IOWA DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
OFFICE OF RIGHT OF WAY
DESIGN SECTION

# RIGHT OF WAY DESIGN MANUAL

APRIL 2008

**A. INTRODUCTION ..... 1**

01. EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE ..... 1
02. PURPOSE OF RIGHT OF WAY DESIGN ..... 1
03. TYPES OF RIGHT OF WAY ACQUIRED IN THE STATE OF IOWA ..... 1
04. SYMBOL SYSTEM FOR RIGHT OF WAY PLANS ..... 2
05. RIGHT OF WAY DESIGN BY CONSULTANTS ..... 3

**B. RECEIVED PLAN SUBMITTAL (D5) ..... 5**

01. ACCEPTANCE OF D5 ..... 5
02. SCHEDULING OF RIGHT OF WAY DESIGN WORK ..... 5

**C. DETERMINE LAND OWNERSHIP ..... 6**

01. TITLE SEARCH, FORMS AND PROCEDURES ..... 6
02. TITLE SEARCH SOURCES AND COUNTY RECORDS ..... 6
03. ASSIGNMENT OF PARCEL NUMBERS ..... 7
04. REPORTS OF LIEN ORDERS ..... 7
05. EXISTING RIGHT OF WAY ..... 8
06. PLAN PREPARATION USING TITLE SEARCH INFORMATION ..... 8
07. RAILROAD RIGHT OF WAY ..... 8
08. ADVERTISING CONTROL (SIGNS) ..... 9
09. DRAINAGE DISTRICTS ..... 9
10. MITIGATION PARCELS ..... 9
11. QUITCLAIM AREAS ..... 9

**D. ESTABLISH PROPOSED RIGHT OF WAY ..... 10**

01. CROSS SECTION REVIEW ..... 10
02. ESTABLISH THE RIGHT OF WAY LINE ..... 10
03. TEMPORARY NEEDS ..... 14
04. BORROWS ..... 15
05. FENCING & AREA CALCULATIONS ..... 16
06. CITY OWNED LANDS ..... 17
07. ACCESS RULES AND REGULATIONS ..... 18
08. RIGHT OF WAY FIELD EXAMINATION ..... 20
09. EXCESS LAND ..... 21
10. PLAN PREPARATION ..... 21

**E. ESTABLISHING PARCEL FILES ..... 22**

01. PREPARATION OF PARCEL FILES ..... 22
02. PREPARATION OF SUMMARY OF PROPOSED ACQUISITION AND PLOT PLANS ..... 23

**F. INTERACTION WITH OTHER OFFICES ..... 25**

01. OFFICE OF DESIGN ..... 25
02. DISTRICT OFFICES ..... 25
03. FACILITIES MANAGEMENT ..... 26
04. DEPARTMENT OF NATURAL RESOURCES (DNR) ..... 26
05. OFFICE OF LOCAL SYSTEMS ..... 26

**G. TRANSMITTAL OF THE PROJECT ..... 26**

**H. REVISIONS AND CORRECTIONS ..... 27**

**I. DEVELOPMENT ESTIMATES ..... 27**

# A. INTRODUCTION

The intent of this manual is to instruct those who are preparing plans and parcel files for the acquisition of highway right of way. The right of way is intended to encompass the construction and maintenance needs of the highway. Right of way lines should be as aesthetically functional as possible with due regard to maintenance problems by both the landowner and the State of Iowa. This manual does not cover all situations. Direction by the supervisor may be required.

## 01. EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE

In an effort to discover minority and female abstractors, the Right of Way Design section performs a survey of abstracting firms each year.

All work accomplished in the Design Section is done without regard to race, color or national origin in compliance with TITLE VI OF THE CIVIL RIGHTS ACT OF 1964.

## 02. PURPOSE OF RIGHT OF WAY DESIGN

The Right of Way Design Section operates under the supervision of the Right of Way Director and is located in the Central Office in Ames. The section is supervised by a Right of Way Design Supervisor.

The Right of Way Design Section's basic purpose is to produce and maintain a set of right of way plans for a project that are accurate, legible, clear and concise so as to be understood by landowners and Department personnel alike. The section develops and maintains plats, plot plans and summary sheets, and supporting data necessary to affect a successful appraisal and acquisition process and to ensure project cost participation from the Federal Highway Administration.

The Right of Way Design Section provides title search data for the other sections of the Office of Right of Way and to other offices of the Engineering Bureau. It establishes a right of way line which encompasses the construction need line. It ensures the Engineering Bureau that the Department of Transportation right of way policy, access management policy and the right of way requirements of federal and state laws and regulations are met.

Personnel in the section work through the section supervisor in conjunction with other sections of the Office of Right of Way and with other offices of the Engineering Bureau. They review the Office of Design construction needs and ensure that the area of the proposed right of way meets those needs. The proposed right of way should encompass the areas necessary to produce the fills, cuts, mitigation sites or borrow material required for the construction and maintenance of the project. The Office of Right of Way personnel conduct office reviews and participate in field inspections necessary to ensure application of right of way design principles and concepts.

## 03. TYPES OF RIGHT OF WAY ACQUIRED IN THE STATE OF IOWA

The uses for which right of way is acquired in the State of Iowa fall into five main categories. These are classified as follows:

a. Permanent Right of Way - the minimum land that will be required for the completed highway and its maintenance as long as the road shall exist. Permanent right of way is normally acquired in fee simple on highways in urban areas and where access rights are acquired in both urban and rural areas. Acquisition by fee simple means that all of the property owners' rights are acquired and terminated. On rural projects where access rights are not acquired, the right of way is normally

acquired by permanent easement. The decision to acquire right of way by fee simple or permanent easement is made after discussing the project with the Right of Way Design Supervisor.

b. Underlying Fee – Underlying fee is a term used for that area of existing right of way held by permanent easement that will be converted to fee simple title with the project. The area calculation is indicated on the summary sheet but is not depicted on the plans or plot plans. It is assumed that this area is encompassed by the proposed fee acquisition line. In rare cases where the underlying fee is difficult to distinguish, it may be indicated on the plot plan only. This is not to be common practice.

c. Special Purpose Permanent Easement - land that is necessary for the construction and maintenance of auxiliary features such as dikes, storm sewers, sanitary sewers, stream control devices, etc., is acquired by permanent easement to construct and maintain. This permanent easement gives the State the right to use the land for a specific purpose. The owner retains underlying title to the land and, if and when the land is no longer required for the specific purpose for which it was acquired, it may be abandoned.

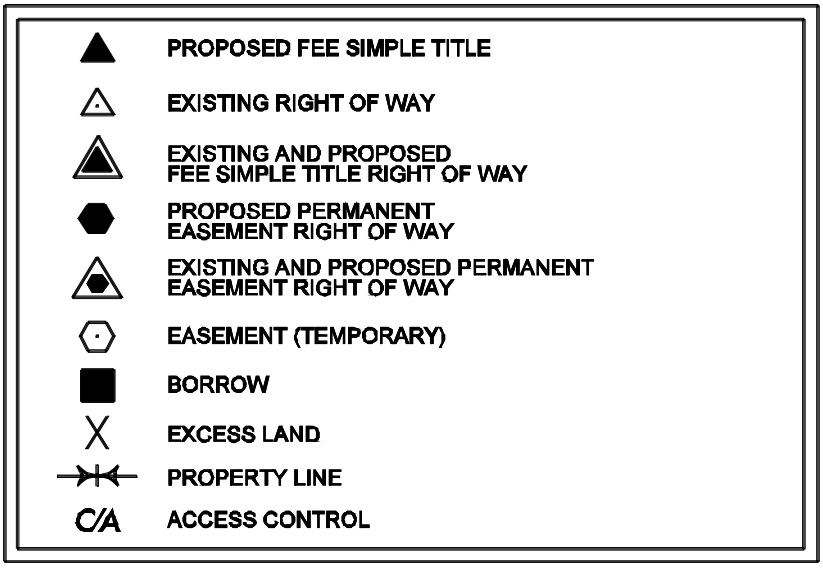
d. Temporary Easement - land which is required for use of a temporary nature during the construction of a project. This is normally a construction right only and after the necessary construction is completed, the state retains no right of any nature to the property. Temporary easements are used for, among other things, construction of channel changes, haul roads, borrow areas, detours, building removal, relocating tile, construction of entrances serving one property owner, and in very isolated cases, the construction of slopes. The use for construction of slopes is normally limited to urban projects where normal procedure dictates that fee title is acquired 2 feet beyond the walk and any necessary shaping beyond that point is done by temporary easement.

e. Flowage and Ponding Easements – Ponding rights are normally acquired when the state reduces the size of a structure under the road and by doing so reduces the flowage rate causing ponding for a limited time (flowage easement) or when the inlet of a structure is raised thereby causing ponding for an indefinite period of time (ponding easement). In each case, these are special purpose permanent easements.

f. Access Control – access control is established in accordance with Chapter 112, Primary Road Access Control of the Administrative Rules and Regulations as set forth by the Department of Transportation.

## 04. SYMBOL SYSTEM FOR RIGHT OF WAY PLANS

The types of right of way on the right of way plans are denoted by different symbols at each break point as follows:




A flagging system to denote station plus and centerline distances will be used at each right of way breakpoint. It should be noted that they are meant to denote distances and pluses normal or concentric to centerline. Any exception to this rule will be noted on the plan sheets.

The limits of a proposed excess land purchase should be denoted. The proposed permanent right of way line through the excess land shall be dashed and labeled as future right of way line. The future right of way line is shown on plans at the time when submitted to the Appraisal section. The future right of way line is not shown on the hearing display.

Access control status will be noted on each plan sheet (R/W & C/A) on proposed right of way line on each side of the sheet. In those cases where we have previously acquired access rights and the right of way line and the access control line are not coincidental, special notations must be made which explain the situation. Access control limits for side roads shall be noted and plotted on the side road plan sheets.

A notation should be made on temporary easement areas to denote their purpose.

## 05. RIGHT OF WAY DESIGN BY CONSULTANTS

It shall be the responsibility of the consulting engineer to perform the following functions in order to complete the right of way design phase of the project contract per the Right of Way Manual. Prior to beginning the right of way design for the project, the consulting engineer should contact the consultant coordinator.

a. Determine and show a permanent right of way either by fee simple or permanent easement and/or access control line on the right of way plans for the project. Review with the Consultant Coordinator to determine type of R/W to be acquired.

b. Determine and show all temporary easements needed for the construction and completion of the project.

c. Establish parcel numbers as required for a project. Perform the initial and preliminary title search needed to determine the ownership of each parcel of property along the project limits. Provide a copy of reports of lien to Consultant Coordinator and District Land Surveyor. Recertification of

title and report of liens will only be done by the consultant if requested by Right of Way Consultant Coordinator. Ownerships should be verified from the county Auditor's office prior to the D5 submittal. Any changes in ownerships should be reflected in the submittal.

d. Establish and show all existing roadway easements and property lines if not provided by the District Land Surveyor.

e. Supply the Office of Right of Way with an ownership map on plan "A" sheets showing the property ownership along the proposed project. Also show all borrow locations. The ownership maps should be supplied as soon as they become available.

f. A preliminary strip map and six plot plan and summary sheets shall be provided as soon as approximately two miles of proposed right of way has been established. This submittal is to be in electronic format. Based upon review and comment by the Consultant Coordinator, the remainder of the project will be completed and submitted for review. The strip map should include: existing ROW, proposed ROW and temporary easements (with station breaks), property ownership limits, parcel numbers, existing physical features, drainage structures and the existing and proposed centerline.

g. Preliminary plans for the right of way field exam shall be submitted by the D5 event as per the Iowa DOT Production schedule. The Office of Right of Way will thoroughly review the plans for errors, omissions, and adherence to the Right of Way Design policy and instructions. The right of way field exam will be scheduled by the Office of Right of Way when it is determined the consultant will be able to supply final field exam plans. The consultant will provide up to two representatives for the field exam. The Right of Way Field Exam Coordinator will make notations to the plans as to any recommendations, suggestions, errors or omissions during the field exam. The original set of plans will be forwarded to the consultant with a copy retained by the Office of Right of Way prior to the R1 event date. Upon completion of the corrections, the consultant will submit the final right of way plans to the Office of Right of Way. The plans will then be rechecked for a final review. In the event additional errors and omissions become evident, a memorandum will be sent to the consultant addressing any necessary corrections.

h. Compile a complete parcel file for each property involved with the project.

i. An electronic file and paper copy of all PLOT PLAN and SUMMARY of ACQUISITION sheets and parcel checklist for a project should be submitted two weeks prior to the public hearing date.

j. All electronic files needed to produce Right of Way plans, Right of Way form PLOT PLAN and SUMMARY of PROPOSED ACQUISITION will be provided by the date of the public hearing in a MicroStation file format. The "H" sheets (Right of Way Sheets) will comply with the guide "Creating ROW H Sheet Using Existing Plan Sheets." The Plot Plans and summaries will comply with "A Guide to the Preparation of Plot Plans and Summary Sheets." This will also include all Geopak files. A CD with all files needed to produce the public hearing display along with plans and cross sections will also be provided by the date of the public hearing.

k. Provide an excess land plat for all excess land on the project.

All of the above functions shall comply with the detailed right of way instructions, procedures and regulations that are contained herein.

## B. RECEIVED PLAN SUBMITTAL (D5)

### 01. ACCEPTANCE OF D5

The Office of Right of Way receives plan submittals from various sources including The Office of Design, Office of Location and Environment, Districts and Cities.

The Design Section is responsible for acceptance of all projects submitted to the Office of Right of Way. All projects must meet criteria established in the "D5 Checklist" guide used by the Office of Design. If discrepancies are found, the submitting source is contacted in an attempt to rectify the situation. After acceptance of the project, an assignment letter is sent to the squad in the Design Section that will be working on the project.

Projects requiring right of way are entered into both the Project Scheduling system (PSS) and Parcel Tracking system. The Design Section is responsible for entering all required parcels into the parcel tracking system along with information specific to each parcel including required acreage, ownership, etc. This information is entered very early in the right of way process. When the project is transmitted from the Design Section to the Appraisal Section, the location of each parcel is changed in Parcel Tracking so that the location of each parcel can be easily determined at any time during the right of way process.

A Project House File is kept for each project. This file consists of all information pertaining to the project and is a complete right of way design history of the project. The Project File is kept and maintained by the design squad responsible for the project.

At the time of D5 submittal, the right of way schedule is reviewed to verify that it is still attainable. If the schedule appears to be unrealistic, the Design Section Supervisor will be notified so that a new schedule can be proposed. Also at this time the development cost estimate is reviewed and adjusted, if necessary, after consultation with the supervisor.

### 02. SCHEDULING OF RIGHT OF WAY DESIGN WORK

Work assignments are made by the Right of Way Plans and Estimating Coordinator. With each assignment, a time schedule is proposed in general agreement with the Planning and Programming Division schedule relating to the Department of Transportation's five-year construction program. Compliance with this proposed work schedule is continually reviewed by the Design Supervisor through the project design technicians and unusual or major right of way design delays are made known to the Office of Right of Way Director.

Right of way design performed by consultants, as a part of an overall design contract authorized by the Office of Design, is monitored by the Right of Way Design Section in cooperation with the Office of Design. The field exams and liaison with the design consultant are coordinated throughout the Office of Design Consultant Coordinating Engineer. The Right of Way Design Consultant Coordinator is responsible for administering the right of way design work performed by the consultant. The work product of the consultant is checked and any corrections or revisions are transmitted to the design consultant for proper action.

# C. DETERMINE LAND OWNERSHIP

## 01. TITLE SEARCH, FORMS AND PROCEDURES

After the alignment(s) of the project has been established, the first step in the right of way design process is that of title determination. This should be done as early in the process as possible. Title search consists of a search through county records to determine the correct title ownership and the description of all properties which will be affected by the proposed highway. This can be accomplished by either requesting copies of the information over the phone, accessing information through the county website, or by a visit to the courthouse. This section also maintains county plat books to aid in ownership determination and location. A copy of all information gathered will be provided to the Land Surveyor responsible for the project and a report of liens will be ordered from an Abstractor for each parcel.

On major projects, an ownership map on plan "A" sheets is to be prepared showing property ownership along the proposed project. A typical land section should be included on this plan along with the proposed alignment centerline, existing streets, borrow locations and parcel numbers with property ownership names. The ownership map should be at a scale that allows the entire ownership of most of the properties to be shown. For smaller projects such as bridge projects, ownership sheets would provide little added benefit and are therefore not necessary.

## 02. TITLE SEARCH SOURCES AND COUNTY RECORDS

a. County Auditor - The Auditor' office is responsible for maintaining the current ownership throughout the county and is a common contact of this section. Often this office is the source for book and page numbers for all recorded deeds that will be required when requesting copies from the Recorders office. Also this office is a good starting point to determine the possible existence and location of drainage districts.

b. County Recorder - The actual deeds for the various types of land transactions are available in the Recorder's Office. There are deeds of several types: warranty deeds, easements, contracts of sale, leases, mortgages, etc. The original plats and descriptions of surveys for subdivisions of land are also located within this office.

c. Clerk of Court - Any properties that are settlements of estates have been noted as being transferred by Change of Title (COT). This information is filed in the office of the Clerk of Court. Information to be acquired in this office includes a copy of the will (if available), results of the probate proceedings and final disposition of the property.

d. County Assessor - The Assessor's office is responsible for tax assessment and as such taxable acreage is shown for each tract. This acreage must be recorded on the form by forty-acre tracts or fractions thereof. The taxable acreage is especially important to the right of way process, as it is used for calculating area remaining after the right of way acquisition.

e. Right of Way File Room – A search of previously acquired contracts/agreements along the proposed project is to be performed. Each contract or agreement is to be examined for reservations or other pertinent information (such as owner participation in the cost of a stock pass). One copy of the contract/agreement is to be placed in the original file and one copy in the field file. If a reservation or participation is detected, the supervisor is to be notified so that necessary action can be taken.

## 03. ASSIGNMENT OF PARCEL NUMBERS

Each ownership from which property or property rights are to be acquired for the project shall have a numerical parcel number assigned to it. These numbers should be in approximate sequence from beginning of the project to the end of the project.

Once parcel numbers have been assigned, they shall not be changed. If two parcels are combined, then one parcel number can be deleted. However, the deleted parcel number shall not be used on another parcel. Do not try to renumber parcels due to design changes. It may be necessary to add additional parcels after the original parcel numbers have been established. The new parcel number should be numbered the same as other parcels nearby with a letter added to the parcel number (i.e., 6A, 6B, 6C).

Any parcel involving an operating railroad's real estate interests will be numbered in accordance with the project parcels and the letter "R" added to the parcel number (i.e., 346R). This applies to operating railroads only. On railroad right of way that has been abandoned, the "R" designation will be eliminated and the land will be treated in the same manner as any other privately owned property.

Any parcel involving real estate interests of a utility company will have the letter "U" added to the parcel number (i.e., 347U).

Mitigation parcels are to have the letter “M” added to the parcel number (i.e., 29M).

Drainage district parcels are to be denoted with the letter “D” (i.e., 15D).

## 04. REPORTS OF LIEN ORDERS

As soon as ownership through title information is determined, a request for reports of lien is to be prepared and mailed to the abstractor. This should be done approximately 18 months prior to the D5 event.

A report of liens should be ordered on all parcels that require the acquisition of a permanent right such as fee simple title, permanent easement, access control, ponding easements, flowage easements and also for parcels that have borrow areas, haul roads, detours and temporary easement parcels that involve considerable amounts of damage. Parcels that have temporary easement only with small amounts of damage do not require a report of liens but will require a copy of the deed for the area.
When ordering reports of lien from the abstractor you must provide as accurate a description as possible of the total ownership of the subject property. This will help the abstractor to provide as complete a report as possible on the entire contiguous ownership. On large orders, the abstractor will be contacted prior to submittal of the order claims in an effort to establish a workable timeframe.

The abstractor shall furnish one copy of the report consisting of **all** the attachments. Upon receipt of the report, one copy will be forwarded immediately to the District Land Surveyor and a copy will be placed in the Agent’s field file. The original report is to be included in the White File that will be transmitted to the Central Files for internal use.

When ordering information on railroads we will request a copy of the original deed so as to determine the type of ownership. The following statement will be included on the Order Claim: **Please provide this office with a copy of the deed by which the original railroad acquired title to the real estate.**

When a railroad is encountered, the Fiscal and Title section will be consulted in order to verify the official name of the railroad.

As development continues and the D5 event approaches, the supervisor should be consulted with regard to recertification of the reports of lien.

## 05. EXISTING RIGHT OF WAY

Existing right of way is to be provided via C.A.D.D. file from the District Land Surveyor. In the case of a consultant design the existing right of way may be the responsibility of the consultant. This information is to be made available in completed form on or prior to the T1 date.

## 06. PLAN PREPARATION USING TITLE SEARCH INFORMATION

All information provided by this section for plans is placed in the ROW C.A.D.D. file under the directory for a specific project. The existing right of way, section lines, and property lines abutting the highway will be referenced into this ROW file from the District Office file. The names of all title holders and contract purchasers and the proposed right of way will be placed in this file which is referenced to the sheet files. No live information is placed in the sheet files by this section.

All text (names, station flags, notes etc.) should be placed at the same angle as the corresponding plan sheet and be the specified height and weight. Information that should be placed in the ROW file by this section is as follows: property lines (in conjunction with District information), names of property owners, proposed right of way including temporary easements, station flags with pertinent notes, subdivisions and lot lines, and major easements (i.e., gas lines, ingress/egress easements). This information placed in the file should be located in such a manner as to avoid interference with other text that will be shown on the plan sheet.

## 07. RAILROAD RIGHT OF WAY

Before any decision is made to acquire either an operating or non-operating railroad right of way, the following guidelines should be followed as to how to treat the title search:

a. ***If the railroad is an active operating railroad and there is no reason to expect it to be abandoned in the near future*** – then no Report of Liens will be necessary. All that will be required will be a copy of the conveyance document where the original railroad acquired the land. This document can be acquired from the county courthouse.
b. ***If the railroad is not an active operating railroad and there is no reason to believe that it will become active in the near future*** – then a Report of Liens will be required with a request that the original conveyance document of the original railroad be included with the report. Note that some railroads are rail banked and if a need for a railroad occurs again, the railroad company has the right to reestablish the railroad.

The title search is to determine what title the railroad company holds to the real estate. The search may involve ordering a report of liens and asking for a copy of the conveyance that first transferred the real estate to a railroad (*see* Section C04 Reports of Lien Orders). The conveyance must be reviewed to determine whether the railroad has fee title or if they only have an easement right to the real estate. If, after reviewing the conveyance, it is not clear what interest rights the railroad holds, it should be brought to the attention of the design supervisor. The design supervisor or the supervisor's designee will confer with a representative of the Fiscal and Title Section to resolve the title issue. If it is

determined that the railroad holds fee title to the right of way, a parcel is established for the acquisition of the necessary real estate from the railroad. If it is an operating railroad, the parcel file is submitted to the Office of Rail Transportation. If the railroad only holds an easement to the right of way and the railroad is abandoned, the land would then revert to the adjacent landowners. The reversion would be half of the corridor. If any of the abandoned railroad right of way is to be acquired, it will be acquired from the adjacent owners. This will normally be accomplished by acquiring underlying fee from each of the owners at the time of the project. An excellent guide for determining ownership of abandoned railroad right of way is included in this manual as Appendix C.

## 08. ADVERTISING CONTROL (SIGNS)

Advertising Management (Office of Traffic & Safety) will inform us by letter if it is necessary to acquire a sign or signs. Upon notification, the Design Section will set up a parcel file and transmit to the Appraisal Section the appropriate sign parcels. The designer shall make every attempt to avoid the acquisition of significant and expensive signs when the new right of way is laid out. This may include asking the Project Engineer to modify the highway design to avoid the sign.

Parcel numbers in the 1000 series are reserved for advertising signs. Add 1000 to the parcel number for the real estate tract that the sign is on. If there is more than one sign on a particular tract, then simply add 1000 for each sign (i.e., 1034, 2034, 3034).

## 09. DRAINAGE DISTRICTS

Affected drainage districts will need to be addressed. Information provided in the summary sheet (no Plot Plan is needed) is: name of drainage district, station location of the structure – both existing and proposed, what is to be done with the existing and/or proposed structure, who is the controlling authority for the drainage district. When a drainage district has an existing easement that will be altered by the D.O.T., the easement will be adjusted and/or replaced at the previous width. See instructions in Appendix B.

## 10. MITIGATION PARCELS

These parcels are treated virtually the same as all other parcels on the project; however, the determination of how to acquire the property is provided by the Office of Location and Environment (OLE). The OLE will provide this and other information including a Management Plan (sometimes referred to as a “Long Term Management Plan”) and any contact notes. A copy of the information is to be placed in both the Original File and Field File. A separate plat is required for all land used for mitigation. The original plat (acreages and “owner acquired from” filled out in pencil) is to be sent to the Property Management Section with copies to each file, Plans and Estimating Coordinator and Wetlands Section of the OLE. This section will verify with OLE as to whether or not access will be required.

## 11. QUITCLAIM AREAS

A Quitclaim deed according to “The Dictionary of Real Estate Appraisal” is: *A form of conveyance in which any interest the grantor possesses in the property described in the deed is conveyed to the grantee without warranty of title.* Essentially the grantor transfers whatever interest they possess to the grantee and this may be fee simple title or nothing at all.

Quitclaim Deeds are sought when ownership is undeterminable, in dispute or when an area in use by one property owner is within the legally described boundaries of another property. Proposed Quitclaim deeds generally originate from one of two sources – the Design Section or the Surveyor.

When a Quitclaim is necessary the area should be outlined with a dashed line, noted on the plans and hatched on the plot plan. There is also a line on the summary sheet for the area that will need to be filled in.

# D. ESTABLISH PROPOSED RIGHT OF WAY

## 01. CROSS SECTION REVIEW

Cross sections are provided electronically from the Office of Design in sheeted format. Also provided in the microstation file is a "construction need line" that should reflect and match the cross sections. When reviewing the construction needs, all cross sections are to be reviewed. There may be needs that should be covered by temporary easement. The construction need line is an aid in laying out the proposed right of way line, but the cross sections establish the official need.

## 02. ESTABLISH THE RIGHT OF WAY LINE

The location of the right of way line is dictated, to a large degree, by the need line. The right of way line must be sufficient enough to allow the construction and maintenance of the highway. The following are rules and guidelines that are used to establish the right of way line:

a. Rural - A standard distance of 25 feet from the construction need line is used, in most cases, to guide the establishment of the mainline right of way in rural areas. This allows the property owner to place fence away from the backslope and provides room for utilities, plantings, maintenance, etc. Exceptions to the use of the 25 foot buffer would be small projects, such as bridge projects, and other minor projects. In areas of high damage, the additive distance shall be adjusted to allow a minimal amount of area to construct and maintain the roadway.

b. Urban - The urban layout is established differently than the rural layout. Inside corporate limits, the roadway right of way is acquired by fee simple title in the name of the state and, on side roads, in the name of the city. On small projects (1 or 2 parcels) where the existing right of way is by permanent easement, the proposed acquisition may also be by permanent easement. Generally, proposed right of way in urban areas will be located 12 feet behind the back edge of the highway curb. This places the right of way 2 feet behind the sidewalk in most cases; however, existing right of way circumstances will need to be considered. In urban areas with curb and gutter and open ditch, use fee simple title 12 feet behind the back edge of the curb and permanent easement beyond the 12 feet for the ditch or fill.

   The shaping of slopes beyond the permanent right of way line can normally be accomplished with a temporary easement. Fill areas which run consistently over 3 feet in height or cut areas that are deeper than 3 feet for 50 feet in length should be acquired by permanent easement behind the fee acquisition.

   Where retaining walls are to be constructed in order to minimize deep slope cuts, the permanent right of way lines shall be 2 feet in back of the retaining wall, except in cases where the retaining wall is quite high, in these areas judgment should be used to provide adequate right of way. Additional excavation and sloping to construct the wall and "finish" the slopes may be accomplished by a temporary easement.

c. Right of Way Line – The right of way line should be placed parallel or concentric to the centerline where it is reasonable to do so. Excessive breaks are to be avoided. After laying out a portion of

the project, the Design Supervisor should be consulted for review and comment on the layout. In all cases where homes are being impacted, or areas of high damage, the Design Section Supervisor should be consulted.

Items such as parallel ditches, retaining walls or tile lines that are not on existing right of way and will need to be reconstructed with the project, and remain the property of others, should remain outside of the proposed right of way. A temporary easement should be used for construction of these items.

Breakpoints must be placed at the intersection of all property lines. Right angle jogs are acceptable in areas of high damage, such as at farm sites, in order to minimize damages. On curves of 6 degrees or more, the right of way line should be chorded to simplify fencing. When a concentric line is used in a curve, the right of way line should be labeled "CONCENTRIC". When a straight line is used in a curve with identical offset distances within the curve, it should be labeled "STR LINE", this will eliminate confusion in flat curves. Breakpoints are not to be placed inside of a spiral unless it is unavoidable (such as at a property line). Straight lines should be used through spirals, label "STR LINE", do not use concentric lines in spirals. It is not necessary to place breakpoints on spiral or curve points (i.e.: TS) but may be desirable depending upon the situation.

At the completion of the layout, the Design Section Supervisor is to be notified so that a review can be performed prior to submittal of the R1 event.

d. Agreements - In order to acquire right of way in the name of a city, county or other public entity, a "28E" agreement (intergovernmental agreement) is required. If there is not a signed 28E agreement, the right of way will be acquired in the name of the state. The right of way may be transferred to the city or county after the agreement is completed at a later date. When acquiring right of way for other non-public entities, a general agreement will be necessary.

e. Drainage Structures - All drainage structures shall be constructed within permanent right of way. In most cases, a minimum of 20 feet of right of way will be acquired from the end of all large structures (larger than 48" diameter). Shaping and/or rip rap placement beyond this is usually covered with temporary easement. The "situation plan" should be checked for shaping lines that are not shown on the cross sections.

f. Bridges - When establishing the right of way for a bridge, a minimum of 20 feet from the outboard projection of each side of the bridge is required. It may be necessary to acquire temporary easement outside of the 20 foot permanent acquisition area.

g. Stability Berms - In areas where there are stability berms with a slope of 12:1 or flatter, we shall acquire the berm area by permanent easement to construct and maintain the stability berm. Where the berm is steeper than 12:1, the area required will be considered as roadway and be acquired in the same manner as the roadway.

h. Slopes – Backslopes 6:1 or flatter can be covered with temporary easement since they are considered farmable. Backslopes steeper than 6:1 are to be covered by permanent acquisition.

In the case where a property owner requests that the backslope at a building site be made flatter in order to allow for maintenance by the owner, the backslope may be flattened. As a general

guideline the slope should be adjusted to between 3:1 and 6:1. Care must be taken to assure that enhancement of private property does not take place. The proposed permanent right of way line will remain at the original location and a temporary easement added to encompass the adjusted construction limits.

i. Stationing – All stationing is established by a perpendicular offset from the construction centerline. All right of way centerline offset distances will be measured and shown as normal or radial distances. In most cases, station calls will be either from the mainline centerline or from the side road centerline. The mainline right of way will take precedence over all other right of way. Once the mainline proposed right of way is completed, the side road proposed right of way should be established. Station calls will be based from the respective centerline. In the case where a common breakpoint is used for both mainline and side road, the mainline call will be used. All property lines adjacent to the project should be stationed whether or not there will be acquisition from the property. Both station calls (pluses) and offset distances are to be to the nearest 5' increment. In areas of high damage or required precision, the nearest foot may be used. No decimal places should be used in the proposed right of way. When tying to a geometric point on a curve, spiral or tangent, round to the nearest foot and place the specific point designation on the top line of the station indicator (i.e.: SC) so that the intent is clear.

j. Breakpoints – Breakpoints should not be placed in a waterway or entrance. When it is necessary to angle at a stream crossing, break points should be placed on each bank and connected with a straight line. Whenever possible, the right of way breaks should be placed as close as possible to existing cross fence lines. A right angle plus to the nearest foot should be used. Do not refer to the fence or use plus or minus fence line.

k. Breakpoint Adjustment – When tying to a property line or existing right of way line, a "plus or minus" symbol (±) is to be placed on the relevant side (top or bottom) of the station call. This informs the surveyor of the expectation that the point will be adjusted to hit precisely the desired line. If the breakpoint is expected to be moved longitudinally along the centerline to the exact location of the property line or existing right of way line, then the plus or minus symbol would be placed on top. If the breakpoint is to be moved perpendicularly to the centerline to tie to the exact location of a property line or existing right of way line, then the plus or minus indicator would be placed on the bottom with the offset distance. The plus or minus symbol may only be used once per station call. If, as in the case of a property corner, it is necessary that both directions of the breakpoint need to be adjusted to tie to the exact property corner, then one side of the station call would have the plus or minus symbol and the other side would state "(property corner)" to indicate the intent that the breakpoint is to be adjusted to the property corner. The plus or minus symbol is only used to locate property lines or existing right of way lines.

l. Interchange Stationing - In interchange or ramp areas, the right of way is to be stationed from the mainline centerline.

m. Channel Relocation - Where a major channel relocation is proposed and a base line is provided, the right of way should be stationed from the base line (BL). Right of way for channel changes or ditching the channel to conform to culvert flow lines is normally acquired by temporary easement. However, direction should be provided by the Office of Location and Environment (Wetland Unit) as far as special considerations, type of acquisition, etc.

n. Easements – For each instance where either a special purpose permanent easement or a temporary easement is used, a note block will be placed describing the purpose for the easement.

o. Subterranean Easements – In the case where underground rights are required such as for soil nails associated with retaining walls, a subterranean easement will be acquired.

p. Flowage and Ponding Easements - Where ponding is by agreement between the Natural Resources Conservation Service (NRCS) and the property owner, only the Statement "Right to pond water to elevation ____ feet" Needs to be shown on the Plans and Summary Sheet. A copy of the signed agreement between the NRCS and the property owner shall be placed in the parcel file.

   In the case of a flowage easement or a ponding easement for the benefit of the State of Iowa, a special purpose permanent easement is required. Ponding for a flowage easement is required when the flowage of water is restricted and ponding will occur for a short period of time. A ponding easement occurs when water is ponded indefinitely where it was not previously.

   When all ponding is within the banks of the existing stream, a statement should refer to the pond elevation and the fact that it is all within existing stream banks. The area lying between the proposed ponding elevation and the historical ponding elevation will be indicated as a "flowage easement" or a "right to pond water" depending upon the situation. The area of ponding will be established with as few breaks as practical while still encompassing the new ponding area. It will be necessary to indicate this area on the plot plan and obtain a survey plat. In either case, the statement "right to pond water to elevation _____ feet" will be placed on the plans. The ponding area will be listed on the summary sheet in the areas provided. This area is a right and is not to be subtracted from the tax acres.

   In all cases, the ponding elevation will be provided by the Office of Bridges and Structures.

q. County Road Connections – When acquiring right of way for a county, the 25 foot buffer used for state right of way is not required. As a general rule, use 3 feet from the backslope for a cut section and 10 feet from the toe of slope for a fill section.

   On county road connections where the existing county road intersects the primary road at something less than 90 degrees it is sometimes necessary to relocate the county road to form an approximate 90 degree intersection. When this is done it quite often leaves an uneconomical remnant between the existing county road and the proposed county road. That portion of the existing county road that is severed from the county road system then creates a problem for both the county and the state as invariably there may be a private entrance to a residence connecting to the county road. This then becomes a conflict between the county and the state as to who is relocated and leaves an area between the existing county road and the proposed county road, the area will be acquired in fee title in the name of the state.

r. Access Control – Access Control along county roads will be acquired in fee simple title to the State of Iowa. The access rights will be acquired based on the Access Control Letter provided by the Office of Traffic and Safety. Access control on county roads will only be acquired when access control is acquired on the primary highway. When the side road is at an interchange an underlying fee will be acquired to the access control limit. Access control limits on side roads are to be shown as a dashed line and stationed on the side road sheet with the note "Acquire access control on side

road from station _____ to station _____". Access control at interchanges will be described along mainline through the interchange and along the side road through the interchange. Ramps are not included in the access control verbage in this section. Additional information can be found in Appendix B "A Guide to the Preparation of Plot Plans and Summary Sheets".

Access control along railways running parallel and adjacent to the highway will be acquired from the property owner on the opposite side of the railway. This property owner, by Iowa code, has the right to cross the railway. The type of ownership held by the railway is inconsequential. Access Control from the railway will not be acquired. If the railway is owned by fee simple title and the ownership of the railway corridor changes the access control issue will be addressed at the time it becomes an issue. When considering access control on a side road across a parallel railway, we will look at where the access control limit falls and if it is near the outside right of way of the railway no access control will be acquired on the side road.

s. Dikes - Generally, all dikes should be constructed within permanent right of way if for the benefit of the highway. A permanent easement to construct and maintain may be used in specific locations such as jetties or spurs. An exception to this would be if an existing dike on and for the benefit of private property were being reconstructed, in which case a temporary easement would be used.

**03. TEMPORARY NEEDS**

Temporary Easements – Temporary easements are utilized to perform work on private property that will be released back to the property owner. Temporary easement limits should be laid out in a manner to allow the work to be accomplished but not be excessive. Attention should be paid to any high damage item(s) within the easement area. If there are items that warrant consideration for avoidance, attempt to adjust the temporary easement accordingly. If the temporary easement is not adjustable due to construction limits, a determination should be made as to whether or not the item can be worked around. If, after reviewing the cross sections, ROW personnel are unable to determine that the items(s) can be worked around, the Project Engineer will need to be consulted. In either case, the Project Engineer and Right of Way Agent will need to be notified if a note is to be placed on the construction plans.

a. Entrance Construction – If the need lines for the construction of an entrance fall outside the permanent right of way limits, a temporary easement will be acquired to do the necessary construction work. Care should be taken to insure that the easement is wide enough to accommodate the side slopes of the entrance and provide the contractor with adequate working room. Typically a distance of 20 feet should be added to the intercept point of the entrance with the ground line for construction. The stationing for all temporary easements is to be from either the mainline or side road centerline and not from detour centerline or baseline.

A temporary easement cannot be placed on one property to construct an entrance to another property. If an entrance to serve one owner must cross the land of another, the land required for the entrance must be purchased as permanent right of way. This situation should be carefully evaluated to ensure that the expense to construct and maintain the access way is reasonable compared to the property that is being accessed. The Design Supervisor is to be consulted on all such instances.

b. Channel Changes, Ditching Inlets/Outlets, Shaping Slopes, Removing Buildings, Etc. - In most cases temporary easements shall be used for the above construction situations. Care should be

taken in laying out the temporary easements so that we provide enough room for the construction activities and yet cause the least amount of damage to the subject property. It is permissible to square off temporary easement areas for descriptive purposes if it does not cause an excessive amount of damage.

## 04. BORROWS

Borrows are located and designed by the Soils Section of the Office of Design. Borrows are developed through the S2 event at the time of submittal to the Office of Right of Way (D5). The S2 event involves, among other items, the final borrow location and conceptual design. The conceptual design is preliminary and will usually change through the construction process. Borrow usage and conformity to design is dependant upon the construction requirements of the project except in the case of mandatory borrows. Mandatory borrows require the material to be removed as designed.

If, in the opinion of the Office of Right of Way, a preferable alternate source of borrow is available they will discuss the alternate source of material with the Office of Design. Issues such as land use and land economics will be taken into consideration in any recommendation for an alternate source of borrow. Consideration should be paid to proximity to high damage areas such as cemeteries, building sites, gas lines etc. Notify the Design Section Supervisor of any such instances.

a. Borrow Types - There are two basic types of borrows from a right of way perspective:

   - Surface – this borrow is designed to drain. Surface borrows are assumed to be farmable if the slope is 6:1 or flatter.

   - Pond – this borrow is designed as a pond and may or may not hold water when the project is completed.

b. Borrow Layout – All borrows will initially be proposed to be acquired by fee simple title. During the negotiation process this may be changed to accommodate the desires of the property owner. If a request is made to revise the type of acquisition from permanent to temporary the Office of Location and Environment will be contacted to verify that the borrow is not also being used as a mitigation site.

   In the event that the borrow, or a portion of the borrow, is to be used for mitigation the type of acquisition will need to be in compliance with the requirements of the Office of Location and Environment.

   If possible, borrows should be contained within one ownership. If a small portion of the borrow limit extends onto an adjoining property the Office of Design should be consulted to see if the borrow could be modified in such a manner as to place the entire borrow on one ownership.

   Borrow areas should have a minimum of 50 ft. between the construction limit and proposed borrow acquisition line. This allows working room for construction equipment. It is desirable to square up the borrow area if practical to do so.

   On borrow areas that are adjacent to the roadway the designer shall review the cross sections to determine if the right of way needs for the highway are affected by the borrow design. This is

particularly true in areas where a high backslope is being removed. The proposed right of way line should be designed considering the final stage of construction.

When borrows affect entrances consideration must be given to assure that the property owner has adequate access during use of the borrow. If alternate access is unavailable, a note should be placed in the comment section of the Summary Sheet to alert the right of way agents.

c. Topsoil – Topsoil in all cases, with the exception of commercial and residential development areas, will be replaced. In the case of a pond borrow the topsoil will be replaced to the expected water line. In borrows where the proposed right of way is greater than 10 acres it is assumed that the topsoil can be stockpiled within the borrow area. For those borrow areas encompassing less than 10 acres a stockpile location may be required. This area is usually located with input from the Office of Design and possibly District personnel and is usually acquired by temporary easement. The stockpile location should be reviewed during the right of way field exam to verify that it is workable for the D.O.T. and that the property owner is not unfairly inconvenienced. As a general rule the stockpile area requires 1 acre for every 10 acres of borrow area.

d. Haul Roads – For each borrow there must be a method of transporting the soil from the borrow area to the required location. In many cases, such as off site borrows, a haul road will be required. If no haul road has been provided by the Office of Design it will be necessary to consult with the Project Engineer to determine a logical location. Consideration must be given as to the type of acquisition to acquire the haul road. If the borrow is by fee acquisition it will usually be desirable to acquire the haul road by fee acquisition to assure that access will be available after usage. If the borrow is acquired by temporary easement the haul road should be by temporary easement as well. The width for haul roads is typically 50 ft. but this may need to be altered due to circumstances such as terrain or construction techniques. The Project Engineer should be consulted to verify that the proposed haul road is adequate for both size and location.

In the case where a borrow is also to be used as a mitigation site access may need to be provided with permanent acquisition in addition to the haul road. If this has not been provided the Office of Location and Environment will need to be contacted to determine how access will be accomplished for their future use.

e. Seeding – All borrows will be stabilized by seeding.

f. Snow Treatment – Snow treatment may be accomplished by several different construction methods. These methods may be handled differently within the right of way process.

## 05. FENCING & AREA CALCULATIONS

a. Fencing – On interstate and freeway systems, the State will be responsible for constructing the fence along the access control line. If the State is to construct the fence, the Designer is to determine and list the station limits in the appropriate location on the summary sheet. The fence beyond the access control limits is to be constructed by the property owner. The ROW acquisition agent is responsible for measuring the amount of fencing to be replaced beyond the access control limits. On interstate and freeway systems where the State constructs the access control fence, the acquisition agent shall review all stream or draw crossings to determine if water gap fencing will be necessary. On lower classifications of relocated highways, the property owner is responsible for the fence erection and is paid accordingly. Written notification of the limits of State fencing are to

be obtained from the Office of Design. Determination of fence type and limits of placement on 4 lane highways is the responsibility of the respective district.

b. Area Calculation – The calculation of areas is an important function of the Right of Way designer. These areas are used at the public hearing, and extreme care should be exercised to assure that the proper area has been calculated. After the survey plat is received, all pertinent areas will be adjusted to match.

c. Rural areas – areas to be acquired are normally expressed in acres. These areas shall be rounded to the nearest hundredth (10.688=10.69).

d. Urban areas – the areas to be acquired within corporate limits are normally expressed in square feet. These areas are rounded to the nearest square foot.

Separate area calculations shall be made for the various types of acquisition (fee simple title, permanent easement, etc.) and for acquisition acquired in another entity's name (city, country, etc.). Also area calculations will be made for special purpose easements and temporary easements, borrow and haul roads. The existing right of way to which we are acquiring underlying fee title will also be calculated separately. When a parcel is severed by a relocated alignment, the remaining area left and right of centerline will be calculated.

**06. CITY OWNED LANDS**

a. Inside Corporate Limits - All projects within corporate limits where we will acquire right of way in the name of a city will require a city agreement. The agreement will include a clause that states in part that "The City will provide to the state, without cost, existing streets and alleys and other city owned lands with the exception of park or recreational lands". If the acquisition area includes improvements, the state will be responsible for reimbursing the city for the improvements.

If the acquisition area does not include improvements, a statement shall be placed on the summary sheet that "this parcel will be a Mutual Benefit Contract and will not be appraised". A city agreement must be in place for this contract.

If the acquisition area includes an improvement and/or improvements, a statement shall be placed on the summary sheet that the land shall be acquired as mutual benefit and the improvement and/or improvements shall be appraised.

When land owned by the City is required for a city street or other city improvements, the area will be covered by a temporary easement.

Anytime publicly owned recreational areas (such as: parks, golf courses, public schools) are to be affected it is necessary to contact the Office of Location and Environment. This should be done as soon as these areas are known to be affected.

b. Outside Corporate Limits - If the acquisition area includes city owned lands that lie outside of the corporate limits, we must reimburse the city for the land and improvements thereon. A statement shall be placed on the summary sheet that "The acquisition area is outside the corporate limits and the land to be acquired must be appraised".

## 07. ACCESS RULES AND REGULATIONS

Entrance locations are established according to the policies, procedures and rules of the Iowa Department of Transportation. Entrance locations are shown on the right of way plans submitted to the Right of Way Office by the Office of Design. Access control instructions are furnished for each project via the Access Control letter provided by the Office of Traffic and Safety. These instructions denote the access classification and point out any special access problems or situations involved. It is the responsibility of the Design Section to insure that the instructions are reflected in the information forwarded to the various sections in the Office of Right of Way.

Special access problems encountered during right of way design should be referred to the Right of Way Design Supervisor.

a. Access Control - Chapters 306A and 307 of the 2005 Code of Iowa authorizes highway authorities to acquire property rights, including the rights of access, for construction of controlled access facilities. Access rights are acquired in fee simple title.

   Access locations are located based on safety and need. Access locations within access control limits that are to be constructed with the project are referred to as “predetermined access points” (PDA). Access locations that will not be built with the project are referred to simply as “future access location”. Future access locations will only be noted in the Access Control letter and not on the plans, summary sheet, or plot plan.

   Fee simple title will be used for acquisition along mainline on all projects that require access control, and underlying fee will be obtained within the proposed acquisition. On “at grade" side roads we will acquire access control in accordance with the Access Control Letter; however, proposed acquisition will be by permanent easement unless the county requires otherwise. Underlying fee will not be obtained past the mainline proposed acquisition unless the county acquisition is by fee title. When a side road is encountered that is also a state highway, we will acquire fee acquisition and underlying fee to the access control limit.

   In the event the location of an access is revised from that set out in the access control letter a "REQUEST FOR RIGHT OF WAY DESIGN REVISION" form is used. The District Engineer and Office of Traffic & Safety (Access/Utility Policy Administrator) must agree to the revision and sign the form before any revision can be made.

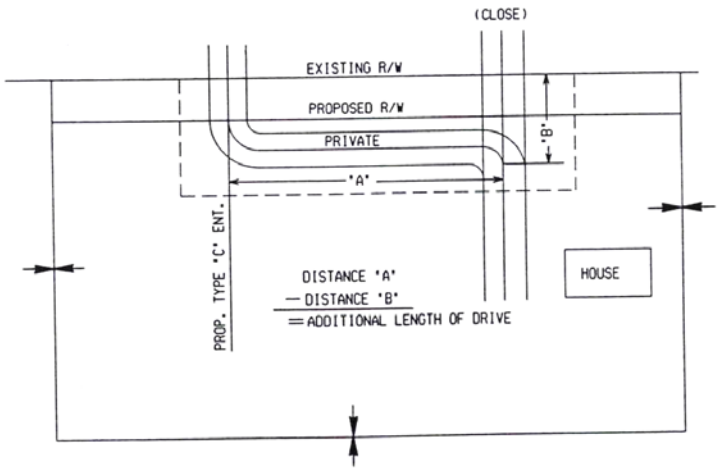
b. Entrances – Entrances within the project limits must be addressed in one of three ways:

   1. UAC (use as constructed) – construction activities will not affect the entrance and it will remain as is.
   2. CLOSE – entrance will be permanently closed.
   3. PROPOSED – new entrance will be constructed. Must be classified by type (see: Iowa Primary Road Access Management Policy).

   Entrances outside of the construction limits may be closed due to access control otherwise they will not be addressed.

c. Relocated Entrances (Private) - Where entrances on private property are relocated from the original alignment, the additional length of the drive to be maintained shall be noted on the Summary of

Proposed Acquisition sheet. Compute only that part which is beyond the terminal point of existing entrance and the proposed drive from proposed right of way to the end of construction then subtract the lateral distance of existing entrance from existing right of way to the terminal point of the two entrances. The property owner will be compensated for the additional length of drive that is their responsibility to maintain. This applies only if there is a residence.




Relocated Access ways (Public) - It sometimes becomes necessary to relocate a private access way across another ownership. When this is done, permanent right of way is acquired in the name of the State, County, or the City in which the project is located. It is assumed that whichever political subdivision has jurisdiction will maintain the access way. However, right of way shall not be acquired in either the name of a city or a county without an approved city and/or county agreement.

When a tract is landlocked and direct access cannot be provided to the property, it may be necessary to provide access via a public access way. The Right of Way Design Supervisor is to be notified of these situations and an economic analysis shall be completed before any public access way is considered. If the result of the economic analysis justifies the public access way, then it may be considered. However, the public access way will require public maintenance. Therefore, we should make an effort to limit the number of public access ways required.

In the event that a clear decision cannot be made to provide access to the landlocked tract, the appraiser may be instructed in the following manner. A Case I/ Case II appraisal shall be made for this parcel. Case I would acquire the landlocked tract. Case II would provide a public access way to the landlocked tract.

The right of way for public access ways shall be laid out in the following manner:

- Right of way for access ways that connect to county road systems will be acquired by easement in the name of the county provided there is a signed county agreement.

- Right of way for access ways that connect to city streets will be acquired in fee title in the name of the city provided there is a signed city agreement. There may also be some access ways

within a city that connect only to the primary road system and the right of way may be acquired by fee title in the name of the city.

- In situations where the access way in a rural area does not connect to a county road system, the right of way for the access way will be acquired in fee title in the name of the State of Iowa.

## 08. RIGHT OF WAY FIELD EXAMINATION

a. There shall be a field examination on each project after a tentative right of way design has been completed. The following personnel should be notified of the field exam:
   - ROW Design Technician who is assigned the project
   - ROW Design Supervisory Personnel
   - District Engineer
   - Project Engineer
   - Appraisal Section Supervisor
   - Relocation Assistance Section Supervisor
   - Advertising Control Section Supervisor
   - Acquisition Section Supervisor
   - Project Agreements and Utility Coordination Section Supervisor
   - Support Services Bureau
   - Title and Closing Section Supervisor
   - Location and Environment

b. There should be great effort taken to assure that the district designee and Project Engineer are able to attend. These individuals should be able to provide input and find solutions to problems encountered during the exam.

   The following items should be checked on the examination trip:

   - Check all borrow areas for suitability and to see if the quantity estimate is reasonable. Check for stockpile areas for borrows less than 10 acres in size.

   - Check for potential "off the road" borrows if it appears that grading and shouldering requirements cannot be met by side or adjacent borrows. Note the location, distance and the probable route for haul roads from such areas.

   - Check the proposed permanent right of way lines to determine if adjustments can and should be made to reduce excessive property damages.

   - Check drainage problems involving channel changes, diversion or concentration of surface water, areas which may be ponded, etc. If water is ponded, the ponding area along with the ponding elevation must be shown and clearly labeled on the right of way plans.

   - Check the proposed access locations to determine their feasibility and note any need for change. This is a very important part of field check and should be considered carefully. Unnecessarily steep or long drives or drives with an awkward alignment should be eliminated wherever possible. Where grade necessitates that a drive to serve an owner travels parallel to

the centerline for any distance, care should be taken to ensure that this drive is constructed **outside** of the permanent right of way line.

- Check locations of detours and any other temporary construction requirements.

- Check for underground tanks or other areas that may be contaminated with hazardous waste. If any questionable areas are found notify the Office of Environmental Services (Regulated Substances).

c. Following the field check, any necessary revisions shall be made on the Right of Way plans.

## 09. EXCESS LAND

It sometimes becomes necessary to acquire tracts of land in addition to what is required for the construction and maintenance of the highway. These tracts are known as excess land. Most commonly this occurs when a tract of land is left without access (landlocked) or is deemed an uneconomical remnant (of no use or value to the owner). In each case the D.O.T. will propose to acquire the property. While all excess tracts are proposed to be acquired, if during negotiations the owner requests to keep the excess tract, the request will be considered provided the area is not required for mitigation or borrow. The land owner must provide access to these landlocked tracts. When excess land is encountered a future right of way line will need to be established to denote that area that is required for construction and maintenance of the highway. The future right of way line will be determined at the same time that the other right of way for the project is established.

When excess land is proposed to be acquired an Excess Land Plat will be generated. This standard form will provide a graphic representation of the area that is excess as well as calculations for the total acquisition, right of way acquisition (required right of way to be retained), borrow area (if applicable), mitigation area (if applicable) and the excess acquisition area. This form becomes the master copy and is provided to the Property Management Section for their inclusion of the tract into the excess land inventory. This form is to be completed at the time the parcel is sent to the Appraisal Section.

The excess determination made by the Design Section is preliminary and may change with construction of the project.

## 10. PLAN PREPARATION

a. Right of Way Plan Sheets (H Sheets) - For each project, plan sheets will need to be created by the Design Section. These are referred to as H sheets and are in addition to the official plan set created by the Office of Design. The H sheets are intended to show the proposed right of way in a manner that will allow the user to more easily see and comprehend the area of acquisition and the impacts associated with the specific property. The H sheets are to comply with the guide “Creating ROW H Sheet Using Existing Plan Sheets”. (*see* Appendix E)

b. Hatching is used to indicate proposed right of way to be acquired in the name of the county and/or in the name of the city. Cross hatching at 90 degrees indicates right of way to be acquired in the name of a county. Single hatching with dashed lines indicates right of way to be acquired in the name of a city. Proposed acquisition in the name of the State is not hatched on plan sheets.

c. Ownership maps - The Design Section will provide (on large projects) an ownership map on “A” sheets which will show property ownership along the proposed project. This sheet will also show

all borrow and mitigation sites if available. The ownership maps should be created as soon as possible and updated routinely. The ownership sheets should be at a scale that is legible so that individual properties can be located easily within the project limits.

d. Parcel Check List Sheet – Each set of plans will have a sheet to be inserted consisting of the ownership name and amount of acquisition for each parcel (parcel check list).

e. Access Control Letter – Each set of plans will have a sheet containing the Access Control Letter. If the project does not require the acquisition of access control, a sheet will be provided stating: "No access rights are to be acquired on this project." This sheet will also contain the legend for right of way symbols used on the H sheets.

# E. ESTABLISHING PARCEL FILES

## 01. PREPARATION OF PARCEL FILES

a. Parcel Definition - A parcel is defined as a tract or tracts of land having the following characteristics:

(1) Unity of ownership.
(2) Tracts that are contiguous or abutting (considered contiguous if separated only by a road, railroad, river or other natural barrier).
(3) Unity of use. Tracts farmed separately are not considered to be used as a unit.

To be considered a parcel, the tract must include at least characteristic No. 1 plus one of the other characteristics (2 or 3). Both parcel number and the names of all fee owners and/or contract purchasers should be placed on the plans within the limits of the property as plotted on the plans.

A tract of land lying in two or more sections and meeting the requisites for a parcel as shown above is considered to be one parcel. A separate parcel shall not be made for each separate tract even though the tracts do lie in different sections.

Prepare two parcel files for each parcel on the project. One file is called the original file. Upon completion, the original file is transmitted to the Property Management Section (ROW Fileroom) for filing. Once it is filed, it must **never** leave the office. If it is removed from the file section for reference use in the office, it must be signed out from the file room coordinator. The second parcel file is the field file and is submitted to the Appraisal Section at the appropriate time.

b. Original File - The following information is inserted into the original file and secured with metal fasteners.

- Parcel File Check Sheet – This form is placed on top of the information provided by the Design Section and serves as a marker between the Design Section information and all other information that will eventually be placed in the file. The form is to be completed by the person making up the Original File. Section I of the form pertains to the documents that are included in the file. A check mark is placed for each document that is included. Section II pertains to the type(s) of acquisition required from the subject parcel. A check mark is placed for each type of acquisition required. The remainder of the form is filled out, signed and dated.

- One copy - SUMMARY OF PROPOSED ACQUISITION form.
- One copy - PLOT PLAN form.
- Original - REPORT OF RECORD OWNERSHIP AND LIENS form.
- Original – EXCESS LAND DETERMINATION form if applicable.
- All correspondence, notes, etc. related to the parcel.

c. Field File - The second file to be made for each parcel is the field file. This file is used in the field by both appraisers and negotiators. This is placed in a folder with the name, parcel number, county and project number lettered in black ink on the tab. The following information is placed within this file:

- Six copies - SUMMARY OF PROPOSED ACQUISITION form.
- Six copies - PLOT PLAN form.
- One copy - REPORT OF RECORD OWNERSHIP AND LIENS form.
- Copies of all correspondence, notes, etc. related to the parcel.

Fee files are normally not made up until requested by the Appraisal Section. They are enclosed in folders with the parcel information underlined in red ink on the tab. They contain the same information as the field file with the exception that only three summary of proposed acquisition and plot plans are required. A plan sheet covering the property is added to the file. Fee files are requested when additional appraisals or other outside services are required.

d. Transmittal Letter - All of the above information is transmitted under cover of a transmittal letter and electronically (see section on Right of Way Design Forms and Correspondence).

e. Project File – A Project File is to be made up for each project and provided to the Appraisal Section with the project. The Project File should contain copies of the Concept Statement, Access Control Letter, Field Exam Letter, Public Hearing Letter (rap up letter), and pertinent project-related correspondence.

## 02. PREPARATION OF SUMMARY OF PROPOSED ACQUISITION AND PLOT PLANS

The Summary Sheet and Plot Plan are treated as one document and are sent out of the Design Section attached together.

### SUMMARY SHEETS

The Summary Sheet is intended to provide a summarization of the impacts specific to each parcel and contains, in part, the following information:

- County, project number and parcel number.

- Owner of Record. The ownership should be listed the same as what is shown on the deed if possible, and should be consistent with other documents within the Design Section. All owners are to be listed.
- All type and amount of proposed acquisition from the parcel is accounted for on the summary sheet.
- The total taxable area of the property.
- Flowage easements and ponding rights.
- All temporary easements. When a temporary easement will encumber an area for a significant period of time, the calculated area will be shown on the summary sheet.
- Access control limits and predetermined access locations (PDA). Future PDA's are not listed on the summary sheet.
- Entrances that will be constructed with the project. Entrances that will be closed are to be listed in the comments section.
- Additional length of drive, if applicable.
- Fence replacement determination and who will be responsible for replacement.
- Comments deemed pertinent to the parcel.

**PLOT PLANS**

Individual property plats (PLOT PLANS) shall be prepared. The plats should be prepared to show the following:

- Name of property owner. The owner name should be as close to that shown on the deed as possible.
- Section, township and range numbers. Lot and block numbers in urban areas.
- Parcel number (numerically), for each right of way parcel.
- North Arrow.
- Dimension of individual tracts.
- Ownership boundaries.
- Existing right of way lines - State - County - City Streets.
- Building area.

- Highway centerline (ramps at interchange). Do not station indicators (tick marks) or geometric information.

- Proposed right of way lines shown by a solid line with station calls at breaks and property lines.

- Section, 1/4 Section and 1/4 1/4 Section lines.

- Frontage road and relocated local road centerlines.

- Railroads (show centerline and right of way lines).

- Right of way to be purchased in name of state by either fee simple or easement will be shown by single hatch (use only on plot plans).

- Right of way to be purchased in name of a particular city by either fee simple or easement will be shown by long dashed hatching. (Use on both plans and plot plans.)

- Right of way to be purchased in name of a particular county by easement will be shown by double cross-hatching. (Use on both plans and plot plans.)

- Temporary easement area outlined by a dashed line and shown by bar hatching and labeled temporary easement area. (Use only on plot plans.)

- Points of access (arrowhead with the arrow pointing out from the centerline; also, notation: Point of Access - Station and plus).

An original plot plan file is also established for the project. This file is in the ROW Design Section. It will contain the original plot plan plats and original summary sheets.

See: Appendix B, *A Guide to the Preparation of Plot Plans and Summary Sheets.*

## F. INTERACTION WITH OTHER OFFICES

### 01. OFFICE OF DESIGN

The Office of Right of Way and Office of Design work closely together to assure that sufficient right of way is acquired to construct and maintain the proposed highway construction. Projects are submitted to the Office of Right of Way (Design Section) from the Office of Design via D5 submittal letter. Any changes to the design of a project, after the D5 submittal, that affect the right of way process or alter the impact to properties require a “Revision to the D5” letter from the originator of the initial D5 letter.

### 02. DISTRICT OFFICES

Communication with the District offices is essential throughout the development of a project through the right of way process. Correspondence related to the project in general is sent to the District Engineer and/or the Assistant District Engineer.

The District Land Surveyor is responsible for establishment of the existing right of way and property line locations (at the intersection of the highway) for all projects that will require additional right of way (T01 event). This information is to be placed in the microstation file in adherence with established CADD policy. When the existing right of way has been placed in the file notification is sent to the Design Section informing them that the T01 event has been completed. When the plot plans are developed to a point where the preliminary proposed right of way and property lines are established the District is notified by the Design Section that the R00 event has been completed. At this time the District Land Surveyor initiates the development of the survey plats and descriptions for all parcels requiring permanent acquisition.

The Right of Way Design Section receives the completed survey plats for each project (T02 event). Each survey plat is checked to verify that the area depicted is in agreement with the area proposed for acquisition by the Design Section. The area calculated is also compared to the preliminary calculation and any discrepancy is rectified prior to the project being sent to the Appraisal Section.

Survey plats are required when acquiring underlying fee only but not when acquiring access control only or temporary easement only. After the survey plat is checked the original is sent to the Condemnation Unit and copies to the Acquisition Section and Field File.

If the proposed right of way changes after the survey plats are received they will be sent back to the District Land Surveyor so that an updated plat can be provided.

**03. FACILITIES MANAGEMENT**

Whenever DOT owned buildings are involved in a highway improvement, a memo stating that fact along with the applicable plan sheet is sent to Facilities Management as soon as possible. This enables Facilities Management to react to any implications in a timely manner.

**04. DEPARTMENT OF NATURAL RESOURCES (DNR)**

A set of right of way plans should be submitted to the DNR as early as possible on projects where the construction limits extend onto land managed by the DNR. The type and size of acquisition may need to be altered to accommodate DNR requirements.

**05. OFFICE OF LOCAL SYSTEMS**

Utility parcels that require a partial acquisition of real estate only will be submitted to the Appraisal Section with the other parcels for a project. Utility parcels that require the acquisition of real estate along with improvements will be submitted to the Utility unit in the Office of Local Systems. This submittal will be at the same time the other parcels are submitted to the Appraisal Section.

In certain situations the D.O.T. may be responsible for acquisition of right of way in the name of a particular utility company. In order for this to happen there must be a pre-existing easement which is being displaced by the project, and an agreement in place with the utility company. Information related to the requested easement must be received early enough in the process to allow for consideration and implementation into the plans.

## G. TRANSMITTAL OF THE PROJECT

In order for projects to be sent out of the Design Section the following conditions need to be met:

- The project must have commission approval by the Department of Transportation.
- Environmental, cultural and historical clearances need to be completed.
- All public contacts need to be accomplished.
- Need survey plat for each parcel being submitted that will require permanent acquisition.
- A project is transmitted out of the Design Section by sending the field file with plans under cover letter (Transmittal Letter) to the Appraisal Section and various copies to other sections and offices.

As indicated above most parcels are sent to the Appraisal Section, however, there are cases when parcels are submitted elsewhere:

Railroad parcels are sent to the Office of Rail Transportation. If the acquisition is to be from property owned by a railroad but not within an operating railroad corridor the parcel will then be forwarded to the Appraisal Section to be appraised.

Utility parcels that require a partial acquisition of real estate only will be submitted to the Appraisal Section. Parcels that require the acquisition of real estate, along with improvements, will be submitted to the Utility Unit in the Office of Local Systems.

## H. REVISIONS AND CORRECTIONS

The Office of Right of Way deals with two general types of revisions; revisions made to the design of the project (proposed construction) and revisions made to the proposed right of way.

When the Office of Right of Way feels that it may be desirable to alter the design of the proposed construction in some manner the Design Section will be responsible for contacting the relevant Project Engineer to discuss the situation and determine the feasibility of the request. In all such cases the Design Section Supervisor is to be consulted prior to contact with the Office of Design. The Office of Design also initiates revisions that may require the Office of Right of Way to make adjustments. In each case a “Revision to the D5” letter will be required from the Office of Design.

Revisions are also initiated within the Office of Right of Way. When the Design Section receives revision requests from other sections the revision is reviewed and acted upon. All revisions initiated within the Office of Right of Way must be approved in the Design Section. When the revision has been made all appropriate personnel are copied with relevant documents and electronic information is updated.

Corrections are of a more minor nature and are made to documents mainly to bring them into compliance with other documents and information that does not affect the proposed right of way. Examples of corrections would be; name changes and changing the area of acquisition to match the survey plat. The corrected information is forwarded to the responsible section and the Original File is updated.

## I. DEVELOPMENT ESTIMATES

This section may be asked to provide cost estimates at certain times during the development of a project. The estimates are necessary for the preparation of highway program quantities. The degree of accuracy is of course somewhat dependant upon the development stage of the project. Estimates may be compiled with the

assistance and coordination of the Appraisal Section depending on the complexity of the project. Cost estimates should be in a format that would allow later interpretation. The cost estimate is entered into the Project Scheduling System with notification to Program Management, Office of Contracts and Project Scheduling.

# APPENDIX INDEX

**APPENDIX A: DESIGN SECTION FORMS AND TRANSMITTALS**


| EXHIBIT # | DESCRIPTIVE TITLE |
|---|---|
| 1A | ORDER CLAIM-ORIGINAL REQUEST |
| 1B | ORDER CLAIM-RECERTIFICATION |
| 2 | REPORT OF RECORD OWNERSHIP AND LEINS |
| 3 | PLOT PLAN (BLANK) |
| 4 | RIGHT OF WAY DESIGN TRANSMITTAL |
| 5 | SUMMARY OF PROPOSED ACQUISITION |
| 6 | PARCEL CHECK LIST |
| 7 | EXCESS AND MITIGATION LAND DETERMINATION |
| 8 | REQUEST FOR ROW DESIGN REVISION |
| 9 | LETTER TO OFFICE OF LOCATION & ENVIRONMENT: PLANS FOR PUBLIC HEARING |
| 10 | LETTER TO DISTRICT: REPORT OF LEINS SUBMITTAL |

**APPENDIX B: A GUIDE TO THE PREPARATION OF PLOT PLANS AND SUMMARY SHEETS**

**APPENDIX C: AN ANALYTICAL APPROACH TO DETERMINE OWNERSHIP OF ABANDONED RAILROAD RIGHT OF WAY**

**APPENDIX D: IOWA PRIMARY ROAD ACCESS MANAGEMENT POLICY**

**APPENDIX E: CREATING ROW H SHEET USING EXISTING PLAN SHEETS**

# APPENDIX A

# Design Section
# Forms & Transmittals

Form No. 635037-WP 7/97

Iowa Department of Transportation

# ORDER CLAIM

County MAHASKA | Date 9/12/2000

Project **STPN-63-3(58)—2J-62** | Order No. **5332-XXX-XX**

| VENDOR NUMBER *(Accounting Use Only)* | SOC. SEC./TAX I.D. NUMBER *(1099 Reportable Income)* |
|---|---|
| | |

ACME TITLE SERVICES
P.O. BOX 1234
NOWHERE, IOWA 54321-9876

**NOTICE**

This is a BILLING STATEMENT. The VENDOR must show a specific charge for each item, and SIGN the CLAIMANT=S CERTIFICATION in INK. Send this CLAIM to the SAME INDIVIDUAL or PLACE as the REQUESTED ITEMS.

| VENDOR INVOICE | | | | Cost Center | Sys. No. | Co. No. | Cont. No. | Paren | Parcel No. | Obj. Code | Func. Code | R-1 U-2 | P-1 NP-2 | Amount |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mo. | Day | Yr. | Inv. No. | | | | | | | | | | | |
| | | | | | | | | | | | | | | $ |
| | | | | | | | | | | | | | TOTAL | $ |

| Approval Authority | Date | CLAIMANT=S CERTIFICATION | (DO NOT WRITE IN THIS SPACE) |
|---|---|---|---|
| | | I, the within claimant, do certify that the items for which payment is claimed were furnished for State business under authority of the law; and the charges are reasonable, proper and correct, and no part of this claim has been paid. | |
| | | (Sign in Ink) Date | |

Deliver the requested items to **James S. Olson, DOT Right of Way Design Office, 800 Lincoln Way, Ames, IA 50010**

| ITEM NO. | PLEASE FURNISH THE FOLLOWING: | ACTUAL COST ITEM, PARCEL |
|---|---|---|
| | Please furnish one report of lien including attachments per the instructions on the attached forms for the following tracts.<br><br>Report on all lands which are contiguous or abutting to the land described below which are under the same ownership even though they were not all included in this order. | |
| **102** | **FIRST ADDITION OF PARK PLACE OF NW SE IN SECTION 34-92-4, OWNED BY JOHN DOE** | |
| **103** | **PART SE SW. PART SW SE, PART NW SE, AND PART OF THE NE SE ALL IN SECTION 34-92-4, OWNED BY GAGE M. DOT** | |

JS:ag Please submit these reports to this office by SEPT. 18, 2000 If this schedule cannot be met, please notify this office in writing as soon as possible. Telephone number 515-239-1551. Thank you.

Order Requested
By:_____
DOT Signature Date

Make: 9Full and/or 9Progress Payment
By:_____
DOT Ordering Authority Date

| | AUDITED: |
|---|---|

**EXHIBIT 1A**

Form No. 635037-WP 7/97

Iowa Department of Transportation

# ORDER CLAIM

County **MAHASKA** Date 9/12/2000

Project **STPN-63-3(58)—2J-62** Order No. **5332-XXX-XX**

| VENDOR NUMBER *(Accounting Use Only)* | SOC. SEC./TAX I.D. NUMBER *(1099 Reportable Income)* |
|---|---|
| | |

ACME TITLE SERVICES
P.O. BOX 1234
NOWHERE, IOWA 54321-9876

**NOTICE**

This is a BILLING STATEMENT. The VENDOR must show a specific charge for each item, and SIGN the CLAIMANT=S CERTIFICATION in INK. Send this CLAIM to the SAME INDIVIDUAL or PLACE as the REQUESTED ITEMS.

| VENDOR INVOICE | | | | Cost Center | Sys. No. | Co. No. | Cont. No. | Paren | Parcel No. | Obj. Code | Func. Code | R-1 U-2 | P-1 NP-2 | Amount |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mo. | Day | Yr. | Inv. No. | | | | | | | | | | | |
| | | | | | | | | | | | | | | $ |
| | | | | | | | | | | | | | TOTAL | $ |

| Approval Authority | Date | CLAIMANT=S CERTIFICATION | (DO NOT WRITE IN THIS SPACE) |
|---|---|---|---|
| | | I, the within claimant, do certify that the items for which payment is claimed were furnished for State business under authority of the law; and the charges are reasonable, proper and correct, and no part of this claim has been paid.<br><br>(Sign in Ink) Date | |

Deliver the requested items to **James S. Olson, DOT Right of Way Design Office, 800 Lincoln Way, Ames, IA 50010**

| ITEM NO. | PLEASE FURNISH THE FOLLOWING: | ACTUAL COST ITEM, PARCEL |
|---|---|---|
| | Please recertify the attached copy of the report of liens for Parcel No. 100,101,102, & 103<br><br>Include all land contiguous which is under the same ownership.<br><br>Please bring these reports down to present date by means of a simple recertification and return it to this office as soon as possible. Telephone number 515-239-1551. Thank you. | |

PH:ag Order Requested Make: 9Full and/or 9Progress Payment

By:_____ By:_____
DOT Signature Date DOT Ordering Authority Date

AUDITED:

**EXHIBIT 1B**

Form 632004wd
09-94

**Iowa Department of Transportation**

Right-of-Way Office
REPORT OF RECORD
OWNERSHIP AND LIENS

I Order No. _____
N Date _____
D County _____
E Project No. _____
X Parcel or Tract No. _____

1. This Report Is Prepared For A Tract(s) Of Land Located In _____ County, Iowa, More Particularly Described As Follows:

2. Title To The Above Described Tract(s) Is In _____

(REPORT AND ATTACH outstanding Purchase Contracts, Articles of Incorporation, etc.)

3. Title Was Acquired By _____ Dated _____ Filed Bk. _____ Pg. _____
_____ Dated _____ Filed Bk. _____ Pg. _____
_____ Dated _____ Filed Bk. _____ Pg. _____
_____ Dated _____ Filed Bk. _____ Pg. _____
_____ Dated _____ Filed Bk. _____ Pg. _____
_____ Dated _____ Filed Bk. _____ Pg. _____

4. The Following Additional Title Instruments And Proceedings Affect Title:
(Include all transfers of title occurring within the past five years)

Instrument _____ Dated _____ Filed Bk. _____ Pg. _____
Instrument _____ Dated _____ Filed Bk. _____ Pg. _____
Instrument _____ Dated _____ Filed Bk. _____ Pg. _____
Instrument _____ Dated _____ Filed Bk. _____ Pg. _____
Instrument _____ Dated Filed Bk. Pg.

5. The Tract(s) Is Zoned (None _____ ) _____ Bk. _____ Pg. _____

6. Restrictive Covenants Apply (None _____ ) _____ Bk. _____ Pg. _____

7. Subject To Land Use Agreements (None _____ ) _____ Bk. _____ Pg. _____
_____ Bk. _____ Pg. _____ _____ Bk. _____ Pg. _____

8. Attach description of land included in agricultural area as provided in Iowa Code Section 93A.8. (None _____ )

9. Mineral Reservations (None _____ ) _____ Bk. _____ Pg. _____

10. Title To This Tract(s) Is Also Subject To:
A. Mortgages (None _____ ) _____ Dated _____ Bk. _____ Pg. _____
B. Judgements (None _____ ) _____ Dated _____ Bk. _____ Pg. _____
C. Financing Statements (None _____ ) _____ Dated _____ Bk. _____ Pg. _____
D. Taxes and Assessments (None _____ ) _____ Dated _____ Bk. _____ Pg. _____
E. All Other Liens (None _____ ) _____ Dated _____ Bk. _____ Pg. _____
_____ Dated _____ Bk. _____ Pg. _____

**Attach Copies Of All Instruments Listed In Items 3 Through 10 Inclusive**

11. Certification – The Undersigned Hereby Certifies That Title To This Land Is As Reported And Shown In The Records Of _____ _____ County, Iowa.

**This Report Is A Report Of Liens Only. No Examination Is Made And No Opinion Has Been Formed As To The Legal Effect Of Any Instrument Or Proceeding Inspected. It Is Made For The Exclusive Information And Use Of The Iowa Department Of Transportation And The State Of Iowa And No Liability For Errors Or Omission Will Accrue To The Benefit Of Any Other Person, Firm, Or Corporation.**

Dated this _____ day of _____ , 20 _____ , at _____ o'clock ____ M
At _____ , County of _____ , State of Iowa

Signed _____
Title _____
Address _____
Telephone Number _____

**On Reverse Side Please List Any Additional Information You May Have Such As Names And/Or Addresses of Spouses, Property Managers, Lienholders, Attorneys Involved In Proceedings Affecting Ownership, Any Instruments Of Which You May Have Knowledge But Which Are Not Shown Of Record, Etc.**

# EXHIBIT 2

12. Assessment Data And Information Furnished But Not Certified To:

| BY 40 AC TRACT OR LOT | LAND ASSESSED | SEC. | TWP. | RNG. | Acres of Lots Taxed |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

**EXHIBIT 2 (cont.)**

IOWA DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT
PLOT PLAN

PARCEL NO.: _____

OWNER: _____

SECTION: _____ T _____ N-R _____ W.

SCALE: 1" = _____

LEGEND

R.O. OR EASEMENT LINE:

ACCESS LOCATION POINT:

PROPERTY LINE:

COUNTY: _____ PROJECT NO.: _____

**EXHIBIT 3**

Iowa Department of Transportation

## ROW Design Transmittal

**TO:** John Doe

**FROM:** James S. Olson

**DATE:** 06/03/00

**RE:** County Mahaska

Project STPN-63-3(58)—2J-62

Pin No. 12-34567-8

Description W. of Here to 0.6km E. of There

We are attaching 1 parcels for appraisal/acquisition on the above project.

There are a total of 101 parcels on the project.

0 of the attached parcels are original submittal.

1 of the attached parcels are revisions. The revisions involved parcels numbered 000

--- parcels are being held on this project for the following reasons:

Fee Appraisal Files are attached for parcels numbered

--- buildings lie within the proposed right of way. _____ are homes, _____ are commercial enterprises.

Access Control Classification adjacent to this property is Priority IV

Acquisition of Access will be necessary on the project.

The following utilities and/or railroads are involved with the project:

You should be aware of the following general information concerning this project:

James S. Olson
Right of Way Design Supervisor

By _____
Right of Way Design Section

C D. R. Hicks
S. B. Westvold
S. D. Albright
D. E. Muessigmann
B. B. Banker
D. C. Bates
D. A. Popp
E. L. Fawkes

**EXHIBIT 4**

RIGHT OF WAY OFFICE

**SUMMARY OF PROPOSED ACQUISITION**

**DESIGN SECTION**

ID No. _____

County _____ Project No. _____ Parcel No. _____

Owner of Record _____

Contract Purchaser _____

Leasehold _____

Mineral Rights /Mineral Leases _____

**1. PERMANENT ACQUSITION AND PROPERTY AREAS:**

| | | |
|---|---|---|
| ROW in Name of State | _____ acres /SF | _____ acres /SF |
| Excess Land Area | _____ acres /SF | |
| Wetland Mitigation Area | _____ acres /SF | |
| * Fee Title ROW in Name of City | _____ acres /SF | |
| ROW in Name of County | _____ acres /SF | |
| * Easement for _____ | _____ acres /SF | _____ acres /SF |
| * Easement in Name of County for _____ | _____ acres /SF | |
| * Easement in Name of City for _____ | _____ acres /SF | |
| Area of remaining property | | |
| Left of ROW | _____ tax acres /SF | _____ acres /SF |
| Right of ROW | _____ tax acres /SF | |
| Total area of property before acquisition (sum of above) | | _____ acres /SF |
| * Quit Claim Deed | | _____ acres /SF |

* Refer to plat for takings from more than one tract

**2. FLOWAGE EASEMENT TO ELEV.** _____ _____ acres

**3. RIGHT TO POND WATER TO ELEV.** _____ _____ acres

**4. ACQUIRE UNDERLYING TITLE TO EXISTING ROW (CURRENTLY HELD BY EASEMENT)**

State _____ acres

**5. TEMPORARY ACQUISITION:**

Borrow by Easement _____ acres

Haul Road by Easement _____ acres

Detour by Easement _____ acres

Temporary Easement to _____

**6. ACCESS CONTROL:** Classification adjacent to this property is ☐ Priority I ☐ Priority II ☐ Priority III ☐ Priority IV ☐ Priority V ☐ Priority VI

Access rights to be acquired between Stations _____ & Sta. _____

_____ & Sta. _____

_____ & Sta. _____

_____ & Sta. _____

Access location points at stations _____

Entrances will be constructed at Stations _____

Additional Length of Drive _____ ft.

**7. ROW FENCING:**

The State will construct access control fencing through the Priority I access control limits; sta. _____ to _____, sta. _____ to _____, sta. _____ to _____, sta. _____ to _____, including side road access control limits; sta. _____ to _____, sta. _____ to _____, sta. _____ to _____, sta. _____ to _____, sta. _____ to _____, sta. _____ to _____,

The Acqusition Agent is responsible for determining the amount of right of way if any is to be replaced in all other locations.

**COMMENTS:** _____

Prepared by: _____

Date: _____

**EXHIBIT 5**

08/16/00 09:17 HSL PRINT FOR R.D. ROW PAGES: 1 - 7 GEN: 1

PARCEL CHECK BY PROJ UPDATED 07/12/00 09:17 PAGE: 1
AND : 2

R2360004 PARCEL CHECK LIST BY PROJECT NUMBER

COUNTY : TAMA PROJECT NO. :STPN-63-3(58)-2J-62 PIN: 12-34567-8

CONSTRUCTION NO. :STP-63-3(56)-19-62 ASSIGNED TO: JJC

DESCRIPTION : W. OF HERE TO 0.6KM E. OF THERE

| PARCEL | KEY | OWNER | TYPE | R/W W.D. OR EASE. | BORROW W.D OR EASE. | HOUSE OR OTHER COMMERCIAL |
|---|---|---|---|---|---|---|
| 100 | 12345 | JANE Q. PUBLIC | FEE | 20.66 WA | | |
| | | JACK M. PUBLIC | FEE | | | |
| 101 | 23456 | ACME CORP. | FEE | 5.01 WA | | |
| 102 | 34567 | JOHN DOE | FEE | 6.66 WS | | |
| | | FRANK M. PLAT | CP1 | | | |
| | | GENE R. PLAT | CP1 | | | |
| 103 | 65734 | GAGE M. DOT | FEE | 9.99 WS | | |

EXHIBIT 6

RIGHT OF WAY OFFICE
MITIGATION/EXCESS
LAND DETERMINATION

ID NO. _____

PARCEL NO. _____

ACQUIRED FROM _____

SECTION: _____T_____N-R _____W SCALE:1"= _____

COUNTY: CALHOUN PROJECT NO.: NHSN-020-3(95)--2R-13

| FORMULA EVALUATION | TOTAL ACQUISITION | | ROW ACQUISITION | | BORROW/MITIGATION | | EXCESS LAND ACQUISITION | |
|---|---|---|---|---|---|---|---|---|
| | AREA | VALUE | AREA | VALUE | AREA | VALUE | AREA | VALUE |
| LAND | | $ | | $ | | $ | | $ |
| IMPROVEMENTS | | $ | | $ | | $ | | $ |
| TOTAL | | $ | | $ | | $ | | $ |

FILLED IN BY _____ DATE _____, 20_____

C: PROPERTY MANAGEMENT
WETLANDS UNIT
T. GETTINGS
V. GOETHALS (ORIG.)

**EXHIBIT 7**

Iowa Department of Transportation

**OFFICE of RIGHT OF WAY**
**REQUEST FOR R.O.W.REVISION**

**Date:** July 3, 2000 **Project:** STPN-63-3(58)0—2J-62

**Parcel number:** 000 **County:** MAHASKA

**Ownership:** GAGE M.DOT

**Revision requested by:** JOHN DOE

**Reason for revision:** PROPERTY LINE HAS CHANGED

Approved by: _____ Date _____
ROW Design Supervisor

Approved by: _____ Date _____
ROW Director/Manager ROW Operations

Approved by: _____ Date _____
Access Supervisor

Approved by: _____ Date _____
Transportation Engineer

Revision made by: _____ Date _____

**EXHIBIT 8**

IOWA DEPARTMENT OF TRANSPORTATION

| | | | |
|---|---|---|---|
| To Office | Corridor Development & Prelocation Studies | Date | July 3, 2000 |
| Attention | | Ref. No. | Mahaska |
| From | ROW Design Supervisor | ROW No. | STPN-63-3(58)—2J-62 |
| Office | Right of Way | Const. No. | STP-63-3(56)—19-62 |
| Subject | (R1) Complete Plans | PIN No. | 12-34567-8 |

Attached is the two half size sets of plans and two parcel check lists for the above project. Borrow areas for the project are not included in these plans. If borrow areas are needed and they are not included in this plan submittal, they will be submitted at a later date. The full size plan is for your use and the half size plans are to be used in making archeological surveys.

Supervisor

By_____
Right of Way Design Section

Attachment

c: Director, Office of Design
District Engineer
Project File

**EXHIBIT 9**

**IOWA DEPARTMENT OF TRANSPORTATION**

To Office District 1

Attention John Doe

From ROW Design Supervisor

Office Right of Way Design

Subject Mahaska Co. ROL's

Date July 3, 2000

Ref. No. Mahaska
(County)

ROW No. STPN-63-3(58)—2J-62

CONST No. STP-63-3(56)—19-62

Attached is/are 1Report of Liens for the above project. The report is for parcel number **000.**

Supervisor

By _____
Right of Way Design Section

Attachment

c: Project file

**EXHIBIT 10**

# APPENDIX B

# A Guide to the Preparation of Plot Plans and Summary Sheets

# *A Guide to the Preparation of Plot Plans & Summary Sheets*

Office of Right of Way, Right of Way Design Section DATE: 03/18/08

This information is intended as a guide for the construction of plot plans and summary sheets, additional information can be found in the *Office of Right of Way Design Manual.*

The purpose of the plot plan is to help the property owner better understand the impacts of the proposed acquisition as related to the specific property. The plot plan is also a requirement of the appraisal process. Technical information should be obtained from the plan set, survey plat or other supporting documents.

The plot plan shows the area of acquisition in relation to the property as a whole, thus the entire property limits must be indicated. If the ownership limits are too extensive to fit on the plot plan, a small insert (thumbnail sketch) may be necessary (see directions in the "*Technical Aid for the Construction of Plot Plans*"). This should however be utilized rarely and only as a last resort. Also in some cases it may be necessary to have 2 plot plans (1 of 2 & 2 of 2); again, this should be avoided if possible.

## SCALES

All plot plans are to be one of the following sizes unless otherwise approved:

1 inch = 800 ft. (full section)
1 inch = 400 ft. (1/4 section)
1 inch = 200 ft. (1/4,1/4 section)
1 inch = 100 ft. (urban areas)

In the case of an acreage it is recommended that a scale such as 1 inch = 200 ft. be used. This will allow the proposed right of way to be clearly seen. When this is done it will be necessary to label the 1/41/4 section and a corner – preferably a section corner if possible.

## TEMPORARY EASEMENTS

All temporary easements must have a note stating their specific purpose. The note should include area of the temporary easement. When temporary easements are used for detours or access ways during construction the acreage will be provided on the summary sheet since the area encompassed will be utilized for an extended period of time.

## ACCESS POINTS AND ACCESS CONTROL

Access locations must be indicated by a bold arrow, see example, and a station call is to be provided at each location. This station location is to match the Access Control Letter except at property line locations where the station call may differ slightly and have a plus or minus sign behind it. County road locations will be listed as access locations but are not considered entrances.

When access control has been acquired previously it should be noted as such in the comment section with the relevant book and page number for reference (a copy of the document is to be included in the file). When we are changing a previously reserved

access location we will note the previously reserved location in both old and new stationing as such: *"CLOSE ACCESS LOCATION AND ENTRANCE PREVIOUSLY RESERVED AT STATION ___ (OLD STA.) ___ (NEW STA.) BK___ PG___"*.

Access control stationing that is listed on the Summary Sheet shall be located on the plot plan so that the access control limits are clear and easily understood.

## ENTRANCES

All entrances that are to be closed shall be noted as such in the comment section with the statement: "*CLOSE ENTRANCE LOCATED AT STATION ___.*"
Entrances are not addressed on the plot plan.

## LABELING

Existing and proposed centerlines are to be shown and labeled, do not show slabs. Also any station equations for the proposed centerline should be labeled.

When a Section Center is located on the plot plan it is not necessary to label section corners or ¼ corners.

All text should be oriented with the sheet or 90 degrees counter clockwise to the sheet.

A north arrow must be placed on each plot plan.

## USE OF PHOTO FILE

The photo file is to be used to show buildings, streams, and railroad lines **only**, if other information is desired it can be obtained from the plan sheets or additional sources. There are times that the building site will be away from our construction area and will not be available in the photo file. In this case the building site is to be indicated with a dashed line around the perimeter and labeled as such. An attempt should be made to locate the site with aerials or other available information.

## PROPERTY LINES

The entire property limits must be indicated on the plot plan. If the ownership is too extensive to fit on the plot plan a small insert (thumbnail sketch) will be necessary to indicate the total ownership (see directions towards back of packet). In some cases it will be necessary to have two plot plans.

## URBAN PLOTS

Urban plot plans need to indicate the appropriate lot, block, subdivision and city involved with the acquisition area.

## EXCESS LAND

The plot plan will include future right of way lines since they are on the same level as the proposed right of way lines, however, this line is not to be stationed or labeled on the plot plan. The summary sheet is to include the acreage breakdown for excess land, borrows etc.

## EASEMENTS

Significant existing easements such as pipeline easements, ingress/egress easements etc. should be shown on the plot plan and addressed in the comment section of the summary sheet. Other common easements such as telephone and waterline easements do not need to be addressed.

## DRAINAGE DISTRICTS

Drainage districts do not require a plot plan. All information is contained in the summary sheet. In the comment section note the person or entity that has control of the drainage district and the respective telephone number, also list the type, size and location of the existing structure and the type, size and location of the proposed structure. The intent is to enable the Agent to explain to the responsible party what is happening in regard to the drainage district and obtain an agreement with them.

## RAILROADS

Railroads do not require a plot plan. The summary sheet should contain information indicating the type of acquisition sought whether it is of a permanent or temporary nature. The intent is to enable the agent to explain our design and impact to the railroad so that an agreement can be obtained.

## ADDITIONAL LENGTH OF DRIVE

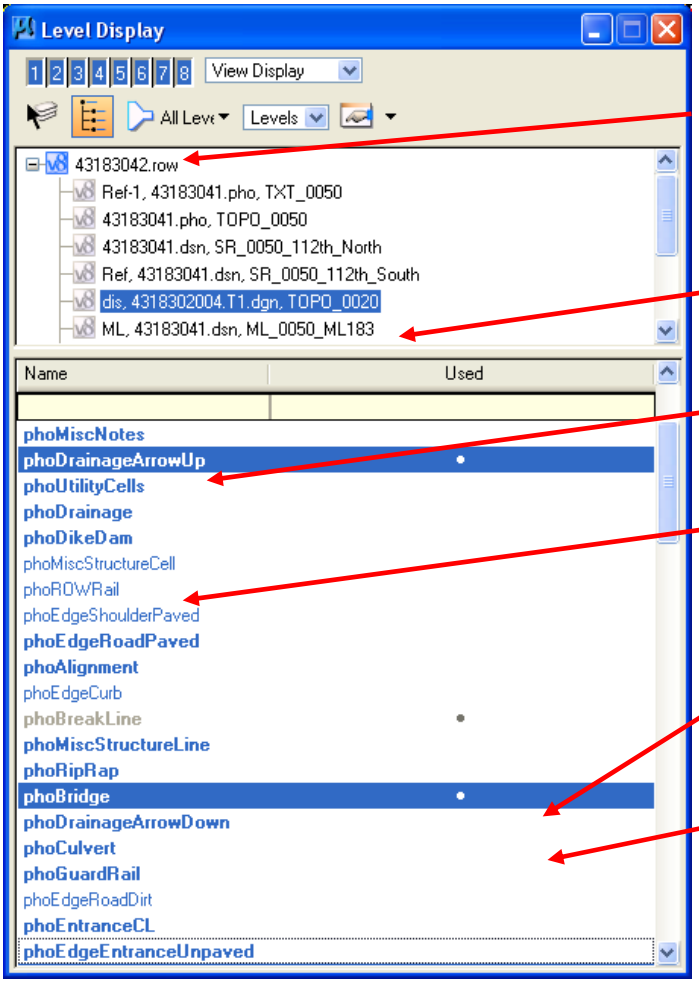
Additional length of drive is required when the existing entrance **to a residence** is being closed and a new relocated (longer) entrance is to be constructed. This is figured as a linear distance along centerline and is determined by measuring the difference between a common point of the existing and proposed entrance and the existing and proposed right of way lines respectively.

Both the plot plan and summary sheet are to include a location path so they can be easily accessed.

This information is intended as a guide in the construction of plot plans and summary sheets additional information can be found in the Right of Way Design Manual.

## 1. Aligning plt file to correct location

i. Open the level display manager: Press **<F3>** or
(Menu bar): **Settings > Level > Display**




The top file is your active file name with all other reference files falling below it in the typical 'Windows' folder structure.

By clicking on each of the file names the display below will change and show the files contained within that reference file.

Bold text means the level contains elements.

Normal text means the dgnlib names the level but no elements have been placed on that level.

Highlighted shows that the level is turned ON.

Unhighlighted shows that the level is turned OFF.

ii. Click on the **00000000.plt** file and turn on **rowdsnPSPlotArea**

*This makes a light blue box appear in the drawing area of the plot plan sheet.*

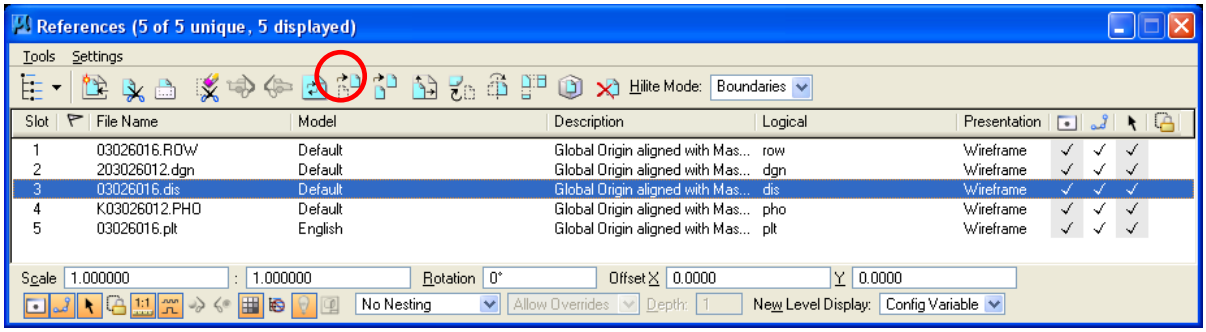
iii. Using the **copy** command, copy the blue template box and place it over the area where the plat is to be located.

*Be sure the area shows at the very least a section corner, center section, etc. so that customers using the plot plan can determine a definitive location.*

*Now the **plt** file needs to be moved to the location determined by the placing of the blue box.*

## 2. Moving the plt file

i. Using the Reference file dialog box **<F1>,** choose **Tools** > **Move** or the **icon** below




ii. Snap to one of the corners of the blue box of the **(.plt)** file

iii. Match blue boxes up by dragging **(.plt)** file to the area and snap to the corresponding corner of the live copy of the blue box

*The (.plt) file will turn purple once it is placed. It will remain purple until the reset button on the mouse is pressed, thus ending the move reference tool*

*iv.* Once positioned correctly delete the active copy of blue box

*If the blue box is not the correct size to show the property, acquisition area, and a section marker, then the (.plt) file will need to be scaled*

## 3. Scaling the plt file

i. Decide which scale is to be used to most efficiently show ownership, location and taking.

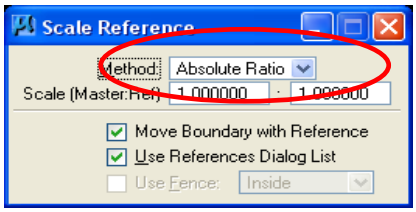
ii. Scale reference **(.plt)** file, using : 1:1, 2:1, 2.5:1, 5:1, or 10:1 (if metric file)
1”=100’, 200’, 400’ or 800’ (if english file)
**If ownership too large, do thumbnail—see back pages for instructions**

iii. From the Reference Files Dialog**(F1)**: **Tools** > **Scale** or the **reference scale icon**

iv. Change the **Method** type to **Absolute Ratio (Very important)**

v. To enlarge the **(.plt)** file change the first number or to down-size the **(.plt)** file change the second number

vi. Enter a data point on the design plane to scale about that point



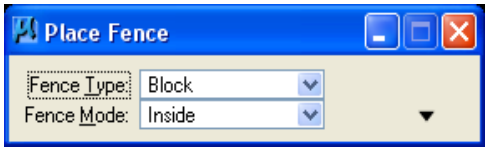

*Towards the bottom of the reference dialog box are 2 entry boxes showing the scale. DO NOT change the scale at this location. It will move the **(.plt)** to an unknown location*

*After re-sizing the **(.plt)** file some adjustment of location may be needed, refer back to step 2*

## 4. Clipping the other ref. files to summary sheet

i. Choose the **fence** tool & change the fence mode & type to the following:

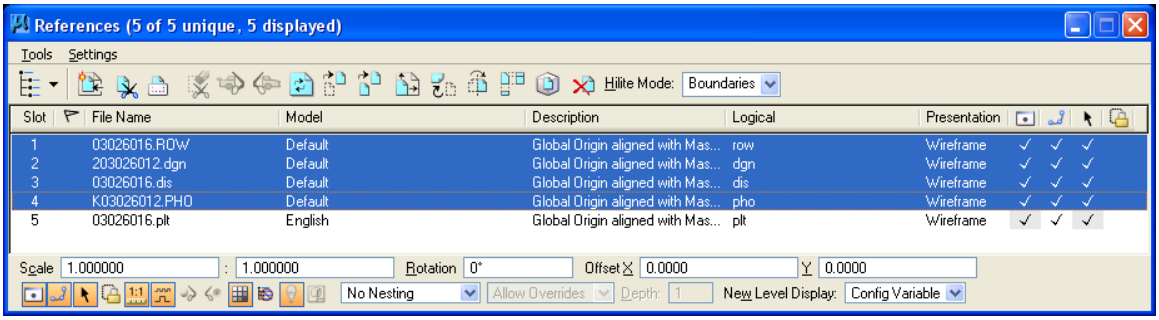
Fence type: **block**
Fence mode: **clip**




ii. Snap to one of the upper corners of the blue box and accept

iii. Drag fence to opposite lower corner, snap and accept

iv. Using the reference dialog box again, highlight **all** files except the **(.plt)** file by clicking on each file name while holding down the **<Ctrl> key**



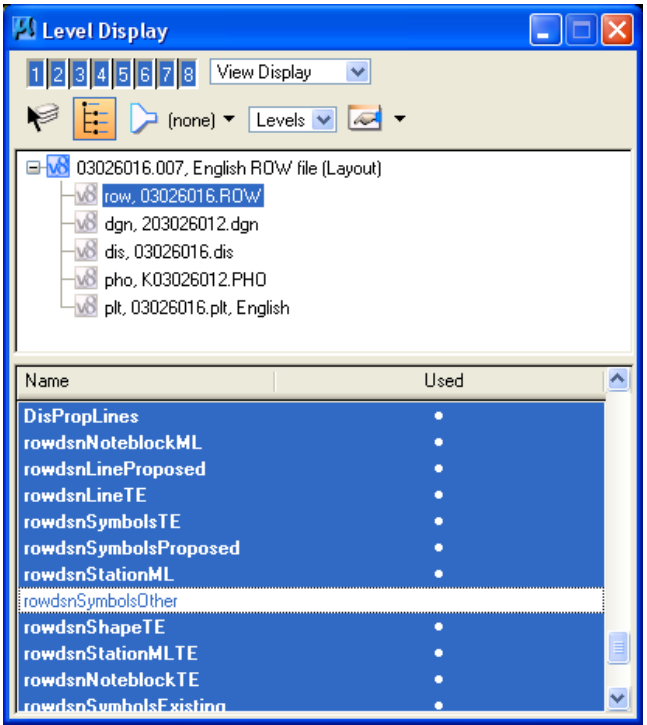

v. In the Reference Files dialog box, choose **Tools** > **Clip boundary** or choose the **reference clip icon**

*This will clip all file boundaries to the blue box*

*vi.* Shut off fence by clicking fence icon again

## 5. Other files & appropriate levels

*Below is a list of the appropriate level names for each of the reference files that need to be turned on (highlighted black). Choose each file separately and turn on/off the levels.*




**Turn on the following levels:**

**i.** **(.dis) file:**
DisRowExist
DisSecLines
DisPropLines
DisSecQuarterLines
DisLotLines
DisCorpLines

ii. **(.dsn) file:**
dsnAlignment

dsnAlignmentTic

iii. **(.pho) file**
phoEdgeBank
phoAlignment
phoBuilding
phoMiscStructureLine
phoRailroad

iv **(.row) file**
rowdsnLineProposed
rowdsnLineTE
rowdsnShapeUF
rowdsnShapeTE
rowdsnShapePE
rowdsnShapeFeeTitle
rowdsnStationSRTE
rowdsnStationSR
rowdsnStationMLTE
rowdsnStationML
rowdsnSymbolsPL

*Many of the (.row) levels will be shut off in another step, but the above levels should be turned on to start a plot plan and summary*

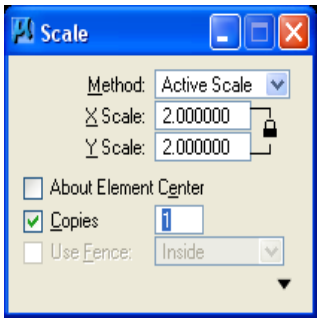
## 6. Property info

i. Copy the property lines from **DisPropLines** to **rowdsnPSProperty** using fence copy or copy individual elements
ii. Press **<esc>** key which puts cursor in key-in box
iii. Type **lv=rowdsnPSProperty** and press enter
iv. Then accept with a click of the mouse
v. After all property lines pertaining to the parcel are copied, shut off level **DisPropLines**

*The only property lines shown on the plot plan are those of the parcel the user is creating The next step is to put property arrows along the entire shape of the property. This can be accomplished numerous ways. Below is an explanation on how to use the existing property arrows that were put in the (.row) file*

vi. Using the **scale** tool, scale change to Active scale to match that of the Master: Reference ratio of your (.plt file)

*(i.e. If your (.plt) file was scaled up to 2:1, then set your Active scale to 2 on both 'X' & 'Y')*




vii. Check the box marked 'Copies' and enter a '1'
viii. Click on each existing property line and a scaled up copy of the cell will appear. Align it properly along each property line

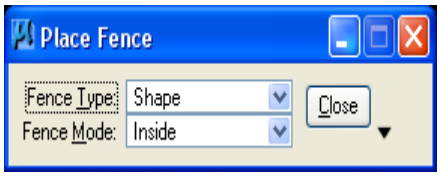
## 7. Finalizing reference files

i. Make sure the ref. File (**.row**) is highlighted and choose the **fence** command

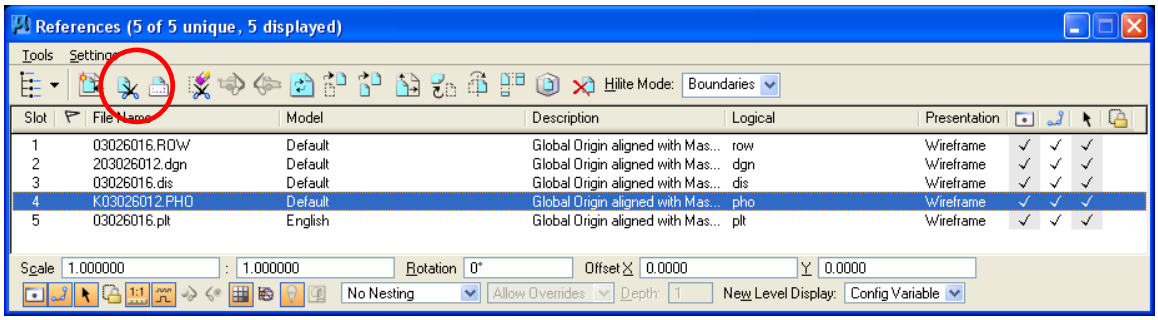
ii. Choose fence type **Shape**
Choose fence mode **Clip**

iii Outline the entire property shape with a fence, be sure to close fence

iv Use the ref. Files dialog box choose **tools > Clip Boundary**




*Clipping the (.row) file this way will show only the proposed row contained only within the boundaries of that parcel*




ii. Now highlight only the (**.pho)** file in the ref. Files dialog box

iii. Once again choose **fence** command; use the same type and mode as before

iv. Fence around the entire property boundary and the existing row for all roads

v. Again choose the **Clip boundary** ref files tool

*The purpose for fencing the (. **pho)** in this manner is to show not only all buildings, structures etc. contained within the parcel, but also to show all existing centerlines of roadways near and adjacent to the parcel. This helps to specify location of the parcel and shows roadway realignments.*

ii. Shut off the fence by clicking on the fence tool

*No other clip bounding is necessary to any of the remaining reference files*

## 8. Hatching appropriate areas

*The fee title hatching process can now be automated using the specified color and pen tables copied into the project directory at the time of setting up the original project files*

i. With the **fill** attribute on, turn on the shapes for acquisition
Reference files **(F1)**: **Settings > Levels**

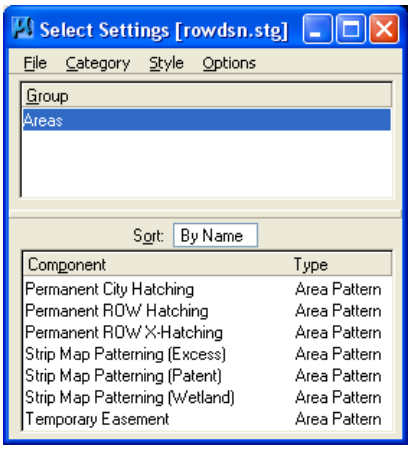
ii. Make sure the following levels are turned on in the **row** reference file:

rowdsnShapeTE
rowdsnShapePE
rowdsnShapeFeeTitle
rowdsnShapeUF

*Row level rowdsnShapeFeeTitle will remain on. The plot files specified in IPLOT will recognize the fee title shape attributes, and automatically shade the shape:*

iii. In the case of T.E, P.E., or city acquisition,

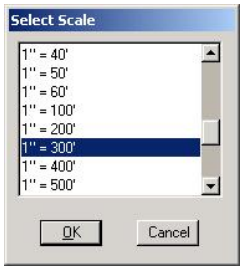
follow the steps below using the patterning to from the Settings Manager (F4)




*When dealing with a P.E. on a plt file scaled at 100 or 200, simply turning off level rowdsnShapePE, leaving the rowdsnHatchPE on.*

iv. Choose the desired patterning style.

v. Choose the appropriate scale by going to Category → Scale.
(example: plt file is scaled to 3:1, then choose 1" = 300')




vi. Click OK.
vii. Once again click on the pattern you choose prior to the scaling.

viii. Click on the shape you wish to hatch.

Click once more to accept the hatching.

ix. Once all the shapes are hatched, shut off row reference levels **rowdsnShapeTE and rowdsnShapePE**

## 9. Station Callout Labeling

*This is a very important part of the plot plan. The station call-outs need to be correct so use the copy procedure discussed below instead of typing out new text*
*This section was written with the stations being put into the ROW file using **GEOPAK***
*If GEOPAK was not used, ask your squad leader for assistance*

i. Using the GPK attributes tools (English/Metric), click on the appropriate scale

*This tool will set the correct attributes of the label meaning it sets Level name and all by-level properties*

ii. Make sure all appropriate levels for stationing are turned on.

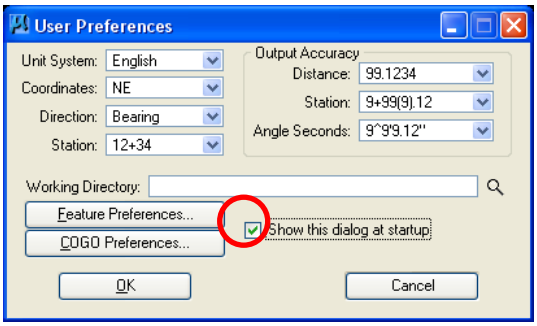
iii. Now, using the **copy** command, copy all appropriate station call-outs, using the **<esc>** key followed by typing lv=**rowdsnPSText** into the key in box

*This step copied the GEOPAK call-outs to active file level rowdsnPSText. Once these elements are active they now can be modified without the danger of file corruption.*
***DO NOT** try to modify or alter the original call-out. This option can be done, but it will create a bad element in your file and eventually the file will crash.*
*Now the user must open a session of GEOPAK to continue*

iv. Choose the below pull-down menu:
**Applications: BENTLEY CIVIL: Activate BENTLEY CIVIL**

v. The below dialog box should appear, if not select the following pull down menus:
**Applications: ROAD: User Preferences:**

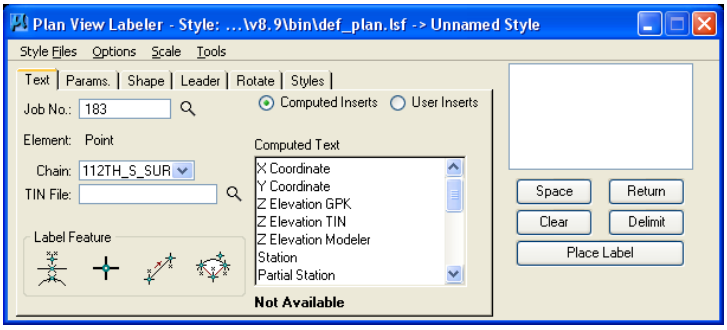
***Make sure the "Show this dialog at GEOPAK startup" is CHECKED, if not do so.***



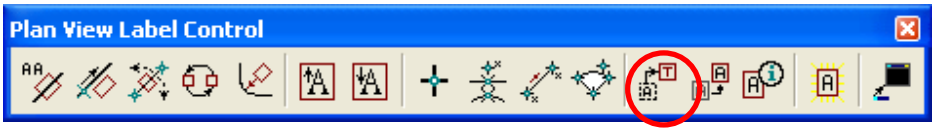
*For the importance of doing plats & summaries, the users DO NOT have to set all projects and/or COGO related preferences (job no., directory no., etc). Although getting into the habit of always changing these preferences is a very good practice. But whenever the user is creating a ROW file, ALWAYS make sure all project preferences are correct.*

***It is very important that for this next step, all station callout levels must be shut off. The reason for this precaution is to be sure that the user is working with the COPIED callout label, NOT THE ORIGINAL GEOPAK LABEL!***

vi. Once again go along the top of screen to your pull down menus:
**Applications: ROAD: Plan Preparation: Plan View Labeling:**



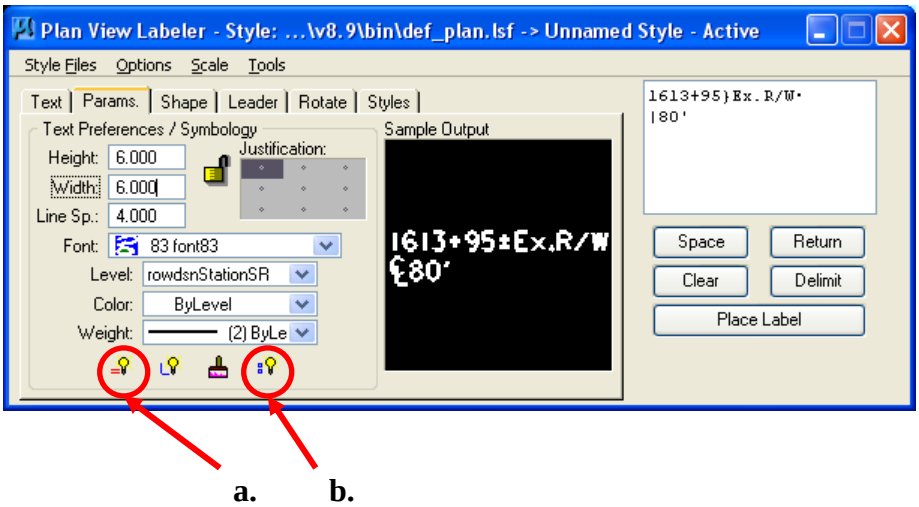

vii. Next go to the Plan View Labeler dialog box. Go to the following top pull down menus on the Plan View Labeler box:
**Options: Label Tools:**




viii. Using the **Move Label** tool (as circled in the above picture), click once on the tool, then ONCE on the station you wish to be modified.

*The station callout should appear in the key-in box in the upper right hand corner of the Plan View Labeler dialog box, If it does not then try clicking once again on the desired station. Also the station callout on the plat should turn to a different color.*

ix. Along the top of the Plan View Labeler dialog box, select the **Params**. Tab

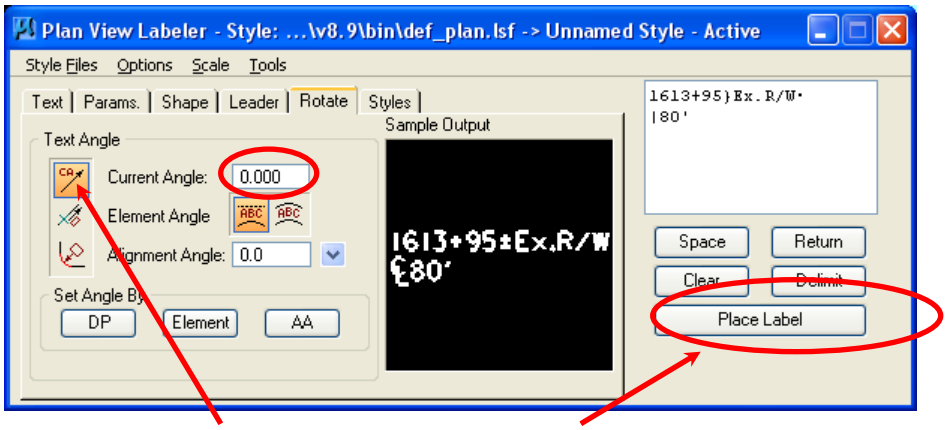



**a.** **b.**

a. Click first on the **Set by Current** button to set text height & width, color, level name, weight and font style. (Color and Weight should be set to ByLevel)

b. Then click on the **Set All Parameters** button to set Parameters, Shape, & Leader to the same current attributes.

*All labels need to be horizontal, never vertical. So the last step is to click on the **Rotate** tab in the Plan View Labeler dialog box*



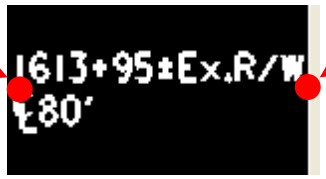

**step c.** **step d.**

c. Choose the **Current Angle** tool and set to **0.00** degrees.

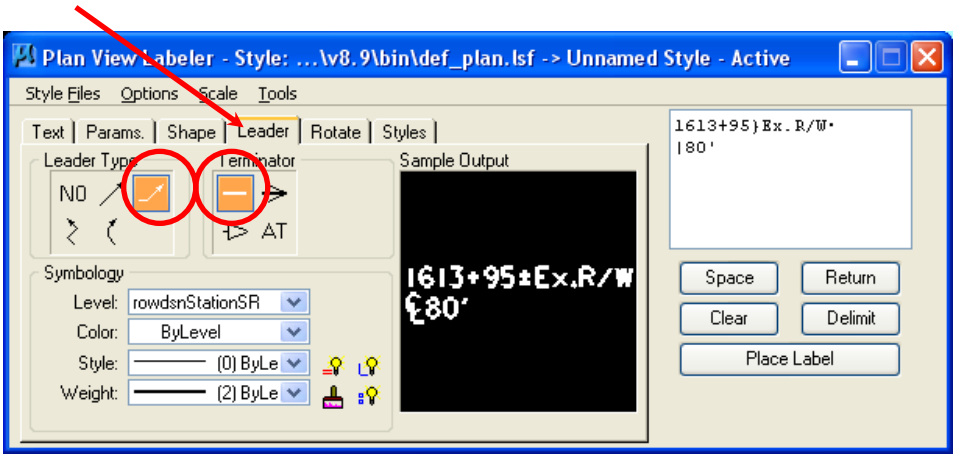
d. Lastly click on **Place Label**, choose which side to pull your delimiter line thru, click to choose and pull delimiter thru and click to finalize

*The delimiter line may be a little tricky. When placing the leader line remember that the labeler is asking for a starting point and an ending point for the labeler. Once the start position is chosen, drag line thru to choose length, and terminate the line. (See below)*

**ending point** **starting point**




e. Click on the Leader tab and make sure the below circled items are highlighted

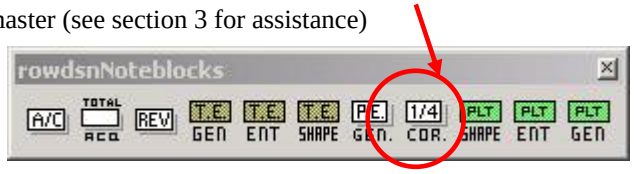



*Simply click on the starting point and drag line straight thru to the ending point. Reverse sides if you desire to have label point the other direction* ***(See back pages for examples)***
*It is also important that leader lines DO NOT cross over any hatched area. Also try to move call-outs around enough so that the leader lines do not cross important elements like centerlines, buildings, etc. but sometimes it is unavoidable. Use judgment* ***(see back sheet for examples)***

## 10. Finalizing the plot plan

*The last step to doing a plot plan is very important also. It consists of putting in all the necessary notations, etc. that need to be placed. Below are the tasks that should be on every plat:*
***(See exhibits 1 and 2 for examples of completed plot plans)***

i. **Section Cor. Markers** Using the **rownoteblocks** tool palette located on the lower portion of the r/w2 tool bar choose the **¼ corner marker**. Scale this block to the same ratio of plat/master (see section 3 for assistance)




ii. **Section or ¼ sec.** These notes are merely text entered by the user. Make sure the angle of the text is 45 degrees and weight of text changed to (1). Also the size of the text can be enlarged slightly. These labels are meant to be subdued in the background, not be bold and interfere with the plat. (see example on back page)

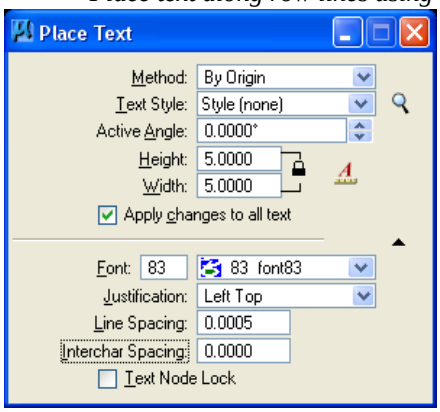
iii. **North Arrow** There usually is a north arrow template along the left side of the plat sheet. Simply copy the existing arrow in the UPPER RIGHT corner of design area. If it does not fit it may be placed in the upper left. NEVER place arrow in lower corners or middle. The north arrow is also part of the **rowsymbols** tool palette

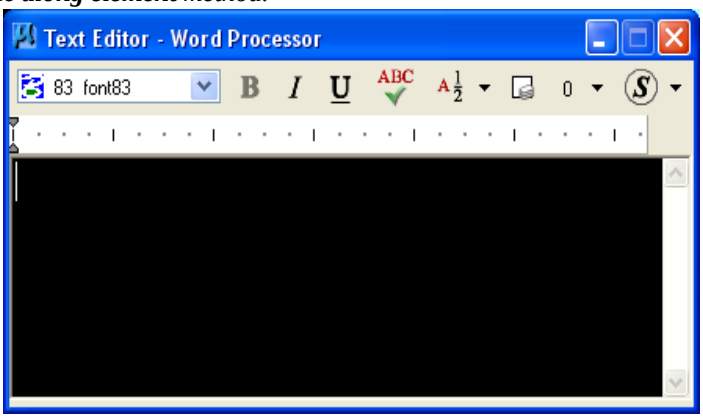
iv. **Easement Notations** Using the **rownoteblocks** tool palette located on the lower portion of the r/w2 tool bar choose the appropriate notation block. Scale these blocks to the ratio of plat/master (see section 3 for assistance)
After the block is placed the data field entry tool is invoked. Merely click on the data fields to be entered. All the acreages should be entered on the plot plans as well.

v. **Centerlines** All mainline and side road centerlines should be labeled appropriately.

Use the **smartmatch** tool and choose the attributes of the text at the bottom of the plot plan. This will match the height, width, etc of the text fields

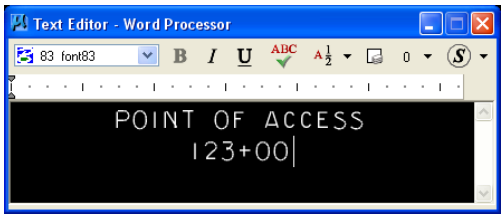
vi. **Existing R/W Lines** Labeling the existing ROW lines are very important. Using the text tool and small text (*size will vary with plat scale*) using **DisRowExist** bylevel attributes type the following: **EX.R/W**
*Place text along row lines using the **along element** method.*




vii. **Access Location** The access stations should be entered with the same attributes as the station callouts and or the county/project no. at the bottom of the plat sheet

a. Once these attributes are set, make sure the justification is set to center, use the **text** tool and type POINT OF ACCESS and the station.




b. Align the text with the access location arrow, using which ever rotation method you are most comfortable with.

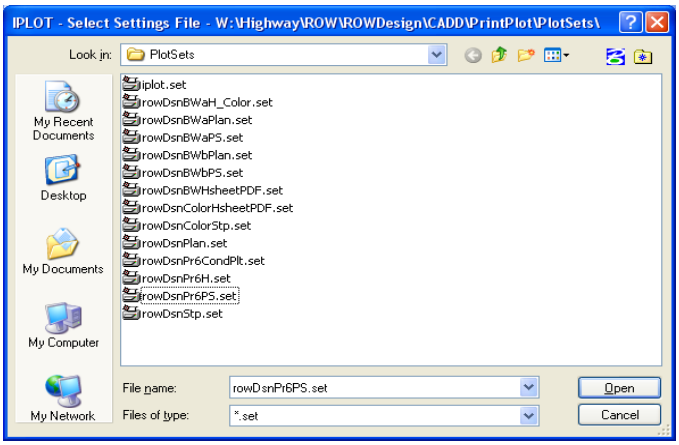
viii. **Data field entries** With the data fields attribute checked earlier, there should be dashed lines at the top of the plot plan sheet where parcel no., owner, section, & scale can be filled in. Using the **copy** command copy along with the key-in box <**esc**> copy these data fields to **rowdsnPSDataFields**
Now click **tools** > **main** > **text**

a. Turn off reference file level **rowdsnPSDataFields**
b. Using the **Fill in Single Data Entry** tool will bring up a text editor window. Click on one of the copied data fields, now enter the appropriate data in the text window and press the <**enter**> key.
**c.** Shut off the data fields attribute by pressing **<Ctrl B>** and clicking the data fields box and selecting **apply**

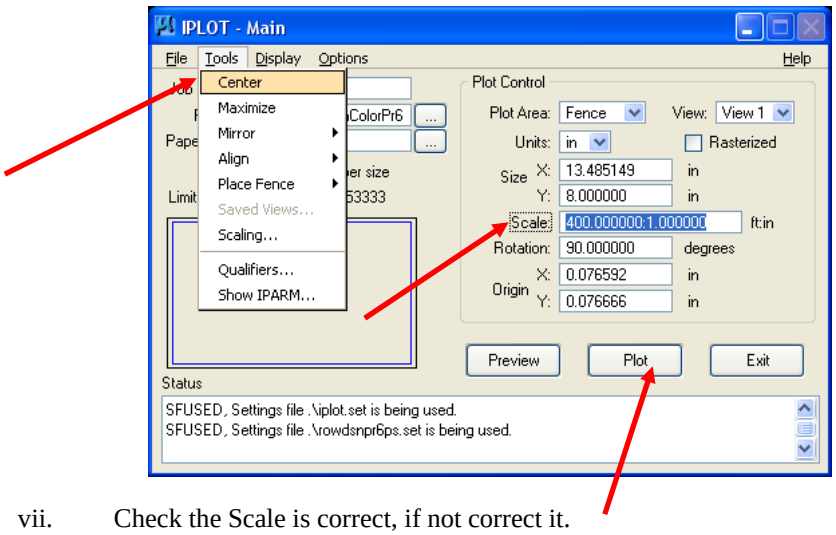
## 11. Plotting the plat and summaries

*Once all is complete, hit the <**f11**> key to bring up the **IPLOT** program.*

i. In the **IPLOT** window go to Tools **>Fence > Block to** activate the fence command.
ii. Snap to the upper left corner line within the plot plan and accept.
iii. Drag the fence out and snap to the opposite corner (lower right) and accept
iv. Choose a plot *Settings* file **File > Select Settings**




v. Choose ANY (.set) file with "PS" in the name.
*This will set all appropriate attributes to plot a plot plan and summary sheet in black & white*

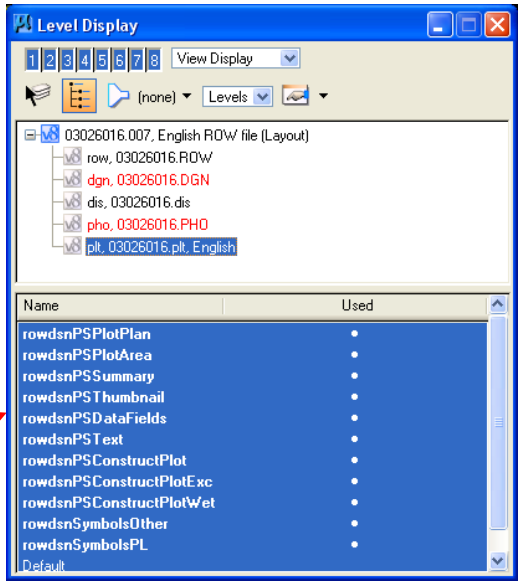



vii. Check the Scale is correct, if not correct it.
viii. Select **Tools** > **Center**
ix. Select **PLOT** button then exit

# CREATING THUMBNAIL SKETCHES

1. **Placing the blue box**

Turn on level **rowdsnPSThumbnail** in the **(.plt)** file

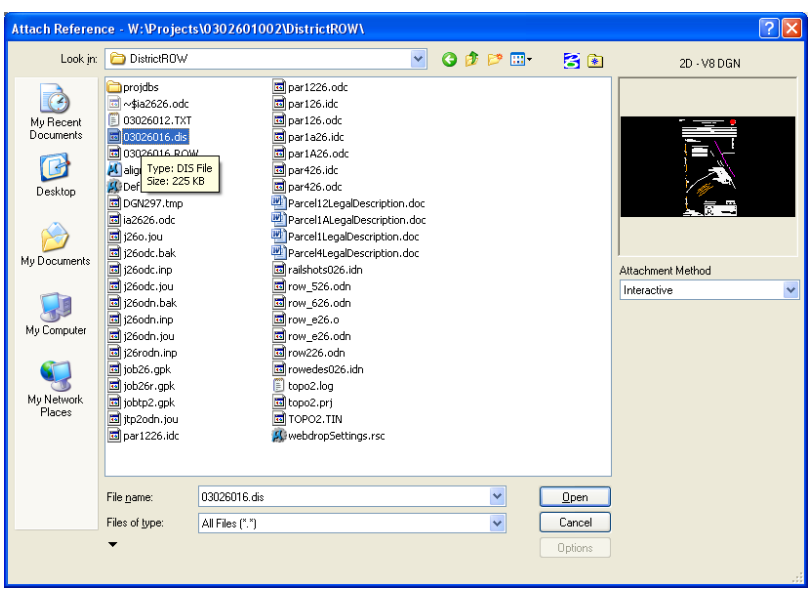



*Two blue boxes should appear within the design field of the plot plan*

Use the **copy** command, copy one blue box to the active level **rowdsnPSThumbnail**
Now shut off level **rowdsnPSThumbnail** of the **(.plt)** file

2. **Attaching reference files**

i. In the reference dialog box choose **Tools > Attach**

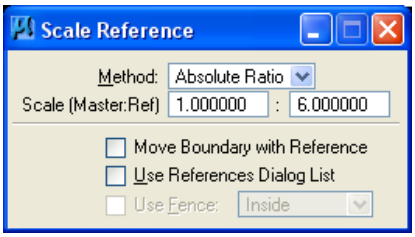



ii. Attach another **(.dis)** file *or (.row) if property lines were added*
ii. Give it the logical name **disthumb** *(or something similar)*
iii. Repeat this process again but attach another **(.dsn)** file: **(dsnthumb)**

3. **Resizing and Clipping ref. files**

i. Open Reference file dialog box Press **<F1>** or go to **File** > Reference
ii. Highlight the **disthumb & dsnthumb** files while holding down the **Ctrl** key
iii. In Reference file dialog box, choose Tools **> Scale**
iv. Change the **second** number to 6.0 *(Any number is good but this is usually a good start)*

*This will scale down the two files so that the entire property, as well as some section information will fit in the small blue box.*

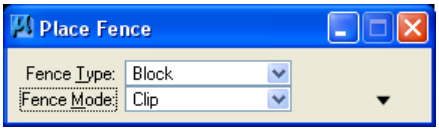



*Now the files will need to be moved into place*

v. In the Reference file dialog box go to **File** > Move

***It is very important that BOTH files are still highlighted, BEFORE moving them***

vi Move the files so the entire property in question is contained within the blue box
vii. Now select the **fence** command: Fence type **Block**
Fence mode **Clip**




viii. Data point to a corner of the blue box, accept and drag to opposite corner of box and accept
ix. In Reference file dialog box go to **File** > Clip **Boundary**

## 4. Finalizing the thumbnail

i. Using the ref. files dialog box, highlight only the **dsnthumb** file
ii. Turn off all levels except **dsnCenterline**

*This is the proposed centerline of the design; it will help show location of property in respect to the proposed alignment*

iii. Now highlight only the **disthumb** file

iv. Turn off all levels except **DisRowExist, DisSecLines, & DisPropLines**

v. Using the **copy** command, copy the correct property line information

vi. Copy information to **rowdsnPSProperty:** <key-in> **lv=rowdsnPSProperty**

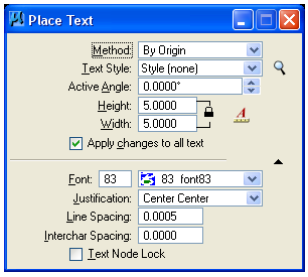
vii. Once all property information is copied shut off **disthumb** level **DisPropLines**

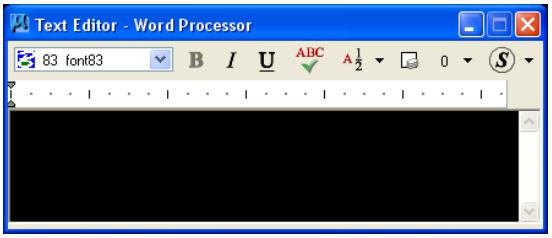
viii. Choose the **Smartmatch** command and click once on either the county name or project number at the bottom of the plat sheet

*This will select all attributes of the text, including the size and type of the text*

iv Lastly use the **text** command type the following: TOTAL OWNERSHIP

(NOT TO SCALE)

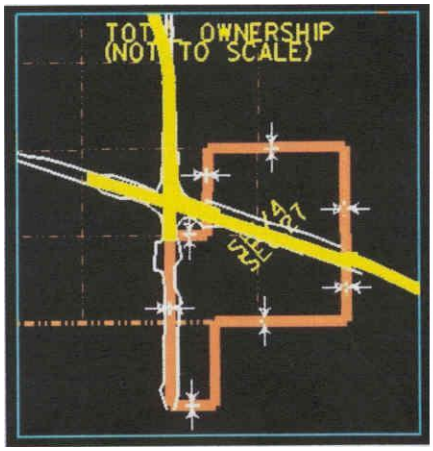



v. Now place the text in the correct place within the blue box

*The thumbnail should look like the example below*

**On-Screen**




**Printed**

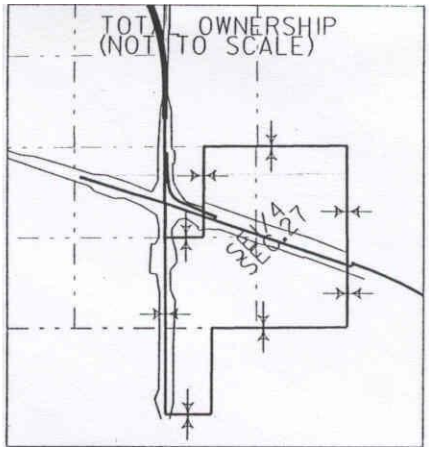



**EXHIBIT 1**

IOWA DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT
PLOT PLAN

0803001004\row\ 08030070. 002

PARCEL NO.: 2

OWNER: JOHN Q. SMITH

SECTION: 31 T 84 N-R 28 W.

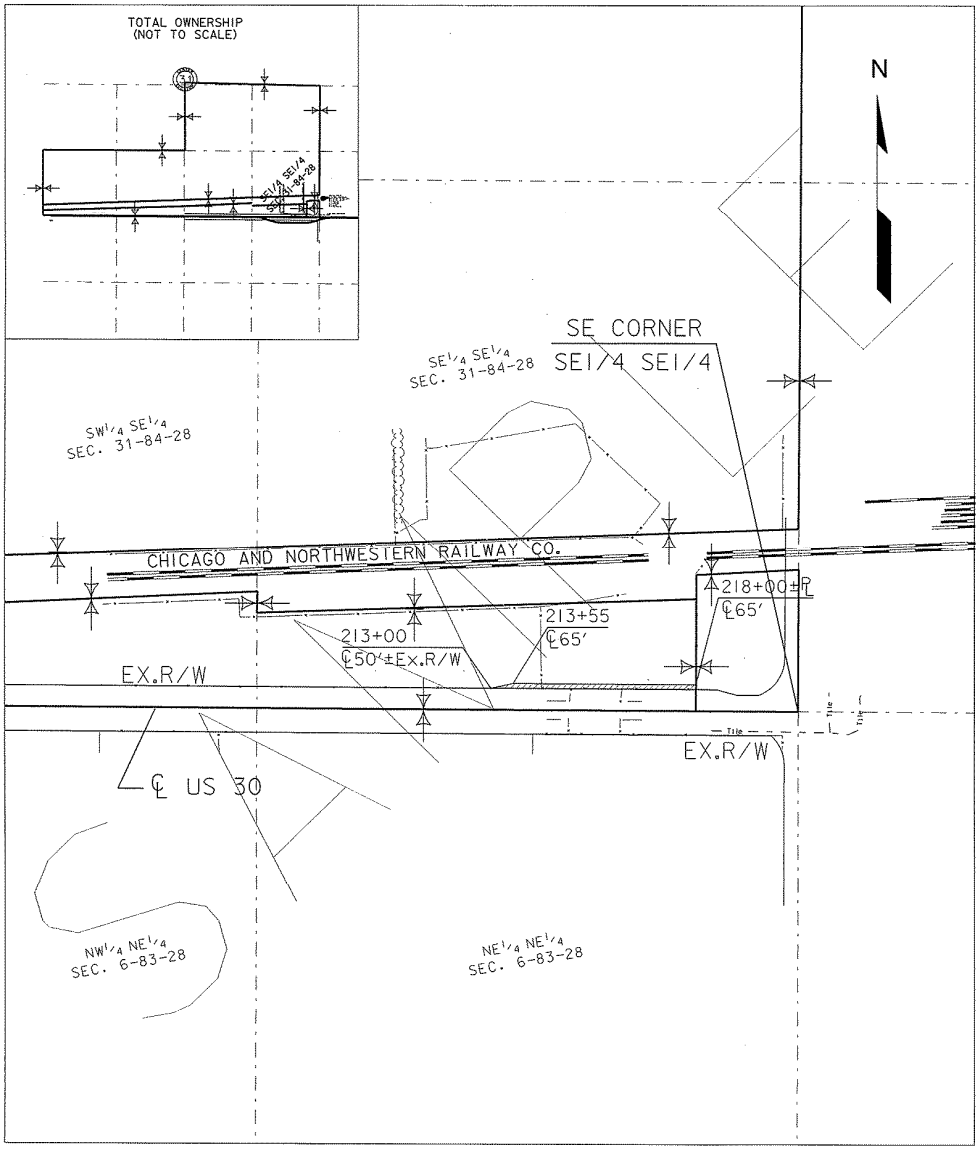
SCALE: 1" = 300'

LEGEND

W.D. OR EASEMENT LINE:

ACCESS LOCATION POINT:

PROPERTY LINE:




COUNTY: BOONE

PROJECT NO.: NHSN-30-4(70)- -2R-08

# EXHIBIT 2

IOWA DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT
PLOT PLAN

29061020C99\row\j290612060.012

PARCEL NO.: 12

OWNER: JOHN Q. SMITH

SECTION: 6 T 69 N-R 2 W.

SCALE: 1" = 100'

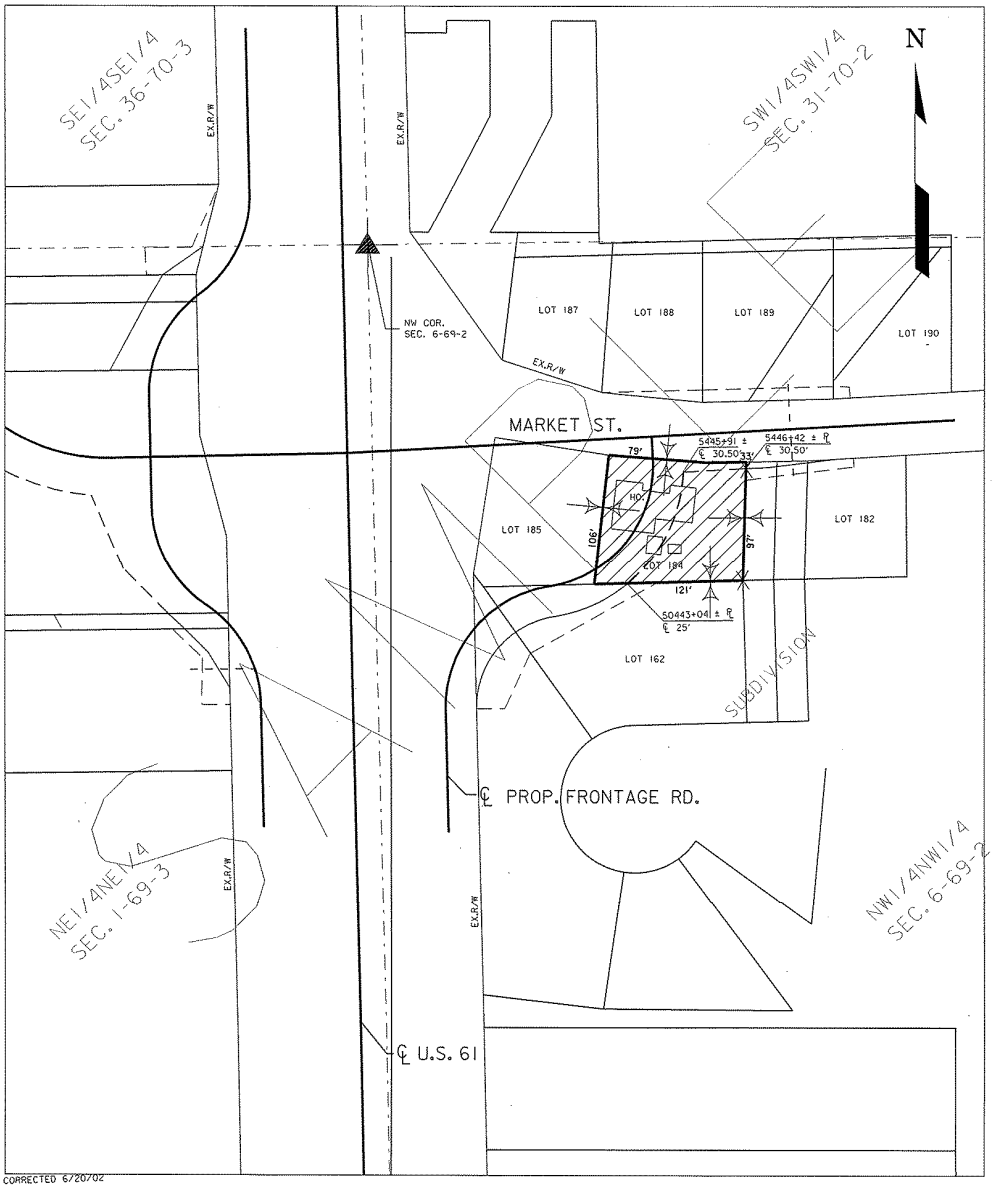
LEGEND

W.D. OR EASEMENT LINE:

ACCESS LOCATION POINT:

PROPERTY LINE:

CITY OF BURLINGTON




CORRECTED 6/20/02

COUNTY: DES MOINES

PROJECT NO.: NHSN-61-2(60)--2R-29

# APPENDIX C

# An Analytical Approach to Determine Ownership of Abandoned Railroad Right of Way

# AN ANALYTICAL APPROACH TO DETERMINE OWNERSHIP OF ABANDONED RAILROAD RIGHT OF WAY

JULY 1988

OFFICE OF RIGHT OF WAY
Iowa Department of Transportation

# An Analytical Approach to Determine Ownership of Abandoned Railroad Right of Way

Administrative policy provides that it is the responsibility of Right of Way Design to determine who owns land needed for right of way purposes for highway and other transportation public works projects. This determination is necessary so that the property can be appraised and purchased or acquired by condemnation. The acquisition of right of way often requires the purchase of land which was formerly used for railroad right of way purposes.

It is necessary that Right of Way Design establish what interests exist and why certain individuals own abandoned railroad right of way while others do not. The problem of determining who owns what is complicated by the manner in which the original right of way was acquired by the railroad, whether by fee or fee with possibility of reverter, or by easement. Determination of ownership of abandoned railroad right of way is further complicated by the numerous changes to statutory provisions that relate to the disposition of or title to abandoned right of way.

This analysis is intended, 1) to provide a systematic approach to determine the nature of the railroad interest, 2) to provide a means of determining which persons other than the railroad own the abandoned railroad right of way, 3) to establish a common method to determine what these ownership interests are and from whom they may be acquired, and 4) to provide some procedural assistance to Right of Way personnel for clarifying and recording title as authorized by law.

Although this analysis makes references to legal authorities to clarify positions taken and conclusions reached, it is not intended to be an authoritative brief. We recognize that it may be necessary in some instances to obtain specific opinions of title from the Attorney General to support or concur in title determinations made through the application of this analysis. We also recognize that in some instances we may not be certain about title judgments which are made until final disposition by the courts. It is our intent to use this analysis to facilitate communication with the Attorney General’s Office and with legal counsel for property owners. This analysis will serve its purpose if it helps us to identify title issues and to avoid or reduce title disputes arising out of railroad abandonments.

The Attorney General’s Office has reviewed this analysis and concurs in the use of it for the purposes for which it is intended.

Treva T. Petersen
Closing Agent
and
James E. Graham
Adminstrative Manager
Office of Right of Way

TABLE OF CONTENTS

Page

I. Deed with Reversionary Provision 1

A. Prior to July 4, 1945, and Abandonment Prior to July 1, 1980 1
B. After July 1, 1945, but prior to July 1, 1959, and Abandonment Prior to July 1, 1980 1
C. After July 1, 1959, and Abandonment Prior to July 1, 1980 1
D. Prior to July 1, 1959, and Abandonment After July 1, 1980 2

II. Easements 2

A. By Condemnation 2
1. Abandonment prior to July 1, 1980
2. Abandonment after to July 1, 1980 and prior to July 1, 1983
3. Abandonment after July 1, 1983

B. By Document 3
1. Abandonment prior to July 1, 1980
2. Abandonment after July 1, 1980, and prior to July 1, 1983
3. Abandonment after July 1, 1983

C. By Prescription 5

III. Deed without Reversionary Provision 5

NOTES 6

DEFINITIONS AND EXAMPLES 7

1. Deed with Reversionary Provision
2. Deed of Easement without Reversion
3. Deed of Easement with Reversion
4. Deed without Reversionary Provision or Easement
5. Continuous Chain of Title to Deed Reversion Right
6. Continuous Chain of Title to Easement Reversion Right
7. Broken Chain of Title to Easement Reversion Right
8. Illustrations of Easement by Document

FORM - Affidavit of Ownership of Abandoned Railroad Right of Way 11

STATUTORY ATTACHMENTS 12

I. Railroad has Deed with Reversionary Provision, i.e. fee simple determinable (see Example 1):[1]

A. Deed to Railroad filed of record prior to July 4, 1945, and Abandonment[2] occurs prior to July 1, 1980:

1. Reversion holder[3] has fee subject to rights of third parties in possession, only if:

a. Reversioner shows continuous chain of title to underlying fee of Railroad right of way (see Example 5); and

b. Reversioner filed claim to extend his interest under Section 614.24 on or before July 4, 1966, preserving such interest; and

c. Reversioner filed like extensions every 21 years thereafter.

2. Railroad has fee, subject to rights of third parties in possession, if (1) above not complied with.

B. Deed to the Railroad filed of record after July 4, 1945, and prior to July 1, 1959, and Abandonment[2] occurs prior to July 1, 1980:

1. Reversion holder[3] has fee, subject to rights of third parties in possession, only if:

a. Reversioner shows continuous chain of title to underlying fee of Railroad right of way (see Example 5); and

b. Reversioner filed claim to extend his interest under Section 614.24 on or before expiration of 21 years following date of recording of deed preserving such interest; and

c. Reversioner filed like extensions every 21 years thereafter.

2. Railroad has fee, subject to rights of third parties in possession, if (1) above not complied with.

C. Deed to the Railroad filed of record after July 1, 1959, and Abandonment[2] occurs prior to July 1, 1980:

1. Reversion holder[3] has fee, subject to rights of third parties in possession, only if:

a. Reversioner shows continuous chain of title to underlying fee of Railroad right of way (see Example 5); and

b. Reversioner files facts of record confirming fee, i.e. affidavit of possession, and/or quiet title action (see last sentence, Sec. 614.24).

2. Railroad has no fee because the original 21 year period requiring the filing of a claim has not passed prior to the time of the abandonment and the reversion remains enforceable.

D. Deed to the Railroad filed of record prior to July 1, 1959, and Abandonment[2] occurs after July 1, 1980:

1. Reversioner has no fee unless he complied with subparagraph A(1), B(1) or C(1) above. Railroad obtained vested rights or ownership prior to July 1, 1980. Section 614.24 will be construed to apply prospectively only, to avoid causing an unconstitutional taking of Railroad property.

2. Reversioner has what appears to be a claim of right to assert his reversioner's interest by language of Section 614.24 as amended in 1980.

3. Because of probability of litigation over application of Section 614.24 as amended in 1980, title from Railroad is not merchantable. Party desiring title to right of way must deal with both the Railroad and the Reversioner.

Caveat: In most cases reversioner rights were not preserved under Sec. 614.24, and the Railroad has fee.

II. Railroad has Easement[4]:

A. Easement created by condemnation:

1. Abandonment[2] occurs prior to July 1, 1980:[5]

a. Reversion takes effect 8 years after abandonment or nonuse by railroad.
(i) During 8 year period, railroad can grant right of possession to anyone.
(ii) At end of 8 year period, neither the railroad, nor the grantee of railroad who had not operated a railroad on the right of way, has any further rights to the land.
(iii) If grantee of railroad is operating a railroad, reversion does not occur. (See Byker, supra.[5])

b. At end of 8 year period, reversion is automatic, and right of way reverts to the person who, at the end of the 8 year period, owns the land from which the right of way was taken.

c. If there are different land owners on each side of the right of way, each owner would take to the center.

2. Abandonment[2] occurs after July 1, 1980, and prior to July 1, 1983:

   a. Reversion takes effect at time of abandonment or nonuse by railroad.

   b. Right of way reverts to owners of adjacent properties at time of abandonment.

   c. If there are different land owners on each side of the right of way, each owner would take title to the center.
      (i) Proof of abandonment may be made by filing Affidavit under Sec. 327G.77(2) as amended in 1983 (see Form).

3. Abandonment[2] occurs after July 1, 1983:

   a. Reversion takes effect at time of abandonment, subject to railroad's right to remove track materials on the right of way, which right terminates <u>one</u> year after abandonment.

   b. Right of way reverts to owners of adjacent property at time of abandonment.

   c. If there are different owners on each side, each owner takes title to the center.

   d. Title to adjoining property owner may be perfected by filing an affidavit of ownership with County Recorder under Sec. 327G.77(2) (see Form).

B. Easement created by document (see Examples 2 & 3) (Reversion right is not extinguished by failure to comply with Sec. 614.36.See Sec. 614.36.):[6]

1. Abandonment[2] occurs prior to July 1, 1980:

   a. Reversion takes effect:
      (i) Immediately upon occurrence of conditions provided in original document for terminating the easement; or
      (ii) <u>8 years</u> after construction or use ceases (see subparagraphs under Sec. II, Paragraph A(1)(a), above).

   b. Reversion is automatic, and right of way reverts:
      (i) to persons showing continuous chain of title to the underlying fee (see Examples 6 & 7); [7] or
      (ii) to the persons who, at the time of reversion, are owners of the tract from which such right of way was taken.

c. If there are different land owners on eacn side or the right of way, each owner would take the property to the center.

2. Abandonment[2] occurs after July 1, 1980, and prior to July 1, 1983:

   a. Reversion takes effect:
      (i) Immediately upon occurrence of conditions provided in original document for terminating the easement; or
      (ii) On effective date of I.C.C. abandonment order.

   b. Reversion is automatic, and right of way reverts:
      (i) to the persons showing continuous chain of title, to the underlying fee (see Examples 6 & 7);[7] or
      (ii) to the persons who, at the time of reversion, are owners of the tract from which such right of way was taken.

   c. If there are different land owners on each side of the right of way, each owner would take the property to the center.

3. Abandonment[2] occurs after July 1, 1983:

   a. Reversion takes effect:
      (i) Immediately upon occurrence of conditions provided in original document for terminating the easement; or
      (ii) Upon removal of track materials to the right of way, or <u>one year</u> after final authorization for removal of track materials.

   b. Reversion is automatic, and right of way reverts:
      (i) to persons showing continuous chain of title to the underlying fee (see Examples 6 & 7);[7] or
      (ii) to persons who, at the time of reversion, are owners of the <u>adjacent</u> property.

   c. If there are different owners on either side, each owner takes to the center of right of way.

   d. Title may be perfected by filing an affidavit of ownership with County Recorder under Sec. 327G.77(2) (see Form).

See Example 8 for illustrations.

Caveat: In most cases, no person can show continuous chain of title to the abandoned right of way because fact of ownership has become “lost” by passage of time or by belief that ownership had ceased. In fact, the only persons who can make claim of ownership are the adjacent property owners. The disposition of right of way as shown by Illustration III is remote; disposition generally is made as shown by Illustration VI.

C. Easement by Prescription (no instrument of record):

1. With no record of the railroad’s interest, we presume that the Railroad held an easement which was acquired by prescription in the manner provided by Chapter 564, Iowa Code, or by common law prior to enactment of Chapter 564.

a. See Sec. II, Paragraph A, above for disposition of the right of way.

Caveat: Generally, right of way abandoned prior to July 1, 1987, has reverted to adjacent property owners and possessory rights have terminated. The exception is when grantee of railroad is operating a railroad.

III. Railroad has Deed without reversionary provision, i.e. fee simple title (see Example 4):

A. Railroad can convey right of way land whenever it desires to do so and to whomever it wishes.

NOTES:

1. Many courts have found that documents labeled as deeds "for the construction of a railroad" with a reversionary clause conveys an easement. When viewing documents to railroads, any reference or restriction as to use or purpose raises the question of whether or not the railroad has acquired any fee or has acquired an easement only. See Martel, Acquiring Abandoned Railroad Right-of-Way in Iowa, 30 Drake L. Rev. 545, 554, fn. 95 (1981). See Hawk v. Rice, 325 N.W.2d 97 (Iowa 1982).

2. Abandonment is by Order of the Interstate Commerce Commission, or the State Transportation Regulation Board, or by relocation of the line.

3. A reversion holder is either an heir at law or beneficiary, or an assignee, of the original grantor to the railroad.

4. Easements may be lost by nonuse or abandonment. The clearest case of this is where a rail line is relocated. This principle became Iowa statutory law in 1873. Sections 327G.76 and 327G.77 preserve this concept by continuing to acknowledge that these property rights (easements) are extinguished by cessation of service by the railroad.

5. See Byker v. Rice, 360 N.W.2d 572 (Iowa App. 1984); Williams, et al, v. Caskey, et al, Iowa Ct. App., Docket No. 4-220/93-1294, filed 9/6/84, citing Brugman v. Bloomer, 234 Iowa 813, 816, 13 N.W.2d 313,314 (1944), Chadek v. Alberhasky, 253 Iowa 32, 34, 111 N.W.2d 297, 298 (1961); and Atkin v. Westfall, 246 Iowa 822, 828, 69 N.W.2d 523, 527 (1955).

6. An easement is not subject to the recording provisions of Iowa Code Section 614.24, Johnson v. Burlington Northern, Inc., 294 N.W. 2d 63, 66 (Iowa Ct. App. 1980).

7. It appears that an affidavit of possession under Section 614.17, Iowa Code, while it may be a cure or a remedy for other imperfections in a chain of title, it will not reestablish old easement interests. If a title document reestablishing an old easement interest refers specifically to the recorded title document that created the original easement, it would appear that perfection of chain of title can be made. See Note 34, Marshall's Title Standards, Standard 11.5.

DEFINITIONS AND EXAMPLES:

1. Deed with Reversion:

   Grantor sells and conveys to Railroad 100’ wide strip of land in NE 1/4 Sec. 1-10-100.

   In the event Railroad fails to construct a railway or ceases to operate a railway, said land shall revert to Grantor.

2. Deed of Easement without Reversion:

   Grantor sells and conveys “for railroad purposes” to Railroad “the right of way” over and through 100’ wide strip of land in NE 1/4 Sec. 1-10-100, for uses connected with construction and occupation of Railroad.”

3. Deed of Easement with Reversion:

   Grantor sells and conveys “for railroad purposes” to Railroad “the right of way” over and through 100’ wide strip of land in NE 1/4 Sec. 1-10-100, for uses connected with construction and occupation of Railroad, but if Railroad shall not construct or ceases permanently to use as a railway, then in that event said land shall revert to Grantor.

4. Deed without reversion or easement:

   Grantor sells and conveys to Railroad all right, title and interest in 100’ wide strip of land in NE 1/4 Sec. 1-10-100.

5. Continuous chain of title to deed reversion right:

   The possibility of reverter is an interest in real property that remains with the person and, therefore, must be transferred by affirmative act, i.e., by Assignment or by specific bequest. If original grantor, assignee, or beneficiary of specific bequest fails to transfer the possibility of reverter by affirmative act, the possibility of reverter passes to the heirs at law of said grantor, assignee or beneficiary.

   (a) An Assignment or specific bequest should recite: “I (grantor, assignee or beneficiary) hereby assign (or bequeath) to _____ all my rights to and interest in a possibility of reverter (or in the railroad right of way) by virtue of that certain deed dated _____ and recorded in Book _____, Page _____, Office of _____ County Recorder.”

   (b) A Deed subsequent to the original deed to the railroad conveying the adjacent real estate would assign or transfer the possibility of reverter, if it recites:

(i) The NE 1/4, Sec. 1-10-100; or
(ii) A metes and bounds description that includes the right of way area; and further contains an assignment similar to that set forth in (a) above.

(c) Reversion right is preserved by filing a claim as required by Section 614.24.

6. Continuous chain of title to easement reversion right:

Easements run with the land. All conveyances subsequent to original easement to the railroad recite:

(a) The NE 1/4, Sec. 1-10-100, subject to “railroad easement”, “railroad right of way”, “easements of record”, etc.; or

(b) A metes and bounds description that includes area of right of way, subject to easement.

7. Broken chain of title to easement reversion right:[7]

Any conveyance subsequent to the original easement to the railroad that recites:

(a) The NE 1/4, Sec. 1-10-100, except “railroad easement”, etc.; or
(b) A metes and bounds description that excludes the right of way area.

8. Easement by document, for the following illustrations:

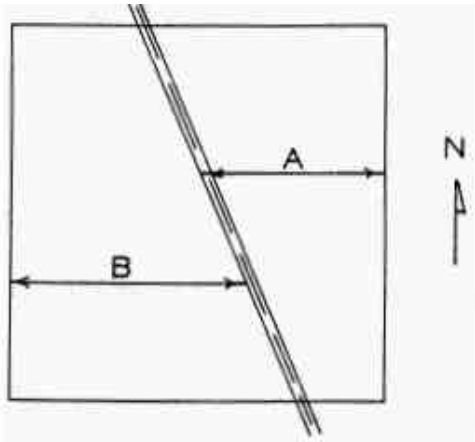
if abandonment occurs prior to 7/1/80, reversion effective 8 years after abandonment to owner at time of reversion or no later than July 1, 1988;

if abandonment occurs between 7/1/80-7/1/83, reversion effective on effective date of abandonment order;

if abandonment occurs after 7/1/83, reversion effective on removal of track material or 1 year after abandonment order, whichever occurs first

Facts (for illustrations I, II & III): Owner A acquires Section, either subject
to Railroad easement or subsequently grants an easement to Railroad prior to any transfers to third parties. (Continuous chain of title to underlying fee of the right of way).

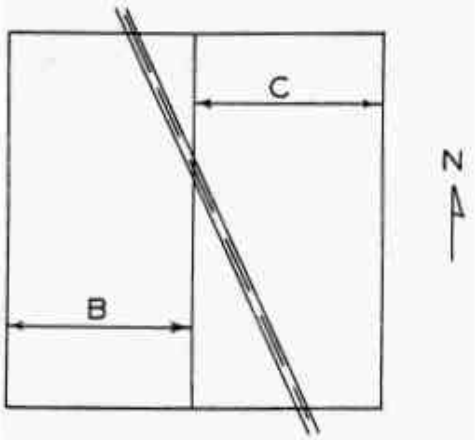
I




A transfers to B that part of Section lying west of right of way.

On abandonment, A receives east right of way from centerline and B receives west right of way from centerline.

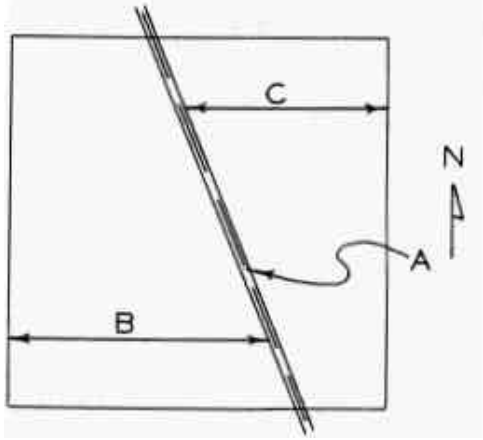
II




A conveys to B the west half of section and conveys to C the east half of Section.

On abandonment, B receives all of right of way lying within west half of Section and C receives all of right of way lying within the east half.

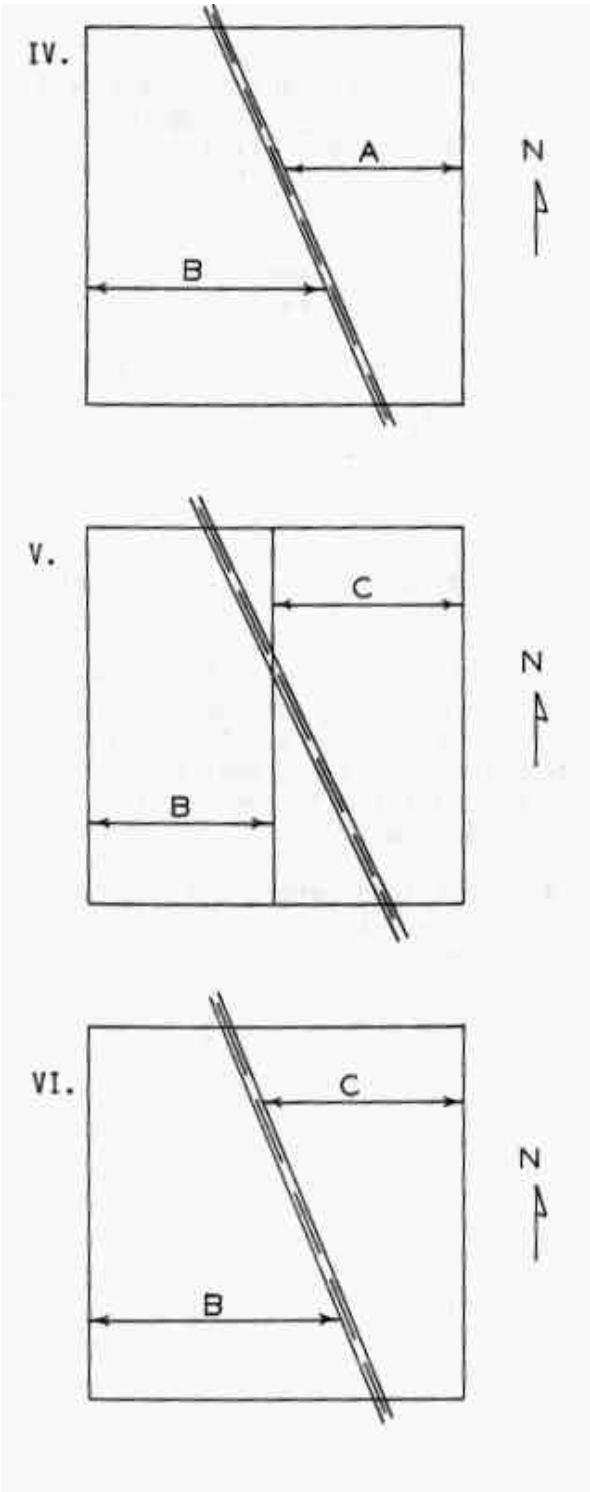
III




A conveys to B part of Section lying west of right of way and conveys to C part lying east of right of way. A has continuous chain of title to underlying fee of the right of way.

On abandonment A receives all of the right of way.

Facts (for illustrations IV, V & VI): Owner A acquires Section, except railroad easement. (Broken chain of title to underlying fee of the right of way).




A transfers to B that part of Section lying west of right of way.

On abandonment A receives east right of way from centerline and B receives west right of way from centerline.

A conveys to B the west half of Section and conveys to C the east half of Section.

On abandonment, B receives all of right of way lying within west half of Section and C receives all of right of way lying within east half.

A conveys to B part of Section lying west of right of way and conveys to C part of Section lying east of right of way.

On abandonment B receives west right of way from centerline and C receives east right of way from centerline. A receives nothing - he never acquired underlying fee.

State of Iowa )
) ss.
County of _____)

AFFIDAVIT OF OWNERSHIP
(Filed pursuant to Iowa
Code Section 327G.77)

I, _____, of lawful age, being first duly sworn on oath, depose and state:

That I own fee title to a tract of land in the _____ of Sec. _____, T__N, R__W of the 5th P.M., in _____ County, Iowa, which is adjacent to certain railroad right of way. The _____ acquired an easement to said railroad right of way in a certain document filed in the _____ County Recorder's Office on _____, 18 ____, in Book _____, Page _____.

That the _____ acquired ownership of said easement in _____. On _____, 19 ____, a Certificate and Order was issued by the Interstate Commerce Commission in Docket No. _____ in the matter of the _____ authorizing abandonment of the railroad line between _____ and _____ in _____ County effective _____, 19 ____. This Order permitted the abandonment of that railroad line, a part of which traverses the above described tract. The authority granted in this Certificate and Order was exercised within one year from its effective date.

That the track materials on the right of way easement have been removed and that their removal occurred during 19 ____.

By operation of law, the abandonment of former railroad line and the passage of one year from the date of the ICC Order did thereby release, abandon, and extinguish all the railroad's right, title, and easement interest in and to said former railroad right of way. That reversion of the easement was effective _____, 19 ____, at which time title to the former railroad right of way vested in the adjacent land owners.

By authority of Iowa Code Section 327G.77, adjacent land owners are the fee owners of abandoned railroad easement lands, and are authorized to file an Affidavit affirming such ownership with the county recorder.

Therefore, I affirm and state that I am the owner of the _____ half of the abandoned railroad right of way in the _____ of Sec. _____, T__N, R__W of the 5th P.M., in _____ County, Iowa, adjacent to the above described tract of land owned by me.

Dated this _____ day of _____, 19 _____.

_____

Subscribed and sworn to before me on this _____ day of _____, 19 __

_____
Notary Public in and for the State of Iowa

STATUTORY ATTACHMENTS:

| | |
|---|---|
| Chapter | 473, Iowa Code, Prior to July 1, 1976 |
| Section | 327G.76, Iowa Code, From July 1, 1976 to July 1, 1980 |
| | 327G.76, Iowa Code, From July 1, 1980 to July 1, 1983 |
| | 327G.76, Iowa Code, From July 1, 1983 to Date |
| Section | 327G77, Iowa Code, From July 1, 1976 to July 1, 1980 |
| | 327G.77, Iowa Code, From July 1, 1980 to July 1, 1983 |
| | 327G.77, Iowa Code, From July 1, 1983 to Date |
| Section | 614.24, Iowa Code, Prior to July 1, 1980 |
| | 614.24, Iowa Code, From July 1, 1980 to Date |
| Section | 614.36, Iowa Code, From 1971 to Date |

PRIOR T0 JULY 1, 1976

## CHAPTER 473

### REVERSION TO OWNERS UPON ABANDONMENT

**473.1 Relocation of railway.**
**473.2 Failure to operate or construct railway.**
473.3 and 473.4 Repealed by 54GA, ch 103,§22.

---

**473.1 Relocation of railway.** Such part of a railway right of way as is wholly abandoned for railway purposes by the relocation of the line of railway, shall revert to the persons who, at the time of the abandonment, are owners of the tract from which such abandoned right of way was taken. [C24, 27, 31, 35, 39, §7861; C46, 50, 54, 58, 62, 66, 71, 73,§473.1]

**473.2 Failure to operate or construct railway.** If a railway, or any part thereof, shall not be used or operated for a period of eight years, or if, its construction having been commenced, work on the same has ceased and has not been in good faith resumed for eight years, the right of way, including the roadbed, shall revert to the persons who, at the time of the reversion, are owners of the tract from which such right of way was taken. [C73,§1260; C97, §2015; C24, 27, 31, 35, 39,§7862; C46, 50, 54, 58, 62, 66, 71, 73,§473.2]

**473.3 and 473.4** Repealed by 54GA, ch 103, §22. See ch 306 for disposal of abandoned highways.

JULY 1, 1976 - JULY 1, 1980

### DIVISION III. REVERSION TO OWNERS UPON ABANDONMENT

Formerly Chapter 473

**327G.76 Relocation of railway.** Such part of a railway right of way as is wholly abandoned for railway purposes by the relocation of the line of railway, shall revert to the persons who, at the time of the abandonment, are owners of the tract from which such abandoned right of way was taken. [C24, 27, 31, 35, 39,§7861; C46, 50, 54, 58, 62, 66, 71, 73, 75,§473.1; C77,§327G.76]

**327G.77 Failure to operate or construct railway.** If a railway, or any part thereof, shall not be used or operated for a period of eight years, or if, its construction having been commenced, work on the same has ceased and has not been in good faith resumed for eight years, the right of way, including the roadbed, shall revert to the persons who, at the time of the reversion, are owners of the tract from which such right of way was taken. [C73,§1260; C97,§2015; C24, 27, 31, 35, 39,§7862; C46, 50, 54, 58, 62, 66, 71, 73, 75,§473.2; C77,§327G.77]

JULY 1, 1980 - JULY 1, 1983

DIVISION III. REVERSION TO OWNERS UPON ABANDONMENT

Formerly Chapter 473

**327G.76 Relocation of railway.** Such part of a railway right of way as is wholly abandoned for railway purposes by the relocation of the line of railway, shall revert to the persons who, at the time of the abandonment, are owners of the tract from which such abandoned right of way was taken. [C24, 27, 31, 35, 39, § 7861; C46, 50, 54, 58, 62, 66, 71, 73, 75, §473.1; C77, 79, 81, §327G.76]

**327G.77 Reversion of railroad right of way.**

1. If a railroad right of way acquired by condemnation is abandoned by order of the federal interstate commerce commission or the state transportation regulation authority, that right of way shall revert to owners of the adjacent properties at the time of the abandonment. If there are different owners on each side of the right of way, each owner shall take title to the center of the right of way. The provisions of section 614.24 requiring the filing of a verified claim shall not apply to the reversionary interest granted by this subsection.

2. If the state department of transportation finds that a railroad right of way is suitable for present or future rail use at least fifteen days before the effective date of an order of abandonment and the railroad right of way was acquired by condemnation, deed or conveyance and is subject to a reversionary interest, the reversion which would occur upon the abandonment of the right of way for railway purposes shall not occur until two years after the effective date of the order of abandonment by the federal interstate commerce commission or the state transportation regulation authority. During that two year period another railroad company or the state may succeed to the interest of the abandoning railroad company in the right of way if it is used for railway purposes. A railroad company or the state which succeeds to that interest shall hold that interest as long as it is used for railway purposes subject to the interests as when it was held by the abandoning railroad company. [C73, §1260; C97, §2015; C24, 27, 31, 35, 39, §7862; C46, 50, 54, 58, 62, 66, 71, 73, 75, §473.2; C77, 79, 81, §327G.77; 81 Acts, ch 22, §22]

Referred to in §327G.78

DIVISION III

REVERSION TO OWNERS UPON ABANDONMENT

**327G.76 Time of reversion.**

Railroad property rights which are extinguished upon cessation of service by the railroad divest when the railway finance authority or the railroad, having obtained authority to abandon the rail line, removes the track materials to the right-of-way. If the railway finance authority does not acquire the line and the railway company does not remove the track materials, the property rights which are extinguished upon cessation of service by the railroad divest one year after the railway obtains the final authorization necessary from the proper authority to remove the track materials.

[C24, 27, 31, 35, 39, §7861; C46, 50, 54, 58, 62, 66, 71, 73, 75, §473.1; C77, 79, 81, §327G.76]

83 Acts, ch 121, §5

**327G.77 Reversion of railroad right-of-way.**

1. If a railroad easement is extinguished under section 327G.76, the property shall pass to the owners of the adjacent property at the time of abandonment. If there are different owners on either side, each owner will take to the center of the right-of-way. Section 614.24 which requires the filing of a verified claim does not apply to rights granted under this subsection.

2. An adjoining property owner may perfect title under subsection 1 by filing an affidavit of ownership with the county recorder. The affidavit shall include the name of the adjoining property owner, a description of the property, the present name of the railroad, the jurisdiction, docket number, and date of order authorizing the railroad to terminate service, and the approximate date the track materials on the right-of-way were removed. A copy of the affidavit must be mailed by the landowner by certified mail to the railroad. The landowner shall pay taxes on the right-of-way from the date the affidavit is filed.

3. Utility facilities located on abandoned railroad right-of-way shall remain on the right-of-way subject to payment by the utility of the fair market value of an easement for the facilities. The utility shall, within sixty days from the time the property is transferred from the railroad, extend a written offer to the landowner to purchase the easement at fair market value. The landowner shall accept or reject the utility's offer within sixty days from the time of receipt. If a disagreement arises between the parties concerning the price or other terms of the transaction, either party may make written application to a compensation commission as established pursuant to chapter 472 to resolve the disagreement. This application shall be made within sixty days from the time the landowner's response is served upon the utility. The compensation commission shall hear the controversy and make a final determination of the fair market value of the easement and the other terms of the transaction which were in dispute within ninety days after the application is filed. All correspondence shall be by certified mail.

[C73, §1260; C97, §2015; C24, 27, 31, 35, 39, §7862; C46, 50, 54, 58, 62, 66, 71, 73, 75, §473.2; C77, 79, 81, §327G.77; 81 Acts, ch 22, §22]

83 Acts, ch 121, §6

PRIOR TO JULY 1, 1980

**614.24 Reversion or use restrictions on land—preservation.** No action based upon any claim arising or existing by reason of the provisions of any deed or conveyance or contract or will reserving or providing for any reversion, reverted interests or use restrictions in and to the land therein described shall be maintained either at law or in equity in any court to recover real estate in this state or to recover or establish any interest therein or claim thereto, legal or equitable, against the holder of the record title to such real estate in possession after twenty-one years from the recording of such deed of conveyance or contract or after twenty-one years from the admission of said will to probate unless the claimant shall, by himself, or by his attorney or agent, or if he is a minor or under legal disability, by his guardian, trustee, or either parent or next friend, shall file a verified claim with the recorder of the county wherein said real estate is located within said twenty-one year period. In the event said deed was recorded or will was admitted to probate more than twenty years prior to July 4, 1965, then said claim may be filed on or before one year after July 4, 1965. Such claims shall set forth the nature thereof, also the time and manner in which such interest was acquired. For the purposes of this section, the claimant shall be any person or persons claiming any interest in and to said land or in and to such reversion, reverter interest or use restriction, whether the same is a present interest or an interest which would come into existence if the happening or contingency provided in said deed or will were to happen at once. Said claimant further shall include any member of a class of persons entitled to or claiming such rights or interests. [C66, 71, 73, 75, 77,§614.24]

Referred to in §§229.27, 614.26, 614.27, 614.28

EFFECTIVE JULY 1, 1980

**614.24 Reversion or use restrictions on land — preservation.**

No action based upon any claim arising or existing by reason of the provisions of any deed or conveyance or contract or will reserving or providing for any reversion, reverted interests or use restrictions in and to the land therein described shall be maintained either at law or in equity in any court to recover real estate in this state or to recover or establish any interest therein or claim thereto, legal or equitable, against the holder of the record title to such real estate in possession after twenty-one years from the recording of such deed of conveyance or contract or after twenty-one years from the admission of said will to probate unless the claimant shall, personally, or by the claimant's attorney or agent, or if the claimant is a minor or under legal disability, by the claimant's guardian, trustee, or either parent or next friend, shall file a verified claim with the recorder of the county wherein said real estate is located within said twenty-one year period. In the event said deed was recorded or will was admitted to probate more than twenty years prior to July 4, 1965, then said claim may be filed on or before one year after July 4, 1965. Such claims shall set forth the nature thereof, also the time and manner in which such interest was acquired. For the purposes of this section, the claimant shall be any person or persons claiming any interest in and to said land or in and to such reversion, reverter interest or use restriction, whether the same is a present interest or an interest which would come into existence if the happening or contingency provided in said deed or will were to happen at once. Said claimant further shall include any member of a class of persons entitled to or claiming such rights or interests.

The provisions of this section requiring the filing of a verified claim shall not apply to the reversion of railroad property if the reversion is caused by the property being abandoned for railway purposes and the abandonment occurs after July 1, 1980. The holder of such a reversionary interest may bring an action based upon the interest regardless of whether a verified claim has been filed under this section at any time after July 4, 1965.

[C66, 71, 73, 75, 77, 79, 81, §614.24]

EFFECTIVE 1971 - TO DATE

**614.36 Lessors, reversioners and easements.**

This division shall not be applied to bar any lessor or lessor's successor as a reversioner of the lessor's right to possession on the expiration of any lease; or to bar or extinguish any easement or interest in the nature of an easement, the existence of which is apparent from or can be proved by physical evidence of its use; or to bar any right, title or interest of the United States, by reason of failure to file the notice herein required.

[C71, 73, 75, 77, 79, 81, §614.36]

# APPENDIX D

# Iowa Primary Road
# Access Management Policy

# Iowa Primary Road Access Management Policy

## December 2005

Iowa Department of Transportation

**IN ACCORD WITH**
**ADMINISTRATIVE CODE**
**761-CHAPTER 112(306A)**

## Table of Contents

761--112.1(306A) General Information....1
112.1(1) Statement of Policy....1
112.1(2) Considerations....1
112.1(3) Waivers....1
112.1(4) Waivers Involving Interstate Highways....1
112.1(5) Contact Information....2

761--112.2(306A) Definitions....3-7
112.2(1) Access....3
112.2(2) Acquisition....3
112.2(3) Bridge....3
112.2(4) Built-up Area....3
112.2(5) Clear Zone....3
112.2(6) Concrete Box Culvert....3
112.2(7) Controlled Access Highway....3
112.2(8) District Representative....3
112.2(9) Entrance....3
112.2(10) Entrance Type....4
112.2(11) Entrance Width....4
112.2(12) Fringe Area....4
112.2(13) Frontage....4
112.2(14) Frontage Road....4
112.2(15) Fully Controlled Access Highway....4
112.2(16) Highway, Street or Road....4
112.2(17) Interchange....4
112.2(18) Median....5
112.2(19) Normal Peak Hour Traffic....5
112.2(20) Pavement....5
112.2(21) Predetermined Access Location....5
112.2(22) Primary Road or Primary Highway....5
112.2(23) Priority I Highway....5
112.2(24) Priority II Highway....5
112.2(25) Priority III Highway....5
112.2(26) Priority IV Highway....5
112.2(27) Priority V Highway....6
112.2(28) Priority VI Highway....6
112.2(29) Ramp Bifurcation....6
112.2(30) Recreational Trail....6
112.2(31) Right-of-way Line....6
112.2(32) Roadway....6
112.2(33) Rural Area....6
112.2(34) Rural-Designed Area....6
112.2(35) Shoulder....6
112.2(36) Sight Distance....7

112.2(37) Special Access Connection ……7
112.2(38) Traveled Way……...7
112.2(39) Turning Lane ……...7
112.2(40) Urban-Designed Area……...7

761--112.3(306A) General Requirements for Control of Access.....…8
112.3(1) Establishment of Controlled Access Highway.....8
112.3(2) Frontage Roads.....8
112.3(3) Enforcement of Access Control .....8
112.3(4) Maintenance of Entrances .....8

761--112.4(306A) General Requirements for Entrances Where Access ..... 9-13
Right Have Not Been Acquired
112.4(1) Entrance Permit.....9
112.4(2) Construction and Modification of Entrances .....9
112.4(3) Construction Costs .....9
112.4(4) Maintenance of Entrances .....9
112.4(5) Primary Road Extensions.....10
112.4(6) Considerations for Entrance Width and Radius or Flared Returns.....10
112.4(7) Entrance Widths .....10
112.4(8) Radius or Flared Returns..... 11-12
112.4(9) Entrance Angle.....12
112.4(10) Slope and Cross Section of Entrances in Rural-designed Area ... 12-13
112.4(11) Entrance Grade.....13

761--112.5(306A) Additional Requirements for Type “A” Entrances..... 14-15
112.5(1) General .....14
112.5(2) Type “A” Access Requests ..... 14-15
112.5(3) Agreement Supplementary to Permit .....15
112.5(4) Primary Highway Improvements .....15

761--112.6(306A) Drainage Requirements .....16
112.6(1) Drainage Requirements.....16
112.6(2) Entrances Must be Constructed So The Do Not Adversely.....16
Affect Primary Highway Drainage
112.6(3) When Construction of An Entrance Necessitates Crossing a .....16
Highway Ditch
112.6(4) Where Drainage is Carried Along An Existing Curb.....16

761--112.7(306A) Access to Priority I, II, III and IV Highways .....17
112.7(1) Priority I Highway.....17
112.7)2) Priority II, III, and IV Highways.....17

761--112.8(306A) Access to Priority V Highways in Rural Areas .....18
112.8(1) General .....18
112.8(2) Access Requirements Near Public Road Intersections .....18
112.8(3) Property Lines .....18

761-112.9(306A) Access to Priority V Highways, Fringe or Built-up Areas and Priority VI highways, All Areas ..... 19-20
112.9(1) General .....19
112.9(2) Access Requirements Near Public Road Intersections .....19
112.9(3) Channelized Intersection or Divided Highway .....19
112.9(4) Median Openings .....20
112.9(5) Property Lines .....20

761--112.10 Reserved .....20

761--112.11(306A) Policy on Acquisition of Access Rights ..... 21-22
112.11(1) General .....21
112.11(2) Project Development .....21
112.11(3) Access Rights at At-grade Intersections with City Streets and Secondary Roads .....21
112.11(4) Access Rights at At-grade Primary Intersections .....21
112.11(5) Access Rights Along Intersecting Roadways at Interchanges .....21
112.11(6) Agreement with City or County .....22

761--112.12(306A) Policy on Location of Predetermined Access Locations ..... 23-24
112.12(1) General .....23
112.12(2) Establishing Predetermined Access Locations .....23
112.12(3) Spacing .....23
112.12(4) Entrances Constructed After Project Completion .....24
112.12(5) Revision of Access .....24

761-112.13(306A) Policy on Special Access Connections Where Access Rights Have Been Previously Acquired ... 25-26
112.13(1) General .....25
112.13(2) Application .....25
112.13(3) Requirements .....25
112.13(4) Temporary Access .....26

761-112.14(306A) Recreational Trail Connections .....27
112.14(1) General .....27
112.14(2) Application .....27
112.14(3) Requirements .....27

**761--112.1(306A) General information.**

**112.1(1) Statement of policy.** The efficiency and safety of a highway depend to a large extent upon the amount and character of interruptions to the movement of traffic. The primary cause of these interruptions is vehicular movements to and from businesses, residences, and other developments along the highway. Regulation and overall control of highway access are necessary to provide efficient and safe highway operation and to utilize the full potential of the highway investment.

Accordingly, the department hereby establishes rules for control of access to primary roads.

**112.1(2) Considerations.** If the department determines that the literal application of these rules to a specific situation will create or result in an unsafe situation or an unreasonable design, the department shall use sound engineering practices to determine the appropriate design for the specific situation. The design shall address:

1. Safety to the traveling public.

**2.** Perpetuation of the traffic-carrying capacity of the highway.

**3.** The impact upon the economy of the state.

**4.** Protection of the rights of the traveling public and of property owners, including the rights of abutting property owners.

Justification for the design must be included in the permit or the highway project file, as applicable.

**112.1(3) Waivers.** The director of transportation may, in response to a written request or petition, waive provisions of this chapter. 761--Chapter 11 applies, with the following exceptions:

**a.** If a person is applying for an access permit under this chapter, the person shall submit a related waiver request as an addendum to the application, in lieu of petition for waiver. The request must include:

(1) A description of and citation to the specific rule from which a wavier is requested.

(2) The specific waiver requested.

(3) The relevant facts and reasons the applicant believes will justify the waiver, if they have not already been provided to the department in the application. The applicant should address each of the following:

1. Why applying the rule will result in an undue hardship to the applicant.

2. Why waving the rule will not prejudice the substantial legal rights of any other person.

3. Whether the provisions of the rule are specifically mandated by statute or another law other than the rule.

4. How substantially equal protection of the public health, safety and welfare will be afforded by means other than those prescribed by the rule.

(4) The names of persons who may be adversely impacted by the grant of the waiver, if known.

**b.** In all other cases, a person requesting a waiver shall submit a petition for waiver in accordance with 761--11.5(17A). The petition shall be submitted to the district engineer.

**112.1(4) Waivers involving interstate highways.** The department shall not waive these rules in access situations involving the interstate highway system, including its ramps, without the approval of the Federal Highway Administration.

**112.1(5) Contact information.** Information and forms regarding primary road access control may be obtained from any of the department's six district offices or from the Office of Traffic and Safety, Iowa Department of Transportation, 800 Lincoln Way, Ames, Iowa 50010. Forms are available on the department's Internet Web site at the following address: http://www.dot.state.ia.us/forms/index.htm.

**761--112.2(306A) Definitions.** The following terms, when used in this chapter, shall have the following meanings unless the context otherwise requires:

**112.2(1) Access.** A means of ingress or egress between a primary highway and abutting property or an intersecting local public road or street.

**112.2(2) Acquisition.** To receive title by gift, purchase or condemnation.

**112.2(3) Bridge.** Any structure, including supports, that is erected over a depression or obstruction, has a track or passageway for carrying traffic or other moving loads, and has a length measured along the center of the driveway of more than 20 feet between undercopings of abutments or extreme ends of openings for multiple boxes.

**112.2(4) Built-up area.** An area adjacent to a primary road that meets the following general criteria:

1. The lots or area abutting the primary road does not have sufficient setback for the construction of a frontage road, and the development in depth precludes the establishment of a frontage-type road to the rear of the lots or area.
2. When a "built-up area" exists on one side of a primary road, the other side of the road is also considered to be "built-up" for the purpose of determining access requirements.

**112.2(5) Clear zone.** The roadside border area, starting at the edge of the traveled way, available by use by errant vehicles.

**112.2(6) Concrete box culvert.** A concrete structure not classified as a bridge, that provides an opening under a roadway or driveway, is either precast or cast in place, and has vertical sidewalls, a top slab and a floor.

**112.2(7) Controlled access highway.** All primary highways are controlled access facilities.

**112.2(8) District Representative.** A department employee who processes requests for access in an assigned geographical area.

**112.2(9) Entrance.** A physical connection between a primary highway and abutting property or an intersecting local public road or street.

**112.2(10) Entrance type.** Entrances are divided into the following three classes according to their normal usage:

1. Type "A" entrance. An entrance developed to carry sporadic or continuous heavy concentrations of traffic. Generally, a Type "A" entrance carries in excess of 150 vehicles per hour. An entrance of this type would normally consist of multiple approach lanes and may incorporate a median. Possible examples include racetracks, large industrial plants, shopping centers, subdivisions, or amusement parks.

2. Type "B" entrance. An entrance developed to serve moderate traffic volumes. Generally, a Type "B" entrance carries at least 20 vehicles per hour but less than 150 vehicles per hour. An entrance of this type would normally consist of one inbound and one outbound traffic lane. Possible examples include service stations, small businesses, drive-in banks, or light industrial plants.

3. Type "C" entrance. An entrance developed to serve light traffic volumes. Generally, a Type "C" entrance carries less than 20 vehicles per hour. An entrance of this type would not normally accommodate simultaneous inbound and outbound vehicles. Possible examples include residential, farm or field entrances.

**112.2(11) Entrance width.** See subrule 112.4(7).

**112.2(12) Fringes area.** A suburban-type area adjacent to a primary road that meets the following general criterion: The layout of the lots or area abutting the primary road, including intermittent or unrelated development, permits construction of a frontage road in front of, or a frontage-type road to the rear of, the development.

**112.2(13) Frontage.** The length along a public road right-of-way of a single property tract. A corner property at an intersection of two public roads has separate frontage along each roadway.

**112.2(14) Frontage road.** A public road or street auxiliary to and usually located alongside and parallel to a primary highway for maintaining local road continuity and for control of access.

**112.2(15) Fully controlled access highway.** A highway for which the rights of ingress and egress from abutting properties have been legally eliminated by the roadway jurisdiction. Permanent access to the facility is allowed only at interchange locations. No permanent at-grade access is allowed.

**112.2(16) highway, street or road.** A public way for the purpose of vehicular travel, including the entire area between the right-of-way lines.

**112.2(17) Interchange.** A system that provides for the movement of traffic between intersecting roadways via one or more grade separations.

**112.2(18) Median.** The portion of a divided highway or divided entrance separating traffic moving in opposite directions. Medians may be depressed, raised or painted. Openings in the primary highway median to accommodate entrances are governed by the following:

1. New median openings should not be permitted except to accommodate intersecting local public roads or streets or large traffic-generating facilities such as large shopping centers or industrial plants. Median openings may be permitted in these instances if satisfactorily justified and in the public interest.
2. If a median opening exists prior to the construction of a driveway or local public road or street, the opening may be modified to accommodate the turning movements of the traffic expected.
3. Costs incurred for adding or modifying median openings shall not be borne by the department.
4. The department reserves the right to close an existing median opening when the department deems it is necessary.

**112.2(19) Normal peak hour traffic.** The highest number of vehicles found to be entering and leaving an entrance during 60 consecutive minutes in a 24-hour period, excluding holidays.

**112.2(20) Pavement.** The portion of a roadway used for the movement of vehicles, excluding shoulders.

**112.2(21) Predetermined access location.** A location of access reserved for the adjacent property at the time access rights are acquired.

**112.2(22) Primary road or primary highway.** A road or street designated as a "primary road" in accordance with Iowa Code subsection 306.3(6). This definition includes primary road extensions in cities and primary roads under construction.

**112.2(23) Priority I highway.** A primary highway constructed as a fully controlled access highway. Permanent access to the facility is allowed only at interchange locations. No permanent at-grade access is allowed.

**112.2(24) Priority II highway.** A primary highway constructed as a two-lane or multilane (more than two lanes) facility with a high degree of access control. Access to the facility is allowed only at interchanges and selected at-grade locations.

The minimum allowable spacing between access locations is one-half mile. Limiting primary highway access to existing public road intersections at intervals of one mile is preferable.

**112.2(25) Priority III highway.** A primary highway constructed as a two-lane or multilane facility. Access to the facility is allowed at interchanges and at-grade locations.

The minimum allowable spacing between access locations is 1000 feet. Spacing of one-quarter mile is preferable.

**112.2(26) Priority IV highway.** A primary highway constructed as a two-lane facility; however, the definition may include a multilane facility. Priority IV is divided into Priority IV(a) and Priority IV(b).

1. For highways designated as Priority IV(a), the minimum allowable spacing between access locations is 600 feet.
2. For highways designated as Priority IV(b), the minimum allowable spacing between access

locations is 300 feet.

**112.2(27) Priority V highway.** A primary highway where access rights to it were acquired between 1956 and 1966, entrances were reserved at that time with no spacing limitations, and the department has subsequently determined that a higher degree of access control is desirable. The definition also includes a highway where access rights have not been acquired, but the department anticipates acquiring access rights in the future.

In rural areas, entrances to the highway are generally restricted to one entrance for contiguous highway frontage not exceeding 1,000 feet, two entrances for contiguous highway frontage exceeding 1,000 feet but not exceeding 2,000 feet, and so on.

**112.2(28) Priority VI highway.** A primary highway where the acquisition of access rights or additional access rights is not anticipated. This definition may also include a highway where access rights were acquired between 1956 and 1966, entrances were reserved at that time with no spacing limitations, and the department has subsequently determined that restricting access to the facility is no longer necessary.

Access locations are approved based on safety and need.

**112.2(29) Ramp bifurcation.** The point where the baseline of the ramp intersects the centerline of the adjacent roadway.

**112.2(30) Recreational trail.** A trail established for biking, pedestrian, snowmobiling, cross-country skiing, or equestrian use.

**112.2(31) Right-of-way line.** The boundary line between the land acquired for or dedicated to public road use and the adjacent property.

**112.2(32) Roadway.** The portion of a highway used for the movement of vehicles, including shoulders and auxiliary lanes. A divided highway has two or more roadways.

**112.2(33) Rural area.** An area clearly not meeting the criteria set forth for a built-up or fringe area. Rural area also includes agricultural land within the corporate limits of a city.

**112.2(34) Rural-designed area.** An area in which the predominant cross section accommodates surface drainage from the roadway and adjacent terrain via an open ditch.

**112.2(35) Shoulder.** The portion of a public road contiguous to the traveled way for the accommodation of disabled vehicles and for emergency use.

**112.2(36) Sight distance.** The distance of clear vision along a primary highway in each direction from any given point of access where a vehicle must stop before entering the highway.

1. Sight distance at an access location is measured from the driver's height of eye (3.5 feet) to the height of an approaching vehicle (4.25 feet).

2. An access location should be established where desirable sight distance is available and shall not be authorized in a location providing less than minimum sight distance, as shown below.

| POSTED DAYTIME SPEED LIMIT (mph) | DESIRABLE SIGHT DISTANCE (feet) | MINIMUM SIGHT DISTANCE (feet) |
|---|---|---|
| 70 | 910 | 730 |
| 65 | 820 | 645 |
| 60 | 730 | 570 |
| 55 | 645 | 495 |
| 50 | 570 | 425 |
| 45 | 495 | 360 |
| 40 | 425 | 305 |
| 35 | 360 | 250 |
| 30 | 305 | 200 |

3. On a four-lane divided primary highway where access is proposed at a location that will not be served by a median crossover, sight distance is required only in the direction of the flow of traffic.

**112.2(37) Special access connection.** An access location authorized to the primary road system in an area where access rights were previously acquired.

**112.2(38) Traveled way.** The portion of a roadway used for the movement of vehicles, excluding shoulders and auxiliary lanes.

**112.2(39 Turning lane.** An auxiliary lane, including taper areas, primarily used for the deceleration or storage of vehicles leaving the through traffic lanes.

**112.2(40) Urban-designed area.** A built-up or fringe area in which the predominant cross section accommodates roadway surface drainage by means of a curbed roadway.

**761--112.3(306A) General requirements for control of access.**

**112.3(1) Establishment of controlled access highway.** Access locations necessary for free and convenient access that exist at the time a primary highway is established are hereby approved if the department deems they are reasonably located.

**112.3(2) Frontage roads.** If a frontage road is open to public travel, access from the abutting property shall be to the frontage road.

**a.** Access to frontage roads maintained by the department shall be authorized in accordance with rules 112.4(306A), 112.8(306A) and 112.9(306A).

**b.** Access to frontage roads maintained by other governmental agencies shall conform to those agencies' access requirements.

**112.3(3) Enforcement of access control.**

**a.** *Fences.* The department may construct and maintain fences or other appropriate physical separations within the primary highway right-of-way to effectively enforce and control access to the highway.

**b.** *Unauthorized construction or modification of entrances.* If an entrance is constructed or altered without the approval of the department or if the work is not completed in conformity with an approved permit or agreement, the department may notify the owner by certified mail of the violation and the need to restore the area to the standards which existed immediately prior to construction or alteration or advise of the changes necessary to conform. If after 20 days the changes have not been made, the department may make the necessary changes and immediately send a statement of the cost to the property owner. If within 30 days after sending the statement the cost is not paid, the department may institute proceedings in the district court system to collect the cost.

**c.** *Written permission--right to inspect.* A person must have written permission from the department via the specified permit or agreement before the person may construct or alter an entrance.

(1) The department reserves the right to inspect and approve any work performed within the right-of-way.

(2) If the work is not performed as required by the permit or agreement, the department may revoke its permission and deny access until the conditions are corrected.

(3) If the work performed does not conform to the department's specifications, the department may make the necessary changes, charge the costs to the party responsible and pursue other available remedies.

**112.3(4) Maintenance of entrances.**

**a.** Property owners having access to a primary highway are responsible for the maintenance of their entrances as follows:

(1) For an entrance that does not have a paved surface, the property owner is responsible for maintaining the entrance from the outer shoulder line of the primary highway to the right-of-way line.

(2) For an entrance that has a paved surface, the property owner is responsible for maintaining the entrance from the paved edge of the primary highway to the right-of-way line.

**b.** Drainage structures located within the primary highway right-of-way shall be maintained by the department except for concrete box culverts and bridges constructed by a permit holder under authority of an entrance permit. These structures shall be maintained by the permit holder.

**761--112.4(306A) General requirements for entrances where access rights have not been acquired.** This rule establishes the general requirements for access to primary highways where access rights have not been acquired.

**112.4(1) Entrance permit.** A person shall not modify an existing entrance or construct a new entrance to a primary highway from abutting property or from a local public road or street until the department has issued an entrance permit for the work.

**a.** An application for an entrance permit shall be submitted to the appropriate district representative on a form prescribed by the department.

**b.** The department shall be provided with a plan, drawing or sketch of the property or site to be served by the requested access. This may vary from a simple sketch in the case of a Type "C" entrance to a detailed plan in the case of a Type "A" entrance. See rule 112.5(306A) for further Type "A" entrance requirements.

**c.** The application shall be signed by the owner or owners of record. The signature(s) shall be notarized.

**d.** If the request is for a property within the corporate limits of a city, an authorized representative of the city must sign the application recommending approval. See subrule 112.4(5).

**e.** The application shall be approved or denied by the appropriate district representative.

**f.** If the district representative denies the application, the applicant may appeal the decision by submitting to the appropriate district engineer the application along with background information and an explanation of the need for access.

**g.** If the district engineer denies the application, the applicant may appeal the decision by submitting to the director of transportation the application along with background information and an explanation of the need for access. The director's decision is final agency action.

**112.4(2) Construction or modification of entrances.**

**a.** All work performed on a primary highway under the terms of an entrance permit shall comply with the conditions of the permit. These conditions include any accompanying plans, drawings, sketches, or other attachments to the permit. The permit holder or the permit holder's contractor shall have a copy of the permit available at the work site.

**b.** During the time an entrance is being constructed or modified, care must be taken to ensure the safety of the workers on the site and of the traveling public. The work shall be accomplished in a manner that will minimize interference with normal highway operations. Care must be taken during construction or modification of the entrance and development of the abutting property to avoid tracking mud or other material onto the primary highway.

**112.4(3) Construction costs.** Construction costs, including any costs incurred for modifying the existing primary highway as may be required by the entrance permit, should not be borne by the department.

**112.4(4) Maintenance of entrances.** See subrule 112.3(4).

**112.4(5) Primary road extensions.**

**a.** On primary road extensions, the location and geometrics of entrances must meet local requirements within the limitations of this chapter, and entrance permit applications must be approved by authorized city officials before final action is taken by the department.

**b.** Applicants are responsible for ensuring compliance with local building codes, setback requirements, minimum lot sizes, density of buildings, provisions for adequate parking, and other local ordinances and regulations.

**c.** Entrance permits issued by the department apply to the construction of entrances within the primary highway right-of-way and do not release applicants from compliance with local ordinances and regulations. These requirements are not altered by the issuance of entrance permits. Applicants are responsible for obtaining the required local approvals and permits.

**d.** Without an approved permit, there shall be no encroachment onto the primary highway right-of-way.

**112.4(6) Considerations for entrance width and radius or flared returns.**

**a.** Entrance width and the size of radius or flared returns should be determined based on the predominant type of vehicle that will use the entrance. The combination of entrance width and return radii or flares should permit vehicles to enter and exit the highway with minimum disruption to through traffic, yet be restrictive enough to discourage erratic maneuvers.

**b.** Entrance width should minimize speed differential, which is the difference between the speed of through traffic and the speed of vehicles that are turning into the entrance. In general, the narrower the entrance, the more vehicles must slow down to negotiate the entrance. An increase in speed differential increases the tendency for potential crashes. Use of larger turning radii or flares will reduce speed differential.

**c.** An entrance can also be too wide. An entrance that is too wide may confuse motorists by creating uncertainty as to where they should position their vehicles within the entrance. Pedestrian traffic must also be considered. Wider entrances may place pedestrians in greater conflict with vehicular traffic.

**112.4(7) Entrance widths.** The width of an entrance is the distance between the beginning points of the return radii or flares, measured perpendicular to the centerline of the entrance.

**a.** *Type "A" entrances*. Each case requires special study. See rule 112.5(306A).

**b.** *Type "B" entrances*.

(1) The minimum allowable width is 24 feet.

(2) The maximum allowable width is 45 feet.

(3) For one-way operation, the minimum allowable width is 12 feet and the maximum allowable width is 30 feet.

**c.** *Type "C" entrances.*

(1) The minimum allowable entrance width is 20 feet. In an area where the posted speed limit is 35 miles per hour or less, a minimum width of 15 feet may be allowed.

(2) The maximum allowable width is 30 feet.

(3) If an entrance will serve more than one property, the minimum allowable width is 20 feet and the maximum allowable width is 35 feet.

**d.** *City street and secondary road intersections.* The department shall determine the width of city street and secondary road intersections on a case-by-case basis, taking into consideration both local and department standards.

**112.4(8) Radius or flared returns.** Return radii for granular entrances shall be measured along the edge of the primary highway shoulder. Return radii for paved entrances shall be measured along the edge of the primary highway pavement.

If the predominant types of vehicles that will use an entrance are passenger cars and straight trucks, paragraphs "a" to "i" of this subrule apply. If the predominant types are truck tractor-semitrailer combinations and large equipment, paragraph "j" applies.

**a.** *Type "A" entrances.* Each case requires special study. See rule 112.5(306A).

**b.** *Type "B" entrances, rural-designed area, not paved.*

(1) For an entrance angle of 90 degrees to the centerline of the primary highway, the return radii should not exceed 35 feet.

(2) For an entrance angle of 60 degrees to the centerline of the primary highway, the return radius of the obtuse angle should not exceed 50 feet. The return radius of the acute angle should not exceed 25 feet.

(3) For an entrance angle that is between 90 and 60 degrees, the maximum radii of the obtuse and acute angles should be interpolated between the values given in subparagraphs (1) and (2) above and rounded to the nearest 5 feet.

(4) Entrance angles that are less than 60 degrees require department review to establish appropriate radii.

**c.** *Type "B" entrances, rural-designed area, paved.*

(1) For an entrance angle of 90 degrees to the centerline of the primary highway, the return radii should not exceed 50 feet.

(2) For an entrance angle of 60 degrees to the centerline of the primary highway, the return radius of the obtuse angle should not exceed 60 feet. The return radius of the acute angle should not exceed 25 feet.

(3) For an entrance angle that is between 90 and 60 degrees, the maximum radii of the obtuse and acute angles should be interpolated between the values given in subparagraphs (1) and (2) above and rounded to the nearest 5 feet.

(4) Entrance angles that are less than 60 degrees require department review to establish appropriate radii.

**d.** *Type "B" entrances, urban-designed area, paved or not paved.*

(1) All Type "B" entrances within an urban-designed area should be paved for a minimum distance of 10 feet back from the primary highway curb, as measured 90 degrees to the edge of the primary highway roadway.

(2) The return radii should be no less than 10 feet nor greater than 20 feet.

**e.** Reserved.

**f.** *Type "C" entrances, rural-designed area, not paved.*

(1) For an entrance angle of 60 to 90 degrees to the centerline of the primary highway, the return radii should not exceed 15 feet for either the obtuse or acute angle.

(2) Entrance angles that are less than 60 degrees require department review to establish appropriate radii.

**g.** *Type "C" entrances, rural-designed area, paved.*

(1) For an entrance angle of 60 to 90 degrees to the centerline of the primary highway, the return radii should not exceed 20 feet.

(2) Entrance angles that are less than 60 degrees require department review to establish appropriate radii.

(3) If an existing entrance is being reconstructed, the returns may be replaced in kind.

**h.** *Type "C" entrances, urban-designed area, paved or not paved.*

(1) All Type "C" entrances within an urban-designed area should be paved for a minimum distance of 10 feet back from the primary highway curb, as measured 90 degrees to the edge of the primary highway roadway.

(2) The return radii should equal the distance between the back of the curb and the front edge of the sidewalk, not to exceed 10 feet.

(3) When no sidewalk is present or anticipated, the maximum radii should be 10 feet.

**i**. *Flared entrances, urban-designed area.* In an urban-designed area, entrances may be constructed with flared returns rather than radius returns. When used, the flare shall be constructed at a 2:1 ratio with the "2" value measured on a line parallel to the entrance centerline and the "1" value measured on a line perpendicular to the entrance centerline. The length of the flare as measured parallel to the entrance centerline should be equal to the radii requirements shown in paragraphs 112.4(8)"d" and "h" above.

**j.** *Truck tractor-semitrailer combinations.* Truck tractor-semitrailer combinations and large equipment vary greatly in length and generally require a customized design for the entrance. Flares will generally not accommodate the movement of these types of vehicles and therefore should not be used. To reduce encroachments onto the traveled way and opposing entrances, turning templates should be used. All turning movements should be evaluated to ensure the entrance width and radii are designed to handle the types and volume of traffic anticipated.

**112.4(9) Entrance angle.**

**a.** In general, the entrance angle shall be established as near to 90 degrees to the centerline of the primary highway as site conditions will allow.

**b.** Normally, the centerline of that part of an entrance lying within the right-of-way shall be at a right angle to the centerline of the primary highway for a minimum distance of 30 feet from the near edge of the primary highway pavement.

**c.** An entrance established for two-way operation for a service station or other development where two access points are authorized shall be 70 to 90 degrees to the centerline of the primary highway.

**d.** On a divided primary highway where two access locations are authorized for one-way operation, the "ingress" may be 45 to 60 degrees to the centerline of the primary highway and the "egress" may be 60 to 90 degrees to centerline of the primary highway.

**112.4(10) Slope and cross section of entrances in rural-designed area.**

**a.** The finished, surface elevation of an entrance over a culvert, or the location where a culvert would normally be placed, should be lower than the primary highway pavement, preferably an extension of the 4 percent shoulder grade, to prevent surface water from draining onto the highway pavement. The shoulder grade should be extended onto the entrance at a distance sufficient to provide a safe platform for a vehicle to stop before entering the highway.

**b.** If an entrance requires drainage pipe, the entrance side slopes from highway shoulder to the entrance pipe shall be no steeper than 8:1 and from the entrance pipe to the right-of-way line shall be no steeper than 6:1. A smooth transition from the 8:1 to the 6:1 slope is required.

**c.** If an entrance does not require drainage pipe, the entrance side slopes from highway shoulder to the minimum clear zone distance shall be no steeper than 10:1, right-of-way width permitting. From the point of minimum clear zone to the right-of-way line, a smooth transition to a 6:1 slope is acceptable.

**d.** Upgrading only the surfacing material of an existing entrance will not require a change in

existing side slopes.

**112.4(11) Entrance grade.** The grade of an entrance is an important element when considering overall motorist safety because the grade impacts speed differential. Vehicles must slow appreciably to turn into an entrance; therefore, the steeper the entrance grade, the greater the reduction in speed required to prevent "bottoming out." Ideally, the maximum practical grade for entrances varies from 8 to 14 percent for low-volume entrances to approximately 5 percent for high-volume entrances. Above these values, bumpers and other low-hanging parts of a vehicle will scrape the entrance.

An entrance's vertical profile should allow for a smooth transition to and from the highway. Flattening entrance grade lines is another tool in providing safe access to and from the highway system.

**761--112.5(306A) Additional requirements for Type "A" entrances.** This rule establishes additional requirements for Type "A" entrances serving commercial, industrial or residential developments.

**112.5(1) General.**

**a.** The most important factors in developing an access plan for a commercial, industrial or residential development are a determination of the potential traffic generated by the site and a determination of the directional distribution of site-generated traffic on the major approach routes and proposed entrances serving the site. Entrances serving the site represent an important element in the efficiency and safety of the highway handling the site-generated traffic. To properly handle traffic from these entrances, the anticipated traffic volumes must be determined by the applicant and submitted to the department.

**b.** The location of entrances, particularly commercial entrances, is a critical factor in minimizing disruption to traffic and pedestrians. A site should be developed with an internal circulation pattern for traffic movements so that access to the site may be gained by a free flow of traffic from the primary road system. Parking stalls and pedestrian movements should be located away from the main entrance to the facility.

**c.** Adequate storage for vehicles must be provided on commercial and industrial sites so that vehicles do not wait on the highway to enter. Adequate storage space is a function of the demand volume, the service time per facility, and the number of service facilities available. Service time is dependent upon the time required to maneuver into position and the time needed to obtain the service. The geometrics of the internal circulation pattern control a portion of the service time. The radii of internal curves should be as large as possible. Buildings on a site should be arranged to allow for the maximum storage available on the site for exiting traffic and situated so that they will not disrupt the free flow of entering traffic.

**d.** A service station site should be designed to provide a minimum distance of 15 feet from the right-of-way line to the near edge of the pump island. No portion of the highway right-of-way shall be used for servicing vehicles.

**e.** When property is being developed, consideration must be given to locating the access directly opposite an existing commercial entrance or street intersection.

**f.** Comments from local authorities regarding the proposed development should be included in the application to allow the department to incorporate the input of local authorities into the final design of the entrance location. This input should refer to the zoning plan, land use plan, or metro transportation plan.

**112.5(2) Type "A" access requests.**

**a.** *Application for entrance permit.* An entrance permit application for a Type "A" entrance shall, when relevant to the proposed development, include the following data in detail:

(1) Type and location of the proposed development.

(2) Site plan.

(3) Location of all proposed entrances, turning lanes on adjacent highways or streets, and internal traffic lanes and parking facilities within the development area. This information shall be sufficiently complete to allow determination of dimensions, the direction of traffic flow, and restrictions to traffic caused by plantings, curbing, medians, walls, signing, etc.

(4) Detailed design of proposed highway pavement widening, additional lane provisions, relocations, and other highway improvements considered necessary to the efficient operation of the

proposed development.

(5) Signal warrant analysis and application to construct a traffic control device, when required. See paragraphs "b" and "c" of this subrule.

(6) Preliminary drainage data.

(7) Gross leasable floor area in square feet.

(8) Number of parking spaces.

(9) Anticipated total daily trips inbound and outbound during an average 24-hour period for total site development. Special holiday shopping traffic shall not be used for this estimate.

(10) Estimated traffic volumes arriving and departing during the normal peak hour.

(11) Estimated distribution of traffic via individual entrances for the normal peak hour.

(12) Estimated distribution of traffic by percentage of total daily trips via major highways from origin to the development.

**b.** *Signal warrant analysis.* The applicant must submit to the department a signal warrant analysis for all multimovement access points within the study area for the proposed development. The purpose of the analysis is to determine if traffic signals are warranted. The analysis should also evaluate the feasibility of coordinating any proposed traffic signals with existing traffic signals in the study area to achieve the desired traffic progression. The department may require a proposed entrance to be redesigned or relocated if the proposed entrance meets signal warrant thresholds but does not meet other standards in these rules.

**c.** *Application to construct a traffic control device.* The applicant shall submit for department approval an application to construct a traffic control device if an existing traffic signal will be modified or a new traffic signal will be installed.

**112.5(3) Agreement supplementary to permit.**

**a.** A major development often involves a variety of special access requirements. In addition to the entrance permit, an agreement between the department, the local governmental unit and the applicant may be required to fit the particular situation, listing in detail the responsibilities of each party.

**b.** Upon receipt of the agreement, the applicant shall be responsible for obtaining the necessary signature approvals including those of appropriate local authorities and returning the agreement to the appropriate district representative.

**c.** The department shall notify the applicant when it has approved or denied the agreement. No work shall be done within the primary highway right-of-way until the department approves the agreement. Any work completed without the prior approval of the department is a violation of Iowa Code section 319.14.

**112.5(4) Primary highway improvements.** The cost of primary highway improvements needed to handle the volume of traffic generated by the development should not be the responsibility of the department.

**761--112.6(306A) Drainage requirements.** This rule establishes drainage requirements for all locations where access is requested to the primary highway system.

**112.6(1) Entrances must be constructed so that they do not adversely affect primary highway drainage** or drainage of the adjacent property. The drainage and the stability of the highway subgrade must not be impaired by driveway construction or roadside development. Construction of an entrance shall not cause water to flow across the primary highway pavement or to pond on the shoulders or in the ditch, or result in erosion within the primary highway right-of-way limits.

**112.6(2) Drainage collected by ditches, gutters or pipes on private property** shall not be discharged into the primary highway drainage system unless expressly approved by the department. An applicant may be required to submit a drainage study to the department that justifies the drainage system proposed and the pipe or sewer sizes to be used. The applicant shall not interfere with the natural course of drainage.

**112.6(3) When the construction of an entrance necessitates crossing a highway ditch** that has been constructed to carry drainage, a drainage structure shall be installed in the ditch by the applicant at the applicant's expense. The low point of the ditch shall dictate the location for culvert placement unless otherwise specified by the department. Under no circumstances shall existing ditches or gutters be filled without adequate alternate provisions for drainage.

**a.** The department's engineering staff will assist in determining the size and length of culverts and aprons. A culvert shall be of adequate size to handle drainage, but in most situations the culvert shall not be less than 18 inches in diameter. Where shallow ditches exist, the department may approve small arched culverts or culvert sizes less than 18 inches in diameter. Culvert pipe shall comply with departmental standard specifications as they exist at the time of installation.

**b.** Length of culvert pipe shall be sufficient to accommodate the entrance slopes. The finished surface elevation of an entrance over a culvert pipe, or the location where a culvert would normally be placed, should be sloped away from the primary highway pavement, preferably an extension of the 4 percent shoulder slope, to prevent surface water from draining onto the highway pavement.

**c.** Drainage structures located within the primary highway right-of-way shall be maintained by the department except for concrete box culverts and bridges constructed by a permit holder under authority of an entrance permit. These structures shall be maintained by the permit holder.

**112.6(4) Where drainage is carried along an existing curb**, the entrance shall be constructed with a rise in elevation of at least 6 inches from the street gutter at the entrance to a point 6 feet behind the gutter to prevent runoff from spilling onto private property. The flow line of the gutter through the entrance shall be restored.

**761--112.7(306A) Access to Priority I, II, III and IV highways.** Access rights are acquired on Priority I, II, III and IV highways. See rules 112.11(306A) and 112.12(306A). After access rights are acquired, additional access may be allowed as follows:

**112.7(1) Priority I highway.** The department may allow a temporary at-grade access in emergency situations or for construction or maintenance purposes. Temporary access to the interstate highway system requires the concurrence of the Federal Highway Administration. See subrule 112.13(4).

**112.7(2) Priority II, III and IV highways.** An additional entrance to a property from which access rights have been acquired may be permitted only as a special access connection. See rule 112.13(306A). This includes a temporary at-grade access for emergency situations or for construction or maintenance purposes. See subrule 112.13(4).

**761--112.8(306A) Access to Priority V highways, rural areas.** This rule establishes requirements for access to Priority V highways in rural areas.

**112.8(1) General.** Where access rights have not been acquired, access is generally limited to one entrance for contiguous highway frontage not exceeding 1,000 feet, two entrances for contiguous highway frontage exceeding 1,000 feet but not exceeding 2,000 feet, and so on. Ownership on each side of the highway shall be considered as separate ownership. Except for the above-stated restrictions and those contained in subrules 112.8(2) and 112.8(3), no spacing restrictions shall be imposed. Additional entrances may be permitted when a single entrance will not provide adequate access due to topographic conditions or when additional entrances will comply with future construction plans for the roadway and the access priority classification to be applied.

**112.8(2) Access requirements near public road intersections.**

**a.** A property abutting a primary road and a local public road or another primary road may be granted access to the primary road at a distance generally no less than 300 feet from the intersection of the centerlines of the two roads.

**b.** At a "T" type intersection, access to the primary road may be located directly opposite the intersection.

**c.** Access shall not be permitted onto a local public road within the primary road right-of-way limits. The centerline of an access onto a local public road should be no closer than 150 feet to the near edge of the primary highway traveled way.

**112.8(3) Property lines.** The centerline of an entrance to the primary roadway should be no closer than 50 feet to the property line as extended to intersect the roadway centerline at a right angle. No portion of an entrance located within the right-of-way should extend beyond the property line as extended. If an entrance does extend onto an adjoining property within the right-of-way, the applicant should contact that property owner to request the property owner's concurrence or to suggest a joint entrance. An entrance that will serve two properties abutting the primary road may be centered on the property line by mutual agreement between the property owners.

**761--112.9(306A) Access to Priority V highways, fringe or built-up areas, and Priority VI highways, all areas.** This rule establishes requirements for access to Priority V highways in fringe or built-up areas, and access to Priority VI highways in rural, fringe, or built-up areas.

**112.9(1) General.** Property frontage may be granted access where needed to the primary road, provided safety and construction standards are satisfactory. In a rural area, a minimum distance of 30 feet between toes of slopes along the centerline of the ditch shall be maintained. In a fringe or built-up area, there shall be a minimum of 15 feet of curb maintained between near edges of curb drops when more than one access is allowed to a single highway frontage. If the property is within corporate limits, city requirements apply if they are more restrictive.

**112.9(2) Access requirements near public road intersections.**

**a.** *Rural area.* Same as subrule 112.8(2).

**b.** *Fringe or built-up area.*

(1) The beginning of the curb drop for an entrance to a primary highway shall be no closer than 15 feet to an intersecting street's curb tangent point. No portion of the entrance along the primary highway should extend beyond the property line as extended or into a crosswalk.

(2) The beginning of the curb drop for an entrance to a street should be no closer than 15 feet to an intersecting primary highway's curb tangent point. No portion of the entrance along the street should extend beyond the property line as extended or into a crosswalk.

(3) If an intersection does not have an existing or a planned curb and gutter to define the radius, the following assumptions shall be applied to the above requirements for determining the location of an entrance:

Minimum width of the traveled way of the primary highway is assumed to be 53 feet back to back of curbs.

However, if the platted width of the primary highway right-of-way is less than 66 feet, the width of the traveled way is assumed to be 75 percent of the platted width.

Minimum width of the traveled way of an intersecting local public road or street is assumed to be 31 feet back to back of curbs.

**112.9(3) Channelized intersection or divided highway.** When there is a median in a primary road or intersecting street, or both, the curb drop for an entrance to the primary road or intersecting street shall be determined as stated in subrule 112.9(2), except that at the beginning or end of the median, or at a median break, the nearest edge of the curb drop for the entrance shall be no closer than 20 feet to the end of the median as measured at a right angle to the median. This does not apply to access centered on a median break.

**112.9(4) Median openings.**

**a.** When a divided primary highway has been constructed with a median, crossovers or median breaks shall not be permitted if there are frequent openings for local street intersections or traffic conditions do not make median breaks advisable. The layout of entrances to adjacent properties along the primary highway shall be designed to take advantage of existing or planned median crossovers.

**b.** When a crossover or median break is deemed necessary by the department as a result of traffic generated by a business or other development, the required improvements shall be constructed by the property owner as a part of a permit process. The department shall bear no part of the construction costs.

**c.** The permit authorizing a new crossover shall specify the exact location, design, and construction requirements. Any drainage facilities required by the construction shall be installed by the permit holder at the permit holder's expense.

**d.** The minimum width of a new median crossover is 40 feet. In a rural-designed area, the width of a median crossover shall be measured at the normal culvert line. In an urban-designed area, the width of a median crossover shall be measured parallel to the highway centerline between the curbed noses of the median.

**e.** Upon completion of construction of the improvements as provided by this subrule, the department shall assume ownership of the improvements and shall be responsible for their future maintenance.

**112.9(5) Property lines.**

**a.** *Rural area.* Same as subrule 112.8(3).

**b.** *Fringe or built-up area.* The beginning of an entrance radius return or flare shall be no closer than 1 foot to the property line as extended on an interior lot line to intersect the primary road centerline at a right angle. An entrance to serve two properties abutting the primary road may be centered on the property line by mutual agreement between the property owners.

761--112.10 **Reserved.**

**761--112.11(306A) Policy on acquisition of access rights.**

**112.11(1) General.** It is necessary that every effort be made to preserve the public investment in the primary highway system. Where efficiency of traffic movement is desired, this investment is preserved by acquiring the adjacent property's access rights and limiting or prohibiting direct access to the primary highway. This provides a safer environment for the highway user, increases the free and efficient movement of through traffic, and reduces highway accidents by minimizing the number of conflict points or entrances located along the highway.

**112.11(2) Project development.** During the initial stages of project development for a highway improvement project, the department shall determine if access rights to the primary highway will be acquired and the applicable access priority classification to be applied.

The department shall consider average daily traffic, proposed design features of the facility, terrain, the function of the particular section in relation to the total highway system, the commercial/industrial network of highways, service level, continuity of the system and sound engineering judgment.

**112.11(3) Access rights at at-grade intersections with city streets and secondary roads.** When access rights to a primary highway are acquired, the department may also acquire access rights along a city street or secondary road where an at-grade intersection with the highway exists or is proposed. If access rights are acquired, they will be acquired along the city street or secondary road for a distance of 150 feet from the near edge of the primary highway traveled way. However, the department may acquire more or less than 150 feet of access rights after considering the severity of damage to adjacent properties and traffic volumes and other safety factors.

**112.11(4) Access rights at at-grade primary intersections.**

**a.** When access rights to a primary highway in a rural area are acquired, the department may also acquire access rights along an intersecting at-grade primary highway for a minimum distance from the intersection of the centerlines of the two primary highways as follows:

1. 150 feet when the intersecting primary highway carries less than 2,500 vehicles per day.
2. 300 feet when the intersecting primary highway carries 2,500 or more vehicles per day.

However, the department may acquire more or less than the specified access rights after considering the severity of damage to adjacent properties and traffic volumes and other safety factors.

**b.** If the intersection is channelized, access rights shall be acquired and no access shall be permitted along the channelized primary highway for a minimum distance of 100 feet beyond the beginning or end of the median. For the purpose of access control, the beginning or end of a median is the point where the distance between the edges of the opposing traveled lanes is 4 feet.

**112.11(5) Access rights along intersecting roadways at interchanges.**

**a.** When an interchange is constructed on a primary road, the department shall acquire access rights along the public road or street intersecting the primary road. Once access rights are acquired, no access is allowed. The following are the minimum distances where access rights shall be acquired along the intersecting public road or street; in each case, the greater distance shall prevail.

1. 600 feet from the point of ramp bifurcation in a rural or fringe area.
2. 300 feet desired, 150 feet minimum, from the point of ramp bifurcation in a built-up area.
3. 150 feet from the beginning of a deceleration lane or taper.
4. 100 feet from the beginning or end of a median.

However, the department may acquire more or less than the specified access rights after considering the severity of damage to adjacent properties and traffic volumes and other safety factors.

**b.** When an interchange is constructed as a half-diamond or partial cloverleaf, the department may permit an access directly opposite a ramp connection to the primary road.

**112.11(6) Agreement with city or county.** When access rights are acquired along a city street or secondary road, the department shall negotiate an agreement with the city or county which states that access rights shall be acquired by the department in the state's name or in the name of the city or county and that the city or county shall not permit any third party to use the controlled portion of the street or road without the prior written consent of the department.

**761--112.12(306A) Policy on location of predetermined access locations.**

**112.12(1) General.** At the time access rights are acquired, existing entrances shall be removed or relocated to connect to predetermined access locations. These locations shall thereafter be defined as the adjacent properties' access locations.

**a.** The department is responsible for the construction of entrances at predetermined access locations, either as a part of the project or at a future date when requested by the property owners. Entrances not constructed as a part of the project will be designated on the construction plans as predetermined access locations that are reserved for the property.

**b.** Any alteration or relocation of an access location requires the written approval of the department, and the property owner is responsible for all costs incurred. See subrule 112.12(5), revision of access.

**112.12(2) Establishing predetermined access locations.** The department realizes that these rules cannot reasonably be expected to address every situation or issue that may arise when developing plans for a proposed highway improvement project. It is foreseeable that not all access locations will comply strictly with the required or recommended spacing standards set out in these rules; however, all reasonable efforts shall be made to establish predetermined access locations that meet these spacing standards.

**a.** The department shall establish predetermined access locations by considering the following:

(1) Zoning and intended land use, as reviewed with city and county officials.

(2) Potential adverse impacts on adjacent property if spacing standards are applied strictly, such as but not limited to an unreasonable restriction on the property due to a unique physical situation that cannot be remedied or an unreasonable damage to the property.

(3) Environmental, social, or economic constraints that prevent the application of spacing standards.

(4) Federal, state, or local standards that conflict with these rules and take precedence.

(5) Sound engineering judgment consistent with the goals of the department.

**b.** When establishing predetermined access locations, the department may conduct a field examination, giving consideration to information received from city and county officials, sight distance availability, natural barriers, property ownership, proposed roadway design, and development of future frontage roads.

**c.** A predetermined access location that does not meet required spacing standards is not a waiver or variance of these rules if justification for the access location is based on one or more of the considerations listed in paragraph "a" of this subrule. The final access review letter must include this justification.

**112.12(3) Spacing.** Spacing between predetermined access locations shall conform to the following requirements:

**a.** *Priority I highway.* Access is allowed only at interchange locations.

**b.** *Priority II highway.* One mile is desirable. One-half mile is the minimum.

**c.** *Priority III highway.* One-quarter mile is desirable. 1,000 feet is the minimum.

**d.** *Priority IV highway.*

(1) Priority IV(a). 600 feet is the minimum.

(2) Priority IV(b). 300 feet is the minimum.

**112.12(4) Entrances constructed after project completion.** After completion of a highway project, a property owner may request the department to construct an entrance at a predetermined access location. Unless otherwise specified in the right-of-way acquisition contract or in the condemnation documents:

**a.** The department is responsible for constructing, at the department's expense, a granular-surfaced entrance that does not exceed the maximum width for a Type "C" entrance.

**b.** The department may approve modifications, such as widening or paving the entrance. In this instance, the property owner is responsible for constructing the entrance. After the property owner has constructed the entrance, the department will compensate the property owner for the cost of constructing a granular-surfaced Type "C" entrance. The property owner is responsible for the remainder of the costs.

**112.12(5) Revision of access.** After an entrance has been constructed at a predetermined access location, no change in entrance type or location may be made unless a revision of access has been approved by the department. The property owner is responsible for the cost of altering or relocating the entrance.

**a.** A request for revision of access shall be submitted by the property owner to the appropriate district representative upon the prescribed application form furnished by the department.

**b.** The application shall be approved or denied by the department's access policy administrator.

**c.** If the access policy administrator denies the application, the applicant may appeal the decision by submitting to the appropriate district engineer the application along with background information and an explanation of the need for access.

**d.** If the district engineer denies the application, the applicant may appeal the decision by submitting to the director of transportation the application along with background information and an explanation of the need for access. The director's decision is final agency action.

**761--112.13(306A) Policy on special access connections where access rights have been previously acquired.**

**112.13(1) General.** An additional entrance to a property from which access rights have been previously acquired may be permitted only as a special access connection.

**a.** An applicant for a special access connection should be aware the state of Iowa has previously acquired the rights of direct access to the primary highway from the applicant's highway frontage and, therefore, the applicant has no remaining right of additional direct access to the highway.

This acquisition of access rights is recorded in the local county courthouse and is a restriction placed upon the property.

**b.** The department realizes there may be locations where granting an entrance within an area where access rights were previously acquired may be consistent with the department's current rules.

In these special cases, the department may authorize a special access connection upon such terms and conditions as may be determined by the department.

**c.** In an area where access rights were acquired after July 1, 1966, an applicant may be required to reimburse the state for the increase in land value resulting from the new connection, as determined by a department appraisal.

**112.13(2) Application.**

**a.** A request for the establishment of a special access connection shall be submitted by the property owner to the appropriate district representative upon the prescribed application form furnished by the department.

**b.** The application shall be approved or denied by the department's access policy administrator.

**c.** If the access policy administrator denies the application, the applicant may appeal the decision by submitting to the appropriate district engineer the application along with background information and an explanation of the need for access.

**d.** If the district engineer denies the application, the applicant may appeal the decision by submitting to the director of transportation the application along with background information and an explanation of the need for access. The director's decision is final agency action.

**112.13(3) Requirements.**

**a.** Whenever possible, a special access connection should be established as a joint access location to serve more than one property ownership.

**b.** A special access connection is a special permit for access and is not a permanent right of access to the highway.

**c.** The property owner is responsible for all costs incurred for the construction of the approved connection, including any required drainage structure.

**d.** A special access connection shall be recorded by the department in the county recorder's office and will be a restriction placed upon the property. All provisions of the special access connection shall be binding on successors or assigns of the applicant property owner.

**e.** Special access connections shall be constructed in compliance with rules 112.4(306A), 112.5(306A) and 112.6(306A).

**f.** The department shall approve spacing for special access connections in accordance with subrules 112.12(2) and 112.12(3).

**112.13(4) Temporary access.**

**a.** The department realizes temporary access may be needed in emergency situations or for highway construction or maintenance purposes. In these cases, a temporary connection may be allowed, but is subject to special stipulations as may be determined by the department.

**b.** Temporary access shall be authorized for a determinable period of time. The access need not comply with paragraph 112.13(3)"a" (joint access) or 112.13(3)"f" (spacing). The applicant is responsible for all costs incurred, including removal of the access and restoration of the right-of-way.

**c.** The granting of temporary access to the interstate highway system requires the concurrence of the Federal Highway Administration.

**d.** A separate application for temporary access is not needed if the temporary access is for a construction or maintenance project, it is shown on the original plan, and it has been approved previously by the department and, when required, the Federal Highway Administration.

**761--112.14(306A) Recreational trail connections.** This rule establishes requirements for access to the primary road system from recreational trails.

**112.14(1) General.**

**a.** No access to a Priority I highway from a recreational trail is allowed.

**b.** Reserved.

**112.14(2) Application.**

**a.** An application for access to a Priority II, III, or IV highway shall be submitted and processed in accordance with subrule 112.13(2).

**b.** An application for access to a Priority V or VI highway shall be submitted and processed in accordance with subrule 112.4(1).

**c.** The applicant shall submit with the application a detailed plan sufficient for departmental review. The plan shall include an appropriate recreational trail signing layout.

**d.** The applicant may contact the appropriate district representative for assistance in preparing the application.

**112.14(3) Requirements.**

**a.** *Spacing.*

(1) Spacing for a Priority II, III, or IV highway shall conform to subrule 112.12(3). It is preferable that an entrance provide access to adjacent properties as well as to the recreational trail.

(2) Spacing for a Priority V or VI highway shall conform to rule 112.8(306A) or 112.9(306A) as applicable.

**b.** *Sight distance.* Sight distance for a recreational trail connection shall conform to the desirable sight distance as listed in rule 112.2(306A).

**c.** *Entrance width and radius return.* The entrance width and radius return of a recreational trail connection shall conform to the design standards adopted for the Statewide Iowa Trails Plan.

**d.** *Entrance angle.* The entrance angle for a recreational trail connection shall be established as near to 90 degrees to the centerline of the primary highway as site conditions will allow.

**e.** *Slope and cross section.* The slope and cross section of a recreational trail connection shall conform to subrule 112.4(10).

**f.** *Drainage.* Drainage for a recreational trail connection shall conform to rule 112.6(306A).

**g.** *Construction.* The permit holder shall be responsible for constructing the recreational trail connection in compliance with the approved permit and at no cost to the department. The department reserves the right to inspect any work performed within the primary highway right-of-way. See subrule 112.3(3).

**h.** *Maintenance.* Maintenance responsibilities shall conform to subrule 112.3(4).

These rules are intended to implement Iowa Code sections 306.19, 306A.1 to 306A.8, and 319.14.

# IOWA DEPARTMENT OF TRANSPORTATION

## *TYPE "A" DETERMINATION CHECK SHEET*

## EXHIBIT "A"

The efficiency and safety of a highway depends to a large extent upon the amount and character of roadside interference with the movement of traffic. Most of this interference originates in vehicular movements to and from businesses, residences or other developments along the highways. Accordingly, regulation and overall control of entrances are necessary to provide efficient and safe operation and to utilize the full potential of the highway investment.

In developing an access plan for a commercial site, an important factor is determining the potential traffic to be generated by the site and the directional distribution of site-generated traffic on the major approach routes and proposed entrance serving the site. Entrances serving these areas represent an important element in the efficiency and safety of the highway onto which the site traffic will enter and exit.

To properly handle traffic from these entrances, the anticipated traffic volumes shall be determined by the applicant and submitted to the department before approval will be granted to commence any activities within the highway rights of way.

If the proposed development is to be located within the limits of a city, the applicant shall be responsible for reviewing the information as required and noted in this "Type "A" Entrance Determination Check Sheet" with City Authorities and shall include, as a part of the submittal to the department, comments as received from an authorized representative of the City. The development proposal must be consistent with the Metropolitan Area Transportation Plan when the development plan falls within the area.

**PLEASE REFER TO THE DEPARTMENTR OF TRANSPORTATION'S ACCESS POLICY "2002" FOR ADDITIONAL INFORMATION. IN PARTICULAR, REFER TO SECTIONS 112.3 AND 112.5 AS WELL AS SECTION 319.14 OF THE CODE OF IOWA.**

*INFORMATION REQUIRED OF THE APPLICANT PRIOR TO RECEIVING DEPARTMENT APPROVAL*

| | |
|---|---|
| LEGAL DESCRIPTION OF SUBJECT PROPERTY | ATTACH INFORMATION |
| GROSS SQUARE FOOTAGE OF DEVELOPMENT UNDER ROOF | _____ |
| SQUARE FOOTAGE OF RETAIL SALES AREA OR GROSS LEASABLE AREA | _____ |
| TOTAL NUMBER OF PARKING STALLS | _____ |
| NUMBER OF ANTICIPATED PEDESTRIAN AND MASS TRANSIT SHOPPERS | _____ |
| YEAR IN WHICH THE DEVELOPMENT WILL INITIALLY OPEN | _____ |
| YEAR IN WHICH THE DEVELOPMENT WILL BE IN TOTAL OPERATION | _____ |
| EXPECTED NUMBER OF EMPLOYEES FOR INITIAL OPENING | _____ |
| EXPECTED NUMBER OF EMPLOYEES FOR FULL OPERATION | _____ |

DAYS OPEN FOR BUSINESS AND HOURS OF OPERATION

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| OPEN | | | | | | | |
| CLOSED | | | | | | | |
| DAY | SUN. | MON. | TUE. | WED. | THUR. | FRI. | SAT. |

ATTACH PLANS OF THE PROPOSED DEVELOPMENT AREA AND INCLUDE:

A. Location of entire development site including location of buildings.
B. Location of all proposed access locations.
C. Details of parking lot including traffic flow and drainage features.
D. Prepare traffic flow charts for <u>each access location.</u>

BASED ON THE INFORMATION KNOWN AT THIS TIME, ADVISE AS TO THE TYPE OF STORES PROPOSED WITHIN THE DEVELOPMENT AREA AND THE GROSS LEASABLE AREA OF EACH:

STORES AVAILABLE AT INITIAL OPENING:

| TYPE OF STORE | GROSS LEASABLE AREA |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |

STORES AVAILABLE AT TIME OF FULL OPERATION:

| TYPE OF STORE | GROSS LEASABLE AREA |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

IF THE TRAFFIC GENERATED BY THIS DEVELOPMENT ADVERSLY IMPACTS THE EFFICIENCY AND SAFETY OF THE EXISTING HIGHWAY FACILITY AS DETERMINED THROUGH AN ENGINEERING STUDY INCLUDING A TRAFFIC ANLYSIS, THE APPLICANT SHALL BE REQUIRED TO PROVIDE HIGHWAY MODIFICATIONS AND\OR SIGNALIZATION ALL AT NO EXPENSE TO THE DEPARTMENT

**A DETAILED GEOMETRIC DESIGN PLAN INCLUDING THE FOLLOWING DIMENSIONAL ELEMENTS SHALL BE PREPARED BY THE APPLICANT AND SUBMITTED TO THE DEPARTMENT:**

A. Total width of the entrance(s), lane widths and intended lane usage.

B. Location of the entrance(s) along the highway by reference to highway stationing, or if stationing is not available, by a stated distance from a known landmark. (For example, 95 feet west of Soma Street.)

C. Location of traffic islands (raised, depressed or painted) by reference to lengths along the highway or entrance baseline and offset distances from the edge of highway or entrance.

D. Radii of all turning roadway curves, lengths of turning bays, turn lanes, taper ratios and lengths and shoulder widths as proposed.

E. The detailed geometric plan shall also include curb details and pavement jointing details where applicable.

**OTHER PLAN SUBMITTAL REQUIREMENTS:**

A. Details of size and location of proposed drainage structures.

B. Size and location of existing drainage structures.

C. Detailed information regarding any proposed changes in existing drainage.

D. A vertical profile of the entrance(s) approach to the highway.

E. Pavement and shoulder cross slope information to verify crossover crown controls and pavement drainage.

F. Grading cross sections when highway widening is required.

G. Comments regarding the handling of highway traffic during construction.

H. Pavement marking plans should highway widening be required.

---

**UPON COMPLETION OF THE ABOVE INFORMATION, PLEASE FROWARD THIS INFORMATION AND ATTACHMENTS AS REQUIRED TO:**
**ENGINEERING OPERATIONS TECHNICIAN**_____
**ADDRESS:**_____
**TELE. #**_____

---

**APPLICANT NOTE: ALL CONTACTS AND SUBMITTALS SHALL BE MADE WITH THE DISRICT FIELD OFFICE AS NOTED ABOVE.**

**FAILURE ON THE PERT OF THE APPLICANT TO PROVIDE THE ENTIRE PACKAGE OF INFORMATION AS DETAILED ABOVE WILL RESULT IN DELAY IN DEPARTMENT REVIEW AND MAY RESULT IN DEPARTMENT DENIAL OF THE APPLICATION.**

## INCLUDE THE FOLLOWING INFORMATION:

Anticipated total daily trips (inbound and outbound) during an average 24 hour period including existing highway traffic. Special holiday traffic should not be used for this estimate.

If the development is to be completed in stages, use this page for the opening date traffic estimates and the following page for total traffic estimates upon final completion of development area.

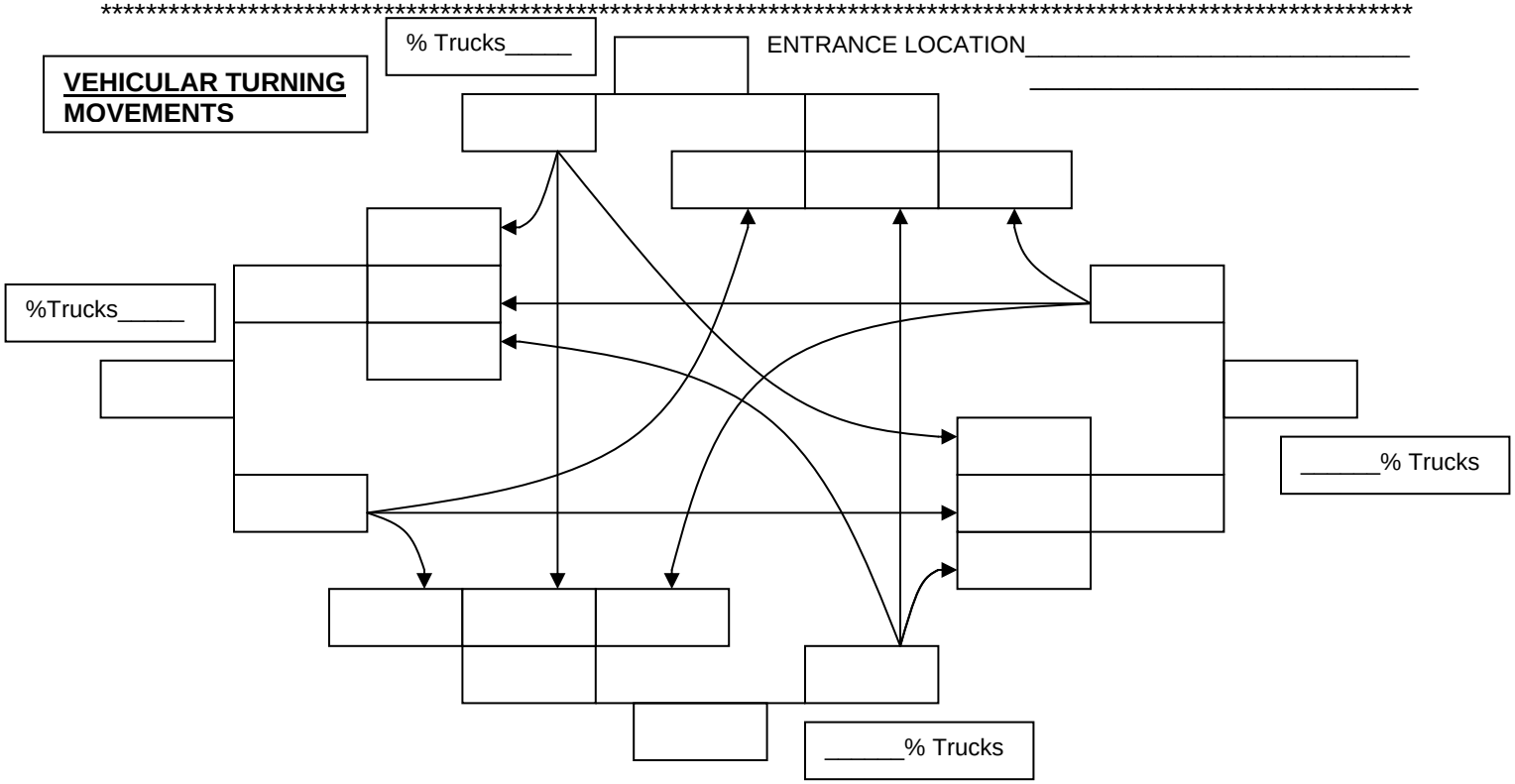
In completing the traffic movement estimate, volumes shall be shown for left turns, right turns and straight through movements as well as percentage of trucks involved in each movement for each access location as proposed to serve the development area.

**********

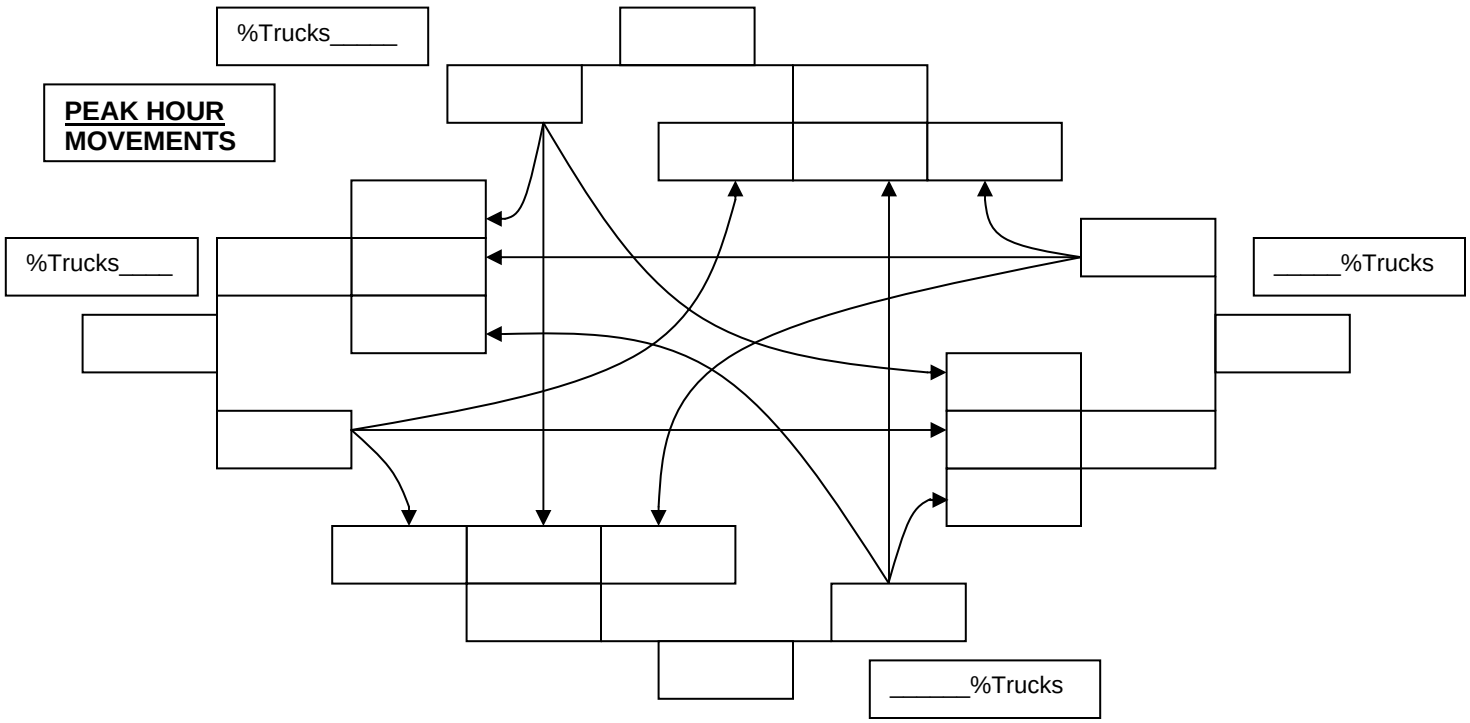
ENTRANCE LOCATION_____

_____

**VEHICULAR TURNING MOVEMENTS**



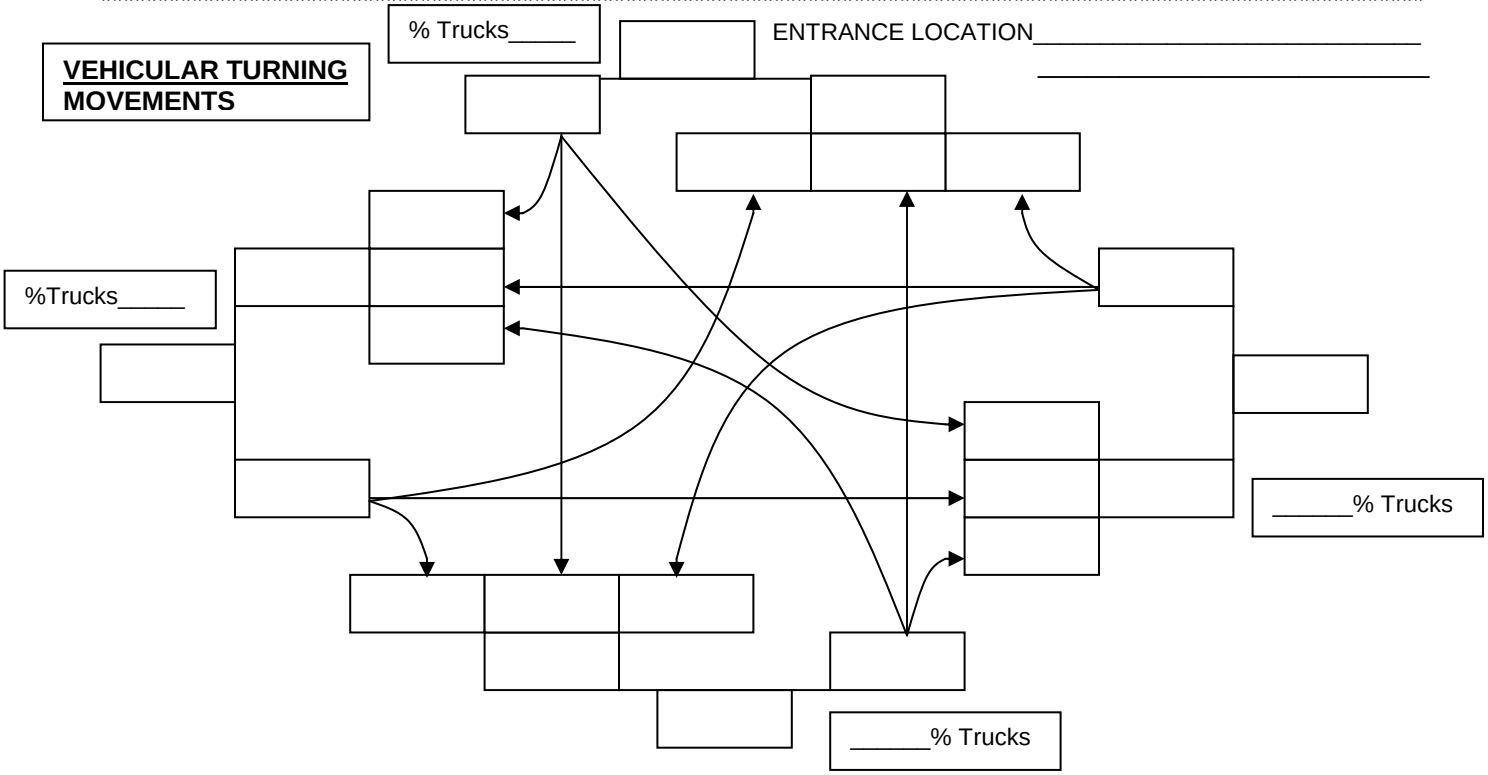

**PEAK HOUR MOVEMENTS**



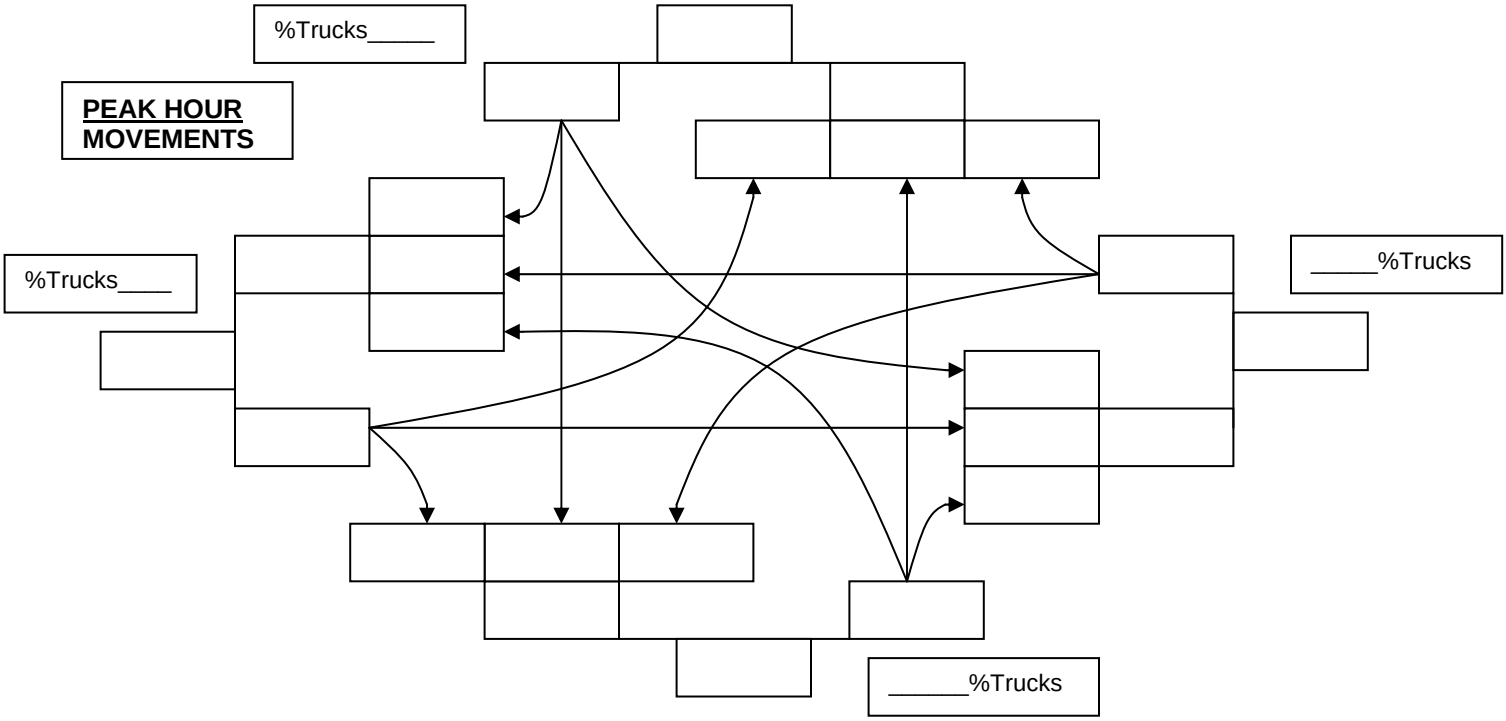
**THIS ESTIMATE HAS BEEN PREPARED FOR THE YEAR_____,**
**THE YEAR TOTAL COMPLETION OF THE DEVELOPMENT AREA IS ANTICIPATED.**
**********

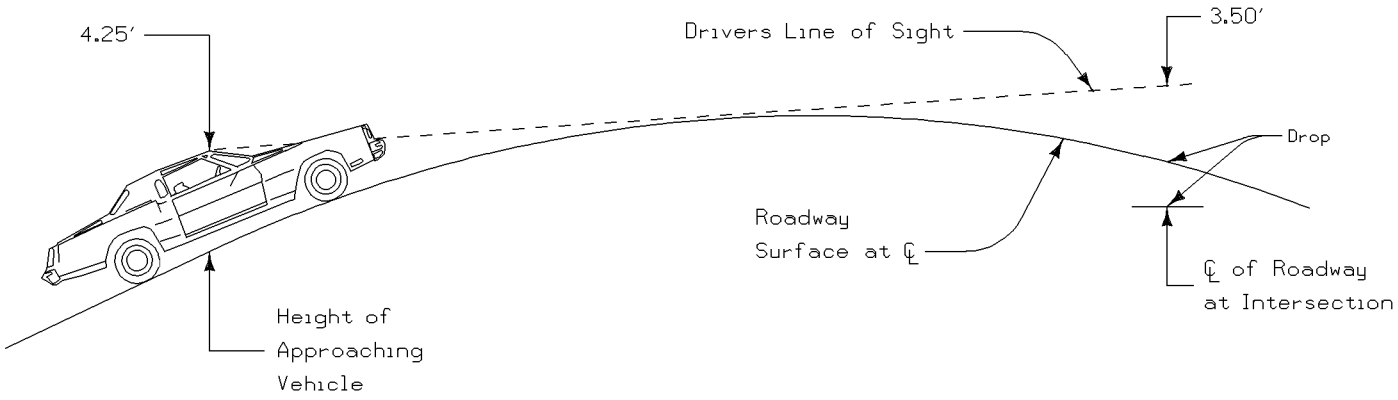
ENTRANCE LOCATION_____
_____

**VEHICULAR TURNING MOVEMENTS**

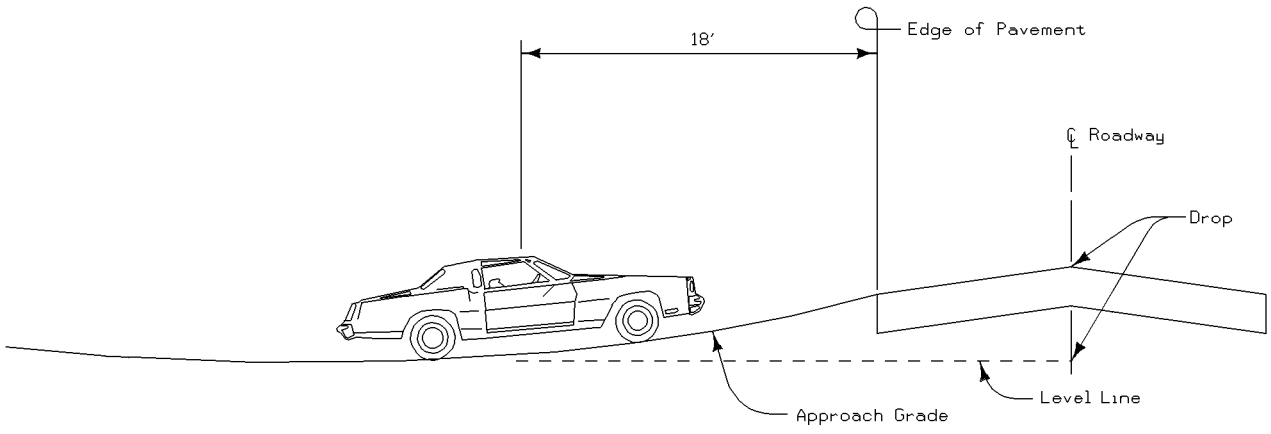



**PEAK HOUR MOVEMENTS**

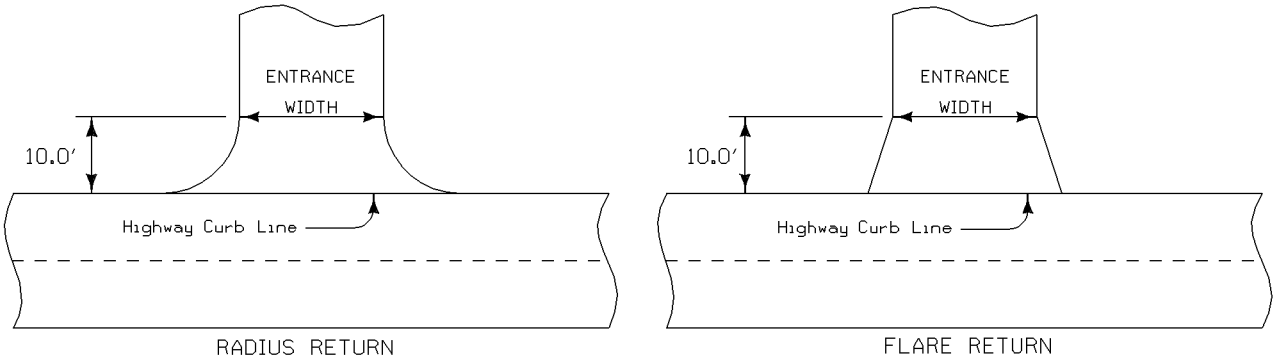





**SIGHT DISTANCE – PROFILE OF ROADWAY**
**112.2(36)**



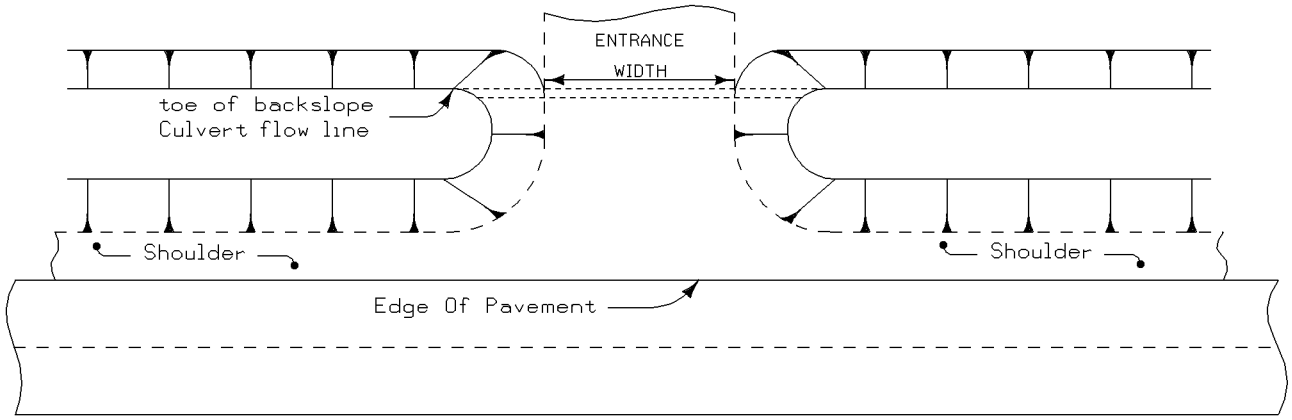

**SIGHT DISTANCE – PROFILE OF APPROACH GRADE**
**112.2(36)**




**URBAN DESIGNED ENTRANCE WIDTH DETERMINATION**
**112.2(7)a 112.4(8)d&h**

| ENTRANCE WIDTH | OPERATION OF ENTRANCE | | |
|---|---|---|---|
| | 1-WAY | 2-WAY | JOINT |
| TYPE 'B' | 12'-30' | 24'-45' | 24'-45' |
| TYPE 'C' | —— | 15'-30' | 20'-35' |

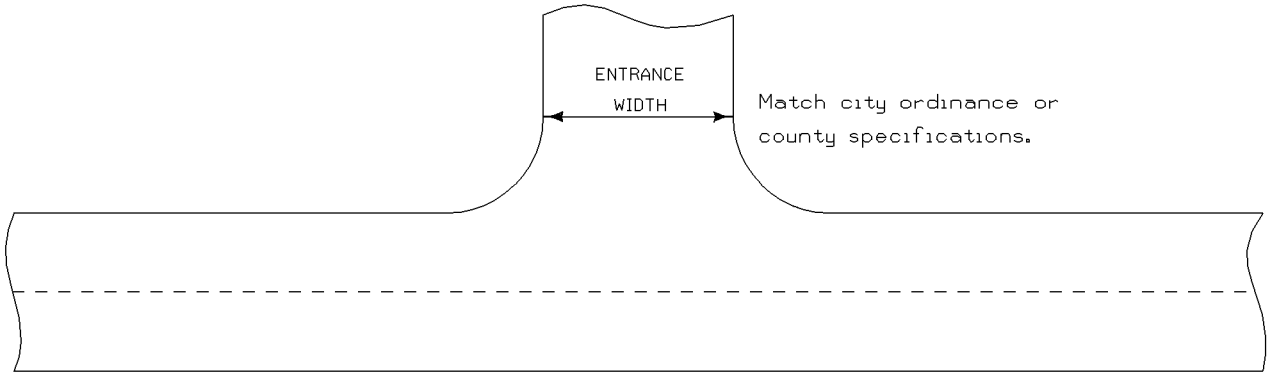
**112.4(7)**



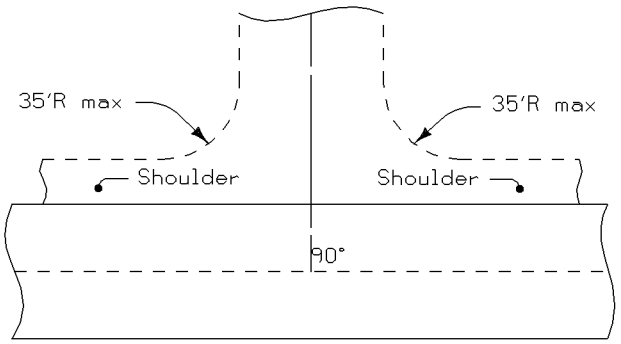

**RURAL DESIGNED ENTRANCE WIDTH DETERMINATION**
**112.4(7) 112.2(8)**

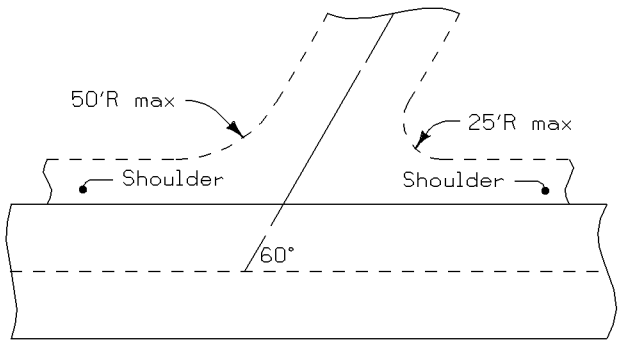
| ENTRANCE WIDTH | OPERATION OF ENTRANCE | | |
|---|---|---|---|
| | 1-WAY | 2-WAY | JOINT |
| TYPE 'B' | 12'-30' | 24'-45' | 24'-45' |
| TYPE 'C' | —— | 15'-30' | 20'-35' |

**112.4(7)**




**CITY STREET OR COUNTY ROAD**
**112.4(7)d**

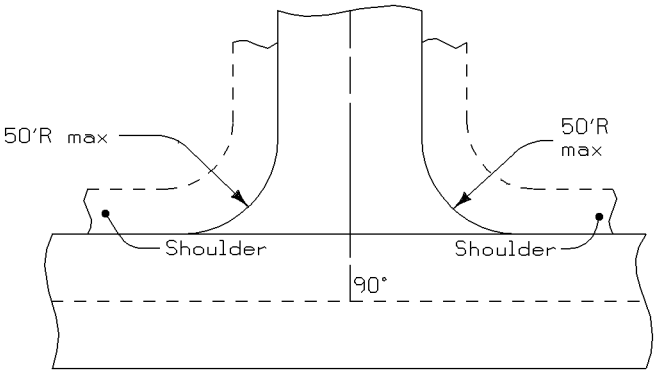


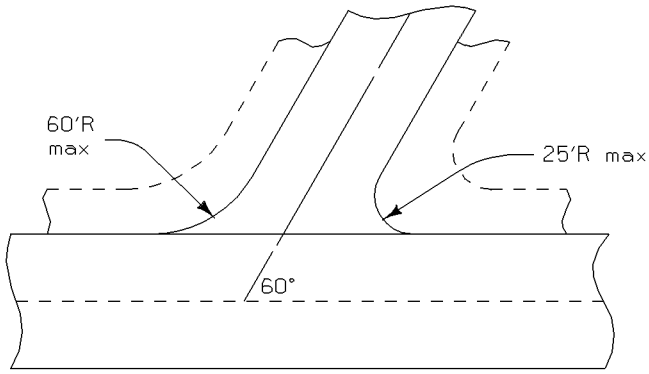




| ANGLE | RADIUS |
|---|---|
| 120° 00' - 112° 30' | 50' |
| 112° 29' - 97° 30' | 45' |
| 97° 29' - 82° 30' | 40' |
| 82° 31' - 67° 30' | 30' |
| 37° 29' - 60° 00' | 25' |

**RADIUS RETURN – TYPE 'B' RURAL DESIGNED ( Not Paved )**
**112.4(8)b**

---

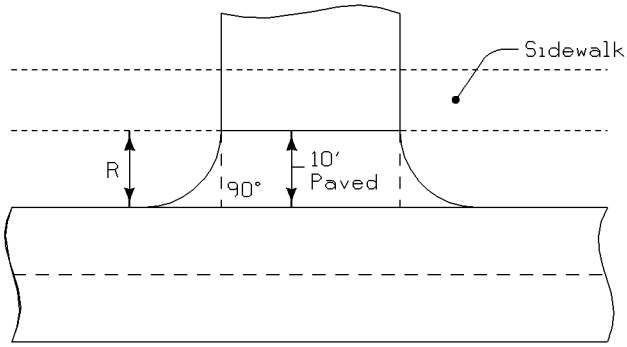


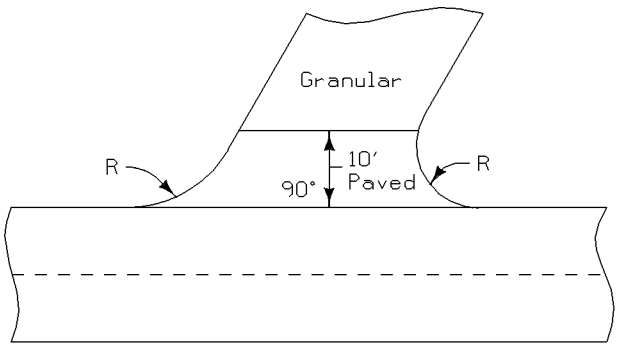




| ANGLE | RADIUS |
|---|---|
| 120° 00' - 105° 00' | 60' |
| 104° 59' - 86° 15' | 50' |
| 86° 14' - 78° 45' | 45' |
| 78° 44' - 71° 15' | 40' |
| 71° 14' - 63° 45' | 30' |
| 63° 44' - 60° 00' | 25' |

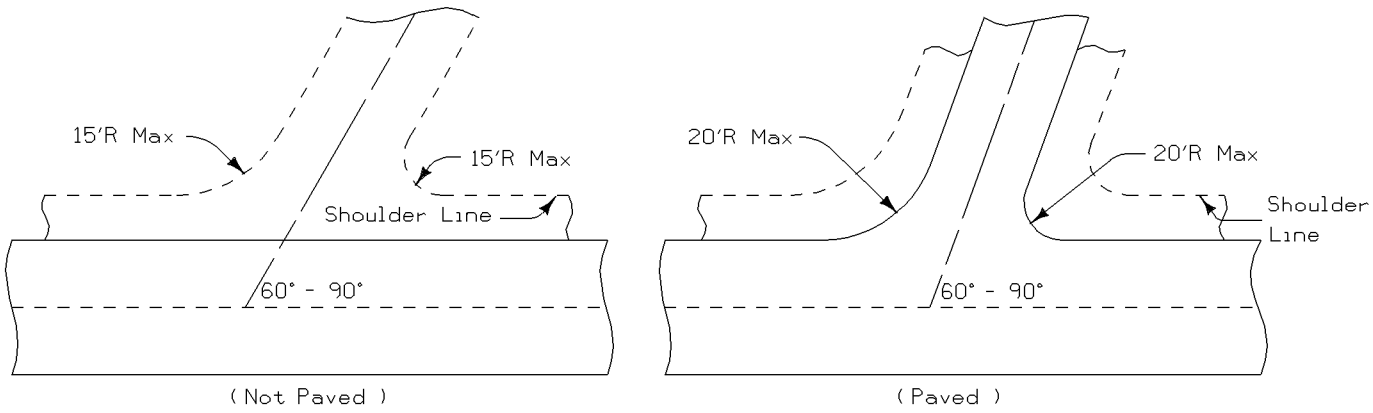
**RADIUS RETURN – TYPE 'B' RURAL DESIGNED ( Paved )**
**112.4(8)c**

---



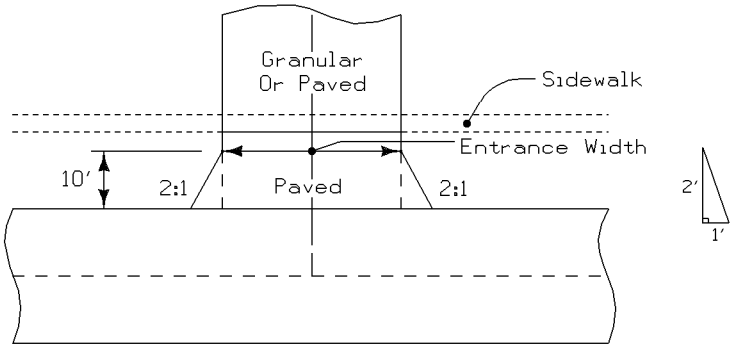




**RADIUS RETURN – TYPE 'B' AND 'C' URBAN DESIGNED ( Paved or Not Paved )**
**112.4(8)d&h**



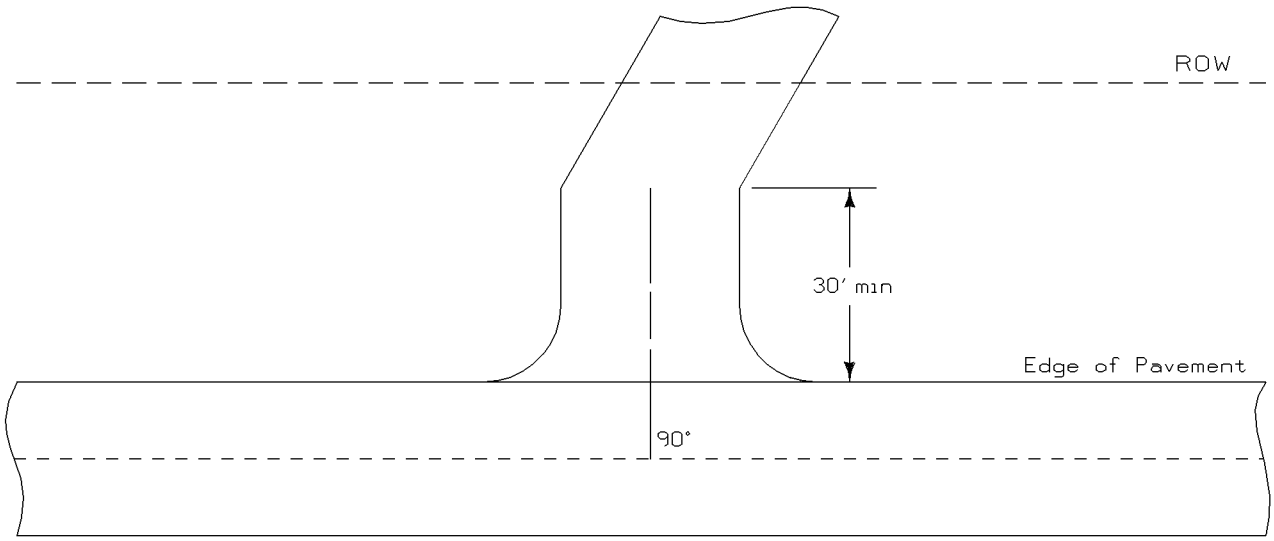

**RADIUS RETURN – TYPE 'C' RURAL DESIGNED ENTRANCE**
**112.4(8)f&g**

---

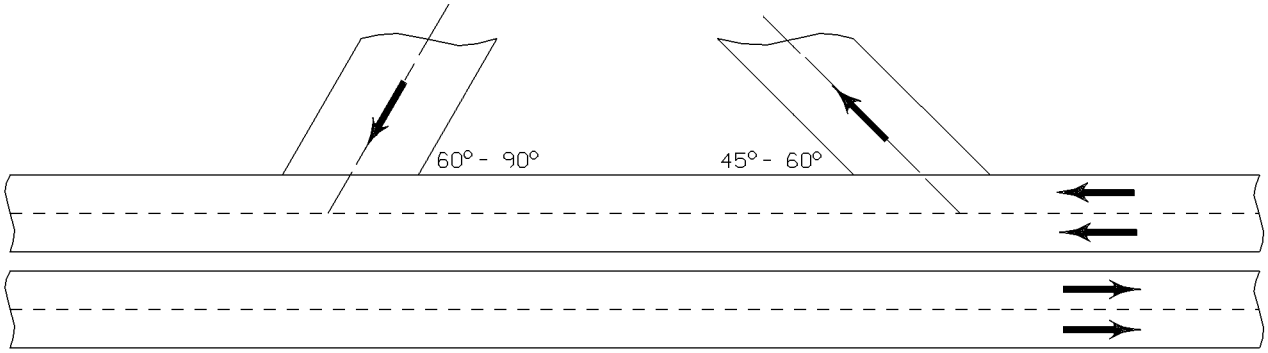



**FLARED RETURN – TYPE 'C' URBAN DESIGNED ENTRANCE**
**112.4(8)i**

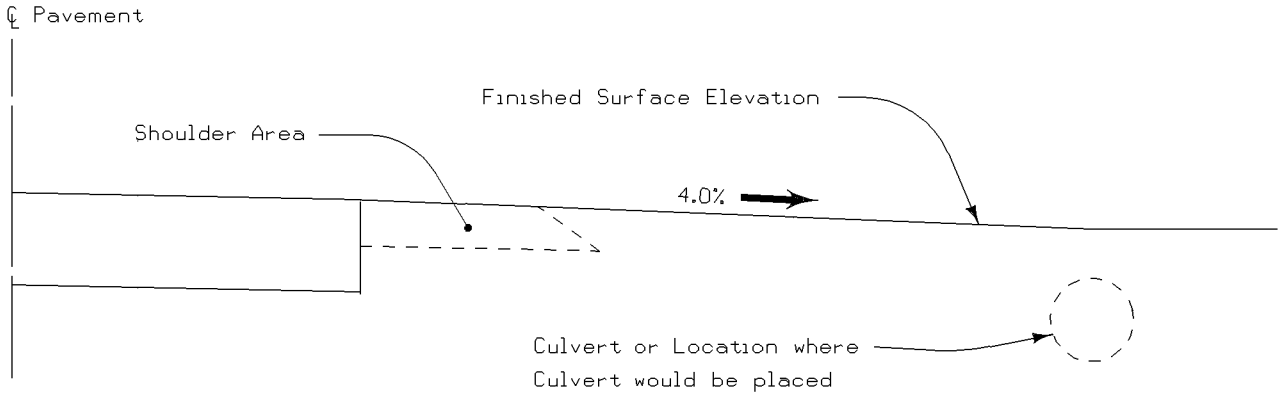
---



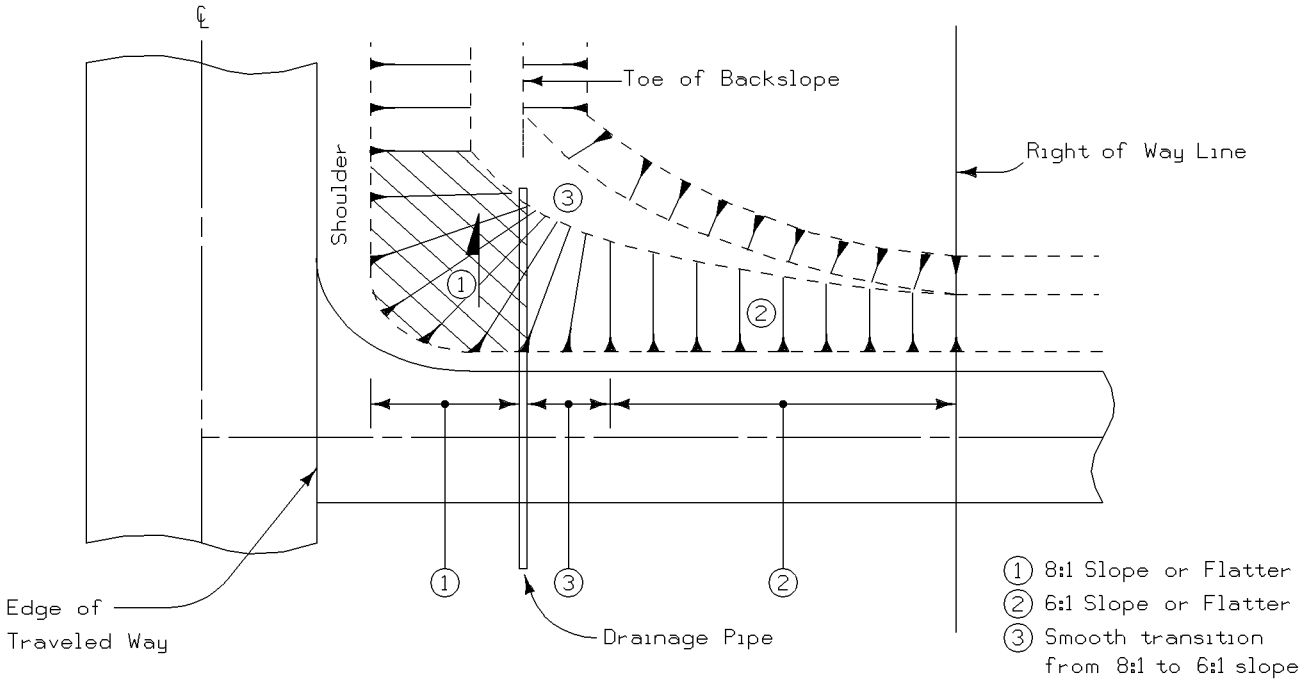

**ENTRANCE ANGLE – RURAL DESIGNED AREAS**
**112.4(9)b**



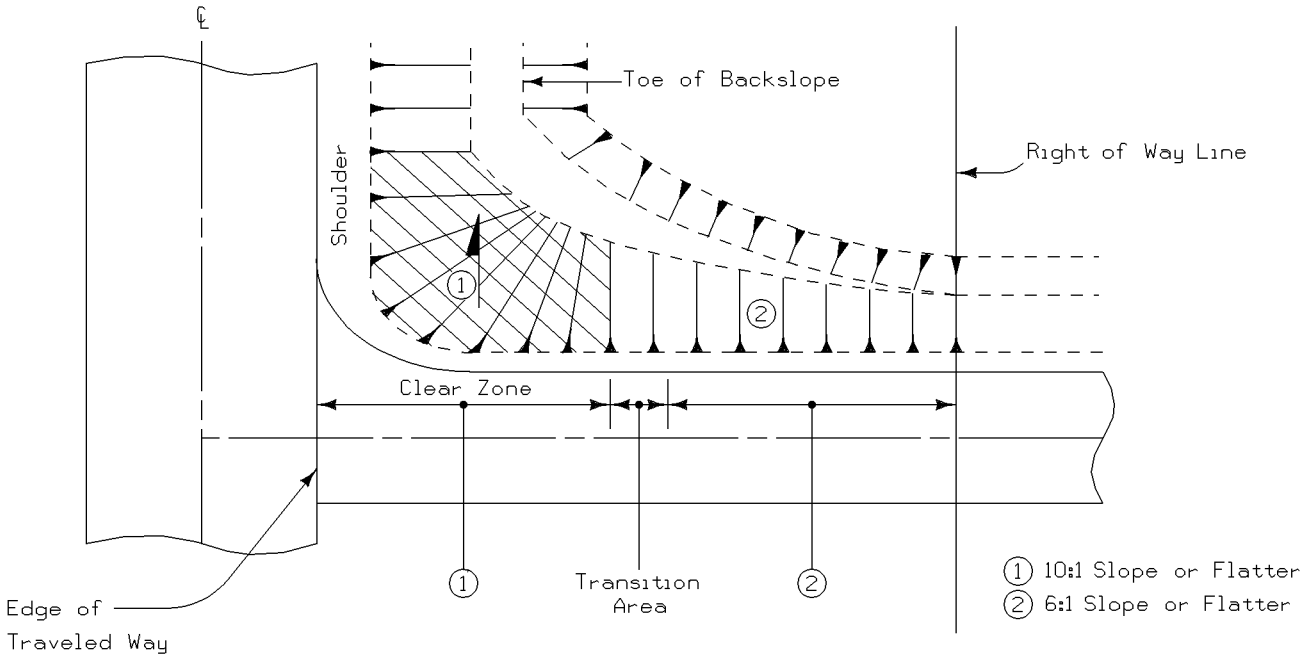

**ENTRANCE ANGLE – RURAL DESIGNED AREAS**
**112.4(9)d**



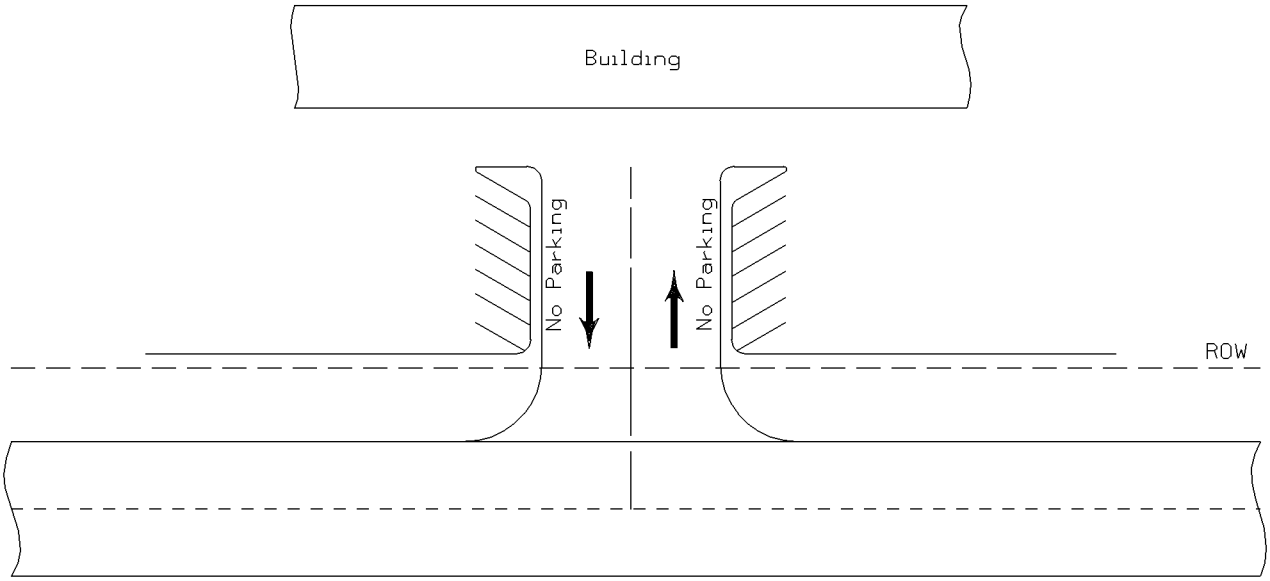

**FINISH SURFACE ELEVATION**
**112.4(10)a**




**ENTRANCE SIDE SLOPE**
**Drainage Pipe Required**
**112.4(10)b**

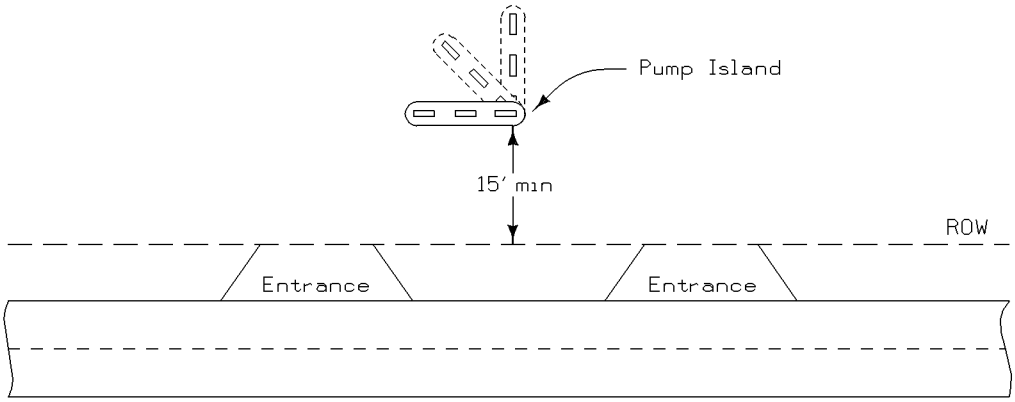



**ENTRANCE SIDE SLOPE**
**No Drainage Pipe Required**
**112.4(10)c**



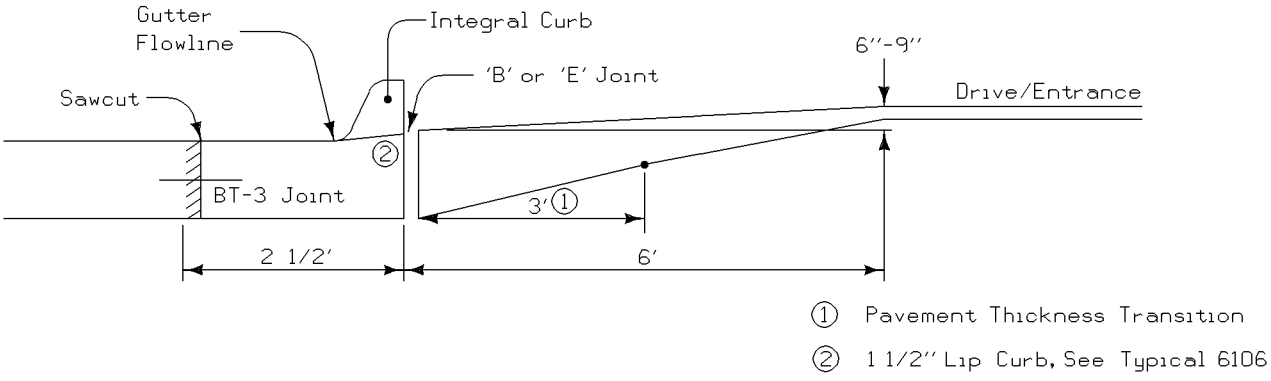

**GUIDELINE FOR COMMERCIAL AND INDUSTRIAL DEVELOPMENT**
**FREE FLOWING MAIN ENTRANCE**
**112.5(1)b**

---

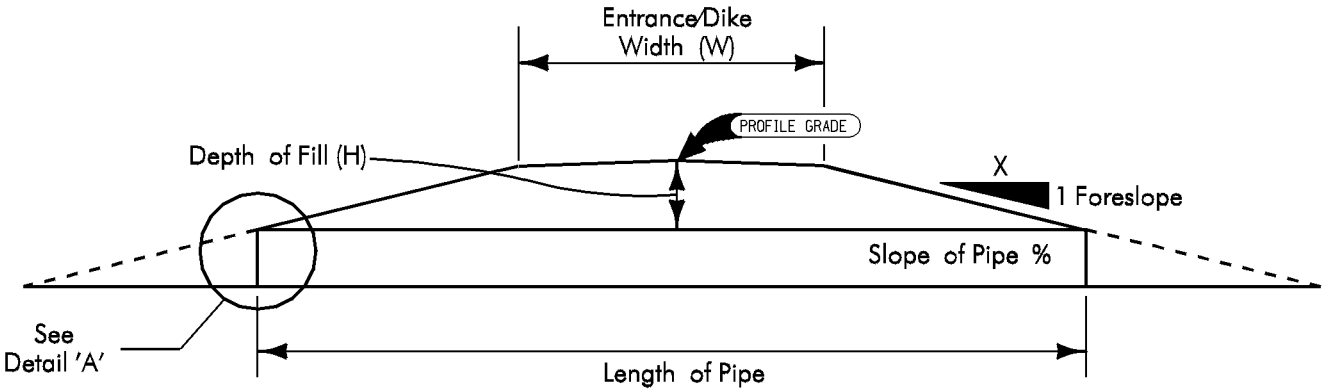



**GUIDELINES FOR SERVICE STATION DEVELOPMENT**
**112.5(1)d**

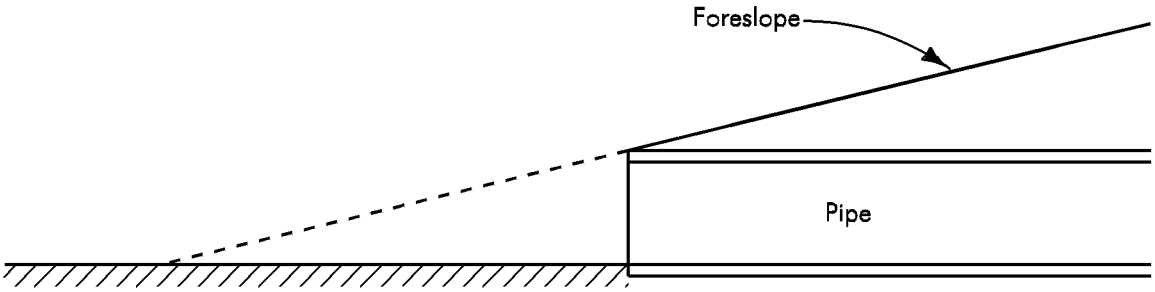
---




**DRAINAGE ENTRANCE CONSTRUCTION CURBED SECTION**
**112.6(4)**




Typical Cross Section

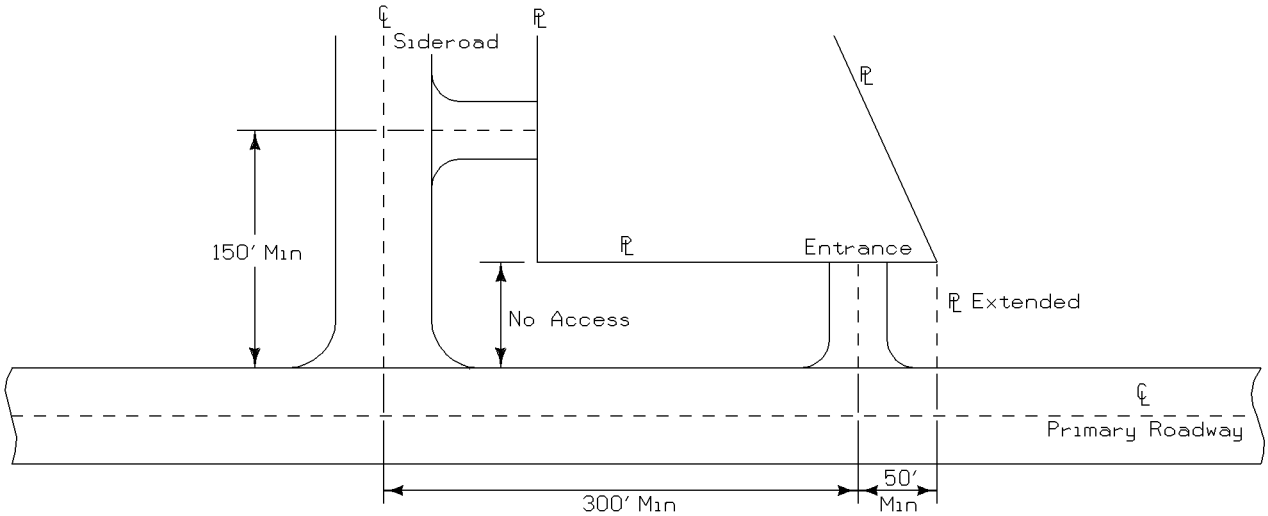



DETAIL 'A'

| Pipe Length in feet for an 8:1 Foreslope – Width 24 ft. | | | | | | | |
|---|---|---|---|---|---|---|---|
| Depth to top of pipe (H) | Slope of Pipe | | | | | | |
| | 0.0% | 1.0% | 2.0% | 3.0% | 4.0% | 5.0% | 6.0% |
| 1 | 34 | 34 | 35 | 36 | 38 | 41 | 45 |
| 2 | 50 | 51 | 52 | 53 | 56 | 60 | 65 |
| 3 | 66 | 67 | 68 | 70 | 74 | 79 | 86 |
| 4 | 82 | 83 | 84 | 87 | 92 | 98 | 107 |
| 5 | 98 | 99 | 101 | 104 | 110 | 117 | 128 |
| 6 | 114 | 115 | 117 | 121 | 127 | 136 | 149 |
| 7 | 130 | 131 | 134 | 138 | 145 | 155 | 170 |
| 8 | 146 | 147 | 150 | 155 | 163 | 174 | 190 |
| 9 | 162 | 163 | 167 | 172 | 181 | 193 | 211 |
| 10 | 178 | 179 | 183 | 189 | 199 | 212 | 232 |
| 11 | 194 | 196 | 199 | 206 | 217 | 232 | 253 |
| 12 | 210 | 212 | 216 | 223 | 234 | 251 | 274 |
| 13 | 226 | 228 | 232 | 240 | 252 | 270 | 294 |
| 14 | 242 | 244 | 249 | 257 | 270 | 289 | 315 |
| 15 | 258 | 260 | 265 | 274 | 288 | 308 | 336 |
| 16 | 274 | 276 | 282 | 291 | 306 | 327 | 357 |
| 17 | 290 | 292 | 298 | 308 | 324 | 346 | 378 |
| 18 | 306 | 308 | 314 | 325 | 341 | 365 | 399 |
| 19 | 322 | 324 | 331 | 342 | 359 | 384 | 419 |
| 20 | 338 | 340 | 347 | 359 | 377 | 403 | 440 |

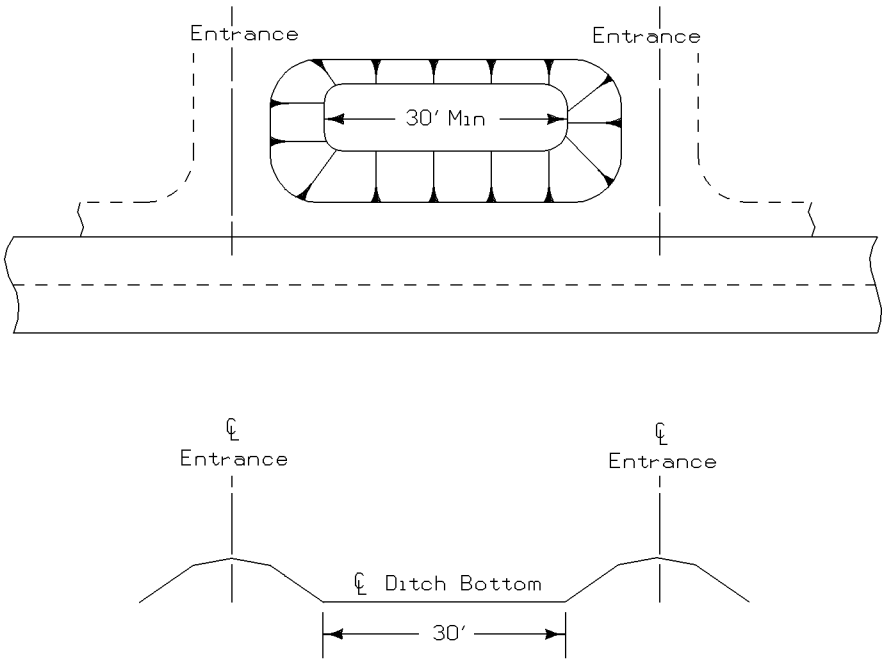
GUIDES FOR DETERMINING LEGTH OF DRAINAGE STRUCTURES REQUIRED

## GUIDELINES IN OBTAINING ACCESS TO PRIORITY V & VI HIGHWAYS

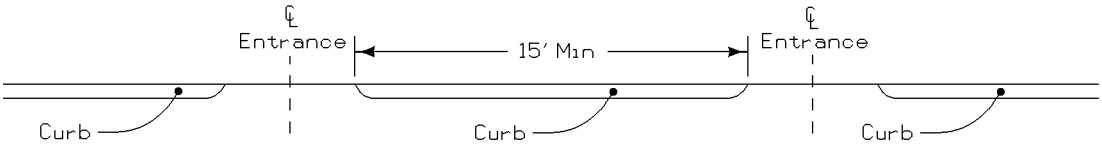



**SIDEROAD AND PROPERTY LINE OFFSETS**
**112.8(2)(3) & 112.9(2)a**

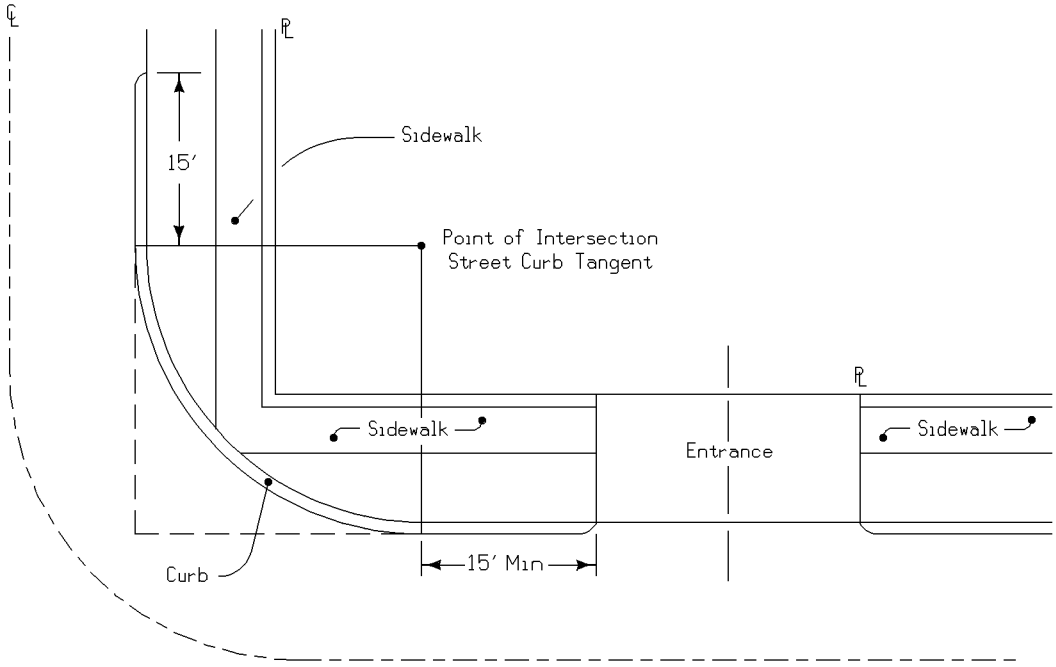
---



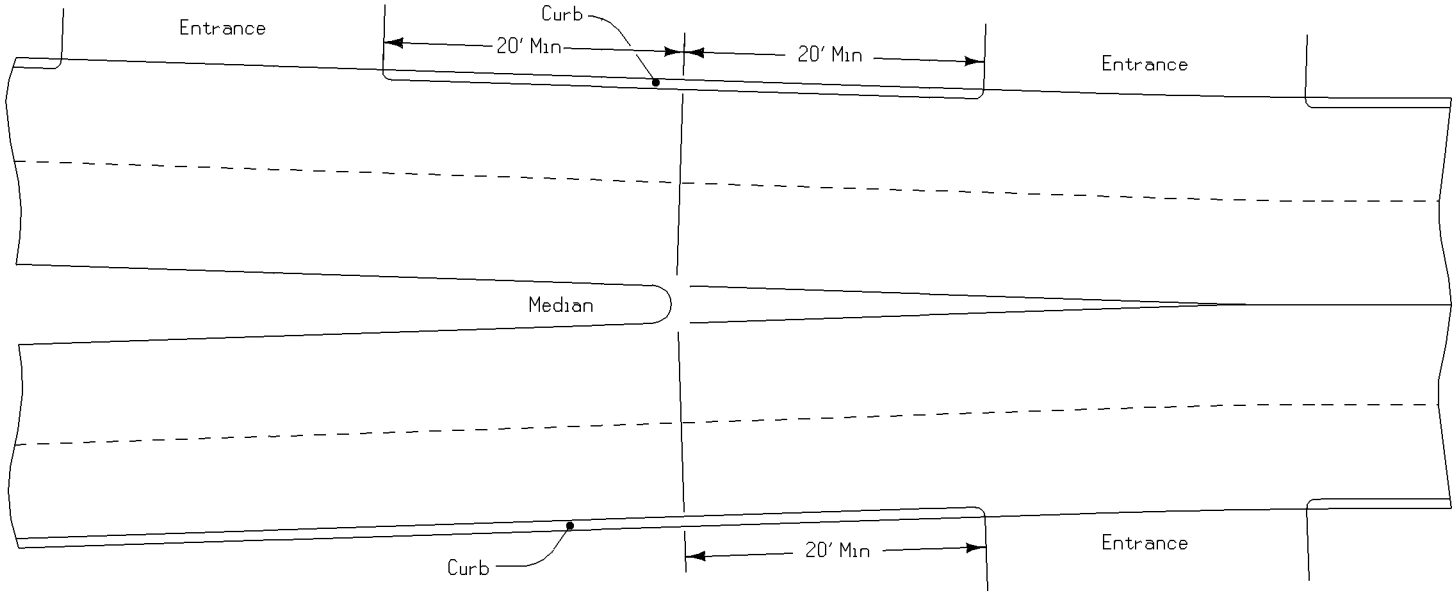

**RURAL AREA ENTRANCE SPACING**
**112.9(1)**



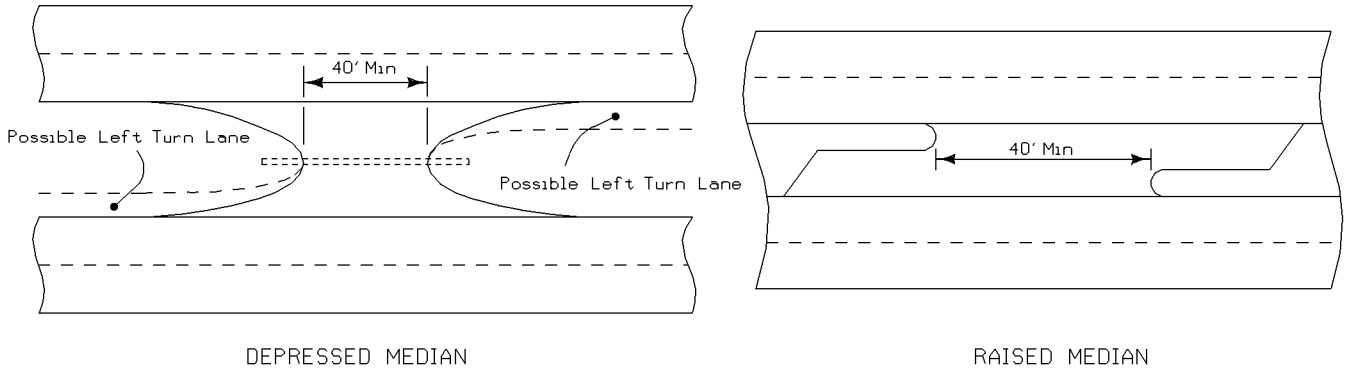

**URBAN AREA ENTRANCE SPACING**
**112.9(1)**




**STREET OFFSET**
**112.9(2)b**

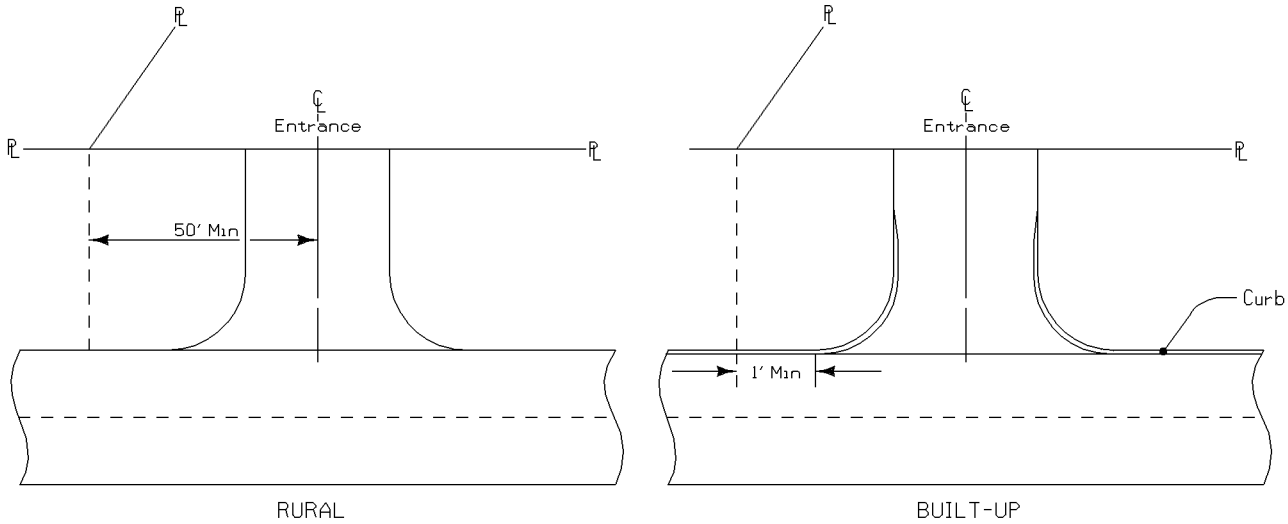



**ACCESS AT CHANNELIZED INTERSECTION**
**112.9(3)**



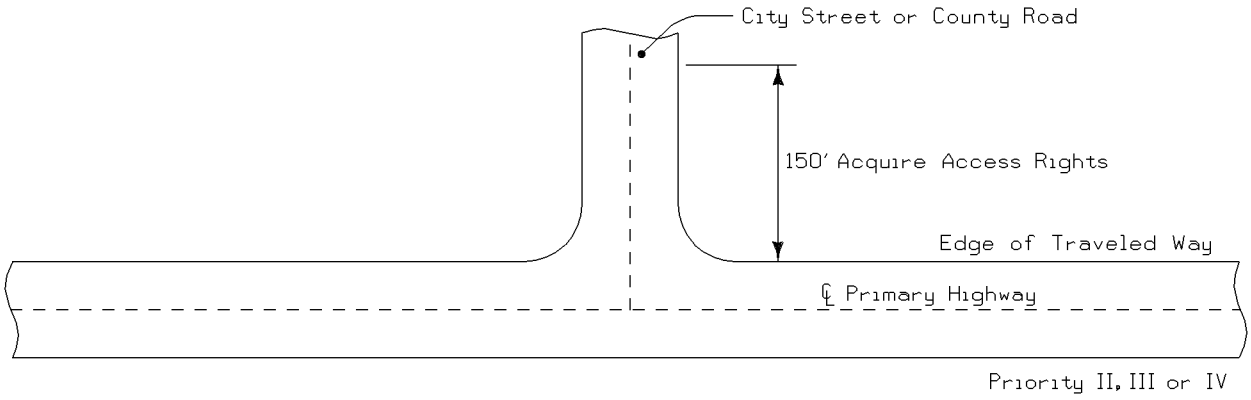

**MEDIAN CROSSOVERS**
**112.9(4)**

---

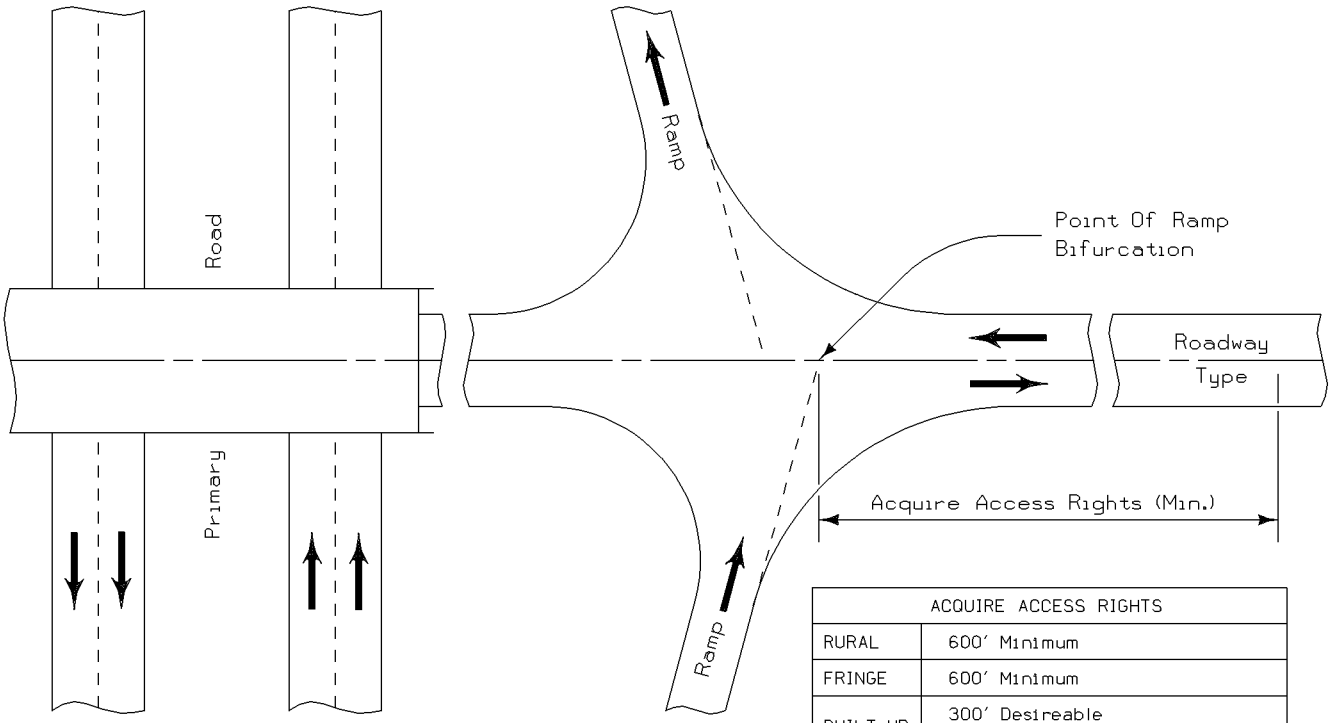



**PROPERTY LINE OFFSET**
**112.9(5)**

---




**ACCESS RIGHTS**
**112.11(3)a**




| ACQUIRE ACCESS RIGHTS | |
|---|---|
| RURAL | 600′ Minimum |
| FRINGE | 600′ Minimum |
| BUILT-UP | 300′ Desireable<br>150′ Minimum |

**ACCESS RIGHTS**
**112.11(5)&(6)**

# APPENDIX E

# Creating ROW ‘H’ Sheet Using Existing Plan Sheets

# Guide to Creating ROW 'H' Sheets

Office of Right of Way, Right of Way Design Section  Date: 3/18/08

**Copy the existing Design office project sheet files -----**

1. Using Explorer, copy the 'D' & 'E' (if needed) plan sheets file, from the Design office subfolder, corresponding to the project.

2. Rename the D sheet file number to an 'H' sheet file number. (Example 90034059.D4 → 90034064.H4)

If a side road sheet is needed, they will be labeled as a 'HE' sheet. It may be necessary to use more or less 'H' or 'HE' sheets then are used for the 'D' and 'E' plan sheets. 'H' or 'HE' sheets are only needed when we need to show new acquisitions. The numbering of these sheets do not have to match the corresponding Design office sheet.

**Correcting the levels displayed -----**

1. Open the renamed 'H' sheet file from the ROW folder.

2. Open the reference files dialog box (F1, or Settings → Levels → Display).

3. Turn on/off the various attachments by shutting off the display of those not needed.

4. Detach those attachments not needed.

*If you realize you need another attachment, **do not** attach the file as usual. The sheet border has been moved and needs preset parameters. Use the next 3 steps to reattach a reference file. If not needed, skip these steps.*

(Be sure the reference file to be copied is highlighted prior to choosing copy)

a. Use the ***copy*** tool within the reference dialog Tools → Copy
b. Choose a data point of the highlighted reference file and accept.
c. Data snap to the exact same point and accept.
d. Use the Browse button, to point the reference path to the desired file for attachment.

5. Use the 4 above steps and make a copy of the (.row) file.

6. Name the (.row) attachment **rowShape** & name the original **rowLine.**

7. Turn on/off the appropriate levels from the list provided at the back of this manual.
8. Once all levels are turned on/off, save settings.

**Moving the Reference files -----**

Be sure the Axis lock is turned on for the next few steps. To turn this on either click on the 'lock' symbol in the lower right portion of the Microstation session OR go to the Settings drop down menu Settings → Lock→ Axis.

In the next few steps you are moving all files on the sheet to show a full plan view, rather than the split plan/profile the D sheet showed. There is a diagram on the next page showing where the data points are to be done and with what snap mode to be used.

1. If not open already; open the reference dialog box (F1).

2. Highlight all files except the (.border) & (.cpn) file.

(See example #1 on page X to see the snap points)

3. In the reference dialog, choose the MOVE command (Tools → Move).

4. Snap to the intersection point of the centerline and the line forming the left side of the border and accept.

5. Using the Midpoint snap method, snap to the midpoint of the line forming the left side of the border and accept.

*DO NOT move the (border) sheet rather than the reference files. This will cause BATCHPLOT to work incorrectly and plot only a portion of the plan sheet.*

All selected files should have moved to the new position and the alignment should be centered in the plan sheet.

**Clipping the Reference file boundaries -----**

Now all the files need to be re-clipped to show information in a full plan view.

1. If not already highlighted, select & highlight all files except the (border).

2. Place a fence from the upper right corner of the sheet border, to the lower left corner.

*Make sure to choose the lower corner of the plan view not of the plan sheet. The fence should not contain the name bar.*

3. In the reference dialog, choose Clip Boundary (Tools → Clip Boundary).

4. Click to accept or decline and redo steps 1-3 above, if needed.

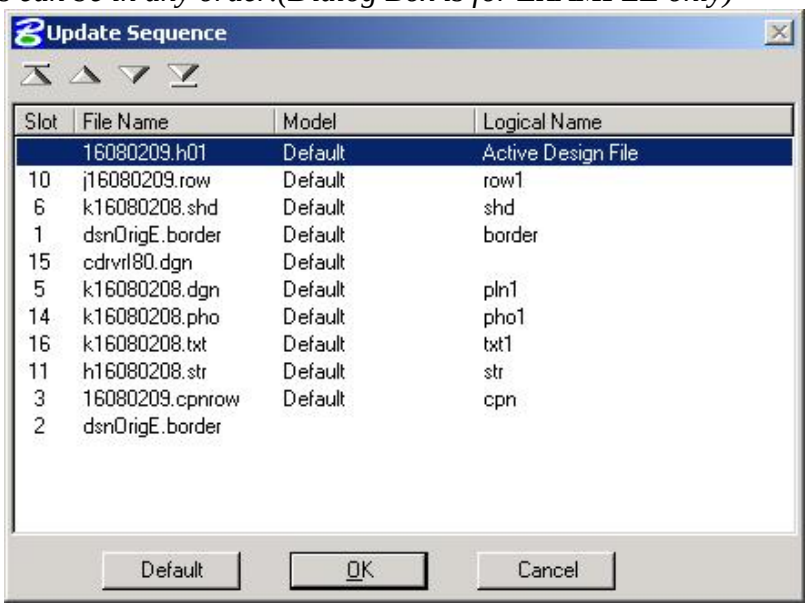
**Sequencing -----**

In order for the line work to properly fall on top of the colored shapes, the reference files need to be re-sequenced. Use the following box for reference sequencing order.

1. (Reference dialog box: Settings → Update Sequence)

   **RowShape** should be **FIRST**
   **(.SHD**) file should be **Second to Last**
   **RowLine** should be **Next to Last**
   **(Active Design)** file should be **Last**

*All other files can be in any order.(Dialog Box is for EXAMPLE only)*




**Additional notes -----**

If all appropriate levels were turned on/off, the final plan sheet should look similar to example #2 on the next page.

Since these are created from the original Office of Design plan sheets, some info will still be centered tightly around the alignment.

1. If eastbound/westbound sheets are created, each sheet should be designated with a note block. (copied from an ref existing file)

2. Clip masking minor amounts of elements from other files is allowable as long as the masking is away from the ROW acquisition area.

3. Plan sheet note blocks should be added to direct the customer to the corresponding D, E, F, or K sheets if applicable. (See rowdsnNoteblocks)

Each sheet will need to be numbered. The sheet number should already be live in the file, but it will need to be changed from the D(or E) to the H.

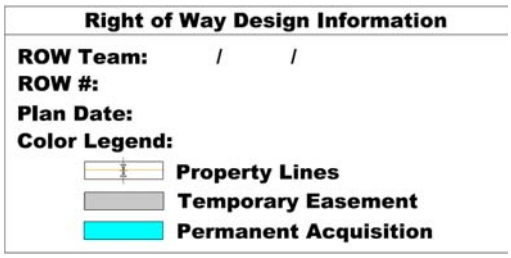
4. Use the Text editor tool and change each sheet number file within the ROW directory appropriately.

Examples: 90034069.D1 → 90034064.H
90034069.E1 → 90034064.HE

5. Place a Right of Way Information box in the lower right corner of each plan sheet.

It can be found in the rowdsnNoteblocks toolbox or rowdsn.cel. (Plan Sheet Legend)

**Plotting-----**



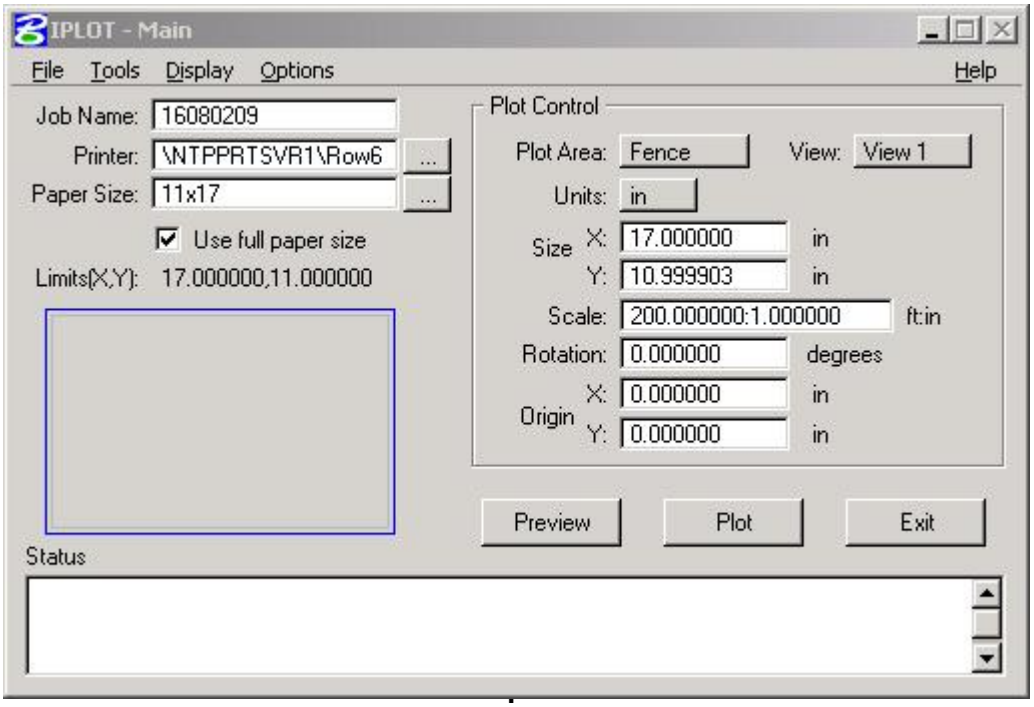

To plot an H sheet use either **Batchplot** or **IPLOT**.

1. When fencing the plan sheet, use the outer dotted box.

2. Click the 'Use Full Paper size' check box in the IPLOT dialog.

When using IPLOT use the parameters shown on the following page to set up a plot:

**Note: The scale may be different**



In the above example, the scale is at 200. The Office of Design determines the scale. The H sheets **SHOULD NOT** be rescaled differently from the D sheets.

3. Use the following Set file: **rowDsnH.set**

In some cases, a project specific color table may need to be created if the proper levels and attributes were not utilized. If this is the case, contact ROW CADD support.

**When plotting the D sheets use the following set file: rowDsnPlan.set**

4. Click PLOT

Next, create a (.pdf) for ALL plan sheets.(A and H)

## Printing Microstation Files to PDF Format

The first step is to attach the plot queue that is used, instead of physical plotters where a paper copy would normally print out.

1. From your open windows session go to Start → Settings→ Printers

*Check to see if the following print queue is already attached. If it is, proceed to step 2 on the following page. If **NOT** continue.*

\\NTPLTSVR2\RowDsnPDF

a. Attach the above print queue (just like attaching a plotter)
   i. Click Add Printer →
   ii. Choose Next on the 'Welcome to the Add Printer Wizard' dialog box
   iii. Choose Network printer on the 'Local or Network Printer' dialog box
   iv. Choose the **SECOND** option *(Type the name, or….)* on the 'Locate Your Printer' dialog box

2. To print a file to either pdf, use our standard **IPLOT** procedures.

   a. Fence your design like you normally would

*When creating a pdf file, fence the sheet using the actual lines of the border of the plan sheet.*

   b. Choose the proper Color table and Design Script (pen table)

*Be sure you choose Design script **NOT** MS Pen Table.*

3. Once all the parameters above are set properly, click on Print., the document, will come out at the RowDsnPDF folder location.

4. To copy the RowDsnPDF folder location, use Explorer to copy the shortcut to your desktop from the following path:
*W:\Highway\ROW\ROWDesign\Automation\Shortcuts*

*Copying over the shortcut only needs to be done once, not after each plot session.*

5. Open the appropriate folder located on your desktop that you sent the 'plot' to.
6. The plotted file should be shown. It will have a portion of the project file name in followed by a few more random numbers and a (.pdf) extension.

**You can send multiple copies of the same sheet. They will not overwrite one another. The file name numbers will change with each submitted plot. **

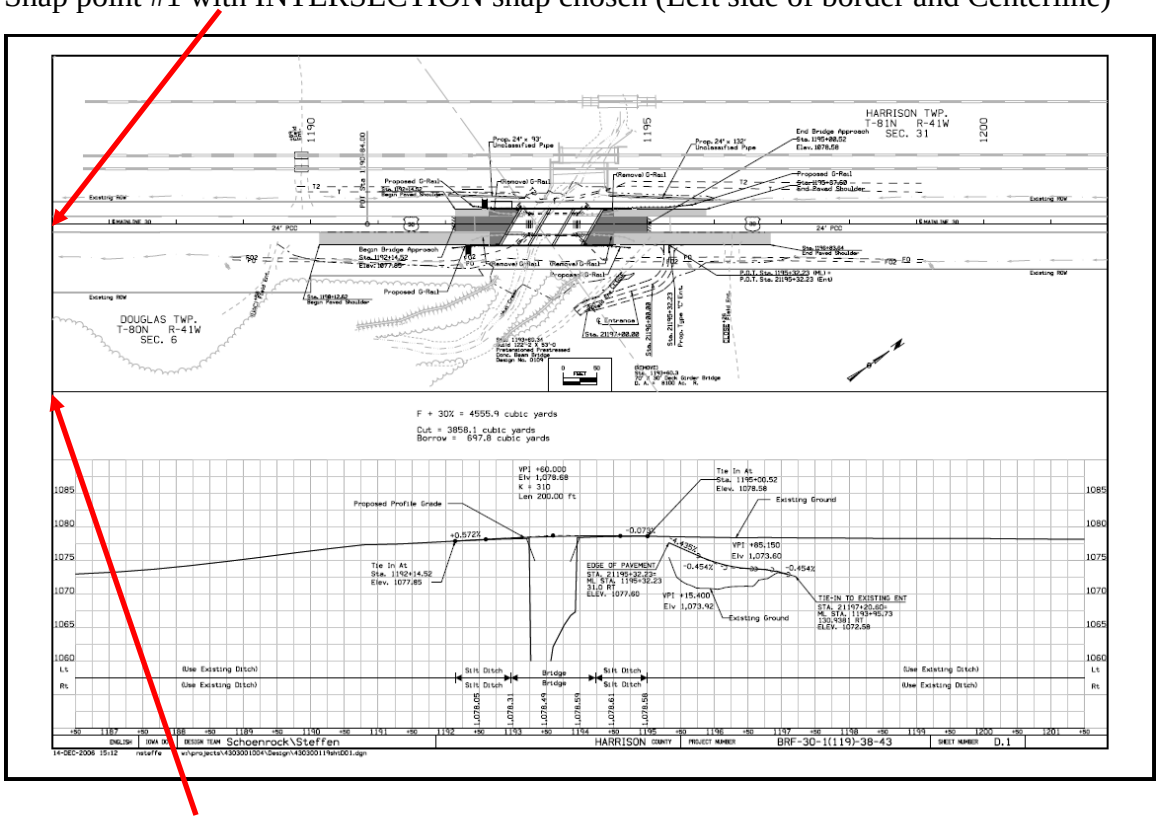
7. Copy the (.pdf) file to a desired location (i.e. Desktop, project folder, P-drive) – be sure if it to be utilized by others, not to copy to the Desktop The original location of the PDF is read-only. No user can modify, delete, rename, etc any file in the folder – It MUST be copied to another location

8. Rename the file using the proper naming convention+sheet no.
*(Example: Sheet H01 would be named 90034064h01.sht)*

Follow the proper naming convention for the pdf and notify Office of Design and the District that they are complete.

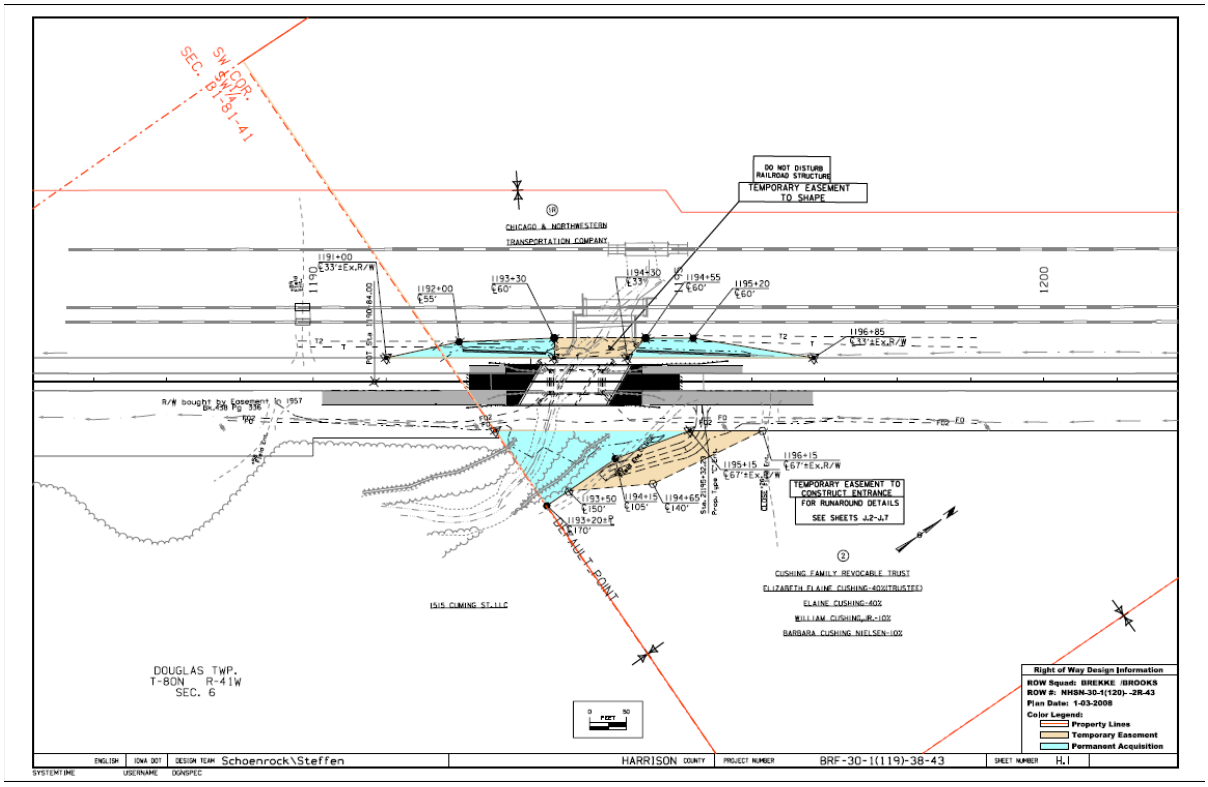
Example#1

Snap point #1 with INTERSECTION snap chosen (Left side of border and Centerline)




Snap point #2 with MIDPOINT snap chosen (Midpoint of the left side of border)

Example #2


SEC. 6
SW COR.
SW 1/4
T81-R41
DO NOT DISTURB
RAILROAD STRUCTURE
TEMPORARY EASEMENT
TO SHAPE
CHICAGO & NORTHWESTERN
TRANSPORTATION COMPANY
1191+00
℄33'±Ex.R/W
1192+00
℄55'
1193+30
℄60'
1194+30
℄33'
1194+55
℄60'
1195+20
℄60'
1196+85
℄33'±Ex.R/W
1200
R/W bought by Easement in 1957
1196+15
℄67'±Ex.R/W
1195+15
℄67'±Ex.R/W
TEMPORARY EASEMENT TO
CONSTRUCT ENTRANCE
FOR RUNAROUND DETAILS
SEE SHEETS J.2-J.7
1193+50
℄150'
1194+15
℄105'
1194+65
℄140'
1193+20±
℄170'
DEADEND POINT
CUSHING FAMILY REVOCABLE TRUST
ELIZABETH ELAINE CUSHING-40%(TRUSTEE)
ELAINE CUSHING-40%
WILLIAM CUSHING,JR.-10%
BARBARA CUSHING NIELSEN-10%
1515 CUMING ST. LLC
DOUGLAS TWP.
T-80N R-41W
SEC. 6
0 50
FEET
Right of Way Design Information
ROW Squad: BREKKE /BROOKS
ROW #: NHSN-30-1(120)--2R-43
Plan Date: 1-03-2008
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition
ENGLISH
IDOT
DESIGN TEAM Schoenrock\Steffen
HARRISON COUNTY
PROJECT NUMBER BRF-30-1(119)-38-43
SHEET NUMBER H.1
SYSTEMTIME
USERNAME
DGNSPEC

Below is a chart showing which levels should be turned on to create a colored 'H' sheet. There may be less/more levels needed, but this list will be a good base to start from.

| file/model name | Levels (ON) | |
|---|---|---|
| **(.border)** | **51-53** | **(These are V7 level names – V8 names TBD)** |
| **(.dsn)** | **1,3,4,9,10,53,58,63** | **(These are V7 level names – V8 names TBD)** |
| **(.shd)** | **1,2,4,17,18** | **(These are V7 level names – V8 names TBD)** |
| **(.row)** | **DisPropLines** | |
| | **rowdsnLineProposed** | |
| | **rowdsnLineTE** | |
| | **rowdsnLineFuture** | |
| | **rowdsnHatchPE** | |
| | **rowdsnNoteblockML** | |
| | **rowdsnNoteblockTE** | |
| | **rowdsnParcelML** | |
| | **rowdsnStationML** | |
| | **rowdsnStationMLTE** | |
| | **rowdsnSymbolsExisting** | |
| | **rowdsnSymbolsProposed** | |
| | **rowdsnSymbolsPL** | |
| **(.row) rowshape** | **rowdsnShapeFeeTitle** | |
| | **rowdsnShapeTE** | |
| | **rowdsnShapePE** | |
| **(.str)** | **brgDimensionLines** | |
| | **brgTextNormal** | |
| | **NewStructure** | |
| | **Prop_Grade** | |
| | **RipRap** | |
| **(.pho)** | **1-5,9,18-20,23,28-31, 33,35,38,39,41,42** | **(These are V7 level names – V8 names TBD)** |
| **(.txt)** | **1,3,4** | **(These are V7 level names – V8 names TBD)** |
| **(.dis)** | **DisLotLines** | |
| | **DisRowExist** | |
| | **DisSecLines** | |

Here are a few items to double check in doing H sheets

**Colors** –Light blue for all permanent acquisition, Wheat for all temporary acquisition and orange for property lines. Ownership names will be black. We will not differentiate between types of acquisition with differing colors or shades. *Use the proper color table*
**New Lanes** – The new construction lanes will be shaded gray, when the shape has been created by the Office of Design
**Centerline Geometrics** - Turn off curve & spiral information (CS, PI, PC etc.). Need to retain BOP and EOP stationing.
**Equations** - Turn off equation stationing.
**Profile** - Profile portion is to be removed. A note block will be placed to refer to the corresponding profile
**Subdue Photogrammetry File** - We will consider this. May be done by Office of Design. In our consideration we need to verify that the photo information is still readable.
**References to Other Sheets** - We will leave these on and add our notes when needed
**Utilities** - We will leave these levels on.
**Labeling of Buildings** – We will leave level on
**Culvert info**- Structure information will remain on