TABLE A

RESOLUTION SUMMARY of JUNE 4, 2019 CATE STREET EXTENSION ROADWAY DESIGN PEER REVIEW #2

Color Code:		Addressed/ Corrected
		Change in progress or confirmation needed

Comment #	Comment	Status	Response
1	Cate Street Extension Design; 30 mph or sufficient justification provided for reduction	Addressed	Please refer to the letter discussing the Design of Cate Street /Cate Street Extension, Speed limit, signage and curves.
1	Cate Street - Proposed new Center Line Radii; 30 mph or justification of reduction of curve radii and or design speed	Addressed	Please refer to the letter discussing the Design of Cate Street /Cate Street Extension, Speed limit, signage and curves.
1	Cate Street / Bartlett Street Intersection is shown	Addressed (see #15 and #55)	
2	Curve Data Labels shown, but Text/Line conflicts obscuring readability	Addressed	Curve Data labels have been relocated to improve readability
3	Cate Street Extension / Route 1 Bypass / Borthwick Avenue Intersection Alignment not ideal, addition of 3rd lane west bound on Cate St. Ext. for left turns, revisions of median island and eastbound Cate St. Ext. lane recommended	Addressed	The intersection has been revised per the suggestions to add a 3rd lane
4	City Requires Curb radii at intersections to be 25-ft for roads, Cate St. / Cate St. Extension , Route 1 Bypass and intersection with U-Haul Drive should be revised	Addressed	Radius is now 25-ft

TABLE A

RESOLUTION SUMMARY of JUNE 4, 2019 CATE STREET EXTENSION ROADWAY DESIGN PEER REVIEW #2

Color Code:		Addressed/ Corrected
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Comment #	Comment	Status	Response
5.a	Curb radius at northeast corner of Cate St. Ext. Route 1 Bypass, revised to 25-ft, Provide adequate space for turning movements of design vehicle and double right turn westbound on Cate St. Ext. turning north onto the Bypass	Addressed	Design vehicle was determined to be a WB-62 by Eric Eby at Tuesday June 11, 2019 TEC, City Staff and Development Team Review meeting. The 25-ft radius has been added and the appropriate turns are accommodated
5.b	Consider relocating signal mast arm to provide a 7-ft offset to the curb line.	Addressed	AASHTO policy minimum offset is 1.5-ft from curbline to Signal Mast Arms.
5.c	NHDOT should be consulted regarding signalization improvement design concurrent with the Design and Permitting of the Cate St Ext. Project		The Development Team is in discussion with NHDOT on the design and permitting of the signalized intersection at Cate St. Ext. / Route 1 Bypass / Borthwick Avenue. NHDOT Permitting is being performed concurrently. NHDOT has agreed to a phased permitting approach to allow the project to begin on site while the intersection design is finalized.
6.a	Traffic Study indicates higher volume of right turns than through and left turns	Addressed	The lanes have been reconfigured as suggested to accommodate the higher volume of right hand turns
6.b	Traffic Queuing in the currently designed through-left-right lane may block access to the dedicated right turn lane	Addressed	A dedicated left hand turn lane has been added to rectify the situation
6.c	Provide vehicle turning simulation to illustrate intersection can accommodate double right turn	Addressed	The turning Movement Plans demonstrate that a double right turn can be accommodated with a WB-62 and passenger vehicle.
7	Refer to Comment #3	Addressed	

TABLE A

RESOLUTION SUMMARY of JUNE 4, 2019 CATE STREET EXTENSION ROADWAY DESIGN PEER REVIEW #2

Color Code:		Addressed/ Corrected
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Comment #	Comment	Status	Response
8	Various design vehicles are used throughout the Turning movement plans for Cate Street Extension. Please confirm the design vehicle and provide templates for that vehicle and that turns do not encroach on opposing lanes or extend the beyond the roadway.	addressed	Design vehicle was determined to be a WB-62 by Eric Eby at Tuesday June 11, 2019 TEC, City Staff and Development Team Review meeting. The revised turning templates provided maintain the vehicles in their lanes without interfering with one another or mounting the curb.
9	NHDOT should be consulted regarding signalization improvement design concurrent with the Design and Permitting of the Cate St Ext. Project. See prior comments regarding turning movements and design vehicles.	Addressed	NHDOT will be consulted regarding the signalization design. The traffic Study is currently being reviewed by NHDOT and the permitting performed concurrently.
10	Comment Adequately Addressed	Addressed	
11	Comment Adequately Addressed	Addressed	
12	It is noted that the horizontal curve at Station 18+81 is labeled as L=55.61. It should be 3x the speed limit in length. That section of road is currently posted at 20 mph. L>=60'	Addressed	This is the existing centerline through the bridge. If necessary a flatter curve can be fit to the alignment lengthening the curve to 60-ft or greater as would be required. This would not impact design as it is beyond the limit of work currently expected.
13	Regarding the 2 centerline radii on the new design of Cate Street Extension =155-ft, Please see comment #1	Addressed	Please refer to the letter regarding the alignment of Cate Street /Cate Street Extension and the measures being taken to ensure safe travel and the reasons why larger curves do not fit.

TABLE A

RESOLUTION SUMMARY of JUNE 4, 2019 CATE STREET EXTENSION ROADWAY DESIGN PEER REVIEW #2

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Comment #	Comment	Status	Response
14	Design vehicle simulations for the WB-62 appear to mount the outside curbs in both directions. Provide revised vehicle simulation and/or revised road design to ensure design vehicle accommodation.	Addressed	Design vehicle was determined to be a WB-62 by Eric Eby at Tuesday June 11, 2019 TEC, City Staff and Development Team Review meeting. The revised turning templates provided maintain the vehicles in their lanes without interfering with one another or mounting the curb.
15.a	Mid block crosswalks at station 17+50 and station 22+50 are not in safe locations relative to queued vehicles and turning movements at the intersection. It is unclear if adequate sight distance is provided. Revision of the crosswalk locations to within the intersection is recommended.	Addressed	Appropriate signage has been added as have flashing beacons.
15.a	Consider connecting a sidewalk along the norther side of Cate Street to the Multi-use path would allow the elimination of the southern sidewalk and a crosswalk.	Addressed	This will not fit. The ROW available does not accommodate the sidewalk on the Northside of Cate Street without further shrinking the 110-ft radius approaching the railroad overpass. Maintaining the largest radius possible was seen as the greater priority.
15.b	Cate Street Radius from station 16+85 to 18+53, R=110-ft only meets AASHTO reqs. for 20 mph. Horizontal alignment warning signs in advance of the curve per Table 2C-5 should be provided.	Addressed	Appropriate signage has been provided ahead of the curve.
15.c	Plans should show more existing detail beyond the match lines on Bartlett Street North and South	Addressed	Currently, all of the existing survey information in the design team's possession is shown. Additional information does not appear necessary to prepare the design.

TABLE A

RESOLUTION SUMMARY of JUNE 4, 2019 CATE STREET EXTENSION ROADWAY DESIGN PEER REVIEW #2

Color Code:		Addressed/ Corrected
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Comment #	Comment	Status	Response
16	The Sag vertical curves at station 1+25, 15+08 and 18+78 should be updated to have K values equal to K=37.	Addressed	K's have all been revised
17.a	Detail on CD-550 should better match the ADA ramps proposed on the plan	Addressed	Tipdown Details have been revised and Plan Tipdowns have been edited to better match one another
17.b	Show Grade breaklines at all ramps	Addressed	All tipdown grade breaklines have been added
17.c	Tipdowns at existing Cate Street are still missing	Addressed	Tipdowns have been added
17.d	TD and TDR (tipdown ramp) notes and labels are inconsistent, some are greyed out , some are dark , etc.	Addressed	This has been corrected
18	Comment adequately addressed	Addressed	
19	Comment adequately addressed	Addressed	
20	Comment adequately addressed	Addressed	
21	Comment adequately addressed	Addressed	
22	NHDOT should be consulted regarding signalization improvement design concurrent with the Design and Permitting of the Cate St Ext. Project (regarding a pedestrian signal and crosswalk to Borthwick Avenue)		The Development Team is in discussion with NHDOT on the design and permitting of the signalized intersection at Cate St. Ext. / Route 1 Bypass / Borthwick Avenue. NHDOT Permitting is being performed concurrently. NHDOT has agreed to a phased permitting approach to allow the project to begin on site while the intersection design is finalized.
23	Plans do not currently show the Side path warning signs and markings	Addressed	Side path warning signage has been added

TABLE A

RESOLUTION SUMMARY of JUNE 4, 2019 CATE STREET EXTENSION ROADWAY DESIGN PEER REVIEW #2

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Comment #	Comment	Status	Response
24	Plans do not currently show pedestrian / bicycle crossing warning signs ahead of crosswalks, consider rectangular rapid flashing beacons at these locations, particularly station 13+90, the end of the side path.	Addressed	Appropriate signage has been added as have flashing beacons.
25.a	Stop lines should have added 12" SL labels, double yellow markings should have 4" DSLY labels as appropriate	Addressed	These labels have been added
25.b	Cate Street is still missing stop lines and cross walk markings	Addressed	The Stop line and Crosswalk has been added
25.c	Stop signs (R1-1) should be considered on all major drives and on Cate St /Cate St. Extension intersection	Addressed	Stop Signs have been added at all intersections with Cate St. /Cate Street Extension.
26	Comment adequately addressed	Addressed	
27	Plans do not currently show applicable signs or markings (for westbound bicyclists to prepare to transition to side path)	Addressed	Applicable signage has been added
28	NHDOT should be consulted regarding signalization improvement design concurrent with the Design and Permitting of the Cate St Ext. Project (regarding physical improvements to the infrastructure)	Addressed	The Development Team is in discussion with NHDOT on the design and permitting of the signalized intersection at Cate St. Ext. / Route 1 Bypass / Borthwick Avenue. NHDOT Permitting is being performed concurrently. NHDOT has agreed to a phased permitting approach to allow the project to begin on site while the intersection design is finalized.
29	Comment adequately addressed	Addressed	
30	Comment adequately addressed	Addressed	

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Comment #	Comment	Status	Response
31	Comment adequately addressed	Addressed	
32	label Street Names on all plans	Addressed	Street names have been added
33	Comment adequately addressed	Addressed	
34	Dimension all lanes and shoulder widths, dimensions should be along Cate Street, Cate St. Ext. and the driveways intersecting them	Addressed	Dimensions have been added as suggested
35	Graphic scale needs to have correct number values on each plan	Addressed	Graphic scales have been reviewed and corrected
36	Add additional relevant existing conditions survey information to the site plans, specifically existing guardrail and utility signal infrastructure at the Cate St. Ext. / Route 1 Bypass intersection and Hodgson Brook Limits	Addressed	Existing survey information has been more clearly depicted. Apparent lack of information was due in part to line weight screening.
37	Include Match lines on all plan sheets	Addressed	Matchlines have been added to the plans
38	Include and label all tipdowns on Site Plans	Addressed	Tipdowns have been labelled
39	Remove sewer text from roadway profiles CS-102 & CS-103	Addressed	The text has been removed
40	Label Grades on Profiles at 50-ft stations	Addressed	The elevation labels have been added
41	Consider expanding plan coverage to show Borthwick Avenue and intersection with Route 1 Bypass CS-101	Addressed	Sheet CS-107 was added to show the work between Cate Street and Cottage Street this plan shows the intersection on both sides of Route 1 bypass As Design and Permitting of the Route 1 Bypass progresses with NHDOT revised plans may be developed as well.

TABLE A

RESOLUTION SUMMARY of JUNE 4, 2019 CATE STREET EXTENSION ROADWAY DESIGN PEER REVIEW #2

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Comment #	Comment	Status	Response
42	CU-100 add label to indicate "See inset Above for Continuation"	Addressed	The inset not has been added
43	CD-511 Proposed cast Iron cover for Bioretention Inlet structure should be labeled "DRAIN". Currently "SEWER"	Addressed	
44	CD-511 label inlet structure on Bioretention System Typical Section Detail	Addressed	Labels have been added
45	Label all Drainage structures on Grading, Drainage & Erosion Control Plans including the Subsurface Infiltration Basins	Addressed	Labels have been added
46	Provide an update on status of Coordination with NHDOT District 6 regarding the Driveway Permit and work within the Right of Way to Route 1 Bypass. Comment Adequately Addressed	Addressed	
47	Label 2 pairs of 3 squares on Cate Street on either side of brook crossing CS-102	Addressed	"Bollards, in event bridge closed to vehicles" note added
CG-101 to CG-104			
48	CB #5 at U-Haul drive appears to be in the wrong location. Should be on pavement or in swale to west of drive	Addressed	CB #5 was moved into driveway from its existing location off of the pavement
49	CB #7 and #8 should be located at the low point in the road	Addressed	CB #7 and CB #8 have been located in the low spots
50	Continuous silt sock should be shown on the north side of the site adjacent to Hodgson Brook	Addressed	Silt sock added

TABLE A

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Comment #	Comment	Status	Response
51	A CB should be added near station 11+80 on the right side as there is a 400- stretch of roadway without a CB	Addressed	An additional catch basin was added tying into DMH #42
52	SMH's at sta 11+90 RT and Sta 12+90 appear to be in conflict with the proposed curbing consider shift north to eliminate conflict	Addressed	The SMH'S have been shifted north
53	Drainage structures/BMP's should be labeled (e.g. tipdown curb inlets to the PRETX curb outlet structures)	Addressed	The
54	Add Low point CB's at Sta 21+40 LT and RT on Bartlett Street		This is being reviewed and will be added as necessary
55	Plans should show proposed drainage system for new Cate Street / Bartlett Street intersection design		Catch basin relocation to curb faces is being reviewed The drainage analysis of the intersection is being added to the model ahead of submission to AOT. However, the contribution to the City System in this area is reduced over the current situation by the proposed design.
Sheet CD-511			
56	Show 6" underdrain on Bioretention System Detail	Addressed	Added to the detail plan and profile as well as section
57	Show Estimated Seasonal High Water Table (ESHWT) and/or groundwater on section A-A	Addressed	Added to cross-section
Sheet CD-513			
58	Correct/update the invert elevations shown on Overflow Outlet Control Structure Detail	Addressed	Inverts corrected

TABLE A

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Color Code:		Addressed/ Corrected
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Comment #	Comment	Status	Response
59	Pedestrian Ramp ADA details should be consistent with the plans TD & TDR's (from legend) on plans should match detail and vice versa	Addressed	

FUSS & O'NEILL

June 20, 2019

Ms. Juliet T.H. Walker, AICP
Planning Director
Planning Department
1 Junkins Avenue
Portsmouth, NH 03801

RE: Response to Cate Street Extension Peer Review Comments, June 3, 2019
Response to Cate Street Extension Traffic Study - Peer Review Comments, June 3, 2019

Dear Ms. Walker,

While we have provided responses to the review comments provide by TEC and City Staff in the form of color coded matrices, one per letter, a small number of the comments regarding Cate Street and the Cate Street Extension Alignment merit a more in depth discussion. The following are responses to comments that we felt deserved more detail.

Response to Cate Street Extension Peer Review Comments, June 3, 2019

1. *The City classifies Cate Street / Cate Street Extension as a Neighborhood Connector, per the City of Portsmouth Complete Streets Design Guidelines, dated June 2017. Accordingly, the design speed for this roadway should be 30 mph. To the maximum extent practical, all design criteria should meet a design speed of 30 mph, or adequate justification shall be provided for specific elements not meeting this design speed, for consideration by the City.*

   The radius cited per AASHTO Table 3.7 is applicable for a roadway that is superelevated at 4.0%; however, the typical roadway sections and grading plans show that the roadway is crowned at 2.0%. AASHTO Table 3.13 indicates the minimum radii for various cross slopes, including normal crown (-2.0%).

   The review engineers at TEC are correct. The City has a target design speed for a neighborhood connector road of 30 mph. However there are a number of justifications for smaller curves and slower design speeds on a portion of Cate Street.

   Unfortunately, the property and Right of Way that the proposed Cate Street and Cate Street Extension re-alignment are being designed on have a number of geometric limitations; the lot shape and existing Right of Way create pinch points limiting the curves that can fit between Cate Street and Islington at The Bartlett Street Intersection, and Cate Street and the Cate Street Extension to Route 1 Bypass. In part this is why smaller curves have been selected that are designed for speeds less than 30 mph. There are other reasons for slower speeds as you approach the intersection with Bartlett Street.

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Kennebunk, ME 04043
207.363.0669

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California
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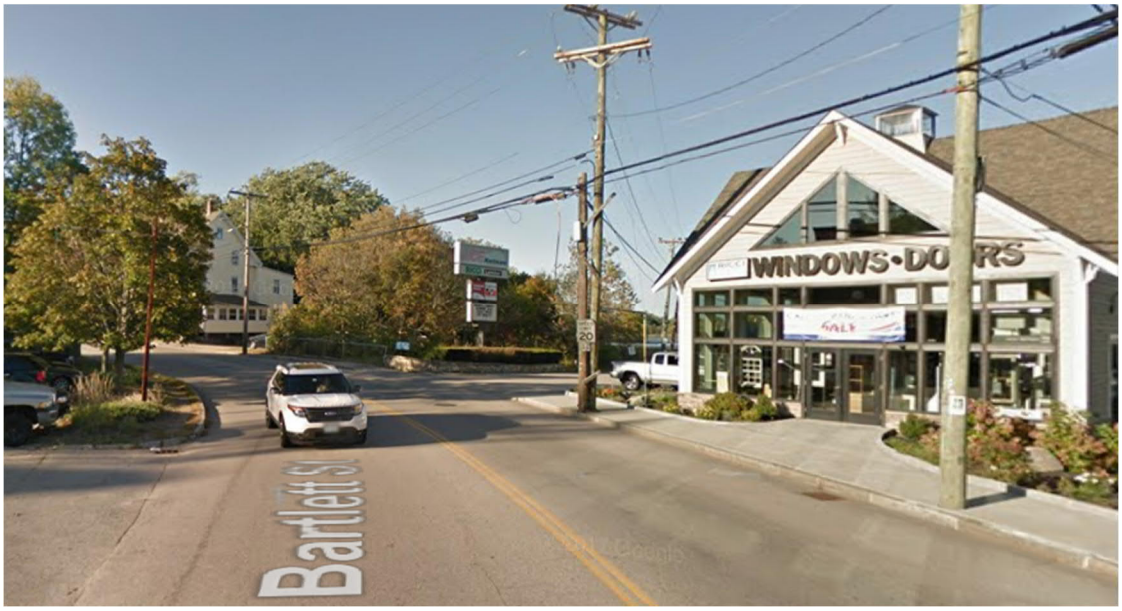
Surrounding Neighborhood and Roads:

The surrounding neighborhood and street network, its posted speed limits and typical traffic is also of a concern since these roads are quieter and in the case of Woodbury Avenue and Bartlett Street have sections with posted design speeds of 20 mph in close proximity to the Bartlett Street Cate Street intersection.

Woodbury Avenue southbound toward Bartlett Street – "Sharp Curve" 20 MPH

Bartlett Street South of Thornton Street – posted 20 MPH



Bartlett Street looking North toward Ricci Lumber – posted 20 MPH

The traffic from Cate Street will be encountering drivers on Bartlett and Islington Streets that will be travelling at slower speeds. These drivers will have been travelling at these slower speeds for some time when they reach the Cate Street Bartlett Street intersection. Drivers turning north onto Bartlett Street from Cate Street will need to be travelling at 20 mph immediately.

Railroad Overpass and Approach Curve to Islington Street:

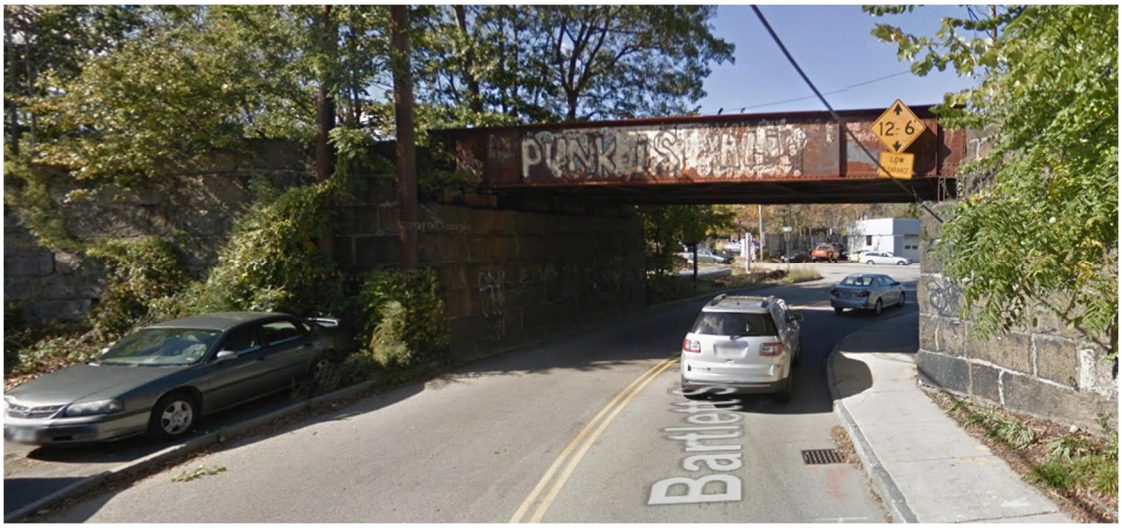
The final curve on Cate Street that approaches the Railroad Overpass before Islington Street to the southeast is 110-ft. This curve cannot be posted for speeds above 20 mph. Further it would be unsafe in our opinion to do so due to the narrow opening of the overpass and the imposing construction.

The photos on the following page illustrate both the limitations created height and width wise by the overpass and, in the second photo, the proximity to Cate Street which will be re-aligned to curve into the overpass.

Drivers coming from the intersection at Islington north through the overpass to Cate Street and Bartlett Street will have limited sight distance. Increased design speeds headed to this intersection will exacerbate the situation for these drivers further impacting decision time for them as they judge turning onto Cate Street and or Bartlett Street.

The Low clearance at this location will limit truck traffic as well. Trucks will need to turn north onto Bartlett Street from Cate Street. Large trucks will not be able to clear the overpass due to height.

Bartlett Street looking south through the railroad overpass toward Islington Street – Low Clearance 12'6"



Bartlett Street looking north through the railroad overpass toward Cate Street – Low Clearance 12'6"

Reverse Curves; Cate Street Approaching Bartlett Street:

The selection of the Radii for the reverse curves that are encountered as one drives east along Cate Street toward Bartlett Street and the re-aligned Cate Street radius of 110-ft just prior to the rail overpass was not done lightly. A number of variables were considered.

As touched upon in the earlier portion of the letter, the Right of Way under City control as you approach the Development site form Bartlett Street is limited. Due to this the Curve between Cate Street and the railroad overpass heading south to Islington Street can be no larger than a 110-ft radius. Shifting the tangent section of Cate Street running west to east, south toward the

Brayerston Condominiums reduces the curve radius while marginally increasing the possible curve that will fit as one travels west toward Route 1 Bypass into the site. However, a larger curve entering the Development site west of the Cate Street Bartlett Street intersection will shorten the tangent approaching the curve in the intersection. Currently the Tangent between curves is 106-ft long. Shortening this tangent is not advised. Typically a minimum tangent between reverse curves of 100-ft is advised for low speed roads. Tangents help the driver transition between curves and direction changes.

Larger radii reverse curves were explored. See exhibits attached to this letter.

A phone call was had on June 17, 2019 with Eric Eby, City of Portsmouth Traffic Engineer, about the road design and the reverse curves. A number of the topics discussed above were reviewed. During the call the reverse curves were discussed, we expressed our concern with superelevating the curves and with eliminating the tangents with Mr. Eby.

No Tangent Between Curves

Mr. Eby agreed that eliminating the tangents was not a satisfactory design outcome. He echoed our concerns that it limits driver's ability to transition between curves and direction changes.

Superelevating Curves

We discussed our concern with superelevating the curves and that it would encourage faster speeds approaching the limiting or controlling radius at the Cate Street Intersection which at 110-ft is only able to be posted at 20 mph. Mr. Eby agreed that super elevating the curves would not be a satisfactory outcome.

It was explained that due to the above, and the fact that the last curve approaching the railroad overpass was the controlling curve, that for design we would do our best while maintaining tangents between curves to allow drivers to transition. Mr. Eby asked that we provide further signage and traffic calming in the revision. To this end we have done the following:

Signage

Per MUTCD table 2C-5 we have provided the following signage in advance of the curves in each direction for reduced curve speed.

1. "Winding Road" W1-5L and "Advisory 20 MPH" W13-1P
2. "One Direction Large Arrow" W1-6

6/19/2019 Chapter 2C - MUTCD 2009 Edition - FHWA

Table 2C-5. Horizontal Alignment Sign Selection

Type of Horizontal Alignment Sign	Difference Between Speed Limit and Advisory Speed				
	5 mph	10 mph	15 mph	20 mph	25 mph or more
Turn (W1-1), Curve (W1-2), Reverse Turn (W1-3), Reverse Curve (W1-4), Winding Road (W1-5), and Combination Horizontal Alignment/Intersection (W1-10) (see Section 2C.07 to determine which sign to use)	Recommended	Required	Required	Required	Required
Advisory Speed Plaque (W13-1P)	Recommended	Required	Required	Required	Required
Chevrons (W1-8) and/or One Direction Large Arrow (W1-6)	Optional	Recommended	Required	Required	Required
Exit Speed (W13-2) and Ramp Speed (W13-3) on exit ramp	Optional	Optional	Recommended	Required	Required

Note: Required means that the sign and/or plaque shall be used, recommended means that the sign and/or plaque should be used, and optional means that the sign and/or plaque may be used.

Including these signs provides both the required and recommended signage for the curves that are provided.

Maintaining the curves as designed also allows for a safer transition to the speed required to navigate the final curve to Islington Street or a northbound turn onto Bartlett Street which is posted at 20 mph.

Traffic Calming

In the event that the Curves were to remain at 155-ft radii, we were to discuss means of traffic calming employed to help keep drivers on Cate Street and Cate Street Extension wary and attentive. We offer the following:

1. Signage ahead of the curves (discussed above)

2. Mid-block Crosswalks – Flashing Beacons; A crosswalk form the Apartment Buildings to the multi-use trail has been provided. With this crosswalk "Trail Crossing Ahead" signage and pedestrian actuated flashing beacons are provided.

   A second mid-block crosswalk with the same signage and flashing beacon is provided at the beginning of the multi-use path near the Cate /Bartlett intersection.

3. Driveways; There are 5 driveways that intersect Cate Street and Cate Street Extension as well as the portion of Cate Street that heads north over Hodgson Brook. These intersecting driveways and the vehicles entering and exiting will also serve to slow traffic.

With the addition of the appropriate signage for the curves as in the revision, the correct signage for the mid-block crosswalks and well as the desire to maintain tangent and curves with no superelevation, it is our opinion that the design is justified as proposed. Any increase in curve radius would not provide any noticeable benefit.

Thank you for providing your review. Should you have additional questions/comments, please do not hesitate to contact me.

Sincerely,

Rick Lundborn, PE
rlundborn@fando.com
207-363-0669 x2314

RL/bh
c: file

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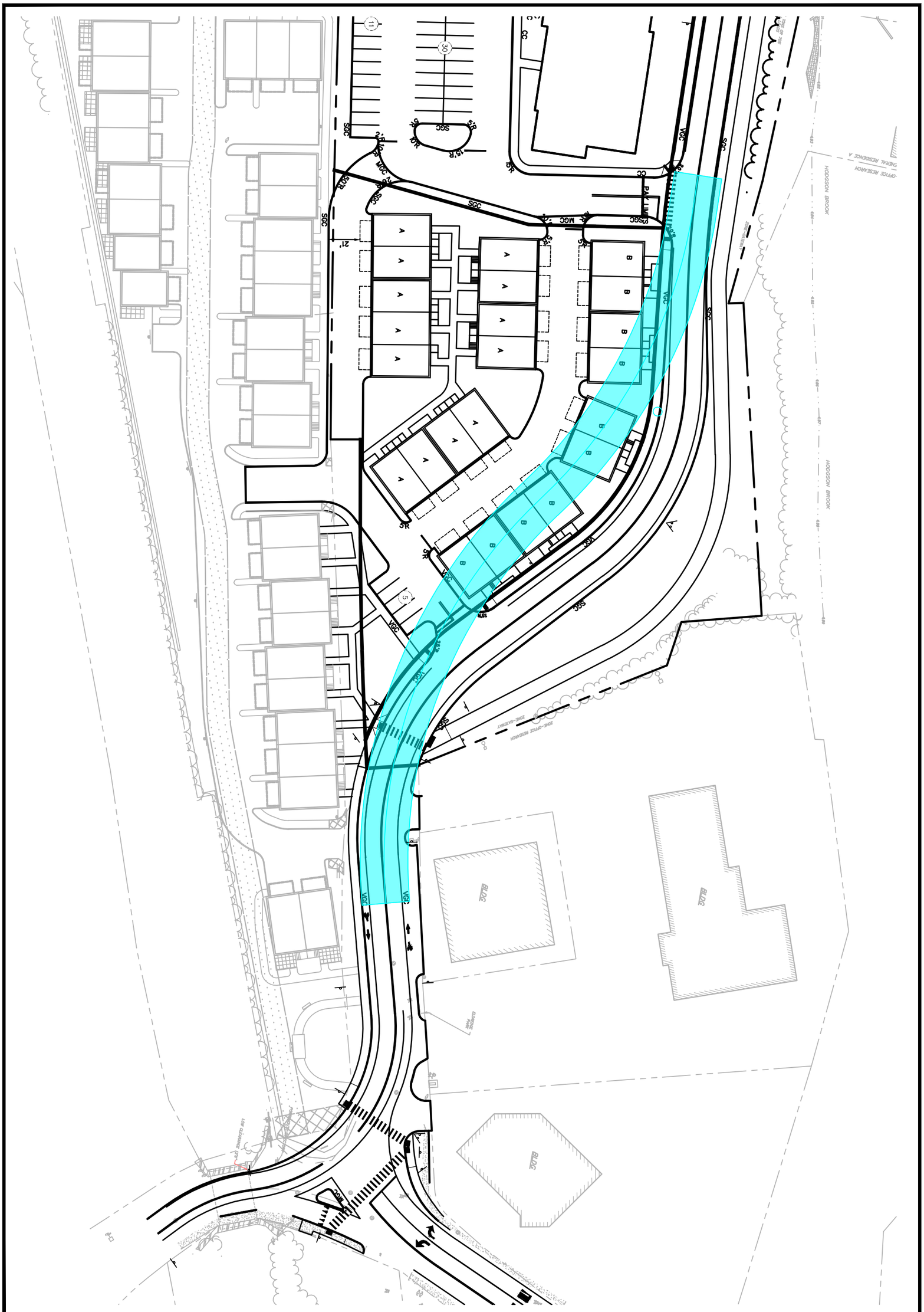

E-1

PROJ. No: 20180317.A10
DATE: 06/20/2019

CATE STREET DEVELOPMENT, LLC

335-FT REVERSE CURVES
NO TANGENT POSSIBLE
CATE STREET

PORTSMOUTH NEW HAMPSHIRE

FUSS & O'NEILL
UPPER SQUARE BUSINESS CENTER
5 FLETCHER STREET, SUITE 1
KENNEBUNK, MAINE 04043
207.363.0669
www.fando.com

SCALE:
HORZ.:
VERT.:
DATUM:
HORZ.: NAD83
VERT.: NGVD29
0
GRAPHIC SCALE

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
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1.	3/18/2019	TAC SUBMITTAL	JVA/DAD	RRL

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E-2

PROJ. No: 20180317.A10
DATE: 06/20/2019

CATE STREET DEVELOPMENT, LLC

335-FT TO 155-FT CURVES
NO TANGENT POSSIBLE
CATE STREET

PORTSMOUTH NEW HAMPSHIRE

FUSS & O'NEILL
UPPER SQUARE BUSINESS CENTER
5 FLETCHER STREET, SUITE 1
KENNEBUNK, MAINE 04043
207.363.0669
www.fando.com

SCALE:
HORZ.:
VERT.:
DATUM:
HORZ.: NAD83
VERT.: NGVD29
0
GRAPHIC SCALE

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
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2.	5/20/2019	TAC SUBMITTAL	JVA/DAD	RRL
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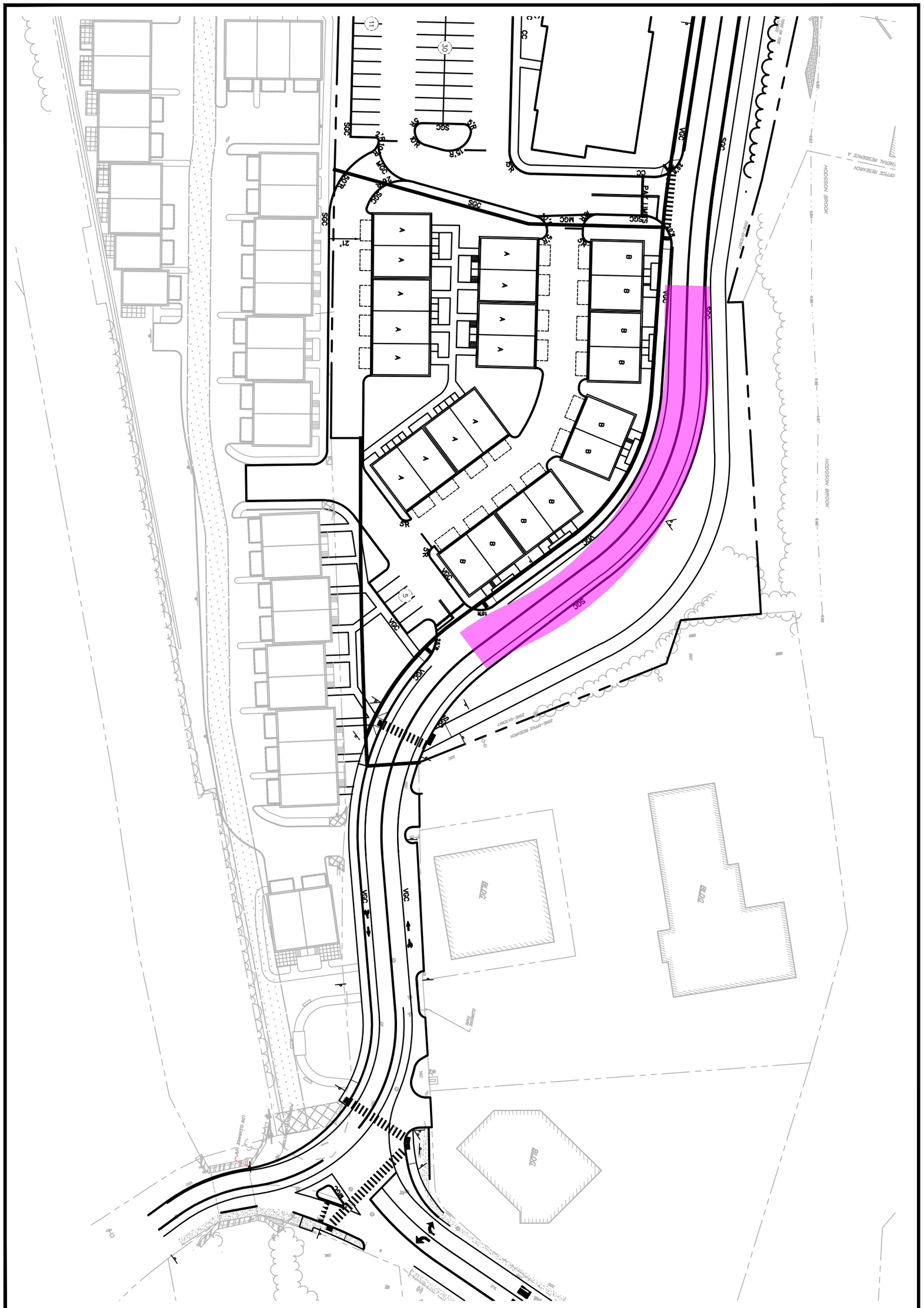

E-3

PROJ. No: 20180317.A10
DATE: 06/20/2019

CATE STREET DEVELOPMENT, LLC

200-FT TO 155-FT CURVES
NO TANGENT POSSIBLE
CATE STREET

PORTSMOUTH NEW HAMPSHIRE

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UPPER SQUARE BUSINESS CENTER
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KENNEBUNK, MAINE 04043
207.363.0669
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SCALE:
HORZ.:
VERT.:
DATUM:
HORZ.: NAD83
VERT.: NGVD29
0
GRAPHIC SCALE

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
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