

COMMONWEALTH OF VIRGINIA

# ISLE OF WIGHT COUNTY

THESE PLANS ARE UNFINISHED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION

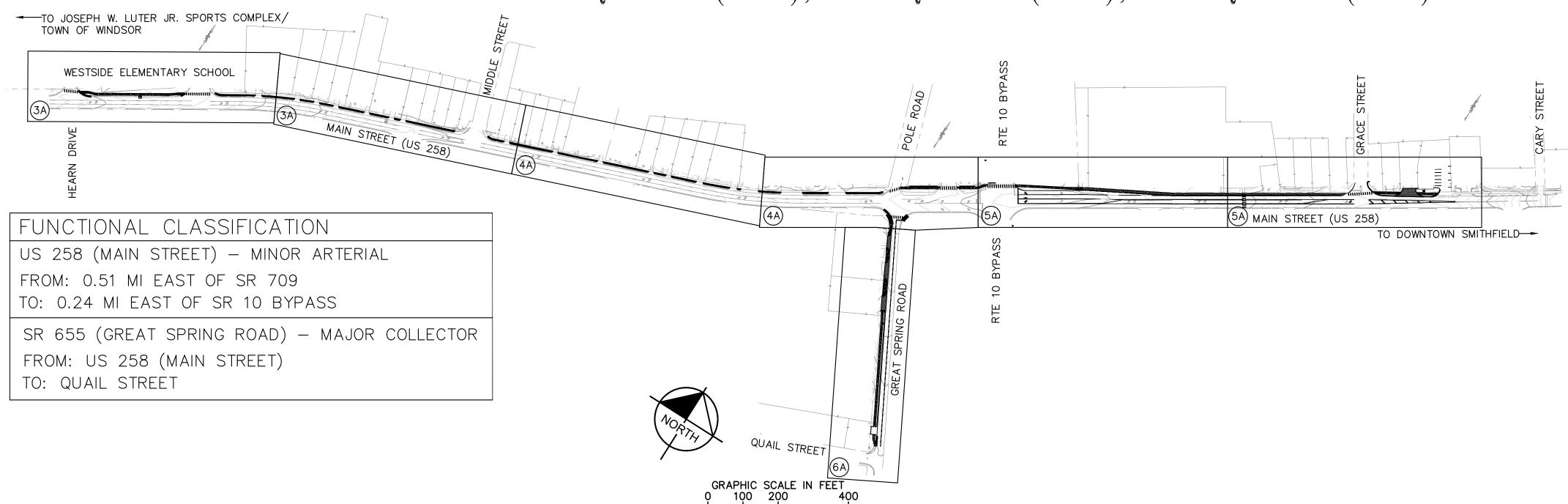
SMITHFIELD, VA

SMITHFIELD SIDEWALK IMPROVEMENTS

UPC #102951

0258-046-626, P101, R201, C501

CMAQ-5A03(952), CMAQ-5A04(267), CMAQ-5A03(268)



THIS PROJECT WAS DESIGNED UTILIZING AUTOCAD CIVIL 3D 2020 DESIGN SOFTWARE. UPC NO. (102951)

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DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT'S 2020 ROAD AND BRIDGE SPECIFICATIONS, 2016 ROAD AND BRIDGE STANDARDS, 2009 MUTCD WITH REV. 1+2 (2012), 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 VIRGINIA WORK AREA PROTECTION MANUAL WITH REV. #2 (9/1/2019) AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC PDF VERSION OF THE PLAN ASSEMBLY.

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#### SURVEYOR:

NXL CONSTRUCTION CO., INC. 114 EAST CARY STREET RICHMOND, VA 23219 TEL. (804) 644-4600, EXT. 22

CONTACT: NATHAN TRAVIS, LS

#### **ENGINEER:**

KIMLEY-HORN AND ASSOCIATES, INC. 4525 MAIN STREET SUITE 1000 VIRGINIA BEACH, VIRGINIA 23462 TEL. (757) 213-8600

CONTACT: ANDREW FARTHING, P.E.

#### TOWN OF SMITHFIELD POPULATION 8,533 (2020 CENSUS)

									·				
STATE PROJECT	ROJECT SECTION	FEDERAL AID	FEDERAL AID PROJECT NO.			TYPE CODE	UPC NO.	LENGTH INCLUDING BRIDGE(S)			EXCLUDING IDGE(S)	TYPE PROJECT	DESCRIPTION
NO.		FROMECT NO.	OODL	110.	FEET	MILES	FEET						
	P-101	CMAQ -5A03(952)		102951	4680.70	0.887	4680.70	0.887	PRELIM. ENG.	FR: 2800 LF EAST OF WATERWORKS ROAD			
										TO: 250 LF WEST OF CARY STREET			
	R-201	CMAQ -5A04(267)		102951		0.887	4680.70	0.887	R/W	FR: 2800 LF EAST OF WATERWORKS ROAD			
										TO: 250 LF WEST OF CARY STREET			
	C-501	CMAQ -5A03(268)		102951	4680.70	0.887	4680.70	0.887	CONSTRUCTION	FR: 2800 LF EAST OF WATERWORKS ROAD			
										TO: 250 LF WEST OF CARY STREET			

NOTE: PROJECT LENGTH BASED ON CONSTRUCTION BASELINE

09/30/22 07/31/23

**DESCRIPTION** 

100% DESIGN SUBMISSION

TIER 1 PROJECT

LOCALLY ADMINISTERED PROJECTS

RECOMMENDED FOR APPROVAL

DATE RANDY R. KEATON, COUNTY ADMINISTATOR

FOR RIGHT OF WAY ACQUISITION

ISLE OF WIGHT COUNTY

JAMIE L. OLIVER, TRANSPORTATION MANAGER

RECOMMENDED FOR APPROVAL

FOR RIGHT OF WAY ACQUISITION

DATE DISTRICT PLANNING AND INVESTMENT MANAGER

DATE DISTRICT PROJECT DEVELOPMENT ENGINEER

APPROVED FOR RIGHT OF WAY **ACQUISITION** 

DISTRICT ENGINEER/ADMINISTRATOR

RECOMMENDED FOR APPROVAL

FOR CONSTRUCTION

DATE DISTRICT PLANNING AND INVESTMENT MANAGER

DATE DISTRICT PROJECT DEVELOPMENT ENGINEER

APPROVED FOR CONSTRUCTION

DISTRICT ENGINEER/ADMINISTRATOR

NAME OF LOCALITY

SMITHFIELD SIDEWALK
IMPROVEMENTS
PREPARED FOR
ISLE OF WIGHT COUNTY

SHEET NUMBER

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1C	RIGHT OF WAY DATA	
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· · ·	GENERAL NOTES	
2		
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3A	DEMOLITION PLAN	STA. 10+00 TO STA. 24+00
3B	ROADWAY PLAN	STA. 10+00 TO STA. 24+00
3C	RIGHT-OF-WAY PLAN	STA. 10+00 TO STA. 24+00
3D	GRADING AND DRAINAGE PLAN	STA. 10+00 TO STA. 24+00
4	EXISTING CONDITIONS	STA. 24+00 TO STA. 37+25
4A	DEMOLITION PLAN	STA. 24+00 TO STA. 37+25
4B	ROADWAY PLAN	STA. 24+00 TO STA. 37+25
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5A	DEMOLITION PLAN	STA. 37+25 TO STA. 51+50
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5C	RIGHT-OF-WAY PLAN	STA. 37+25 TO STA. 51+50
5D	GRADING AND DRAINAGE SHEET	STA. 37+25 TO STA. 51+50
6	EXISTING CONDITIONS	STA. 20+95 TO STA. 28+00
6A	DEMOLITION PLAN	STA. 20+95 TO STA. 28+00
6B	ROADWAY PLAN	STA. 20+95 TO STA. 28+00
6C	RIGHT-OF-WAY PLAN	STA. 20+50 TO STA. 27+50
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7	PEDESTRIAN SIGNAL PLAN	
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XS-8	CROSS SECTIONS MAIN STREET	
XS-9	CROSS SECTIONS GREAT SPRING ROAD	
XS-10	CROSS SECTIONS GREAT SPRING ROAD	

KIMIEY-HORN AND ASSOCIATES, INC.

Kimley-Horn and Associates, Inc.
Virginia Beach, Virginia
Roadway Engineer

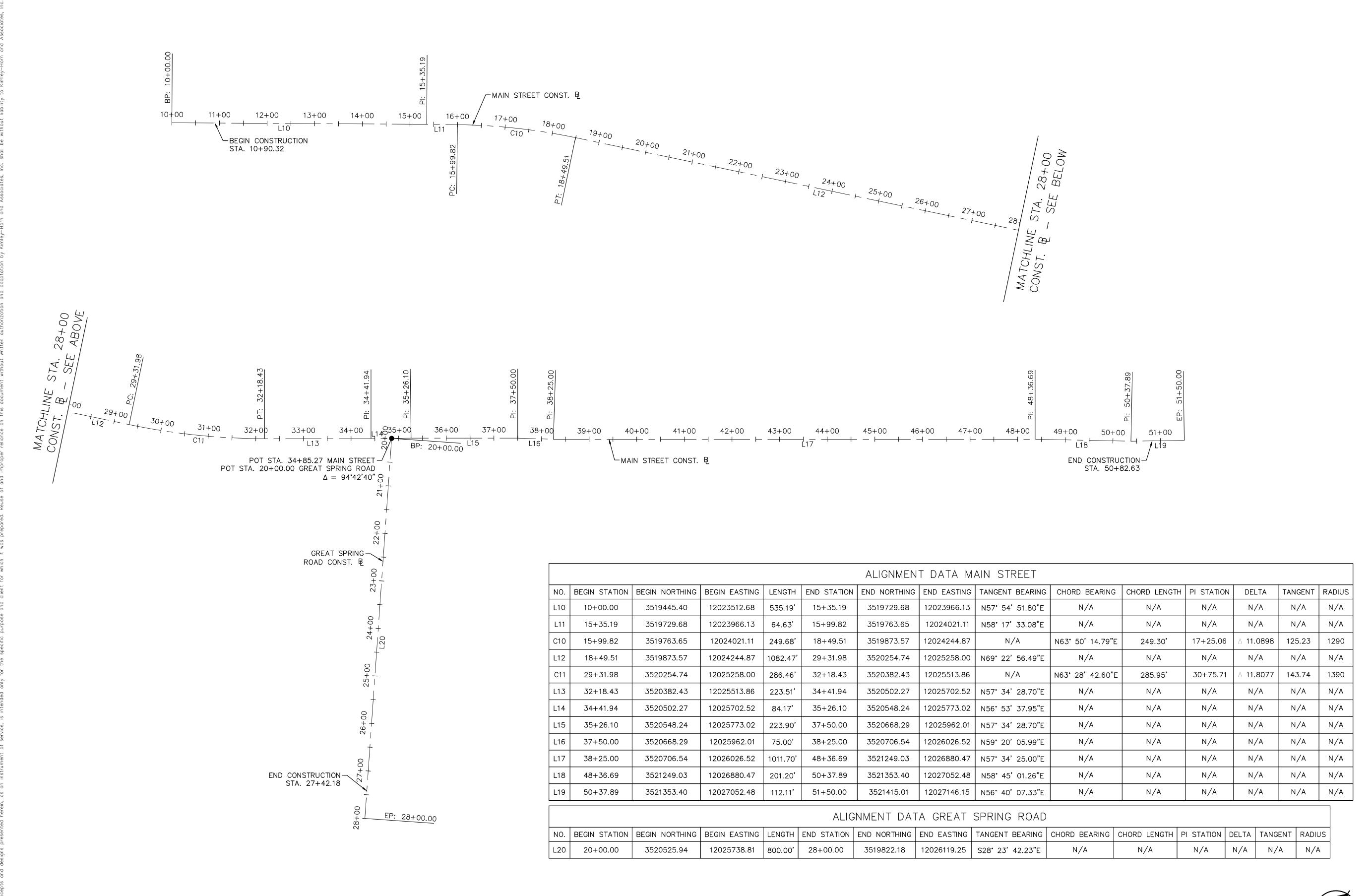
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NDEX

SHEET IN

SMITHFIELD SIDEWALK
IMPROVEMENTS
PREPARED FOR
ISLE OF WIGHT COUNTY

SHEET NUMBER





SMITHFIELD SIDEWALK
IMPROVEMENTS
PREPARED FOR
ISLE OF WIGHT COUNTY SHEET NUMBER 1B

Kimley»Horn

Kimley-Horn and Associates, Inc Virginia Beach, Virginia Roadway Engineer

									TOT	DRAINAGE         ENTRANCE         ENTRANCE           SF         ACRES         SF         ACRES         SF           0         0.000         0         0.000         0         0.000         10           0         0.000         0         0.000         0         0.000         3						
											ΕA	SEMENTS				0.025 0.007 0.006 0.000 0.014 0.014 0.034
002	LANDOWNER	SHEET NO.	TOTAL	TOTAL	FEE TAKING	FEE TAKING	PERM.	PERM.	PERM.	PERM.			TEMP.	TEMP.	TEMP. CONST.	TEMP CONST
NO.							UTILITY	UTILITY	DRAINAGE	DRAINAGE		FLIXIVI. IVIAIINT.	ENTRA NCE	ENTRA NCE	TEIVIF. CONST.	TEIVIF. CONST.
			SF	ACRES	SF	ACRES	SF	ACRES	SF	ACRES	SF	ACRES	SF	ACRES	SF	ACRES
001	COUNTY SCHOOL BOARD OF ISLE OF WIGHT COUNTY	3	932,837	21.415	643	0.015	50	0.001	0	0.000	0	0.000	0	0.000	1092	0.025
002	FRANKLIN E. HALL REAL ESTATE, LLC.	5	-	-	39	0.001	0	0.000	0	0.000	0	0.000	0	0.000	313	0.007
003	FRANKLIN E. HALL REAL ESTATE, LLC.	5	12,208	0.280	61	0.001	0	0.000	439	0.010	0	0.000	0	0.000	250	0.006
004	BRICKNER PROPERTIES, LLC.	5	-	-	0	0.000	0	0.000	0	0.000	0	0.000	737	0.017	0	0.000
005	BRICKNER PROPERTIES, LLC.	5	13,290	0.305	0	0.000	0	0.000	478	0.011	0	0.000	0	0.000	608	0.014
006	SEJ ASSET MANAGEMENT AND INVESTMENT COMPANY	4,6	41,818	0.960	0	0.000	0	0.000	0	0.000	0	0.000	736	0.017	604	0.014
007	JOYCE LEE UPTON	6	43,560	1.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	1502	0.034
800	BETTY A. RICKS	6	0	-	0	0.000	0	0.000	0	0.000	19	0.000	110	0.003	36	0.001

Kimley»

Kimley-Horn and Associates, Inc. Virginia Beach, Virginia Roadway Engineer

RIGHT

SMITHFIELD SIDEWALK
IMPROVEMENTS
PREPARED FOR
ISLE OF WIGHT COUNTY

SHEET NUMBER 1C

#### TEMPORARY TRAFFIC CONTROL PLAN

SMITHFIELD SIDEWALK IMPROVEMENT PROJECT

#### INTRODUCTION

THE PROPOSED PEDESTRIAN ACCOMMODATION IMPROVEMENTS AND PROPOSED MAINTENANCE OF EXISTING INFRASTRUCTURE IS LOCATED ALONG THE NORTHERN SIDE OF MAIN STREET (US ROUTE 258) AND WEST SIDE OF GREAT SPRINGS ROAD (ROUTE 655). THE PROPOSED IMPROVEMENTS CONSIST OF NEW SIDEWALK ALONG THE FRONTAGE OF WESTSIDE ELEMENTARY SCHOOL, MAINTENANCE OF THE EXISTING SIDEWALK FROM WESTSIDE ELEMENTARY SCHOOL TO THE INTERSECTION WITH OLD STAGE HIGHWAY (ROUTE 10), SHOULDER IMPROVEMENTS FROM THE

INTERSECTION WITH OLD STAGE HIGHWAY (ROUTE 10) TO THE INTERSECTION WITH GRACE STREET AND CURB AND GUTTER AND SIDEWALK IMPROVEMENTS FROM GRACE STREET TO THE EXISTING SIDEWALK WEST OF CARY STREET. THE PROJECT ALSO INCLUDES SIDEWALK, CURB AND GUTTER, AND DRAINAGE IMPROVEMENTS ALONG GREAT SPRINGS ROAD (ROUTE 655) FOR APPROXIMATELY 700 LINEAR FEET TO THE SOUTH OF MAIN STREET.

#### TEMPORARY TRAFFIC CONTROL PLAN

#### GENERAL NOTES

- THE PROPOSED IMPROVEMENTS FOLLOW THE REQUIREMENTS OF TYPE B TMP PROJECT.
- THERE ARE NO IDENTIFIED AREAS WITHIN THE RIGHT OF WAY FOR THE CONTRACTOR TO STORE EQUIPMENT AND MATERIALS. THE CONTRACTOR MUST MAKE ARRANGEMENTS FOR THESE AREAS ACCORDING TO ISLE OF WIGHT COUNTY POLICIES.
- THE WORK ZONE SHALL BE MAINTAINED ACCORDING TO THE FOLLOWING TRAFFIC CONTROL SPECIFICATIONS FROM THE LATEST VERSION OF THE VIRGINIA WORK AREA PROTECTION MANUAL: TTC 5.2, TTC-21.1, TTC-22.2, TTC-23.2 AND TTC-53.0 AS REQUIRED.
- IT IS ANTICIPATED THAT MOST OF THE WORK CAN BE PERFORMED IN ACCORDANCE WITH TTC 22.2 RIGHT LANE CLOSURE ON A THREE LANE ROADWAY. TTC 23.1 IS REQUIRED FOR LANE CLOSURE ON GREAT SPRING ROAD USING FLAGGERS AND THE CONTRACTOR SHALL SUBMIT A REQUEST FOR A LANE CLOSURE TO THE COUNTY AND VDOT A MINIMUM 2 WEEKS PRIOR TO PLANNED CLOSURE.
- ENTRANCES AFFECTED BY THE WORK ZONE SHALL BE MAINTAINED AT ALL TIMES TO PROVIDE ACCESS TO RESIDENTS UNLESS APPROVED BY ENGINEER.
- TYPES OF TRAFFIC CONSIST OF RESIDENTS, SCHOOL BUSES, AND LOCAL TRANSIT.
- CHANNELIZING DEVICES MUST SEPARATE THE WORK AREA FROM THE TRAVEL AREA AND BE EXTENDED TO WHERE THEY ARE VISIBLE TO ONCOMING TRAFFIC.
- THE CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT OF ALL PAVEMENT MARKINGS IDENTIFIED TO REMAIN OR THAT ARE DESTROYED DUE TO CONSTRUCTION OR EXCAVATION.

#### SPECIAL DETAILS

THERE ARE NO SPECIAL DETAILS FOR THIS PROJECT THAT ARE NOT ADDRESSED IN THE PLANS OR THE LATEST VERSION OF THE VIRGINIA WORK AREA PROTECTION MANUAL.

#### PUBLIC COMMUNICATIONS PLAN

PROJECT STAFF IS TO COORDINATE WITH THE HAMPTON ROADS DISTRICT PUBLIC AFFAIRS OFFICE (PHONE NUMBER - 757-420-8300) TO PUBLISH ANNOUNCEMENTS REGARDING WORK ACTIVITIES FOR THE PROJECT. EACH ACTIVITY WILL BE GOVERNED BY THE TIMES ESTABLISHED BY THE REGIONAL TRAFFIC ENGINEER AND THE SMART TRAFFIC CENTER. CONTRACTOR TO PROVIDE PUBLIC AFFAIRS OFFICE LANE CLOSURE INFORMATION A MINIMUM 2 WEEKS IN ADVANCE OF THE WORK.

#### TRANSPORTATION OPERATIONS PLAN

- 1. THE CONTRACTOR SHALL CONTACT THE ENGINEER A MINIMUM OF 7 DAYS IN ADVANCE OF A PLANNED LANE CLOSURE. VDOT REQUIREMENTS CONSIST OF NOTIFICATION OF LANE CLOSURE TO BE PROVIDED BY 8 AM THURSDAY FOR ANY CLOSURES THE FOLLOWING WEEK.
- 2. THE FOLLOWING IS A LIST OF LOCAL EMERGENCY CONTACT AGENCIES: VIRGINIA STATE POLICE: 757-253-4923 OR 1-800-582-8350
- 3. PROCESS OF NOTIFICATION OF INCIDENT TO BE FOLLOWED IS:

#### CONTRACTOR TO CALL:

- -CONTRACTOR TO NOTIFY COUNTY PROJECT MANAGER, VIRGINIA STATE POLICE, INSPECTOR, AND SMART TRAFFIC CENTER.
- -DEPENDING ON SEVERITY OF INCIDENT, CONTRACTOR MAY HAVE TO CEASE WORK
  -CONSTRUCTION INSPECTOR TO NOTIFY COUNTY PROJECT MANAGER OF INCIDENT AND
  TAKE PICTURES AS NECESSARY, PARTICULARLY OF THE CONTRACTOR'S WORK ZONE TO
  VERIFY PROPER SETUP

#### SEQUENCE OF CONSTRUCTION

- 1. CONTRACTOR TO INSTALL REQUIRED EROSION AND SEDIMENT CONTROL MEASURES.
- 2. CONTRACTOR TO CLOSE OUTSIDE LANE BETWEEN GRACE STREET AND CARY STREET AND CONSTRUCT CURB AND GUTTER, SIDEWALK AND DRAINAGE IMPROVEMENTS.
- 3. CONTRACTOR TO CONSTRUCT PROPOSED SIDEWALK ALONG WESTSIDE ELEMENTARY SCHOOL
- FRONTAGE AND BETWEEN POLE ROAD AND ROUTE 10 BYPASS.

  4. CONTRACTOR TO CONSTRUCT PROPOSED CURB AND GUTTER, SIDEWALK AND DRAINAGE
- IMPROVEMENTS ALONG GREAT SPRING ROAD WITH A FLAGGER OPERATION.
- 5. CONTRACTOR TO PERFORM REQUIRED MAINTENANCE OF EXIST. SIDEWALK BETWEEN STA. 15+10 TO
- STA. 34+70
  6. CONTRACTOR TO INSTALL PEDESTRIAN SIGNAL IMPROVEMENTS.
- 7. CONTRACTOR TO MILL AND OVERLAY EXISTING ASPHALT PAVEMENT STA. 38+27 TO STA. 50+83 ALONG MAIN STREET AND STA. 20+33 TO STA. 27+36 ALONG GREAT SPRING ROAD.
- 8. CONTRACTOR TO INSTALL PAVEMENT MARKING AND SIGNING IMPROVEMENTS.
- 9. CONTRACTOR TO PROVIDE PERMANENT SEEDING AND STABILIZATION IN ALL DISTURBED AREAS.
- 10. CONTRACTOR TO INSTALL REMAINING BID ITEMS.

#### TEMPORARY TRAFFIC CONTROL GENERAL NOTES

UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PLAN AND PROSECUTE WORK IN ACCORDANCE WITH THE FOLLOWING MAINTENANCE OF TRAFFIC PLAN.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE SIGNING AND ANY OTHER TRAFFIC CONTROL DEVICES NECESSARY TO PERFORM THE WORK. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL IMMEDIATELY REMOVE ALL SUCH TEMPORARY DEVICES.

TRAFFIC SAFETY PLANS MUST BE SUBMITTED TO THE COUNTY AND VDOT NO LESS THAN 72 HOURS PRIOR TO COMMENCEMENT OF WORK WITHIN THE RIGHT-OF-WAY. ALL PLANS MUST BE APPROVED IN WRITING PRIOR TO COMMENCEMENT.

ALL WORK AREAS AND LANE CLOSURES SHALL BE IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL DATED AUGUST 2011 (INCLUDING ALL REVISIONS).

NO LANE CLOSURE OPERATION SHALL BE CONDUCTED WITHOUT A RECEIVED WRITTEN REQUEST 48 TO 72 HOURS PRIOR TO THE OPERATION. ONCE THE REQUEST HAS BEEN APPROVED, WORK MAY COMMENCE. HOURS OF CLOSURE SHALL BE CONDUCTED BETWEEN 9:00 AM AND 4:00 PM MONDAY THROUGH FRIDAY. LANE CLOSURES WILL NOT BE PERMITTED ON SATURDAYS, SUNDAYS, AND STATE RECOGNIZED HOLIDAYS. LANE CLOSURES WILL BE PROHIBITED FROM NOON PRIOR TO A THREE DAY WEEKEND TO NOON THE FOLLOWING WORK DAY.

THE CONTRACTOR SHALL NOT CONDUCT OPERATIONS WHEN THE WEATHER CAUSES UNSAFE CONDITIONS FOR THE TRAVELING PUBLIC AS DETERMINED BY ISLE OF WIGHT COUNTY AND VDOT. ISLE OF WIGHT COUNTY RESERVES THE RIGHT TO CHANGE ANY OR ALL OF THE WORKING HOURS WHEN SUCH CHANGES ARE IN BEST INTEREST OF THE TRAVELING PUBLIC. THE CONTRACTOR MAY REQUEST A CHANGE IN THE HOURS OF OPERATION IF THE REQUESTED TIME WILL BE SAFE FOR THE TRAVELING PUBLIC. THIS REQUEST MUST BE APPROVED BY ISLE OF WIGHT COUNTY AND VDOT PRIOR TO CONDUCTING SUCH OPERATION. ALL SIGNS, EQUIPMENT AND MATERIAL WILL BE REMOVED FROM THE RIGHT—OF—WAY PRIOR TO THE END OF THE LANE CLOSURE TIME INDICATED.

THE CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE, AS REQUIRED, TO PREVENT PONDING OF WATER ON THE EXISTING ROADWAY AND ADJACENT PROPERTIES. ANY TEMPORARY DRAINAGE STRUCTURES INSTALLED ON THE PROJECT ARE THE CONTRACTOR'S RESPONSIBILITY. THE COST OF THE STRUCTURES IS TO BE INCLUDED IN THE PRICE BID FOR OTHER DRAINAGE ITEMS.

THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ACCESS TO ALL EXISTING ENTRANCES DURING CONSTRUCTION.

THE CONTRACTOR SHALL MAINTAIN MINIMUM 11' TRAVEL LANE WIDTHS AT ALL TIMES DURING CONSTRUCTION.

EXISTING TRAFFIC PATTERNS ARE TO BE MAINTAINED DURING CONSTRUCTION EXCEPT WHEN THIS SEQUENCE OF CONSTRUCTION/MAINTENANCE OF TRAFFIC PLAN INDICATES THERE IS TO BE A REDUCTION IN THE NUMBER OF LANES, DETOUR, OR ONE WAY FLAGGER CONTROLLED TRAFFIC OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES SHALL BE KEPT CLEAN, LEGIBLE, AND IN PROPER WORKING ORDER AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE A PERSON WHOSE RESPONSIBILITY SHALL BE TO INSPECT AND MAINTAIN SIGNS, BARRICADES, OTHER CHANNELIZING DEVICES AND LIGHTS DURING THE TIME THAT TRAFFIC IS RESTRICTED DUE TO CONSTRUCTION OPERATIONS. PERSON MUST HAVE UP TO DATE INTERMEDIATE WORK ZONE TRAFFIC CONTROL CERTIFICATION

IF THE CONTRACTOR ELECTS TO WORK AT NIGHT, SUFFICIENT LIGHTING OF THE WORK SITE(S) TO ENABLE THE SATISFACTORY COMPLETION OF THE WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL. LIGHTING SHALL BE ARRANGED SO AS NOT TO INTERFERE WITH OR IMPEDE TRAFFIC APPROACHING THE WORK SITE(S) FROM EITHER DIRECTION OR INTERFERE WITH LOCAL RESIDENTS. LIGHTING SHALL BE SHIELDED FROM SHINING TOWARD DWELLINGS.

ANY CONTRACT ITEMS NOT SPECIFICALLY NOTED IN THE SEQUENCE OF CONSTRUCTION MAY BE CONSTRUCTED AT THE CONTRACTOR'S OPTION, AS DIRECTED BY THE ENGINEER. HOWEVER, UNDER NO CIRCUMSTANCES WILL CONCURRENT CONSTRUCTION LEFT AND RIGHT OF ANY ROADWAY BE ALLOWED.

AT THE CONCLUSION OF EACH WORK DAY, ALL PAVEMENT EDGE DROPOFFS SHALL MEET THE REQUIREMENTS OF FIGURE 2 IN APPENDIX A OF THE 2011 WORK AREA PROTECTION MANUAL FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC. ALL COSTS FOR MEETING THE REQUIREMENTS SHALL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS IN THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

CONSTRUCTION PAVEMENT MARKINGS SHALL BE TYPE D, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

CONTRACTOR SHALL SUBMIT MAINTENANCE OF TRAFFIC PLAN PRIOR TO LANE CLOSURES.

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4525 MAIN STREET, SUITE 1000, VIRGINIA BEACH, VA 23462
PHONE: 757-213-8600

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DATE
7/31/2023
SCALE AS SHOWN
DESIGNED BY MAM

EMPORARY TRAFFI CONTROL NOTES

THFIELD SIDEWALK
MPROVEMENTS
PREPARED FOR
OF WIGHT COUNTY

SHEET NUMBER

1D

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September 2019

Page 6H-55

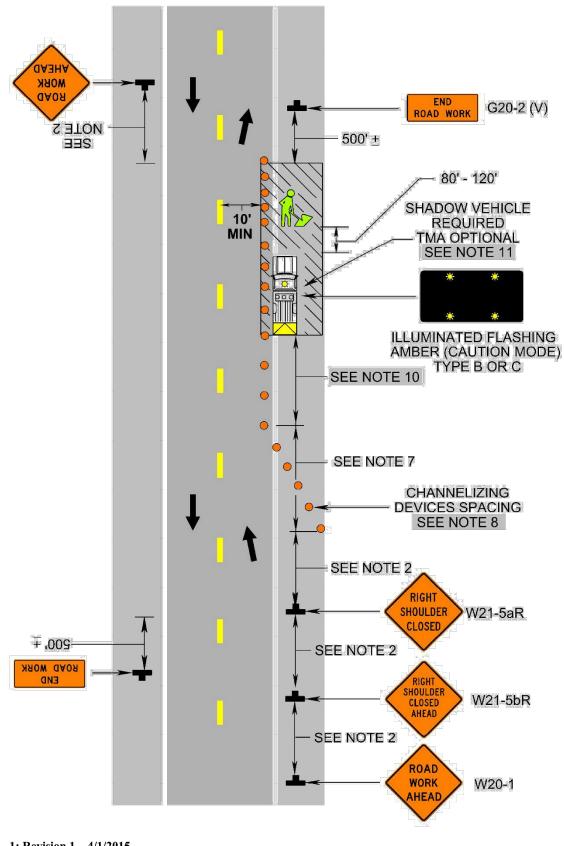
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Right Lane Closure Operation on a Three-Lane Roadway (Figure TTC-5.2) (Figure TTC-22.2)

Page 6H-17

September 2019

### **Shoulder Operation with Minor Encroachment**



1: Revision 1 - 4/1/20152: Revision 2 – 9/1/2019

Page 6H-16 **Typical Traffic Control** 

> Shoulder Operation with Minor Encroachment (Figure TTC-5.2)

1. For required sign assemblies for multi-lane roadways see Note 1, TTC-4.1

2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where

**NOTES** 

the posted speed limit is 45 mph or less. 3. When work takes up part of a lane on a high volume roadway; vehicular traffic volumes, vehicle mix, speed and capacity should be analyzed to determine whether the affected lane should be closed. Unless the lane encroachment analysis permits a remaining lane width of 10 feet, the lane should be closed. If the closure operation is on a Limited Access highway, the minimum lane width is 11 feet.

Option:

- 4. The ROAD WORK AHEAD (W20-1) sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.
- Standard: 5. A shadow vehicle with either an arrow board operating in the caution mode, or at least one highintensity amber rotating, flashing, or oscillating light shall be parked 80' - 120' in advance of the
- 6. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or oscillating lights.
- 7 Taner length (I) and channelizing device enacing shall be at the following

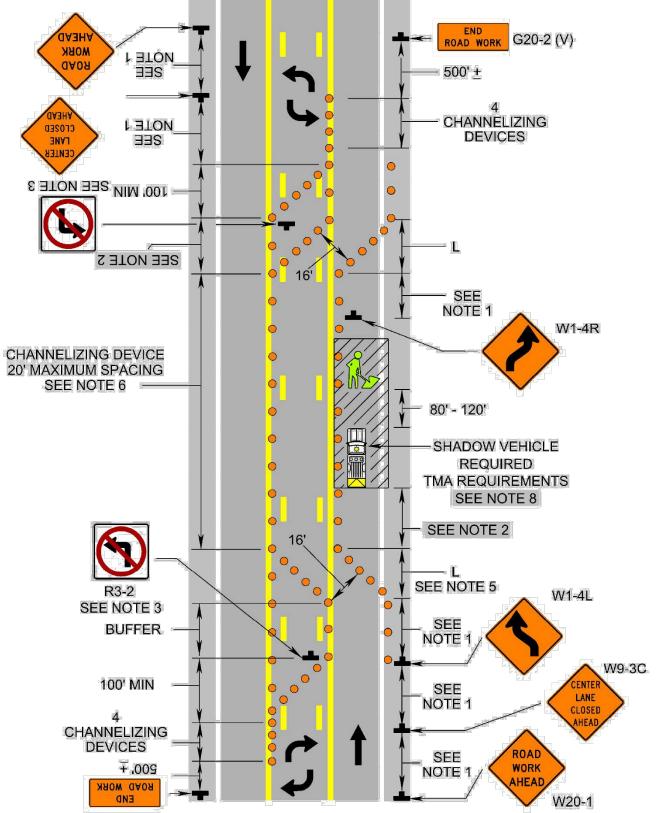
					Taper	Len	gth L			,			
Speed	L	ane Wid	th (Fee	t)			Speed	L					
Limit (mph)	9	10	11	12	Remarks		Limit (mph)	9	10	11	12	Remarks	
25	95	105	115	125	L=S <sup>2</sup> W/60		50	450	500	550	600	L=SW	
30	135	150	165	180	L=S <sup>2</sup> W/60		55	495	550	605	660	L= SW	
35	185	205	225	245	L=S <sup>2</sup> W/60		60	540	600	660	720	L=SW	
40	240	270	295	320	L=S <sup>2</sup> W/60		65	585	650	715	780	L=SW	
45	405	450	495	540	L=SW		70	630	700	770	840	L=SW	
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	taper 10	i postet	a specus		Shoulder Tape				osieu s	peeus <u>-</u>	<u>- 00 mp</u>		

8. Channelizing device spacing shall be at the following:

Channelizing Device Spacing													
Location	Speed Limit (mph)		Location	Speed (mp		Location Spacing	Speed Limit (mph)						
Spacing	0 -35	36 +	Spacing	0 -35	36 +		0 -35	36 +					
Transition	20'	40'	Travelway	40'	80'	*Construction Access	80'	120'					
*Construction acc	ess spa	cing ma	y be increased to this	distance,	but shal	I not exceed one acces	s per ¼	mile.					

- 9. On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.<sup>2</sup>
- 10. The buffer space length The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
- 11. A truck-mounted attenuator (TMA) shall be used on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph.
- 12. When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.

1: Revision 1 – 4/1/2015 2: Revision 2 – 9/1/2019



1: Revision 1 - 4/1/20152: Revision 2 – 9/1/2019 Page 6H-52

> **Typical Traffic Control** Right Lane Closure Operation on a Three-Lane Roadway (Figure TTC-22.2)

**NOTES** 

Guidance:

- 1. The distance between signs should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.<sup>2</sup> The distance of the beginning of channelizing device transition should be a minimum of 500' and a maximum of 800'.
- 2. The buffer space length should be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
- 3. For locations with a high volume of left turning movements, the graphic NO LEFT TURN (R3-2) signs should be used within the closed lane.

4. Where Right-of-Way or geometric conditions prevent use of 48" x 48" signs, 36" x 36" signs may be used. Standard:

Speed	L	ane Wid	th (Fee	t)	Remarks	Speed	La				
Limit (mph)	9	10	11	12		Limit (mph)	9	10	11	12	Remarks
25	95	105	115	125	L=S <sup>2</sup> W/60	50	450	500	550	600	L=SW
30	135	150	165	180	L=S2W/60	55	495	550	605	660	L= SW
35	185	205	225	245	L=S <sup>2</sup> W/60	60	540	600	660	720	L=SW
40	240	270	295	320	L=S2W/60	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW
posted s	peeds le	ess than	65 mpł	and a	n Limited Ac 1000' shifting d be used.²						

6. Channelizing device spacing shall be at the following:

5. Taper length (L) shall be at the following:

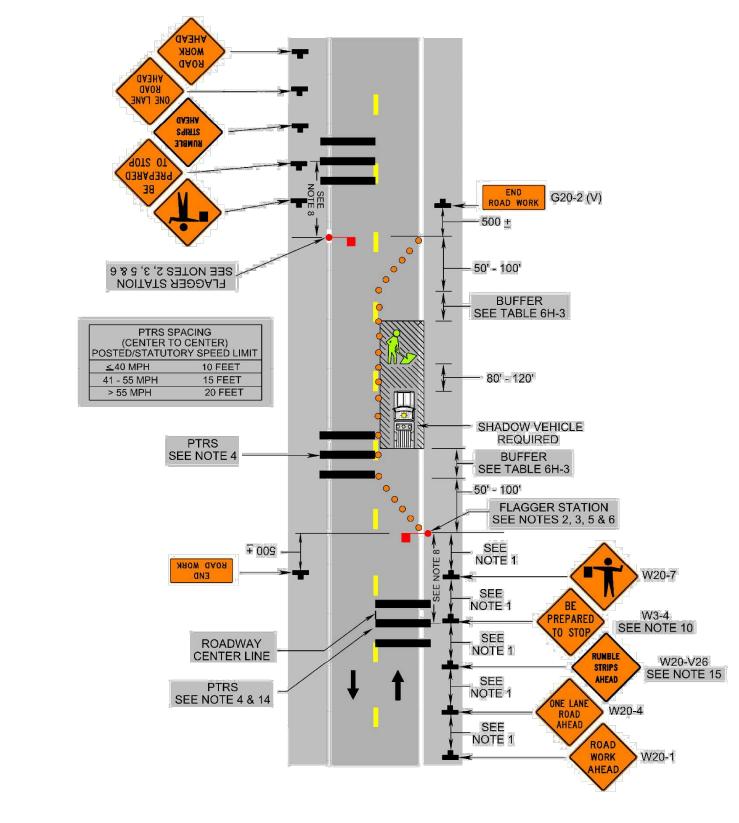
Channelizing Device Spacing												
Location	Speed (mph)	l Limit	Location	Speed L (mph)	.imit	Location Spacing	Speed Limit (mph)					
Spacing	0 -35	36 +	Spacing	0 -35	36 +	, -	0 -35	36 +				
Transition	20'	40'	Travelway	40'	80'	*Construction Access	80'	120'				

- \*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile. 7. To prevent vehicles from entering into the buffer and activity areas<sup>1</sup>, channelizing device spacing shall be a maximum of 20' on center.
- 8. A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one rotating amber light or high intensity amber flashing or oscillating light shall be parked 80'-120' in advance of the work crew in both directions of travel. When the posted speed limit is 45
- mph or greater, the shadow vehicle shall be equipped with a truck-mounted attenuator (TMA).<sup>2</sup> 9. When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.
- 10. For long-term work zones existing conflicting pavement markings and markers shall be removed and temporary pavement markings and markers shall be installed per Figure TTC-60. Guidance:
- 11. When channelizing devices have the potential of leading vehicular traffic out of the intended traffic space, the channelizing devices should be extended a distance with 4 additional channelizing devices beyond the downstream end of the transition area as depicted. 1

1: Revision 1 – 4/1/2015

2: Revision 2 – 9/1/2019

Lane Closure on a Two-Lane Roadway Using Flaggers (Figure TTC-23.2)



1: Revision 1 - 4/1/20152: Revision 2 – 9/1/2019

Page 6H-54 September 2019 **Typical Traffic Control** 

> Lane Closure on a Two-Lane Roadway Using Flaggers (Figure TTC-23.2) **NOTES**

- 1. Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.
- 2. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line
- of sight from the graphic flagger symbol sign to the flagger. 3. To maintain efficient traffic flow in a flagging operation on a two-lane roadway, the maximum time motorists should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.<sup>2</sup>

Standard:

- 4. Portable Temporary Rumle Strips (PTRS) shall be used as noted in Section 6F.99.
- Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5).
- 6. All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).
- 7. Cone spacing shall be based on the posted speed and the values in Table 6H-4 on Page 6H-6. 8. A shadow vehicle with at least one high intensity amber rotating, flashing, or oscillating light shall
- be parked 80'-120' in advance of the first work crew. Option:
- 8. A SLOW (W21-V10) sign<sup>2</sup> may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.
  - 9. If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the PTRS<sup>1</sup> should be readjusted at greater distances.
  - 10. When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).

**Standard:** 

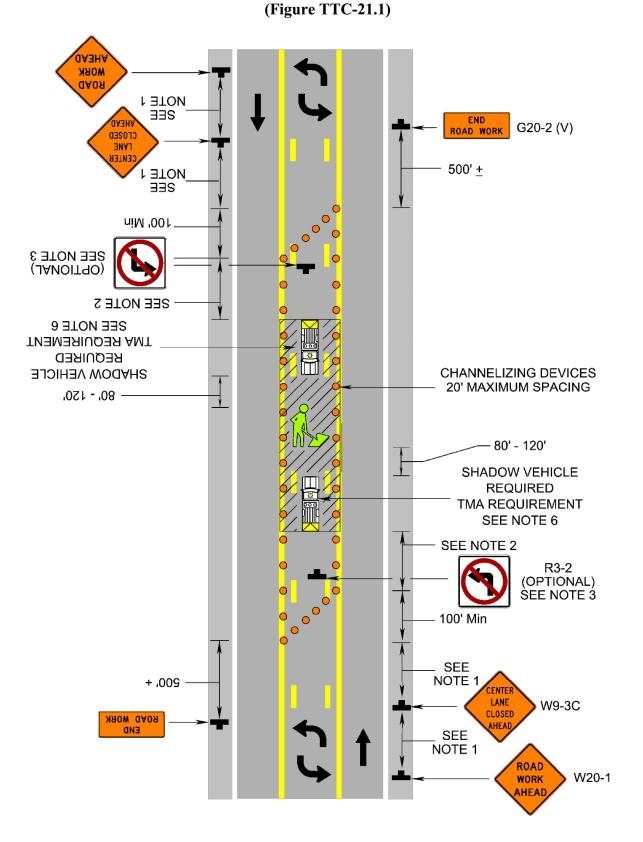
11. At night, flagger stations shall be illuminated, except in emergencies (see Section 6E.08).

- 12. Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20 feet
- 13. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).

Standard:1

14. When used<sup>2</sup>, three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper placement on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-V26) sign shall also be utilized.

1: Revision 1 – 4/1/2015 2: Revision 2 – 9/1/2019



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## Typical Traffic Control Center Turn Lane Closure Operation (Figure TTC-21.1) NOTES

#### Guidance

- 1. The distance between signs should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less. The distance of the beginning of channelizing device transition should be a minimum of 500' and a maximum of 800'.
- 2. The buffer space length should be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
- 3. For locations with a high volume of left turning movements, the graphic NO LEFT TURN (R3-2) signs should be used within the closed lane.

#### Option:

- 4. Where Right-of-Way or geometric conditions prevent use of 48" x 48" signs, 36" x 36" signs may be used. **Standard:**
- 5. To prevent vehicles from entering into the work zone, channelizing device spacing shall be a maximum of 20' on center.
- 6. A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one rotating amber light or high intensity amber flashing or oscillating<sup>1</sup> light shall be parked 80'-120' in advance of the work crew in both directions of travel. If multiple lanes are present (four or more lanes, excluding the center turn lane) and the posted speed limit is 45 mph or greater, the vehicles shall be equipped with a truck-mounted attenuator (TMA).
- 7. When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.

PROJECT LIMITS

**Signing for Project Limits** 

(Figure TTC-53.0)

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Typical Traffic Control

Signing for Project Limits

(Figure TTC-53.0)

NOTES

#### Support:

- 1. This layout depicts signing requirements for notifying motorist when they are entering and exiting a potential construction/maintenance area with a duration equal to or greater than 60 days.
- Standard:
- 2. The ROAD WORK AHEAD (W20-1) sign or the ROAD WORK NEXT XX MILES (G20-1 (V)) sign shall be placed far enough in advance of the project limits so that other warning signs in a series may be adequately placed prior to the condition they are warning about.
- 3. The ROAD WORK NEXT XX MILES sign shall be used for projects with activity areas greater than 2 miles in length, or when multiple work activities (such as pavement patching, guardrail installations, shoulder restoration, etc.) occur along a highway.
- 4. The distance displayed on the ROAD WORK NEXT XX MILES sign shall be stated to the nearest whole mile from the point of installation to the END ROAD WORK (G20-2 (V)) sign.
- 5. On divided highways having a median wider than 8', right and left sign assemblies shall be required.
- Guidance:
  6. For projects with activity areas 2 miles or less in length, the ROAD WORK AHEAD sign should be the
- 7. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where
- the posted speed limit is 45 mph or less.

  8. All connections within the project limits should be identified with signs indicating to motorist they are entering or exiting a potential construction/maintenance area.

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KHA PROJECT
117032020
DATE
7/31/2023
SCALE AS SHOWN

MPORARY TRAFF

SMITHFIELD SIDEWALK
IMPROVEMENTS
PREPARED FOR
ISLE OF WIGHT COUNTY

SHEET NUMBER 1D(2)

