

ROAD IMPACT AGREEMENT

Permit Number: _____

Date: _____

The Board of Commissioners of the County of Elkhart, Indiana ("Commissioners") and "Contractor", as defined below, agrees as follows:

1. **Installation.** The Commissioners agree that Contractor may construct the following improvements or take the following action within a public road of Elkhart County, Indiana ("Installation") (check appropriate Installation below).

- A. Residential Driveway. _____ Commercial/Industrial Driveway. _____
B. Utility Installation. _____ Other Use. _____

Further Information or Criteria (where applicable):

- A. CURB & GUTTER: _____ YES _____ NO _____ N/A
B. NEW DRIVE: _____ ASPHALT _____ CONCRETE _____ OTHER _____ N/A
C. ROAD SURFACE: _____ ASPHALT _____ CONCRETE _____ OTHER _____ N/A
D. PIPE REQUIRED: _____ YES _____ NO _____ N/A
E. SWALE TO BE MAINTAINED/CREATED: _____ YES _____ NO _____ N/A
F. PASSING LANE REQUIRED: _____ YES _____ NO _____ N/A
G. ACCEL/DECEL LANE(S) REQUIRED: _____ YES _____ NO _____ N/A
H. FOR SPECIAL INSTRUCTIONS SEE SECTION 12 BELOW: _____ YES _____ NO _____ N/A

2. **Location.** The Installation described in section 1 is to be located at: _____ feet, N S E W of _____ (Street or Road) in Section _____ of _____ Township, Elkhart County, Indiana; if the Installation is limited to or located on a single side of the road/street, the side that is applicable is the N S E W side. Other location information:

SITE ADDRESS (if applicable): _____

SUBDIVISION (if applicable): _____ Lot # (if applicable) _____

3. **Compliance; Timing.** The Installation described in section 1 shall be constructed or undertaken in compliance with the Elkhart County Roads Guidelines and Standards for Design and Public Improvement ("Street Standards"), effective September 7, 2010, Elkhart County Ordinance Number 08-316, and any other applicable Elkhart County Ordinance, application form, approval, or authorization permit, or other agreement required by or pertinent to the Installation. The Installation described in section 1 shall be commenced on or about _____, and shall be fully completed, in conformity with this Road Impact Agreement, by no later than _____.

4. **Damages.** The Contractor shall be responsible for any damage it causes to any roadway, drainage structure, or other Public Improvement located within a Right-of-Way during the construction of the Installation described in section 1. Contractor shall be responsible for and indemnify and hold the Commissioners harmless from any claim for damages of any nature, resulting from Contractor's Installation described in section 1, or any actions or undertakings associated therewith, including the payment of attorneys' fees and other expenses incurred in the defense of any claim against the Commissioners.

5. **Safety.** During the Installation described in section 1, Contractor shall use all reasonable efforts to protect the public from any danger associated with the construction of said improvement or action. Contractor shall be solely responsible for any such damage caused to the public, to include indemnifying and holding harmless Commissioners per section 4 above.

6. **Remedies.** If the Contractor fails to follow the terms of this Agreement or the requirements found in the "Street Standards," Contractor shall be liable for any damage it causes as a result of the violation of this Agreement or the Street Standards, including attorneys' fees incurred by the Commissioners and all other reasonable costs and expenses incurred in enforcing said standards. Additionally, if Contractor fails to construct, maintain, or undertake the Installation as agreed and in violation of the Street Standards, or if Contractor shall in any fashion breach the terms and conditions of this Road Impact Agreement, or if Contractor shall otherwise fail or refuse to comply with the Zoning and/or Subdivision Ordinance of Elkhart County, Indiana, the Commissioners may seek and pursue all other remedies available at law or in equity, to include the remedy of specific performance or injunctive relief, and in addition thereto, the Commissioners may directly, or through their authorized representatives or departments, cancel, rescind, or terminate any permits or authorization heretofore granted to Contractor, and may withhold any construction, building, occupancy, or other permits sought by Contractor, at the location set forth in section 2 AND at any other locations in Elkhart County, until all such failures, breaches, or violations of Contractor shall be cured to the satisfaction of the Commissioners.

7. **Contractor.** "Contractor" as used within this Agreement, and in any application, or permit, applicable to the improvements, shall be and mean the company or entity set forth below, or the individual or individuals set forth below. Each person signing this Road Impact Agreement for and on behalf of a company or entity certifies that he or she is duly authorized and empowered on behalf of such company or entity to execute and deliver the same for and on behalf thereof. Any person signing below as "Contractor" in an individual, non-representative capacity, shall be personally responsible and accountable for the terms and conditions of this Road Impact Agreement.

8. **Contact Person.** The contact person for Contractor, and applicable address and phone number therefore, for all purposes under this Agreement, are as follows: _____

Email: _____

9. **Utility Permits (Only).** If Contractor is a utility company, be such public or private, the following additional standards shall apply:

A. Such utility shall be duly authorized and licensed to conduct business in Elkhart County, Indiana.

B. The Installments described in section 1 to be installed, retained, adjusted, or relocated by Contractor on, over, along, or under the county highway/public road aforescribed, within the right-of-way limits thereof, shall be so placed, located, or accommodated by Contractor so that such will not impair in any fashion the planned or existing roadway, or any bridge or other support structure thereof; will not impede the construction or maintenance of such roadway or other structure; and will not interfere in any fashion with the safe use and operation thereof. Contractor further agrees to comply with the rules, regulations, and rulings of the Commissioners in servicing, maintaining, replacing, and removing the above described improvements or taking the above described

actions, and to obtain the appropriate permit before performing any of such functions on any utility facilities, or otherwise addressing such improvements or taking such actions, to the extent located within the highway or bridge right-of-way at issue.

C. Contractor agrees to assume all responsibility and liability for making any adjustments to the utility facilities, as may from time to time be requested by the Commissioners, and further agrees to assume the costs thereof, except where Contractor has a compensable property right therein or where reimbursement of such costs is prohibited by law.

D. Contractor specifically acknowledges the provisions of Section XI of the Street Standards which are incorporated herein by reference; thus any Installation is subject to removal, relocation, or other alteration at the expense of Contractor per such Street Standards, and fines or other remedies set forth within said Section XI shall specifically apply to the Installation contemplated by this Road Impact Agreement.

10. Agents and Representatives. The duties of Contractor to indemnify and hold Commissioners free and harmless per the terms of this Road Impact Agreement, or the Street Standards, shall apply to Commissioners, Elkhart County Government Generally, and to the officers, agents, elected officials, employees, and representatives thereof.

11. Special or Additional Standards.

12. Binding Effect. This Agreement shall apply to and be binding upon Contractor, and the successors, assigns, heirs, and beneficiaries of the same.

CONTRACTOR:

Date: _____

SIGNATURE OF AUTHORIZED AGENT

PRINTED NAME

TITLE

NAME OF CONTRACTOR

COMMISSIONERS:

Date: _____

SIGNATURE OF AUTHORIZED AGENT

PRINTED NAME

TITLE

FINAL INSPECTION AND CERTIFICATION

The undersigned hereby certifies and confirms that he/she has undertaken the final inspection on the Installation contemplated by the above referenced Road Impact Agreement, and the undersigned herewith confirms that the Installation was completed by Contractor as of _____ (date), and that such Installation was constructed consistent with the terms and conditions of such Road Impact Agreement.

SIGNATURE

PRINTED NAME

TITLE

DATE

- d. All work performed within the public right-of-way must be fully restored to a condition as good or better than the site conditions prior to the work being performed. A Permit holder is responsible for repair, to Elkhart County Highway Department's satisfaction, of damaged facilities owned by Elkhart County. (pavement, culverts- basins, etc.)
- e. All excavation made into, under, across, or within two (2) feet of the finished edges of pavements, or cuts across or into a county road may be allowed to use conventional means of compaction (98% standard proctor density) and replacement of sub-grade material (to be determined by Elkhart County). When an asphalt cut is necessary and has received prior approval, the contractor shall comply with the repair of the road way as outlined in Fig. 4. The final surface shall be placed in such a manner that it is level and uniform and notification shall be given to all affected departments and media by the contractor. All pipes must be sleeved. The length of time the closing is to take place will be determined by the Elkhart County Highway Department. When work is not in progress, all equipment shall be out of the road way and the road shall be open to traffic. All signage required to close the road shall meet standards set forth in the Indiana MUTCD manual.
- f. All utility improvements must be confirmed in writing that the work within the right-of-way has been completed and performed as shown on the submitted plans with any modification indicated and/or included on the as-built drawings. Failure to comply with this final inspection request procedure within the one (1) year time frame will result in the revoking of the permit. Elkhart County prohibits the attachment of any line, pipe, cable or other foreign object to bridge structures whether used by utilities or other entities. Driveway and drainage culverts shall not be used as a conduit to convey cables, utilities or other foreign objects from one location to another. NOTE: Revoked permits that have had the work started or partially completed will require reapplication.
- g. Extended road closures and extended lane restrictions (more than eight (8) hours) is prohibited. Under certain circumstances Elkhart County Highway may grant closure for more than eight hours. The specific date and time must be indicated on the permit with notifications to the appropriate entities (see Fig. 17). This shall be accomplished prior to the commencement of work. The contractor is responsible for all maintenance of traffic, roadside signage, and all other aspects of the work zone. Elkhart County Highway is not responsible for the contractor's work zone. If proper procedures are not followed, the permit may be revoked.

2) Driveways

- a. Residential Driveway Permits – Any entrance (access) onto a street must first have a Driveway Permit. This permit is obtained from Elkhart County. Plans will not be reviewed until after receipt of permit application and payment of permit fee. **The permit fee prior to commencement of the work is \$45.00 payable to Elkhart County Treasurer.** Upon receipt of the plans, application, and fee, Elkhart County review comments will typically be complete within two weeks (three weeks maximum). **The fee for obtaining a permit after or during the work being performed is \$500.00.** Applicant must adhere to the following:

Applicant is to comply with Fig. 5:

- b. **Commercial Driveway Permits** – Any entrance onto a street must first have a Driveway Permit. This permit is obtained from the Elkhart County Highway Department. Plans will not be reviewed

until after receipt of permit application and payment of permit fee. **The permit fee is \$75.00 payable to Elkhart County Treasurer.** Upon receipt of the plans, application, and fee, Elkhart County review comments will typically be complete within two weeks (three weeks maximum). **The fee for obtaining a permit after or during the work being performed is \$750.00.** Applicant must adhere to all the information required for commercial drives along with a Performance Surety (see Section VI Surety).

1. Plans must be submitted to Elkhart County Highway Department for all Commercial Driveway Access along a county road. If the sight distances provided by the applicant are questionable, Elkhart County Highway may require the applicant provide complete topography of the street being accessed for a minimum of six hundred fifty (650) feet each direction. Drainage, Utilities and Geometric Improvements shall be designed along the property frontage and shall comply with results based on the TIVE and/or TIS.
 2. Commercial construction must conform to these Standards and the minimum requirements outlined on Fig. 6.
 3. Commercial construction shall be required to provide TIVE (See Appendix D). Elkhart County Highway Department, at its discretion, may require a TIS depending on the proposed project size and scope.
 4. All access onto a street from a commercial property shall be paved from the right-of-way to the edge of the traveled way within the right-of-way of the street.
 5. Completion of commercial driveway permits is required within twelve (12) months after the issuance of a permit. When construction is completed, the applicant must notify the Elkhart County Highway Department by calling 574-534-9394. The Elkhart County Highway Department will then schedule a final inspection and, if all matters have been properly addressed, shall cause the ultimate release of the Performance Surety. If the work performed fails to comply with the permit, the applicant will be notified in writing that they have forty-five days (45) to correct any deficiencies and obtain a re-inspection of the project, or the Performance Surety may be pursued and the corrective work necessary completed by the Elkhart County Highway Department. Upon written request a new permit may be obtained for the purpose of extending the permit up to an additional twelve (12) months.
 6. Any driveways or cuts of a temporary nature for construction or other limited time purposes shall be subject to the permit process herein stated applicable to the type of driveway at issue, though the Elkhart County Highway Department is authorized to establish and control the length of time that any such Temporary Construction Drives will be allowed.
- c. Residential, Commercial, and Industrial construction must establish and maintain drainage facilities at all points where the owner's property has frontage adjacent to a street. This will typically involve the construction of the roadside swale. (see drainage standards)
 - d. Farm access points do not require a permit; however, all farm access points must accommodate proper roadside drainage.
 - e. Change of Use. Any proposed Public Improvement and/or development demonstrating a change of use shall cause these Standards to become binding upon, and replace and

supersede, any existing access or private drive, or other Public Improvements serving the parcel or proposed development at issue. A permit will be required at this time.

- f. Construction of sidewalks, where applicable, will be inspected and approved along with the Driveway Permit process. All sidewalks shall comply with the ADA requirements.
- g. Driveway permits revoked will require reapplication. Permits may be revoked for, but not limited to, the following reasons:
 - 1. Construction begun but not completed in the time frame indicated on the permit.
 - 2. Construction does not meet the requirements set forth in the permit and repairs have not been completed within the forty-five (45) day time frame
 - 3. Failure to complete any of the proposed improvements outlined on the approved plan submitted with the permit.
- h. All residential subdivision drives shall comply with all the above procedures. The construction of the proposed drive shall comply with the applicable Fig. 5.
- i. Types of commercial drives and their specific requirements are as follows:
 - 1. Commercial Drive on Arterial roads require:
 - a) One drive entrance per legal parcel, outside functional limits of an intersection
 - b) Figure #6
 - c) Adequate drainage typically includes culvert and establish swale on entire frontage
 - d) Traffic Impact Vehicular Estimate (TIVE)
 - e) Traffic Impact Study (TIS) if necessary and at Elkhart County Highway's discretion
 - f) All requirements from Section II and Section III
 - g) Alignment with nearby commercial drives and/or roads (required)
 - h) TOPO
 - i) Clear vegetation/trees in ROW
 - j) Sight Distance calculations
 - k) Site plans showing above
 - 2. Commercial Drive on Collector roads require:
 - a) One drive entrance per legal parcel, outside functional limits of an intersection
 - b) Figure #6
 - c) Adequate drainage typically includes culvert and establish swale on entire frontage
 - d) Traffic Impact Vehicular Estimate (TIVE)
 - e) Traffic Impact Study (TIS) if necessary and at Elkhart County Highway's discretion
 - f) Alignment with nearby commercial drives and/or roads (desired)
 - g) TOPO
 - h) Clear vegetation/trees in ROW
 - i) Sight Distance documented (desired)
 - j) Site plans showing above

3. Commercial Drive (Agricultural) on Collector roads i.e., Duck Barns, Cell Towers:
 - a) One drive entrance per legal parcel, outside functional limits of an intersection
 - b) Figure #6, excluding tapers
 - c) Adequate drainage, typically includes culvert, and establish swale on entire frontage
 - d) Traffic Impact Vehicular Estimate (TIVE)
 - e) Alignment with nearby commercial drives and/or roads (desired)
 - f) TOPO
 - g) Clear vegetation/trees in ROW
 - h) Sight Distance documented (desired)
 - i) Site plans showing above

4. Commercial Drive on a Minor road or within a Commercial Subdivision (with or without curb and gutter):
 - a) One drive entrance per legal parcel, outside functional limits of an intersection
 - b) Figure #6
 - i. 35 foot radii allowed when no truck traffic is present
 - c) Adequate drainage and establish swale on entire frontage
 - d) Traffic Impact Vehicular Estimate (TIVE)*
 - e) Traffic Impact Study (TIS) if necessary and at Elkhart County Highway's discretion*

* If a TIVE or TIS has previously been approved for a Commercial Subdivision, commercial driveways within that subdivision (constructed before the full build-out year specified in the original document) will only be required to submit minimal TIVE information, justifying that the amount of traffic in the approved TIVE or TIS is consistent with that of the proposed development. If the TIVE is inconsistent with the previously approved document, an individual TIVE or TIS for the drive in question may be requested.

3) Mailboxes, Guidelines and Recommendations.

a. Location of Mailboxes:

1. On numbered county roads with no paved shoulder, the front or closest edge of a mailbox should be a minimum of three (3) feet off of the edge of the traveled and/or paved portion of the public right-of-way.
2. On subdivision streets and on numbered county roads with a paved shoulder, that face (closest portion) of the mailbox should be located a minimum of twelve (12) inches off of the edge of the paved shoulder.
3. On streets with raised curbs, the face (closest portion) of the mailbox should be located at least six (6) inches from the back of the curb.
4. If a mailbox is located at or near intersecting streets, it should be located a minimum of ninety (90) feet from the centerline of the two intersecting streets.
5. Unless expressly permitted by the Elkhart County Highway Department, no mailbox shall be placed in front of a guard rail, and hence be closer to the traveled portion of a street than the guard rail.

b. Mailbox Structures:

1. Mailboxes should be of light sheet metal or plastic construction conforming to the requirements of the U.S. Postal Service; accompanying or related or adjacent newspaper delivery boxes shall be of comparable construction and be of no greater size than necessary or suitable for the receipt of a newspaper, and should otherwise comply with the mailbox standards herein set forth.
2. No more than two (2) mailboxes may be mounted on a support structure unless the support structure and mailbox arrangement have been demonstrated by the property owner or owners to be acceptable for traffic and highway safety under AASHTO certified crash tests.
3. Mailbox supports shall not be set in concrete unless the support design has been demonstrated by AASHTO certified crash tests when so installed.
4. A single four (4) inches x four (4) inches square wooden post, four (4) inch in diameter wooden post or a metal post with a strength no greater than a two (2) inch diameter standard strength steel pipe will be acceptable as a mailbox support. The support may be embedded no more than twenty-four (24) inches into the ground will be acceptable as a mailbox support. A metal post shall not be fitted with an anchor plate, but it may have an anti-twist device that extends no more than ten (10) inches below the ground surface.
5. The post to box attachment details shall be in conformance with the current Indiana Department of Transportation standards or current standards of AASHTO's "A Guide for Erecting Mailboxes on Highways".
6. Copies of the attachment details are on file and available in the office of the Elkhart County Highway Department.
7. Mailbox support designs not described in this regulation will be acceptable if shown to be safe by AASHTO certified crash tests and approved by the Elkhart County Highway Department.

c. Responsibility of Mailboxes:

Any person, property owner, applicant, or developer placing a mailbox within the public right-of-way of a street or road, under the jurisdiction of Elkhart County, does so at his/her/its own risk and such party, and any successor in ownership to such mailbox, shall indemnify and hold Elkhart County, and its agents, officials, and employees, free and harmless from any and all, claims and liabilities arising from such placement, whether placed by these standards or otherwise.

SECTION VI

SURETIES

- 1) Where there is higher risk to county infrastructure, or the permitted work is much greater or complex than normal permitted work, the Elkhart County Highway Department reserves the right to increase the Surety requirement after reviewing the plans or application for permit and before approving the permit. The minimum Surety amounts are as follows:

Road Cuts-----	\$ 5,000.00 per location
Road Borings-----	\$ 5,000.00 per location
Commercial Driveway-----	\$ 5,000.00 per location
Special use permit-----	\$ 5,000.00 minimum per use
Dedicated residential street -----	\$ 65.00 per lineal foot
(Good for 2 years)	
Dedicated commercial street -----	\$80.00 per lineal foot
(Good for 2 years)	

- 2) The Performance Surety for both Residential and Commercial developments is to include an amount for construction of Acceleration/Deceleration lanes and /or Passing Lanes when required. This additional amount will be determined by the respective rate per line foot listed above applied to the lineal footage of Acceleration/Deceleration lane and/or Passing Lane pavement to be constructed. The Performance Surety must be submitted to Elkhart County Highway Department prior to recording the Plat after secondary approval. This Performance Surety will be returned to the developer upon initial acceptance. If the developer fails to complete the subdivision for initial acceptance within a two (2) year time frame, Elkhart County will pursue the Surety. If the developer completes the work prior to the Surety's expiration, the Surety will be released, except for one thousand dollars (\$1,000.00) which will be used to cover attorney fees and staff time.
- 3) A Maintenance Surety in the amount of \$7.00 per lineal foot for road construction, or a minimum amount of \$5,000 and \$3.50 per lineal foot of road, or a minimum of \$2,000 for drainage shall be the responsibility of the developer to furnish whether personally or through other willing contributors, to the Board of County Commissioners prior to initial acceptance of the proposed dedications and release of the Performance Surety. The Maintenance Surety is to be effective for a period of three (3) years commencing within three (3) months of the date of initial acceptance. If the developer fails to complete the subdivision for final acceptance within the three (3) year time frame, Elkhart County will pursue the Maintenance Surety and completing any needed work. If the developer completes the work prior to the Surety's expiration, the Surety will be released, except for one thousand dollars (\$1,000.00) which will be used to cover the attorney fees and staff time.
- 4) Each Surety must accompany a properly executed permit or Subdivision Construction and Maintenance Agreement form, whichever is applicable.
- 5) **A Surety for a Work Permit must be good for one (1) calendar year from the date listed on the Surety and cover all construction activities associated with the activity indicated on the Work Permit(s).** An individual Surety will be released upon proper completion of the activity indicated on the Work Permit.

SECTION II

GENERAL GUIDELINES

- 1) Design and construction within Elkhart County are to be in accordance with appropriate current industry standards, unless modified in the following Elkhart County Street Standards.
- 2) Right of Way
 - a. Primary Arterials (4 lane streets)..... by County Design (150' min.)
Secondary Arterials..... by County Design (100' min.)
Collectors by County Design (80' min.)
Boulevard Minor 54 feet
Minors with Sidewalks 50 feet
Minors 40 feet
Cul-de-sacs 50 foot radius
 - b. The dedication of right-of-way for the purpose of acceptance by Elkhart County must follow the procedures prescribed in County Ordinance No. 36-7-4-700 for Major Subdivisions and these Standards.
 - c. Additional right-of-way may be dedicated to or acquired by Elkhart County by acceptance of a deed of dedication to the Board of Commissioners, by eminent domain procedures, or by other undertakings acceptable to Elkhart County Highway Department, without following the aforescribed Major Subdivision procedures and/or these Standards, in such instances where such dedication, eminent domain, or other acquisition shall increase the right-of-way width of an existing, accepted, and maintained street of Elkhart County.
- 3) Access.
 - a. All proposed collectors, cul-de-sacs, or minor streets which provide access to an arterial shall be designed consistent with the requirements of Elkhart County Highway as identified by the TIVE or TIS.
 - b. Only one (1) access is allowed per parcel or lot unless multiple accesses have been granted by the Plan Commission or BZA as a part of the Site Plan.
 - c. Any proposed access via a collector, minor street, cul-de-sac, commercial or residential drive onto an existing county road will be permitted only if adequate intersection sight distances in each direction from the proposed access are demonstrated (per Chapter 9 of current *AASHTO Manual on Geometric Design of Roads and Streets*). In the event adequate intersection sight distances are not present the developer/applicant must create the required distances or access will be denied.

- 4) **Vacation of Public Streets.** Vacation of any public road/street right-of-way in Elkhart County may be accomplished only by the procedures adopted in Appendix A (Section XIII hereof).
- 5) **Sidewalks and street lights.** Sidewalks and street lighting improvements proposed by the developer or required by the Plan Commission may be installed within the right of way. If installed within the right of way, such sidewalk or street lighting improvements shall comply with the American with Disabilities Act of 1990 (ADA) and meet all requirements of Figure 15. Elkhart County shall not be liable and will be held harmless for any and all claims arising from the construction, maintenance, repair, utility bills, or damage to such improvements. The developer or successor(s), homeowner's association, or adjoining property owner(s) shall be wholly responsible and liable for the maintenance and repair of sidewalks and street lighting improvements. The developer shall provide details of such improvements as a part of the construction plan approval process to the Engineering Department.
- 6) **Passing Lanes; Deceleration Lanes.** Where passing lanes and acceleration / deceleration lanes are required additional right-of-way may be required. It is the responsibility of the developer to obtain this right-of-way and have it included on the secondary plat.
- 7) **Additional Right-of-Way.** When a proposed change of use is adjacent to existing County right-of-way, which existing right-of-way does not meet the right-of-way width requirements otherwise set forth by these Standards, additional right-of-way shall be dedicated along the frontage of the property by the owner and/or developer to and for the benefit of Elkhart County; such right-of-way as newly established and required must equal one half the required widths from centerline (see Section II, 2(a)).
- 8) **Traffic Signals.** Included on Elkhart County Highway's website are current traffic signal standards and list of approved traffic signal equipment. All traffic signals are to be designed in accordance with these documents.

intersection is located on a 4 percent upgrade, then the time gap selected for intersection sight distance design for left turns should be increased from 8.0 to 8.8 s, equivalent to an increase of 0.2 s for each percent grade.

The design values for intersection sight distance for passenger cars are shown in Table 9-6. Figure 9-17 includes design values, based on the time gaps for the design vehicles included in Table 9-5.

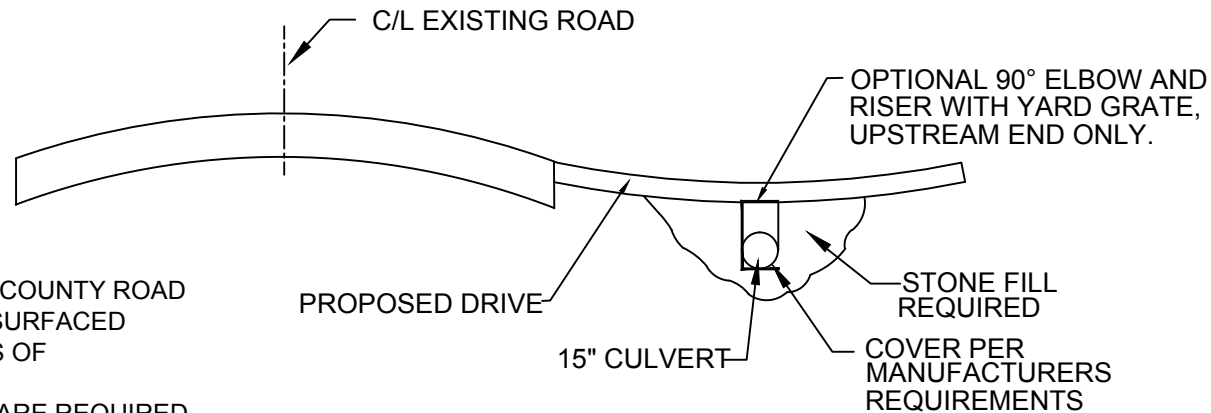
No adjustment of the recommended sight distance values for the major-road grade is generally needed because both the major- and minor-road vehicle will be on the same grade when departing from the intersection. However, if the minor-road design vehicle is a heavy truck and the intersection is located near a sag vertical curve with grades over 3 percent, then an adjustment to extend the recommended sight distance based on the major-road grade should be considered.

Table 9-6. Design Intersection Sight Distance—Case B1, Left Turn from Stop

Metric				U.S. Customary			
Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars		Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars	
		Calculated (m)	Design (m)			Calculated (ft)	Design (ft)
20	20	41.7	45	15	80	165.4	170
30	35	62.6	65	20	115	220.5	225
40	50	83.4	85	25	155	275.6	280
50	65	104.3	105	30	200	330.8	335
60	85	125.1	130	35	250	385.9	390
70	105	146.0	150	40	305	441.0	445
80	130	166.8	170	45	360	496.1	500
90	160	187.7	190	50	425	551.3	555
100	185	208.5	210	55	495	606.4	610
110	220	229.4	230	60	570	661.5	665
120	250	250.2	255	65	645	716.6	720
130	285	271.1	275	70	730	771.8	775
—	—	—	—	75	820	826.9	830
—	—	—	—	80	910	882.0	885

Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

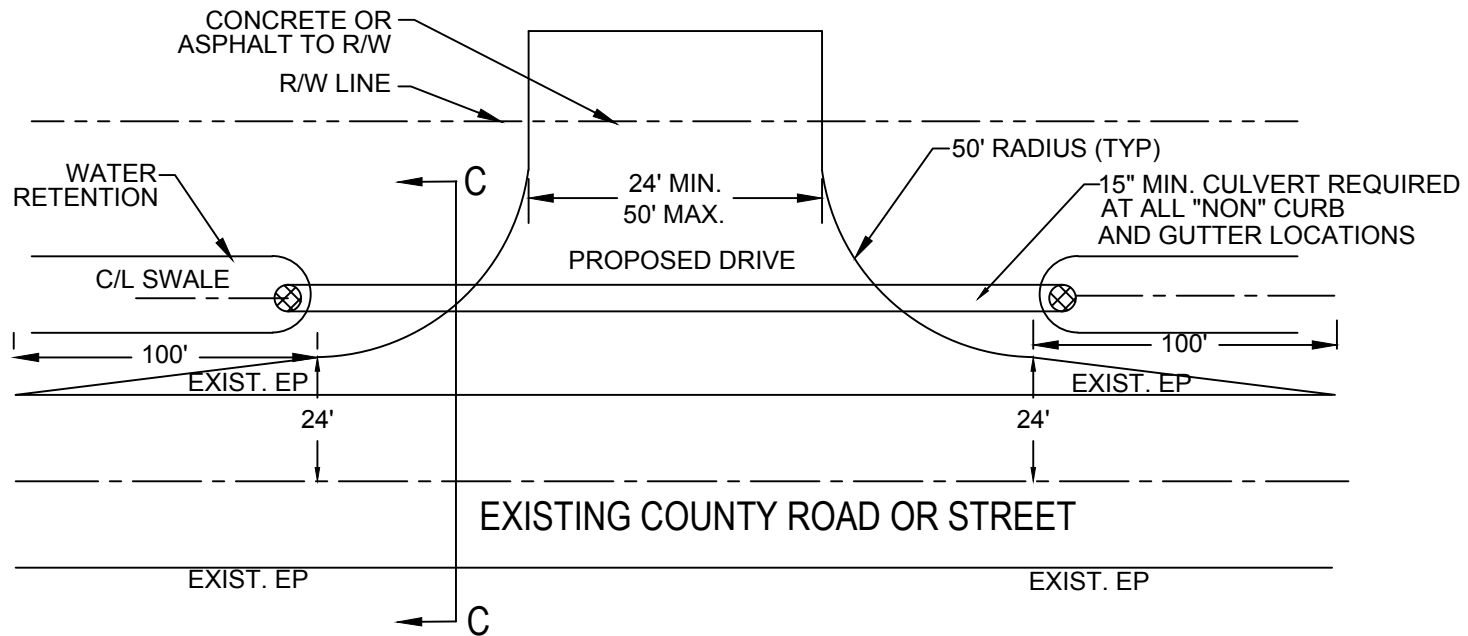
Sight distance design for left turns at divided-highway intersections should consider multiple design vehicles and median width. If the design vehicle used to determine sight distance for a divided-highway intersection is larger than a passenger car, then sight distance for left turns will need to be checked for that selected design vehicle and for smaller design vehicles as well. If the divided-highway median is wide enough to store the design vehicle with a clearance to the through lanes of approximately 1 m [3 ft] at both ends of the vehicle, no separate analysis for the departure sight triangle for left turns is needed on the minor-road approach for the near roadway to the left. In most cases, the departure sight triangle for right



TYPICAL CROSS SECTION "C-C"

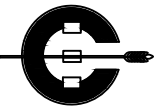
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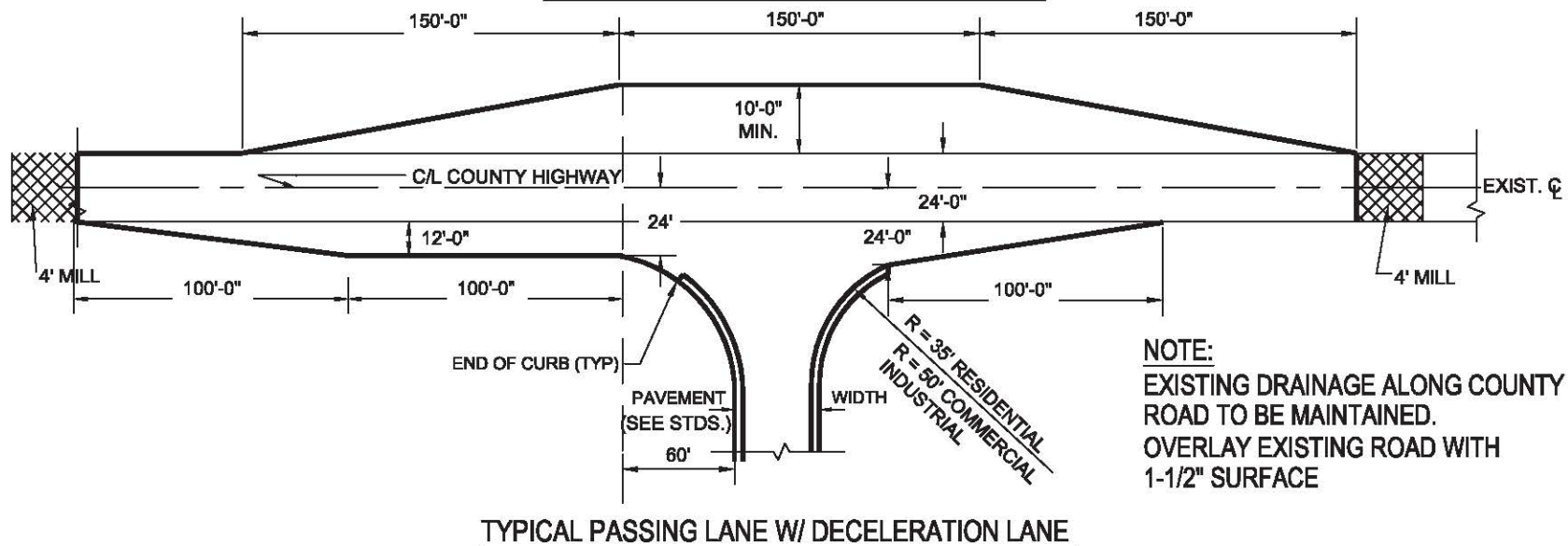
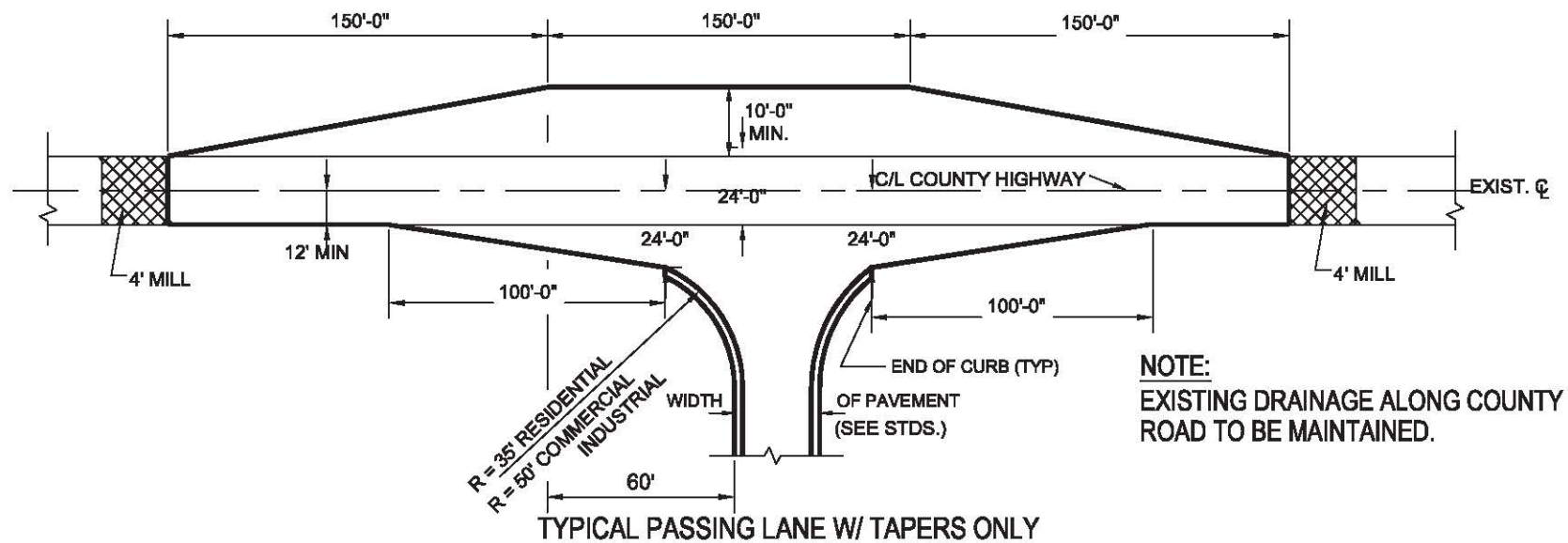
1. FULL WIDTH OF EXISTING COUNTY ROAD MUST BE MILLED AND RESURFACED FROM OUTERMOST LIMITS OF DRIVEWAY TAPERS
2. CULVERT END SECTIONS ARE REQUIRED UNLESS OPTIONAL ELBOW, RISER AND YARD GRATE USED (UPSTREAM ONLY)
3. YARD GRATES SHALL BE BEEHIVE TYPE (SEE FIG. 11)



MINIMUM REQUIREMENTS FOR COMMERCIAL DRIVES

FIG.6





ACCELERATION-DECELERATION TAPERS & PASSING LANES

FIG.2



TRAFFIC IMPACT VEHICULAR STUDY (TIVE)

Location of Project: _____

Description of Project: _____

Nearest Existing Intersections:

North: _____ East: _____

South: _____ West: _____

EXISTING TRAFFIC DATA

Access Point Location

County road name or number: _____

Existing AADT of County Road (EADT): _____ vpd Horizon Year: _____

Undeveloped AADT at Horizon Year: _____ vpd (apply 2% growth rate)

AM Peak Hour Traffic Count: _____ vph Time: _____

PM Peak Hour Traffic Count: _____ vph Time: _____

Directional Distribution: _____ % Direction: _____

_____ % Direction: _____

DEVELOPMENT TRAFFIC DATA

Trip Generation

ITE Classification: _____

Projected Total Weekday Traffic (PADT): _____ vpd _____ % of trucks

Projected AM Peak Hour Generated: _____ vph

Entering: _____ vph _____ %

Exiting: _____ vph _____ %

Projected PM Peak Hour Generated: _____ vph

Entering: _____ vph _____ %

Exiting: _____ vph _____ %

Attach AM and PM peak traffic flow diagram at intersection of entrance with county road at full build-out of the development.

CONCLUSIONS

Projected AADT at Full Build-Out: _____ vpd (EADT +PADT)

Deceleration Lane Required? YES NO > 3500 vpd

Passing Lane Required? YES NO > 1000 vpd for commercial development (or)

> 3000 vpd for residential development (or)

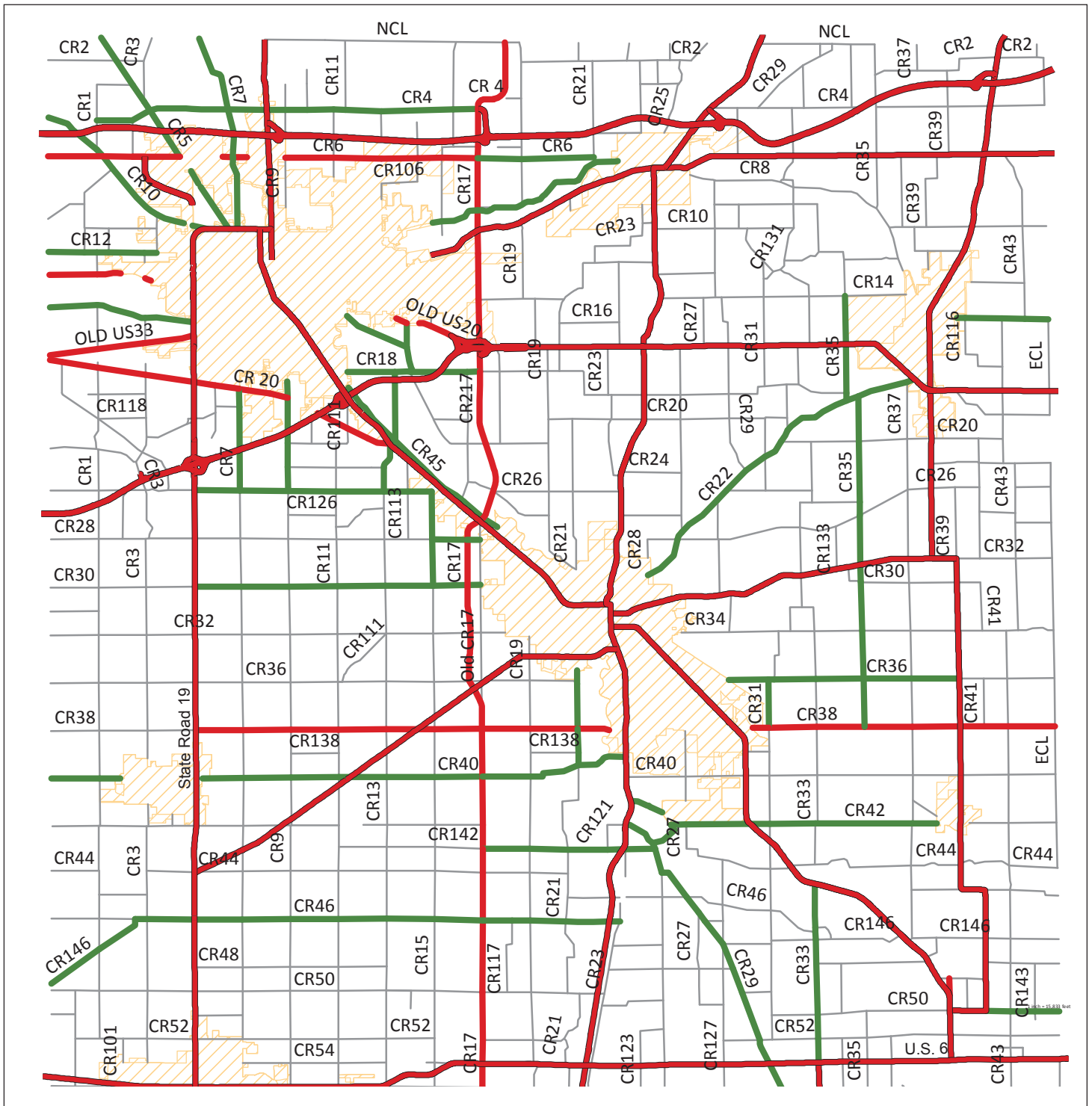
> 20 left turns during design hour

Submitted By: _____

Company: _____ Phone: _____

Email: _____ Fax: _____

ELKHART COUNTY



Elkhart County Thoroughfare Plan APPENDIX C

Legend

- Primary Arterials
- Secondary Arterials

January, 2016

