

Chapter 4 Right of Way

4.1 Introduction

The acquisition of right of way to construct or widen a highway facility is an integral part of the project development process. This chapter provides guidance regarding the roles and responsibilities of the roadway designer for assisting in the development of the right of way plans including selecting appropriate right of way and easements; determining appropriate right of way monuments and access points; and incorporating fencing and gates.

Refer to the roadway right of way activities listed in the latest Project Delivery Network (PDN) on the [NCDOT Integrated Project Delivery](#) website and coordinate with the Location and Surveys Unit and Right of Way Unit when establishing right of way and easement lines on every project.

The roadway designer's initial involvement in the right of way process may begin in either Stage 1 (Project Initiation) or Stage 2 (Alignment Defined) of the PDN. The roadway designer engaged by the Feasibility Studies Unit in Stage 1 is responsible for laying out the right of way limits and the Feasibility Studies Unit is responsible for requesting the right of way estimate. The roadway designer is also responsible for the following:

- Setting initial limits for right of way and temporary easements when completing the Design Recommendation Plan Set.
- Refining the right of way limits for the Field Inspection Plan Set by incorporating the completed drainage design, geotechnical recommendations, utilities, erosion and sediment control measures, signal poles, and other design features that affect the right of way.
- Coordinating with the Division and obtain critical information at the Field Inspection that will affect the right of way and easements shown in the plans.

In the Stage 3 (Plan-in-Hand), the other technical disciplines and units will continue to make minor adjustments to finalize their plans. Update the Right of Way and Easement Layout after receiving the final designs from all applicable disciplines and units.

Location and Design Approval (LADA) is a trigger document for obtaining Right of Way Authorization on some projects.

Refer to RDM Part II Chapter 2 Section 2.7 for additional information regarding the LADA process and project requirements.

Once Right of Way Authorization has been approved by the North Carolina Board of Transportation, the Location and Surveys Unit will be responsible for finalizing the Right of Way and Easement Layout as part of Stage 4 (Plans, Specifications, & Estimates) of the PDN. The Location and Surveys Unit is responsible for completing the final right of way series plan set after establishing all permanent right of way and easement monumentation by Professional Land Surveyors. The Location and Surveys Unit prepares the plan set in accordance with [North Carolina General Statute 136-19.4A](#) and the North Carolina Board of Examiners for Engineers and Land Surveyors policies. The Location and Surveys Unit is also responsible to ensure a portable document format (PDF) version of all final right of way series plan sheets with electronic signature by a Professional Land Surveyor in responsible charge be placed under the project Let Preparation 150 folder on the project's Connect NCDOT team site 15 weeks prior to let date. The Right of Way Unit is responsible for requesting North Carolina Board of Transportation authorization to record the Final Right of Way Series Plan Set matching recorded right of way agreements and project established monumentation. The Location and Surveys Unit w

ill record the Final Right of Way Series Plan Set within two weeks after the project is let to construction. Right of way revisions after project let require recording revised sheets and completing the Report of Final Right of Way and Permanent Easement Survey signed and sealed by a Professional Land Surveyor for replaced or re-established monuments.

For Division Purchase Order and Division Let projects, the Division Project Manager is responsible for submitting requests to the Right of Way Unit for right of way recordation.

Refer to the Right of Way Manual and other publications on the [NCDOT Right of Way Manuals and Publications](#) page of the Connect NCDOT website when establishing the right of way and easement lines for a project.

4.2 Selecting the Appropriate Right of Way

To select the appropriate right of way, become familiar with the functional classification of the roadway and the control of access definitions associated with each functional classification. The functional classification of the roadway affects which control of access designation to specify on a particular project. The Department has standardized definitions for the various types of right of way and control of access based on the function of the roadway, level of mobility and access, and whether the facility has traffic signals, driveways, or medians. Use the following definitions when planning and designing roadway projects:

- **Full Control of Access** – Connections to a facility provided only via ramps at interchanges. All cross streets are grade-separated. No private driveway connections are allowed. A control of access fence is placed along the entire length of the facility and at a minimum of 1,000 feet beyond the ramp intersections on the -Y- lines (minor facility) at interchanges (if possible).
- **Limited Control of Access** – Connections to a facility provided only via ramps at interchanges (major crossings) and at-grade intersections (minor crossings and service roads). No private driveway connections allowed. Place a control of access fence along the entire length of the facility, except at intersections, and at a minimum of 1,000 feet beyond the ramp intersections on the -Y- lines (minor facility) at interchanges (if possible).
- **Partial Control of Access** – Connections to a facility provided via ramps at interchanges, at-grade intersections, and private driveways. Private driveway connections are normally defined as a maximum of one connection per parcel. One connection is defined as one ingress and one egress point. The use of shared or consolidated connections is highly encouraged. Connections may be restricted or prohibited if alternate access is available through other adjacent public facilities. Place a control of access fence along the entire length of the facility, except at intersections and driveways, and at a minimum of 1,000 feet beyond the ramp terminals on the minor facility at interchanges (when practical).
- **No Control of Access** – Connections to a facility provided via ramps at interchanges, at-grade intersections, and private driveways. No physical restrictions, i.e., a control of access fence, exist. Normally, private driveway connections are defined as one connection per parcel. Consider additional connections if they are justified and if such connections do not negatively affect traffic operations and public safety.

The facility types and their typical associated control of access designations are as follows:

- Freeways and Interstates (Full Control of Access)

- Principal Arterials (Limited or Partial Control of Access)
- Minor Arterials and Collectors (Partial Control of Access or No Control of Access)
- Local (No Control of Access)

Maintain control of access at roundabouts and directional crossovers with median U-turns.

Refer to RDM Part I Chapter 8 for additional guidance on roundabouts and directional crossovers.

4.2.1 Guide for Establishing Proposed Right of Way and Easements

Establish and show the proposed right of way and easements on the plans before finalizing the Right of Way Plan Set. Set the right of way at the minimum distance required to construct and maintain the project. Select the appropriate right of way based on the design and discuss the right of way placement with the Division at the Field Inspection. Use the following guides:

1. Interstate, Freeway and Expressway projects generally have fully controlled access. In PDN Stage 1 (Project Initiation), the right of way contains the cross section and allows for 25 feet beyond the construction limits. A distance of between 10 feet outside the construction limits should be sufficient when establishing the right of way in the later stages of project development.

The right of way width for a four-lane section for this type of roadway typically ranges from 250 feet to 300 feet for rural projects and 150 feet to 200 feet for urban projects. It is no longer required to maintain a consistent right of way width.

2. Principal Arterial projects generally have limited or partial control of access. In general, right of way will be wide enough to include all cross-sectional elements throughout the project whether a uniform or variable right of way width is used. Establish from 5 feet to 15 feet beyond the construction limits.
3. Rural Arterial and Collector projects can be partial control of access or no control of access. In general, right of way will be wide enough to include all cross-sectional elements throughout the project whether a uniform or variable right of way width is used. Establish right of way from 5 feet to 15 feet beyond the construction limits.

A right of way width for a two-lane arterial or collector typically ranges from 100 feet to 150 feet. For a four-lane section of roadway, a width of 150 feet to 250 feet is adequate.

4. Urban Arterial projects may contain the cross section within the proposed right of way or use a combination of right of way and easements. Establish right of way from 5 feet to 15 feet beyond the construction limits.

As a rule of thumb, the right of way width for an urban arterial typically ranges between 100 feet to 150 feet with or without curb and gutter.

5. Local projects generally have the total cross section contained within the proposed right of way. Set right of way or easements 5 feet to 10 feet outside the construction limits. A typical width of 60 feet to 100 feet is generally adequate.
6. Curb and Gutter facilities generally have the right of way set to contain the berm plus a buffer area. Place the right of way a minimum of 15 feet from the face of the curb and at least 5 feet beyond the hinge or shoulder point of the berm, when practical.

7. In all situations:
 - a. Numerous factors can affect the placement of the right of way. Take constructability and maintenance into account when establishing the proposed right of way. Discuss the right of way placement with the Division at the Field Inspection.
 - b. Establish right of way at intersections to allow for sufficient sight distances (sight triangles) for all street returns and railroads. This distance is defined as a triangle, as each leg of the intersection requires sufficient sight distance to adjacent approaches.
 - c. Consider vehicle recovery area based on the amount of traffic and the design speed of the facility when establishing the proposed right of way.
 - d. Avoid impacts that could result in total acquisitions or high damage costs. Examples include, but are not limited to, the followings:
 - i. Retention ponds and basins
 - ii. Driveway access changes (number, width, grades)
 - iii. Septic tanks or septic drain fields
 - iv. Wells
 - v. Parking lots, parking areas, and parking spaces
 - e. Follow all commitments in the environmental document.
 - f. Review the right of way with Division personnel including the Division Construction Engineer, Division Right of Way staff, and the Division Locating Engineer prior to acquisition.
 - g. Set the proposed right of way at a dimension that includes the project footprint and encompasses the clear zone as defined by the latest American Association of State Highway and Transportation Officials (AASHTO) *Roadside Design Guide*. Use clear roadside recovery area to establish minimum width of right of way.
 - h. For curb and gutter sections:
 - i. Set the proposed right of way at a dimension that encompasses the berm and protects the clear zone.
 - i. Include things such as slope stakes as well as lateral ditches, berm ditches, erosion control devices, culvert wing walls, end walls, and retaining walls within the construction limits.
 - j. Where practical, place right of way beyond the cut and fill slopes to allow for adequate maintenance of the slopes.
 - k. Set right of way a minimum of 5 feet outside the ditch bottom.
8. Other considerations:
 - a. Analyze the placement of noise and retaining walls in close proximity to existing buildings and permanent structures. Determine if the existing right of way is sufficient or if additional right of way or easements are required for the construction and maintenance of the wall. As a general rule, establish the right of way a minimum of 10 feet from any fill wall. For cut walls, coordinate with the geotechnical engineer to determine right of way and easement requirements for

soil nail and anchored retaining walls. Drainage and other design features may also affect the placement of the right of way. Discuss the placement of right of way adjacent to any noise or retaining wall with the Division at the Field Inspection.

- b. Keep travel lane proximity to existing buildings and other structures in mind. Maintain appropriate clear zone and horizontal offsets or provide appropriate positive protection with additional buffer area where possible.
- c. The establishment of uniform right of way throughout the project limits is no longer standard practice. In special situations; however, it may be more economical or preferred by the Division to establish a uniform right of way width. In this case, use easements to provide a sufficient working area for construction.

4.3 Right of Way Monuments on Plans

Right of way monuments are installed to identify the highway right of way boundary line. Review proposed locations of the monuments at the Field Inspection and adjust as recommended and approved by the Division Right of Way Agent and the Division Location and Surveys Team Lead. To fit field conditions, these locations may be further adjusted in the Final Right of Way and Easement layout by the Division Right of Way Agent and Division Location and Surveys Team Lead as part of Stage 4 (PS&E).

Do not show right of way monuments, including permanent easement monuments on the roadway plans until the development of the Field Inspection Plan Set at PDN Stage 2 (Alignment Defined).

Place monuments at the following locations:

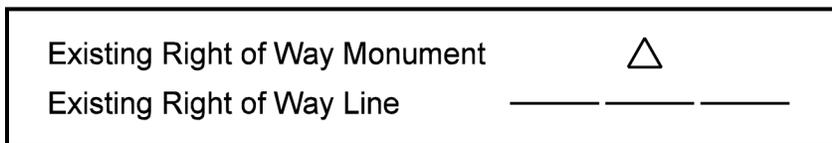
1. Where there is any change in direction of the right of way line.
2. At a maximum spacing of 1,500 feet. Terrain characteristic and construction limits may dictate modification.
3. At points on the right of way boundary line where control of access begins and terminates. (Does not apply to partial control of access.)
4. At the beginning and end of the project.
5. Where the right of way is unusual or where clarification of the right of way is necessary.
6. On projects with uniform right of way, show monuments at the following locations:
 - a. At the point of curvature (PC) and point of tangency (PT) of simple curves and point of compound curvature (PCC) of compound curves.
 - b. At tangent to spiral (TS), spiral to curve (SC), curve to spiral (CS), and spiral to tangent (ST) of simple spirals.
 - c. At the CS and SC of compound spirals.
 - d. Use tangent right of way lines between the TS and SC, CS and ST, and the CS to SC and label as "Chord" on the plans.
7. Do not show right of way monuments on property lines or property corners unless they can be established and confirmed by the Division Locating Engineer. These monuments may be added only in special cases, as requested and approved by the right of way agent in charge, during the review of right of way plans with the Division Locating Engineer.

8. The Division Engineer (or representative) will specify the type of monuments to be used at the Field Inspection, so that a pay item and general note can be included in the contract when needed.
9. Right of way monument locations are to be labeled by stations or partial stations, offset distance from centerline to two decimal places (hundredth), alignment name, and LT or RT of centerline. Refer to RDM Part II Chapter 2 Section 2.1.
10. Place monuments on the right of way lines at the proper locations.
11. Concrete or granite monuments should be placed outside of the Clear Zone.

4.3.1 Existing Right of Way

The existing right of way and monuments are found in the Final Surveys file provided by the Locations and Surveys Unit. Use the symbology shown in Figure 4-1 to represent the existing right of way monuments and right of way lines.

Figure 4-1 Existing Right of Way Line and Monuments

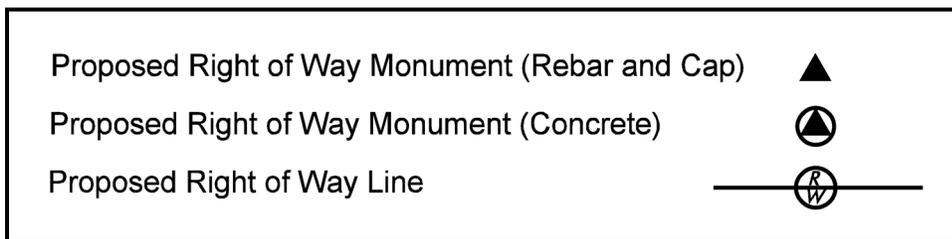


4.3.2 Proposed Right of Way

The roadway designer is responsible for establishing the new or proposed right of way during the development of the right of way and easement layout. Use the symbology shown in Figure 4-2 to represent proposed right of way monuments and right of way lines.

- Show proposed right of way monuments in the plans and stake for both the proposed right of way and concurrent proposed right of way/control of access. This includes where it begins, ends, and changes direction, as well as at control points or intermediate points on long tangents.

Figure 4-2 Proposed Right of Way Line and Monuments



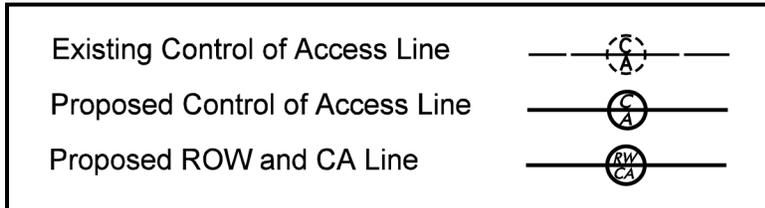
4.3.3 Control of Access

All fully controlled, limited controlled, and partially controlled facilities will require control of access in addition to right of way. Monument the control of access using rebar and cap or concrete or granite right of way monuments as deemed appropriate by the Division Engineer (or representative) (See new right of way monumentation above). Use the Proposed ROW and CA Line when the right of way and control of access right of way are the same. Use the symbology shown in Figure 4-3 to represent the existing and proposed right of way with control of access fencing.

- Show the proposed control of access monuments in the plans and stake where the proposed control of access does not run concurrent to the proposed right of way.

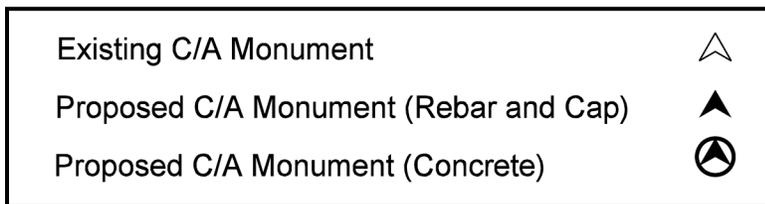
The Location and Surveys Unit will initially stake control of access monuments as rebar and cap. The Division will determine if the contractor resets them as concrete monuments which will require the Right of Way Markers and/or Control of Access Markers pay items.

Figure 4-3 Control of Access



Use concrete control of access monuments or control of access monuments with rebar and cap when there is no control of access fence due to either short sections of control of access right of way (less than 100 feet) or natural restriction such as a wall. Use control of access monuments on full control of access projects where the control of access is not concurrent with the right of way. Use the symbology shown in Figure 4-4 to represent the control of access right of way with control of access monuments.

Figure 4-4 Control of Access with C/A Monument



4.4 Access Points on Partial Control of Access

Show access points on partial control of access projects on the project plans by station locations and offset distance. Do not show a dimension for the opening width.

In establishing the stations, a width of 60 feet is typically used but it can vary. Label the opening as “Access Point” on the roadway plans.

Label the Access Points on the Design Recommendation Plan Set without station and offsets. Discuss the location of these openings with the Division during preparation of the Field Inspection Plan Set. Refer to the Partial Control of Access definition in Section 4.2 above. While more than one access point can be granted per parcel, it should be the exception, not the rule. Determine the final position and number of openings during negotiation by the Right of Way Unit.

4.5 Easements

Classify easements as either temporary or permanent depending on their purpose and discuss with Division personnel and the Division Right of Way Agent at the Field Inspection. Involve the Utilities Unit and utility owners as early as possible to establish permanent utility easements and minimize plan changes.

1. Temporary Construction Easements (E) are used to provide the contractor sufficient working area to construct things such as slopes, ditches, and silt control areas where continuous maintenance will not be required. Describe break points using a station and distance as described for the right of way.
2. Temporary Drainage Easements (TDE) are used to provide the contractor sufficient working area to clean out existing ditches and channels, construct new ditches and channels, construct large silt basins, and to install other drainage facilities where maintenance will not be required. Define TDE using a combination of station and distance.
3. Permanent Drainage Easements (PDE) are used at any location where the Department has a need, or is obligated, to maintain a drainage facility. Define PDE using a combination of station and distance.
4. Permanent Drainage / Utility Easements (DUE) are used to construct and maintain drainage and utility facilities through and across a property. Define DUE using a combination of station and distance.
5. Permanent Utility Easements (PUE) are used to construct and maintain a utility facility through and across a property. PUE can include both aerial and underground utilities. Define PUE using a combination of station and distance.
6. PUEs are provided by the Utilities Unit. Do not modify offsets and stations for PUE recommendations from the Utilities Unit or utility owner. Do not establish parallel alignments that would leave any separation between the highway right of way line and the PUE. In other words, do not allow gaps between the right of way line and the PUE.
7. Temporary Utility Easements (TUE) are used to provide the contractor sufficient working area to construct utility facilities where maintenance will not be required. Define TUE using station and distance. TUEs are provided by the Utilities Unit.
8. Aerial Utility Easements (AUE) are used to construct and maintain an aerial utility facility through and across a property. AUEs only cover aerial utilities and necessary appurtenances. Define AUE using a combination of station and distance. See guidelines for placing PUE above. AUEs are provided by the Utilities Unit.

TDEs are provided by the hydraulics engineer. Make a distinction between the use of temporary construction easement and temporary drainage easement based on their expiration time. A temporary drainage easement reverts to the property owner as soon as the task is complete, while a temporary construction easement does not expire until completion of the contract.

In some cases, areas beyond larger drainage pipes and structures are needed for stream or channel maintenance. On rural projects, this area should normally be purchased as regular right of way in lieu of permanent easements, if the area does not extend beyond 75 feet from the parallel right of way line. If the area extends beyond 75 feet, consult the Right of Way Agent to determine whether to use permanent drainage easement or right of way.

It may not be feasible to place poles outside the clear zone. Urban development, terrain, environmental impacts, historical property, structural conflicts, and cost for right of way or relocation cost may affect the feasibility of relocating utilities outside the determined clear zone. The final decision to leave or relocate overhead utilities within the clear zone will be the responsibility of the project team. The decision to bury existing overhead utilities within the clear zone will be a joint discussion among the Utilities Unit, Division Engineer, roadway designer, and cost review committee.

Use the symbology shown in Figure 4-5 to represent the various types of easements.

Figure 4-5 Temporary and Permanent Easement Lines

Existing Easement Line	— — E — —
Proposed Temporary Construction Easement	——— E ———
Proposed Temporary Drainage Easement	——— TDE ——
Proposed Permanent Drainage Easement	——— PDE ——
Proposed Permanent Drainage/Utility Easement	——— DUE ——
Proposed Permanent Utility Easement	——— PUE ——
Proposed Temporary Utility Easement	——— TUE ——
Proposed Aerial Utility Easement	——— AUE ——

4.5.1 Permanent Easement

All permanent easements require monuments to flag and record the limits of the permanent easement. Rebar and cap monuments are commonly used to flag PDE and PUE but may also be needed to flag easements for right of way when right of way cannot be acquired when crossing rivers and lakes that are owned by a private entity. Use the symbology shown in Figure 4-6 to represent the permanent easement.

Figure 4-6 Permanent Easement Monuments

Existing Permanent Easement Monument	
Proposed Permanent Easement Monument (Rebar and Cap)	

4.6 Guidelines for Control of Access Fencing

Control of access fence is erected to restrict access to the highway facility by vehicles, pedestrians, and wildlife. Establish fencing on all full control of access projects along the right of way or between the freeway and frontage road to prohibit access to the control of access facility. Place control of access fence along the entire length of the facility and at a minimum of 1,000 feet beyond the ramp intersections on the -Y- lines (minor facility) at interchanges (if possible). Fence partial control of access projects unless the Division requests control of access monuments in lieu of fencing. Control of access fence will be constructed and maintained by NCDOT. Landowners will not be allowed to install fence within the control of access right of way. Study each project individually to determine if the fence can be eliminated at rivers, streams, deep cuts, or high fills. Discuss questionable areas at the Field Inspection and include recommendations in the Field Inspection Report from the Division Construction Engineer. Install fencing in accordance with the latest [NCDOT Roadway Standard Drawings](#) Std. Nos. 866.01, 866.02, 866.03, and 866.04.

Install fencing on control of access facilities in accordance with the following guidelines:

- Ensure fencing of full control of access facilities is as complete as practical. Avoid gaps in the fence.
- Include fencing items as part of the grading contract (when applicable).

- Install fencing where it is needed to retain livestock when the existing enclosures are disturbed. See Section 4.8 below.
- Use either woven wire or chain link fencing. Chain link is recommended for urban areas, rest areas, and school areas.
- Fence all interchanges to the control of access limits.

Use one of two methods at locations that require fence to close off the mainline at -Y- lines. The most desirable method is to tie the fence to the bridge. The next acceptable option is to tie the fence to the guardrail. When tying fence to guardrail, locate tie points a minimum of 12 feet 6 inches beyond the guardrail end unit. Refer to Figure 4-7 and Figure 4-8 for an illustration of the two methods.

Review fence locations closely at the Field Inspection. The Right of Way Unit will identify locations requiring disturbance of existing fence enclosures. These areas shall be covered by the project special provisions.

Figure 4-7 Guide for Fence Locations at -Y- Line over Freeway

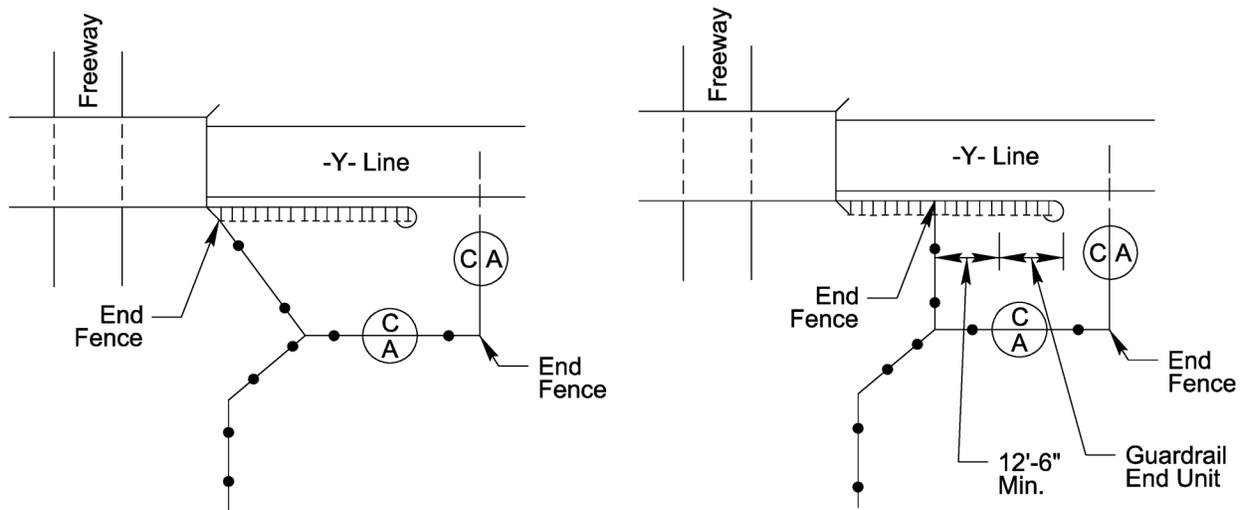
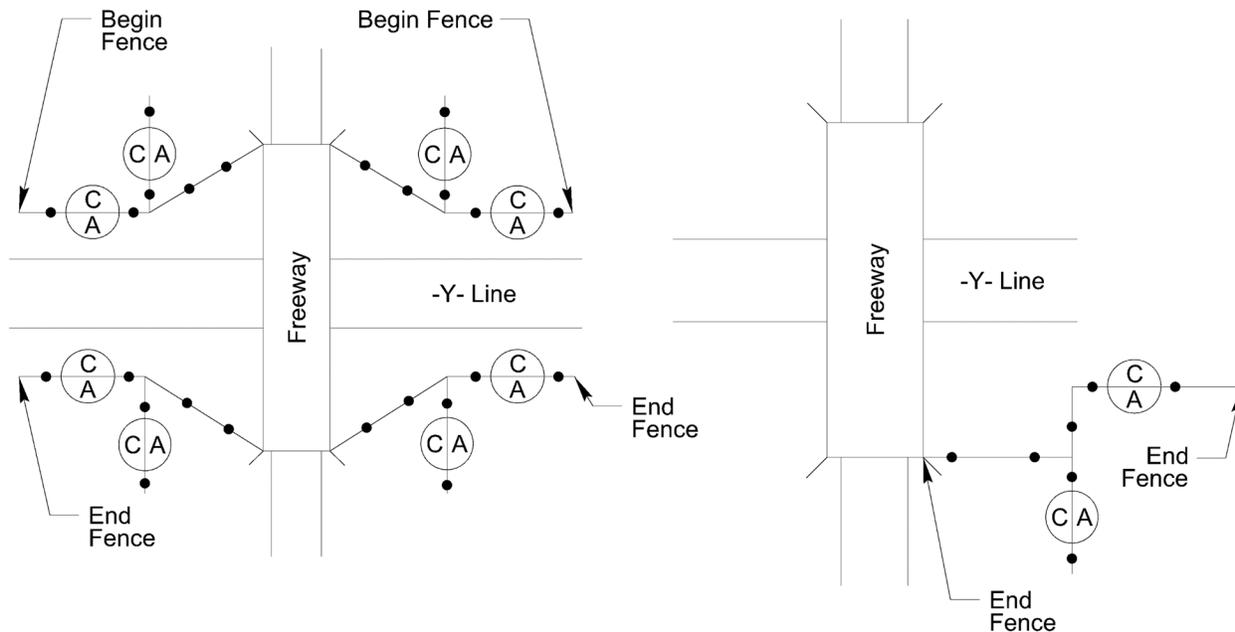


Figure 4-8 Guide for Fence Locations at Freeway over -Y- Line



4.6.1 Types of Fences

Use either woven wire or chain link fence for establishing control of access. Unusual conditions may justify the use of a special type of fence, such as security fence or barbed wire fence, which must be approved by the Division Engineer (or representative). Discuss the type of fence to be used as early as possible and resolve any differences of opinion prior to the distribution of the Right of Way Plan Set in PDN Stage 3 (Plan-In-Hand). It is recommended that the roadway designer discuss the type of fence with the Division during development of the Design Recommendation Plan Set. The Filed Inspection provides another opportunity for the project team to recommend changes to the fence type.

1. Woven Wire Fence – Use woven wire fence except where there is a specific need for chain link fence or a special type of fence. When chain link or a special type of fence is being considered, the land usage at the time the project is in the design stage should be the determining factor unless a change in land use is imminent. Do not base this decision on blanket categories such as anticipated development or zoning classifications. Woven wire fence will typically be erected in rural areas.

The standard height of woven wire fence is 47 inches.

2. Chain Link Fence – Use chain link fence in the following areas:
 - a. A residential area where the average size of a lot adjacent to the right of way does not exceed 1 acre.
 - b. Any area where medium to heavy pedestrian activity will routinely occur closer than 150 feet from the proposed fence location. Study developed land to determine if this type of activity is generated. Do not use chain link fence in institutional, commercial, office, or industrial areas that do not generate such activity. The presence of buffer zones or park like areas adjacent to a developed area will often preclude the need for chain link fence.

- c. Any area which the right of way agreement with the property owner requires that chain link fence be installed by NCDOT.
- d. An area where short sections of woven wire fence would be required to comply with the policy.

The standard height of chain link fence is 48 inches.

3. **Specialty Type Fence** – Consider specialty type fence on a case-by-case basis and discuss during the Field Inspection. The need for specialty fencing may also be identified during right of way negotiations. Special fences include security fencing, barbed wire fencing, masonry walls, and different types for fencing used for screening, landscape purposes, or sound barriers.

Property owners may request specialty fencing and pay for the fence as a betterment outside of the right of way negotiations. Coordinate with the Division Construction Engineer and Division Right of Way Unit to address specialty fencing to be constructed as part of the project.

Note that any specialty fencing specified in the final construction plans may require a special detail and special provision.

4.6.2 Fencing of Rest Areas and Welcome Centers

Determine the type of fence to be used at rest areas or welcome centers on an individual basis through coordination with the Roadside Environmental Unit and Division.

4.6.3 Fencing of Truck Weigh Stations

Determine the type of fence to be used at truck weigh stations on an individual basis through coordination with the Division.

4.6.4 Fencing in Proximity to Airports

Fencing in proximity to airports shall be discussed with the Federal Aviation Administration to determine if nonmetallic fencing should be used. Consult the Division of Aviation when projects are located within 10 miles of an airport.

4.6.5 Fence Locations at Rivers and Streams

Detail the proposed method of fencing at streams in the plans and discuss at the Field Inspection. Tie the fence into the wingwalls at box culverts.

4.6.6 Fence Locations at 54 Inches Pipes and Above

Tie fence to the reinforced endwalls of pipes 54 inches and larger.

4.6.7 Fence Locations at Overpasses

Erect fencing at overpasses in accordance with one of the suggested treatments shown in Figure 4-7 and Figure 4-8. In locations where the fence is tied into the bridge, take extreme caution to assure that sight distances are not obstructed.

4.7 Fencing outside of the Control of Access

Fencing may be needed on roadway facilities outside of the control of access. Replace existing fence affected by construction in kind. Include replacement of existing fence either in the contract and shown on the roadway plans or addressed as part of the right of way negotiations. Discuss fencing at the Field Inspection to identify all fencing that will need to be included in the roadway plans. All types of fences identified in Section 4.6.1 above can also be used outside of the control of access right of way. Include specialty fencing in the right of way negotiations whenever possible.

4.8 Early Fencing (Pre-fencing)

Early fencing, also referred to as pre-fencing, may be needed to ensure that fencing for livestock or other special conditions is maintained during construction. The Right of Way Unit is responsible for identifying the need for early fencing and submitting a letter to the Project Manager. Discuss the need for early fencing at the Field Inspection.

4.9 Gates

When it is necessary to gain access to utilities, drainage areas, and other areas within the fencing or fence line, consider a locked gate. Determine the use of gates on a project-by-project basis and discuss the need for gates at the Field Inspection. Show approved gates clearly on the final construction plans.

The standard types of gates are either single or double gates. Clearly denote the gate height, gate width, and opening dimensions on the plans.

Refer to [NCDOT 2018 Standard Specifications for Roads and Structures](#) Section 866 and [NCDOT Roadway Standard Drawings](#) Std. Nos. 866.01, 866.02, and 866.03 for additional guidance.

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