



ENGINEERING & OPERATIONS DEPARTMENT

PO Box 1110, Tampa, FL 33601-1110
813-635-5400 | Fax: (813) 272-5811

TRANSPORTATION DESIGN BULLETIN 21-11

DATE: January 11, 2021

TO: County Director of Capital Programs Department,
County Manager of Construction Services,
Division Director of Transportation Maintenance,
County Project Managers and Project Engineers of Record

FROM: County Engineer,
County Director of Engineering & Operations Department,
County Director of Technical Services Division,
County Manager of Transportation Services Section

COPIES: County Director of Geospatial & Land Acquisition Services Department

SUBJECT: **PROPOSED ELEVATIONS FOR OVERHEAD SIGNS AND TRAFFIC SIGNALS**

This bulletin requires key proposed elevations be provided in all signalization and overhead signing plan sets. The elevations of interest include:

1. The highest elevation of the proposed ground and top of foundation elevations at the structural foundation.
2. The pavement surface elevation on the traffic lane or shoulder directly below the lowest point on the structure, and the elevation of the lowest point on the structure. The difference resulting in the minimum required vertical clearance.

REQUIREMENTS

Signalization plan submittals must show the required elevations on the proposed signalization plan sheets and on the mast arms/strain poles tabulation sheets. Overhead signs and Dynamic Message Signs must show the elevations on the sign cross section sheets. The required elevations are:

1. Proposed highest ground elevation at the mast arm, strain pole or overhead sign pole foundation locations.
2. Proposed top of foundation elevation at the mast arm or overhead sign pole foundation locations. The top of foundation elevation is not applicable for strain poles.
3. Proposed pavement surface elevation on the traffic lane or shoulder directly below the lowest point on the traffic signal or overhead sign structure creating the minimum required vertical clearance to the pavement or shoulder surface.

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4. Proposed elevation of the lowest point on the traffic signal or overhead sign structure resulting in the minimum required vertical clearance to the proposed pavement surface of the traffic lane or shoulder directly below the lowest point on the structure.

These elevations must be documented in the Critical Elevations Certification Letter for Traffic Signals and Overhead Sign Structures, attached as Pages 3 and 4. The letter must be provided at 60%, 90% and 100% plan submittals and electronically signed and sealed.

BACKGROUND

Construction projects that have not identified proposed elevations at foundations, have led to errors in achieving required minimum vertical clearances and placement of foundations horizontally and vertically. The County will require the Critical Elevations Certification Letter for Traffic Signals and Overhead Sign Structures to identify the critical elevations outlined in this bulletin to avoid these errors.

IMPLEMENTATION

Effective Immediately.

CONTACT

Please use the email link below to address any questions or comments in reference to this Design Bulletin:

[PW-Standards_Inquiry](#)

Recommended / Date:

Approved / Effective Date:

Leland Dicus, Professional Engineer
Technical Services Division Director

Michael J. Williams, Professional Engineer
County Engineer



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SUBJECT: CRITICAL ELEVATIONS CERTIFICATION LETTER FOR TRAFFIC SIGNALS AND OVERHEAD SIGN STRUCTURES

TO: _____ **DATE:** _____
Signalization Engineer of Record

FROM: _____
Roadway Engineer of Record

County Road Number and Street Name: _____

County Capital Improvement Program Number: _____

ELEVATIONS AT: **60% PLANS** **90% PLANS** **100% PLANS**

This is to confirm that the elevations at the following stations and offsets for mast arms, strain poles or overhead signs pole are correct.

ELEVATION 1 = Proposed highest ground elevation at the mast arm, strain pole or overhead sign pole foundation locations.

ELEVATION 2 = Proposed top of foundation elevation at the mast arm or overhead sign pole foundation locations. For strain poles, the top of foundation elevation is not applicable.

ELEVATION 3 = Proposed pavement surface elevation on the traffic lane or shoulder directly below the lowest point on the traffic signal or overhead sign structure creating the minimum required vertical clearance.

ELEVATION 4 = Proposed elevation of the lowest point on the traffic signal or overhead sign structure resulting in the minimum required vertical clearance to the proposed pavement surface of the traffic lane or shoulder directly below the lowest point on the structure.

See Figure 1 for a graphic example of Elevations Detail in a Mast Arm Structure.

MINIMUM REQUIRED

VERTICAL CLEARANCE: Signal Structure = 17.5 feet new construction, 17 feet retrofit construction

Overhead Sign Structure = 17.5 feet new construction, 17 feet retrofit construction

Dynamic Message Sign (DMS) = 19.5 feet new construction, 19 feet retrofit construction

(Source: Florida Department of Transportation Design Manual (FDM))

