

PROJECT ENGINEERING RECORD (New Construction and Reconstruction)

FEDERAL/STATE PROJECT NO.: _____
SPONSOR PROJECT NO.: _____
SPONSOR: _____

In accordance with the *Design Criteria for New Construction and Reconstruction* found in the *LPA Road Design Policy*, the following information is submitted. The items in **bold text** are those elements that are part of the controlling design criteria that require a formal design exception for values outside of the ranges shown in the 2018 AASHTO Green Book.

Guideline 1: General Design Considerations

Functional Classification: Local Road Collector Arterial
Setting: Rural Urban
Terrain: Level Rolling Mountainous
Project Type: Bridge Replacement Grade, Drain, Base & Pave Widening
Route Type: NHS Non-NHS

Project Description: _____

Begin Station: _____ End Station: _____
Equations and Exceptions: _____
Project/Work (Multiple Sites) Length: Feet _____ Miles _____
Design Speed _____ MPH
Present Traffic Count/ Year: _____
Design Traffic Count/ Year (20 Year): _____
Truck Percentage: _____
Maximum Grade (%): _____
Required normal crown cross slope (%): _____
Will superelevation and superelevation transition lengths be provided to meet current standards per the applicable ALDOT Special & Standard Highway Drawings and/or the 2018 AASHTO Green Book? Yes No
Minimum Rate of Vertical Curvature for crests (K): _____
Minimum Rate of Vertical Curvature for sags (K): _____
Estimated Cost of Improvements: \$ _____

Waiver Request(s) and/or Comments Concerning General Design Considerations: _____

Guideline 2: Cross-Sectional Elements

Required Traveled Way Width(s) (ft): _____

Required Number of lanes: _____

Required Lane Width(s) (ft): _____

Required Shoulder Width(s) & Type(s) (ft): _____
_____(C&G, graded, paved)

Existing ROW Width (ft): _____

Will additional ROW and/or easements be required? Yes No

If yes, what will acquired ROW width be? _____

Acres of ROW needed: _____

Type of easement(s) required and how many acres needed: _____

Are there any utilities in conflict with this project? Yes No

If yes, refer to the Utilities Section of the current edition of the ALDOT’s *“Procedural Guidelines for Local Public Agency Projects” (PGLPAP)*, for further information.

Please comment below concerning how utilities will be coordinated.

Are there any existing pedestrian crossings within the project limits that require upgrades to be American with Disabilities Act (ADA) compliant? Yes No

If yes, identify the crossing location(s) and required upgrades: _____

Is there any evidence of any bicycle/pedestrian activities in the project area that would warrant the addition of new facilities? Yes No

If yes, describe the type and location of facilities that will be added: _____

Waiver Request(s) and/or Comments Concerning Cross-Sectional Elements: _____

Guideline 3: Structures

Are there any existing bridges, bridge culverts or box culverts to be replaced within the project limits? Yes No

If yes, provide the following information for the **required** structure(s):

Bridges

BIN	Begin Station	End Station	Skew Angle (Degrees)	Length	Curb to Curb Width	Bridge Type (AASHTO, Precast, etc.)

Note: All required bridge structures require guardrail and/or end anchor installation to meet MASH standards.

Culverts

BIN	◇ Begin Station	◇ End Station	Skew Angle (Degrees)	△ Culvert Width	○ Guardrail Required? (Yes/No)

- ◇ The difference in stations here should reflect the centerline length of the structure, which does not include the outer walls (opening to opening).
- △ Measured from inside of parapets 90 degrees to centerline
- All required culvert structures that do not have adequate clear zone require guardrail and/or end anchor installation to meet MASH standards.

Are there any vertical restrictions or required vertical clearances associated with this project? Yes No

If yes, what are they? _____

Waiver Request(s) and/or Comments Concerning Structures: _____

Guideline 4: Roadside Design

Minimum Clear zone or lateral offset width proposed in project limits (ft): _____
Maximum (steepest) front slope proposed (3:1, 2:1, etc.) _____

Are there any existing pipes within the project limits? Yes No
If yes, are they of sufficient length and construction to cause no obstruction to traffic? Yes No
If no, provide details of required repairs and/or extensions.

Note: It may be helpful to comment below as to the location(s) for the items above and provide the associated cross section sheet(s), if available.

Comments Concerning Roadside Design: _____

Guideline 5: Intersection Design

Will intersection improvement(s) or new intersection(s) be provided in this project?
Yes No
If yes, please provide the following information:

Design Speed (Minor Road(s)) _____ MPH
Note: Provide the location(s) along with each design speed.

What sight distances will be provided based upon the applicable “cases” of intersection control from Section 9.5.3 in the 2018 AASHTO Green Book? _____

Angle(s) of intersection between the major and minor roads (degrees): _____

Note: Provide the location(s) along with each angle of intersection.

Comments Concerning Intersection Design: _____

Note: Attach the "Autoturn", Capacity, and Fastest Path Analyses as applicable.

Guideline 6: Railroad-Highway Grade Crossings

Is there a railroad crossing within the project limits or adjacent to the project?

Yes No

If yes, refer to the Railroad Involvement Section of the current edition of the ALDOT's "Procedural Guidelines for Local Public Agency Projects" (PGLPAP), for railroad involvement procedures. Please comment below concerning railroad involvement.

If a new Railroad-Highway Grade Crossing is being installed, please provide the following information:

Angle(s) of intersection between the road and the railroad tracks (degrees): _____

Note: Provide the location(s) along with each angle of intersection.

Is there adequate storage distance for vehicles between the railroad tracks and the nearest intersection? Yes No

Will the vertical alignment of the roadway adhere to the recommendations shown in Figure 9-66 (page 9-160) in the 2018 AASHTO Green Book? Yes No

Comments Concerning Railroad-Highway Grade Crossings: _____

Guideline 7: Traffic Control Devices

In the space below, please document what traffic control devices (construction signs/detour plan, permanent roadway signs, traffic control markings and legends, pavement markers, and traffic signal improvements, etc.) will be included as part of this project or by LPA forces to adequately handle traffic operations: _____

Guideline 8: Roadway Lighting

Will roadway lighting be provided as part of this project or by LPA forces?

Yes No

If yes, please seek guidance pertaining to the recommended lighting levels from the 2018 AASHTO Green Book.

Guideline 9: Drainage

In the space below, please document what items (roadway ditches, roadway pipes, storm sewer pipes, side drain pipes, etc.) will be installed as part of this project or by LPA forces to facilitate proper drainage: _____

Guideline 10: Erosion Control and Landscaping

In the space below, please document what items (sodding, seeding, mulching, erosion control product, bmps, etc.) will be installed as part of this project or by LPA forces to provide proper erosion control and landscaping: _____

Note: Other chapters and/or sections of AASHTO's *A Policy on Geometric Design of Highways and Streets, 2018 7th Edition* may apply.

Proposed Improvements to Enhance Safety:

Note: These items should include work such as grading, drainage, base, pavements, striping, pavement markers, traffic control markings, guardrail improvements, signs, clear zone improvements, intersection improvements, lighting, drainage improvements, lighting and landscaping as necessary to replace structure(s) or improve roadway(s). Please provide these “scope” items in sentence form. Multiple items may be listed under one number, as space permits.

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____
- 7) _____
- 8) _____
- 9) _____
- 10) _____
- 11) _____
- 12) _____

Items ___ thru ___ will be performed by _____ at no cost to the project, prior to project authorization. *(Note: This is for items to be performed by the project sponsor. List these after items to be performed by contract.)*

Additional comments: _____

SUBMITTED FOR APPROVAL: _____
LPA Representative

Date: _____

- Attachments:
- Location Map (Required)**
 - Autoturn Analysis (Required when app.)
 - Capacity Analysis (Required when app.)
 - Fastest Path Analysis (Required when app.)
 - Right-of-Way Map
 - Other _____

APPROVED: _____
State Local Transportation Engineer

Date: _____