

XXX  
XXX

### WINGWALL LENGTH DESIGN PROCEDURE

#### ELEVATION CALCULATIONS:

From Centerline of Thruway @  
EL. Centerline Thruway =  
Roadway: [redacted] =  
Shoulder: [redacted] =  
Ditch: [redacted] =  
1on4 slope: [redacted] =  
EL. @ Bottom of [redacted] Slope =

From Centerline of Overhead Road  
@ Begin Approach Slab Sta. [redacted]  
EL. Centerline Road =  
Roadway: [redacted] =  
Shoulder: [redacted] =  
EL. @ Top of [redacted] Slope =

$\Delta el. = [redacted] = [redacted]$

#### WINGWALL LENGTH DETERMINATION:

Since the slope is [redacted] the required Spill Path must be the horizontal projection of [redacted]. Therefore the Spill Path [redacted]. The Spill Path is always perpendicular to the slope.

Bisecting the angle between the upper and lower roadway maximizes the available Spill Path length and produces the shortest Wingwall Length. With no skew [redacted] the Wingwall is placed at [redacted].

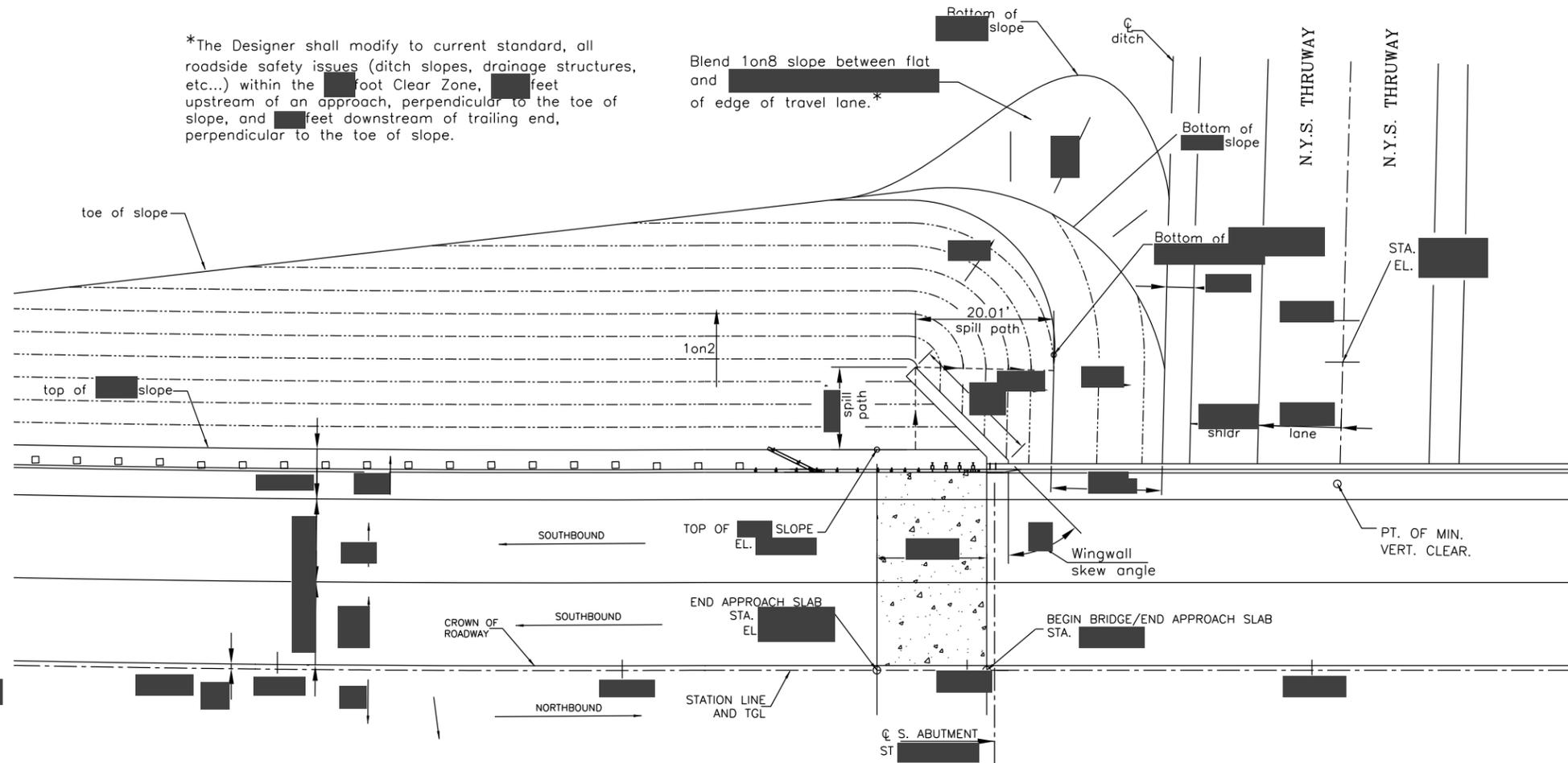
Spill Paths intersect at the front face of the Wingwall at the end to determine minimum Wingwall Length.

In this case the Spill Path is [redacted] on the back side and [redacted] on the front side [redacted] approximately equal to the required [redacted]. The Wingwall Length of [redacted] feet is measured from the front corner of the abutment to the intersection of the Spill Paths (End of Wingwall).

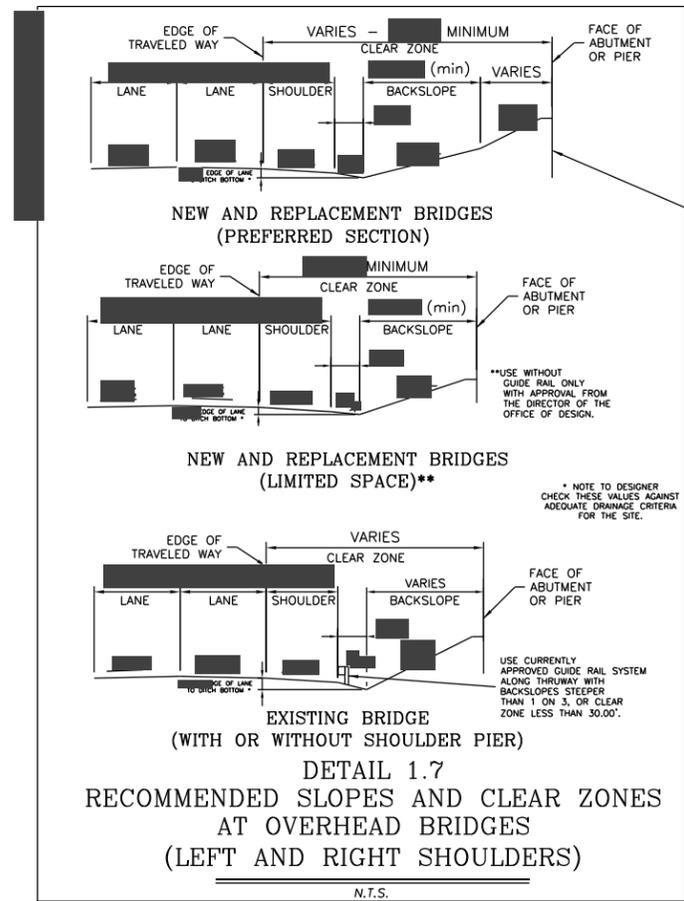
U-Wall Wingwalls and/or retaining walls parallel to the above roadway should only be used where R.O.W. adjacent to road is minimal or an environmentally sensitive site needs to be avoided.

In-Line Wingwalls should only be used where their required length is less than or equal to [redacted].

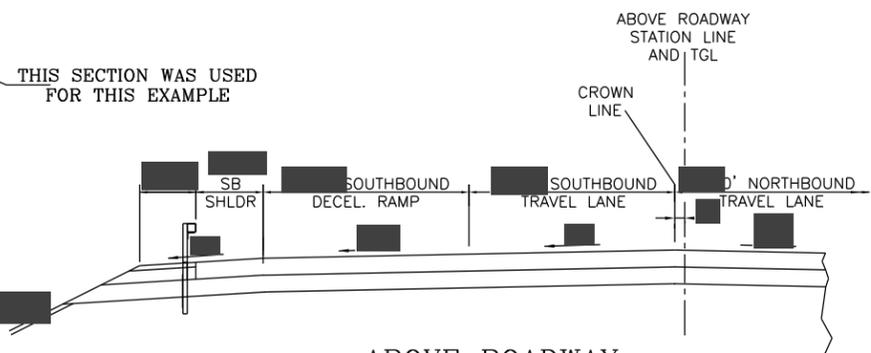
\*The Designer shall modify to current standard, all roadside safety issues (ditch slopes, drainage structures, etc...) within the [redacted] foot Clear Zone, [redacted] feet upstream of an approach, perpendicular to the toe of slope, and [redacted] feet downstream of trailing end, perpendicular to the toe of slope.



### PLAN



DETAIL 1.7  
RECOMMENDED SLOPES AND CLEAR ZONES  
AT OVERHEAD BRIDGES  
(LEFT AND RIGHT SHOULDERS)  
N.T.S.



### ABOVE ROADWAY SECTION

SCALE: [redacted]  
(LOOKING UP STATION)

THIS SHEET IS NOT TO BE USED AS A CONTRACT PLAN SHEET. THIS IS STRICTLY A DESIGN TOOL FOR DETERMINING LENGTHS OF NEW WINGWALLS AND SHOWING THE TYPICAL SAFE FILL SLOPE RUNOUT WITHIN THE CLEAR ZONE AT OVERHEAD STRUCTURES.

DATE	DESCRIPTION	BY	SYM.
REVISIONS			

NEW YORK STATE THRUWAY AUTHORITY  
DEPARTMENT OF ENGINEERING  
200 SOUTHERN BLVD., ALBANY, N.Y. 12209

TITLE OF PROJECT  
TITLE OF PROJECT LINE 1  
TITLE OF PROJECT LINE 2

LOCATION OF PROJECT  
LOCATION OF PROJECT LINE 1  
LOCATION OF PROJECT LINE 2

TITLE OF DRAWING  
WINGWALL LENGTH DESIGN DETAILS



CONTRACT NUMBER:  
TA

DATE:  
3/10

DRAWING NUMBER:  
\*

CHECKED BY: TA  
DRAFTED BY: TA  
DESIGNED BY: TA  
IN CHARGE OF: TA