



STANDARDS, SPECIFICATIONS  
AND REGULATIONS  
FOR  
SUBDIVISION STREETS  
AND PROPOSED PUBLIC ROADS

EFFECTIVE DATE: JULY 16, 2002

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## **THE PLAT ACT**

All plats intended to be recorded with the Register of Deeds must be in conformity with the "Subdivision Control Act" - - Act 288, Public Acts of 1967, as amended.

Section 183 of the Subdivision Control Act reads as follows, in part:

"The county road commission may require the following as a condition of approval of final plat for all highways, streets and alleys in its jurisdiction or to come under its jurisdiction and also for all private roads in unincorporated areas.

- (a) Conformance to the general plan, width and location requirements that the board may have adopted and published.
- (b) Adequate provision for traffic safety in laying out drives which enter county roads and streets, as provided in the board's published construction standards.
- (c) Proper drainage, grading and construction of approved materials of a thickness and width provided in its current published construction standards.
- (d) Submission of complete plans for grading, drainage and construction, to be prepared and sealed by a civil engineer registered in the state.
- (e) Installation of bridges, culverts and drainage structures where it deems necessary.
- (f) Completion of all required improvements relative to streets, alleys and roads, or a deposit by the proprietor with the board in the form of cash, a certified check or irrevocable bank letter of credit, whichever the proprietor selects, or a surety bond acceptable to the Board\*, sufficient to insure completion within the time specified."

\*Surety bonds for completion of improvements are not acceptable to the Board of Antrim County Road Commissioners.

## **DEFINITIONS**

- Board: The Board of County Road Commissioners.
- Engineer: The Engineer of the Board or any of his or her associates designated to act for him or her in carrying out the duties entailed by the Plat Act.
- Proprietor: The owner or owners of the lands to be platted or developed.
- MDOT: Michigan Department of Transportation
- AASHTO: American Association of State Highway and Transportation Officials.

## **GENERAL**

These published minimum requirements and specifications are subject to change without notice by the Board. The Board reserves the right to require construction to higher standards or to modify standards where warranted by special conditions.

Roads in industrial subdivisions or developments or roads in subdivisions or developments which will be subject to non-residential commercial traffic shall be constructed to all-season standards. Such standards are not included in this publication. The Proprietor's Engineer shall submit detailed plans for the design of such developments for the approval of the Board.

These standards and specifications shall apply to both public and private roads proposed to be included within subdivisions, or any private roads to be accepted as public by the Board, except as may be provided otherwise herein.

The requirements of these regulations do not supersede but are in addition to those state laws and regulations or county or township ordinances and zoning requirements which may be in effect.

These published specifications and standards are effective on the date of adoption by the Board and cancel and supersede all previously published regulations.

## I. PRELIMINARY REQUIREMENTS

### A. PRELIMINARY PLAT

In order that the subdivision plats may be prepared in conformity with the general highway and street plans of the Board, the subdivider shall have prepared a preliminary plat of the area which is to be platted. The plat shall be prepared under the direction of a Licensed Land Surveyor and shall be drawn to a convenient scale not smaller than one inch equals two hundred feet.

The preliminary plat shall give the name of the proposed subdivision and the location with reference to the section and township in which the parcel is situated. The plat shall show the proposed street layout, lot and plat dimensions (dimensions to the nearest foot are adequate on the preliminary plat), and governing factors such as adjoining subdivisions, proposed future developments, bodies of water, highways, railroads, parks, cemeteries, natural water courses, sewers or any other feature which might affect the layout of the plat.

Two copies of the preliminary plat prepared as noted above shall be submitted to the Board, together with a letter requesting preliminary approval of the plat. The Board shall approve or reject the preliminary plat within thirty days. One copy of the preliminary plat will be returned to the Proprietor indicating approval or rejection of the Plat, with applicable notations.

### B. DRAINAGE PLAN

A drainage plan, as it affects existing or proposed roadways, shall be submitted indicating the manner in which storm water is to be disposed of.

To accomplish this will usually require making use of existing ditches, natural water courses or the construction of tributaries thereto. An easement of 20 feet or more in width shall be provided when the drain crosses private property within the subdivision or adjacent to it.

The drainage plan may be superimposed on the preliminary plat, or it may be submitted as a supplement to the preliminary plat. The drainage plan shall be drawn on a topographic map unless an exception is approved by the Board due to natural features.

### C. RIGHT OF WAY WIDTH

The following minimum widths of right-of-way will be required for all roads, streets and alleys:

Primary Roads ----- 100 feet

Local Roads ----- 86 feet

Local Roads with provisions for 10 foot minimum  
width utility easement outside of each road  
right-of-way line ----- 66 feet

Greater right of way width may be required by the Board when considered necessary.

Section line and quarter line roads shall be centered on said lines unless an exception is approved by the Board.

Half width dedications of roads, streets or alleys will be acceptable only when the boundary of the proposed plat coincides with the boundary of a recorded plat on which a half road, street or alley has been previously dedicated.

#### D. STREET LAYOUT

The street layout shall conform to the pattern established by adjacent roads and streets. Existing roads and streets that terminate at the boundaries of a proposed plat must be connected with the street system of the proposed plat. Access roads to isolated plats must conform to these specifications, except that right-of-way for access roads shall be provided by easement.

Driveway access from lots to primary roads will be controlled and limited. Access limitations shall be included in the plat restrictions.

When the proposed plat abuts unplatted land, road extensions shall be provided to the title line of the unplatted areas, and easements for temporary turnarounds may be submitted in these cases as required by the Board.

The layout of roads and streets in a proposed plat shall provide a continuous circuit for travel.

Every effort shall be made to eliminate cul-de-sacs from the street layout. In special cases where the lands to be subdivided are limited in area or are subject to a natural barrier, the Board may approve a dedication which provides access to another road or street at one end only if a cul-de-sac right-of-way of 90 foot minimum radius with 66 foot road or street right-of-way or 100 foot minimum radius with 86 foot road or street right-of-way is provided at the terminus of the street to permit turning in a continuous circuit. Refer to the cul-de-sac plan on page 18. The minimum length of any street ending in a cul-de-sac shall be 650 feet, measured from the centerline of the intersecting street to the center of the cul-de-sac. No more than five driveways will be permitted to enter the cul-de-sac beyond the point of curvature at the beginning of the cul-de-sac. All mail boxes for lots around the cul-de-sac shall be located at the beginning of the cul-de-sac, and these mailbox limitations shall be included in the plat restrictions.

#### E. STREET NAMES

Road and street dedications shown on plats shall be designated by name. Roads and streets which are extensions of, or are in line with existing roads and streets must be named to agree with those in existence. Other roads and streets may be given such names as the proprietor may chose, subject to approval of the Board and Antrim County Equalization Department. Names of existing roads within the county may not be used as names for new subdivision roads and streets.

The Board will furnish and erect street name signs and stop signs at all intersections within the subdivision and entrances thereto at the expense of the Proprietor. Such signs will be the same type signs used on the county road system. Reimbursement of this cost to the road commission shall be made prior to signing the final plat.

## **II. REQUIRED IMPROVEMENTS AND SPECIFICATIONS**

The owner of the platted lands, or his agent, shall be required to grade, drain and surface the roads and streets shown on the plat in accordance with the standards and specifications of the Board.

### **A. PLAN AND PROFILE**

Plan and profile drawings shall be prepared by the Proprietors' engineer in detail complete enough to be used as construction plans. The drawings shall show the proposed gradients of all roads and streets and the location of the drainage facilities and structures, as well as other pertinent information.

The maximum grade permitted shall be seven percent. The maximum grade on cul-de-sacs shall be one percent. Vertical curves shall be used at all changes in grade. Sight distance and horizontal and vertical alignment shall be based on a design speed of 30 miles per hour or more as approved by the Engineer, and shall be in accordance with current AASHTO standards for geometric design. A design speed of 25 miles per hour may be approved in special cases on dead end roads. Horizontal curve radii, vertical curve lengths and percent of grade shall all be shown on the plan and profile drawings.

It is desirable that all intersecting roads and streets meet at right angles, but in no case shall the intersection angle be less than 70 degrees. Clear vision easements across corner lots shall be provided with legs of 50 feet measured back from the beginning of a 30 foot corner radius.

A minimum of 50 feet of flat (maximum 0.5% sloped away from the main road or street) gradient measured from the shoulder line shall be provided at the approach of a secondary road or street to a main road or street.

Two copies of the plan and profile drawings shall be forwarded to the Engineer for approval. One copy will be returned to the Proprietor's engineer with approval or necessary revisions marked thereon. Approval must be obtained before construction begins.

### **B. CLEARING AND GRUBBING**

All trees, stumps, brush and roots thereof shall be entirely removed from within the grading limits of all roads and streets in the proposed plat and shall be disposed of outside the right-of-way.



### C. GRADING AND DRAINAGE

A roadway centered on the right-of-way shall be constructed conforming to the typical cross sections contained herein.

Roadbeds shall have a minimum of 32 feet between shoulder lines. Flatter slopes than the minimum required are recommended wherever possible to provide safer roadsides and to give a more pleasing appearance.

The presence of other than granular materials in the subgrade soil shall require a full width 15 inch granular subbase or other special treatment approved by the Engineer. All peat and muck shall be removed from beneath the roadbed.

The level of the finished subgrade shall be at least two and one-half (2 ½) feet above the high water table.

Drainage ditches shall be constructed on each side of the roadway in cut sections and in fill sections when required. Ditches shall be a minimum of two (2) feet in depth, and deeper where necessary to permit placing of future driveway culverts. As an alternative to conventional road ditching, full width bituminous paving with integral bermed edges may be allowed. The design of this alternative shall be as shown on the typical cross-section (alternate) on page 16.

Driveways located in cut sections shall be graded during construction to an elevation at the right-of-way line which is not more than one and one-half (1 ½) feet above the elevation of the finished shoulder to facilitate placing of utilities.

### D. DRAINAGE STRUCTURES AND EROSION CONTROL

Drainage structures shall be installed as indicated on the Drainage Plan. Minimum diameter of culverts across roads shall be 15 inches. The bottom ends of culverts shall extend to the bottom of the slope. Corrugated metal pipe meeting MDOT specifications shall be used as cross road culverts. Corrugated polyethylene pipe meeting MDOT specifications of the required size and strength may be used for driveway culverts only. Where this option is used, a minimum of 12 inches of sand fill, free of stones, shall be provided as cover. Guard posts shall be placed beside the ends of cross culverts to mark their location.

In the event that a bridge is required in the subdivision, it shall be designed to current AASHTO Standard Specifications for Highway Bridges, HS20-44 loading.

Culverts at driveway entrances shall be provided by the proprietor or lot owners. Minimum diameter of driveway culverts shall be 12 inches. Driveway permits will be required for driveways installed after roads have been taken over by the Board.

All areas where raw soil has been exposed due to grading shall be treated to control erosion. Generally such treatment shall consist of an application of a minimum of two (2) inches of

topsoil, seeding (60 lbs. per acre of MDOT mixture - roadsides), fertilizer (240 lbs. per acre of chemical nutrients) and mulching. Slopes steeper than 1 on 3 and ditches subject to erosive drainage velocities shall require special treatment such as sodding, rip-rap, check dams, sediment basins or paving. Where rip-rap is used, it shall be backed by a suitable porous construction fabric.

A minimum total depth of six (6) inches, (compacted), of surfacing aggregate, MDOT 22A, shall be placed as shown on the standard cross-sections.

Bituminous Aggregate Surface Course, MDOT 1100T, 20AA, or an alternate mix design approved by the Engineer, shall be placed on all public roads and streets at the rate of 220 pounds per square yard. Bituminous aggregate surface shall be 22 feet in width except as may be shown otherwise in the standard cross-sections. Where grades exceed five (5) percent, or where deemed necessary by the Engineer, an alternate of full width bituminous paving with edge berm will be required, as shown on the standard cross sections. The limits of the widened surface shall be determined by the Engineer. Bituminous surfacing shall be placed within 18 months after the aggregate surface is completed, and only when approved by the Engineer.

#### F. INTERSECTIONS

Where access to the proposed subdivision is from an existing paved road, the intersection to that road shall be paved and curbed in accordance with the standard on page 17.

#### G. MAINTENANCE

It shall be the proprietor's responsibility to maintain all public roads and streets in good condition until they are taken over by the Board. Eroded areas shall be promptly repaired and maintained by the Proprietor until erosion and sedimentation are completely controlled.

#### H. INSPECTION

Inspections of subdivision roads and streets will be made by the Engineer as follows:

- 1 . Before approval of the Preliminary Plat.
2. After grading is completed, but before aggregate base course is placed.
3. After aggregate base course is complete.
4. Immediately before bituminous paving.
5. After all work is complete.
6. Before approval of the final plat.

An additional fee will be charged to cover the cost of each additional inspection.

It shall be the Proprietor's responsibility to provide engineering inspection during construction. There will be no inspection of construction work by the Engineer during the winter months.

## I. CERTIFICATION

Upon completion of construction the Proprietor's engineer shall certify that all work has been done in accordance with the approved plans and specifications. A sample engineers certificate is shown on page 10. If field changes in the plans have been approved, revised construction plans shall also be submitted to the Engineer. The Engineer may require that the Proprietor's Engineer submit copies of all inspection and testing records showing compliance with the approved plans and specifications.

## III. ADMINISTRATIVE PROCEDURE

### A. CONSIDERATION BY THE BOARD

In accordance with the provisions of Sections 164 and 165 of the Subdivision Control Act, the Proprietor shall submit to the Board all copies of the plat prepared in conformity with the requirements of the Act. Delivery of the plat to the Board shall be made at least one week before their next regular meeting. The Board shall consider and either approve or reject the plat within 15 days after it is received.

If the Board approves the plat, it shall have its certificate of approval transcribed thereon and shall return the approved plat to the Proprietor.

If the Board rejects the plat for any reason, it shall give written notice of such rejection and its reason therefore to the Proprietor, and shall send a copy of the letter to the clerk of the township in which the plat is located.

### B. GUARANTEE OF IMPROVEMENTS

If the proprietor has not completed the construction of the roads and streets in the proposed plat in accordance with these specifications prior to submitting it to the Board for final approval, he will be required to furnish a deposit in the form of cash, irrevocable bank letter of credit or a certified check acceptable to the Board, guaranteeing the completion of all improvements within a period of 24 months from the date of approval of the plat by the Board.

If an irrevocable bank letter of credit is submitted, it shall be accompanied by a certified copy of the bank board resolution authorizing the irrevocable letter of credit. The resolution shall also specifically name the official(s) authorized to sign said irrevocable letter of credit.

If a certified check or cash is submitted, the entire amount shall be deposited by the Board in a separate account and any interest accrued in the account shall be refunded to the proprietor along with the original amount, unless it becomes necessary for the Board to foreclose on the account to perform the required construction, in which case all accrued interest shall also be made available to the Board to complete the unfinished work.

A letter signed by the proprietor shall be submitted prior to approval of the plat, stating that the

accompanying cash, certified check or irrevocable bank letter of credit is to guarantee the improvement of the roads and streets in the plat in accordance with Standards and Specifications of the Board. A sample of such letter is shown on page 12 of these standards.

### C. PRIVATE ROADS

In accordance with Section 261 of the Subdivision Control Act, no person shall sell any lot in a recorded plat if it abuts a street or road which has not been accepted as public unless the seller first informs the purchaser in writing on a separate instrument to be attached to the instrument conveying any interest in such lot or parcel of land of the fact that the street or road is private and is not maintained by the road commission.

The proprietor shall submit a letter to the Board stating that he will inform purchasers of lots abutting private roads that such roads are private and will not be maintained by the road commission. A sample letter is shown on page 11 of these standards.

Private roads shall be clearly signed as such and these signs shall be maintained by the Proprietor.

### D. UNPLATTED ROADS

When the proposed road is in an unplatted area, the proprietor(s) shall furnish the Board with both an executed easement and a legal centerline description of the entire road. These documents must be furnished, at no cost to the Board, before the road will be accepted into the public road system.

### E. FEES

In accordance with Section 248 of the Subdivision Control Act, the Board may adopt a schedule of fees to be charged Proprietors seeking approval of plats. After adoption, this schedule shall become a part of these Standards and Specifications.

## SAMPLE ENGINEER'S CERTIFICATE

\_\_\_\_\_, 20\_\_

Antrim County Road Commission  
PO Box 308  
Mancelona, MI 49659

Ref:           Plat of \_\_\_\_\_  
                Section\_\_\_\_, T\_\_N, R\_\_W  
                \_\_\_\_\_Township

Gentlemen:

I hereby certify that all construction work on the roads in the referenced plat has been completed in accordance with the approved plans and specifications of the Antrim County Road Commission.

\_\_\_\_\_  
Proprietor's Engineer

**SAMPLE LETTER TO ACCOMPANY ALL PLATS WITH  
PRIVATE ROADS**

\_\_\_\_\_, 20\_\_\_\_

Antrim County Road Commission  
PO Box 308  
Mancelona, MI 49659

Ref:           Plat of \_\_\_\_\_  
              Section\_\_\_\_, T\_\_\_\_N, R\_\_\_\_W  
              \_\_\_\_\_Township

Gentlemen:

This will assure you that I will inform all purchasers of lots abutting private roads in the referenced plat that such roads are private roads and that they will not be taken over or maintained by the Antrim County Road Commission.

I understand that the Road Commission will furnish and install stop signs and road name signs at my expense.

I will also erect signs marked PRIVATE ROAD at each entrance to such roads.

Yours truly,

\_\_\_\_\_  
Proprietor

**SAMPLE LETTER TO ACCOMPANY DEPOSIT TO GUARANTEE  
COMPLETION OF ROADS**

\_\_\_\_\_, 20\_\_\_\_

Antrim County Road Commission  
PO Box 308  
Mancelona, MI 49659

Ref: Plat of \_\_\_\_\_  
Section\_\_\_\_, T\_\_\_\_N, R\_\_\_\_W  
\_\_\_\_\_Township

Gentlemen:

The enclosed \_\_\_\_\_ in the amount of \_\_\_\_\_ is hereby submitted to guarantee the improvement of the roads in the Plat of \_\_\_\_\_ in accordance with the Road Commission Standards and Specifications.

I understand that I will be responsible for the maintenance of all public roads in said plat until they have been approved and taken over by the Road Commission. Maintenance of private roads will not become a responsibility of the Antrim County Road Commission Standards and Specifications.

I understand that I will be responsible for the maintenance of all public roads in said plat until they have been approved and taken over by the Road Commission. Maintenance of private roads will not become a responsibility of the Antrim County Road Commission.

I also understand that the Road Commission will furnish and install stop signs and road name signs at my expense.

Yours truly,

\_\_\_\_\_  
Proprietor

**SAMPLE IRREVOCABLE COMMERCIAL LETTER OF CREDIT**

\_\_\_\_\_, 20\_\_\_\_

Antrim County Road Commission  
PO Box 308  
Mancelona, M 49659

Gentlemen:

We hereby open our Irrevocable Letter of Credit in your favor for account of \_\_\_\_\_, for a sum not exceeding \_\_\_\_\_ Dollars.

We are advised that \_\_\_\_\_ is to install roads and drainage improvements in the Plat of \_\_\_\_\_ Section \_\_\_\_, T\_\_\_\_N,R\_\_\_\_W, \_\_\_\_\_ Township, in accordance with plans and specifications approved by you.

In the event \_\_\_\_\_ shall fail to install roads and drainage improvements you may draw a draft at sight on \_\_\_\_\_ Bank, \_\_\_\_\_ Michigan for amounts not exceeding in aggregate the aforesaid sum of \_\_\_\_\_ Dollars when accompanied by:

"Your signed Statement certifying that \_\_\_\_\_ failed to install roads and drainage improvements."

Upon receipt of your Resolution authorizing a release in the amount you will accept under this credit, we shall issue our formal Amendment reducing our liability to an amount equal to the original amount of this credit, less any amounts released by your Resolution and drawings hereunder.

All drafts drawn under this Credit must be marked "Drawn under Letter of Credit dated \_\_\_\_\_, 20\_\_\_\_." Any amendments to the terms of this Credit must be in writing over authorized signatures of this Bank.

This Credit is subject to the Uniform Customs and Practice for Documentary Credits (1974 Revision), International Chamber of Commerce, Publication 290.

We agree with you that all drafts drawn hereunder and in compliance with the terms of this

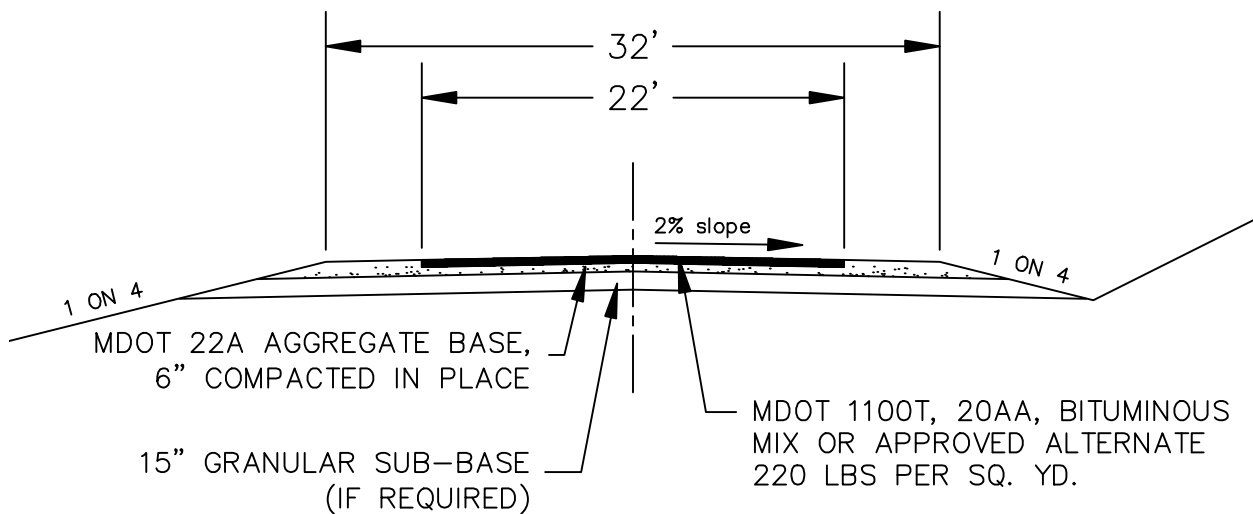


Credit will be duly honored on delivery of your statement as specified, if presented at this office on or before \_\_\_\_\_, 20\_\_\_\_\_.

Very truly yours,

\_\_\_\_\_  
Authorized Signature

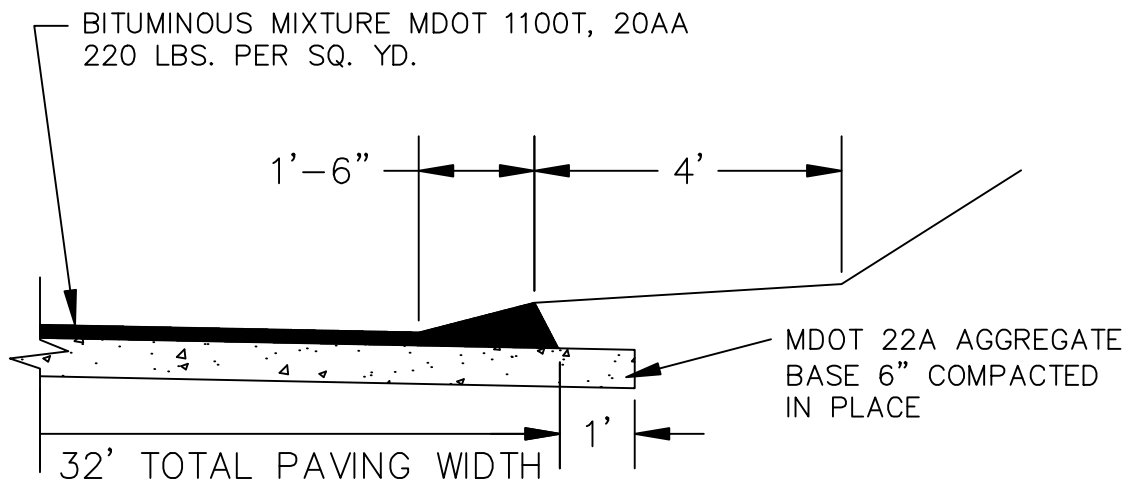
# TYPICAL CROSS SECTION



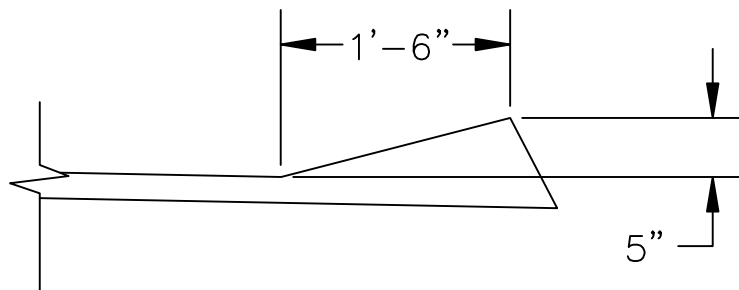
## NOTES:

1. Sand Grade to be 36 feet wide prior to placement of aggregate base.
2. Pavement and shoulders to be sloped 2% from centerline.
3. Ditches to be minimum of 2 feet deep or of sufficient depth to allow placing of driveway culverts, whichever is deeper.
4. Standard MDOT steel beam guardrail with approved terminals is required in fill sections where the embankment is greater than 8 feet in height and the fill slope is steeper than 1 on 3. An additional 2 feet of grade width is required on those roadsides where guardrail is required. In the interest of safety, the construction of flatter slopes is preferred over the use of guardrail and is required where practicable.

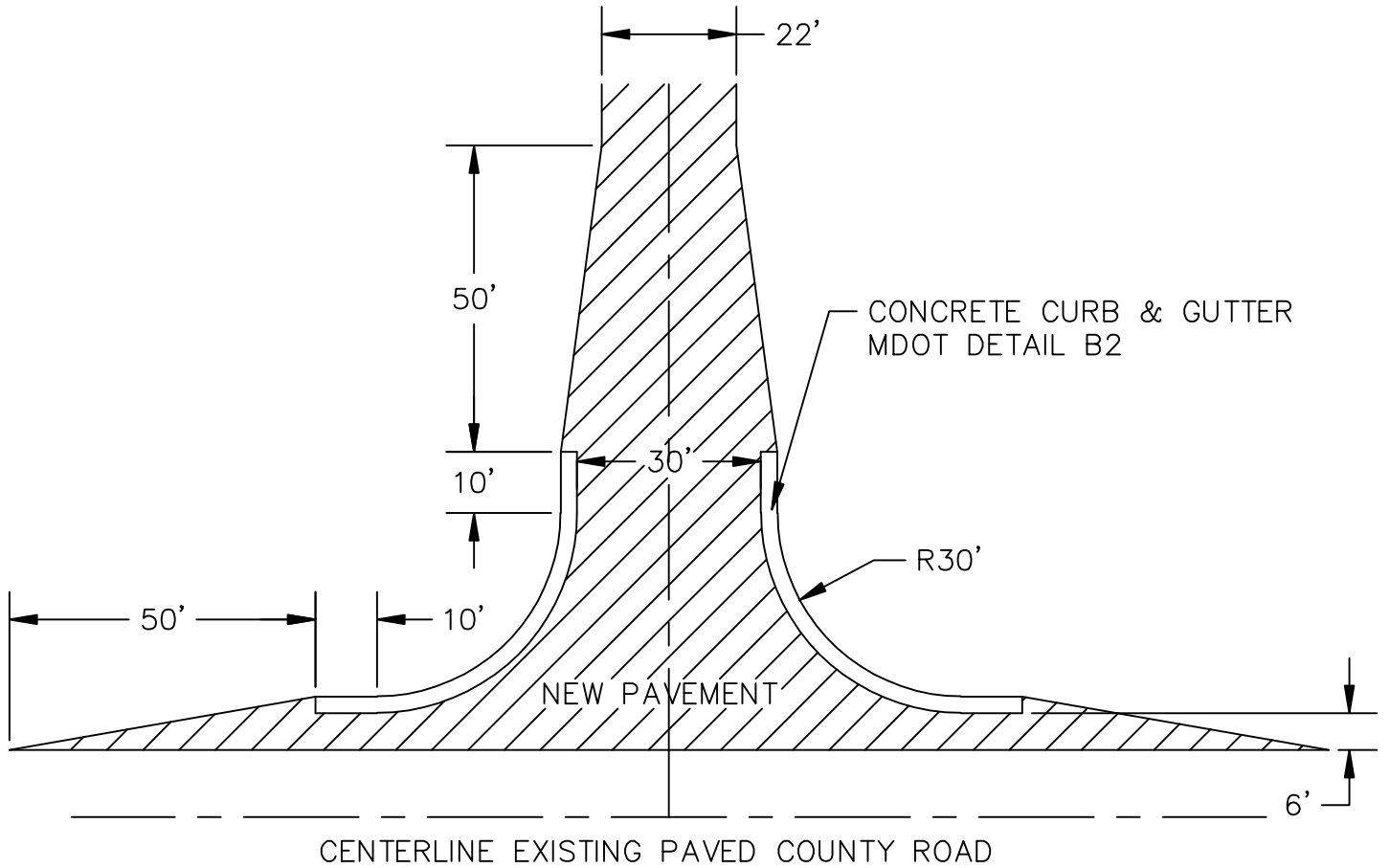
# TYPICAL CROSS SECTION ALTERNATE: FULL WIDTH PAVING WITH INTEGRAL BITUMINOUS BERMED EDGE



BERMED EDGE DETAIL



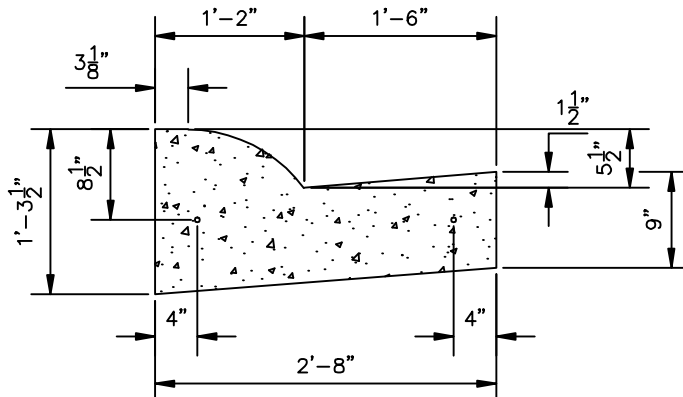
# APPROACH TO EXISTING PAVED COUNTY ROAD



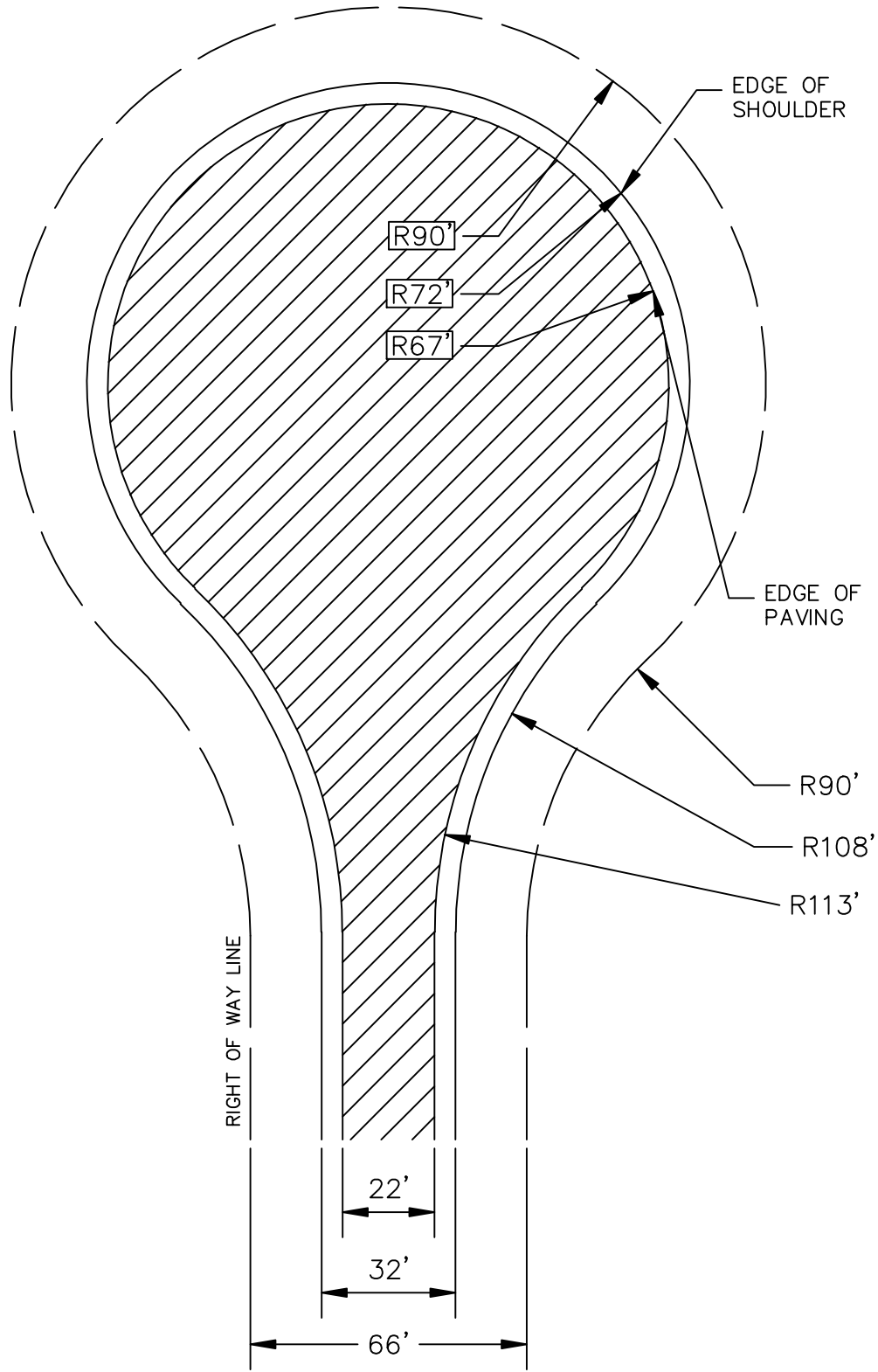
NOTE:

6" COMPACTED AGGREGATE BASE TO BE CONSTRUCTED TO 1' OUTSIDE NEAT LINES OF NEW WORK.

## CURB & GUTTER SECTION MDOT DETAIL B2



# CUL DE SAC PLAN



NOTE:

ALL DIMENSIONS SHOWN FOR 66' RIGHT OF WAY. 86' RIGHTS OF WAY REQUIRE ADDITIONAL 10' OF RIGHT OF WAY AT ROADSIDE.