

HIGHWAY DESIGN REQUIREMENTS

Project Name: *Broadway Intersection Improvements*

WIN: 18665.00

Date: 1/26/2018

PROJECT DATA

Section: **Broadway (Between Waterman and Cottage)**

Town(s):	South Portland	Route(s):	Route 77
WIN:	18665.00	Federal Project No:	STP-01866(500)
Project Location:	Work will include intersection improvements along Broadway in South Portland at Waterman Drive, Ocean Street and Cottage Road.		
Program Manager:	Jeff Tweedie	Designer:	Gorrill Palmer
Project Manager:	Brian Keezer	Engineer of Record:	Don Ettinger
Corridor Priority (1-6):	2	Posted Speed:	30 MPH
NHS/non-NHS:	Fed Aid – Non NHS	Design Life:	20 Yrs.
Functional Class:	Minor Arterial	2019 AADT (Current):	23350
		2039 AADT (Design):	26850
Scope (choices below):	Spot Improvements		
(New Construction, Reconstruction, Rehabilitation, Restoration/Resurfacing, 4R Freeway, Spot Improvement)			

DESIGN CRITERIA

Controlling Elements	Complete before Design Proceeds		Complete before Horizontal/Vertical Alignment Review	
	Required Standard	Reference	Proposed Standard	Design Exception
Design Speed	30 MPH	Posted	Match Existing	No
*Lane Width	11' – 12'	EI - C2	Match Existing	No
*Shoulder Width	4' - 10'	EI - C2	Match Existing	No
Cross Slope (Travelway)	1.5% - 2.5%	EI - C13	Match Existing	No
Minimum Radius	250'	AASHTO Table 3-8	Match Existing	No
Superelevation (emax)	4%	EI - C20	Match Existing	No
Stopping Sight Distance	200'	HDG Table 4-1	Match Existing	No
Maximum Grade (%)	8%	EI - C19	Match Existing	No
Vertical Clearance	16' 6"	HDG Table 7-5	Match Existing	No
Non-Controlling Elements				
Clear Zone	10'	EI - C2.1	TBD	TBD
Side Slopes	3:1 or flatter	Design Guidance for Sideslopes and Backslopes	Match Existing	No

*Check for any corridor requirements and/or history that may govern widths.

COMMENTS – Provide any comments necessary to clarify information presented above.

- (1)
- (2)
- (3)

HIGHWAY DESIGN REQUIREMENTS

Project Name: *Broadway Intersection Improvements*

WIN: 18665.00

Date: 1/26/2018

PROJECT DATA

Section: Casco Bay Bridge

Town(s):	South Portland	Route(s):	Route 77
WIN:	18665.00	Federal Project No:	STP-01866(500)
Project Location:	Work will include intersection improvements along Broadway in South Portland at Waterman Drive, Ocean Street and Cottage Road.		
Program Manager:	Jeff Tweedie	Designer:	Gorrill Palmer
Project Manager:	Brian Keezer	Engineer of Record:	Don Ettinger
Corridor Priority (1-6):	2	Posted Speed:	40 MPH
NHS/non-NHS:	Fed Aid – Non NHS	Design Life:	20 Yrs.
Functional Class:	Minor Arterial	2019 AADT (Current):	14220
		2039 AADT (Design):	16350
Scope (choices below):	Spot Improvements		
(New Construction, Reconstruction, Rehabilitation, Restoration/Resurfacing, 4R Freeway, Spot Improvement)			

DESIGN CRITERIA

Controlling Elements	Complete before Design Proceeds		Complete before Horizontal/Vertical Alignment Review	
	Required Standard	Reference	Proposed Standard	Design Exception
Design Speed	40 MPH	Posted	Match Existing	No
*Lane Width	11' - 12'	EI - C2	12'	No
*Shoulder Width	4' - 10'	EI - C2	5'	No
Cross Slope (Travelway)	1.5% - 2.5%	EI - C13	2.0%	No
Minimum Radius	533'	AASHTO Table 3-8	Match Existing	No
Superelevation (emax)	4%	EI - C20	Match Existing	No
Stopping Sight Distance	305'	HDG Table 4-1	Match Existing	No
Maximum Grade (%)	8%	EI - C19	Match Existing	No
Vertical Clearance	16' 6"	HDG Table 7-5	Match Existing	No
Non-Controlling Elements				
Clear Zone	12'	EI - C2.1	TBD	TBD
Side Slopes	3:1 or flatter	Design Guidance for Sideslopes and Backslopes	3:1	No

*Check for any corridor requirements and/or history that may govern widths.

COMMENTS – Provide any comments necessary to clarify information presented above.

- (1)
- (2)
- (3)

HIGHWAY DESIGN REQUIREMENTS

Project Name: *Broadway Intersection Improvements*

WIN: 18665.00

Date: 1/26/2018

PROJECT DATA

Section: Ocean Street

Town(s):	South Portland	Route(s):	Ocean Street (Route 77)
WIN:	18665.00	Federal Project No:	STP-01866(500)
Project Location:	Work will include intersection improvements along Broadway in South Portland at Waterman Drive, Ocean Street and Cottage Road.		
Program Manager:	Jeff Tweedie	Designer:	Gorrill Palmer
Project Manager:	Brian Keezer	Engineer of Record:	Don Ettinger
Corridor Priority (1-6):	3	Posted Speed:	30 MPH
NHS/non-NHS:	Fed Aid – Non NHS	Design Life:	20 Yrs.
Functional Class:	Major Urban Collector	2019 AADT (Current):	11980
		2039 AADT (Design):	13780
Scope (choices below):	Spot Improvements		
(New Construction, Reconstruction, Rehabilitation, Restoration/Resurfacing, 4R Freeway, Spot Improvement)			

DESIGN CRITERIA

Controlling Elements	Complete before Design Proceeds		Complete before Horizontal/Vertical Alignment Review	
	Required Standard	Reference	Proposed Standard	Design Exception
Design Speed	30 MPH	Posted	Match Existing	No
*Lane Width	10' – 12'	EI - C2	Match Existing	No
*Shoulder Width	2' – 6'	EI - C2	Match Existing	No
Cross Slope (Travelway)	1.5% - 2.5%	EI - C13	Match Existing	No
Minimum Radius	250'	AASHTO Table 3-8	Match Existing	No
Superelevation (emax)	4%	EI - C20	Match Existing	No
Stopping Sight Distance	200'	HDG Table 4-1	Match Existing	No
Maximum Grade (%)	10%	EI - C19	Match Existing	No
Vertical Clearance	15' 6"	HDG Table 7-6	Match Existing	No
Non-Controlling Elements				
Clear Zone	10'	EI - C2.1	TBD	TBD
Side Slopes	3:1 or flatter	Design Guidance on Sideslopes and Backslopes	Match Existing	No

*Check for any corridor requirements and/or history that may govern widths.

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- (1)
- (2)
- (3)

HIGHWAY DESIGN REQUIREMENTS

Project Name: *Broadway Intersection Improvements*

WIN: 18665.00

Date: 1/26/2018

PROJECT DATA

Section: **Cottage Road**

Town(s):	South Portland	Route(s):	Cottage Road
WIN:	18665.00	Federal Project No:	STP-01866(500)
Project Location:	Work will include intersection improvements along Broadway in South Portland at Waterman Drive, Ocean Street and Cottage Road.		
Program Manager:	Jeff Tweedie	Designer:	Gorrill Palmer
Project Manager:	Brian Keezer	Engineer of Record:	Don Ettinger
Corridor Priority (1-6):	4	Posted Speed:	30 MPH
NHS/non-NHS:	Fed Aid – Non NHS	Design Life:	20 Yrs.
Functional Class:	Major Urban Collector	2019 AADT (Current):	11760
		2039 AADT (Design):	13520
Scope (choices below):	Spot Improvements		
<small>(New Construction, Reconstruction, Rehabilitation, Restoration/Resurfacing, 4R Freeway, Spot Improvement)</small>			

DESIGN CRITERIA

Controlling Elements	Complete before Design Proceeds		Complete before Horizontal/Vertical Alignment Review	
	Required Standard	Reference	Proposed Standard	Design Exception
Design Speed	30 MPH	Posted	Match Existing	No
*Lane Width	10' – 12'	EI - C2	Match Existing	No
*Shoulder Width	2' – 6'	EI - C2	Match Existing	No
Cross Slope (Travelway)	1.5% - 2.5%	EI - C13	Match Existing	No
Minimum Radius	250'	AASHTO Table 3-8	Match Existing	No
Superelevation (emax)	4%	EI - C20	Match Existing	No
Stopping Sight Distance	200'	HDG Table 4-1	Match Existing	No
Maximum Grade (%)	10%	EI - C19	Match Existing	No
Vertical Clearance	15' 6"	HDG Table 7-6	Match Existing	No
Non-Controlling Elements				
Clear Zone	10'	EI - C2.1	TBD	TBD
Side Slopes	3:1 or flatter	Design Guidance for Sideslopes and Backslopes	Match Existing	No

*Check for any corridor requirements and/or history that may govern widths.

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- (1)
- (2)
- (3)