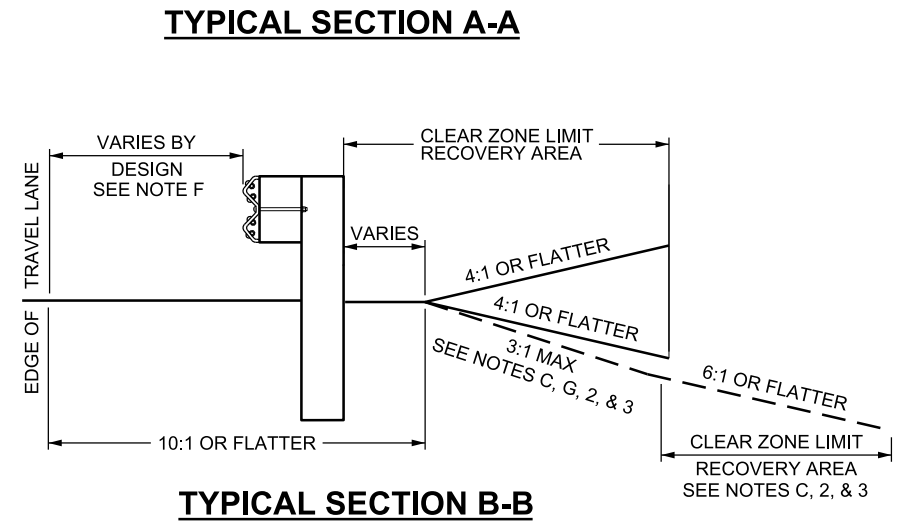
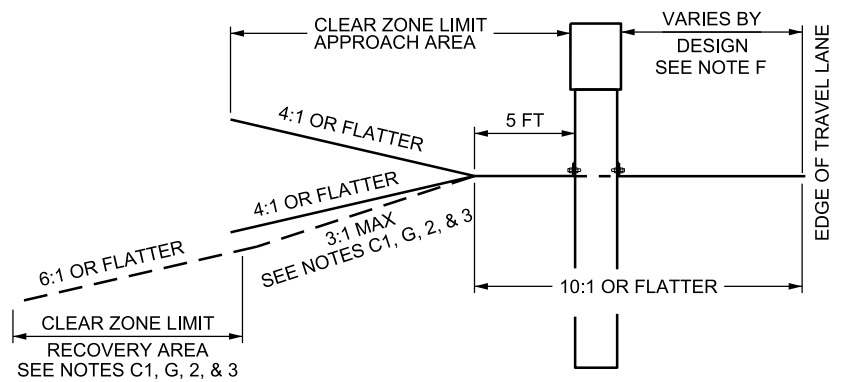
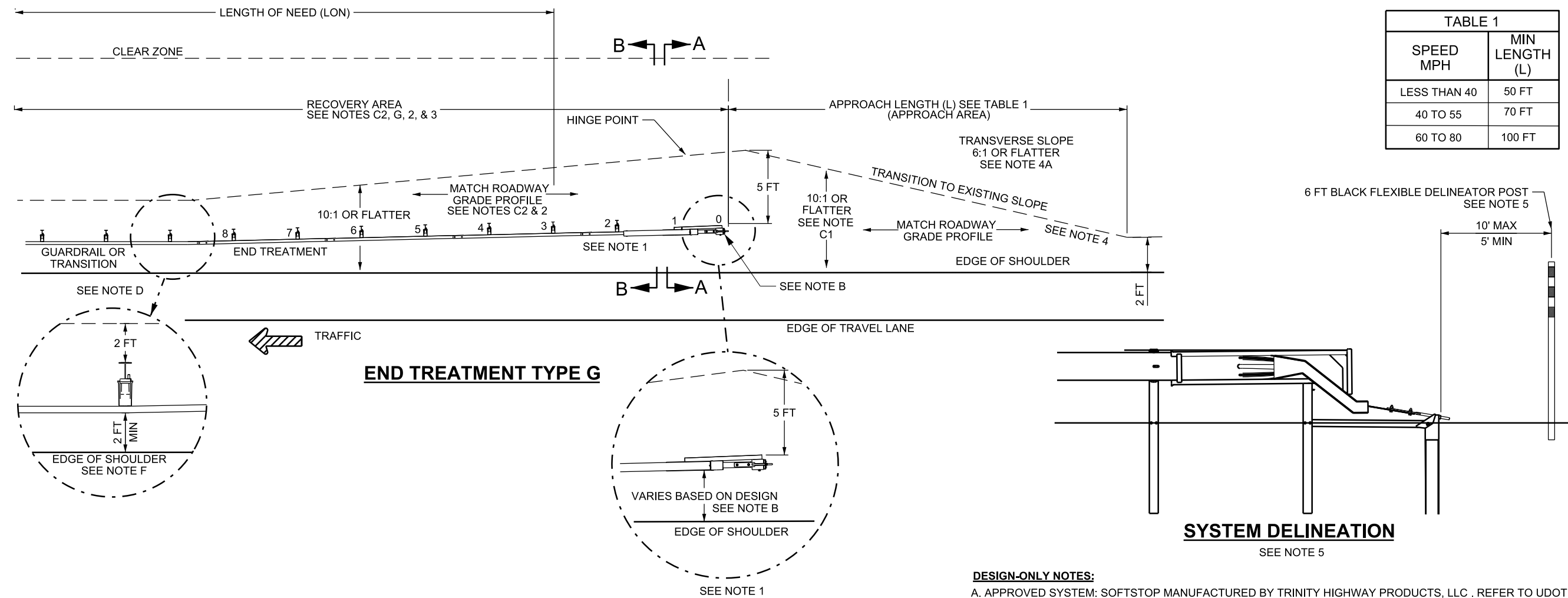


SPEED MPH	MIN LENGTH (L)
LESS THAN 40	50 FT
40 TO 55	70 FT
60 TO 80	100 FT



**DESIGN-ONLY NOTES:**

- A. APPROVED SYSTEM: SOFTSTOP MANUFACTURED BY TRINITY HIGHWAY PRODUCTS, LLC. REFER TO UDOT GUIDELINES FOR CRASH CUSHIONS AND BARRIER END TREATMENTS FOR SPECIFIC SYSTEM DETAILS.
- B. SYSTEM OFFSET:
  - 1. INSTALL SYSTEM WITH 2 FT OFFSET (25:1 FLARE RATE). SYSTEM TO BE INSTALLED WITH TANGENT BARRIER.
  - 2. SEE MANUFACTURER'S INSTALLATION MANUAL WHEN DESIGNING FOR A CONVEX OR CONCAVE CURVE.
- C. MEET SLOPE REQUIREMENTS IN RECOVERY AREA AS DETAILED IN APPLICABLE UDOT ROADWAY DESIGN MANUAL DWGS. THE ADDITIONAL INFORMATION LISTED BELOW IS THE MINIMUM ACCEPTABLE SLOPE REQUIREMENTS FOR THE APPROACH AREA OF THE END TREATMENT AND THE RECOVERY AREA.
  - 1. APPROACH AREA: THE AREA PRIOR TO IMPACTING A SYSTEM.
    - A) USE 10:1 OR FLATTER FORESLOPES IN APPROACH AREAS.
  - 2. RECOVERY AREA: THE AREA BEHIND THE END TREATMENT AND BARRIER SYSTEM EXTENDING FROM THE APPROACH END OF THE END TREATMENT TO THE END OF THE CALCULATED LENGTH OF NEED.
    - A) USE A 4:1 OR FLATTER FORESLOPE OR BACKSLOPE IN RECOVERY AREA.
    - B) USE A 3:1 FORESLOPE IN RECOVERY AREA IF IT IS IMPRACTICAL TO USE A 4:1 FORESLOPE. ESTABLISH A RECOVERY AREA AT THE TOE OF THE 3:1 FORESLOPE OF 6:1 OR FLATTER TO CLEAR ZONE LIMITS. REFER TO THE UDOT ROADWAY DESIGN MANUAL AND AASHTO ROADSIDE DESIGN GUIDE FOR ADDITIONAL INFORMATION.
    - C) USE A 4:1 OR FLATTER BACKSLOPE IN RECOVERY AREA TO THE CLEAR ZONE LIMIT, IF A 4:1 OR FLATTER BACKSLOPE CANNOT BE PROVIDED A 3:1 IS ACCEPTABLE.
- 3. MATCH ROADWAY GRADE PROFILE TO THE HEAD OF THE SYSTEM INSIDE THE APPROACH AREAS.
- D. USE GUARDRAIL TRANSITION, BA 4 SERIES STD DWGS, WHEN ATTACHING SYSTEM TO CONCRETE BARRIER OR BRIDGE PARAPET.
- E. USE THE AASHTO ROADSIDE DESIGN GUIDE TO ESTABLISH CLEAR ZONE REQUIREMENTS AND LENGTH OF NEED (LON) REQUIREMENTS.
- F. 2 FT MINIMUM BARRIER OFFSET IS OPTIONAL WHEN ROADWAY DESIGN REQUIRES A 12 FT OR WIDER EFFECTIVE SHOULDER.
- G. DO NOT PLACE SIGNS, POSTS, OR OTHER HAZARDS IN APPROACH AREA. USE BREAKAWAY SIGNS OR POSTS WHEN PLACED IN RECOVERY AREA, AND MAINTAIN A MINIMUM 10 FT CLEARANCE TO THE SIDE AND 25 FT FROM THE REAR OF THE SYSTEM. MITIGATE POTENTIAL HAZARDS IN THE RECOVERY AREA.

**NOTES:**

- 1. REFER TO MANUFACTURER'S SPECIFICATIONS FOR POST, RAIL ELEMENT, AND POST TO RAIL CONNECTION REQUIREMENTS. HAVE SHOP DRAWING AVAILABLE ON SITE FOR REFERENCE DURING INSTALLATION.
- 2. COMPLETE SLOPE PREPARATION PRIOR TO INSTALLING SYSTEM.
- 3. CLEAR RECOVERY AND APPROACH AREAS OF ANY FIXED OBJECTS OR HAZARDS.
- 4. CONSTRUCT PLATFORM AS REQUIRED WHEN THE SPACE IS AVAILABLE EVEN IF THE PLATFORM EXTENDS BEYOND THE CLEAR ZONE REQUIREMENTS. SEE STD DWG CC 8C FOR EXCEPTIONS.
  - A) CONSTRUCT 6:1 OR FLATTER SLOPE FOR TRANSVERSE SLOPE FROM APPROACH PAD.
- 5. DO NOT MOUNT OBJECT MARKER ON THE SOFTSTOP SYSTEM.
  - A) INSTALL A 6 FT BLACK FLEXIBLE MARKER POST ACCORDING TO SYSTEM DELINEATION DETAIL. PLACE YELLOW BANDS OF REFLECTIVE SHEETING AS SPECIFIED BY STANDARD SPECIFICATION, PART 2 AT THE TOP OF THE POST WITH A 2 INCH SPACE BETWEEN THE 1ST AND 2ND BAND AND THE 2ND AND 3RD BAND.

NO.	DATE	APPR.	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION  
 STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION  
 SALT LAKE CITY, UTAH

RECOMMENDED FOR APPROVAL  
 AUG 30, 2018  
 DATE

APPROVED  
 AUG 30, 2018  
 DATE

DEPUTY DIRECTOR

GRADING AND  
 INSTALLATION DETAILS  
 SOFTSTOP  
 END TREATMENT  
 TYPE G (MASH)

STANDARD DRAWING TITLE

12-SEP-2018 DGN File: D:\Standard\Spec\Section\2017\Section\All\_Supp\_Issues\Issue\_6\_08-30-2018\Drawings\CC08A.dgn