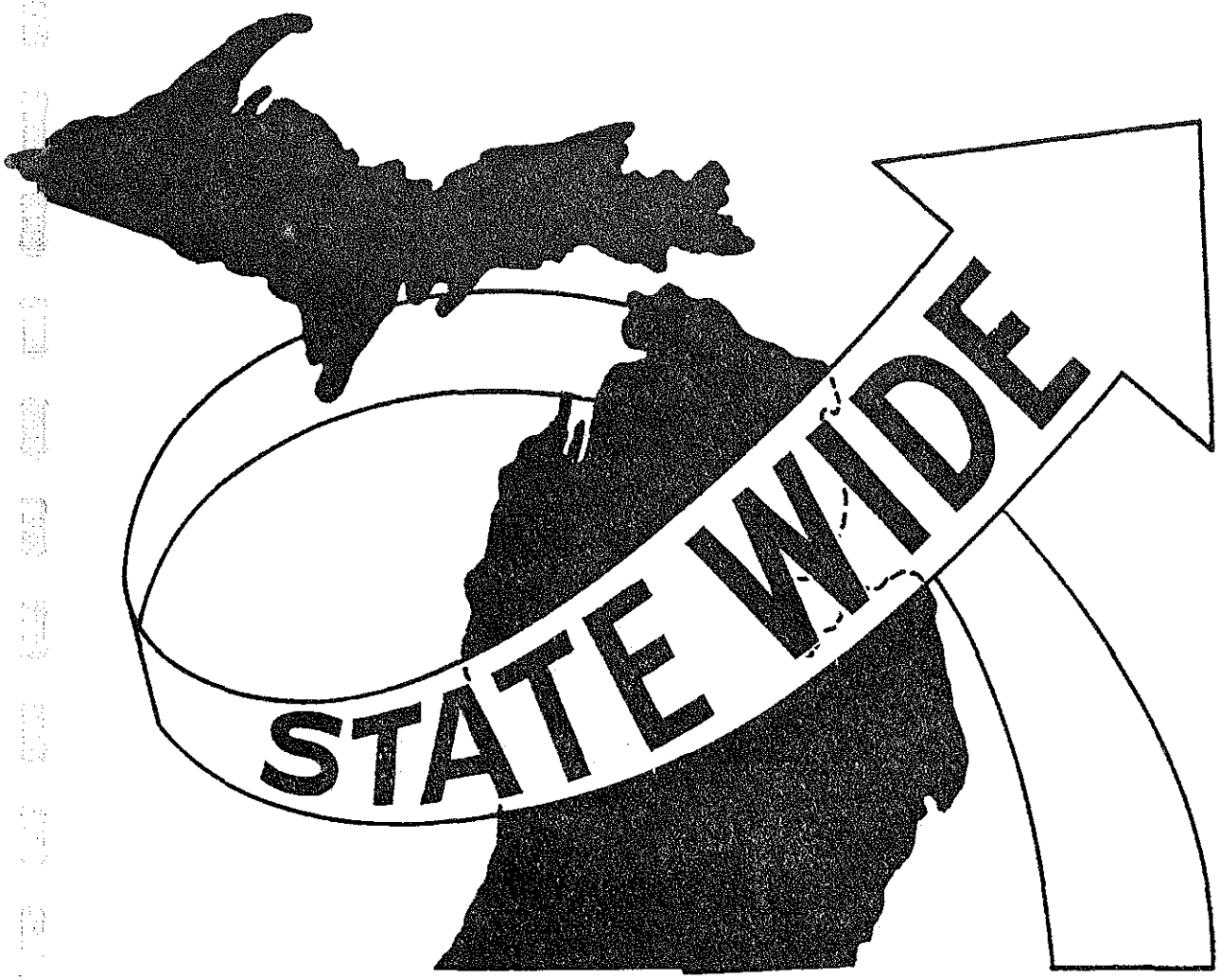
GENERAL INFORMATION

NETEDIT is a means of updating networks interactively on the Tektronix CRT terminal. The entire network can be edited in one run, unlike earlier versions which forced the user to preprocess the net and break out 1 - 10 counties. Five link attributes are carried in core:

1. Distance (2 implied decimals)
2. Speed (1 implied decimal)
3. Link Type
4. Jurisdiction
5. County Number (if volume field 3 = control section)

All volume fields (up to 48) are carried on a random file on resource pack. Within the program, volume fields are also referred to as link attributes. The attribute number is = (volume field number +5).

COMMAND DIRECTORY



COMMAND DIRECTORY

Commands can be segregated into four general categories:

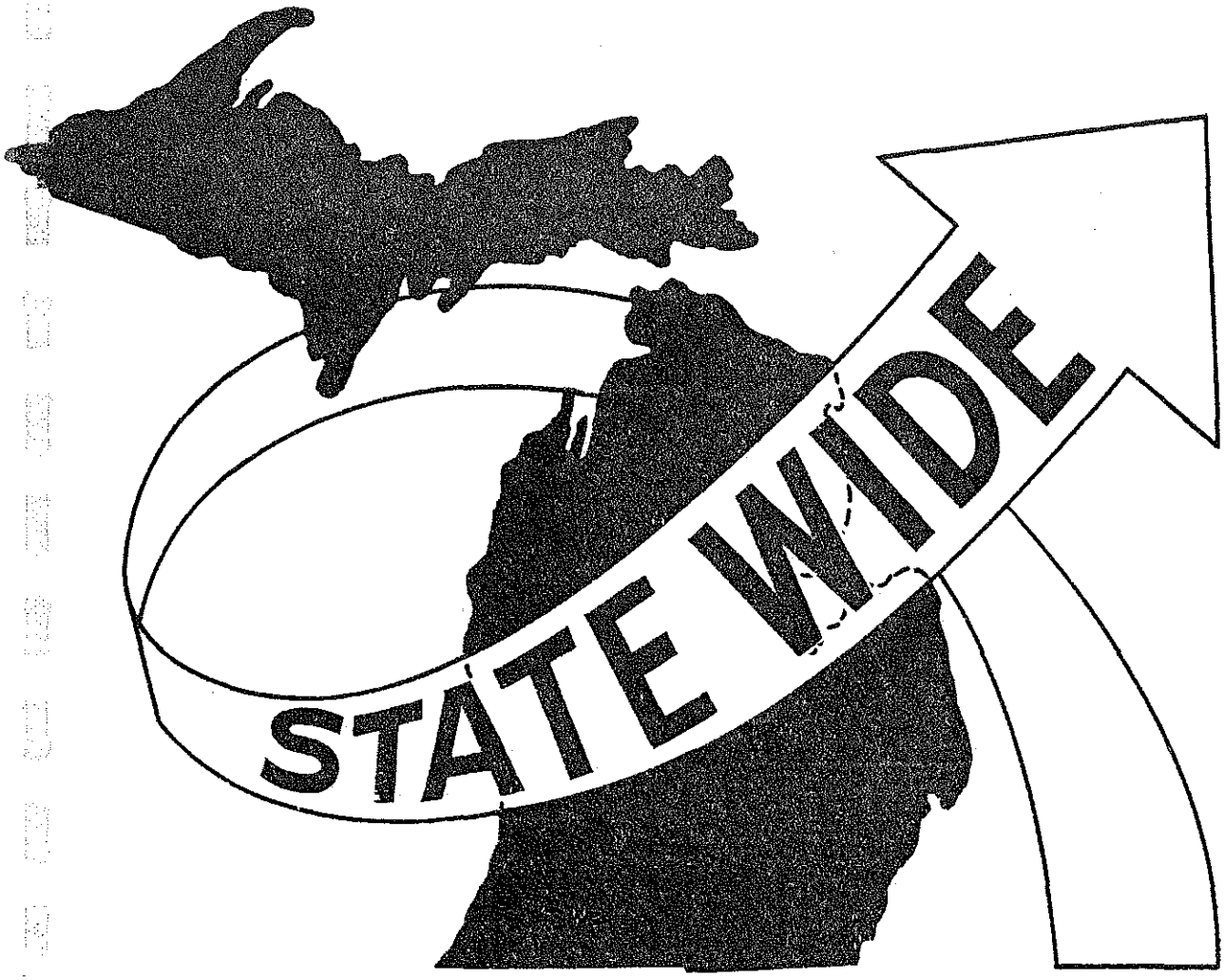
1. Display and Annotation
2. Link/Node Data Manipulation
3. Miscellaneous Commands
4. Recovery/Restart

All commands have the general sytax:

COMM <,parameter 1> <,parameter 2> <,parameter 3> <,parameter 4>

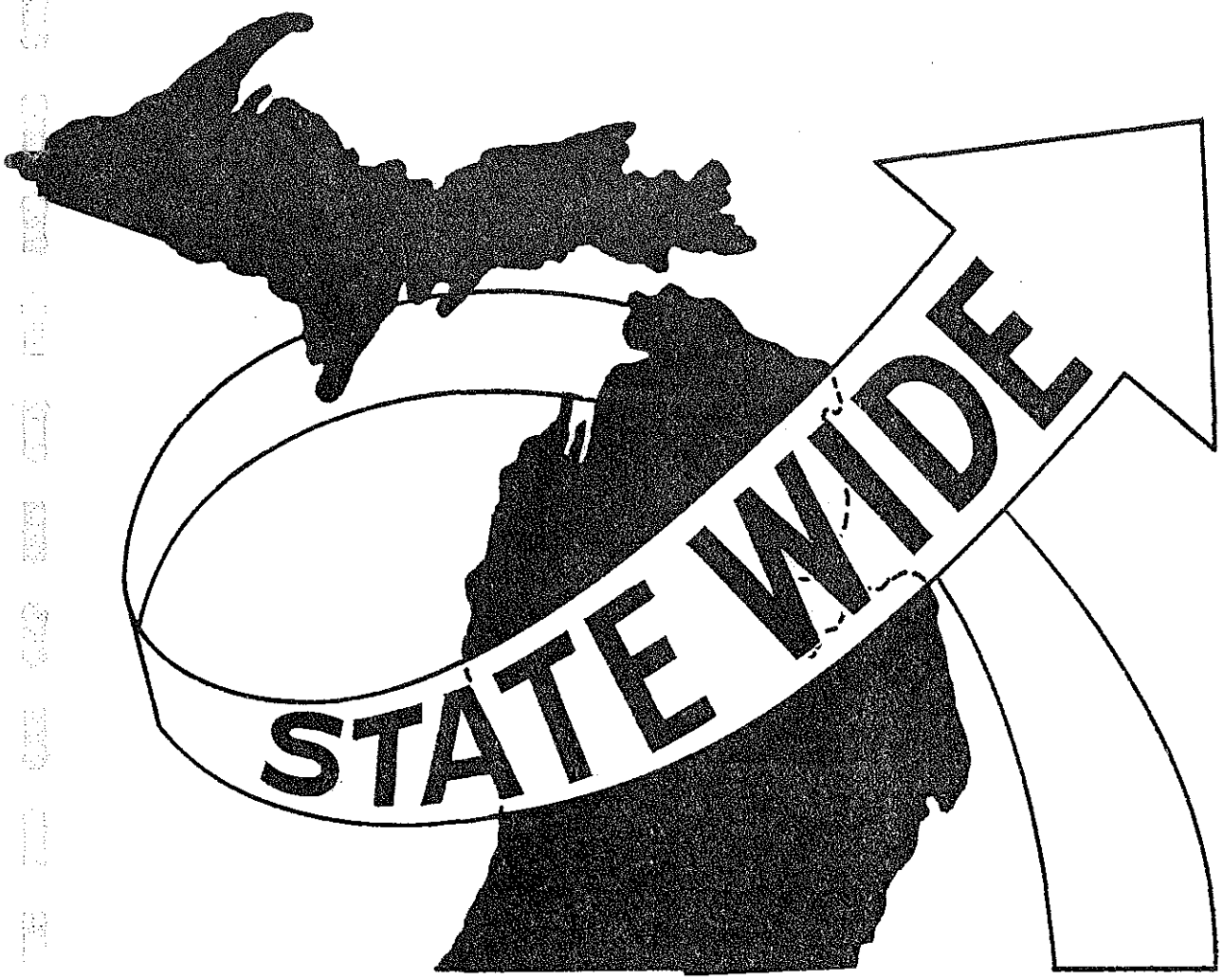
where the underlined letters are the smallest recognizable subset of the command name and the items in brackets are optional parameters. If included, optional parameters can be separated by no more than three blanks. Four consecutive blanks are interpreted as an end-of-line. The parameters themselves must be unsigned integers between 0 and 999999.

TOPICAL INDEX



TOPICAL INDEX

SECTION 1: DISPLAY AND ANNOTATION



SECTION 1: DISPLAY AND ANNOTATION

DISP: Displays network contained in current virtual (user - coordinate) window.

ENGL <,min. user X, max. user X, min. user Y, max. user Y>: Enlarges a portion of the network. If the optional parameters are given, the virtual window is redefined to be the rectangle defined by the parameters. If not, the program issues the prompt "# POSITION CURSOR" and turns the graphic cursor on. The user is expected to point to two opposing corners of the desired rectangle. Cursor commands are "O" for ok or "R" for an emergency return out of the enlarge module.

OLVW: Returns to previous virtual window (the "old view").

ZONE: Overlay zone boundaries (boundaries will continue to be displayed until a NOZN command is given or the virtual window is changed.

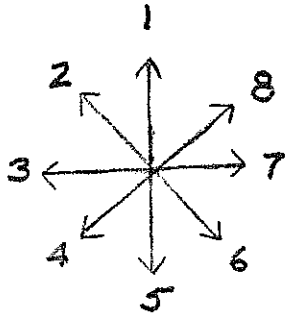
NOZN: Turns off zone - boundary display.

CENT: Displays centroid numbers until either a BLNK command is given or the virtual window is changed.

NODE: Displays all node numbers until either a BLNK command is given or the virtual window is changed.

BLNK: Turns off node annotation.

PAGE <,direction number>: Moves window one screen page in the direction indicated, where "direction" is a number between 1 and 8.



PARA <,attribute no. #1> <,attribute no. #2> <,attribute no. #3>: Display up to three link attributes at the midpoint of each link. If the optional parameters are omitted, the program issues the prompt "ENTER 3 LINK ATTRIBUTES". The user should enter up to three numbers separated by commas. If less than three are desired, follow the last one with a ",*" (e.g., "5,*" or "1,2,*") to tell the program not to look for more entries.

FLTR: Allows user to set filter criteria for inclusion of a link in the display. The program will prompt the user to enter a link attribute number (only 1 - 5 may be used for filtering) and a lower and upper bound; if the given attribute of a link falls between the two bounds, the link will be plotted.

CHGF: Changes filter criteria by adding, replacing, or deleting existing criteria (self-prompting).

LINE: Allows user to change the way in which any link type - jurisdiction group will be plotted. Each link type - jurisdiction pair is assigned a line type by default. Once a line type is changed for a particular link type and jurisdiction, it remains in effect until another LINE command is given. This routine is self-prompting.

LINE TYPE	TYPE OF DRAW
0 or 1	solid line
2	short-dashed line
3	long-dashed line
4	cross-hatched line
5	----A----A----A----
6	----B----B----B----
7	----C----C----C----
8	line marked with triangles
9	line marked with boxes
10	reserved for future development
11	bandwidth (see command BSET)

BSET <,shift parameter>: Set band limits and attribute number which will be used to determine the number of bands; 1 - 10 bands are possible. Depending on the value of <shift parameter>, bandwidths may be selected automatically.

<shift parameter> = 0 (or absent): The program prompts the user to enter an increasing sequence of cutoff limits (one lower limit plus one upper limit for each band). If the user responds to the prompt by entering only an asterisk (*) followed by a carriage return, the program will space the bands equally between the actual maximum and minimum of the key attribute.

<shift parameter> = 1, 2, or 3: The program calculates cutoffs by assuming the values of the key attribute to have a normal distribution $N(\overline{X},S)$, where $\overline{X}$ is the mean of the attribute values and S is the standard deviation. (The means and standard deviations are calculated for all variables at unpack time.) If the shift parameter is = 1, the distribution is assumed centered about $\overline{X}-\frac{1}{2}S$; if shift parameter = 2, center is $\overline{X}$; if shift parameter = 3, center is $\overline{X}+\frac{1}{2}S$.

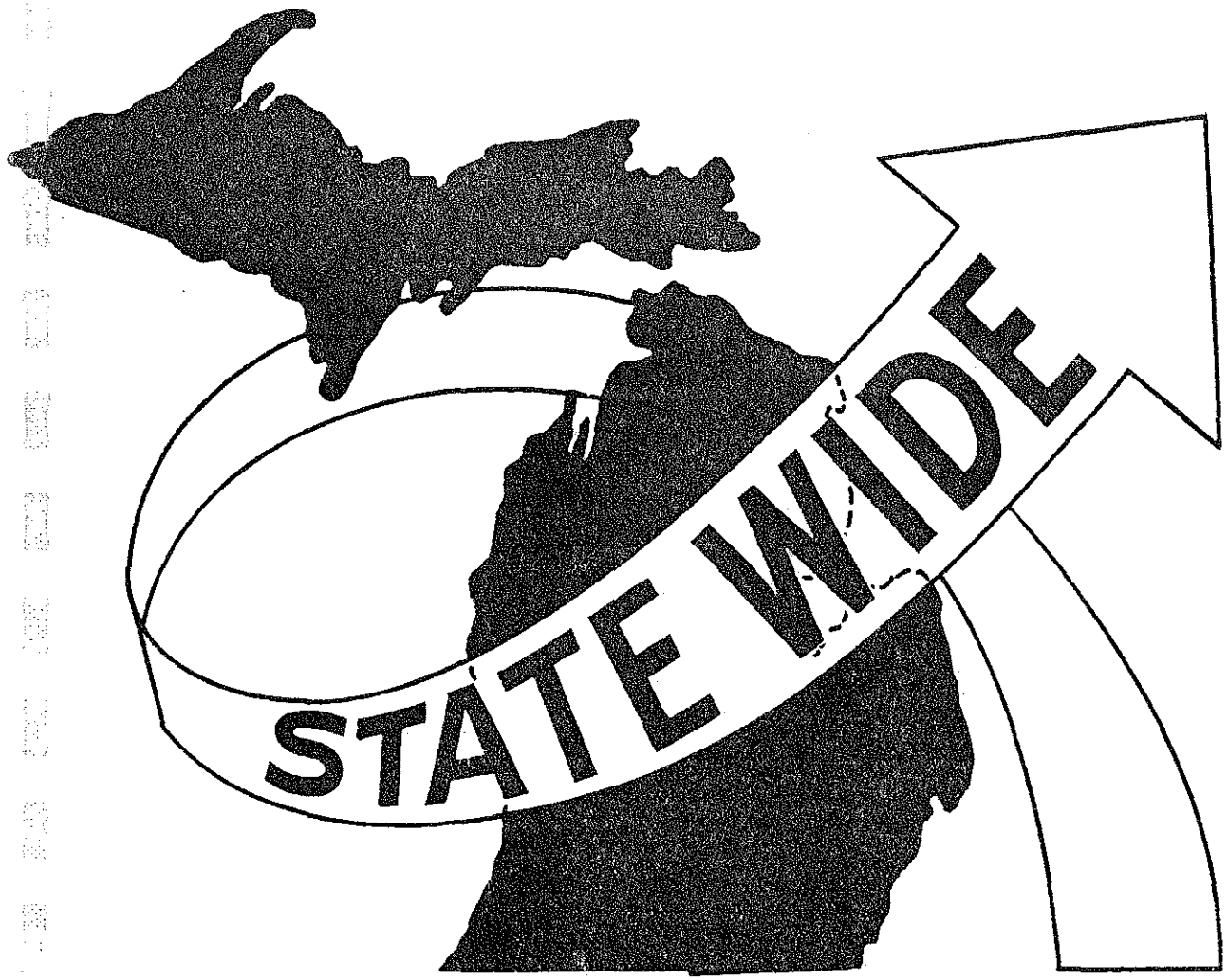
LGND: Writes the key attribute number and band cutoffs beside the picture in bandwidth plotting.

TREE <,origin zone>: Reads tree file and plots tree. If no tree file has been opened, the program will ask for the name of the file.

NEWT <,origin zone>: Requests that the old tree file be closed, a new one opened, and a tree plotted. (Note that to plot a new tree from the tree file currently open, the command TREE should be used. Only use NEWT to change files.)

TIME: Annotates cumulative times on links of tree.

SECTION 2: LINK-NODE MANIPULATION



SECTION 2: LINK - NODE MANIPULATION

ADDN <,node no.>: Add new node. The routine will prompt the user to position the cursor and give a cursor command (O = ok, N = no, R = return). The new node number is chosen from the available node list if it is not specified by the user as a parameter.

DELN <,node no.>: Delete node. CAUTION -- this will also delete any link which has the deleted node as a endpoint.

RNUM <,old node no.> <,new node no.>: Renumber node. The routine will give a warning and request confirmation if the new node number is already in use.

MOVN <,node no.>: Move node. After the prompt, position the cursor where the node should be and use cursor control O (move only), D (move node and change distance on any link ending in the node), or R (return)

ADDL <,a-node, b-node>: Add link. Be prepared to assign the link a link type, jurisdiction, control section, zone number, base-year DHV percent, and pattern factor. All other attributes are taken from default tables.

SPLT <,a-node, b-node>: Split link into two parts, adding a new node in between. Cursor controls are O (ok), N (no), or R (return). If you wish both new links to retain the control section, zone, DHV percent, and pattern factor of the parent link, simply enter an asterisk (*) when these are called for. Otherwise, enter any new values desired in the proper order. The list-directed read can be terminated with

an asterisk, and null entries are permitted in order to space over (example: ",,17,*" changes the third element in the sequence to 17).

DELL <,a-node, b-node>: Delete link (emergency exit -- enter node 99999 in either position).

CHGP <,a-node, b-node>: Change link parameters. In answer to the prompt "ENTER COMMAND, VALUE", the following commands are acceptable:

CJ,<jur> -- Change the jurisdiction of the link to jur and insert the defaults from the table for that jurisdiction.

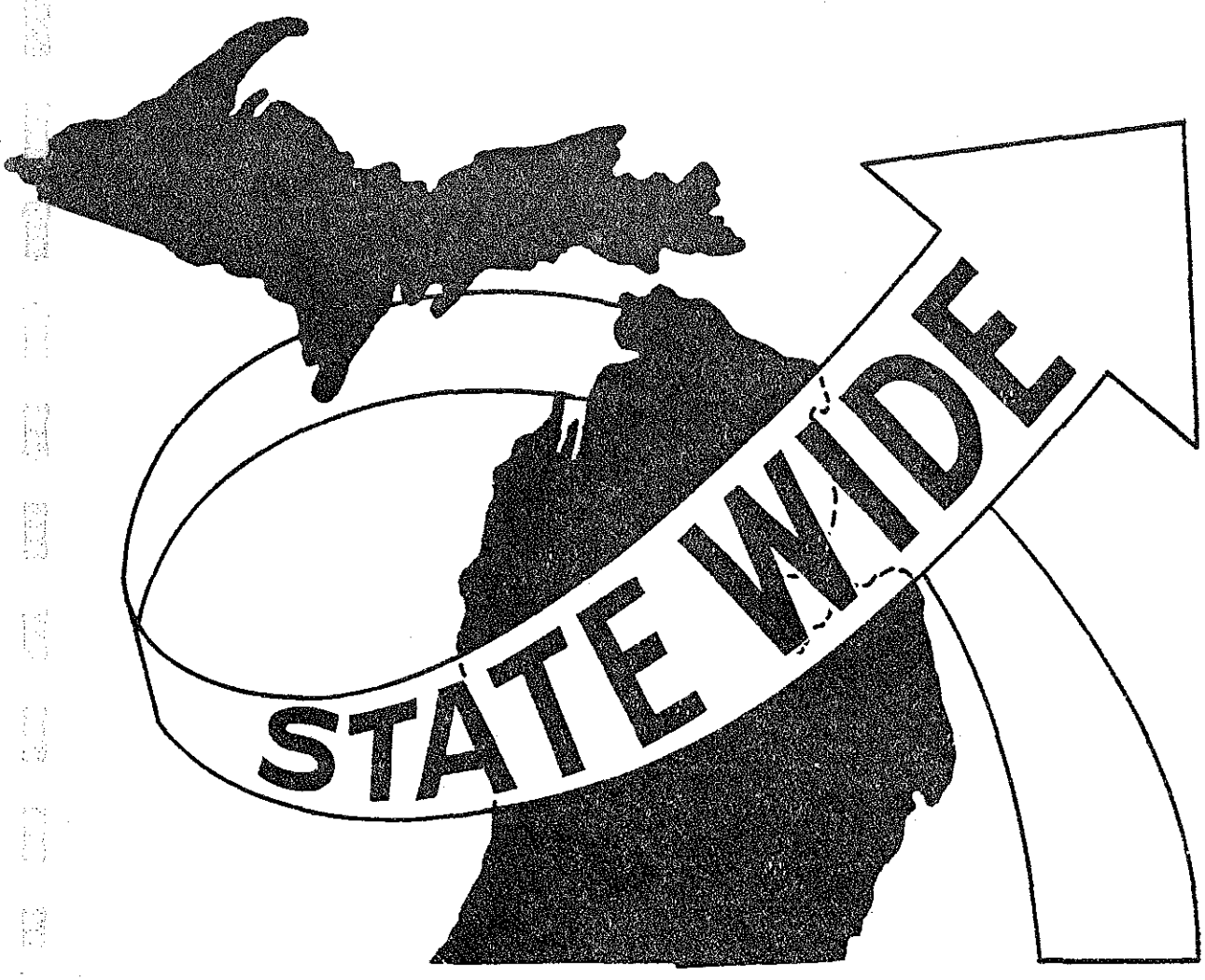
NL -- Get a new link for parameter changes. Program will ask for a-node and b-node.

DR -- Redraw screen. Equivalent to the command DISP, but does not leave the CHGP module.

RE -- Return

<att. no.>, <value> -- Change attribute att. no. to value (example: 1,250)

SECTION 3: MISCELLANEOUS COMMANDS



SECTION 3: MISCELLANEOUS COMMANDS

PACK: Pack network backup. The routine will ask the user for residence of output file (PE-tape or disk).

QUIT: Exit the program without saving anything.

IMPR <,jurin, jurout>: Compute cost of improving links contained in the screen window (note that filtering may be used to advantage here), upgrading all links of jurisdiction jurin to jurisdiction jurout. Jurin and jurout must be between 1 and 6. After the prompt "IMPROVEMENT OPTIONS?", the following responses are possible:

1,nl,* -- Reconstruction to nl lanes.

2,ns,nf -- Resurface and do minor widening to nf feet/lane, adding cost of shoulder work if ns = 1 or not if ns = 0.

3,nl,* -- Major widening by an additional nl lane, with minor widening of existing roadway to 12-foot lanes if necessary.

SNAP: Take printer snapshot of links and nodes, as well as zone boundaries if zones are currently being displayed.

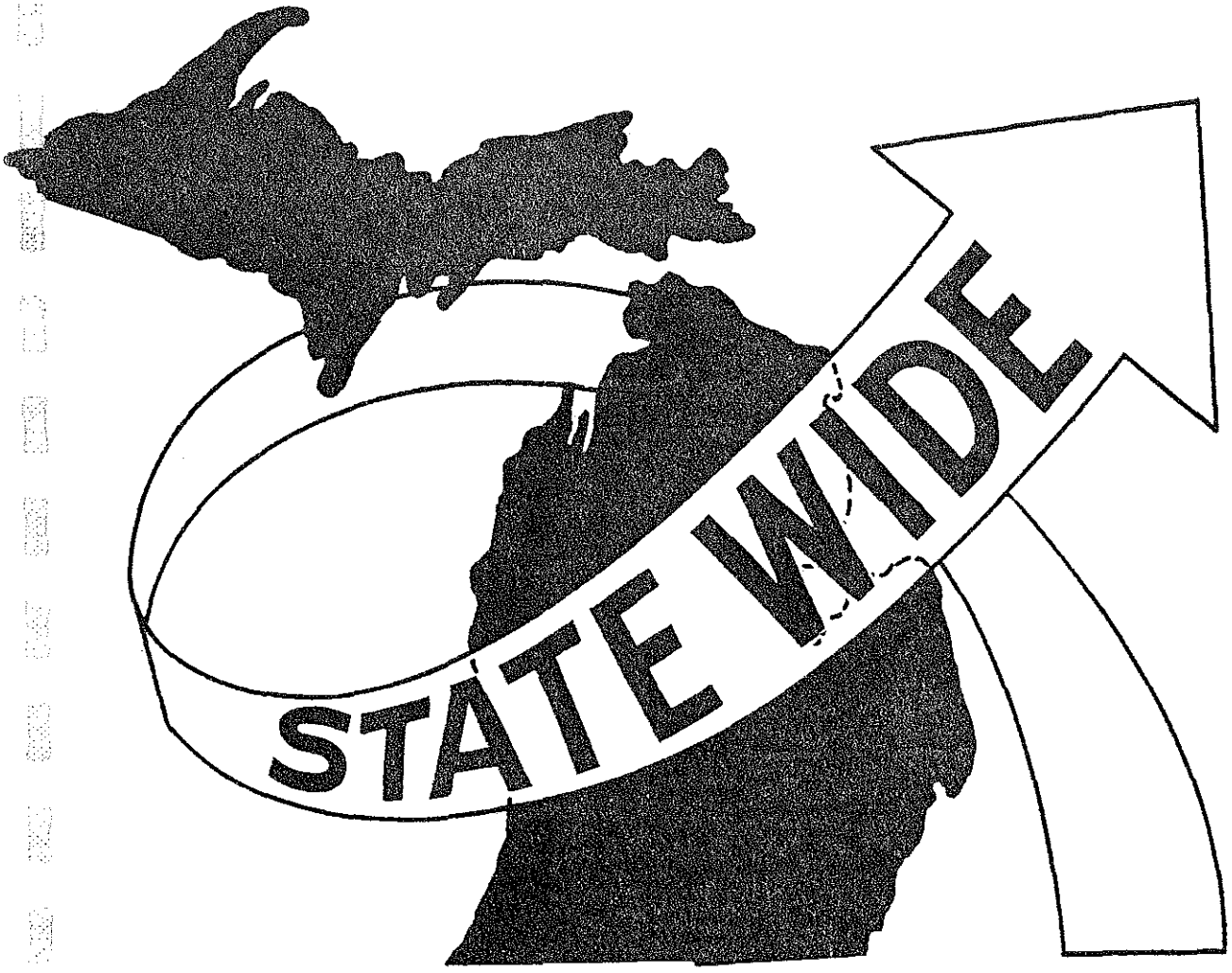
DMPV: Dump volume fields to printer.

FIND <,node #1> <,node #2> <,node #3> <,node #4>: Print the coordinates for up to four nodes.

CHGH: Change header. The routine will inform the user about the present parameters and prompt the change commands.

COMMUNICATING WITH THE PROGRAM

USING TASKVALUE ATTRIBUTES



COMMUNICATING WITH THE PROGRAM

USING TASKVALUE ATTRIBUTES

It is sometimes desirable to give the program instructions without having to wait for the network to be unpacked. This can be done by using the "VALUE=" clause when the program is first started.

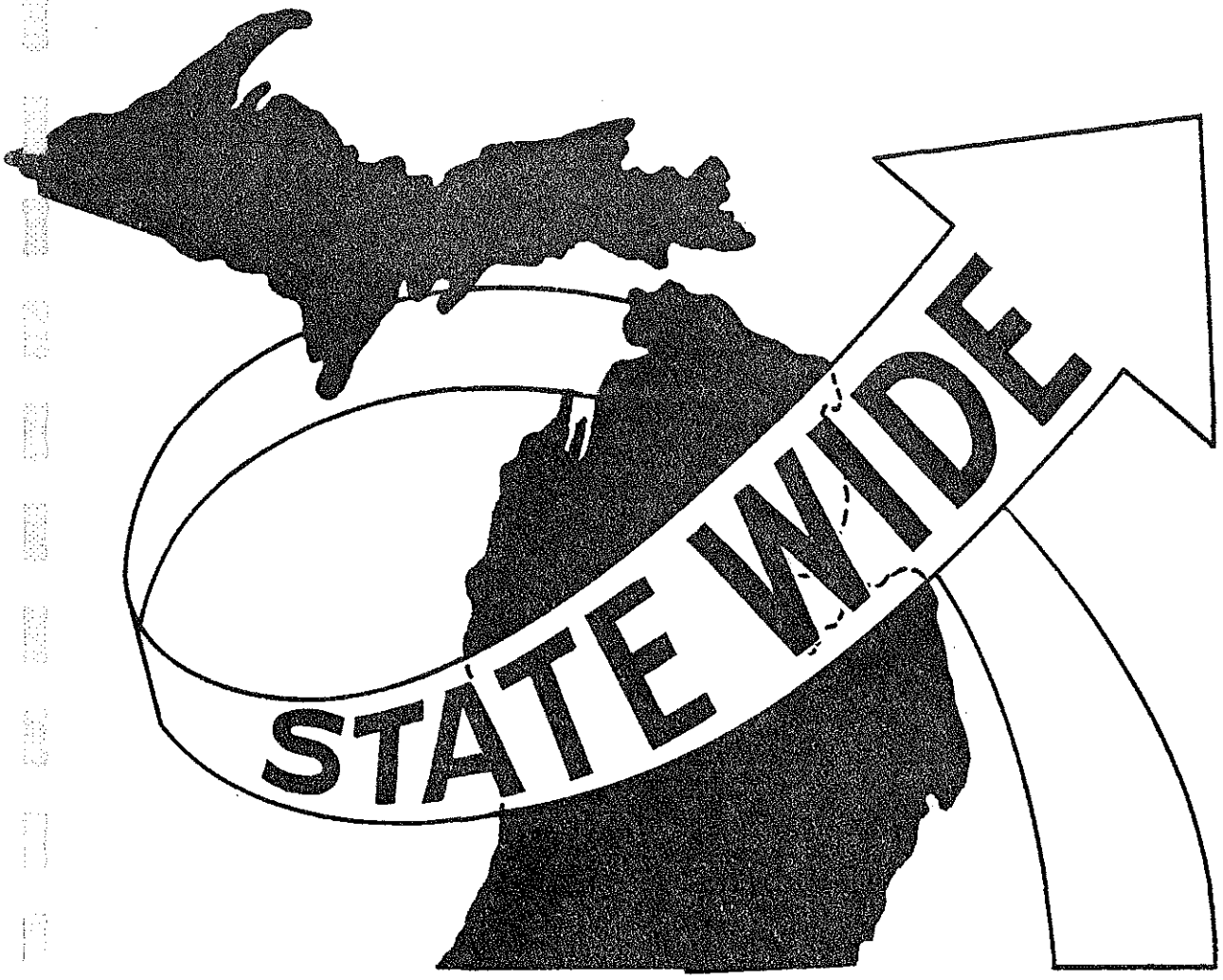
1. R $P/GRAPHICS/NETEDIT/BOUND; VALUE = 1

   NETEDIT no longer asks where an available node should be started unless specifically asked to do so. Using the VALUE = 1 clause will allow the program to inquire about the lower bound for avaliable nodes.

2. R $P/GRAPHICS/NETEDIT/BOUND; VALUE = 2

   A taskvalue of 2 instructs the program to look on PACK for the latest SAVED file instead of unpacking the network. This could be a real time-saver, especially when some volume fields have been unpacked two ways.

SECTION 4: RECOVERY/RESTART



SECTION 4: RECOVERY/RESTART

NETEDIT compiles a tank file of change commands on PACK. This file is added to whenever an update to the link or node file is made. In case of system failure, it is necessary only to unpack or recover the latest network and give a TANK command to return to where you were when the system went down.

SAVE: Saves the current node, link, and header information in unpacked form on PACK. This could be used to interrupt a session temporarily and pick up at the same place later.

RCVR: Recover the latest saved file from PACK and restore the network to the state it was in when the last SAVE was done.

TANK: Access the tank file and process update commands in the order they were entered in the session. After all commands are processed, a SAVE is done. The first new update command starts a new tank file and the old one is automatically purged.

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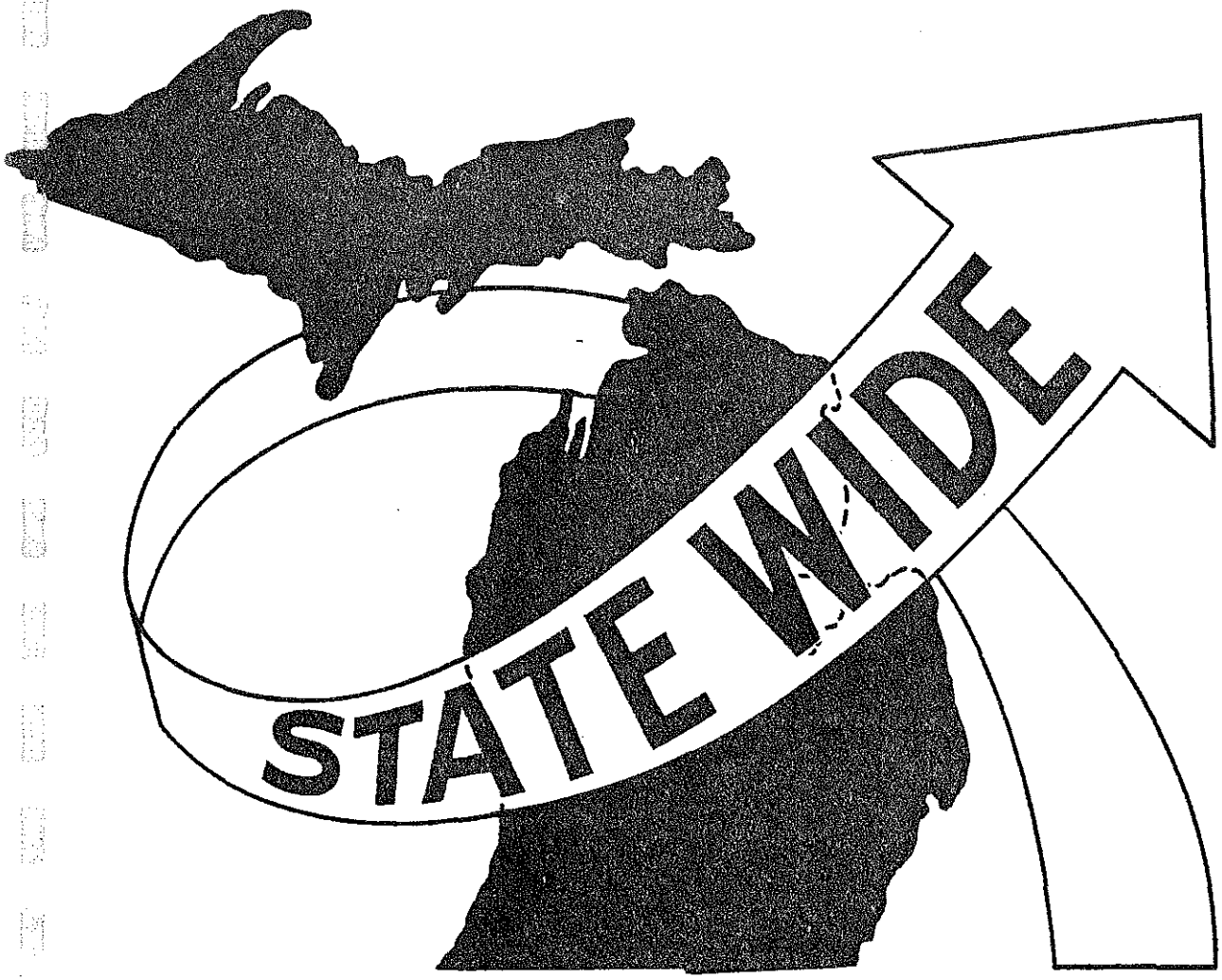

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