

**ALIGNMENT OF ATTENUATOR, PAD AND ROADWAY**

**NOTES:**

1. See Standard Drawing E 601-GAIA-01A for notes.

Distance A			Comment
Test Level 3	Test Level 2	Test Level 1	
148'-0	132'-0	100'-0 Desirable	Use appropriate designated impact attenuator test level

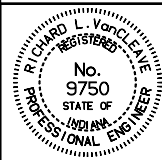
INDIANA DEPARTMENT OF TRANSPORTATION  
**GRADING AT MEDIAN  
 IMPACT ATTENUATOR**  
 MARCH 2002  
 STANDARD DRAWING NO. **E 601-GAIA-01**

	/s/ Richard L. VanCleave 3-01-02 <small>DESIGN STANDARDS ENGINEER DATE</small>
	/s/ Richard K. Smutzer 3-01-02 <small>CHIEF HIGHWAY ENGINEER DATE</small>

DESIGN STANDARDS ENGINEER

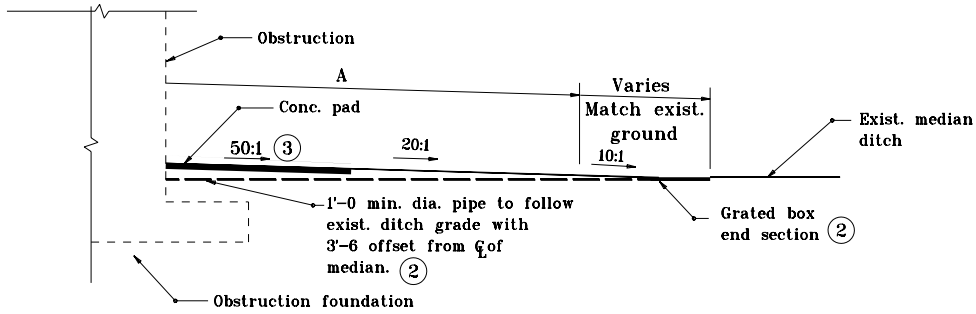
NOTES:

1. The pad and grading details shown on these drawings shall be used as applicable to the attenuator system required for either or both ends of the obstruction.
2. Contractor shall follow manufacturer's recommendations for actual pad size for a particular impact attenuator system.
- ③ Align the centerline of attenuator system parallel to centerline of the roadway. A maximum angle of 5°, as measured between the longitudinal centerline of the roadway and an impact attenuator system type ED is allowed for the gravel barrel array. See Standard Drawing E 601-IAED-01 for gravel barrel layout and pad size.
4. Variation in transverse slope over the length of the pad shall not exceed 2%.
5. Attenuator system including pad shall not encroach on usable shoulder of the roadway.
- ⑥ Longitudinal downward slope shall be 20:1 maximum.
- ⑦ Longitudinal transition slope shall be a maximum of 10:1 downward.
- ⑧ For a concrete pad adjacent to the outside shoulder area, a distance of 3'-3" beyond the far edge of concrete pad from the travel lane shall be sloped 20:1 before gradual transition to existing slope.
- ⑨ Transition from full height barrier curb to mountable curb shall be provided where barrier curb exists or is planned.

INDIANA DEPARTMENT OF TRANSPORTATION	
GRADING AT MEDIAN IMPACT ATTENUATOR	
MARCH 2002	
STANDARD DRAWING NO.E 601-GAIA-01A	
	/s/ <u>Richard L. VanCleave</u> 3-01-02 DESIGN STANDARDS ENGINEER DATE
	/s/ <u>Richard K. Smutzer</u> 3-01-02 CHIEF HIGHWAY ENGINEER DATE
DESIGN STANDARDS ENGINEER	

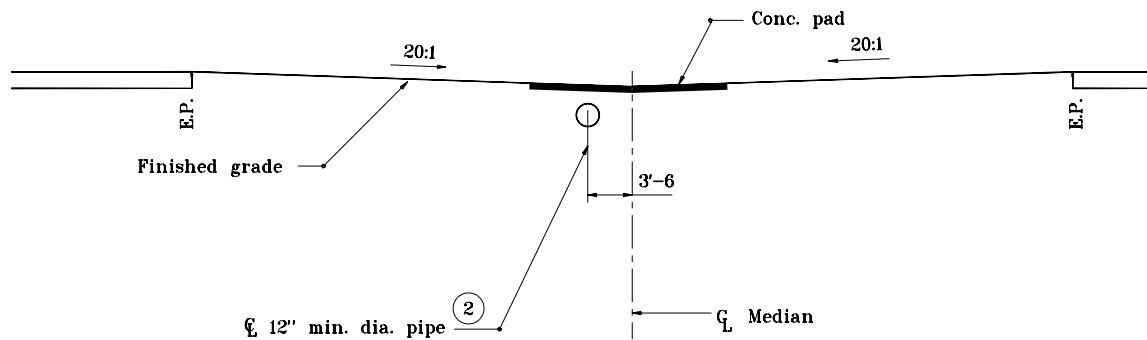
**NOTES:**

1. All slopes from the edge of shoulder to the center of the median and distance A upstation and downstation of the obstruction shall be sloped at 20:1 maximum.
- ② Median drainage is to be determined by field inspection. If drainage is required, a 12" min. grated box end section type II, slope 10:1, and a 12" min. type 1 pipe shall be used.
- ③ Concrete pad slope



**LONGITUDINAL SECTION**

Distance A			Comment
Test Level 3	Test Level 2	Test Level 1	
148'-0	132'-0	100'-0 Desirable	Use appropriate designated impact attenuator test level

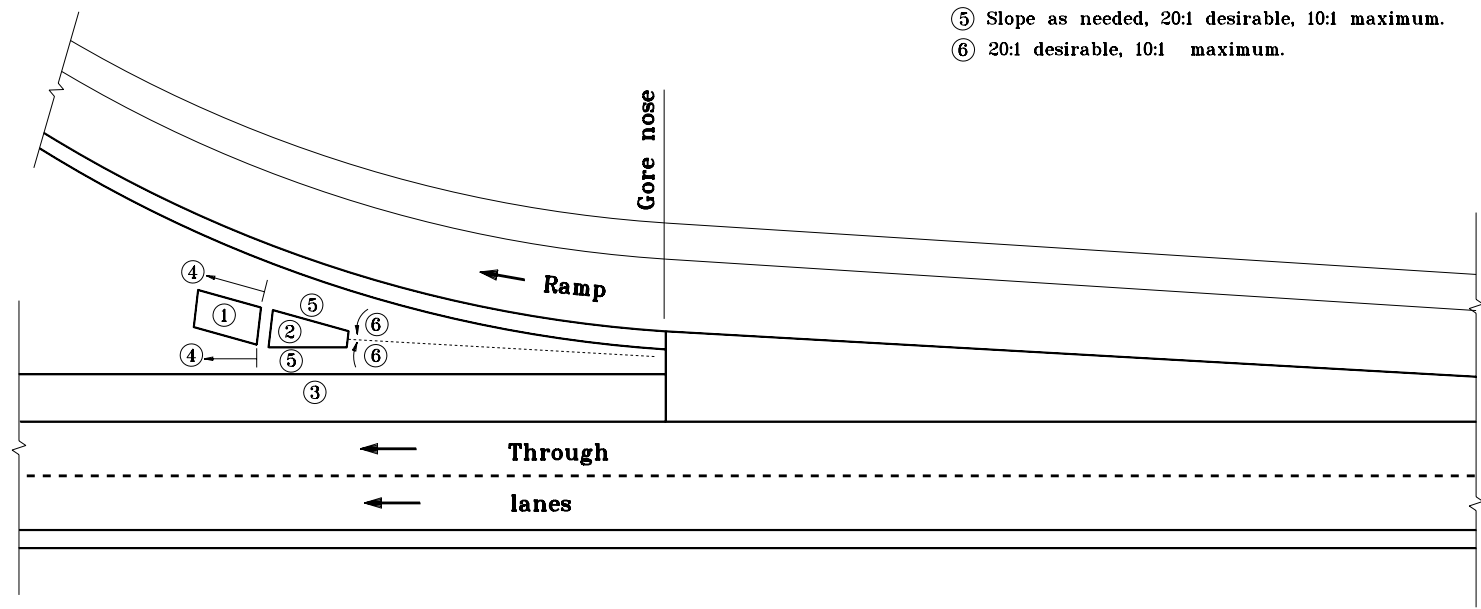


**MEDIAN SECTION AT PAD**

INDIANA DEPARTMENT OF TRANSPORTATION	
<b>GRADING AT MEDIAN IMPACT ATTENUATOR</b>	
MARCH 2002	
STANDARD DRAWING NO. <b>E 601-GAIA-02</b>	
	/s/ Richard L. VanCleave 3-01-02 DESIGN STANDARDS ENGINEER DATE
	/s/ Richard K. Smutzer 3-01-02 CHIEF HIGHWAY ENGINEER DATE
DESIGN STANDARDS ENGINEER	

**LEGEND**

- ① Obstruction
- ② Impact attenuator pad, transversely as level as conditions permit, maximum slope 20:1. Longitudinally sloping 20:1 maximum, with respect to roadway grade.
- ③ Shoulder slope 4% toward obstruction/impact attenuator pad/swale.
- ④ Transition slope 10:1 maximum transversely.
- ⑤ Slope as needed, 20:1 desirable, 10:1 maximum.
- ⑥ 20:1 desirable, 10:1 maximum.



INDIANA DEPARTMENT OF TRANSPORTATION	
<b>GRADING AT IMPACT ATTENUATOR IN GORE AREA</b>	
MARCH 2002	
STANDARD DRAWING NO. <b>E 601-GAIA-03</b>	
	/s/ <i>Richard L. VanCleave</i> 3-01-02 DESIGN STANDARDS ENGINEER DATE
	/s/ <i>Richard K. Smutzer</i> 3-01-02 CHIEF HIGHWAY ENGINEER DATE
DESIGN STANDARDS ENGINEER	