

NPS NO.	REG.	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326	NE	VA	PRA-FRSP II(I), 19(I), Etc.	1	64
41,903					

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DESCRIPTION OF PROJECT
PROJECT LENGTH = 4.84 mi.

IMPROVEMENTS: SUPERPAVE ASPHALT CONCRETE PAVEMENT, AGGREGATE BASE RECONDITIONING, AGGREGATE-TOPSOIL SHOULDER COURSE, PARKING AREA REHABILITATION, CONSTRUCTION OF NEW PULLOFFS, AND OTHER MISCELLANEOUS WORK

DESIGN DESIGNATIONS:

ROUTES 11 & 19 GRANT DRIVE & ANDERSON DRIVE	ROUTES 20 & 22 GORDON & BURNSIDE DRIVES	ROUTE 900 FREDERICKSBURG VISITOR CENTER PARKING AREA
ADT (2006) 110	ADT (2006) 80	ADT (2006) 880
ADT (2026) 160	ADT (2026) 120	ADT (2026) 1320
DHV 25	DHV 18	DHV 200
D 50/50	D 100/0	D 50/50
V 25 mph	V 25 mph	V 25 mph
C/A None	C/A None	C/A None
e(max) 8%	e(max) 8%	e(max) 8%

ROUTE 912 SPOTSYLVANIA SHELTER PARKING AREA	ROUTE 914 CHANCELLORSVILLE VISITOR CENTER PARKING AREA	ROUTE 916 WILDERNESS EXHIBIT PARKING AREA
ADT (2006) 110	ADT (2006) <100	ADT (2006) <100
ADT (2026) 160	ADT (2026) 120	ADT (2026) <100
DHV 25	DHV 18	DHV <15
D 50/50	D 50/50	D 50/50
V 20 mph	V 25 mph	V 25 mph
C/A None	C/A None	C/A None
e(max) 8%	e(max) 8%	e(max) 8%

SPECIFICATIONS:

"Standard Specifications For Construction Of Roads and Bridges On Federal Highway Projects", FP-03, US Customary Units.

U.S. DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

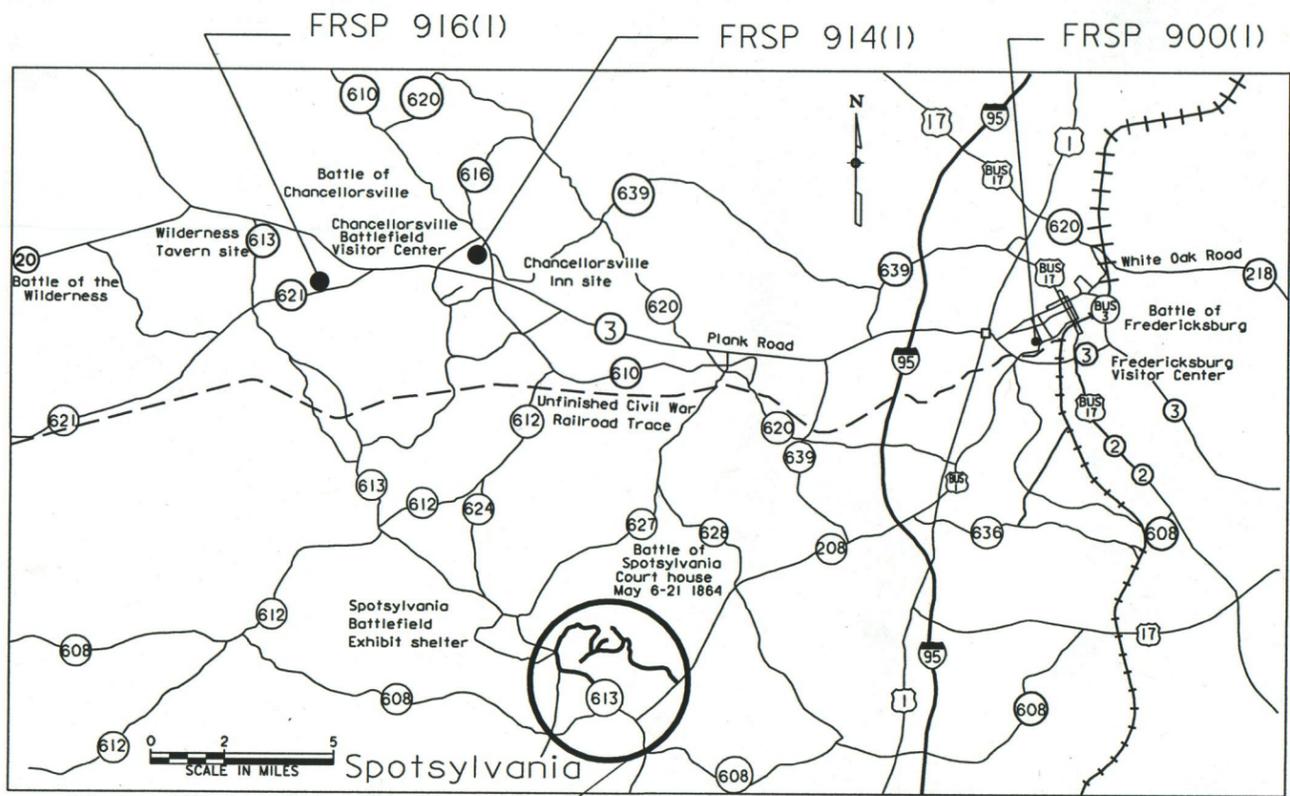
FREDERICKSBURG AND SPOTSYLVANIA NATIONAL MILITARY PARK

PLANS FOR PROPOSED

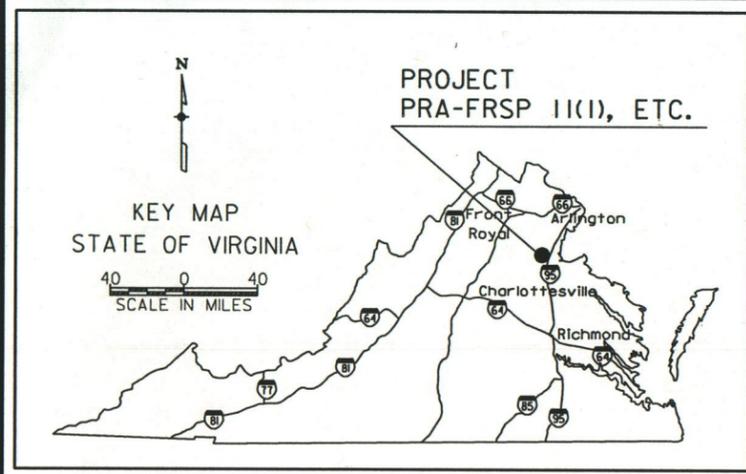
PROJECT PRA-FRSP 11(I), 19(I), 20(I), 22(I), 900(I), 912(I), 914(I), & 916(I)

REHABILITATION OF PARK ROADS AND PARKING AREAS,
CONSTRUCTION OF PULLOFFS AND OTHER MISCELLANEOUS WORK

ORANGE AND SPOTSYLVANIA COUNTIES,
VIRGINIA



PROJECT
PRA-FRSP 11(I), 19(I), etc.



CONVENTIONAL SIGNS

COUNTY LINE	-----	
RIGHT-OF-WAY EXISTING	-----	R/W
RIGHT-OF-WAY PROPOSED	-----	R/W
EXISTING ROADWAY	=====	
EXISTING TRAIL	-----	
STREAM OR RIVER	
CONSTRUCTION LIMITS	-----	
Toe of fill	-----	
Top of cut	-----	
Transition between cut and fill	-----	

	EXISTING	PROPOSED
TELEPHONE LINE UNDERGROUND	--- T ---	--- T ---
TELEPHONE LINE ON POLES	--- T o	--- T ---
POWER LINE UNDERGROUND	--- P ---	--- P ---
POWER LINE ON POLES	--- P o	--- P ---
PIPE LINE (GAS/WATER/OIL/SEWER)	--- W ---	--- W ---
PIPE CULVERT WITH INLET	--- □	--- □
SINGLE OR MULTIPLE PIPE CULVERT WITH HEADWALL AND WINGWALL	--- □	--- □
SINGLE OR MULTIPLE PIPE CULVERT WITH END SECTION	--- □	--- □
PIPE CULVERT IN PROFILE	○	○
SINGLE OR MULTIPLE BOX CULVERT WITH HEADWALL AND WINGWALL	--- □	--- □
BOX CULVERT IN PROFILE	□	□
GUARDRAIL	---	---
RETAINING WALL	---	---
SILT FENCE	---	---
SELECTIVE CLEARING	---	---
SPLIT RAIL FENCE	---	---
TREE LINE	---	---
ROADWAY OBLITERATION	---	---

PLANS PREPARED BY

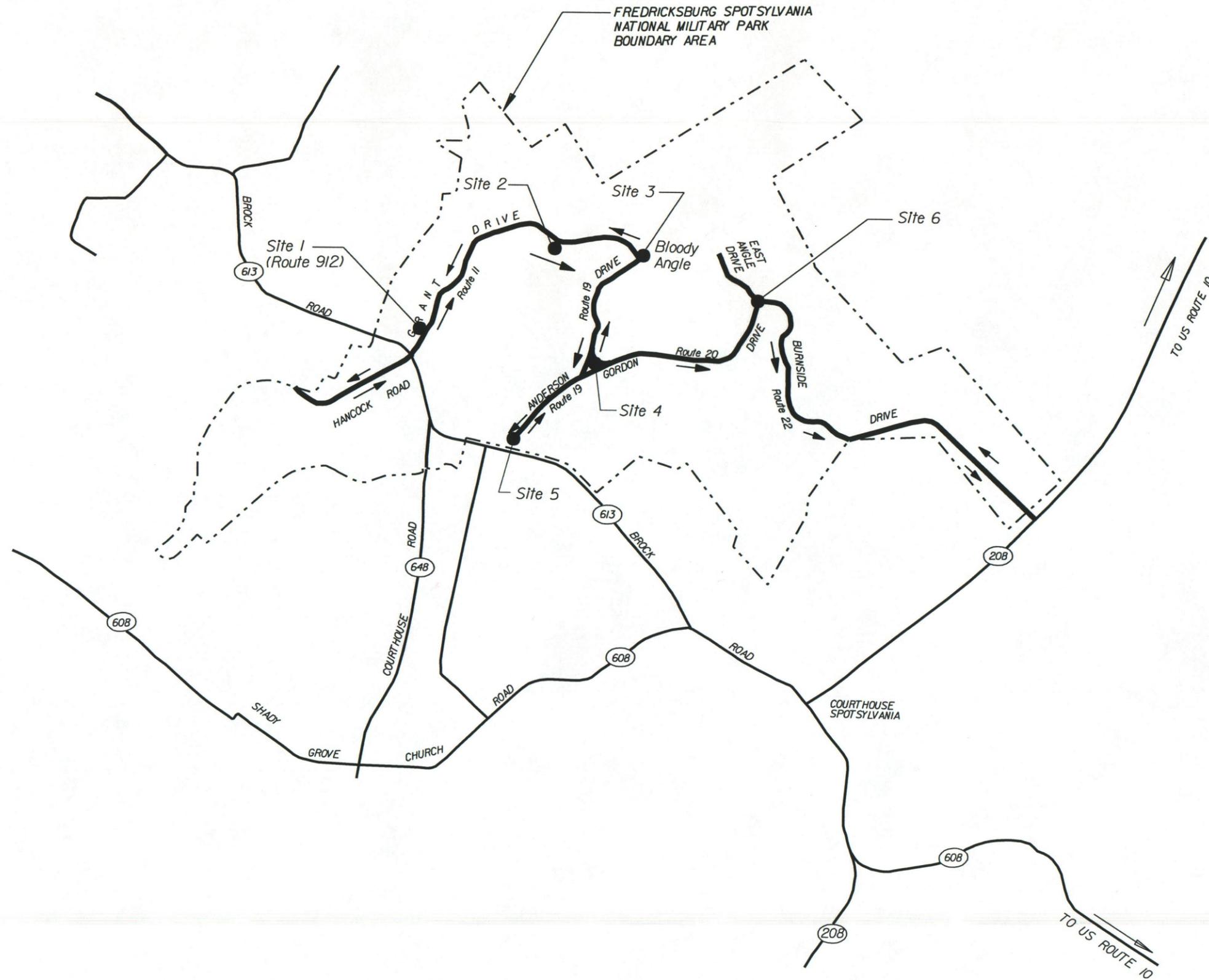
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA
AUGUST 2006

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PROJECT MANAGER	DESIGNER
ROBERT MORRIS	Y. EYFA

FINAL PLANS

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP II(D), 19(I), Etc.	2	64



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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

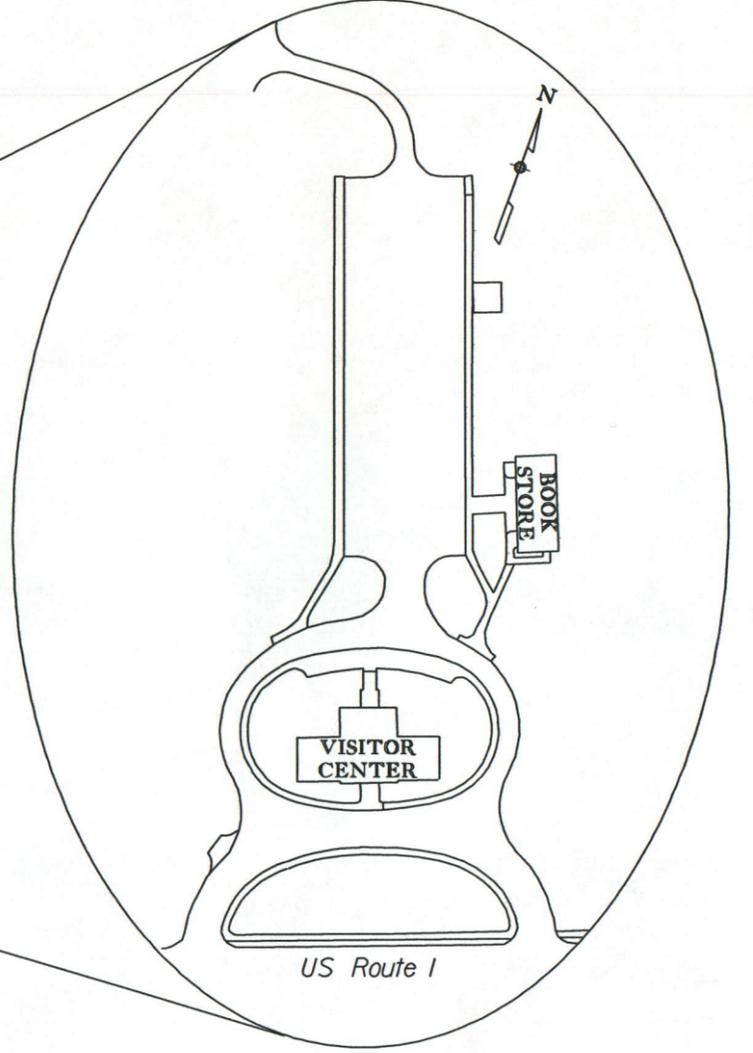
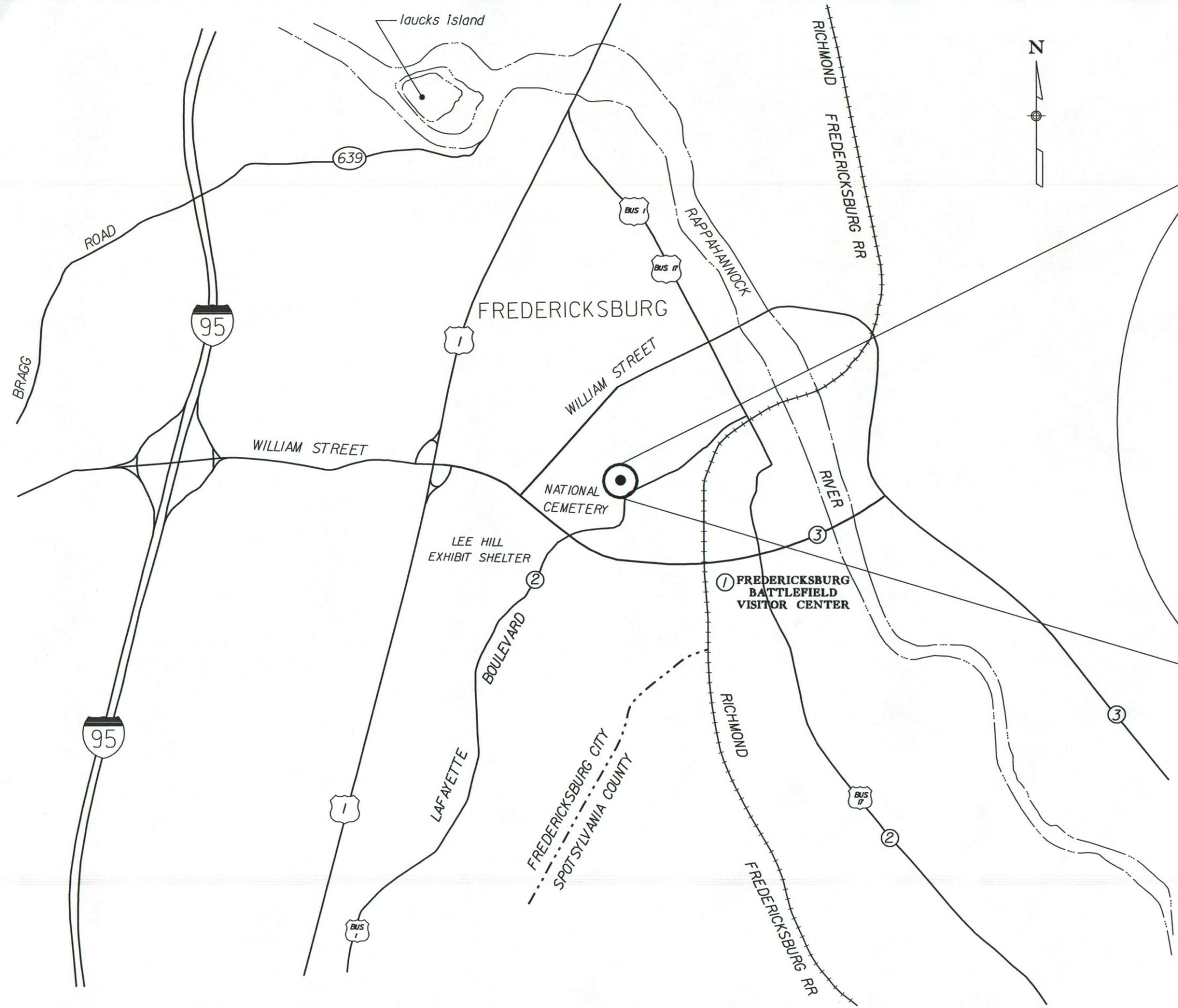
FREDRICKSBURG AND SPOTSYLVANIA
NATIONAL MILITARY PARK

LOCATION MAP
ROUTES 11, 19, 20, 22 & 912

SHEET 1 OF 3

← Direction of traffic →

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326	NE	VA	PRA-FRSP II(I), 19(I), Etc.	3	64
41,903					



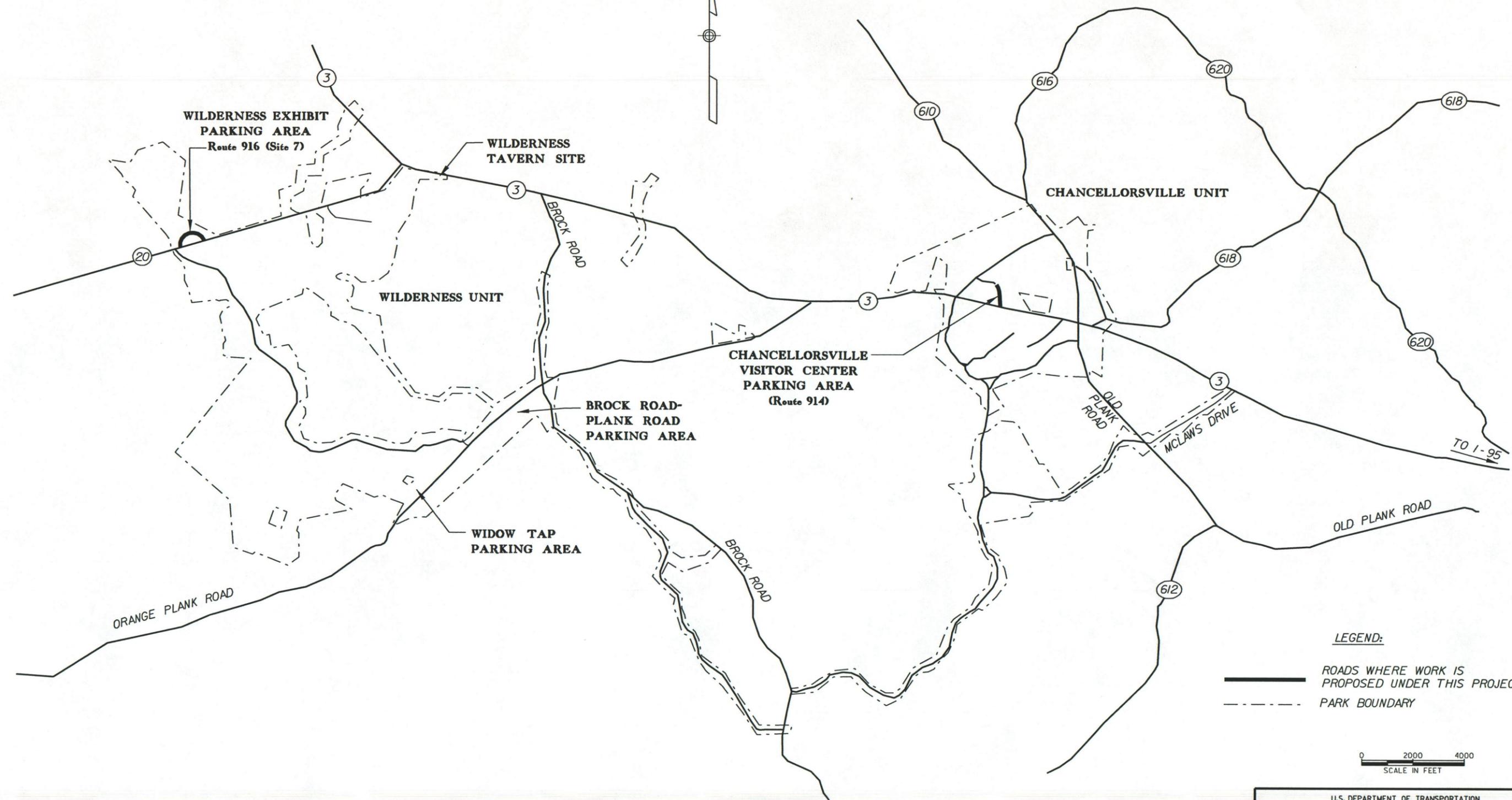
FREDERICKSBURG VISITOR CENTER
PARKING AREA
(ROUTE 900)

0 1500 3000
SCALE IN FEET

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA
FREDERICKSBURG AND SPOTSYLVANIA
NATIONAL MILITARY PARK
LOCATION MAP
ROUTE 900

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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP II(I), 19(I), Etc.	4	64



LEGEND:
 ——— ROADS WHERE WORK IS PROPOSED UNDER THIS PROJECT
 - - - - - PARK BOUNDARY



U.S. DEPARTMENT OF TRANSPORTATION
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 STERLING, VIRGINIA

FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK

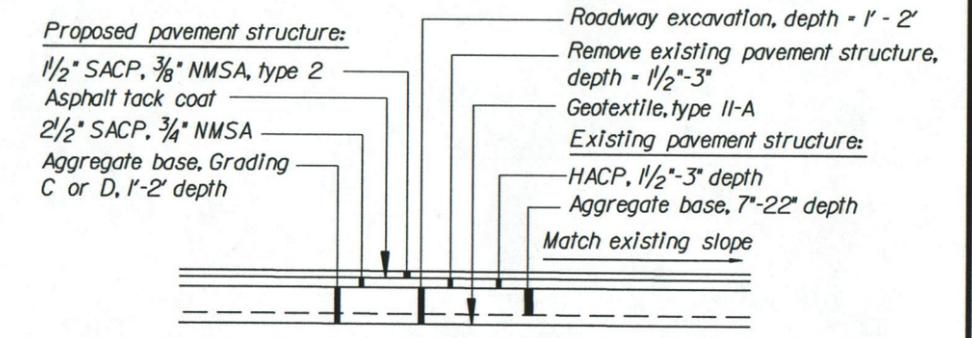
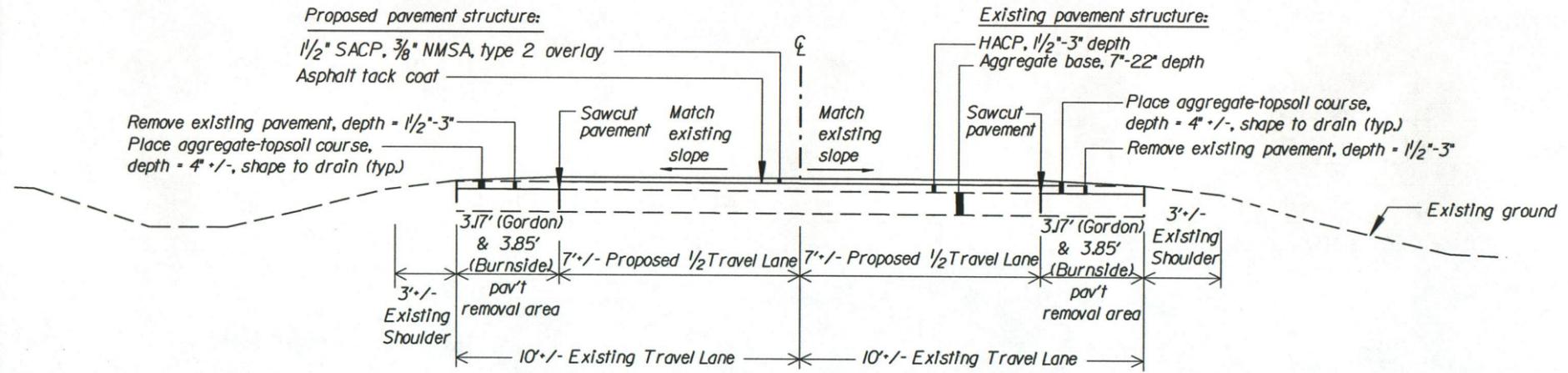
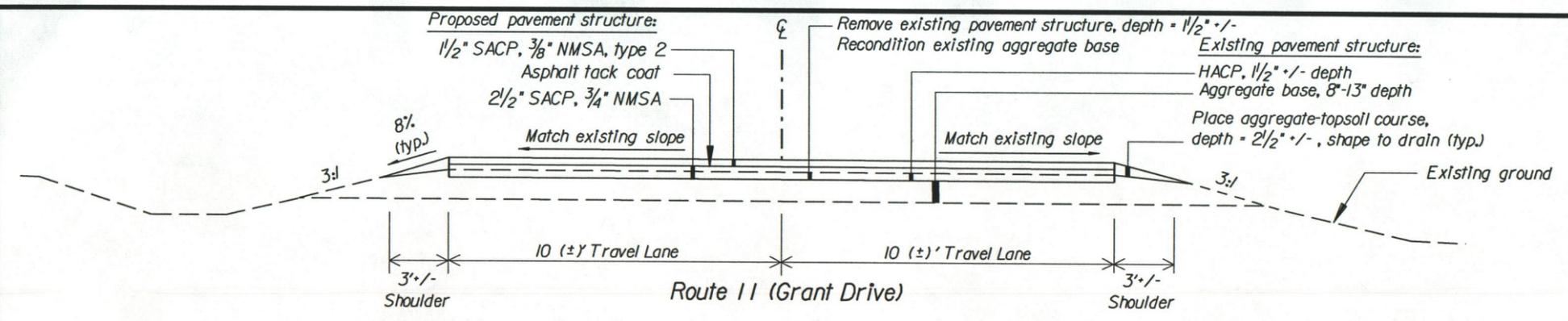
LOCATION MAP
 ROUTES 914 & 916 (SITE 7)

Sheet 3 of 3

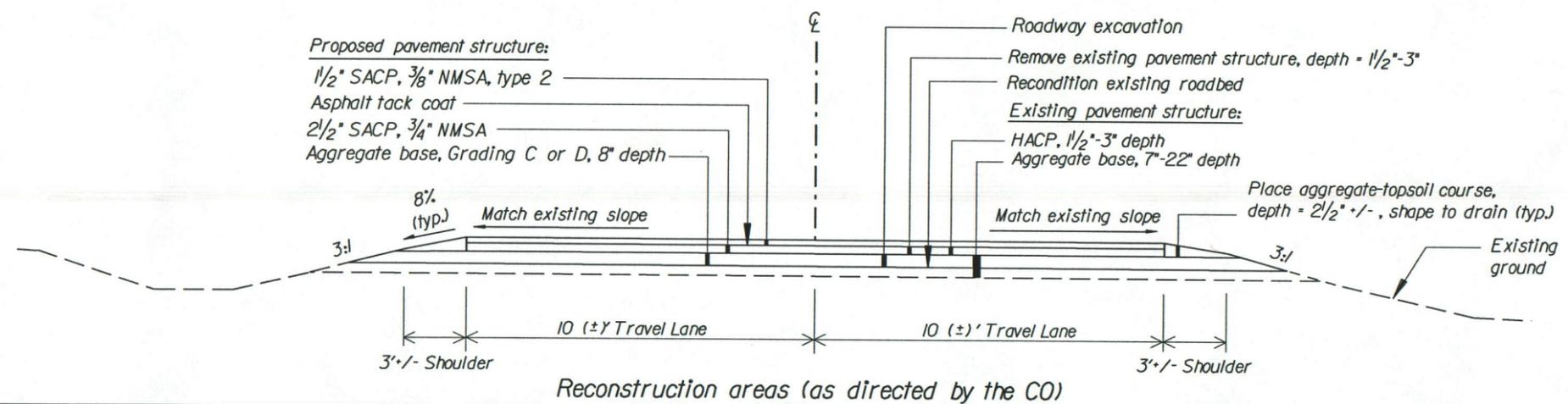
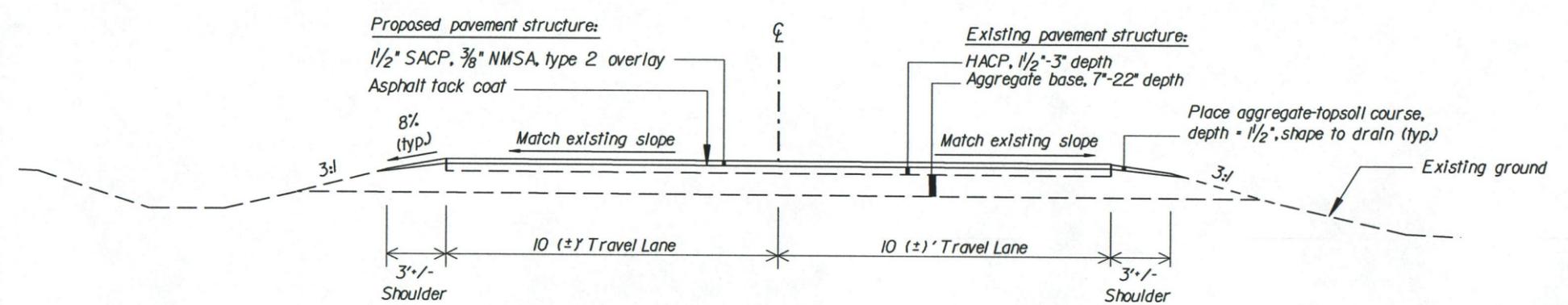
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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41903	NE	VA	PRA-FRSP III(I), 19(I), Etc.	5	64

- Notes:
1. The maximum algebraic difference in cross slope between the shoulder slope and the adjacent travel lane is 8 percent.
 2. Provide topsoil 4" depth, and turf establishment on all disturbed areas except the travel lanes.
 3. Call Miss Utility of VA at 1-800-552-7001 before digging.



SUBEXCAVATION OF UNSUITABLE MATERIAL DETAIL where directed by the CO



PAVEMENT ABBREVIATIONS

Type	Description
SACP, 3/8" NMSA, type 2 (surface course)	Superpave Asphalt Concrete Pavement, 3/8" nominal maximum size aggregate, <0.3 million ESAL's, type 2 pavement smoothness
SACP, 3/4" NMSA (binder course)	Superpave Asphalt Concrete Pavement, 3/4" nominal maximum size aggregate, <0.3 million ESAL's

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 STERLING, VIRGINIA

FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK

TYPICAL SECTIONS
 ROUTES 11, 19, 20 & 22

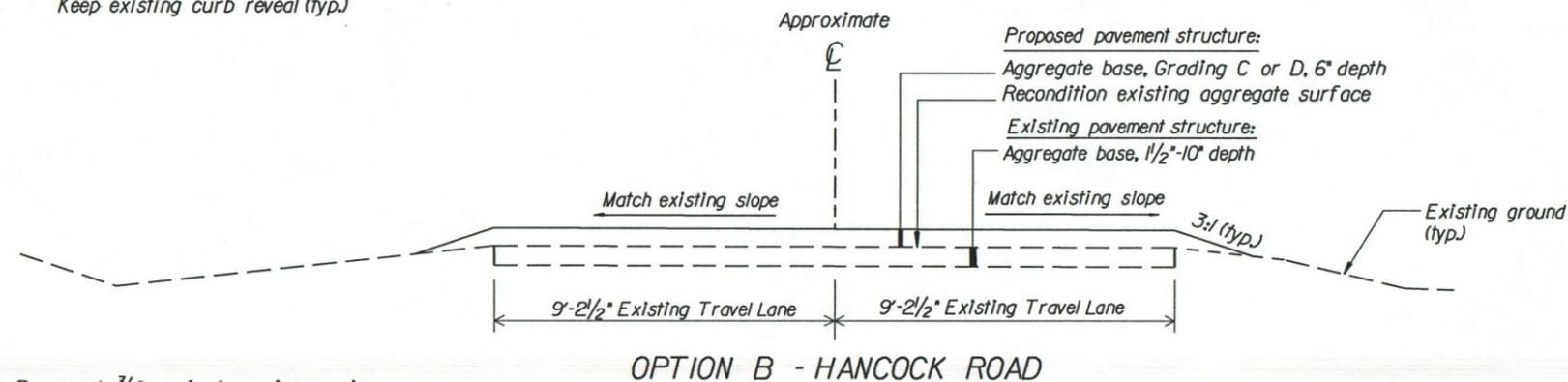
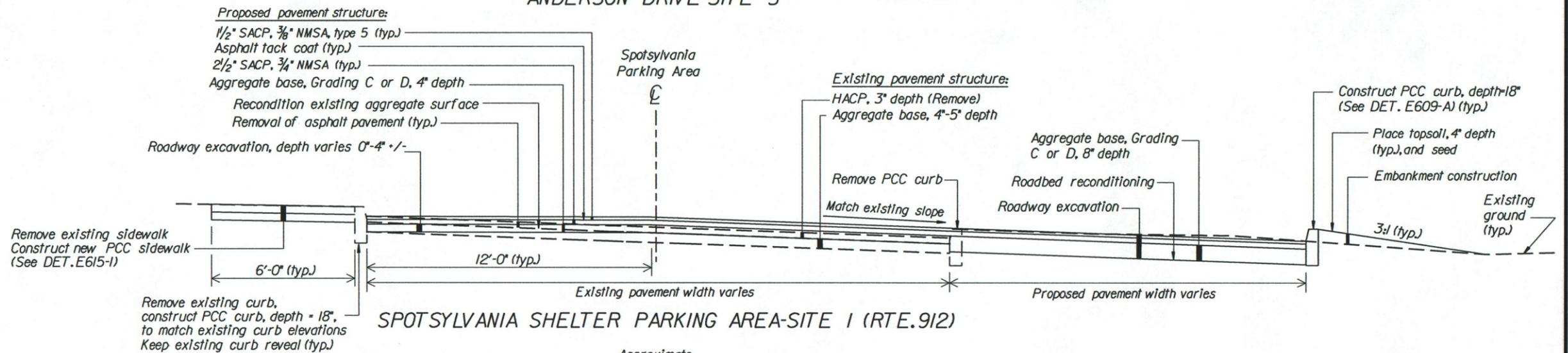
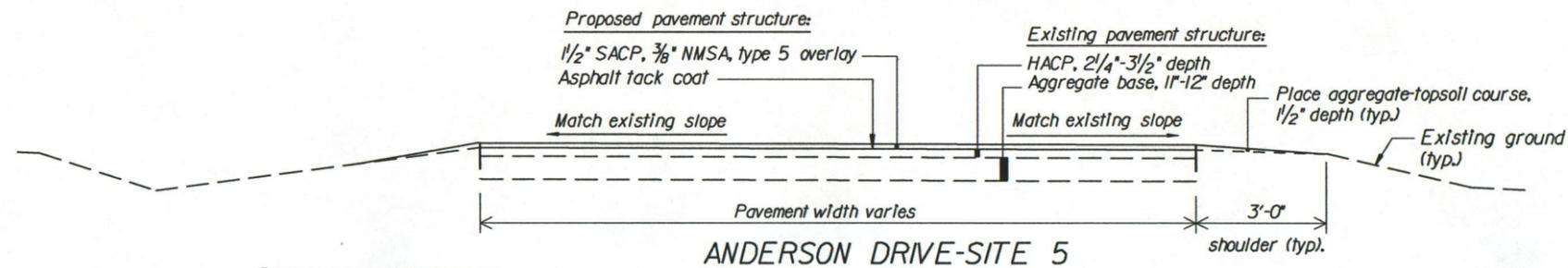
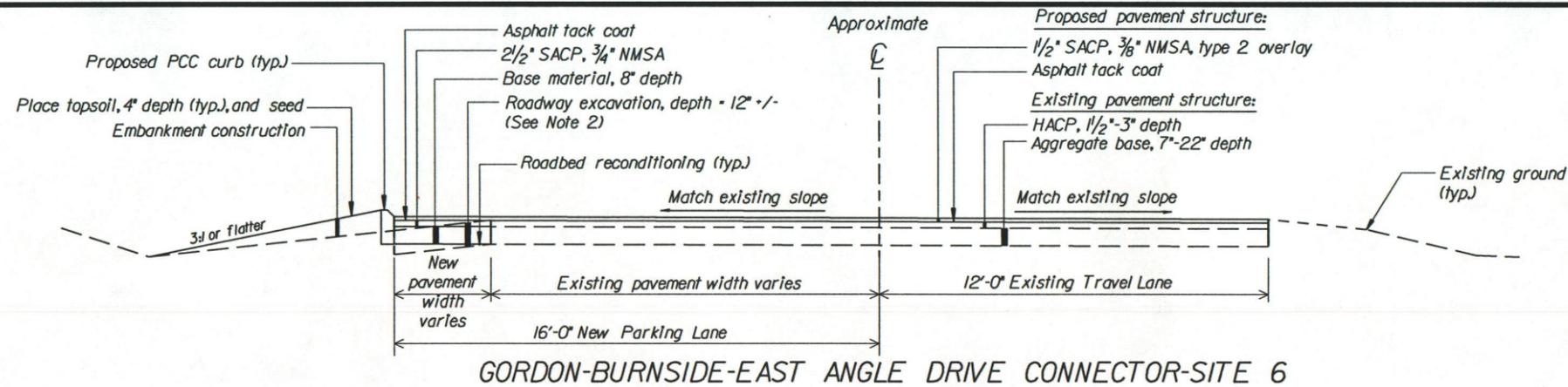
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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41903	NE	VA	PRA-FRSP 11(1), 19(1), Etc.	6	64

Notes:

1. Provide topsoil 4" depth, and turf establishment on all disturbed areas except the travel lanes.
2. Remove top 12-inches of existing material at the new pulloff location (roadway excavation), recondition the new roadbed in accordance with Section 303 of the FP-03. Waste the upper 4 inches of excavated material or reuse as topsoil, & reuse the bottom 8-inches as aggregate base.
3. Call Miss Utility of VA at 1-800-552-7001 before digging.



PAVEMENT ABBREVIATIONS

Type	Description
SACP, 3/8" NMSA, type 2 (surface course)	Superpave Asphalt Concrete Pavement, 3/8" nominal maximum size aggregate, <0.3 million ESAL's, type 2 pavement smoothness
SACP, 3/8" NMSA, type 5 (surface course)	Superpave Asphalt Concrete Pavement, 3/8" nominal maximum size aggregate, <0.3 million ESAL's, type 5 pavement smoothness
SACP, 3/4" NMSA (binder course)	Superpave Asphalt Concrete Pavement, 3/4" nominal maximum size aggregate, <0.3 million ESAL's

NOT TO SCALE

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 FEDERAL HIGHWAY ADMINISTRATION
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 STERLING, VIRGINIA
 FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK
TYPICAL SECTIONS
 PARKING AREAS -
 SITES 1(RTE. 912), 5, & 6 &
 OPTION B - HANCOCK ROAD

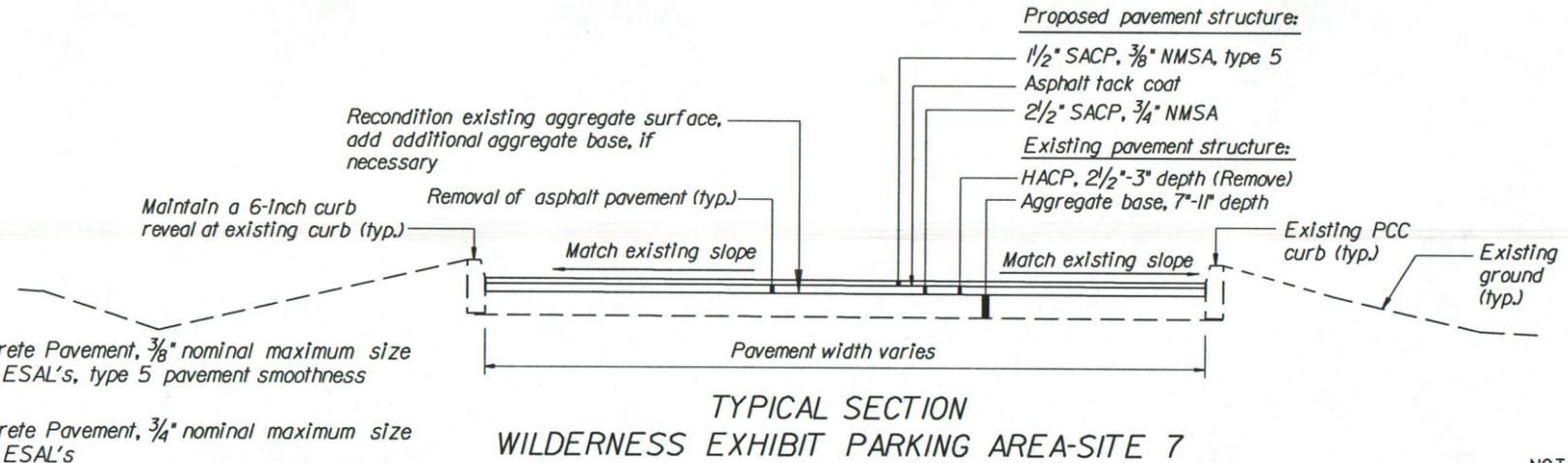
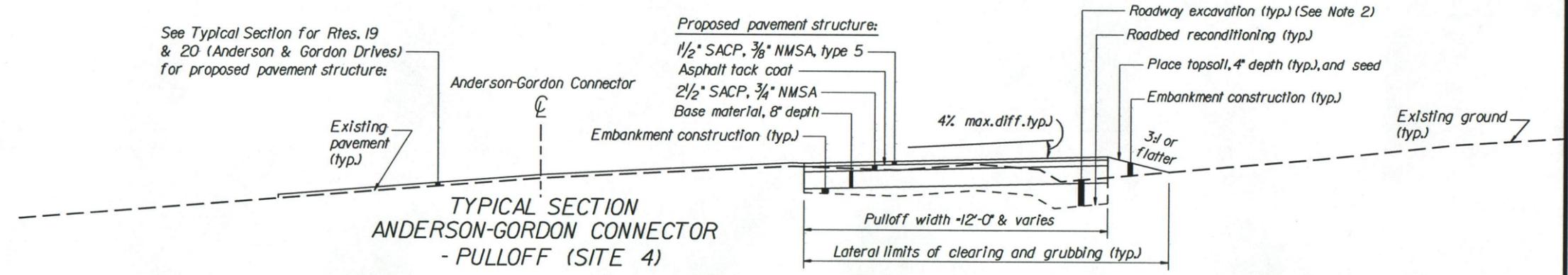
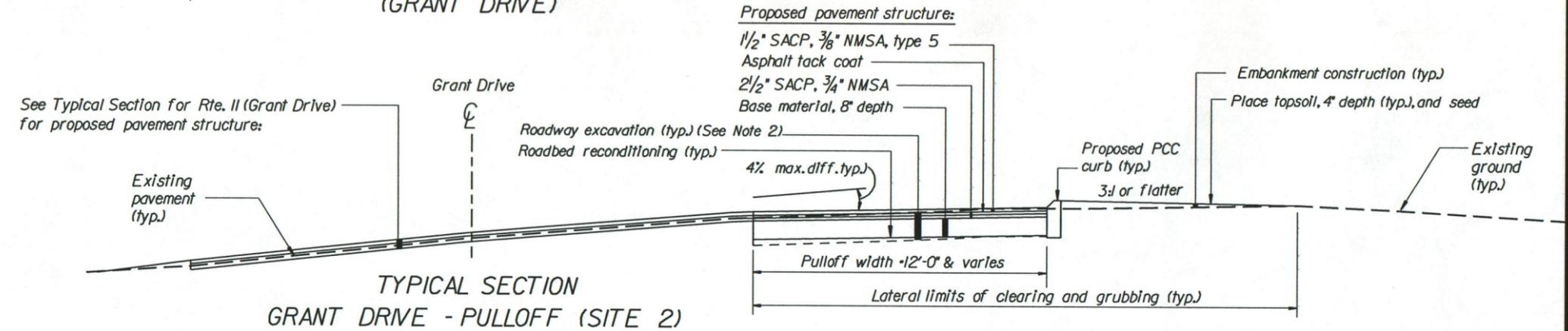
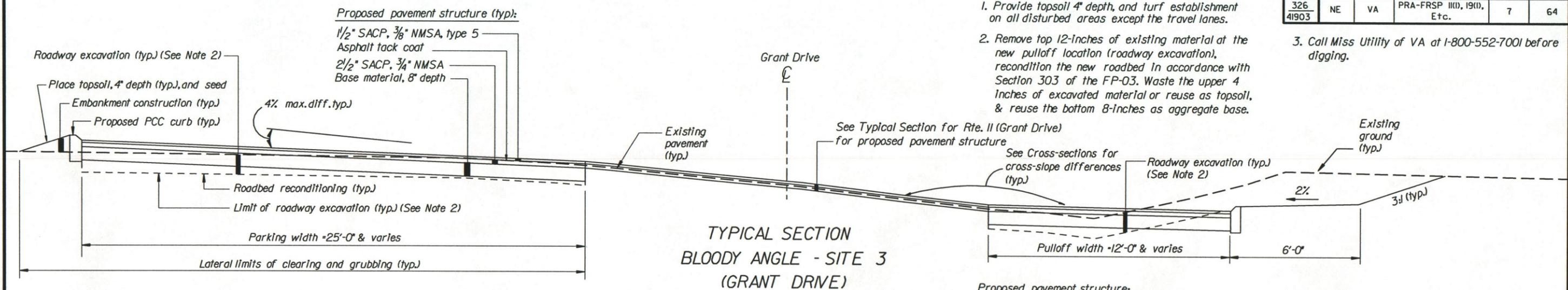
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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41903	NE	VA	PRA-FRSP III(D), 19(D), Etc.	7	64

Notes:

1. Provide topsoil 4" depth, and turf establishment on all disturbed areas except the travel lanes.
2. Remove top 12-inches of existing material at the new pulloff location (roadway excavation), recondition the new roadbed in accordance with Section 303 of the FP-03. Waste the upper 4 inches of excavated material or reuse as topsoil, & reuse the bottom 8-inches as aggregate base.

3. Call Miss Utility of VA at 1-800-552-7001 before digging.



PAVEMENT ABBREVIATIONS

Type	Description
SACP, 3/8" NMSA, type 5 (surface course)	Superpave Asphalt Concrete Pavement, 3/8" nominal maximum size aggregate, <0.3 million ESAL's, type 5 pavement smoothness
SACP, 3/4" NMSA (binder course)	Superpave Asphalt Concrete Pavement, 3/4" nominal maximum size aggregate, <0.3 million ESAL's

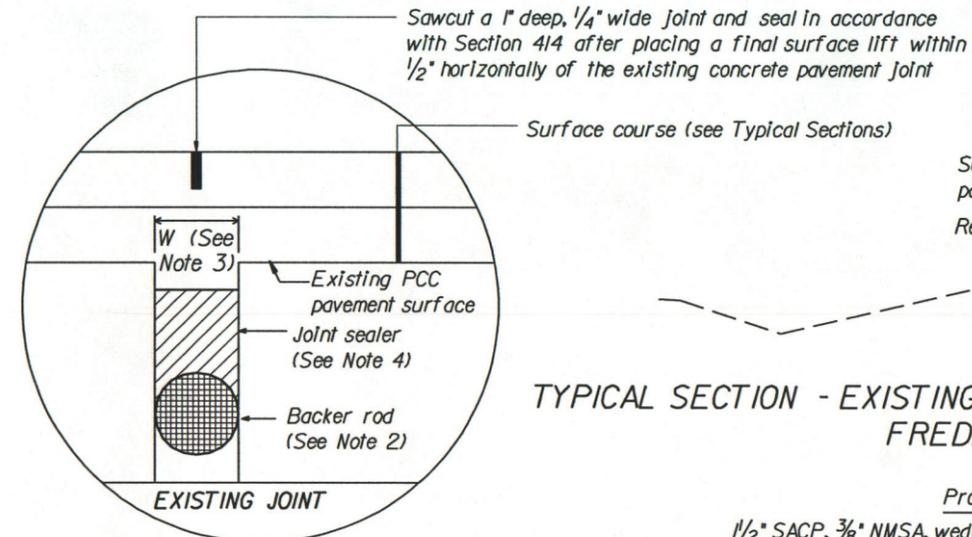
U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA
 FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK
TYPICAL SECTIONS
 PULLOFFS & PARKING AREAS
 - SITES 2, 3, 4 & 7

NOT TO SCALE

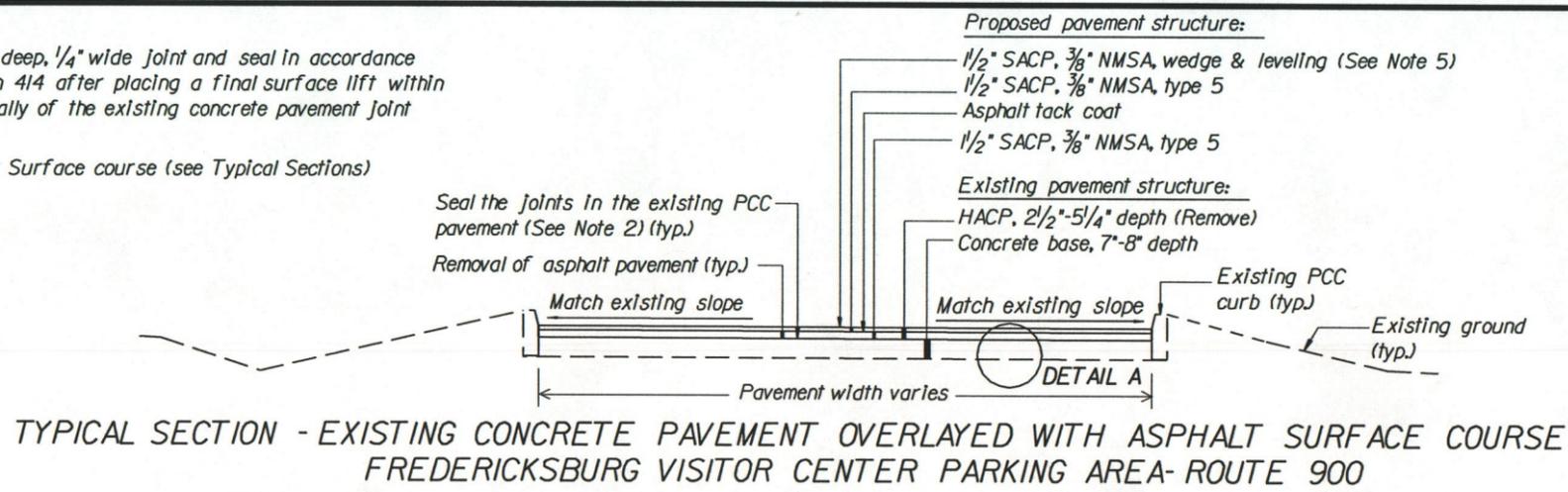
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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41903	NE	VA	PRA-FRSP II(I), 19(I), Etc.	8	64

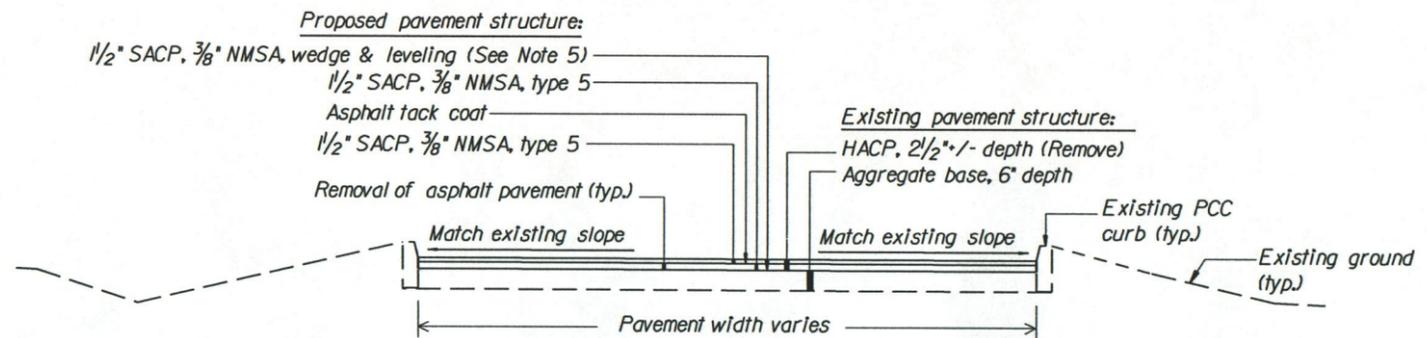
- Notes:
1. Provide topsoil 4" depth, and turf establishment on all disturbed areas except the travel lanes.
 2. At the Fredericksburg Visitor Center Parking Area, identify & record the location of longitudinal & transverse cracks corresponding to the existing PCC joints prior to asphalt pavement milling. Perform joint sealing of the PCC in accordance with Section 414 of the FP. Place a backer rod in the existing PCC joint in accordance with subsection 712.01(g). Measure joint width in the field after milling is completed to properly identify the backer rod size. Apply a hot-poured joint sealant for rigid & asphalt pavement in accordance with subsection 712.01(a)-(2) at the existing joints. Maintain a width-to-depth ratio of 1:1 for the joint material.
 3. Determine joint width (W) after milling (measure existing joint).
 4. Maintain joint sealant width to depth ratio of 1:1.
 5. Use wedge and leveling course before placing two overlay lifts to reestablish smooth surface while maintaining a 4" curb reveal at the Fredericksburg Visitor Center Parking Area.
 6. Call Miss Utility of VA at 1-800-552-7001 before digging.



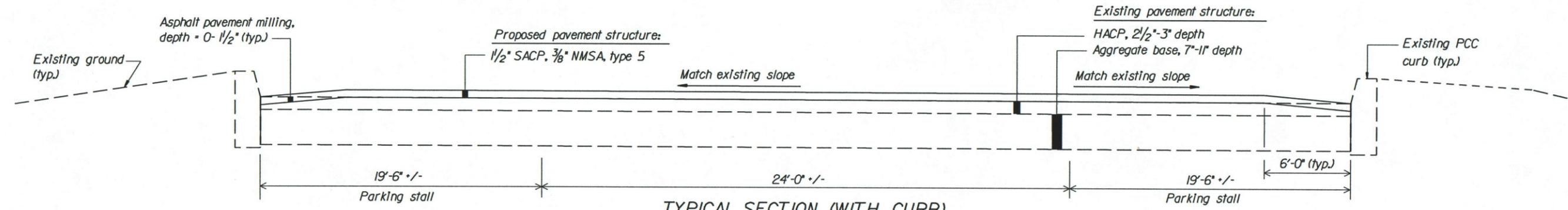
REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
JOINT SEALING DETAILS
DETAIL A



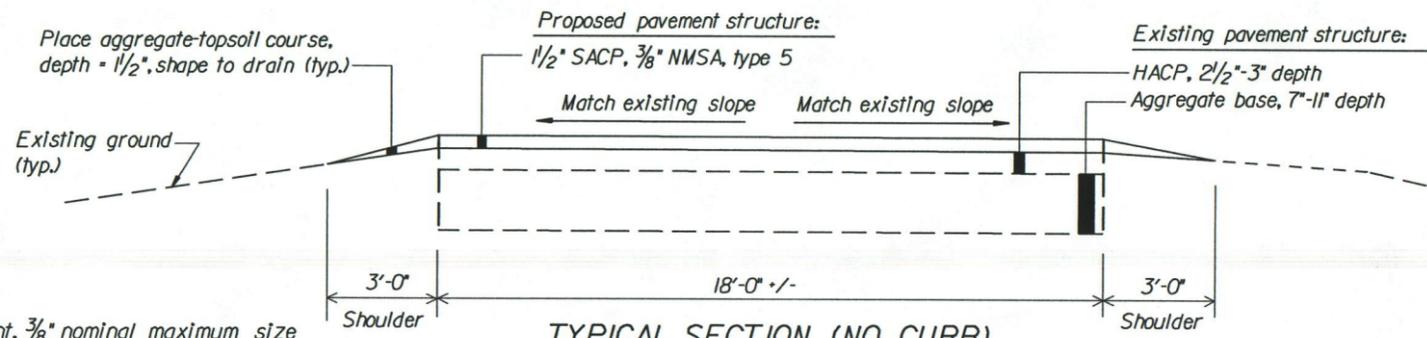
TYPICAL SECTION - EXISTING CONCRETE PAVEMENT OVERLAYED WITH ASPHALT SURFACE COURSE
FREDERICKSBURG VISITOR CENTER PARKING AREA-ROUTE 900



TYPICAL SECTION - EXISTING ASPHALT PAVEMENT
FREDERICKSBURG VISITOR CENTER PARKING AREA-ROUTE 900



TYPICAL SECTION (WITH CURB)
CHANCELLORSVILLE VISITOR CENTER PARKING AREA-ROUTE 914



TYPICAL SECTION (NO CURB)
CHANCELLORSVILLE VISITOR CENTER
PARKING AREA-ROUTE 914

PAVEMENT ABBREVIATIONS

Type	Description
SACP, 3/8" NMSA wedge & leveling	Superpave Asphalt Concrete Pavement, 3/8" nominal maximum size aggregate, <0.3 million ESAL's, wedge and leveling
SACP, 3/8" NMSA, type 5 (surface course)	Superpave Asphalt Concrete Pavement, 3/8" nominal maximum size aggregate, <0.3 million ESAL's, type 5 pavement smoothness
SACP, 3/4" NMSA (binder course)	Superpave Asphalt Concrete Pavement, 3/4" nominal maximum size aggregate, <0.3 million ESAL's

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA

FREDERICKSBURG AND SPOTSYLVANIA
NATIONAL MILITARY PARK

TYPICAL SECTIONS
PARKING AREAS
ROUTES 900 & 914

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Plan Sheet No. ----->>

Item No.	Item Description	Unit		Total	
				Plan	Bid Schedule
15101-0000	MOBILIZATION	LPSM		ALL	ALL
15201-0000	CONSTRUCTION SURVEY AND STAKING	LPSM		ALL	ALL
15401-0000	CONTRACTOR TESTING	LPSM		ALL	ALL
15705-0100	SOIL EROSION CONTROL, SILT FENCE	LNFT	3000	3000	3,000
15706-0200	SOIL EROSION CONTROL, CHECK DAM	EACH	40	40	40
15706-1000	SOIL EROSION CONTROL, INLET PROTECTION	EACH	13	13	13
20101-0000	CLEARING AND GRUBBING	ACRE	0.3	0.3	0.3
20220-1000	REMOVAL, INDIVIDUAL TREE	EACH	4	4	4
20301-0100	REMOVAL OF BOLLARD	EACH	10	10	10
20301-1400	REMOVAL OF INLET	EACH	1	1	1
20301-2000	REMOVAL OF PIPE END SECTION	EACH	1	1	1
20301-2400	REMOVAL OF SIGN	EACH	6	6	6
20301-3400	REMOVAL OF WHEELSTOP	EACH	4	4	4
20302-0500	REMOVAL OF CURB, CONCRETE	LNFT	450	450	450
20302-2100	REMOVAL OF PIPE CULVERT	LNFT	44	44	44
20303-1600	REMOVAL OF PAVEMENT, ASPHALT	SQYD	32160	32160	32,160
20303-3000	REMOVAL OF SIDEWALK, ASPHALT	SQYD	145	145	145
20303-3100	REMOVAL OF SIDEWALK, BRICK	SQYD	2	2	2
20303-3200	REMOVAL OF SIDEWALK, CONCRETE	SQYD	290	290	290
20315-0000	SAWCUTTING PAVEMENT	LNFT	21000	21000	21,000
20401-0000	ROADWAY EXCAVATION	CUYD	500	500	500
20701-0700	EARTHWORK GEOTEXTILE, TYPE II-A	SQYD	40	40	40
21101-2000	ROADWAY OBLITERATION, METHOD 2	SQYD	5000	5000	5,000
30101-4000	AGGREGATE BASE GRADING C OR D	TON	660	660	660
30303-1000	ROADBED RECONDITIONING	SQYD	1060	1060	1,060
30303-2000	AGGREGATE SURFACE RECONDITIONING	SQYD	16665	16665	16,665
30502-0200	AGGREGATE-TOPSOIL COURSE, 1 1/2-INCH DEPTH	SQYD	6110	6110	6,110
30502-0400	AGGREGATE-TOPSOIL COURSE, 2 1/2-INCH DEPTH	SQYD	4065	4065	4,065
30502-0700	AGGREGATE-TOPSOIL COURSE, 4-INCH DEPTH	SQYD	8145	8145	8,145
40101-0100	SUPERPAVE PAVEMENT, 3/8-INCH NOMINAL MAXIMUM SIZE AGGREGATE, <0.3 MILLION ESAL, type 2 pavement smoothness	TON	4100	4100	4,100
40101-0100	SUPERPAVE PAVEMENT, 3/8-INCH NOMINAL MAXIMUM SIZE AGGREGATE, <0.3 MILLION ESAL type 5 pavement smoothness	TON	1240	1240	1,240
40101-0900	SUPERPAVE PAVEMENT, 3/4-INCH NOMINAL MAXIMUM SIZE AGGREGATE, <0.3 MILLION ESAL	TON	2505	2505	2,505

Plan Sheet No. ----->>

Item No.	Item Description	Unit		Total	
				Plan	Bid Schedule
40102-0100	SUPERPAVE PAVEMENT, 3/8-INCH NOMINAL MAXIMUM SIZE AGGREGATE, <0.3 MILLION ESAL, WEDGE AND LEVELING COURSE	TON	100	100	100
41301-0400	ASPHALT PAVEMENT MILLING, 1 1/2-INCH DEPTH	SQYD	760	760	760
41405-0000	SAW CUTTING AND JOINT SEALING (FREDERICKSBURG VISITOR CENTER)	LNFT	2500	2500	2,500
50202-0000	SEALING JOINTS AND CRACKS (FREDERICKSBURG VISITOR CENTER)	LNFT	2500	2500	2,500
60201-0500	15-INCH PIPE CULVERT	LNFT	46	46	46
60210-0800	END SECTION FOR 24-INCH PIPE CULVERT	EACH	1	1	1
60403-1900	INLET, TYPE 6B	EACH	1	1	1
60412-1000	REMOVE AND RESET METAL FRAME AND GRATE	EACH	10	10	10
60704-0000	CLEANING CULVERT IN PLACE	EACH	19	19	19
60801-0400	PAVED WATERWAY, TYPE 4	SQYD	11	11	11
60811-0000	DRAINAGE CHUTE	EACH	3	3	3
60901-1500	CURB, CONCRETE, 16-INCH DEPTH	LNFT	1600	1600	1,600
60901-1700	CURB, CONCRETE, 18-INCH DEPTH	LNFT	475	475	475
61501-0100	SIDEWALK, CONCRETE	SQYD	300	300	300
61501-0800	SIDEWALK, AGGREGATE	SQYD	225	225	225
61504-1000	ACCESSIBILITY RAMP, CONCRETE	SQYD	25	25	25
61504-5000	ACCESSIBILITY RAMP, BRICK	SQYD	2	2	2
61904-0000	BOLLARD POST	EACH	10	10	10
61921-1000	REMOVE AND RESET FENCE	LNFT	80	80	80
62401-0300	FURNISHING AND PLACING TOPSOIL, 4-INCH DEPTH	SQYD	5660	5660	5,660
62501-0000	TURF ESTABLISHMENT	ACRE	1.2	1.2	1.2
63304-0900	SIGNS, ALUMINUM PANELS, TYPE 3 SHEETING	SQFT	31	31	31
63316-1000	REMOVE AND RESET SIGN	EACH	3	3	3
63401-1500	PAVEMENT MARKINGS, TYPE H, SOLID	LNFT	7000	7000	7,000
63405-2950	PAVEMENT MARKINGS, TYPE H, STRAIGHT ARROW	EACH	4	4	4
63405-3250	PAVEMENT MARKINGS, TYPE H, ACCESSIBILITY SYMBOL	EACH	8	8	8
63501-0000	TEMPORARY TRAFFIC CONTROL	LPSM		ALL	ALL
63602-6000	SYSTEM INSTALLATION, TRAFFIC DETECTOR SYSTEM	EACH	2	2	2
63602-6020	SYSTEM INSTALLATION, TRAFFIC DETECTOR WIRE LOOP	EACH	2	2	2
63701-0000	FIELD OFFICE	EACH	1	1	1

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 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA
 FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK
**TABULATION OF
 QUANTITIES -
 SCHEDULE A**

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP 11(I), 19(I), ETC.	10	64

Project Name: FREDERICKSBURG AND SPOTSYLVANIA NATIONAL MILITARY PARK REHABILITATE PARK ROADS - HANCOCK State: VA Project No.: PRA-FRSP 11(I), 19(I), 20(I), 22(I), 900(I), 914(I) & 916(I)

Plan Sheet No. ----->>										Total	
Item No.	Item Description	Unit								Plan	Bid Schedule
15401-0000	CONTRACTOR TESTING	LPSM								ALL	ALL
30101-4000	AGGREGATE BASE GRADING C OR D	TON	1750							1750	1,750
30303-2000	AGGREGATE SURFACE RECONDITIONING	SQYD	5000							5000	5,000
63501-0000	TEMPORARY TRAFFIC CONTROL	LPSM								ALL	ALL

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 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA
 FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK
**TABULATION OF
 QUANTITIES -
 SCHEDULE B**

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326	NE	VA	PRA-FRSP 110, 19(1), ETC.	11	64
41,903					

LOCATION NAME OF ROAD	Station to station	PRIMARY PROJECT ROADWAY (MILES)	INCIDENTAL ROADWAY (MILES)
Route 11 Grant Drive	0+00 to 56+12	1.06	
Spotsylvania Parking - Site 1 (Route 912)			0.05
Pulloff at Grant Drive - Site 2			0.02
Pulloffs at Grant Drive - Site 3			0.06
Route 19 Anderson Drive	56+50 to 95+98	0.75	
Pulloff at Anderson Drive (Site 4)			0.02
Collector Anderson Dr. to Gordon Dr.	228+25 to 230+75		0.05
Route 20 Gordon Drive	96+00 to 152+71	1.07	
Collector Gordon Dr. to Burnside Dr.	230+75 to 231+50		0.01
Route 22 Burnside Drive	152+71 to 228+25	1.43	
Route 916 Wilderness Exhibit Parking Area (Site 7)			0.04
Route 900 Fredericksburg Visitor Center Parking Area			0.10
Route 914 Chancellorsville Visitor Center Parking Area			0.18
Subtotal (miles)		4.31	0.53
Total (miles)		4.84	
Option B - Hancock Road	0+00 to 23+65	0.45	
Option B subtotal (miles)		0.45	0.00
Option B total (miles)		0.45	

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA
FREDERICKSBURG AND SPOTSYLVANIA
NATIONAL MILITARY PARK

**MILEAGE
TABULATION**

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8/17/2006

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP IIII, I9II, ETC.	12	64

LOCATION (station to station)	20303-1600 Removal of pavement, asphalt	20315-0000 Sawcutting pavement	20401-0000 Roadway excavation	Embankment construction	20701-0700 Earthwork geotextile, type II-A	21101-2000 Roadway obliteration, method 2	30101-4000 Aggregate base, grading C or D	30303-1000 Roadbed reconditioning	30303-2000 Aggregate surface reconditioning	30502-0200 Aggregate- topsoil course, 1.5" depth	30502-0400 Aggregate- topsoil course, 2.5" depth	30502-0700 Aggregate- topsoil course, 4" depth	40101-0100 SACP, 3/8" nom. max. aggr., <0.3 <0.3 mil. ESALs, type 2 pav't sm.	40101-0100 SACP, 3/8" nom. max. aggr., <0.3 <0.3 mil. ESALs, type 5 pav't sm.	40101-0900 SACP, 3/4" nom. max. aggr., <0.3 mil. ESALs	40101-0100 SACP, 3/8" nom. max. aggr., <0.3 <0.3 mil. ESALs, wedge & level	41301-0400 Asphalt pavement milling, 1.5" depth	41405-0000 Saw cutting and joint sealing	50202-0000 Sealing joints and cracks	62401-0300 Furnishing & placing topsoil, 4" depth	
	(sqyd)	(lnft)	(cuyd)	(cuyd)	(sqyd)	(sqyd)	(ton)	(sqyd)	(sqyd)	(sqyd)	(sqyd)	(sqyd)	(ton)	(ton)	(ton)	(ton)	(sqyd)	(lnft)	(lnft)	(sqyd)	
Route 11 Grant Drive 0+00 to 56+12	12284								12284		3696		1034		1728						
Spotsylvania Parking - Site 1(Rte. 912)	845		92				263	184	845					87	145						106
Pulloff at Grant Drive - Site 2			23	27	4		46	107						9	15						80
Pulloffs at Grant Drive - Site 3	147		294	23	30	110	231	532						45	75						737
Site 6	4394		14	14	2	4858	18	41						4	6						4450
Route 19 Anderson Drive 56+50 to 95+98																					
Pulloff at Anderson Dr. - Site 4			20	3	4		42	99					764	9	14						17
Site 5														64							
Connector Anderson Dr. to Gordon Dr. 228+25 to 230+75													48		80						
Route 20 Gordon Drive 96+00 to 152+71	3513	10472																			
Connector Gordon Dr. to Burnside Dr. 230+75 to 231+50															25						
Route 22 Burnside Drive 152+71 to 212+00	3892	10478																			
212+00 to 228+25																					
Rte. 916 Wilderness Exhibit Parking Area (Site 7)	1362								1362					115	192						
Rte. 900 Fredericksburg Visitor Center Parking Area	2799								658					471	100		2500	2500			
Rte. 914 Chancellorsville Visitor Center Parking Area														326			690				
Subtotal	29236	20950	443	67	40	4968	600	963	15149	5556	3696	7405	3728	1130	2280	100	690	2500	2500	5390	
As directed	2924	50	57	3	0	32	60	97	1516	554	369	740	372	110	225	0	70	0	0	270	
Total	32160	21000	500	70	40	5000	660	1060	16665	6110	4065	8145	4100	1240	2505	100	760	2500	2500	5660	
Option B- Hancock Rd, 0+00 to 23+65 +/-							1649		4840												
Subtotal	0	0	0	0	0	0	1649	0	4840	0	0	0	0	0	0	0	0	0	0	0	
As directed							101		160	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	1750	0	5000	0	0	0	0	0	0	0	0	0	0	0	

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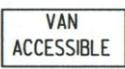
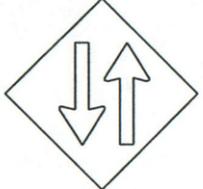
U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA
 FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK
**EARTHWORK & PAVING
 SUMMARY**

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP II(I), 19(I), ETC.	13	64

LOCATION (station to station)	20301-1400 Removal of inlet (each)	20301-2000 Removal of pipe end section (each)	20302-0500 Removal of curb, concrete (lnft)	20302-2100 Removal of pipe culvert (lnft)	20303-3000 Removal of sidewalk, asphalt (sqyd)	20303-3100 Removal of sidewalk, concrete (sqyd)	20303-3200 Removal of sidewalk, brick (sqyd)	60201-0500 15-inch pipe culvert (lnft)	60210-0800 End section for 24" pipe culvert (each)	60403-1900 Inlet, type 6B (each)	60412-1000 Remove & reset metal frame & grate (each)	60704-0000 Cleaning culverts in place (each)	60801-0400 Paved waterway, type 4 (sqyd)	60811-0000 Drainage chute (each)	60901-1500 Curb, concrete, 16" depth (lnft)	60901-1500 Curb, concrete, 18" depth (lnft)	61501-0100 Sidewalk, concrete (sqyd)	61501-0800 Sidewalk, aggregate (sqyd)	61504-1000 Accessibility ramp, concrete (sqyd)	61504-5000 Accessibility ramp, brick (sqyd)							
Route 11 Grant Drive 30+91 - 12" pipe culvert 33+30 - 12" pipe culvert 39+20 - 12" pipe culvert 49+30 - 12" pipe culvert Spotsylvania Parking - Site 1(Rte. 912) Pulloff at Grant Drive - Site 2 Pulloffs at Grant Drive - Site 3 Site 6	1		394	44	130	107		46		1		1 1 1 1						2		112 710 639	396	136		206	7		
Route 19 Anderson Drive 82+06 -12" pipe culvert 89+80 -12" pipe culvert Pulloff at Anderson Dr. - Site 4												1 1															
Route 20 Gordon Drive 109+35 - 18" pipe culvert 113+57 - 12" pipe culvert 125+57 - 12" pipe culvert 132+40 - 12" pipe culvert 137+55 - 12" pipe culvert 141+07 12" pipe culvert 145+81- pipe culvert												1 1 1 1 1 1 1															
Route 22 Burnside Drive 178+65 - 5'x5' box culvert 183+44 - 12" pipe culvert 188+24 - 18" pipe culvert 214+18 - 24" pipe culvert 217+84 12" pipe culvert												1 1 1 1 1															
Rte. 916 Wilderness Exhibit Parking Area (Site 7)		1	15			7			1			1										15				7	
Rte. 900 Fredericksburg Visitor Center Parking Area			7				2				9																2
Rte. 914 Chancellorsville Visitor Center Parking Area			15			148																15		140			9
Subtotal	1	1	431	44	130	262	2	46	1	1	9	19	11	3	1461	433	276	206	23	2							
As directed	0	0	19	0	15	28	0	0	0	0	0	0	0	0	139	42	24	19	2	0							
Total	1	1	450	44	145	290	2	46	1	1	9	19	11	3	1600	475	300	225	25	2							

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 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA
 FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK
**CURB, SIDEWALK &
 DRAINAGE SUMMARY**

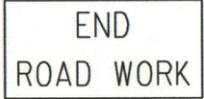
Sign No.	Text No.	Sign Text	LOCATION			PANEL SIZE					TEXT SIZE				Color Combination	Quantity	Total Area ft ²	Support 4"x4" Wood (No Pay)	Remarks
			Station	Side		Width inch	Height inch	Area ft ²	Corner Radii inch	Border Width inch	Margin Width inch	Numbers inch	Upper Case inch	Lower Case inch					
1	R2-1		Route 22 Sta. 156+00+/-	Rt.		24	30	5.0					See Note 3		Black on White	1	5	1x(1)x10.5 =10.5	See Plans Single Post
2	R4-7b		Site 6, Sta. 280+00+/-	Rt.		24	30	5.0					See Note 3		Black on White	1	5	1x(1)x10.5 =10.5	See Plans for Site 6 Single Post
3	R7-8		Sites 1,3,6,7 & Rte.914			12	18	1.5					See Note 3		White on Blue Combination	6	9	6x(1)x10.5 =63	See Plans for Sites 1,3,6,7 & Chancellorsville Parking Area (Rte.914)
4	R7-8b		Sites 1,3,6,7 & Rte.914			12	6	0.5					See Note 3		White on Blue	6	3	-	Mount on the same post as R7-8 sign
5	W6-3		Route 22 Sta. 212+00+/-	Rt.		36	36	9.0					See Note 3		Black on Yellow	1	9	-	See Plans, Replace sign panel, place new sign panel onto an existing sign post

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 8/17/2006

NOTES:
 1. Sign post supports shall be in accordance with Detail E633-1.
 2. Location are approximate only and will be as directed by the CO.
 3. Construct and erect all signs in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD), latest edition.

TOTAL	15	31	84
ROUNDED TOTAL	15	31	84

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA
 FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK
PERMANENT SIGN SUMMARY

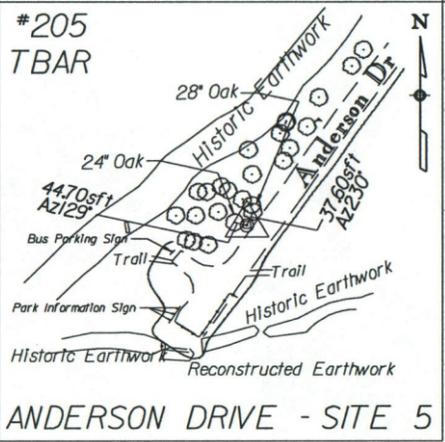
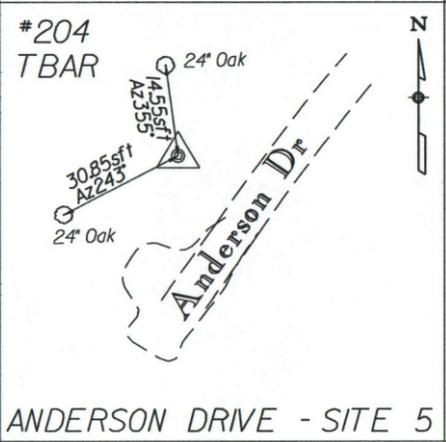
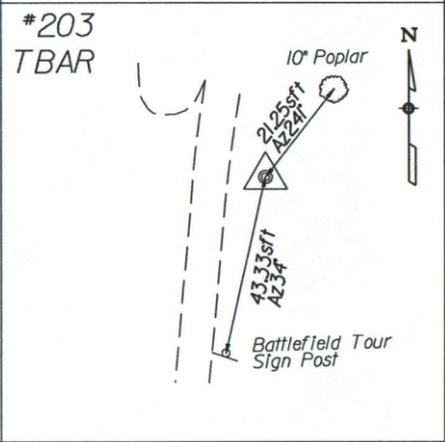
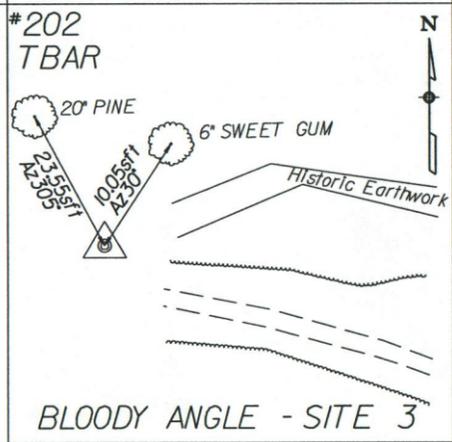
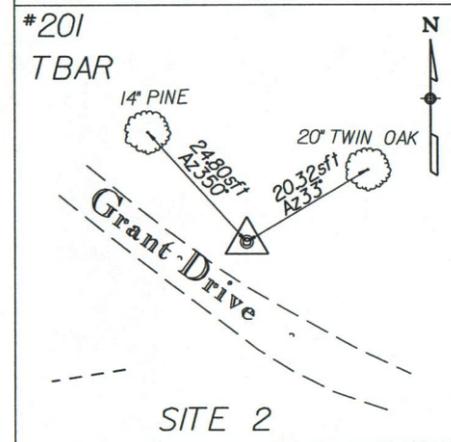
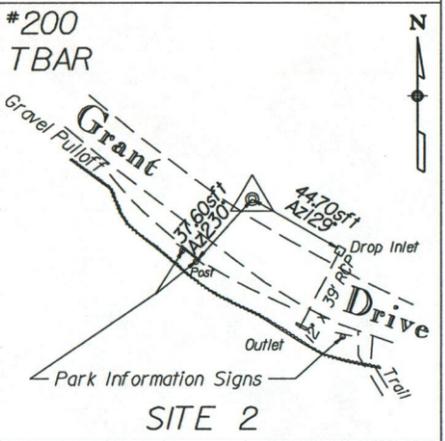
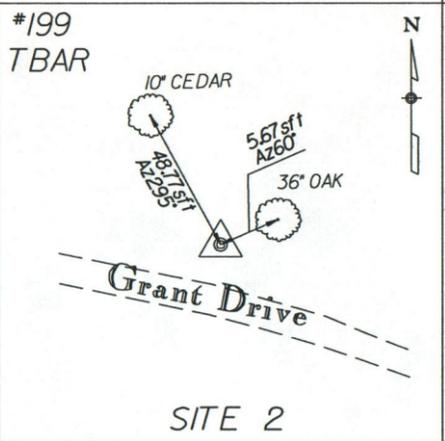
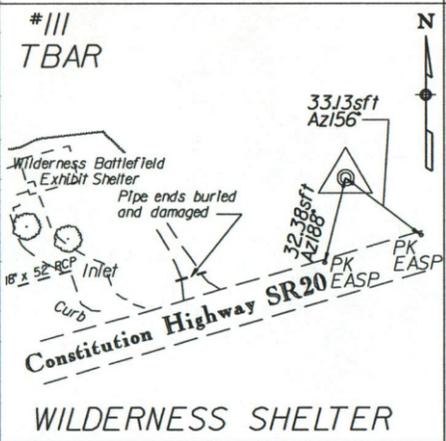
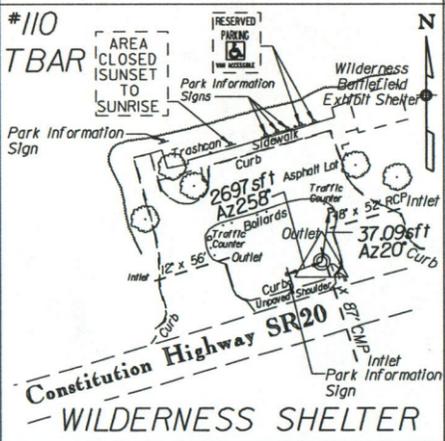
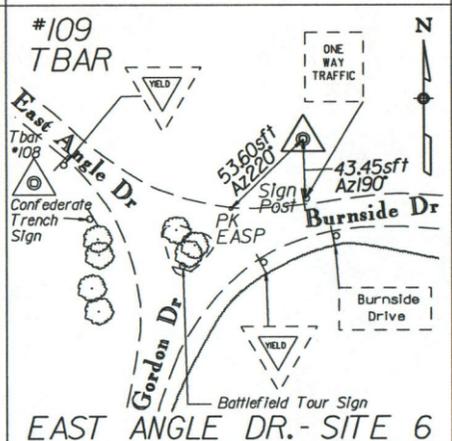
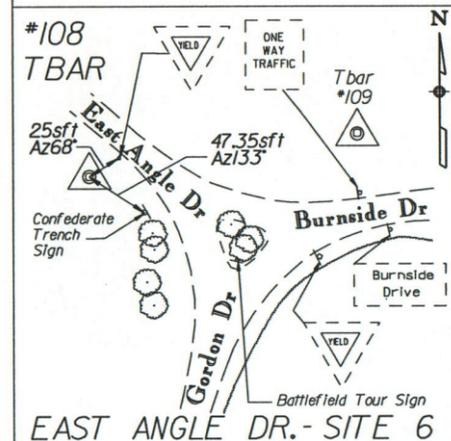
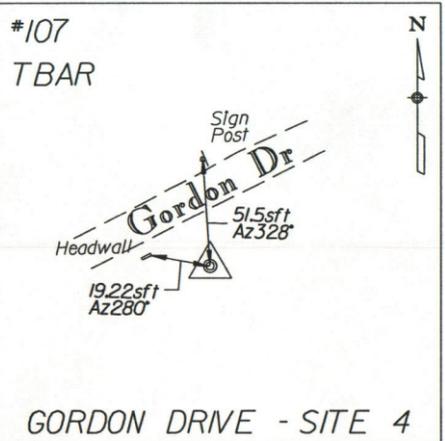
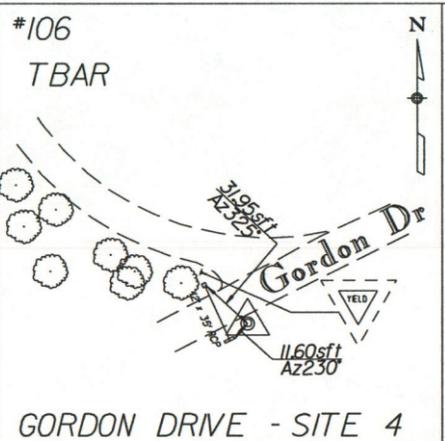
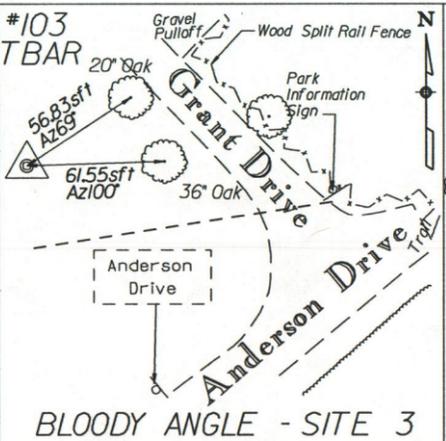
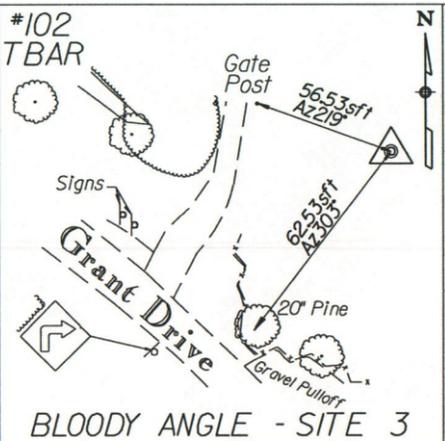
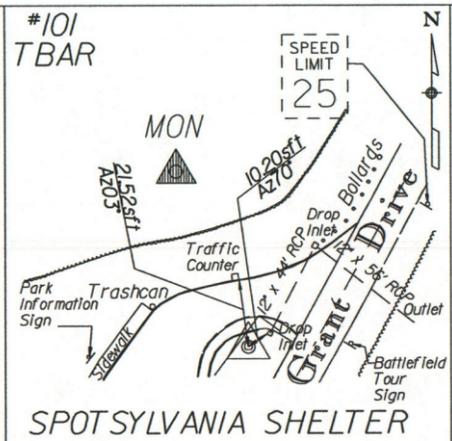
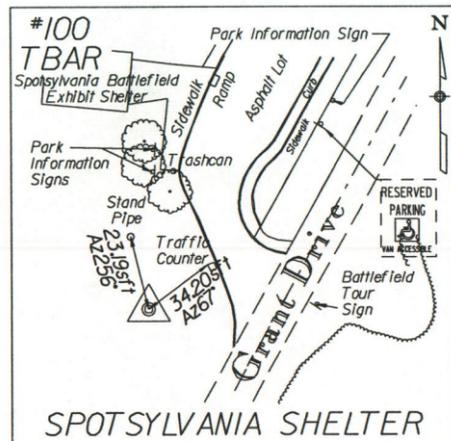
Sign No.	Text No.	Sign Text	LOCATION		PANEL SIZE					TEXT SIZE				Color Combination	Quantity	Total Area ff	Remarks
			Station	Side	Width inch	Height inch	Area ff	Corner Radii inch	Border Width inch	Margin Width inch	Numbers inch	Upper Case inch	Lower Case inch				
1	G20-2A		See note 2		36	18	4.5				See note 3			Black on Orange	2	9	4"x4" wood post or use portable sign See Det. E635-6 & E635-7
2	R11-2		See note 2		48	30	10				See note 3			Black on White	2	20	Mount on Type III barricade, place where closing the road, Anderson Drive, East Angle Drive, Fredericksburg Visitor Center Parking Area, and where directed by the CO.
3	W13-1		See note 2		24	24	4				See note 3			Black on Orange	2	8	Supplemental panel See Det. E635-6
4	W13-1		See note 2		18	18	2.25				See note 3			Black on Orange	1	2.25	Supplemental panel See Det. E635-7
5	W16-2		See note 2		24	18	3				See note 3			Black on Orange	2	6	Supplemental panel See Det. E635-6
6	W20-1		See note 2		36	36	9				See note 3			Black on Orange	2	18	4"x4" wood post or use portable sign See Det. E635-6 & E635-7
7	W20-4		See note 2		36	36	9				See note 3			Black on Orange	2	18	4"x4" wood post or use portable sign See Det. E635-6
8	W20-7A		See note 2		36	36	9				See note 3			Black on Orange	2	18	4"x4" wood post or use portable sign See Det. E635-6
9	W21-1A		Stage 1 See note 2		36	36	9				See note 3			Black on Orange	1	9	4"x4" wood post or use portable sign See Det. E635-7
10	W21-5		See note 2		30	30	6.25				See note 3			Black on Orange	1	6.25	4"x4" wood post or use portable sign See Det. E635-7

NOTES:

1. Sign post supports will not be measured for payment and shall be accordance with Std.E635-1.
2. See Details E635-6 & E635-7 for sign locations. Actual location of the signs will be directed by the CO.
3. Construct and erect all signs in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD), latest edition.

SUBTOTAL	17	114.5
AS REQUIRED	17	0.5
TOTAL	17	115

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA
 FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK
**CONSTRUCTION SIGN
 SCHEDULE**



PT. #	NORTHING	EASTING	ELEV.	DESC.
100	676397.4107	11737388.773	330.660	TBAR
101	6764119.067	11737497.719	327.302	TBAR
102	6765716.237	11741158.455	332.270	TBAR
103	6765509.429	11741079.788	323.080	TBAR
104	6764395.333	11740434.560	343.700	TBAR
105	6764199.460	11740505.197	344.274	TBAR
106	6763484.078	11740589.521	325.619	TBAR
107	6763286.473	11740288.327	331.919	TBAR
108	6764752.179	11743282.117	305.689	TBAR
109	6764783.580	11743475.762	302.808	TBAR
110	6799443.117	11696219.616	360.974	TBAR
111	6799533.360	11696493.720	360.918	TBAR
112	6762207.033	11737732.076	336.194	TBAR
113	6761967.831	11737541.669	329.173	TBAR
198	6765686.759	11738305.237	276.587	TBAR
199	6766027.165	11739255.366	305.056	TBAR
200	6765788.662	11739642.358	318.022	TBAR
201	6765705.056	11740070.866	322.207	TBAR
202	6765819.518	11740699.522	326.640	TBAR
204	6763006.510	11739825.420	344.766	TBAR
205	6762451.962	11739332.885	343.806	TBAR

Notes:
 1) Horizontal Datum are arbitrary.
 2) Vertical Datum was assumed.

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 STERLING, VIRGINIA

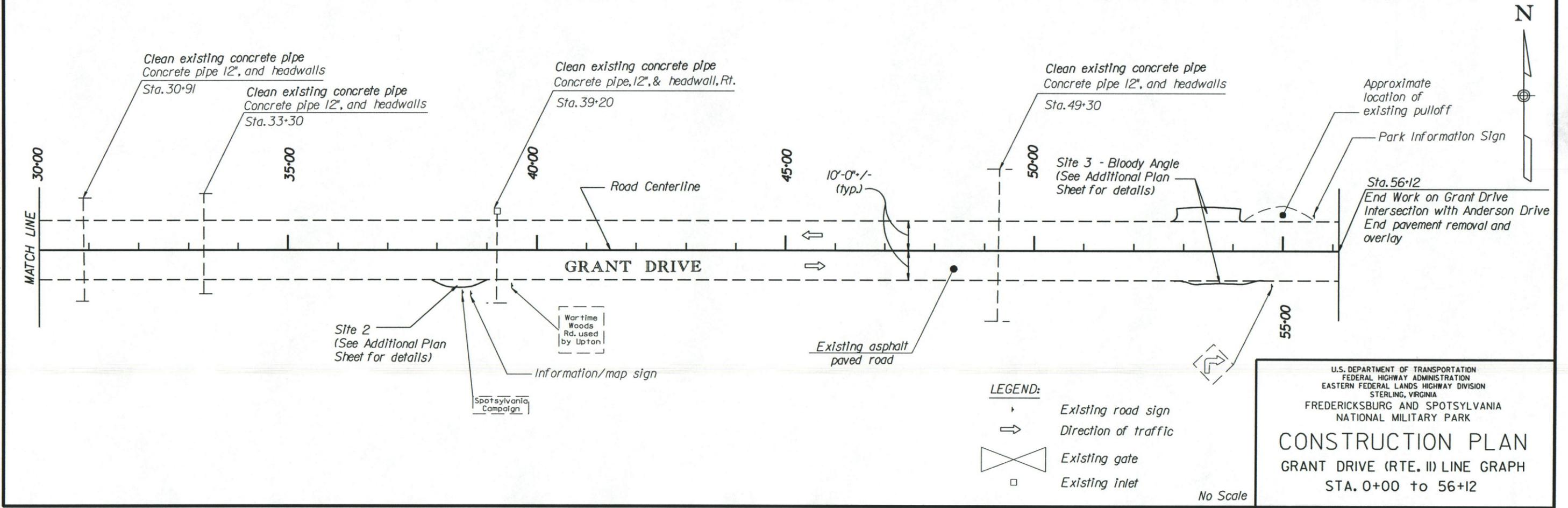
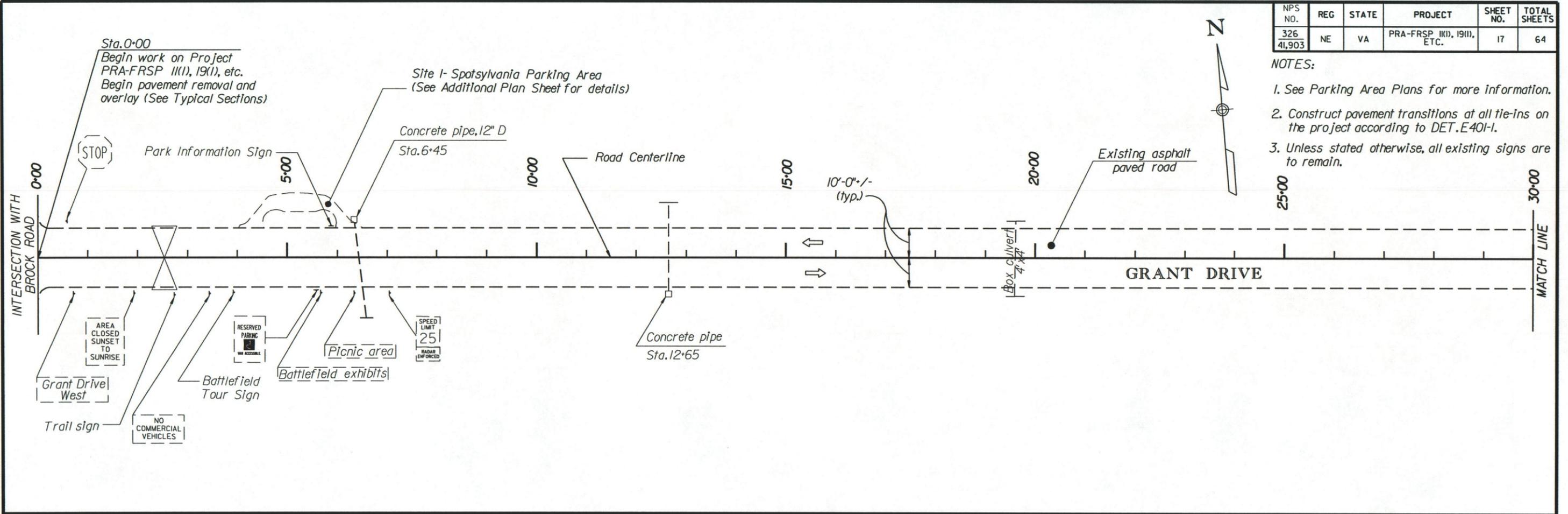
FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK

SURVEY INFORMATION

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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP II(I), 19(II), ETC.	17	64

- NOTES:
1. See Parking Area Plans for more information.
 2. Construct pavement transitions at all tie-ins on the project according to DET.E40I-1.
 3. Unless stated otherwise, all existing signs are to remain.



- LEGEND:
- ⊙ Existing road sign
 - ➔ Direction of traffic
 - ⊗ Existing gate
 - Existing inlet

No Scale

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 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA
 FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK
CONSTRUCTION PLAN
 GRANT DRIVE (RTE. 11) LINE GRAPH
 STA. 0+00 TO 56+12

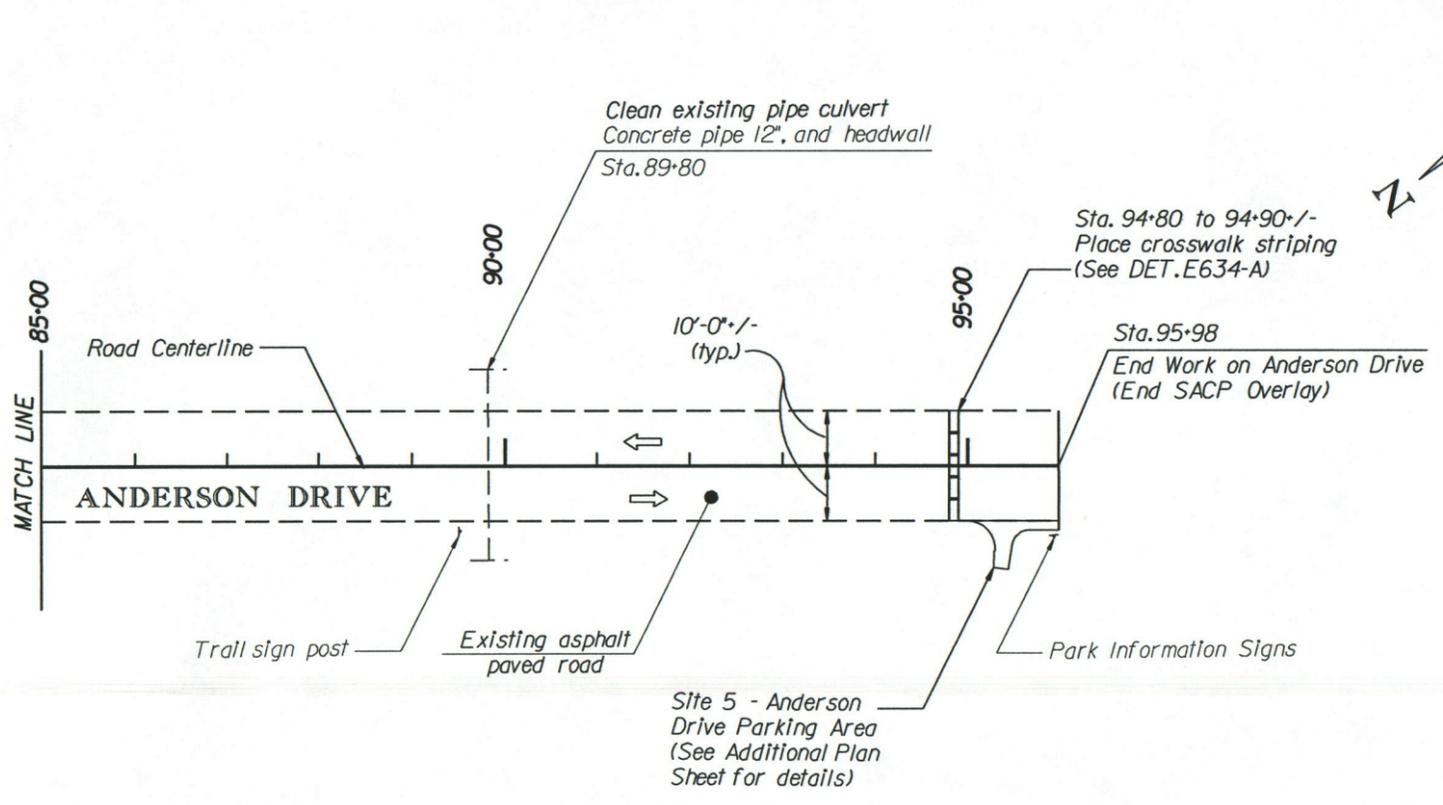
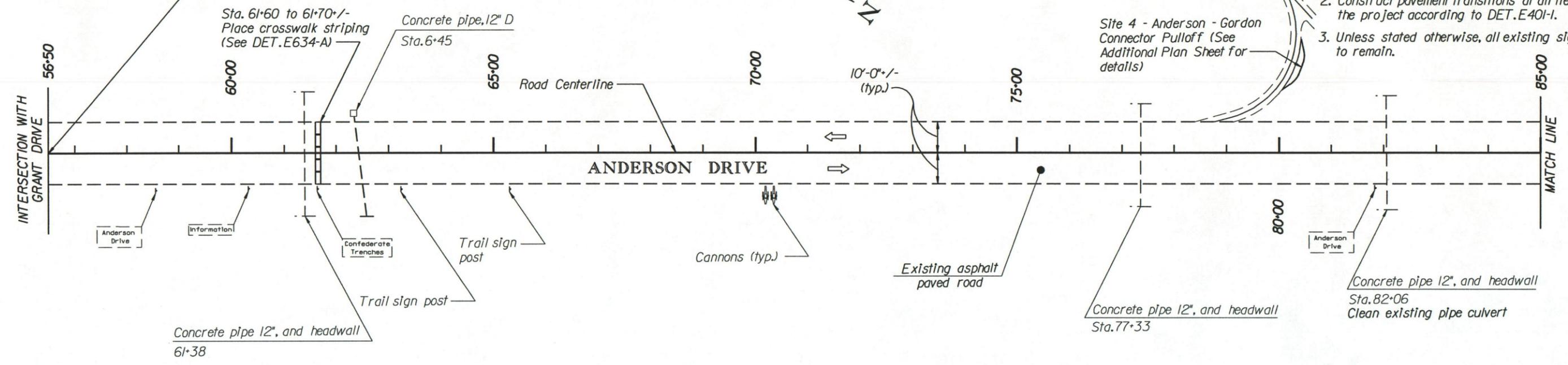
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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP (I), (II), ETC.	18	64

STA. 56+50

BEGIN WORK ON ANDERSON DRIVE
(BEGIN SACP OVERLAY - SEE
TYPICAL SECTIONS)

- NOTES:
1. See Parking Area Plans for more information.
 2. Construct pavement transitions at all tie-ins on the project according to DET.E401-1.
 3. Unless stated otherwise, all existing signs are to remain.



- LEGEND:
- Existing road sign
 - Direction of traffic
 - Existing gate
 - Existing inlet

No Scale

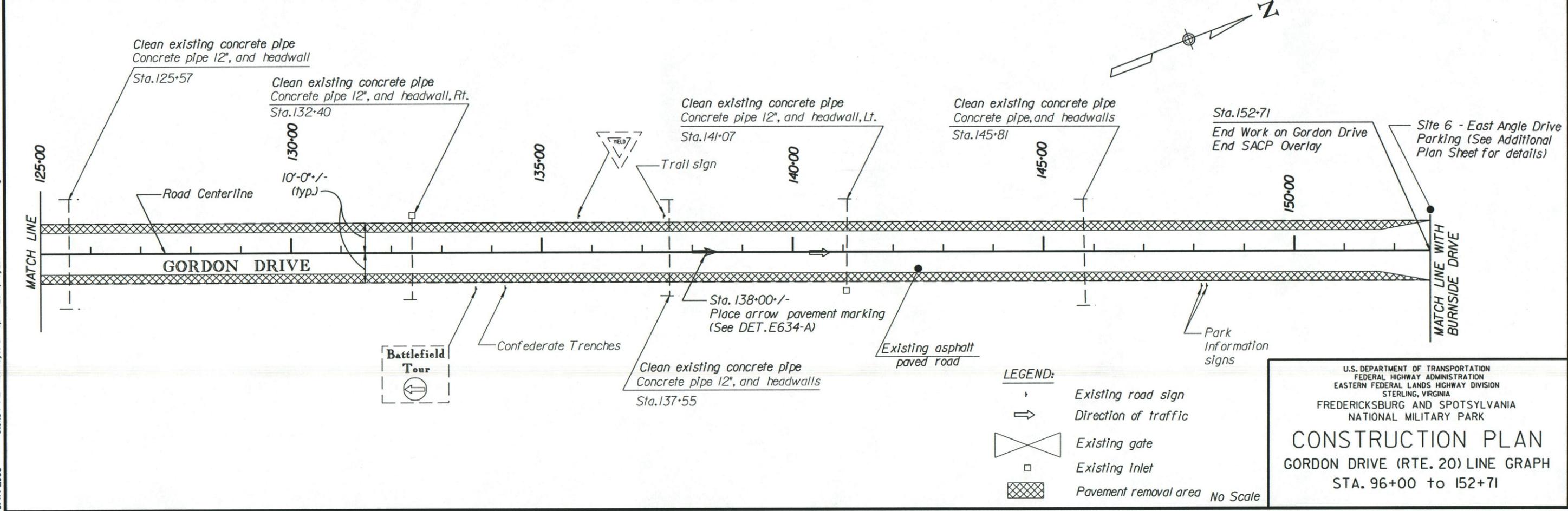
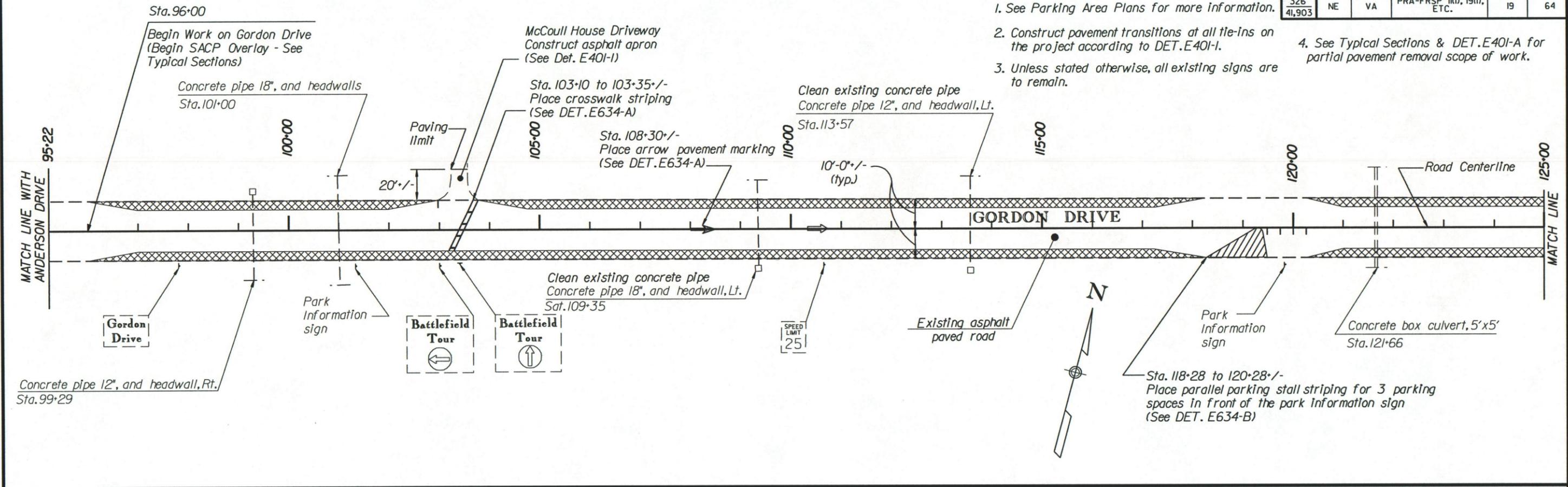
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EASTERN FEDERAL LANDS HIGHWAY DIVISION
STERLING, VIRGINIA
FREDERICKSBURG AND SPOTSYLVANIA
NATIONAL MILITARY PARK
CONSTRUCTION PLAN
ANDERSON DRIVE (RTE. 19) LINE GRAPH
STA. 56+50 to 95+98

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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP 1K(D), 19(I), ETC.	19	64

NOTES:

1. See Parking Area Plans for more information.
2. Construct pavement transitions at all tie-ins on the project according to DET.E401-1.
3. Unless stated otherwise, all existing signs are to remain.
4. See Typical Sections & DET.E401-A for partial pavement removal scope of work.

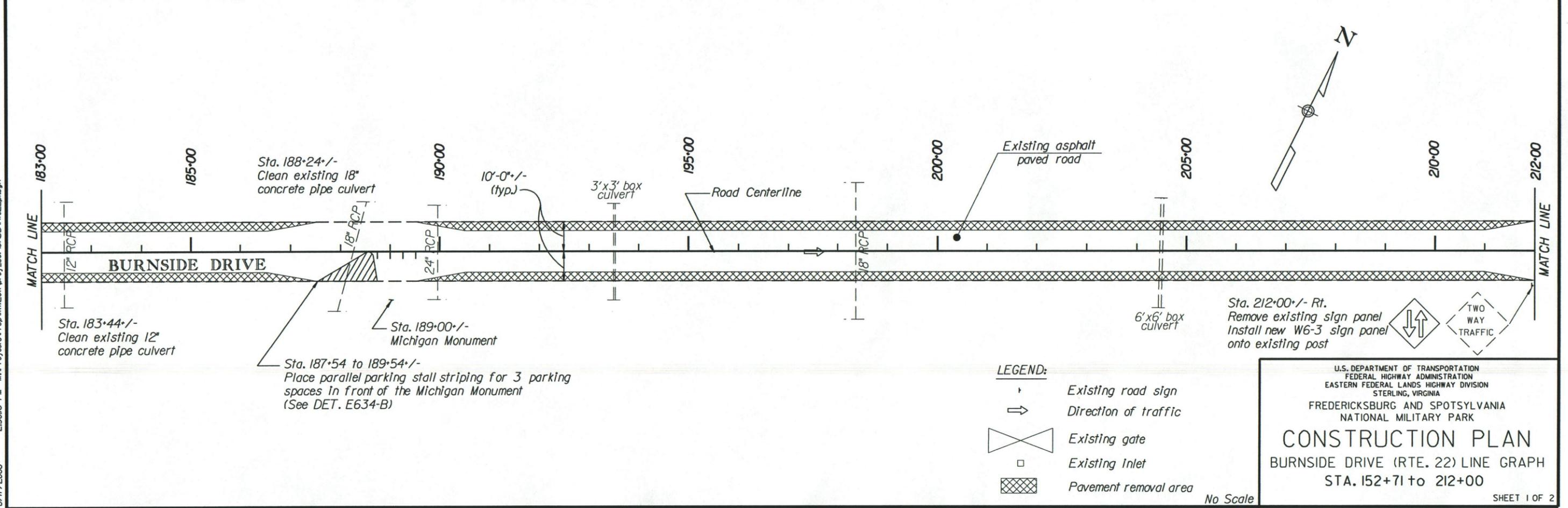
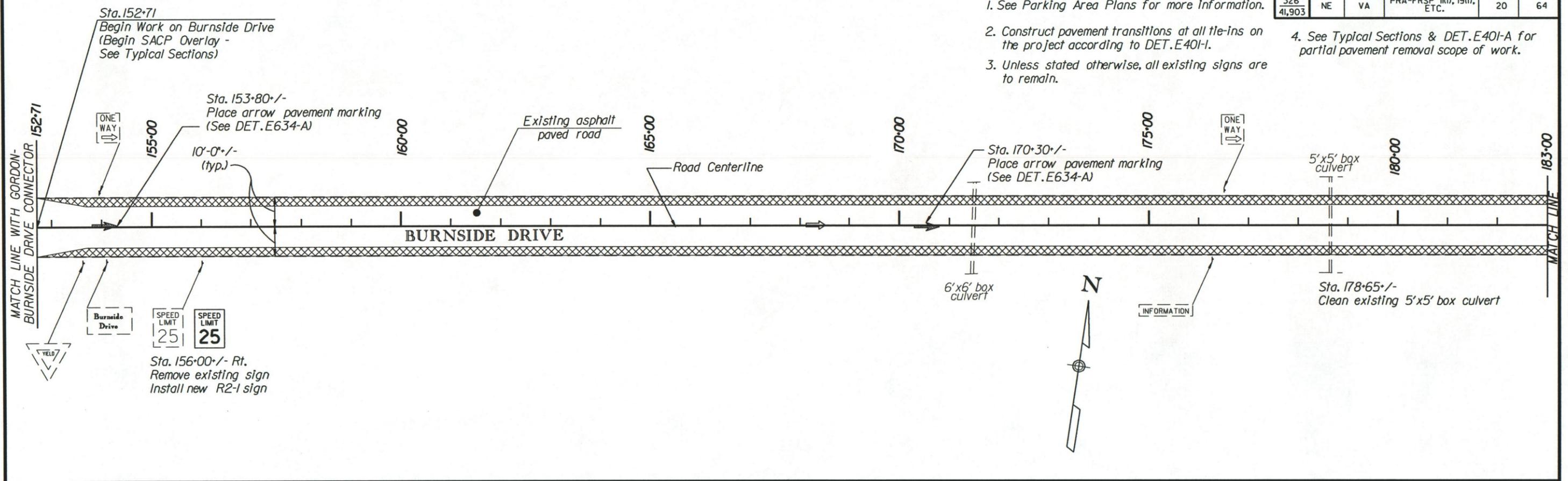


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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP (II), (19)(I), ETC.	20	64

NOTES:

1. See Parking Area Plans for more information.
2. Construct pavement transitions at all tie-ins on the project according to DET.E401-I.
3. Unless stated otherwise, all existing signs are to remain.
4. See Typical Sections & DET.E401-A for partial pavement removal scope of work.



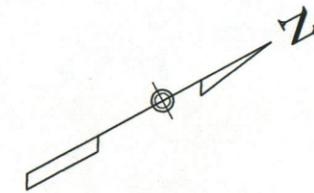
- LEGEND:**
- Existing road sign
 - Direction of traffic
 - Existing gate
 - Existing Inlet
 - Pavement removal area

No Scale

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 NATIONAL MILITARY PARK
CONSTRUCTION PLAN
 BURNSIDE DRIVE (RTE. 22) LINE GRAPH
 STA. 152+71 to 212+00
 SHEET 1 OF 2

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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326	NE	VA	PRA - FRSP III, 1911, ETC.	22	64
41,903					



NOTE:

1. Radii shown are to the face of PCC curbing.
2. Unless noted otherwise, all existing signs are to remain.
3. Establish a 6" curb reveal along all curb sections after final paving is complete.
4. Ensure positive drainage exists in all parking areas once paving is complete (0.5% min. slope).
5. Slope proposed sidewalk from flush with the steps at the entrance to the building to top of back of existing curb.

Spotsylvania Battlefield Exhibit Shelter

Park Information Signs

Curve= SITE-1
 $\Delta = 50^\circ 47' 10.68''$ (RT)
 $D = 143' 14'' 22.02''$
 $R = 40.00'$
 $T = 18.99'$
 $L = 35.46'$

Remove existing concrete sidewalk, Area = 107 sqyd +/-
 Construct medium-brown colored concrete sidewalk, Area = 143 sqyd +/-

Construct wheelchair accessible PCC ramp, Area = 7 sqyd +/-
 (See DET.E615-B)

Remove existing asphalt ramp

Park Information Sign

Remove existing asphalt sidewalk, Area = 43 sqyd +/-

Remove existing pavement structure, construct new pavement structure (See Typical Sections), Area = 845 sqyd +/-

Sta. 270+24.76 to 272+42.93 +/-
 Remove existing curb, length = 243' +/-
 Construct PCC curb, 18" depth, from medium-brown colored concrete, length = 243' +/- (See DET.E609-A)

Curve= SITE-2
 $\Delta = 50^\circ 30' 56.52''$ (RT)
 $D = 143' 14'' 22.02''$
 $R = 40.00'$
 $T = 18.87'$
 $L = 35.27'$

Existing control box to remain

Sta. 272+39.26
 Install new 15" x 46' +/- pipe culvert & inlet, type 6B, Rt., connect to existing inlet, Lt.

Remove existing curb, grade to drain, length = 10 lft +/-
 Sta. 272+42.93 to 272+52.26 Lt. Construct a drainage chute (See DET.E608-B)

Sta. 272+15.43 to 272+22.79
 Construct a drainage chute (See DET.E608-B)

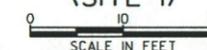
Sta. 271+48.00
 33.93' Rt.

Remove existing sign & install a new sign next to the new accessibility ramp

Construct 18" depth curb from medium-brown colored concrete, length = 153' +/- (See DET.E609-A)

Grant Drive

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 FREDERICKSBURG AND SPOTSYLVANIA NATIONAL MILITARY PARK
SPOTSYLVANIA SHELTER PARKING AREA (SITE I)

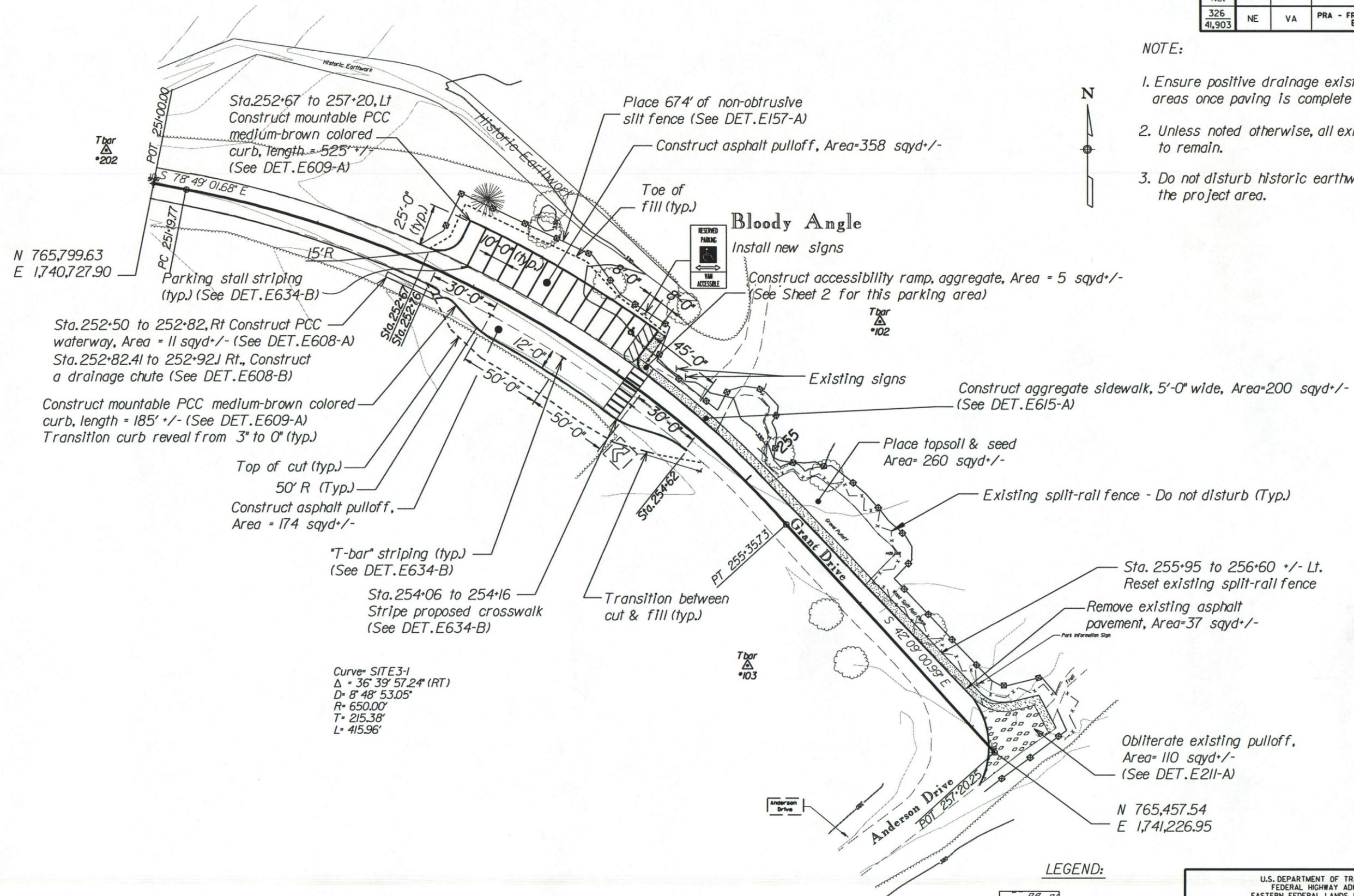


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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA - FRSP (RD, 1910, ETC.	24	64

NOTE:

1. Ensure positive drainage exists in all parking areas once paving is complete (0.5% min. slope).
2. Unless noted otherwise, all existing signs are to remain.
3. Do not disturb historic earthworks located in the project area.



Sta.252*67 to 257*20, Lt
Construct mountable PCC
medium-brown colored
curb, length = 525' +/-
(See DET.E609-A)

Place 674' of non-obtrusive
silt fence (See DET.E157-A)

Construct asphalt pulloff, Area=358 sqyd +/-

N 765,799.63
E 1,740,727.90

Parking stall striping
(typ.) (See DET.E634-B)

Sta.252*50 to 252*82, Rt Construct PCC
waterway, Area = 11 sqyd +/- (See DET.E608-A)
Sta.252*82.41 to 252*92.1 Rt., Construct
a drainage chute (See DET.E608-B)

Construct mountable PCC medium-brown colored
curb, length = 185' +/- (See DET.E609-A)
Transition curb reveal from 3" to 0" (typ.)

Top of cut (typ.)
50' R (Typ.)
Construct asphalt pulloff,
Area = 174 sqyd +/-

"T-bar" striping (typ.)
(See DET.E634-B)

Sta.254*06 to 254*16
Stripe proposed crosswalk
(See DET.E634-B)

Curve: SITE3-1
Δ = 36° 39' 57.24" (RT)
D = 8° 48' 53.05"
R = 650.00'
T = 215.38'
L = 415.96'

Bloody Angle
Install new signs

Construct accessibility ramp, aggregate, Area = 5 sqyd +/-
(See Sheet 2 for this parking area)

Existing signs

Construct aggregate sidewalk, 5'-0" wide, Area=200 sqyd +/-
(See DET.E615-A)

Place topsoil & seed
Area= 260 sqyd +/-

Existing split-rail fence - Do not disturb (Typ.)

Sta. 255*95 to 256*60 +/- Lt.
Reset existing split-rail fence

Remove existing asphalt
pavement, Area=37 sqyd +/-

Obliterate existing pulloff,
Area= 110 sqyd +/-
(See DET.E211-A)

N 765,457.54
E 1,741,226.95

LEGEND:

- Obliteration area
- New aggregate sidewalk

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**FREDERICKSBURG AND SPOTSYLVANIA
NATIONAL MILITARY PARK
BLOODY ANGLE PARKING
AREA (SITE 3)**

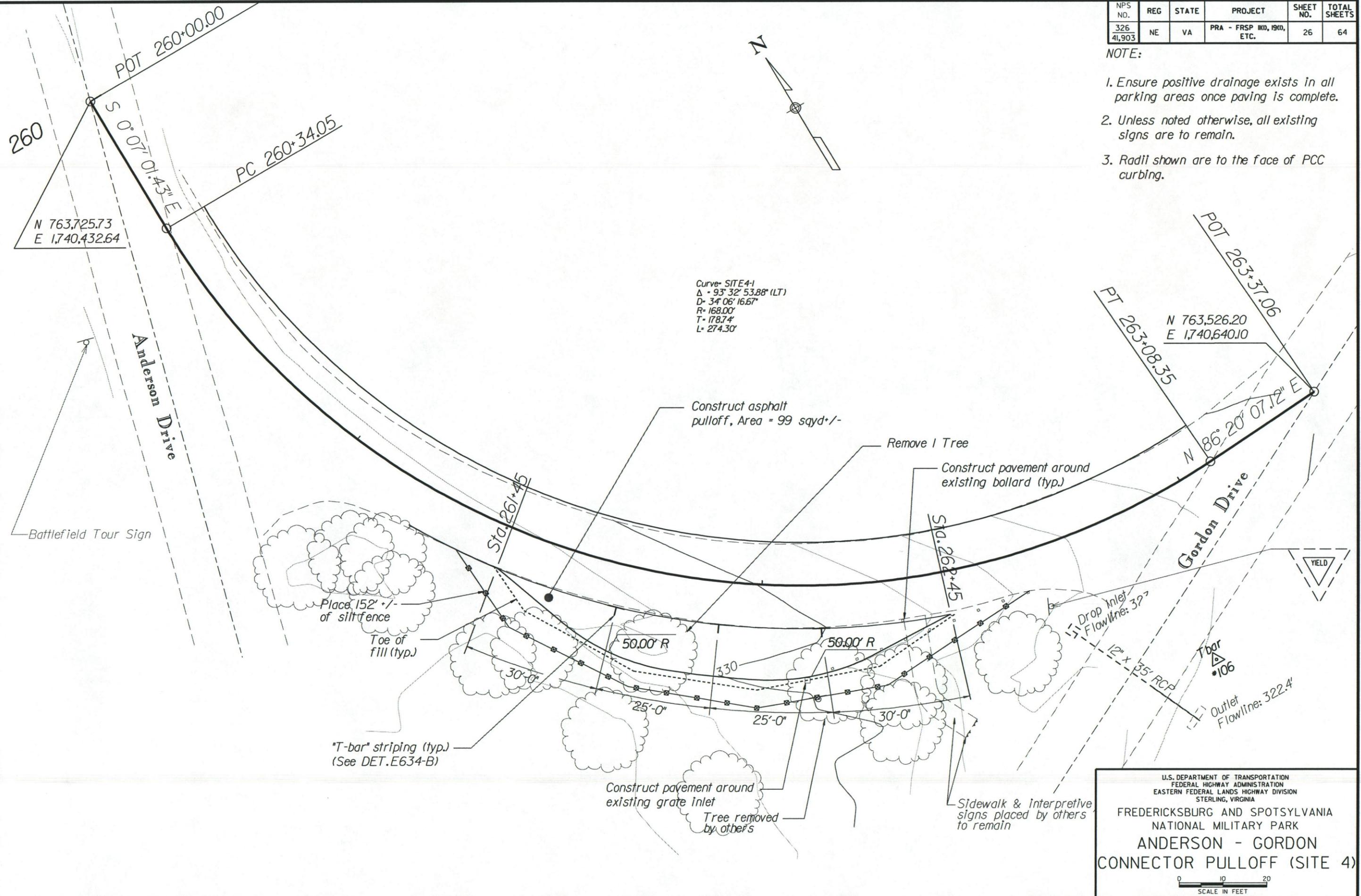
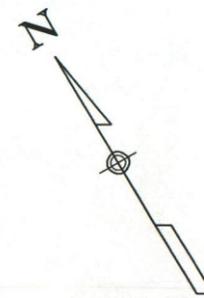
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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA - FRSP RD, 1910, ETC.	26	64

NOTE:

1. Ensure positive drainage exists in all parking areas once paving is complete.
2. Unless noted otherwise, all existing signs are to remain.
3. Radii shown are to the face of PCC curbing.



Curve- SITE 4-1
 $\Delta = 93^\circ 32' 53.88''$ (LT)
 $D = 34^\circ 06' 16.67''$
 $R = 168.00'$
 $T = 178.74'$
 $L = 274.30'$

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 NATIONAL MILITARY PARK

**ANDERSON - GORDON
 CONNECTOR PULLOFF (SITE 4)**

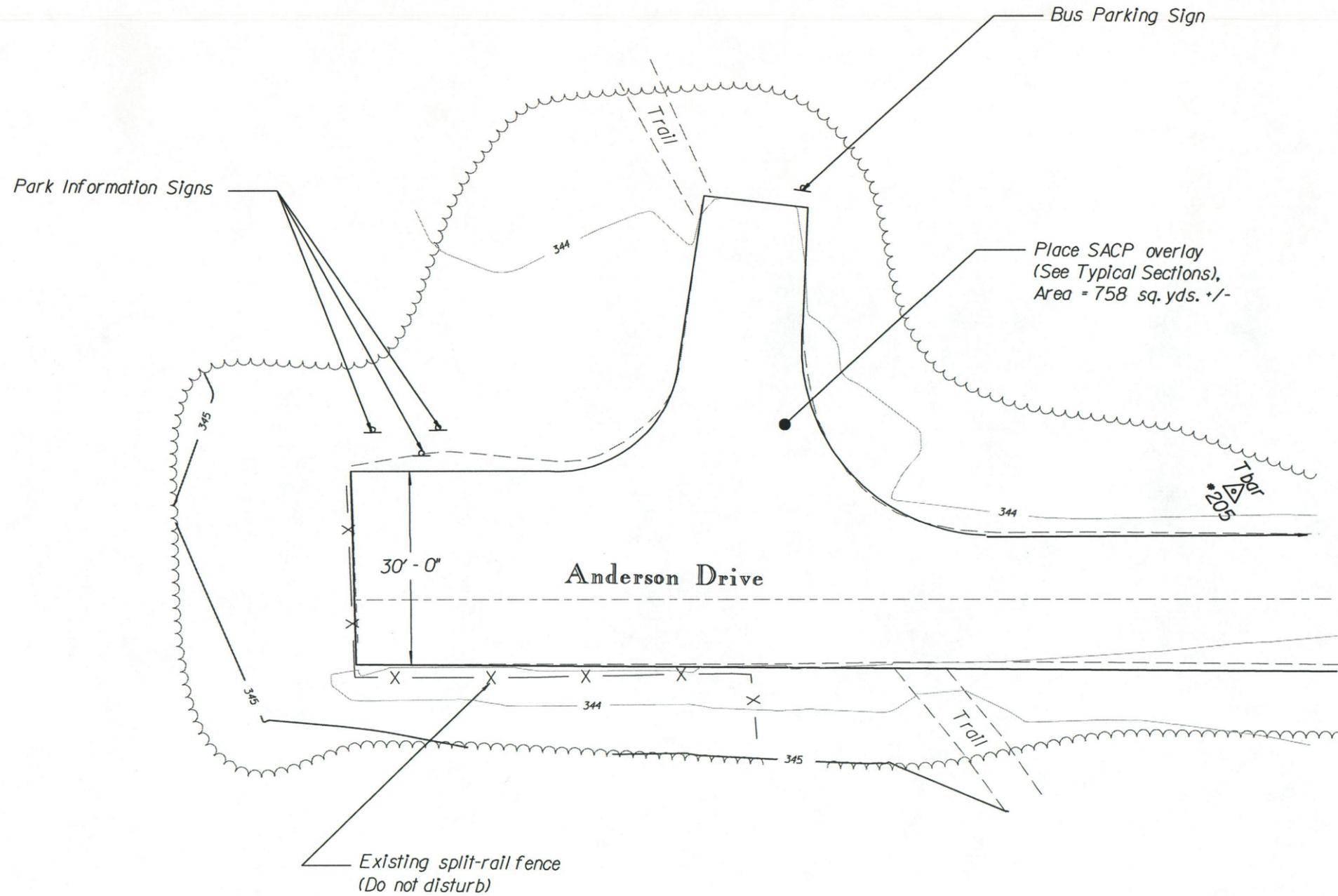
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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA - FRSP MKD, 1910, ETC.	27	64

NOTE:

1. Ensure positive drainage exists in all parking areas once paving is complete.
2. Unless noted otherwise, all existing signs are to remain.



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**ANDERSON DRIVE PARKING AREA
 (SITE 5)**

0 10 20
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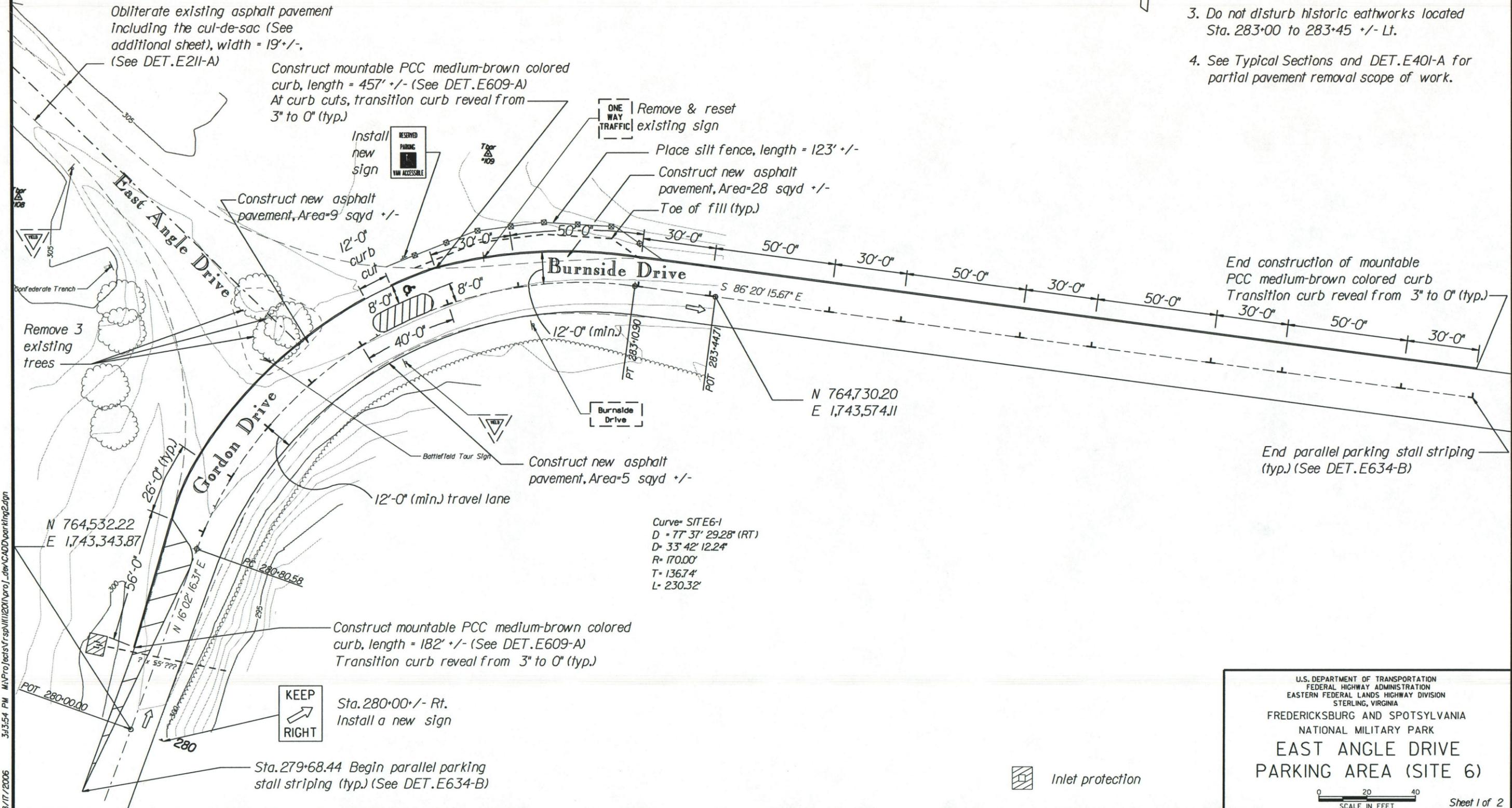
NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA - FRSP III(1), 19(1), ETC.	28	64



NOTE:

1. Ensure positive drainage exists in all parking areas once paving is complete (0.5% min. slope).
2. Unless noted otherwise, all existing signs are to remain.
3. Do not disturb historic earthworks located Sta. 283+00 to 283+45 +/- Lt.
4. See Typical Sections and DET.E401-A for partial pavement removal scope of work.

East Angle



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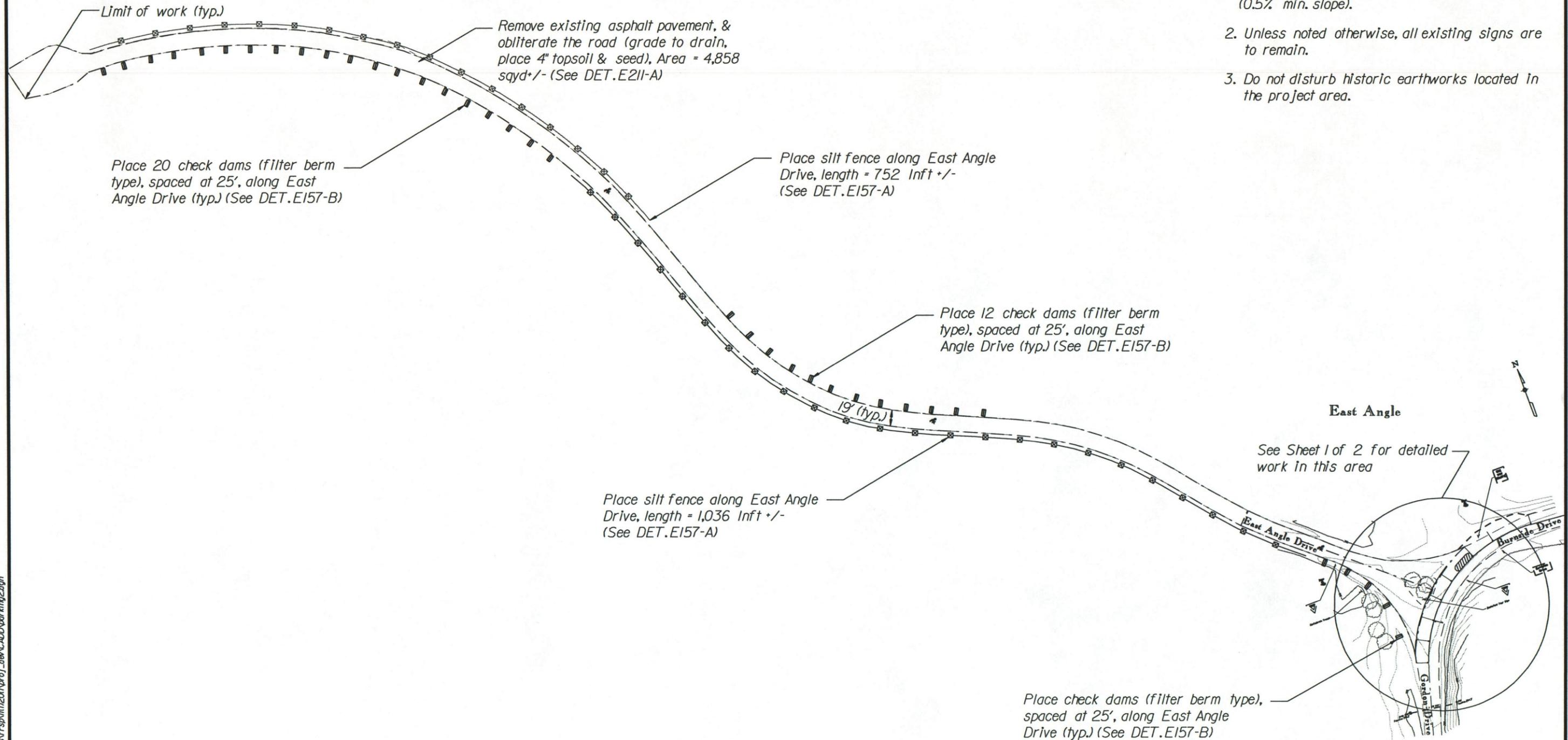
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**EAST ANGLE DRIVE
 PARKING AREA (SITE 6)**

0 20 40
 SCALE IN FEET

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA - FRSP I&D, 1911, ETC.	29	64

NOTE:

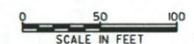
1. Ensure positive drainage exists in all ditches and parking areas once obliteration is complete (0.5% min. slope).
2. Unless noted otherwise, all existing signs are to remain.
3. Do not disturb historic earthworks located in the project area.



LEGEND:

- check dam, filter berm type
- silt fence

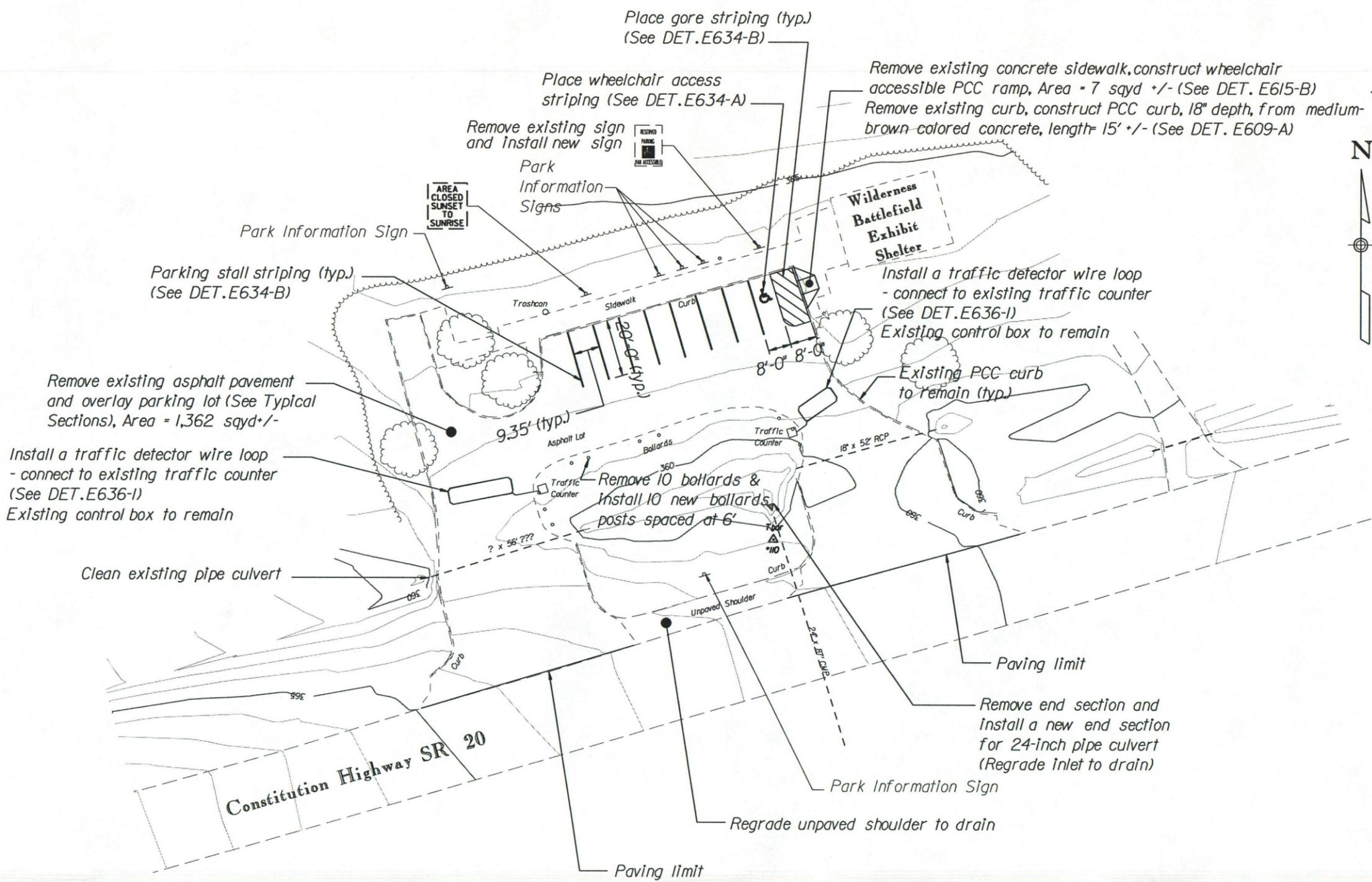
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 NATIONAL MILITARY PARK
 EAST ANGLE DRIVE
 PARKING AREA (SITE 6)



NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA - FRSP RD, 1910, ETC.	30	64

NOTE:

1. Ensure positive drainage exists in all parking areas once paving is complete (0.5% min. slope).
2. Unless noted otherwise, all existing signs are to remain.
3. Establish a 6" curb reveal along all curb sections after final paving is complete.



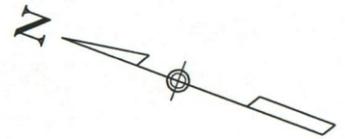
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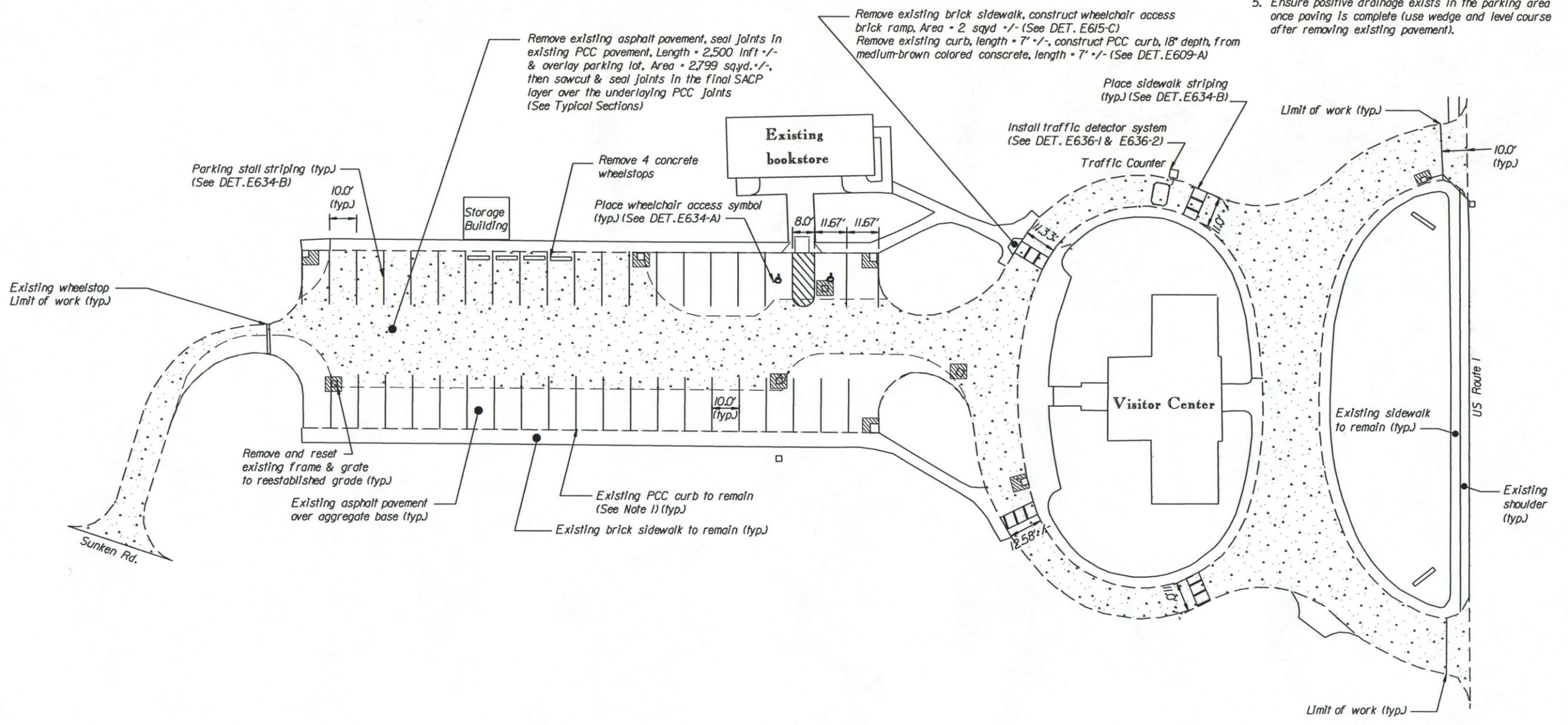
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**WILDERNESS EXHIBIT PARKING
 AREA (SITE 7 - ROUTE 916)**

0 20 40
 SCALE IN FEET

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326	NE	VA	PRA-FRSP III(I), 19(I), Etc.	31	64
41,903					



- NOTES:
1. Reestablish a 4" curb reveal throughout the parking area.
 2. Maintain existing pavement elevations at all cross-walks.
 3. Night work will not be allowed Monday-Friday. Parking area may be closed to traffic at night to maintain traffic control.
 4. Configuration of this parking lot was obtained from as-built drawings. Some geometric variations may be encountered in the field.
 5. Ensure positive drainage exists in the parking area once paving is complete (use wedge and level course after removing existing pavement).

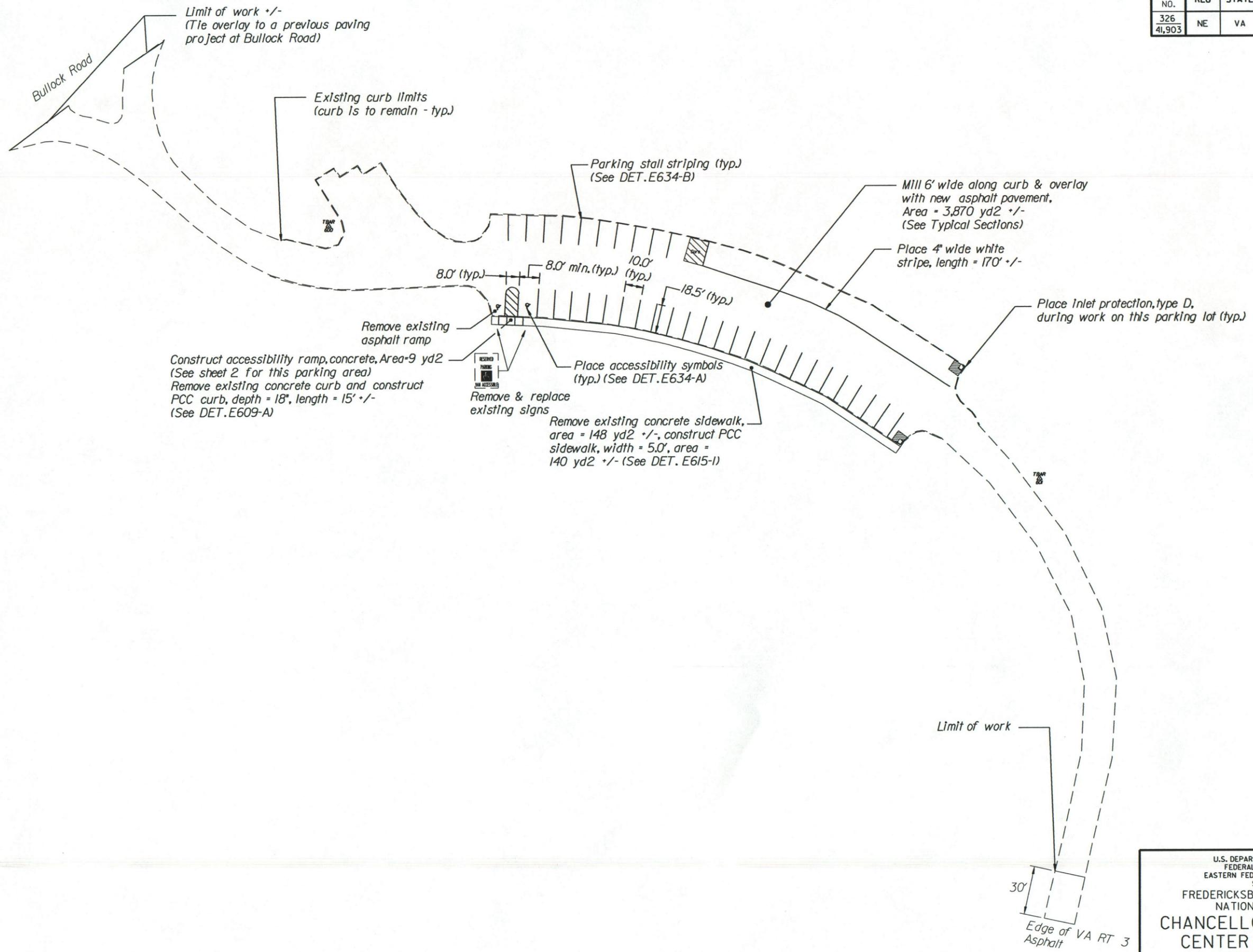


 Existing PCC pavement overlaid with asphalt pavement
 Inlet protection, type C
 Inlet protection, type D

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FREDERICKSBURG VISITOR CENTER PARKING AREA
(ROUTE 900)
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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP III(D), 19(D), Etc.	32	64



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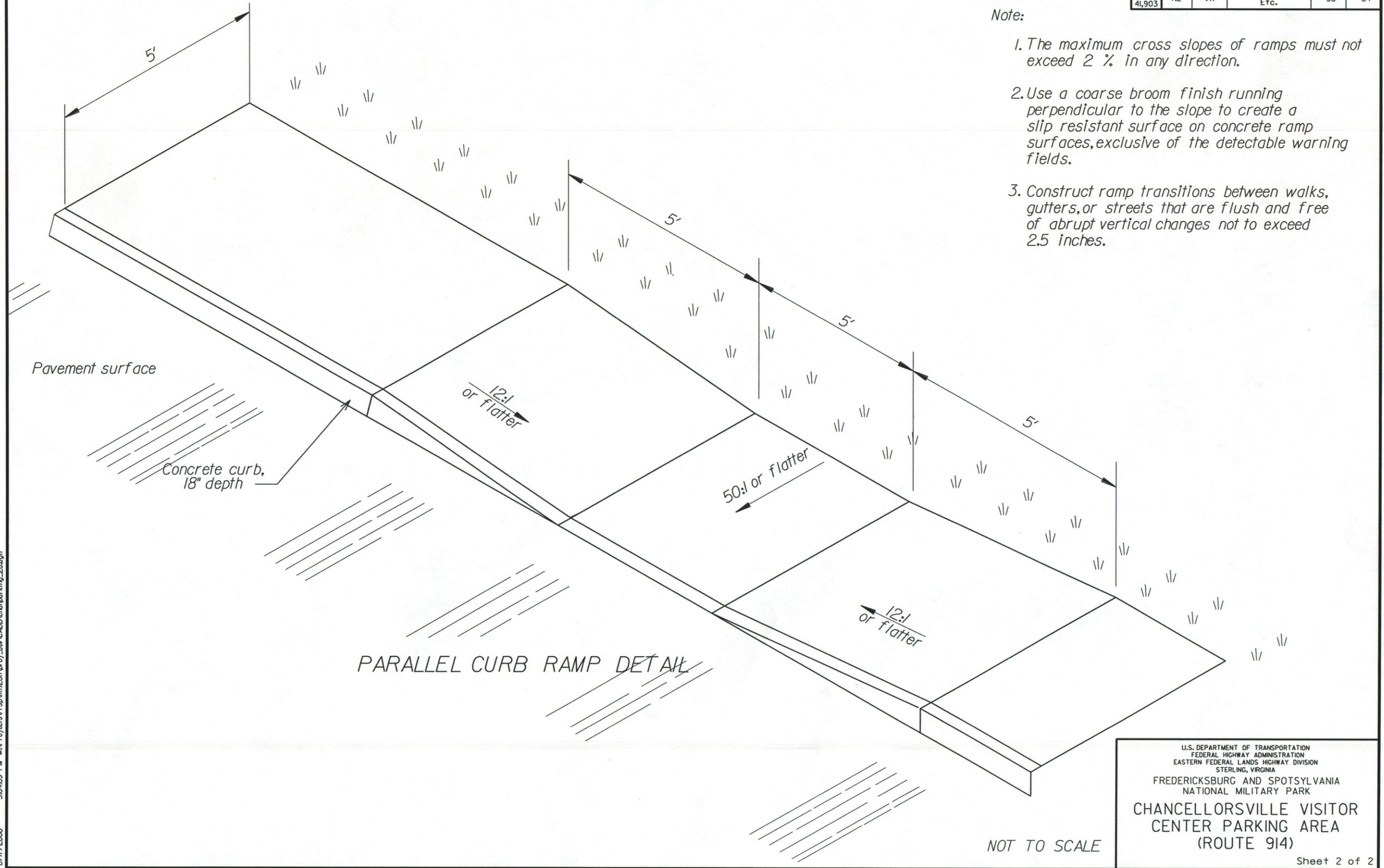
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 NATIONAL MILITARY PARK
**CHANCELLORSVILLE VISITOR
 CENTER PARKING AREA
 (ROUTE 914)**
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 SCALE IN FEET

Sheet 1 of 2

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP III(D), 19(D), Etc.	33	64

Note:

1. The maximum cross slopes of ramps must not exceed 2% in any direction.
2. Use a coarse broom finish running perpendicular to the slope to create a slip resistant surface on concrete ramp surfaces, exclusive of the detectable warning fields.
3. Construct ramp transitions between walks, gutters, or streets that are flush and free of abrupt vertical changes not to exceed 2.5 inches.



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 CHANCELLORSVILLE VISITOR
 CENTER PARKING AREA
 (ROUTE 914)
 Sheet 2 of 2

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP 110, 1901, ETC.	34	64

I. GENERAL GUIDELINES

The Erosion Control Plans (ECP) are meant as a guideline for preventing erosion and controlling sediment. The work outlined in this narrative consists of applying measures throughout the life of the project to control erosion and minimize the sedimentation of rivers, streams, and impoundments such as lakes, reservoirs, bays and coastal waters. The measures consist of stabilization and structural practices, stormwater controls and other miscellaneous pollution prevention controls.

Coordinate the installation, use and removal of erosion and sediment control measures with roadway construction activities to assure economical, effective and continuous erosion and sediment control. Employ temporary stabilization practices in incremental stages as construction proceeds.

Install all erosion and sediment control measures as shown in the ECP or as directed by the Contracting Officer (CO). Do not modify the type, size or location of any control or practice without approval from the CO. Preventing initial soil erosion is much more effective than trying to control eroded sediment. Therefore, stabilize all disturbed areas as soon as is practical, but no more than 14 days after construction activity has temporarily or permanently ceased.

Control only sediment-laden runoff generated by the project site. Separate and quickly route clean, offsite runoff through the project by using culverts. Do not allow construction vehicles to track sediment offsite of the project limits.

In general, preserve existing vegetation, trees and shrubs when possible, and where specifically shown in the landscaping plans or as directed by the CO.

A. SEQUENCE OF CONSTRUCTION

• PHASE I (ESTABLISH PERIMETER CONTROLS):

Install protective fencing to preserve existing vegetation, trees and shrubs when possible where directed by the CO.

Prior to any clearing, grubbing and excavation, construct perimeter controls to ensure that disturbed sediment does not leave the project site. Perimeter controls include silt fence. Where possible, install permanent culverts and channels before beginning rough grading and divert offsite drainage through completed culverts as soon as practicable.

• PHASE II (INTERMEDIATE CONTROLS/STABILIZATION):

Apply intermediate controls during rough grading operations. Obtain the CO's approval before installing any controls not specified in the ECP. The CO may direct the installation of certain controls in order to forestall or mitigate potential or existing erosion problems.

Construct toe-of-fill ditches and install silt fence along the inside of toe-of-fill ditches prior to constructing embankment slopes. Once cut slope ditches are final graded, install check dams (filter berm) along the bottom of the ditch backslope where shown in the ECP.

Apply temporary turf establishment on uncompleted disturbed areas that will remain exposed for over 14 calendar days or as directed by the CO. As soon as practical, but not to exceed 14 calendar days, apply permanent turf establishment to the finished slopes and ditches according to Sections 624 and 625. To control erosion during the time periods between seeding seasons, as shown in Section 625, apply temporary mulch in lieu of temporary turf establishment.

At the end of each day's grading operations, shape earthwork to minimize and control erosion from storm runoff. When directed by the CO, apply temporary mulch to all disturbed slopes at the end of each day's grading operations.

Install check dams (filter berms) along rough graded ditches at spacings shown. Remove check dams immediately prior to final channel grading and stabilization.

Install inlet protection prior to diverting water through inlets. In order to prevent traffic hazards caused by ponded water on the roadway, do not install inlet protection at inlets adjacent to traffic. Do not allow ponded water to encroach into travel lanes.

Provide silt fence around all stockpiled excavated roadway material. Apply temporary mulch or temporary turf establishment to stockpiles remaining in place longer than 14 days or when directed by the CO.

Upon completion of culverts, ensure that culvert entrances, outlets, and outlet channels are at final grade and are stabilized (with vegetation, riprap or pavement) before routing drainage through completed culverts. Reroute offsite drainage through completed culverts as soon as is practical.

Once culvert headwalls are completed, install silt fence immediately behind headwalls and remove any silt fence blocking the culvert end(s).

• PHASE III (FINAL CONTROLS/STABILIZATION):

After completion of roadway construction do the following as directed by the CO:

Where necessary, replace eroded topsoil and reapply permanent turf establishment to disturbed areas where vegetation has not established. Remove silt fence and inlet protection only after all upslope areas are stabilized and vegetation is well established.

B. PERMANENT

Permanent stabilization practices used on this project include aggregate base stone, permanent seeding with mulching, preservation of existing vegetation and other approved measures.

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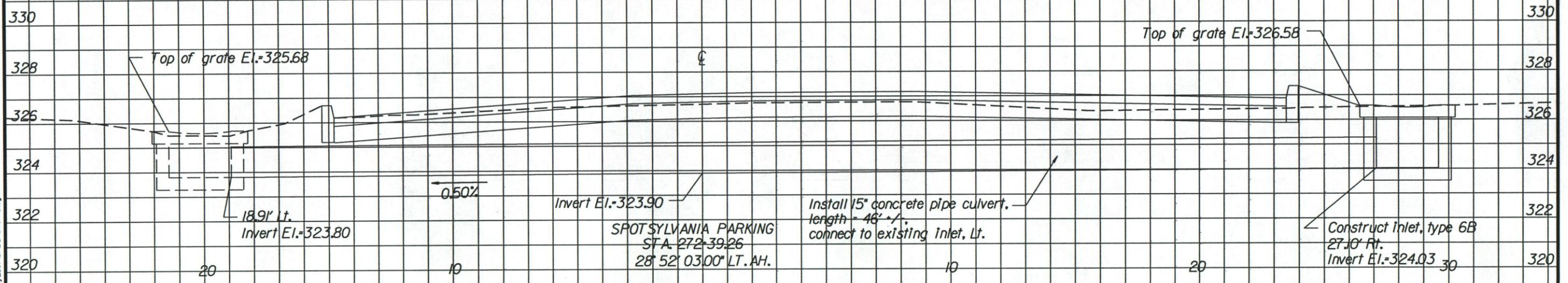
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**EROSION CONTROL
 NARRATIVE**

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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP III(I), 19(I), ETC.	35	64

NOTE:
1. See DET.E602-7 and STD.604-7 for inlet & pipe culvert installation details.



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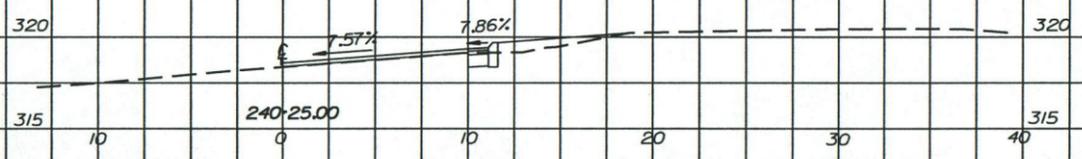
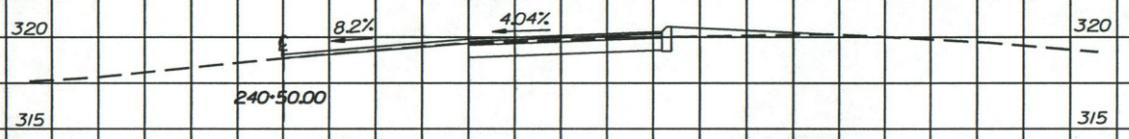
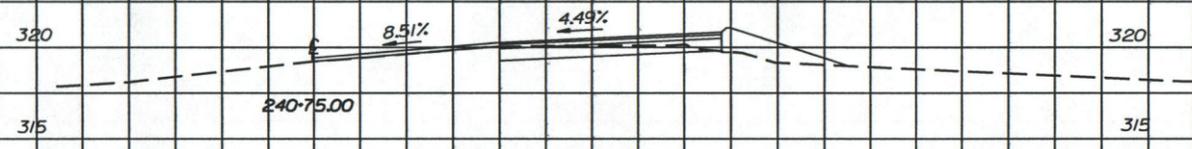
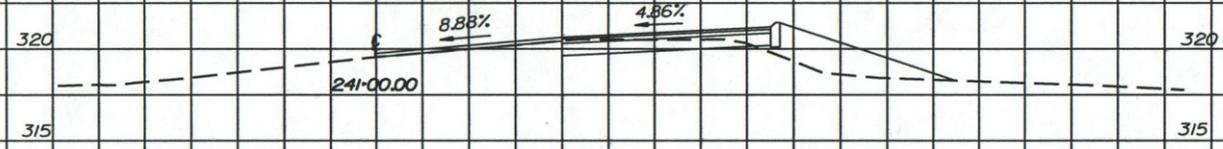
FREDERICKSBURG AND SPOTSYLVANIA NATIONAL MILITARY PARK

**SPOTSYLVANIA SHELTER
PARKING AREA (SITE 1)
DRAINAGE CROSS SECTION**

0 2.0 4.0
SCALE IN FEET

8/17/2006 3:39:17 PM M:\Projects\frsp\111201\proj_cad\CAD\stl\K5.dgn

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP II(I), 19(I), ETC.	36	64



U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA

FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK

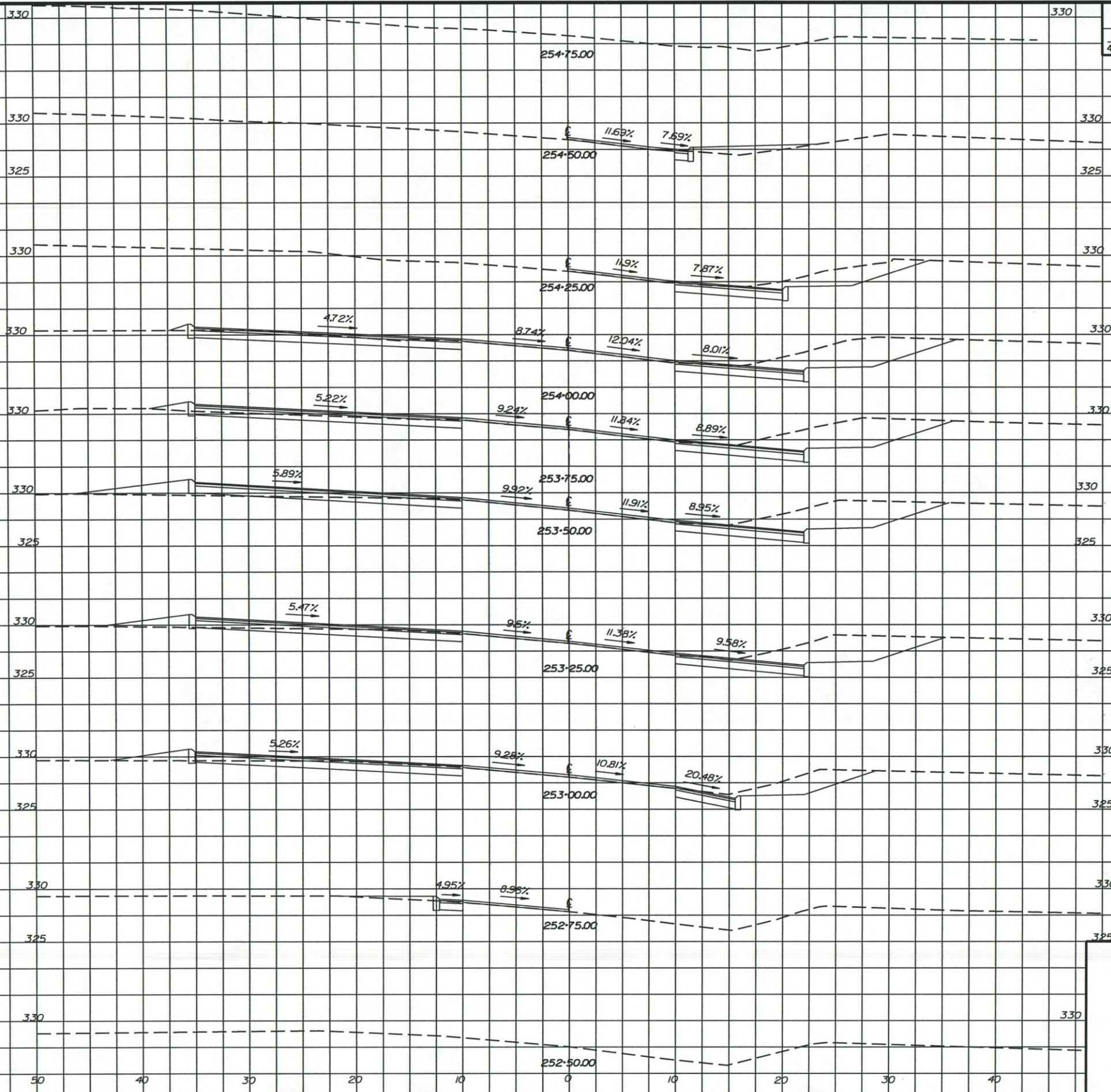
CROSS SECTIONS
GRANT DRIVE - SITE 2

0 5 10
 SCALE IN FEET

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70 60 50 40 30 20 10 0 10 20 30 40

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP II(I), 19(I), ETC.	37	64



U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA

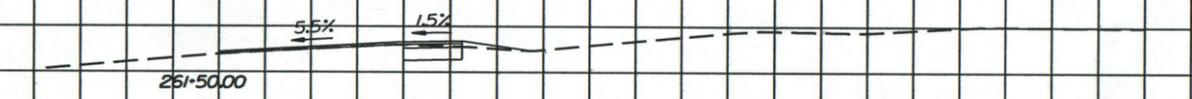
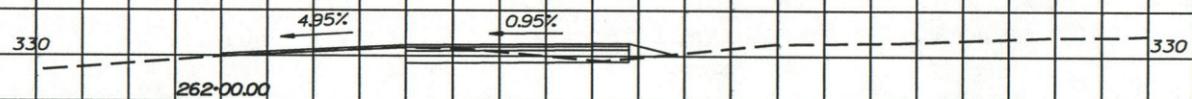
FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK

CROSS SECTIONS
 BLOODY ANGLE - SITE 3

0 5 10
 SCALE IN FEET

8/17/2006 3:49:43 PM M:\Projects\Trsp\III\201\Proj_dwg\CADD\st3\st3.dwg

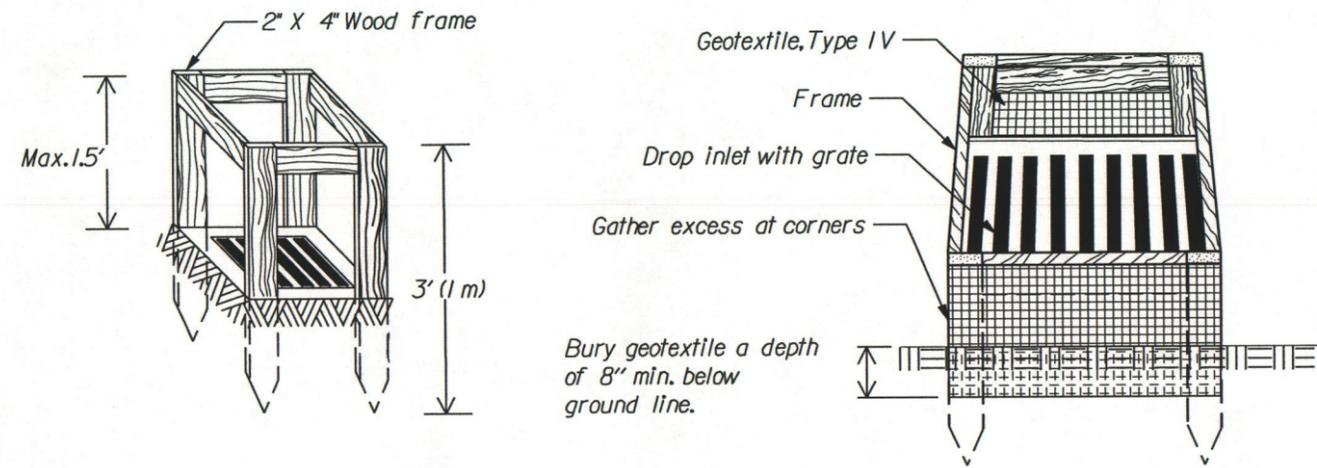
NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	SE	PRA-FRSP III(I), 19(I), ETC.	38	64



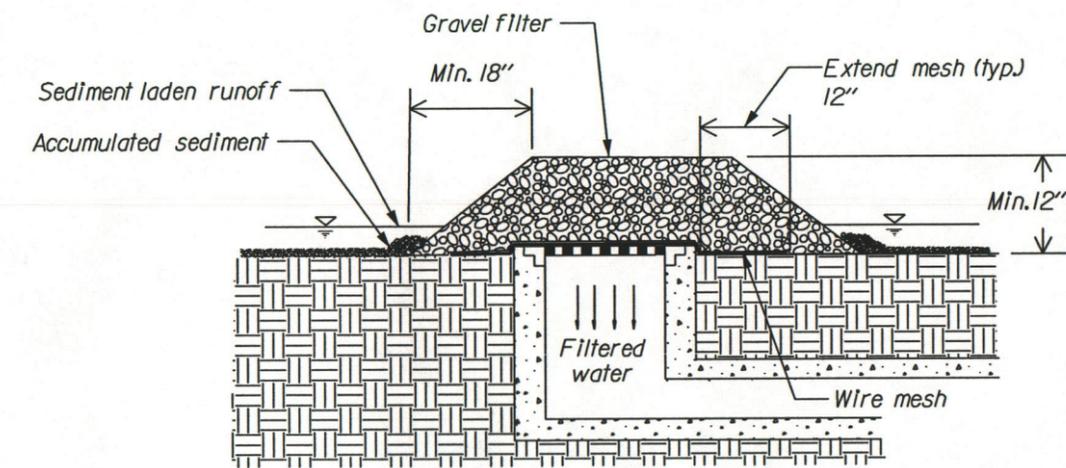
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70 60 50 40 30 20 10 0 10 20 30 40

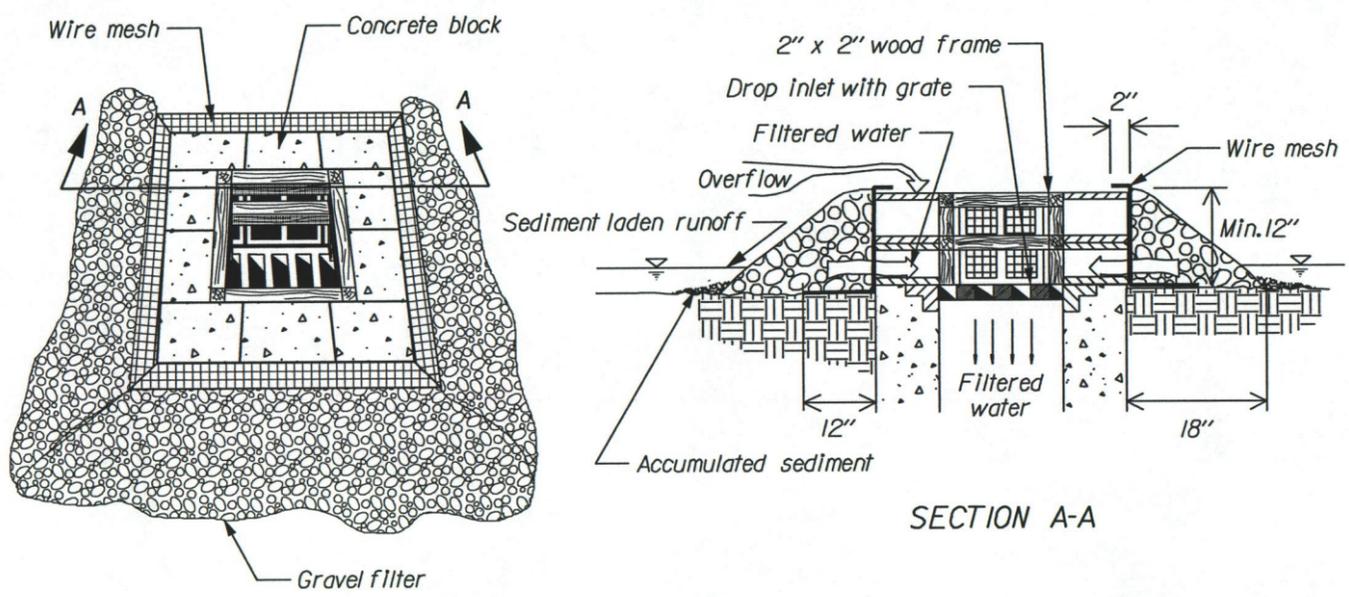
U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION
 STERLING, VIRGINIA
 FREDERICKSBURG AND SPOTSYLVANIA
 NATIONAL MILITARY PARK
 CROSS SECTIONS
 ANDERSON-GORDON DRIVE
 CONNECTOR - SITE 4
 0 5 10
 SCALE IN FEET



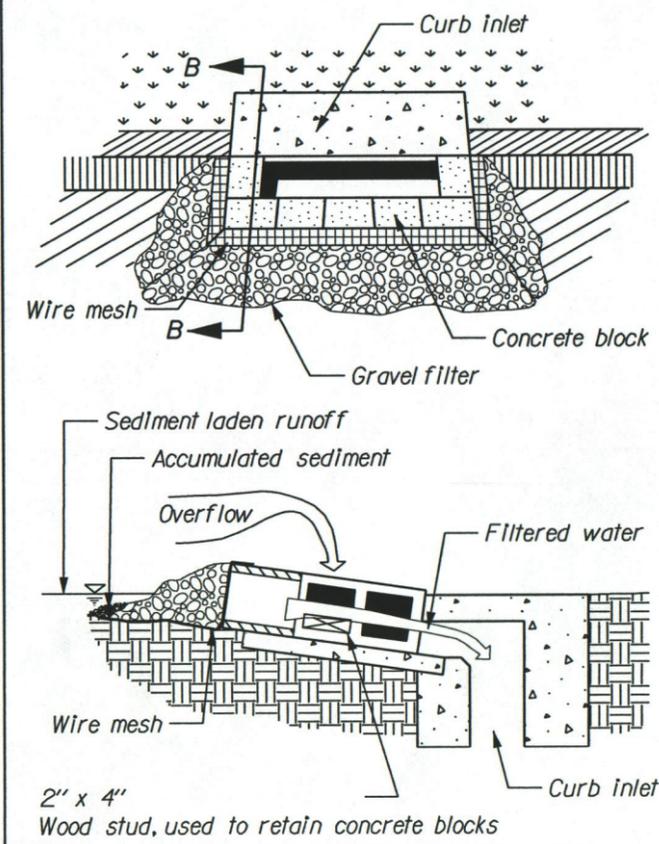
SILT FENCE DROP INLET PROTECTION (TYPE A)
 Note: Use Type A inlet protection in sump locations only.



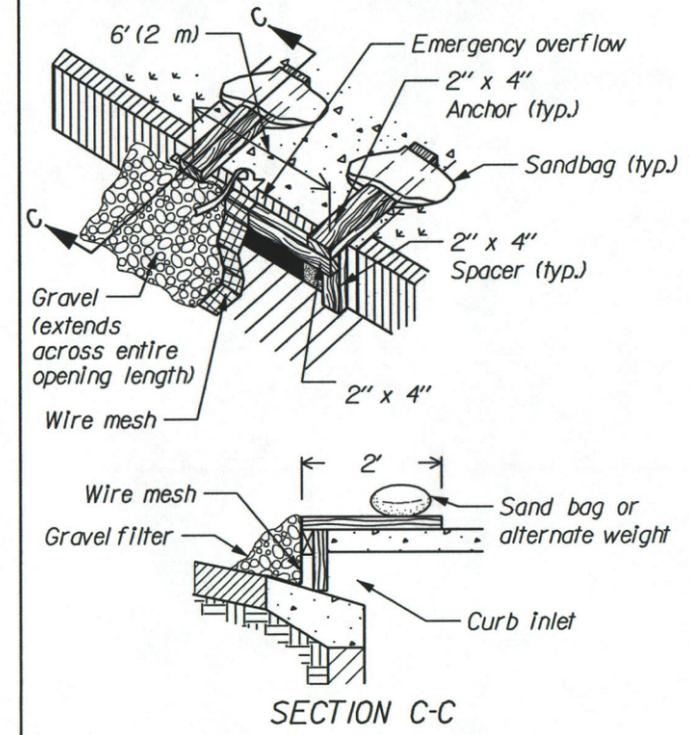
GRAVEL AND WIRE MESH DROP INLET PROTECTION (TYPE B)
 Note: Use Type B inlet protection only in sump locations where heavy concentrated flows are not expected. Do not use where ponding around the structure might cause inconvenience or damage.



BLOCK AND GRAVEL DROP INLET PROTECTION (TYPE C)



SECTION B-B
CURB INLET PROTECTION, BLOCK AND GRAVEL (TYPE D)



SECTION C-C
CURB INLET PROTECTION, WOODEN WEIR (TYPE E)

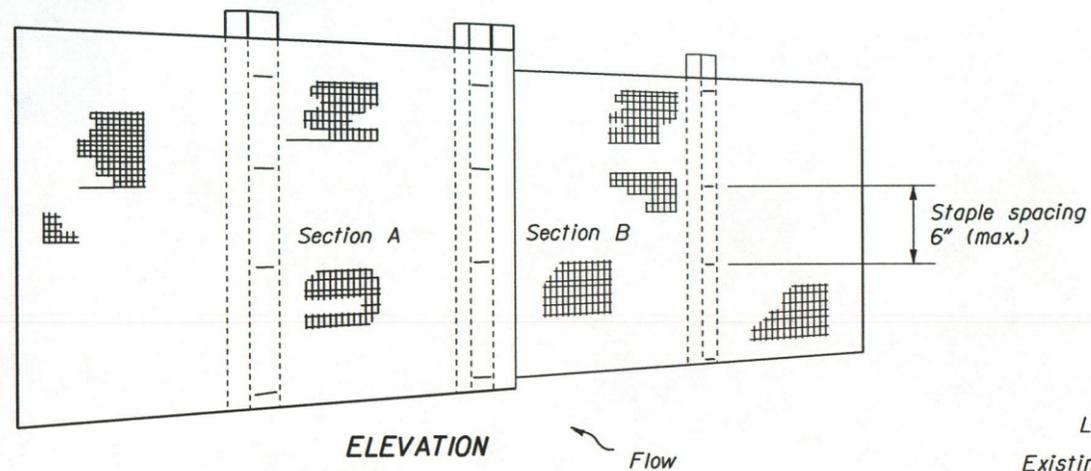
- General Notes:
1. For gravel filters use 2" - 3" diameter coarse aggregate.
 2. Use wire mesh with 1/2" x 1/2" openings.

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 8/17/2006

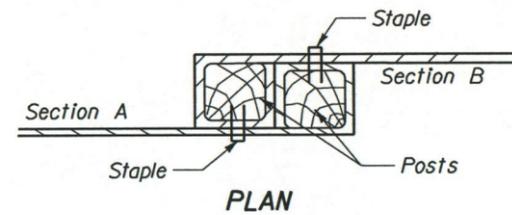
NPS No.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 4,903	NE	VA	PRA-FRSP 1(11), 19(1), ETC.	40	64

NOTES:

1. Use drainage ditch installation for low flow conditions only when specified on Erosion Control Plan.
2. Alternate pre-assembled silt fence options will be allowed as long as specified minimums are satisfied. Follow manufacturer's information for installation procedures.

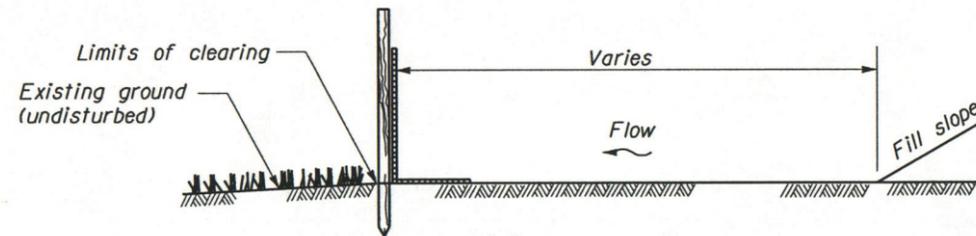


ELEVATION

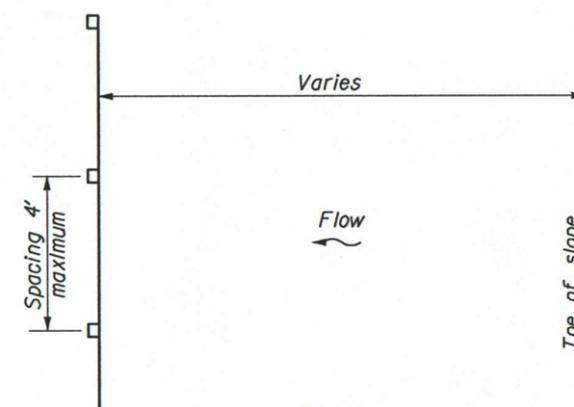


PLAN

JOINING TWO ADJACENT SILT FENCE SECTIONS

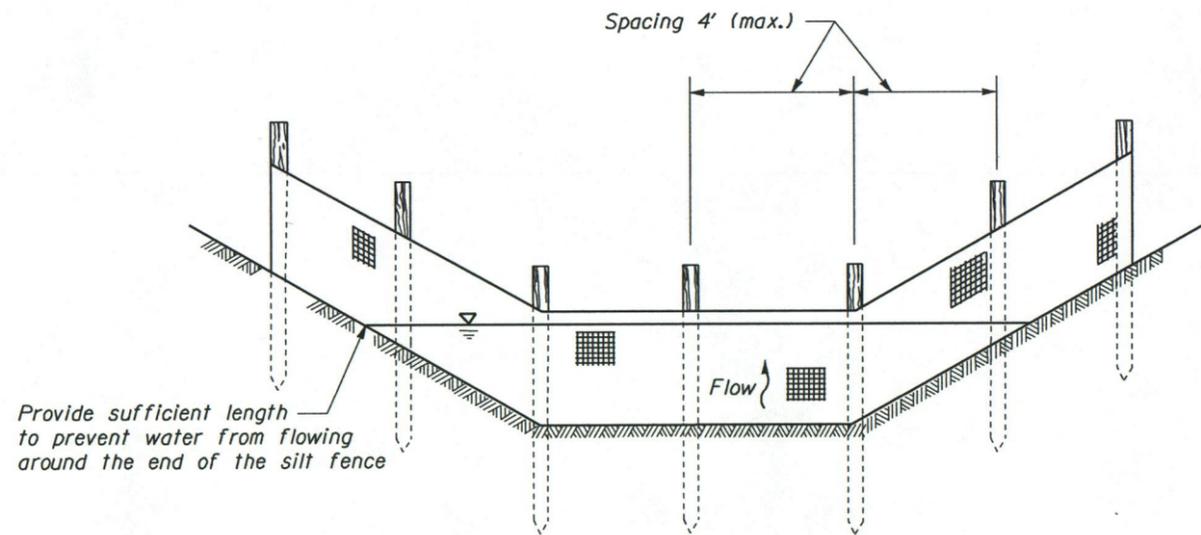


ELEVATION



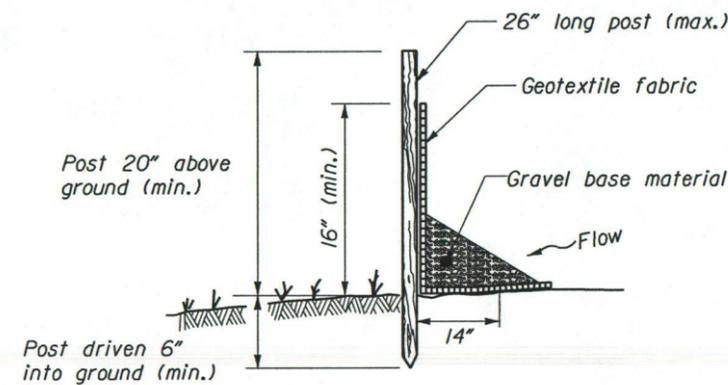
PLAN

SILT FENCE INSTALLATION AT TOE OF FILL



SILT FENCE INSTALLATION IN A DRAINAGE DITCH

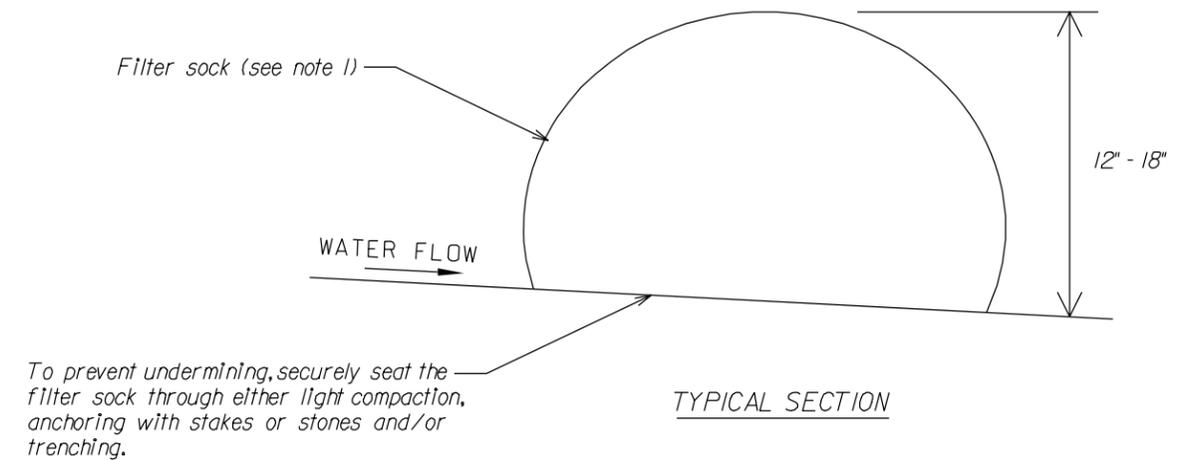
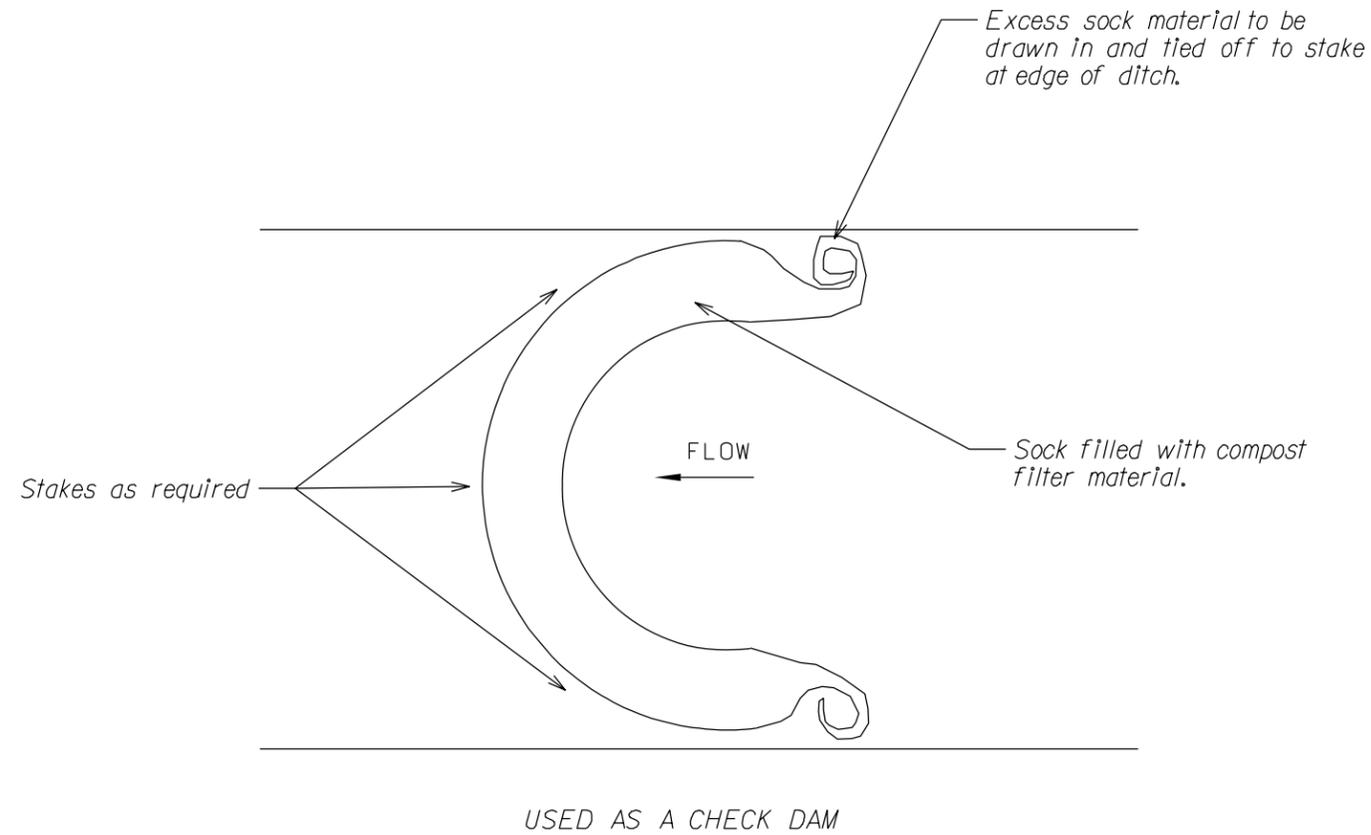
(See note 1)



NO SCALE

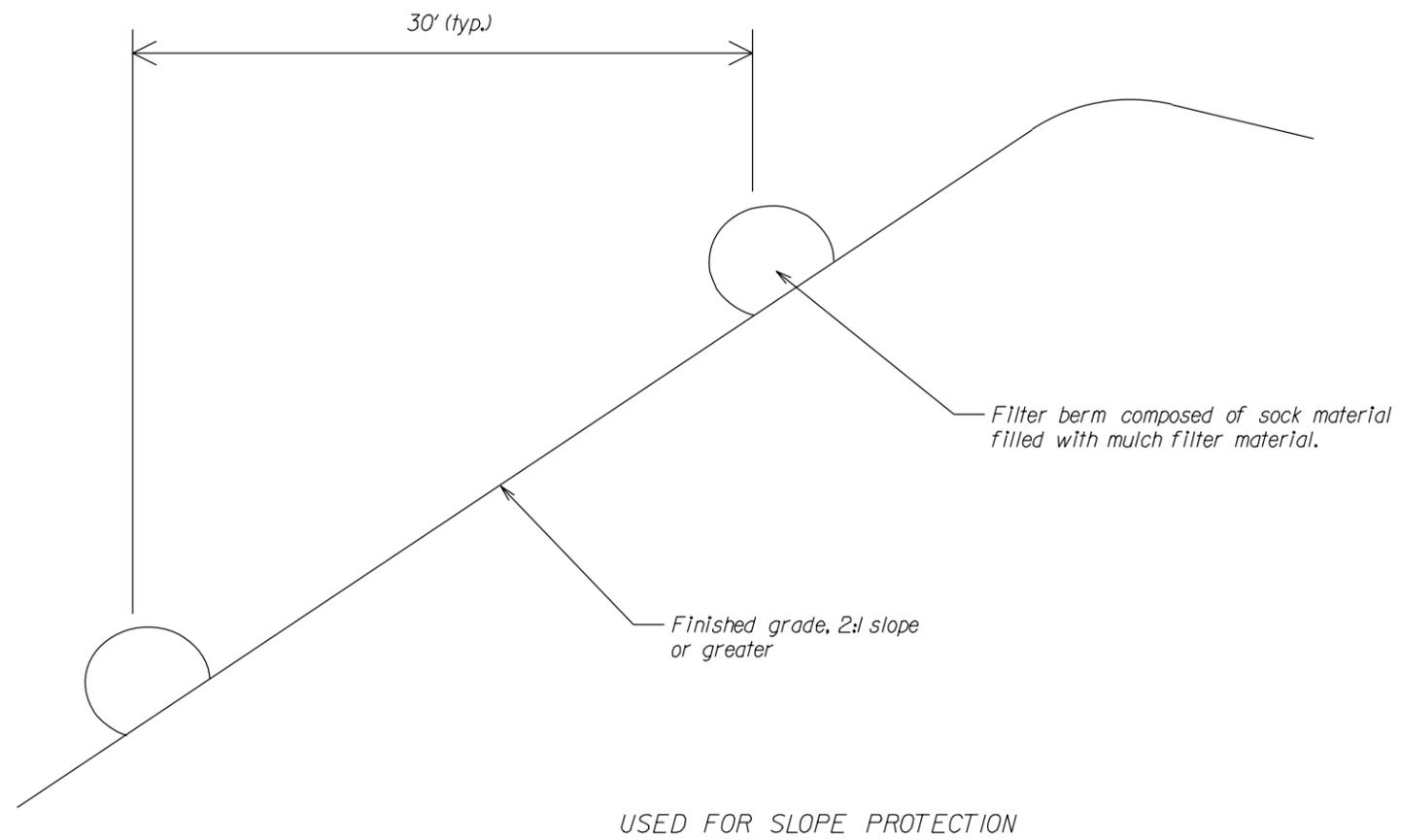
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL SILT FENCE (NON-OBTRUSIVE)	
DETAIL APPROVED FOR USE --/----	DETAIL E157-A

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41903	NE	VA	PRA-FRSP 11(1), 19(1), ETC.	41	64

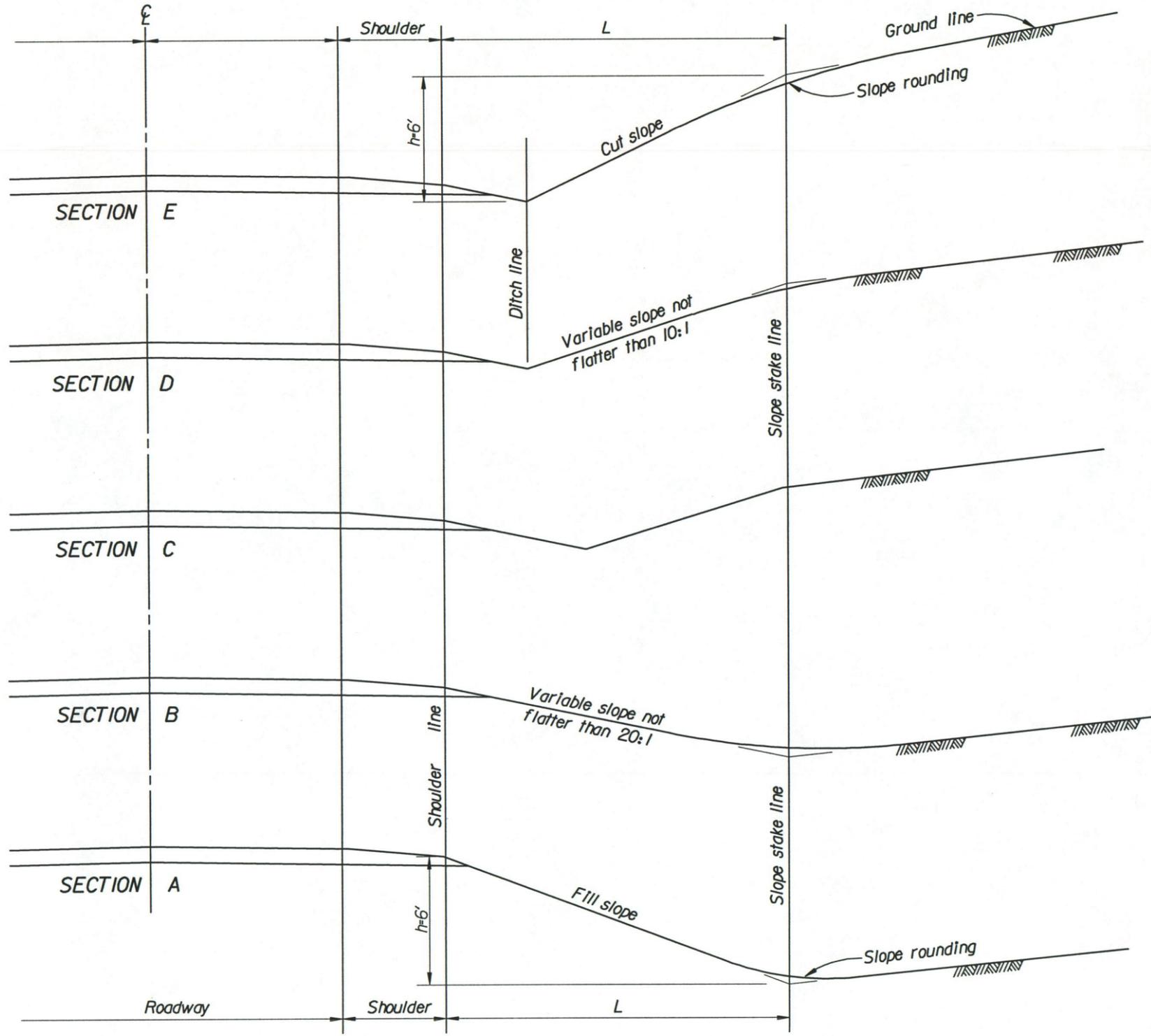


Notes:

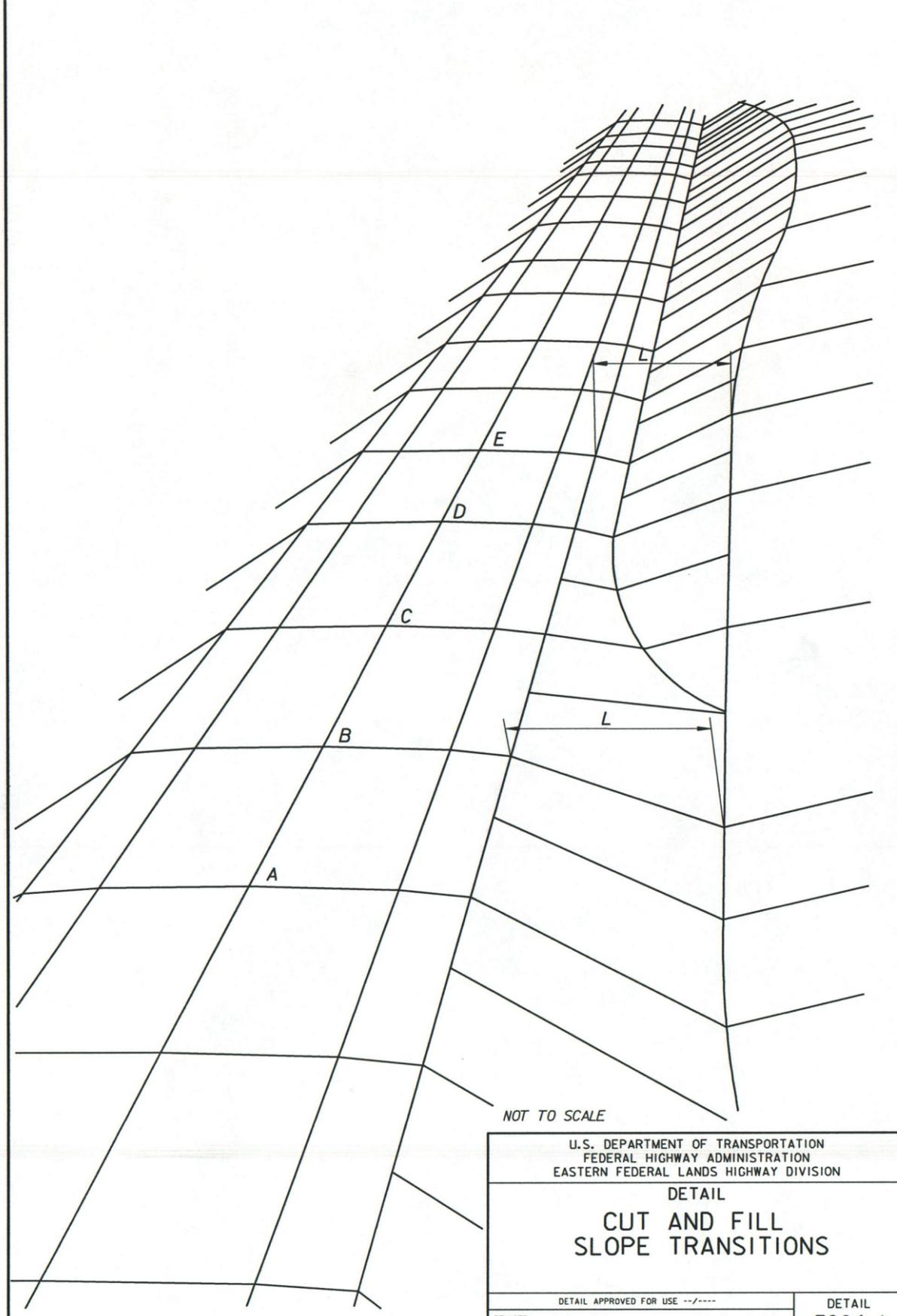
1. Provide sock and compost materials in accordance with Section 157.
2. Maintain compost filter berm in a functional condition at all times, as directed by the CO.
3. Remove sediment at the base of the berm when it has reached 1/3 of the exposed height of the berm, or as directed by the CO.
4. Disperse the compost filter berm on site when no longer required, as directed by the CO.



U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL FILTER BERM	
REVISED:	DETAIL E157-B



Note :
Distance L is to be maintained as the distance to slope stakes
to establish the blend of cut and fill slopes into the original ground.



NOT TO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

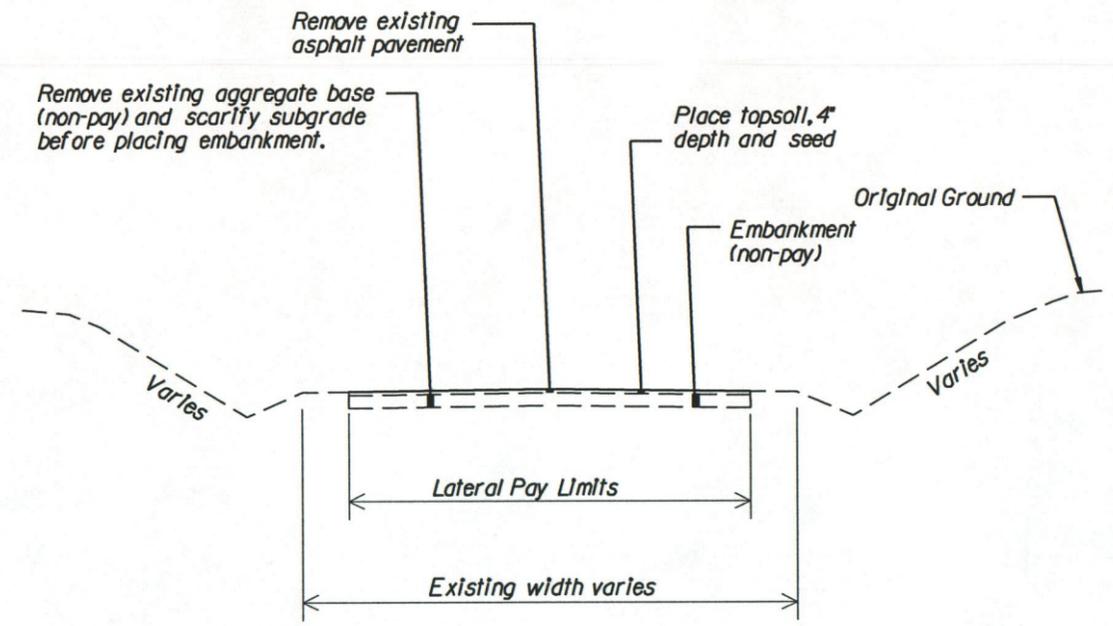
DETAIL
**CUT AND FILL
SLOPE TRANSITIONS**

DETAIL APPROVED FOR USE ---/---
REVISED: _____ DETAIL
E204-1

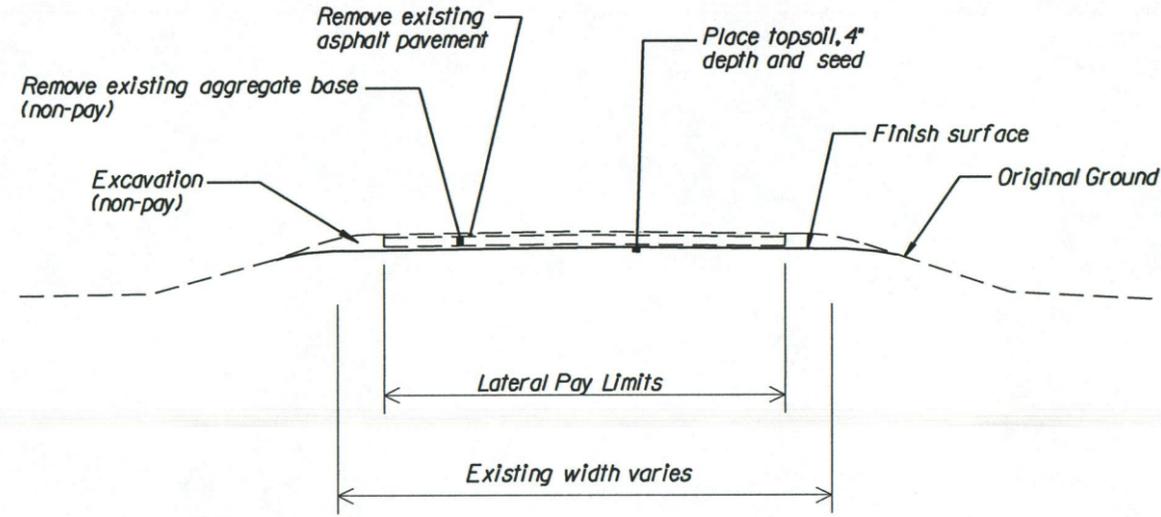
NPS No.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP I(II), 19(II), ETC.	43	64

Notes:

1. Unsuitable material removed from other roadways may be used as embankment material for roadway obliteration.



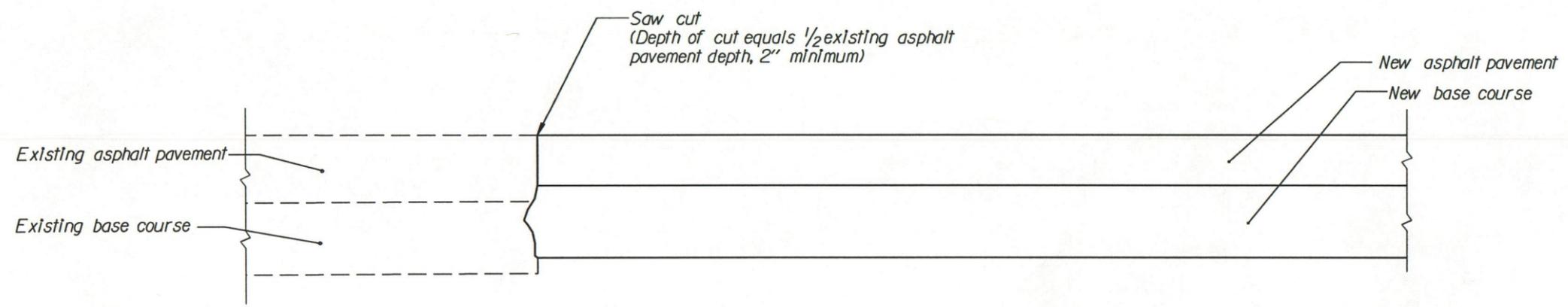
Cut Section



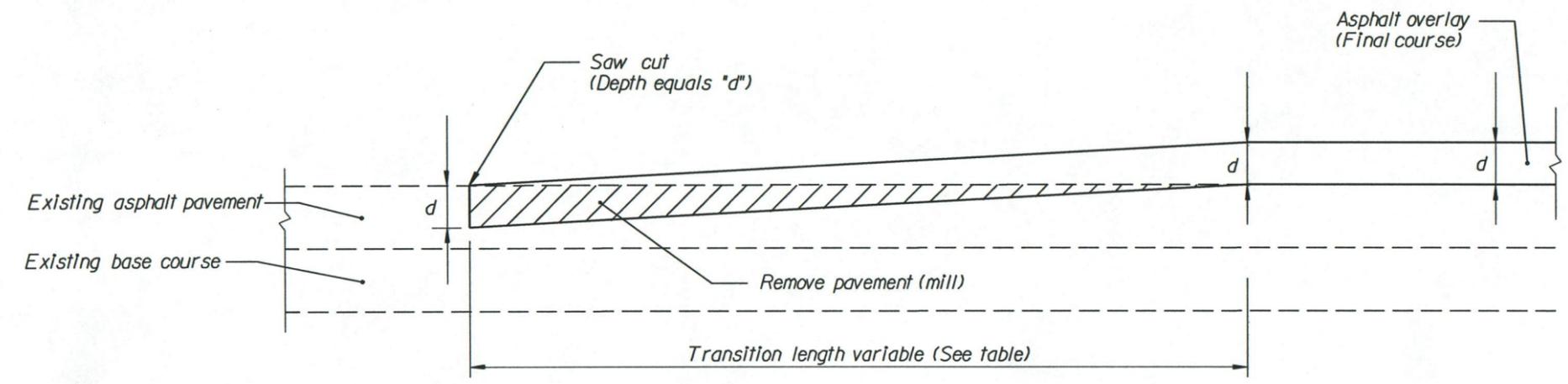
Fill Section

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U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL ROADWAY OBLITERATION	
DETAIL APPROVED FOR USE ---/---	DETAIL E211-A

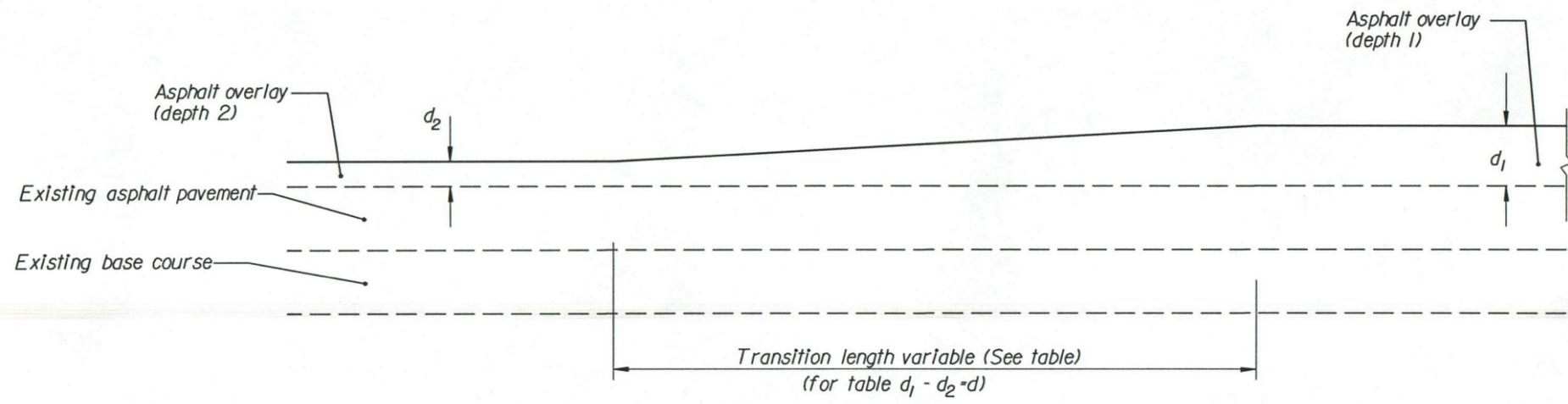


NEW PAVEMENT



OVERLAY

<i>d</i> - Inches	Transition Length - Feet
1	20
1.5	30
2	40
2.5	50
3	60



OVERLAY - DEPTH TRANSITIONS

NOT TO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 EASTERN FEDERAL LANDS HIGHWAY DIVISION

DETAIL

PAVEMENT TRANSITIONS

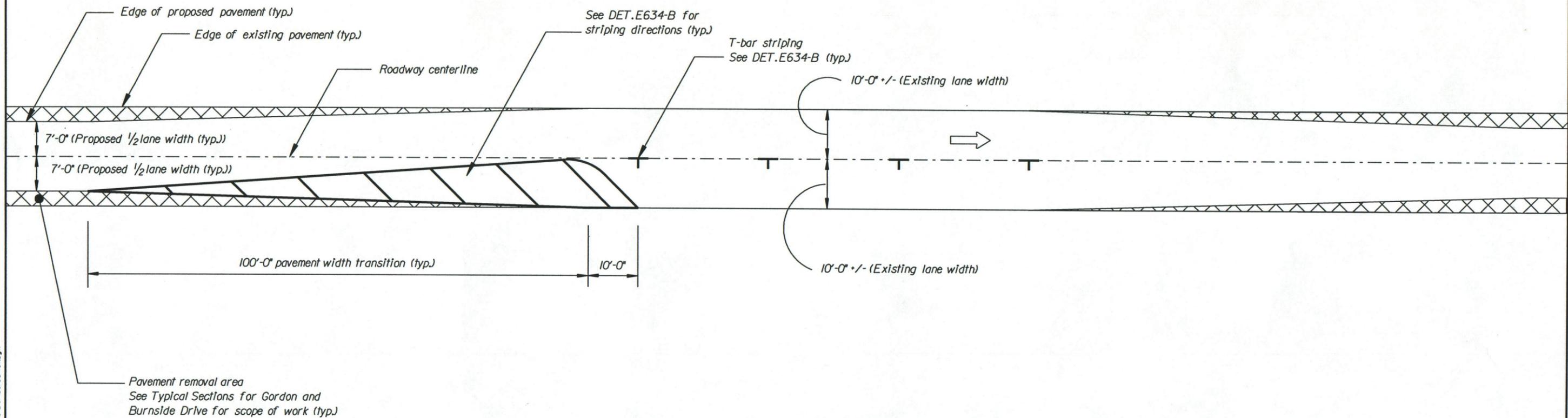
DETAIL APPROVED FOR USE --/---

REVISID: _____

DETAIL
E401-1

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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 4,903	NE	VA	PRA-FRSP 11(1), 19(1), ETC.	45	64



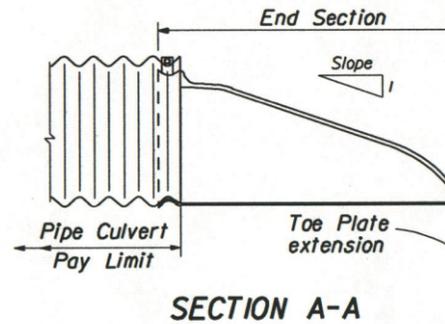
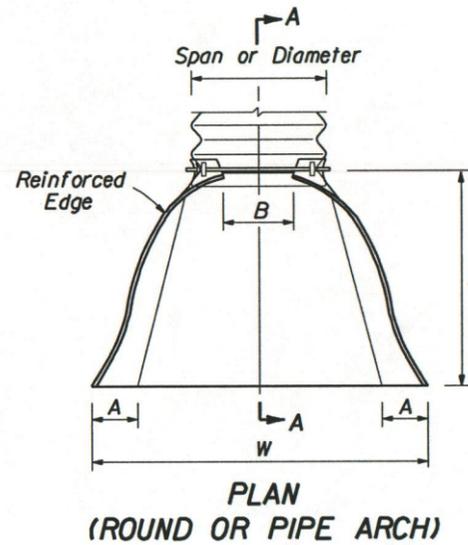
8/17/2006 2:13:19 PM M:\Projects\frsp\111200\proj_dev\CADD\S14-Det\det63401.dgn

Not to scale

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL PARTIAL PAVEMENT REMOVAL TRANSITIONS & PARKING STALL STRIPING (ONE-WAY)	
DETAIL APPROVED FOR USE --/----	DETAIL E401-A
REVISED:	

END SECTIONS FOR PIPE ARCH CULVERT

PIPE SIZE SPAN X RISE INCHES	MINIMUM METAL THICKNESS				DIMENSIONS							SLOPE Approx.
	STEEL		ALUM.		A	B	H	F	L	W		
	INCH	GAGE	INCH	GAGE	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES		
17 x 13	.064	16	.060	16	5	9	6	28	20	52	2 1/8	
21 x 15	.064	16	.060	16	6	11	6	34	24	58	2	
24 x 18	.064	16	.060	16	7	12	6	40	28	63	2 1/8	
28 x 20	.064	16	.060	16	7	16	6	46	32	70	2	
35 x 24	.079	14	.075	14	9	16	6	58	39	85	1 7/8	
42 x 29	.079	14	.075	14	11	18	7	73	46	104	1 7/8	
49 x 33	.109	12	.105	12	12	21	9	82	53	117	1 3/4	
57 x 38	.109	12	.105	12	16	26	12	88	62	132	1 7/8	
53 x 41	.109	12	.105	12	17	26	12	88	63	130	1 3/4	
64 x 43	.109	12	.105	12	17	30	12	100	69	144	1 7/8	
60 x 46	.109	12	.105	12	17	36	12	100	70	142	1 7/8	
71 x 47	.109	12	.105	12	17	36	12	112	77	156	1 7/8	
66 x 51	.109	12	.105	12	17	36	12	112	77	156	1 3/4	
77 x 52	.109	12	.105	12	17	36	12	124	77	167	1 5/8	
73 x 55	.109	12	.105	12	17	36	12	124	77	168	1 1/2	
83 x 57	.109	12	.105	12	17	44	12	130	77	177	1 1/2	
81 x 59	.109	12	.105	12	17	44	12	136	77	179	1 5/8	
87 x 63	.109	12	.105	12	17	44	12	136	77	186	1 1/2	
95 x 67	.109	12	.105	12	17	44	12	160	87	210	1 1/2	
103 x 71	.109	12	.105	12	17	44	12	172	87	222	1 1/3	
112 x 75	.109	12	.105	12	17	44	12	172	87	226	1 1/4	

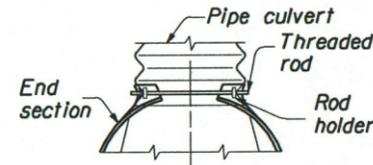
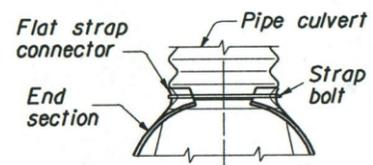
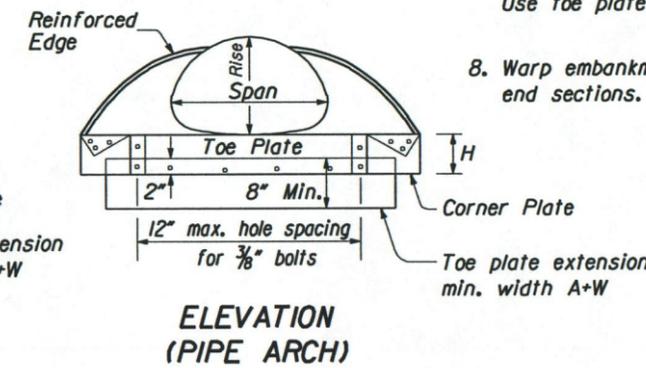
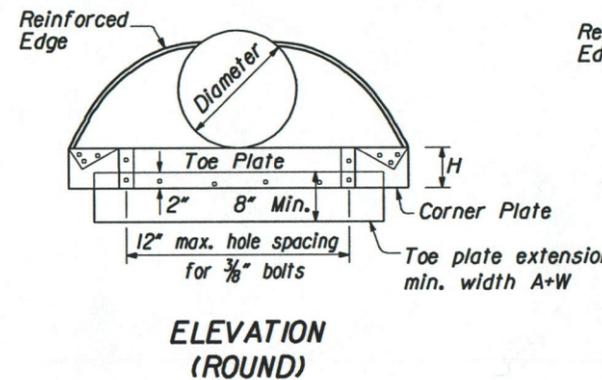


NOTES:

- Variations in design and dimensions are permitted to allow for manufacturer's standards.
- Fabricate the diameter of the end section of Design B to match the inside diameter of the concrete pipe culvert.
- Design C may be used in lieu of Design A for all metal pipe culvert sizes. Coupling bands may be any acceptable type for the pipe culvert specified.
- Fabricate multiple piece bodies with lap seams tightly joined by 3/8" rivets or bolts. Fabricate end section center panels for 60" and larger diameter pipe and 71" x 47" and larger pipe arch from 0.138" (10 gage) steel or 0.135" (10 gage) aluminum.
- On end section center panels for 77" x 52", 73" x 55" and larger pipe arch, provide 2 1/2" x 2 1/2" x 1/4" angle reinforcement bolted or riveted under the center panel seam.
- Supplement the reinforced edges of end sections for 60" and larger diameter pipe and 77" x 52", 73" x 55" and larger pipe arch with 2" x 2" x 1/4" stiffener angles attached with bolts or rivets.
- Fabricate connector section, corner plate and toe plate extensions from the same metal thickness as the panel body. Use toe plate extension where shown on the plans.
- Warp embankment slopes to match the slope of the flared end sections.

END SECTIONS FOR ROUND PIPE CULVERT

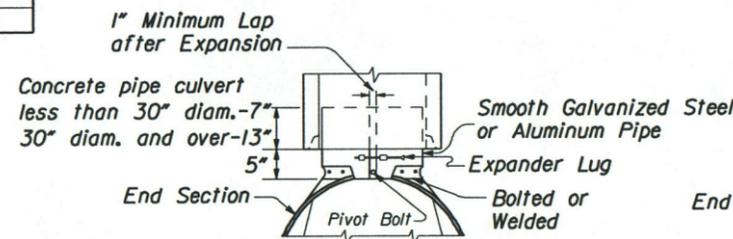
PIPE SIZE DIAMETER INCHES	MINIMUM METAL THICKNESS				DIMENSIONS							SLOPE Approx.
	STEEL		ALUM.		A	B	H	F	L	W		
	INCH	GAGE	INCH	GAGE	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES		
12	.064	16	.060	16	5	7	6	22	21	44	2 1/4	
15	.064	16	.060	16	6	8	6	28	26	52	2 1/4	
18	.064	16	.060	16	7	10	6	34	31	58	2 1/8	
21	.064	16	.060	16	8	12	6	40	36	66	2 1/8	
24	.064	16	.060	16	9	13	6	46	41	72	2 1/8	
30	.079	14	.075	14	11	16	8	55	51	88	2 1/8	
36	.079	14	.075	14	13	19	9	70	60	105	2	
42	.109	12	.105	12	15	25	10	82	69	122	2 1/8	
48	.109	12	.105	12	17	29	12	88	78	131	2	
54	.109	12	.105	12	17	33	12	100	84	143	2	
60	.109	12	.105	12	17	36	12	112	87	157	1 7/8	
66	.109	12	.105	12	17	39	12	118	87	162	1 5/8	
72	.109	12	.105	12	17	44	12	120	87	169	1 1/2	
78	.109	12	.105	12	17	48	12	130	87	178	1 5/8	
84	.109	12	.105	12	17	52	12	136	87	184	1 1/3	
90	.109	12	.105	12	17	58	12	142	87	188	1 1/4	
96	.109	12	.105	12	17	58	12	144	87	197	1 1/8	



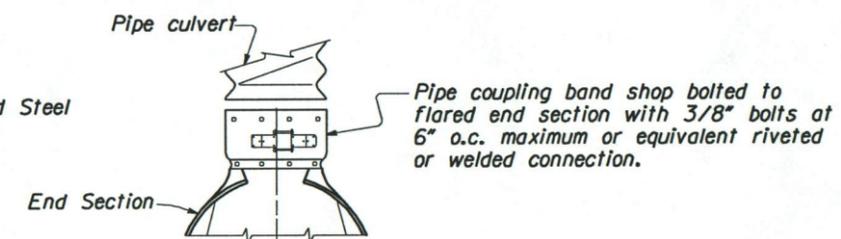
For 12" thru 24" round pipe and 17" x 13" thru 28" x 20" pipe arch

For 30" thru 60" round pipe and 35" x 24" thru 66" x 51" pipe arch

DESIGN A CONNECTION TO ANNULAR CORRUGATED METAL PIPE



DESIGN B CONNECTION TO CONCRETE PIPE INLET END

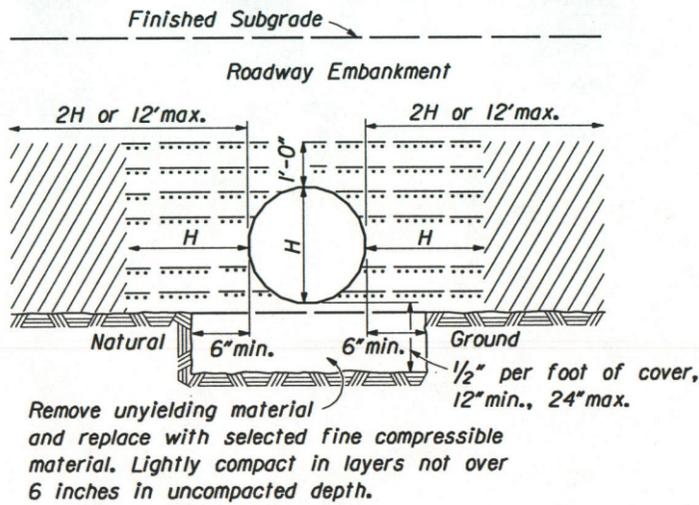


DESIGN C CONNECTION TO METAL PIPE OR OUTLET END OF CONCRETE PIPE

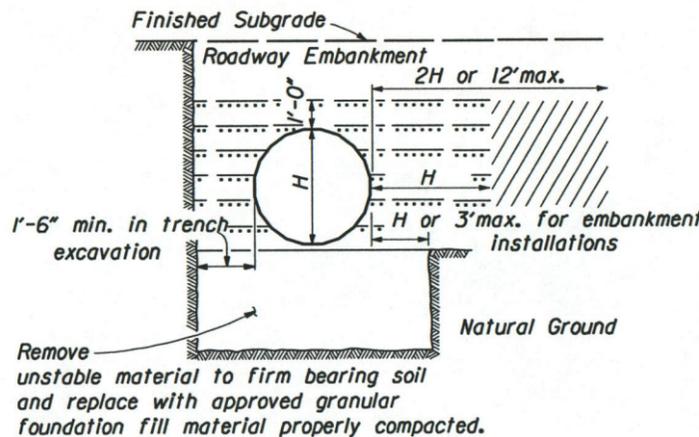
For all sizes of round pipe and pipe arch.

NO SCALE

CONCRETE ROUND PIPE CULVERT									
FILL HEIGHT AND PIPE CLASS TABLE									
PIPE SIZE DIAMETER INCHES	MINIMUM COVER INCHES	EMBANKMENT				TRENCH			
		CLASS II	CLASS III	CLASS IV	CLASS V	CLASS II	CLASS III	CLASS IV	CLASS V
MAXIMUM FILL HEIGHT ABOVE TOP OF PIPE IN FEET									
12	12	11	11	16	23	18	18	26	37
18	12	10	10	25	39	14	14	31	45
24	12	11	11	15	31	15	15	22	40
30	12	9	13	16	35	13	17	20	46
36	12	9	9	20	41	11	14	26	56
48	12	12	14	26	44	16	17	31	50
60	12	15	17	28	44	15	20	32	50
72	12	13	17	31	41	16	20	35	49
84	12	13	19	31		15	23	37	
96	12	13	20			16	24		
108	12	16	20			19	26		



ON UNYIELDING MATERIAL



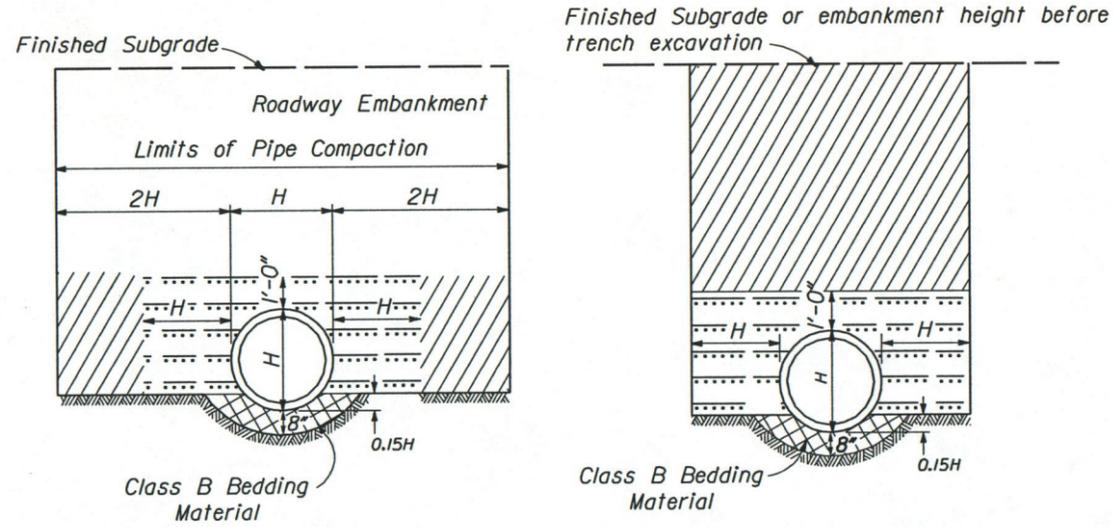
ON UNSTABLE MATERIAL

LEGEND:

- Bedding Material
- Approved granular material or fine compactable soil placed in layers not exceeding 6" compacted depth.
- Embankment material placed in layers not exceeding 6" compacted depth.
- Impermeable backfill material

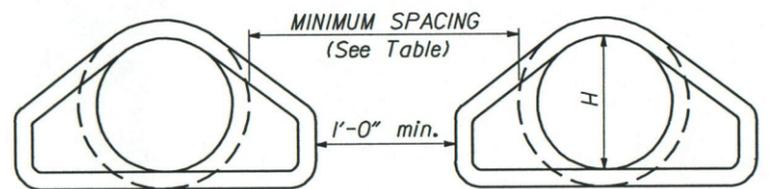
NOTE:

- When directed, camber pipe culverts upward from a chord through the inlet and outlet inverts an ordinate amount equal to 1% of the pipe length. Develop camber on a parabolic curve. If the midpoint elevation on the parabolic curve as designed exceeds the elevation of the inlet invert, reduce the amount of camber or increase the pipe culvert gradient.
- Measure minimum cover from the top of the pipe culvert to the subgrade for flexible pavements, and to the top of the pavement for rigid pavements. Measure maximum fill height from the top of the pipe to the top of the pavement for both flexible and rigid pavements.
- Pipe compaction limits shown are for pipe installation in an embankment. For pipe installation in a trench, the compaction limits shall be the walls of the trench.
- When grades exceed 10%, install supplemental concrete pipe ties on pipe culvert or install bell and spigot pipe.
- Maximum fill heights for pipe culvert installations may be increased on approval of site-specific structural pipe designs meeting the criteria of AASHTO Standard Specifications for Highway Bridges.



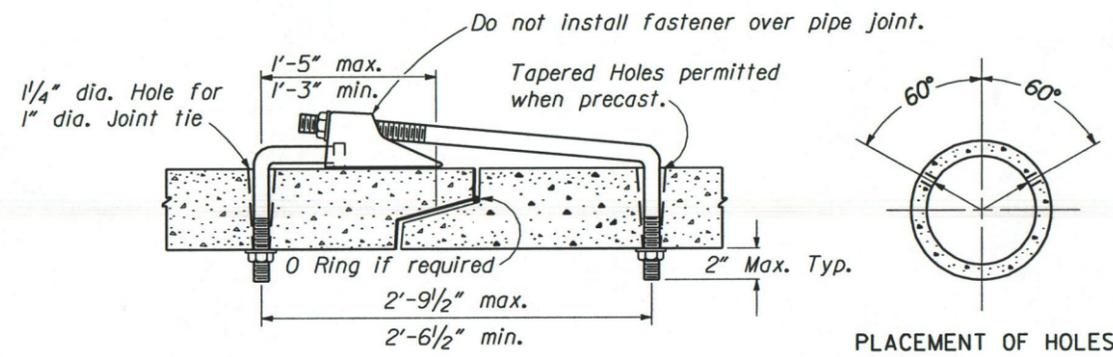
EMBANKMENT INSTALLATION

TRENCH INSTALLATION

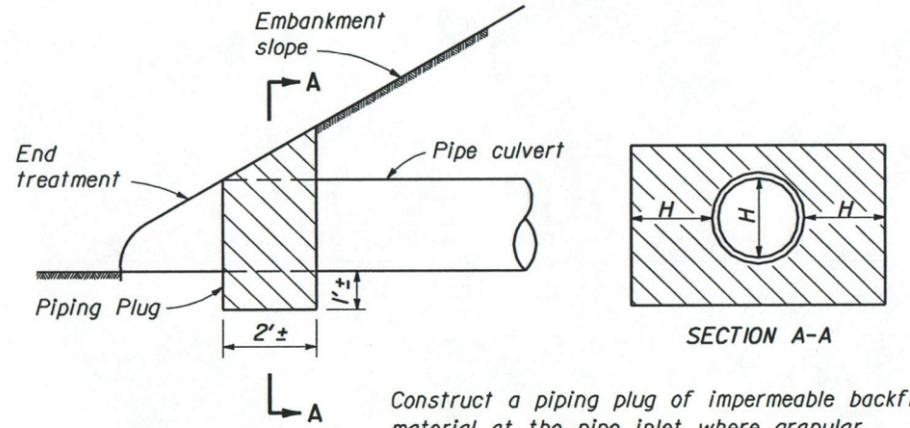


MINIMUM SPACING		
DIAMETER INCHES	EMBANKMENT	TRENCH
12-36	15"	2H
36-96	4 1/2"	72"
OVER 96	48"	72"

MULTIPLE ROUND PIPE INSTALLATION



SUPPLEMENTAL CONCRETE PIPE TIE



PIPING PLUG

Construct a piping plug of impermeable backfill material at the pipe inlet where granular material is used for backfill.

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

DETAIL

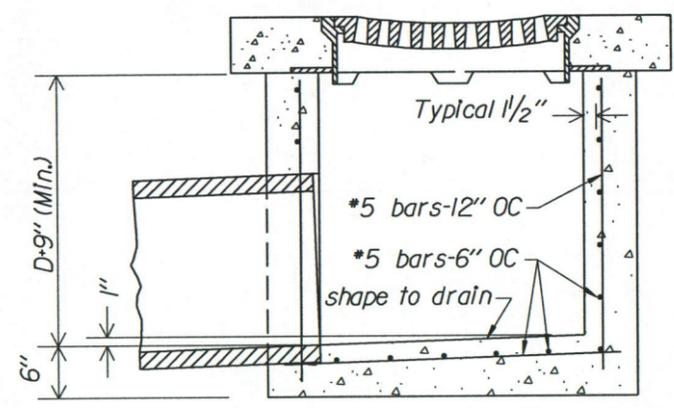
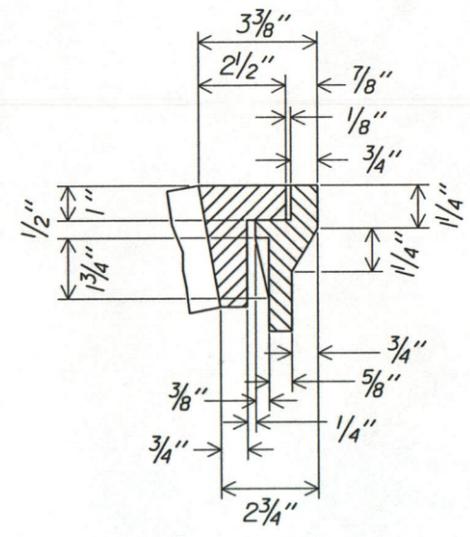
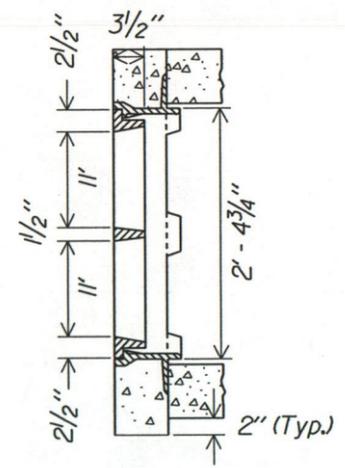
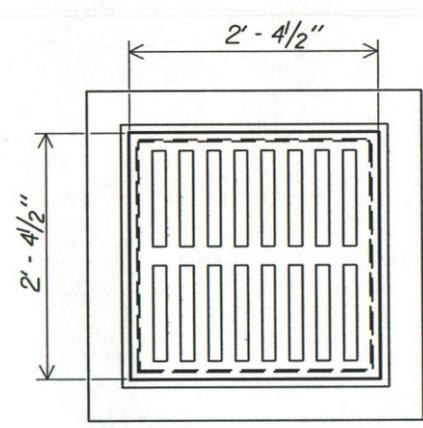
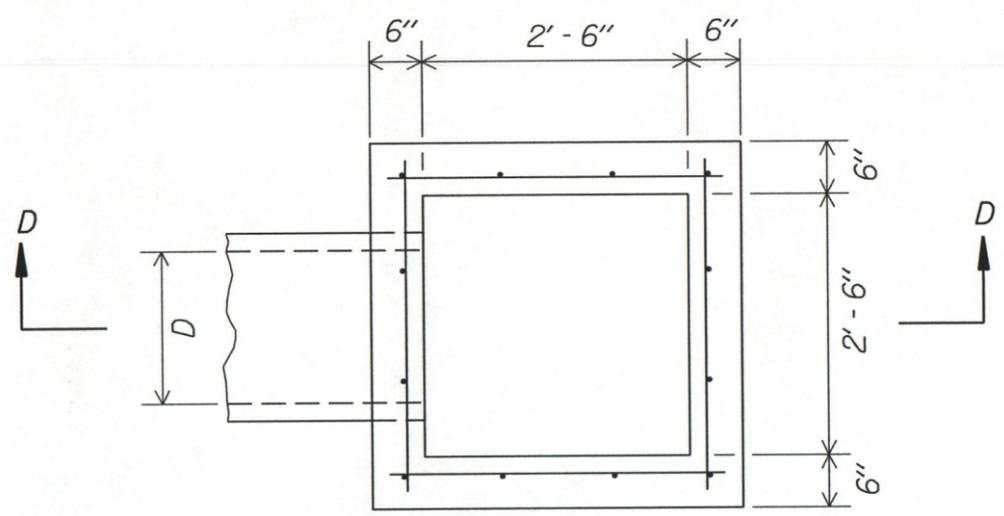
CONCRETE PIPE CULVERT INSTALLATION

DETAIL APPROVED FOR USE --/----

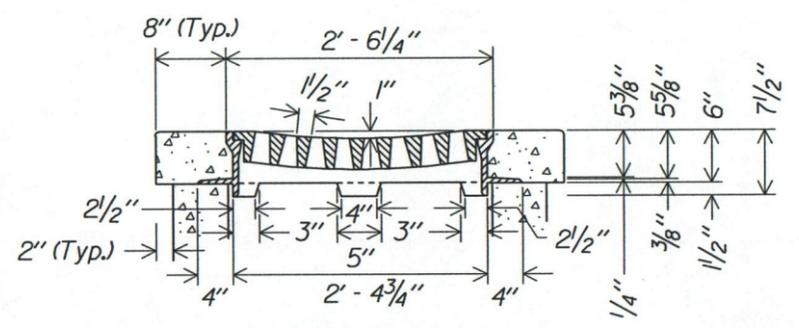
REVISID: 4/28/02

DETAIL
E602-7

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TYPE 6B INLET
SECTION D-D



METAL FRAMES AND GRATINGS
TYPE 6B

Gray Iron Castings, AASHTO M105

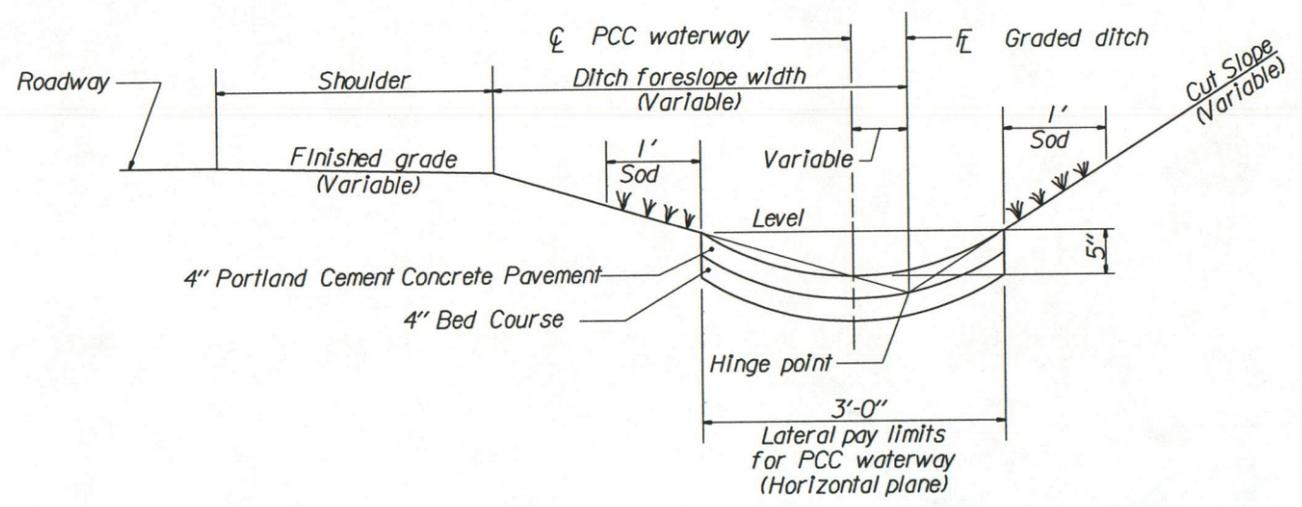
Notes:

1. At the option of the Contractor walls less than 4 feet may be of either concrete block or concrete as shown.
2. Construct inlets parallel to the roadway centerline and grade. For pipes on skew, adapt inlets as directed by the CO.
3. For frames and gratings minor variations in design and dimensions are permitted to allow manufacturers standards.

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
STANDARD	
INLET, TYPE 6B	
STANDARD APPROVED FOR USE --/----	STANDARD
REVISED:	604-7

8/17/2006 3:35:16 PM M:\ProJecis\rspl\11201\proj_dev\CADD\Sid-Def\st604.rvt.dgn

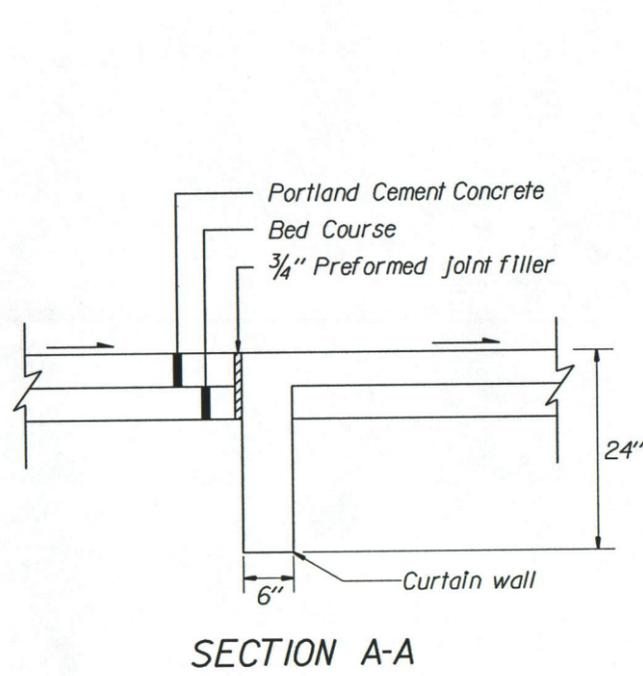
NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP 11(1), 19(1), ETC.	49	64



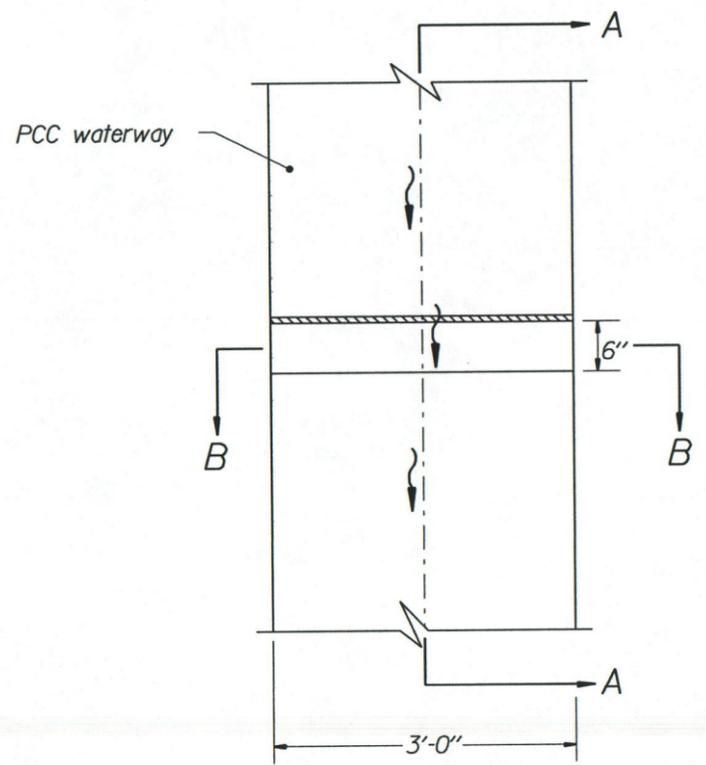
NOTES:

1. The approximate shape of the Portland Cement Concrete waterway is an arc with a radius of 2.9 feet.
2. At inlets and other special locations, widen and shape paved waterway to drain.
3. Construct Portland Cement Concrete waterway in uniform sections 20 feet in length, except closure sections are not less than 5 feet in length. Place expansion joints, with curtain walls at 100 foot intervals.
4. At the outlet end of each Portland Cement Concrete waterway, construct a curtain wall on the downstream end of the last section of waterway.

PORTLAND CEMENT CONCRETE WATERWAY

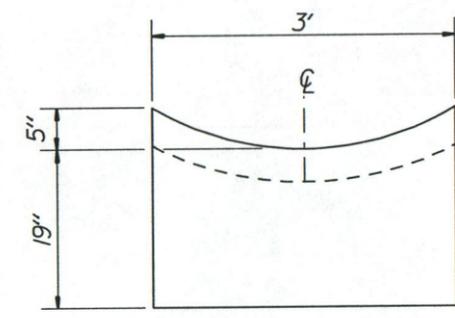


SECTION A-A



PLAN

EXPANSION JOINT FOR PORTLAND CEMENT CONCRETE WATERWAY



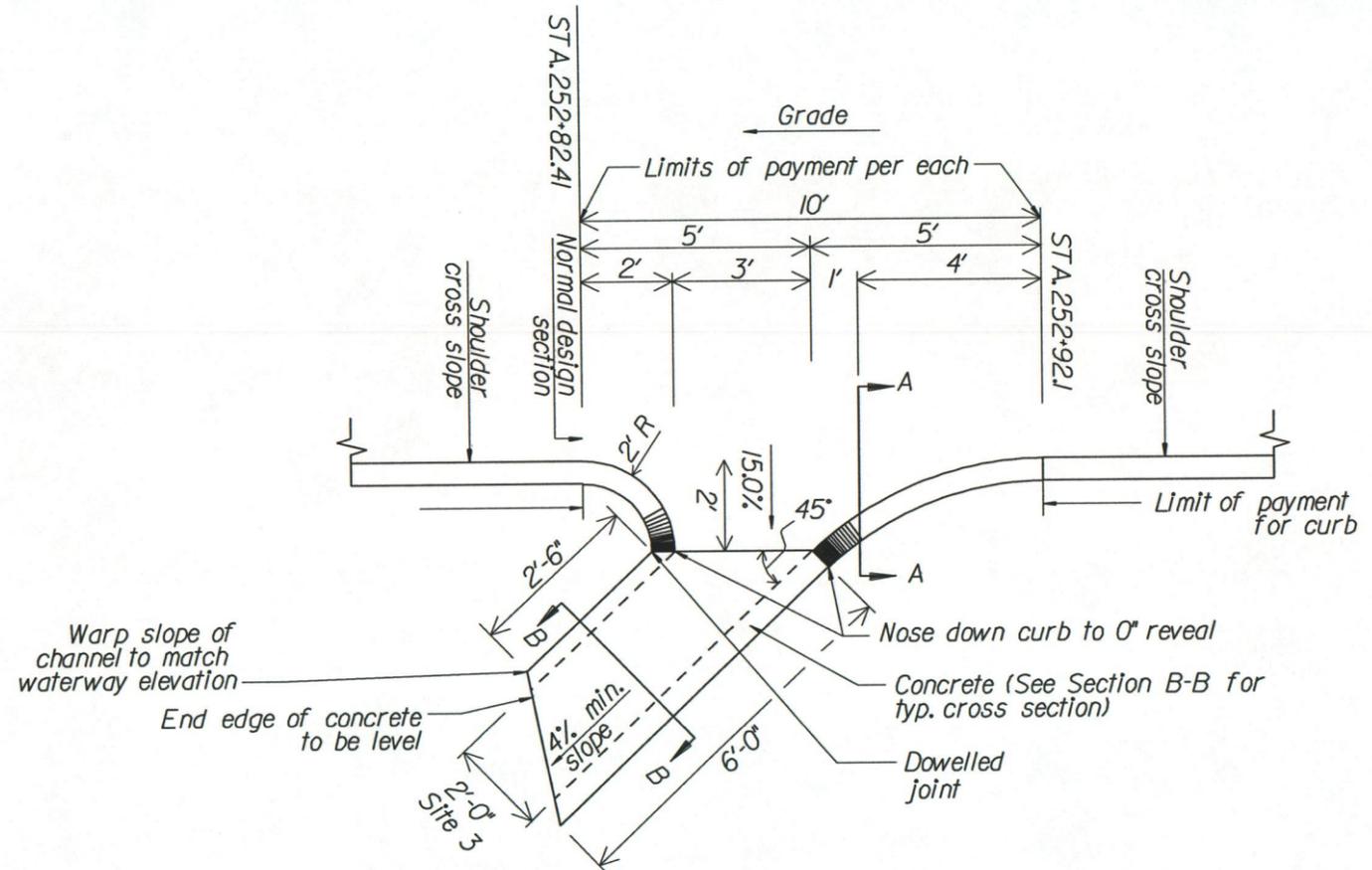
SECTION B-B

NOT TO SCALE

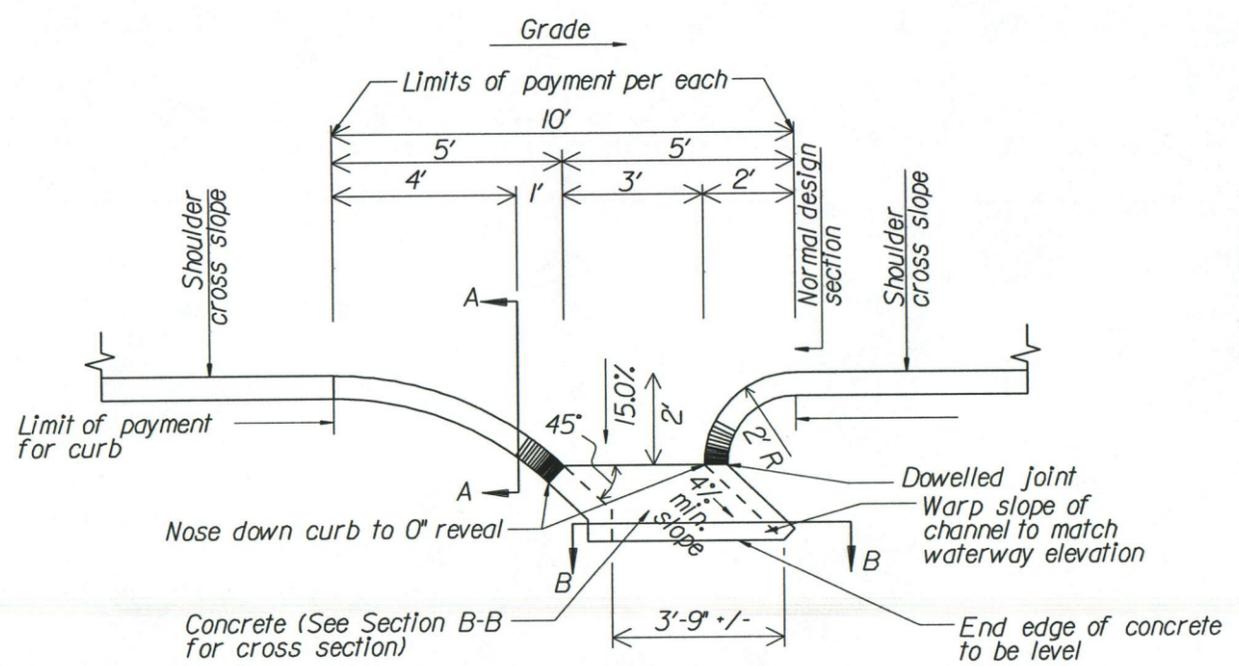
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL	
PORTLAND CEMENT CONCRETE WATERWAY TYPE 4	
DETAIL APPROVED FOR USE --/----	DETAIL E608-A
REVISED: 4/29/02	

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 8/17/2006

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP 11(1) 19 (1), ETC.	50	64



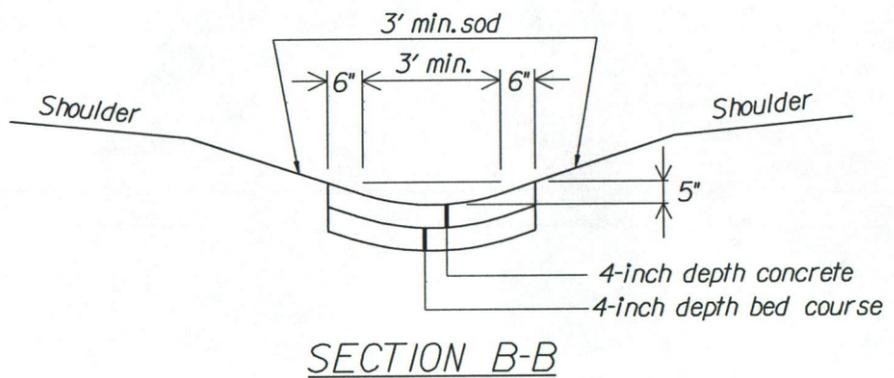
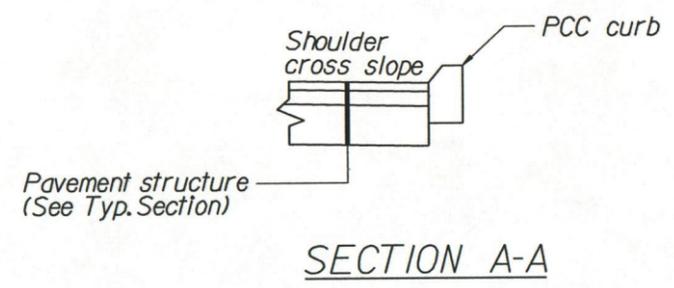
ON GRADE - SITE 3, STA. 252+82.41 TO STA. 252+92.1, RT.



ON GRADE - SITE 1, STA. 272+15 TO 272+23, RT. & STA. 272+43 TO 272+52, LT.

Notes:

1. PCC curb to conform to Section 609.
2. Level spreader (Drainage chute) to conform to Section 608.

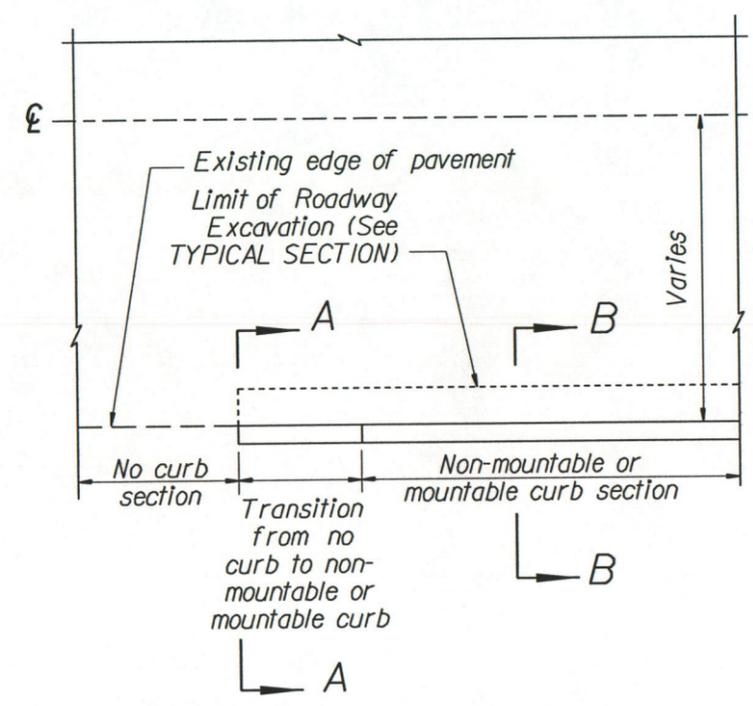


U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL	
CURB CUT OPENING AND LEVEL SPREADER (DRAINAGE CHUTE)	
REVISIONS:	DETAIL APPROVED FOR USE: --/---
	DETAIL E608-B

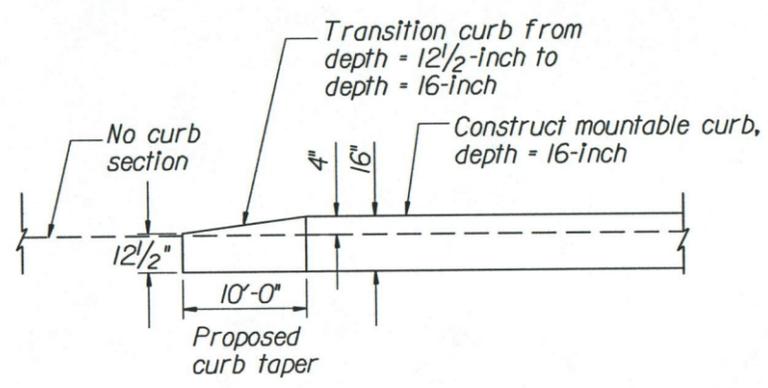
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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP II(I), 19(I), Etc.	51	64

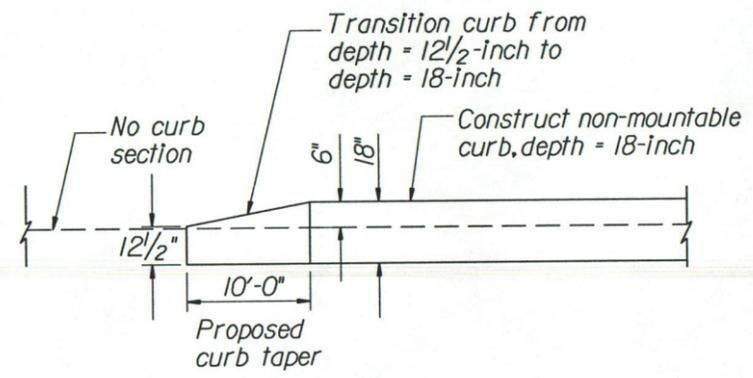
Note:
1. Place 3-inches, minimum aggregate bed course under all curb and gutter.



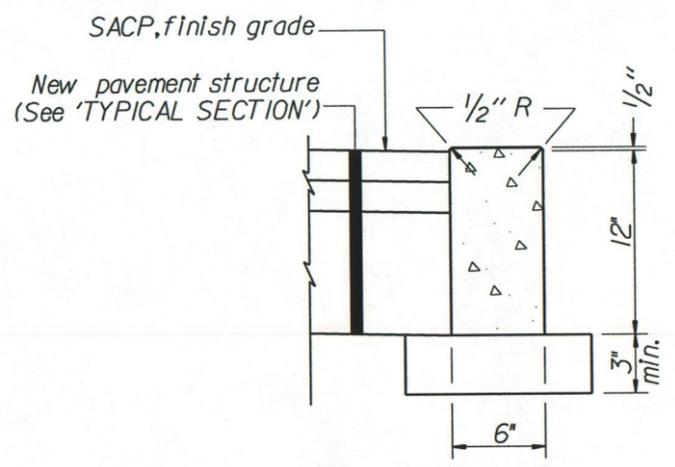
PLAN CURB TRANSITION



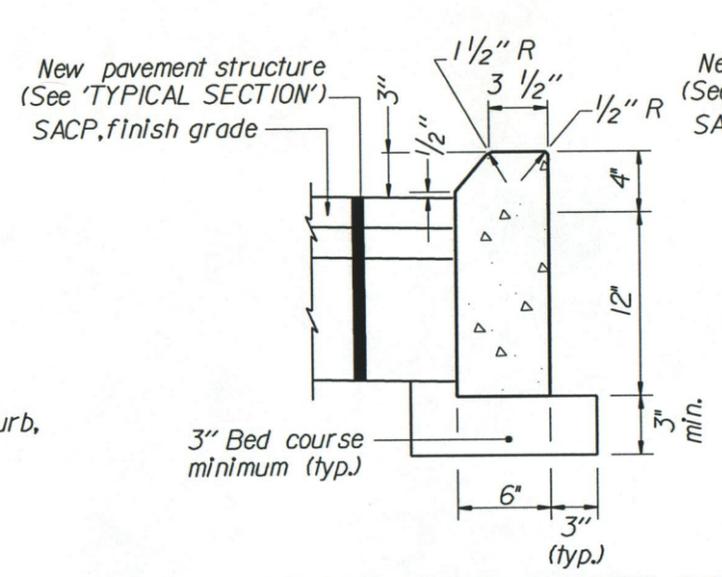
PROFILE CURB TRANSITION (MOUNTABLE CURB)



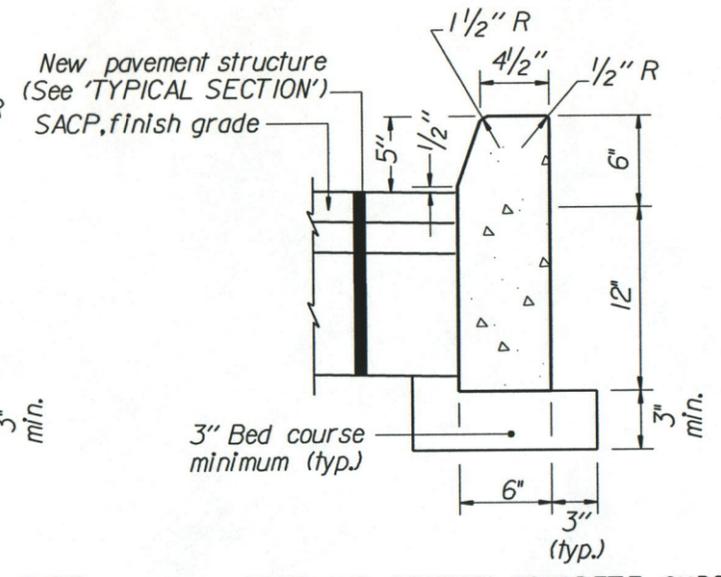
PROFILE CURB TRANSITION (NON-MOUNTABLE CURB)



SECTION A-A



PORTLAND CEMENT CONCRETE CURB 16-INCH DEPTH (MOUNTABLE)



PORTLAND CEMENT CONCRETE CURB 18-INCH DEPTH (NON-MOUNTABLE)

SECTION B-B

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL CURBS & CURB TRANSITIONS	
DETAIL APPROVED FOR USE XX/XX	DETAIL
REVISED: XX/XX	E609-A

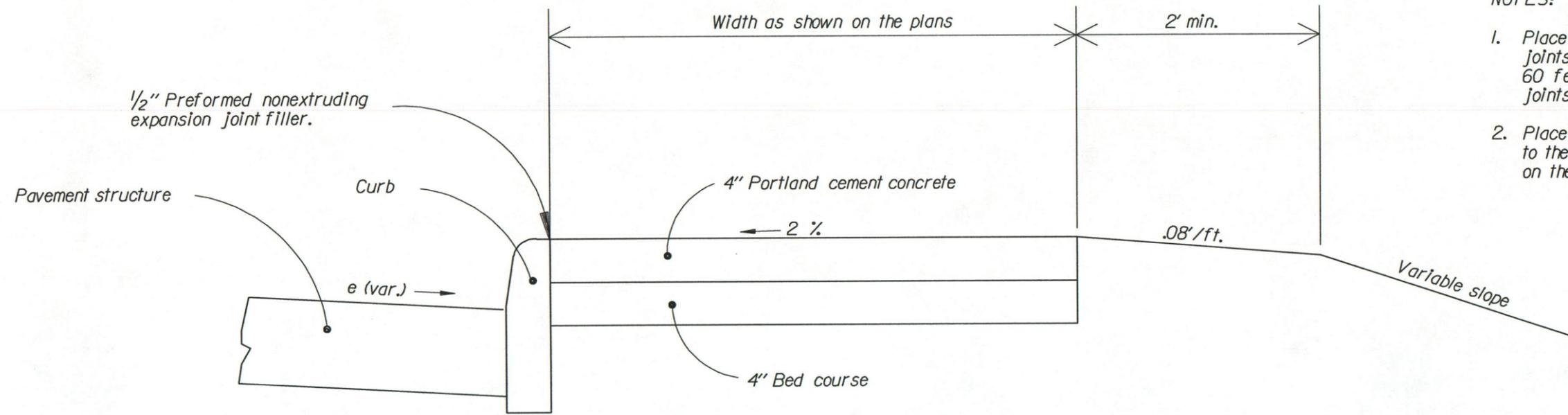
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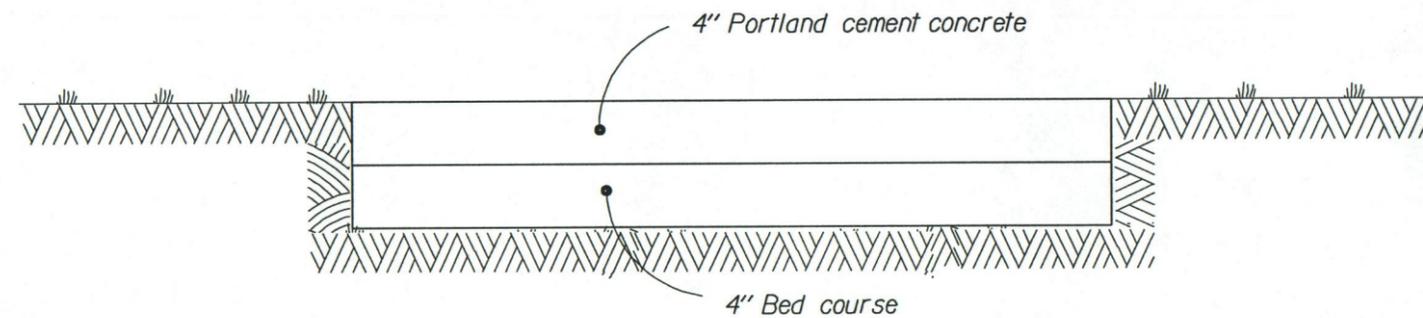
NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41903	NE	VA	PRA-FRSP 11(1), 19(1), ETC.	52	64

NOTES:

1. Place $\frac{3}{4}$ -inch transverse expansion joints at intervals of not more than 60 feet to match adjacent curb expansion joints.
2. Place dummy joints at intervals equal to the width of the sidewalk as shown on the plans.



SIDEWALK WITH CURB



SIDEWALK

NOT TO SCALE

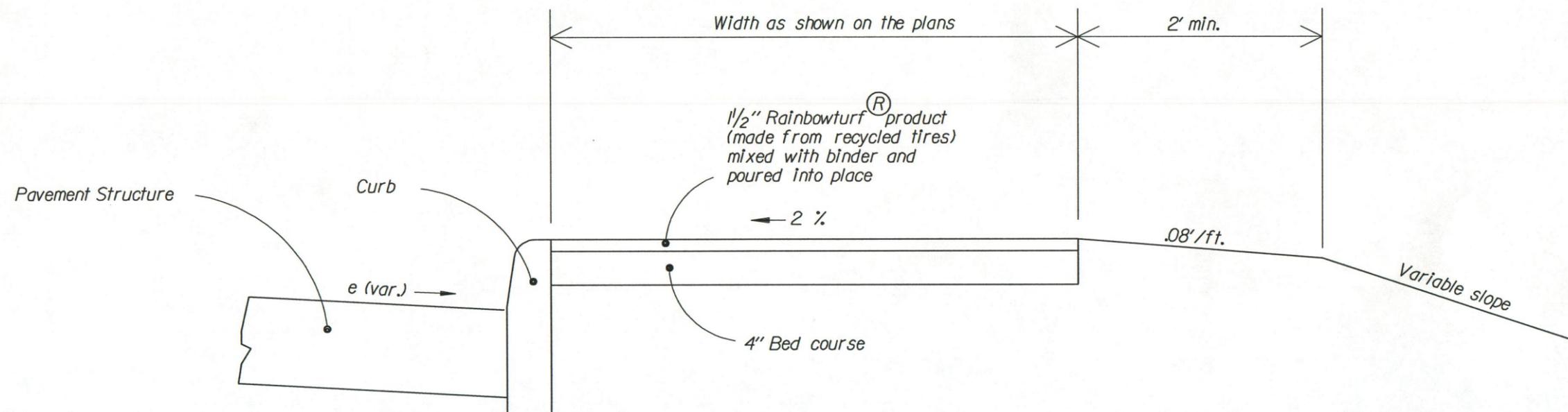
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL	
PORTLAND CEMENT CONCRETE SIDEWALK	
DETAIL APPROVED FOR USE --/----	DETAIL E615-1

8/17/2006 3:28:24 PM M:\P\proj\eds\frsp\11(1)\201\pro\dev\ACADD\SID-Det\1615x1.dgn

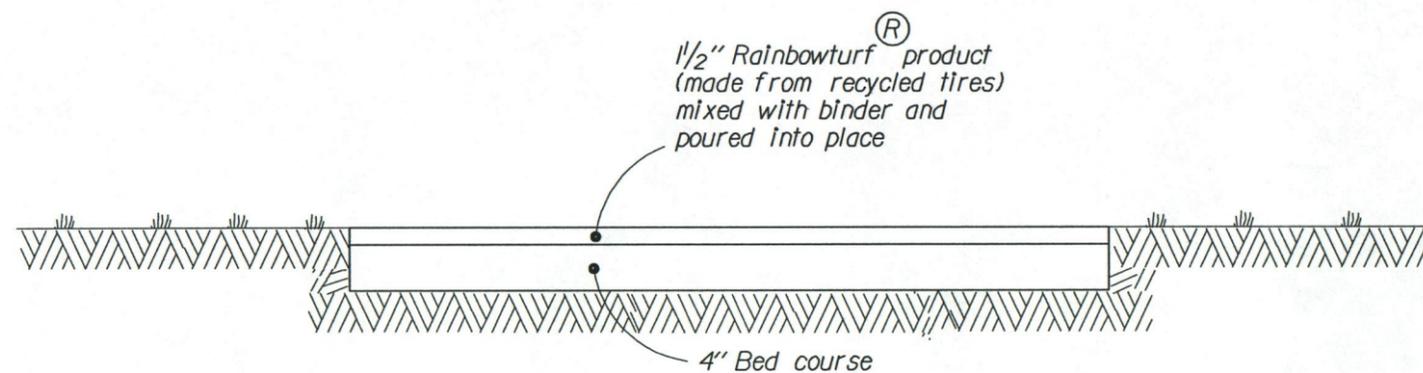
NPS No.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41903	NE	VA	PRA-FRSP 11(1), 19(1), ETC.	53	64

NOTE:

1. Install Rainbowturf[®] product as directed by the manufacturer



SIDEWALK WITH CURB



SIDEWALK

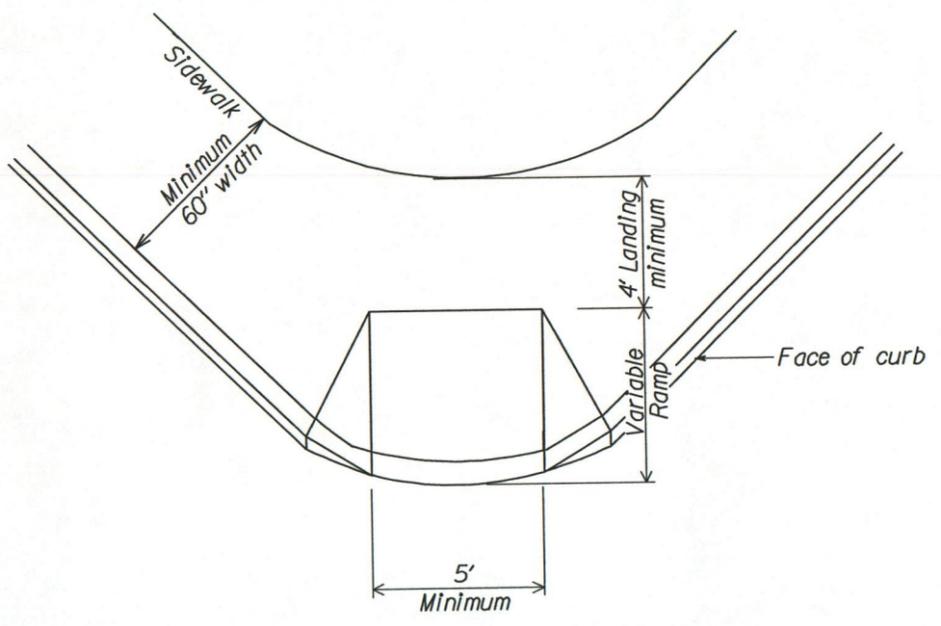
NOT TO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL	
AGGREGATE SIDEWALK	
REVISIONS:	DETAIL E615-A

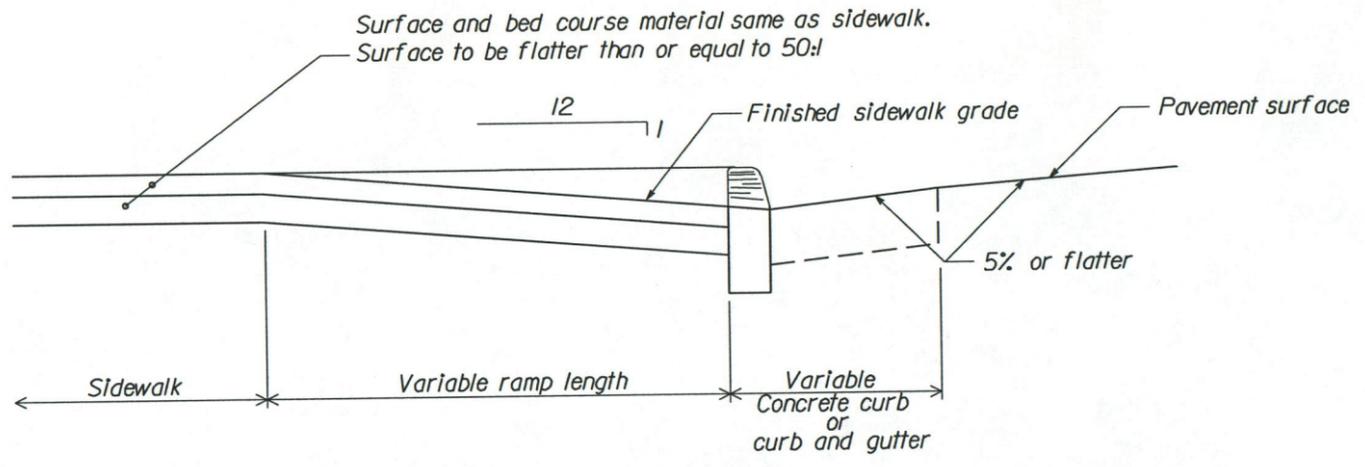
NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 4,903	NE	VA	PRA-FRSP 11(1), 19(1), ETC.	54	64

Note:

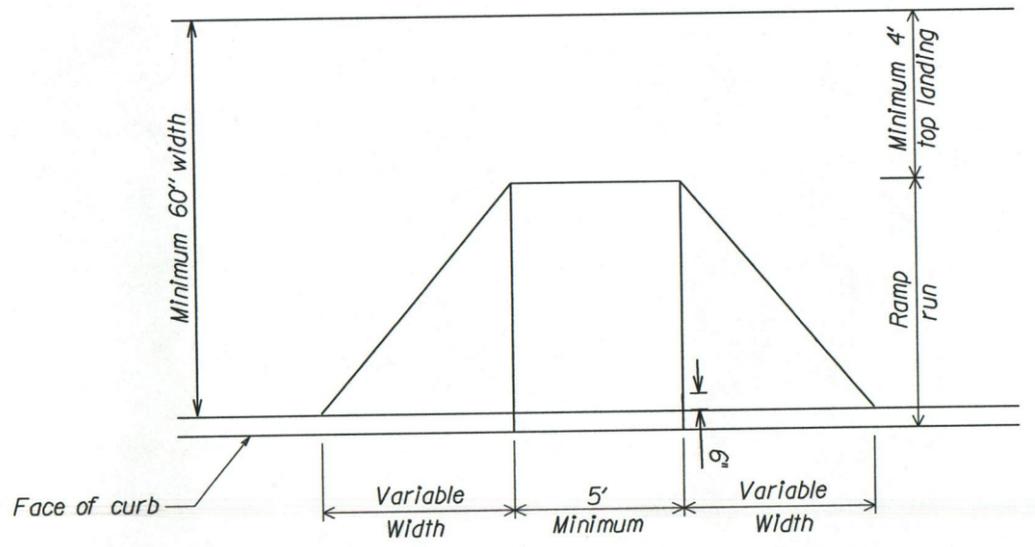
1. The maximum cross slopes of ramps must not exceed 2% in any direction.
2. Use a coarse broom finish running perpendicular to the slope to create a slip resistant surface on concrete ramp surfaces, exclusive of the detectable warning fields.
3. Construct curb ramp perpendicular to the curb. Avoid skewing the ramp face.
4. Construct ramp transitions between walks, gutters, or streets that are flush and free of abrupt vertical changes not to exceed 2.5 inches.
5. Locate drainage inlets and manholes outside of ramp walking surfaces or landings.



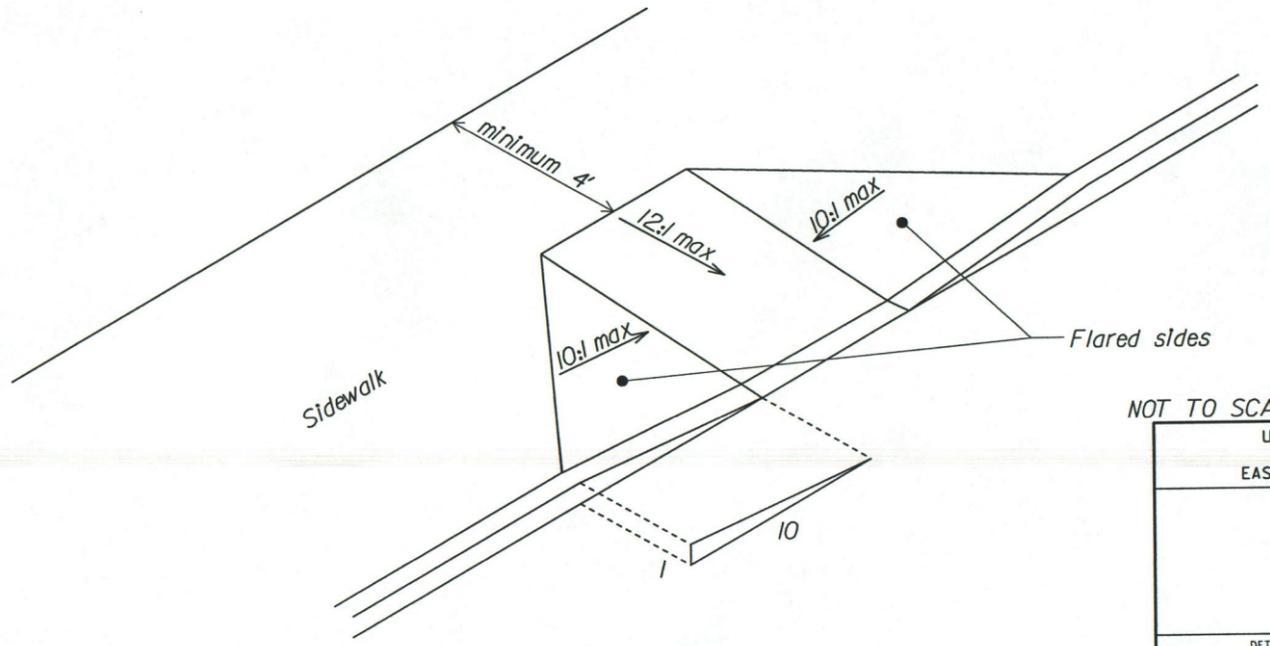
DIAGONAL CURB RAMP



RAMP - TYPICAL SECTION



PERPENDICULAR CURB RAMP



RAMP - ISOMETRIC

NOT TO SCALE

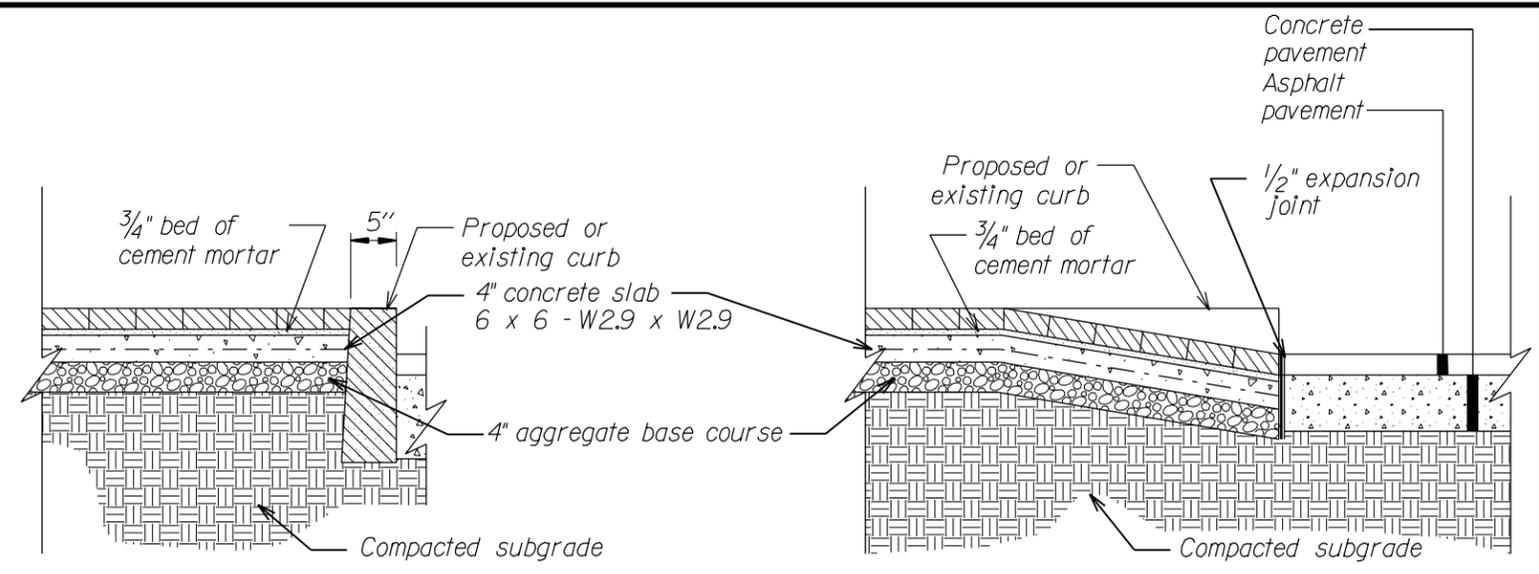
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL	
WHEEL CHAIR RAMP CURB CUT	
REVISIONS:	DETAIL APPROVED FOR USE: / /
	DETAIL E615-B

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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
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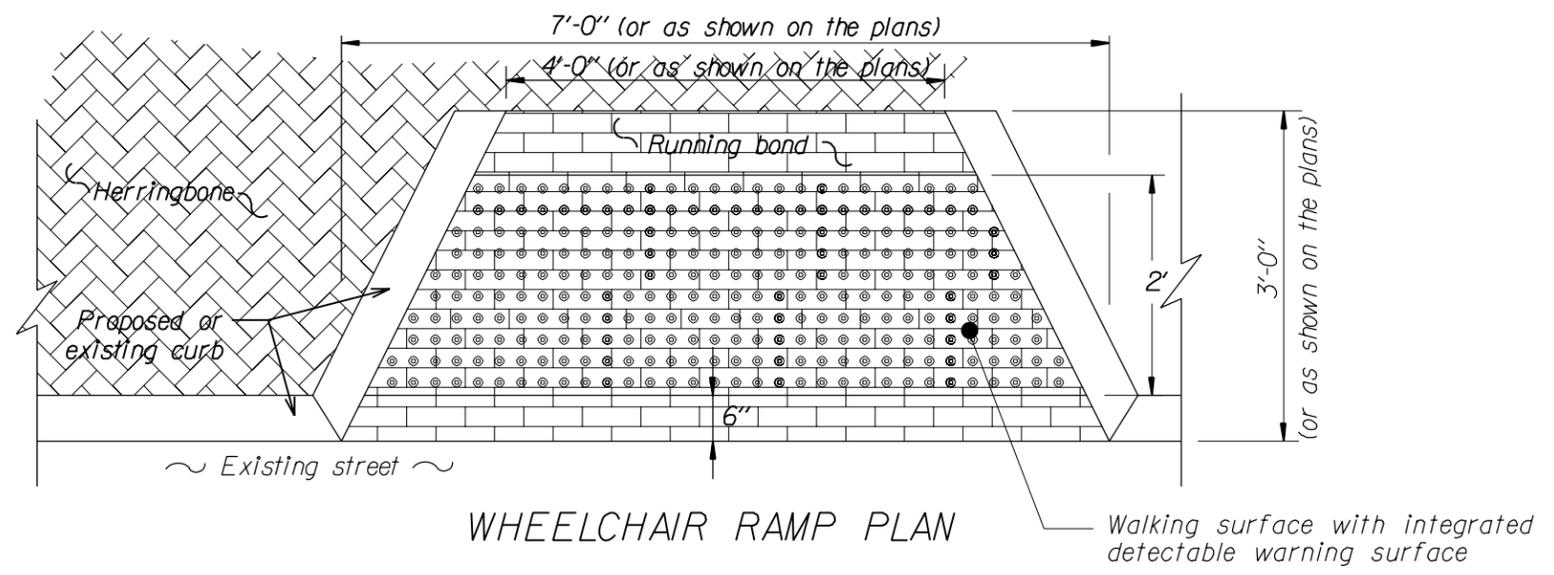
Note:

1. The maximum cross slopes of ramps must not exceed 2 % in any direction.
2. Construct curb ramp perpendicular to the curb. Avoid skewing the ramp face.
3. Construct ramp transitions between walks, gutters, or streets that are flush and free of abrupt vertical changes not to exceed 2.5 inches.
4. Locate drainage inlets and manholes outside of ramp walking surfaces or landings.



CURB SECTION

WHEELCHAIR RAMP SECTION

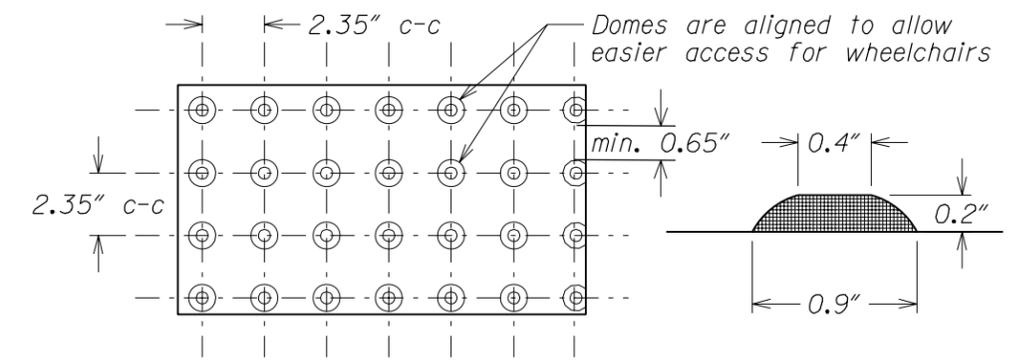


WHEELCHAIR RAMP PLAN



WHEELCHAIR RAMP ELEVATION

BRICK SIDEWALK AND WHEELCHAIR RAMP



PLAN

SECTION TRUNCATED DOME

DETECTABLE WARNING SURFACE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

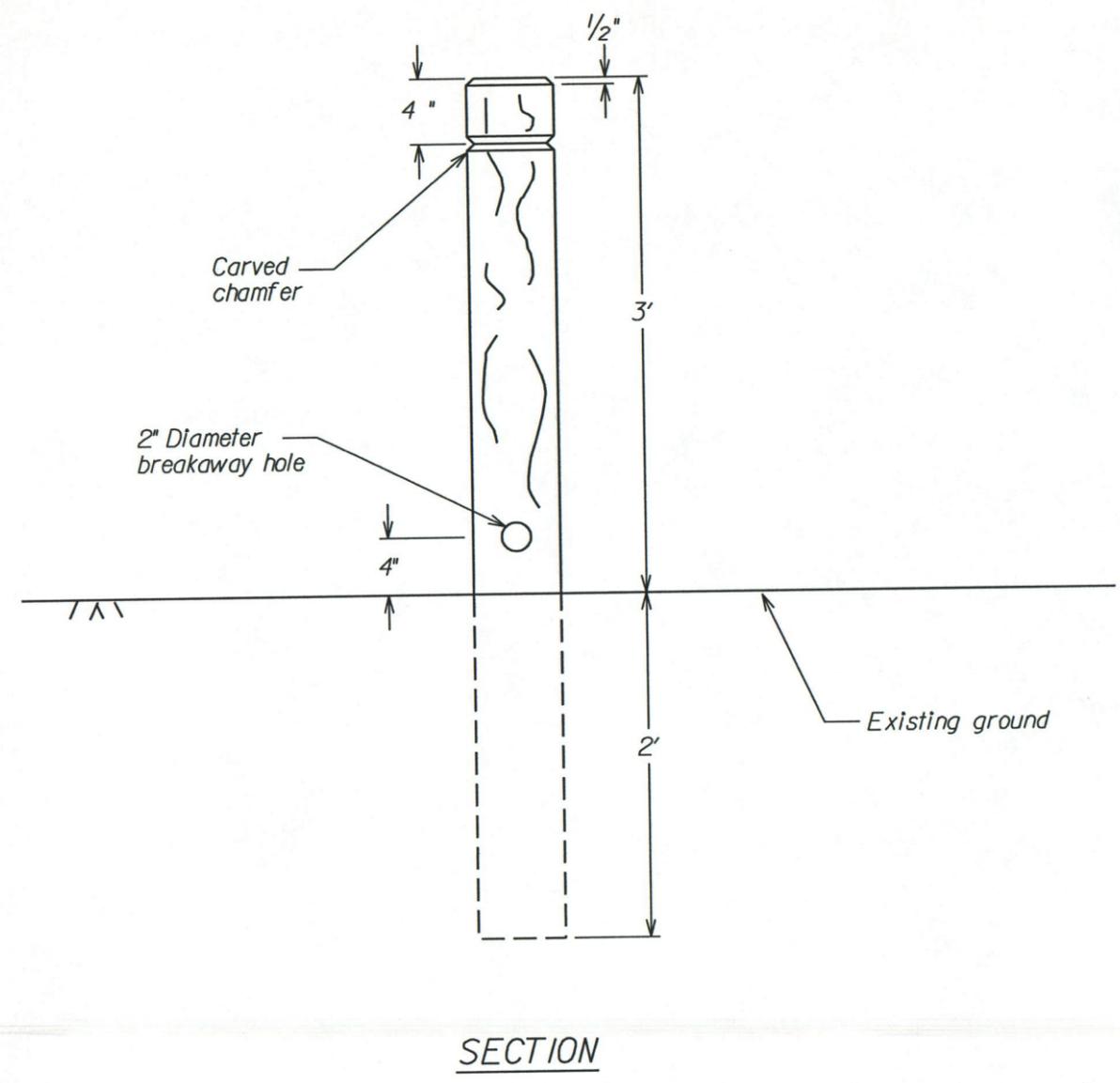
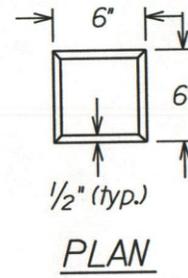
DETAIL
BRICK WHEELCHAIR
ACCESS RAMP

DETAIL APPROVED FOR USE XX/XX	DETAIL
REVISED: XX/XX	E615-C

NOT TO SCALE

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NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
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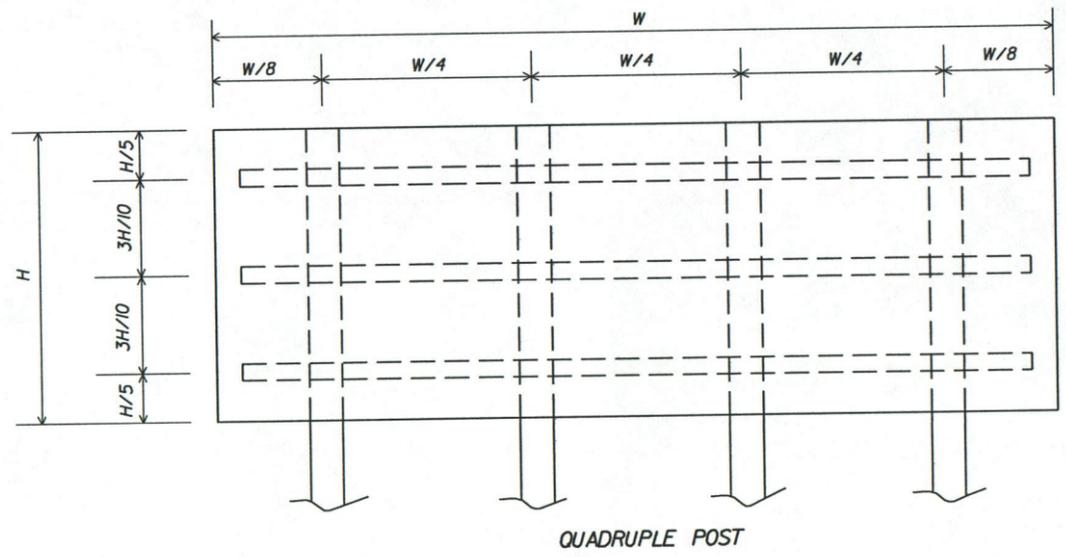
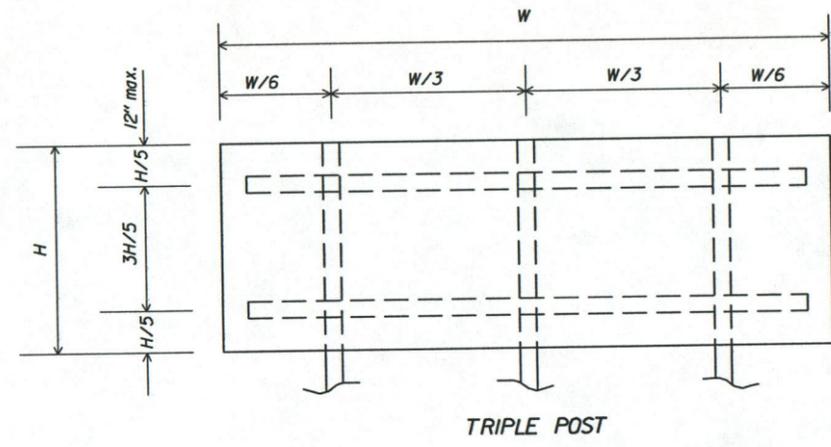
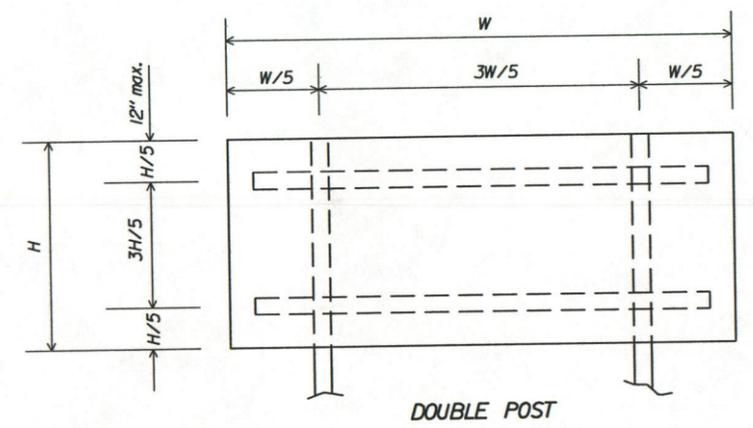
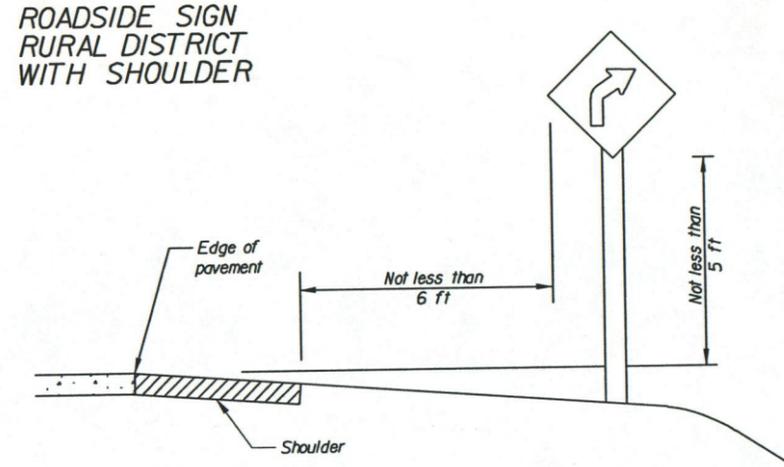
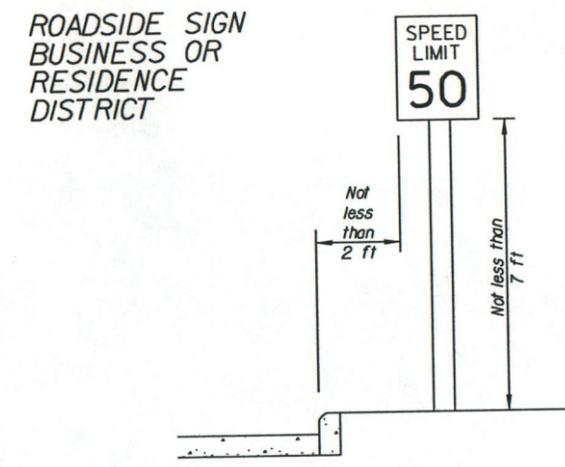
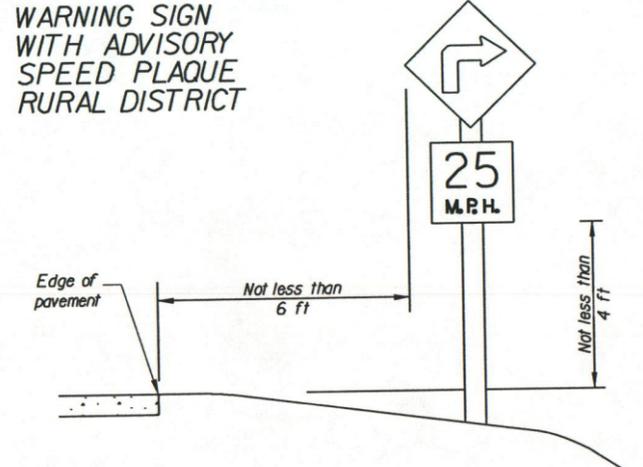
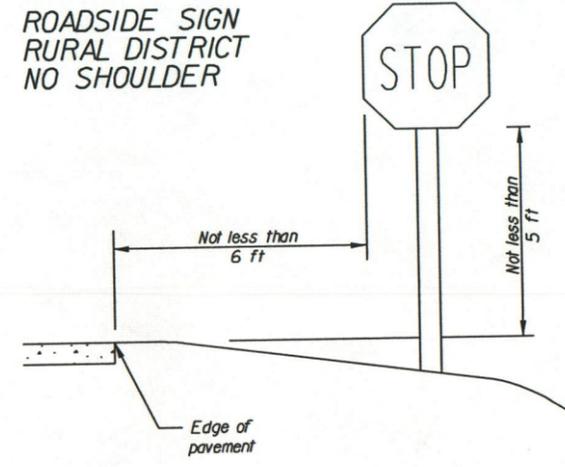


NOTE:

1. Post dimensions are nominal.
2. Breakaway hole required.
3. Drill holes perpendicular to the direction of traffic.

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U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL WOOD BOLLARD	
DETAIL APPROVED FOR USE --/----	DETAIL E619-A
REVISED:	



- Notes:
- Locations and height to be in accordance with the 'Manual on Uniform Traffic Control Devices For Streets and Highways' (MUTCD), latest edition.
 - Use wood battens bolted to post at vertical spacings not to exceed 30-inches.
 - Use double posts if W is over 3 feet.
 - For sign punching details, see the blank standards in the 'Standard Highway Signs' as specified in the MUTCD, latest edition.
 - For steel posts, provide a 1/4" x 6" soil plate. Use the same type of steel for the soil plate as for the post. Soil plate is not required for breakaway design.
 - For signs requiring posts sizes 6 x 6 and greater, signs are considered to be non-breakaway if multiple posts are required and posts cannot be spaced a minimum of 7 feet apart. Place non-breakaway signs outside the clear zone or shield with approved barrier. Do not place holes in posts of non-breakaway signs.
 - Depth, D, is to be in accordance with the 'Manual on Uniform Traffic Control Devices For Streets and Highways' (MUTCD), latest edition, Section 2A.21 and the AASHTO manual 'Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals', latest edition or as directed by the CO. D (min) is given in CHART A.

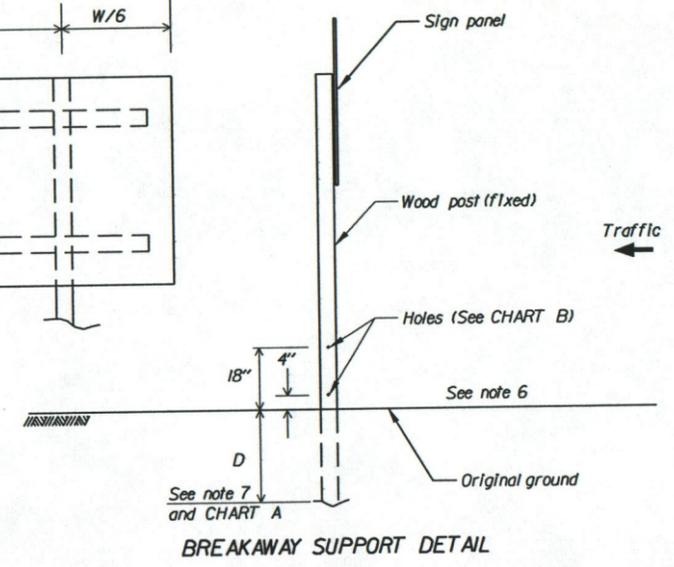


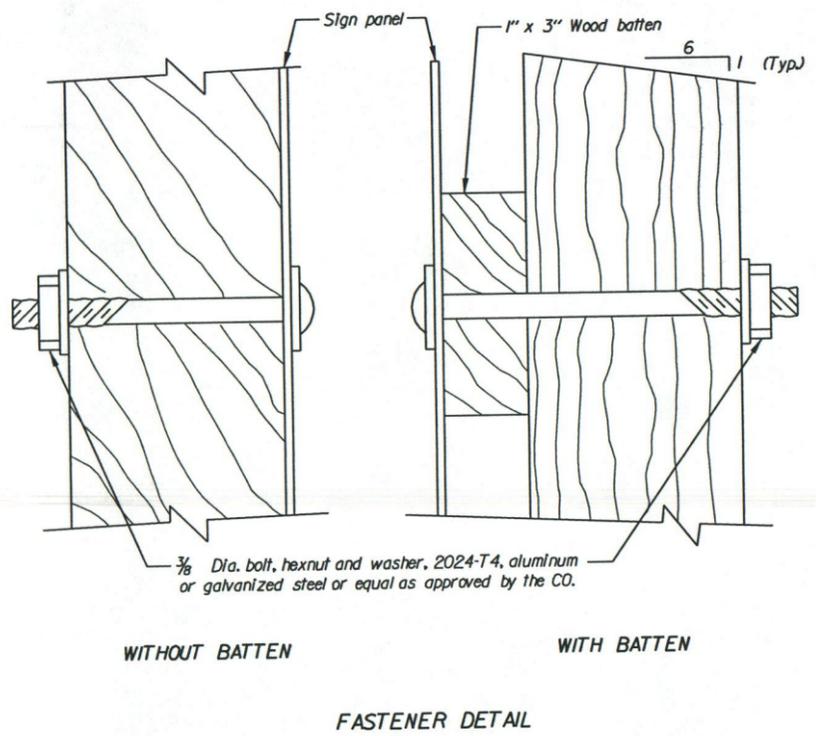
CHART B

Post Size	Hole Diameter
4" x 4"	None Required
4" x 6"	1.5"
6" x 6"	2"
6" x 8"	3"

CHART A

Post Size (Inch)	D (min.) *	Maximum Sign Area (sq. ft.)			
		Single Post	Double Post	Triple Post	Quadruple Post
4 x 4 (Wood)	3'	10	20		
4 x 6 (Wood)	4'	15	35	45	60
6 x 6 (Wood)	4'	20	50	75	100

* See note 7



No scale

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

DETAIL

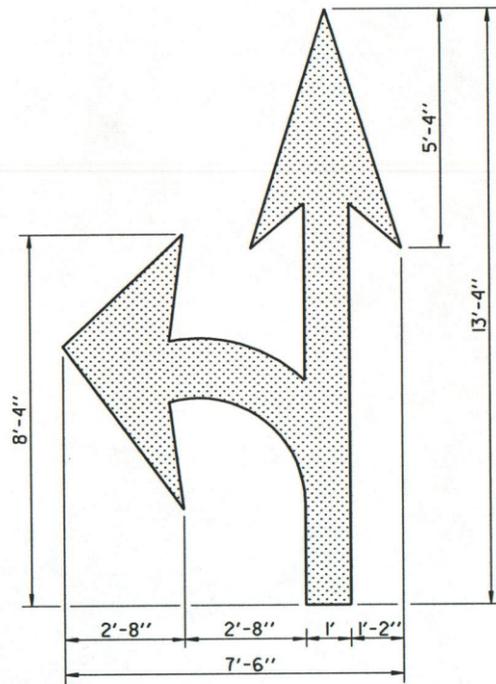
SIGN STRUCTURES

DETAIL APPROVED FOR USE --/----

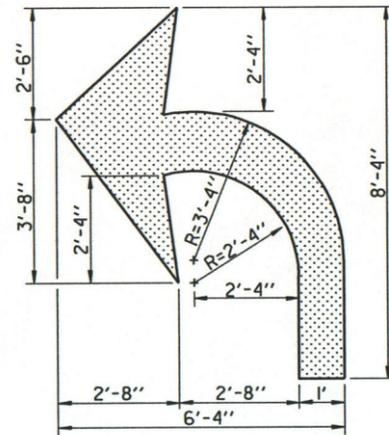
REVISIONS: 3/2004 12/2004

DETAIL
E633-1

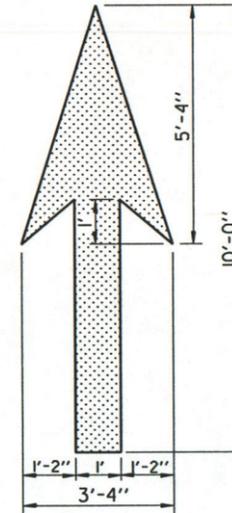
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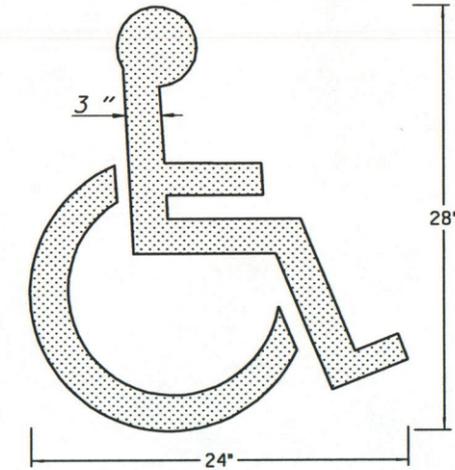
TURN AND THROUGH LANE-USE ARROW



TURN LANE-USE ARROW

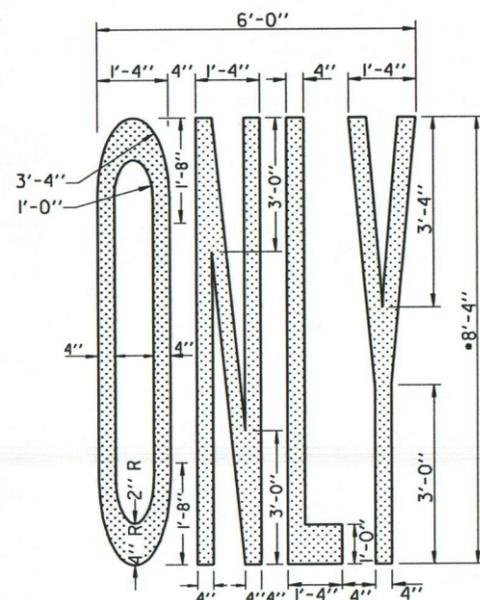


THROUGH LANE-USE ARROW

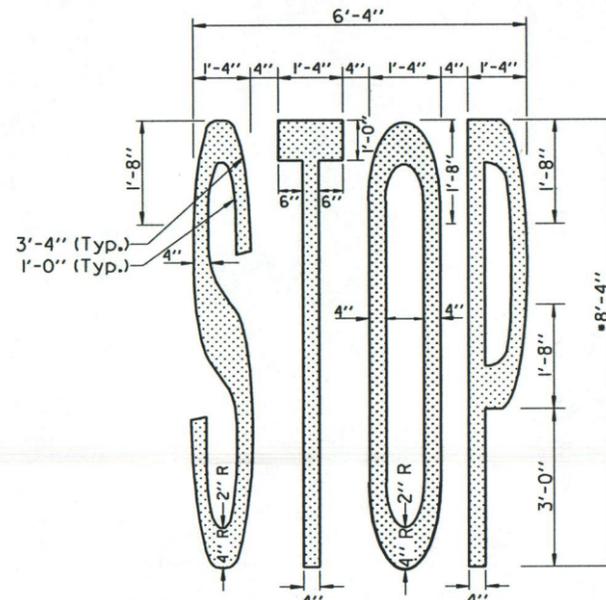


HANDICAP MARKING

•Reduce to 5'-0" for speeds under 35 mph



"ONLY" WORD MARKING



"STOP" WORD MARKING

NOTES :

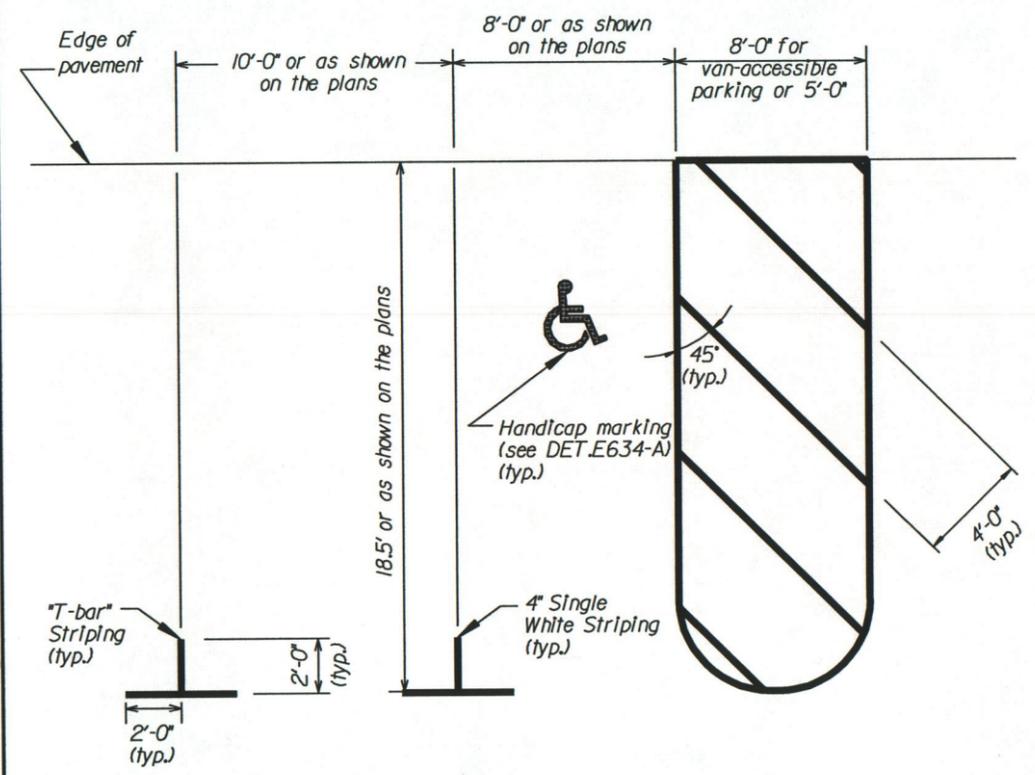
1. Place pavement word and symbol markings in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD), current edition.
2. All letters, numerals and symbols shall conform with the "Standard Alphabets for Highway Signs and Pavement Markings".

PAYMENT QUANTITIES	
ITEM	AREA (SQ. FT.)
Turn Lane-Use Arrow	16
Through Lane-Use Arrow	13
Turn and Through Lane-Use Arrow	28
Handicap Marking	4.67
ONLY Word Marking	18
STOP Word Marking	17

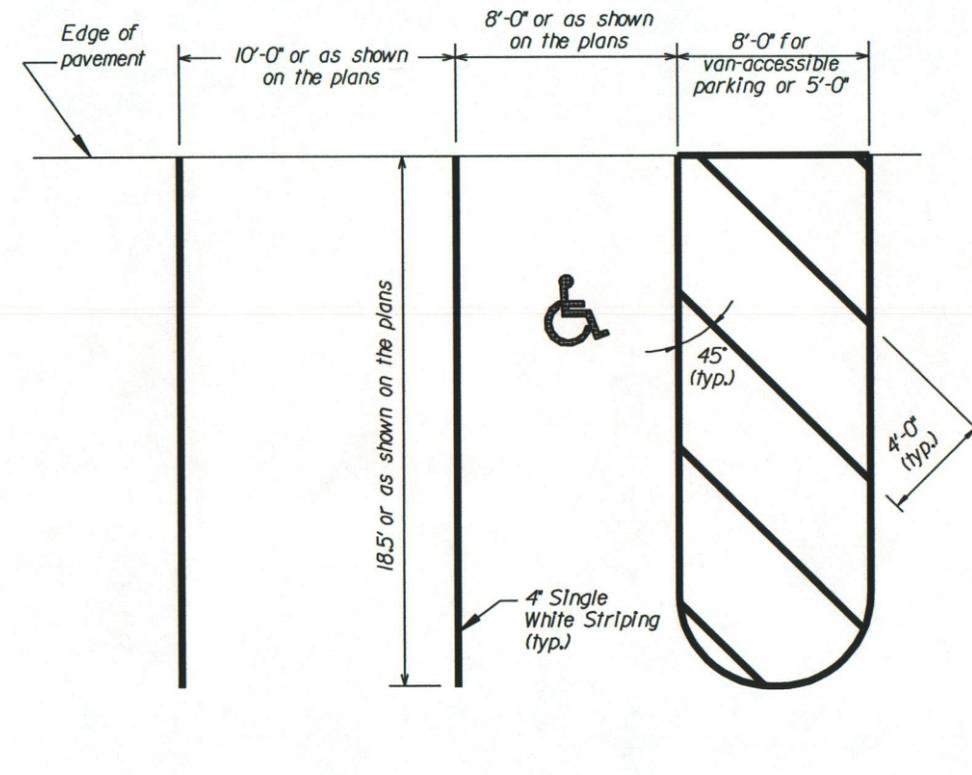
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL PAVEMENT MARKINGS SYMBOLS AND WORDS	
DETAIL APPROVED FOR USE ---/---	DETAIL E634-A
REVISED: 7/99	

NPS No.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 4,903	NE	VA	PRA-FRSP 11(1), 19(1), etc.	59	64

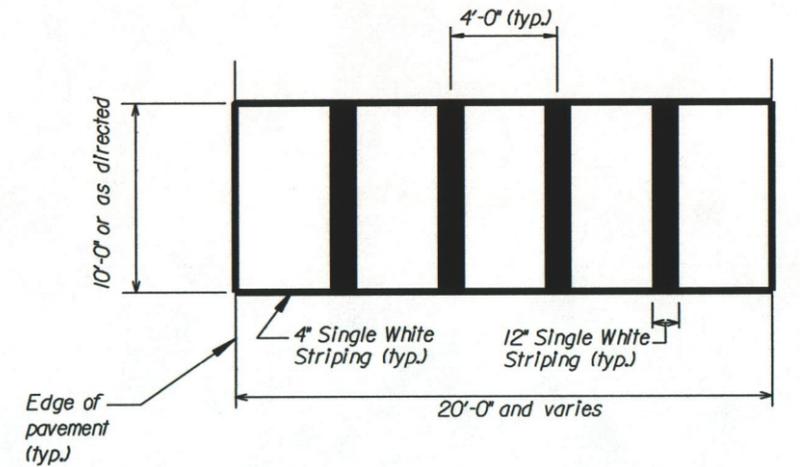
- NOTES:**
- Place pavement word and symbol markings in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD), current edition.
 - All letters, numerals and symbols shall conform with the "Standard Alphabets for Highway Signs and Pavement Markings".



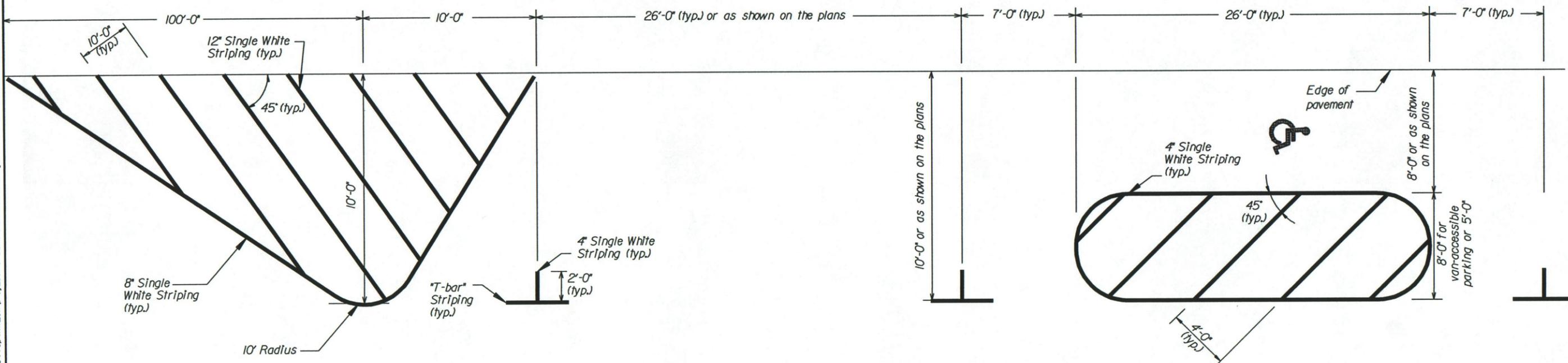
PARKING STALL "T-BAR" STRIPING



PARKING STALL STRIPING



CROSSWALK STRIPING



PARALLEL PARKING STALL STRIPING

8/17/2006 2:13:49 PM M:\P\ro\eds\vr\sp\111201\proj_dev\CADD\SI\1-Dev\def63401.dgn

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

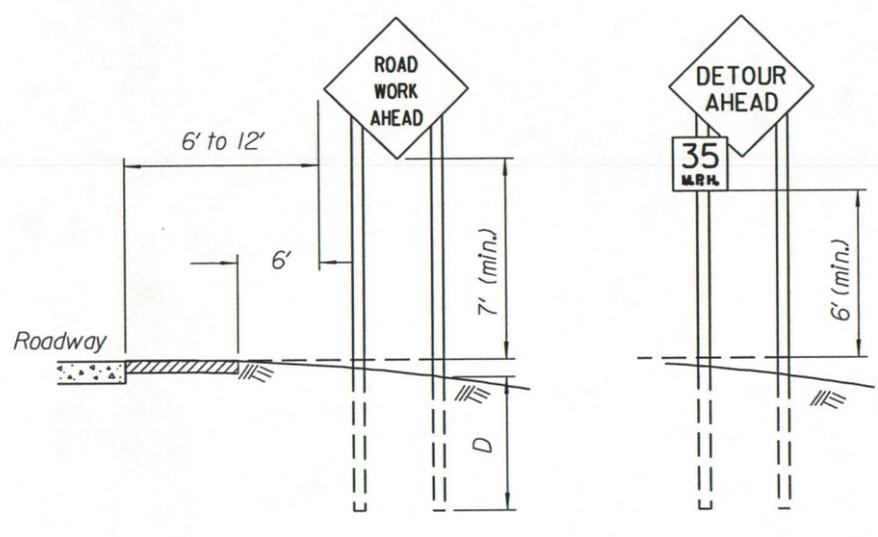
DETAIL
PARKING STALL AND
CROSS-WALK PAVEMENT
MARKINGS

DETAIL APPROVED FOR USE ---/---

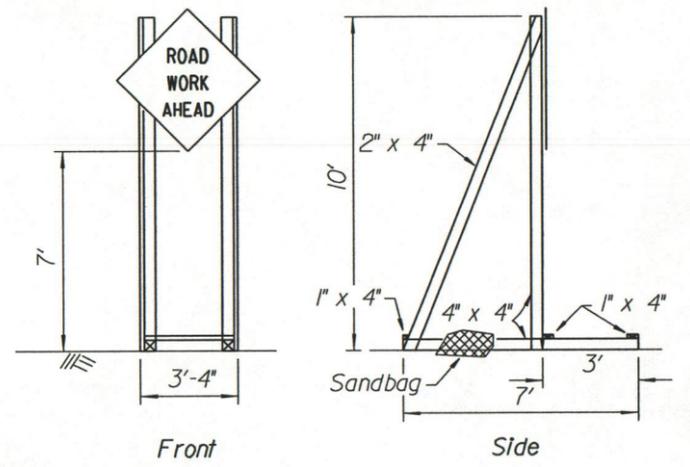
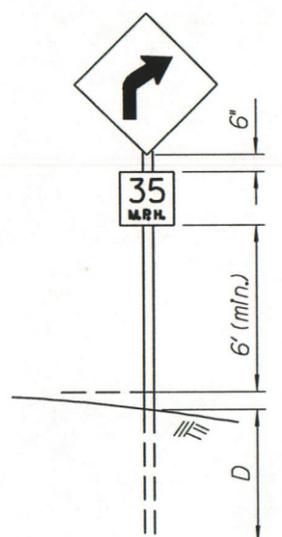
REVISID: _____

DETAIL
E634-B

No Scale

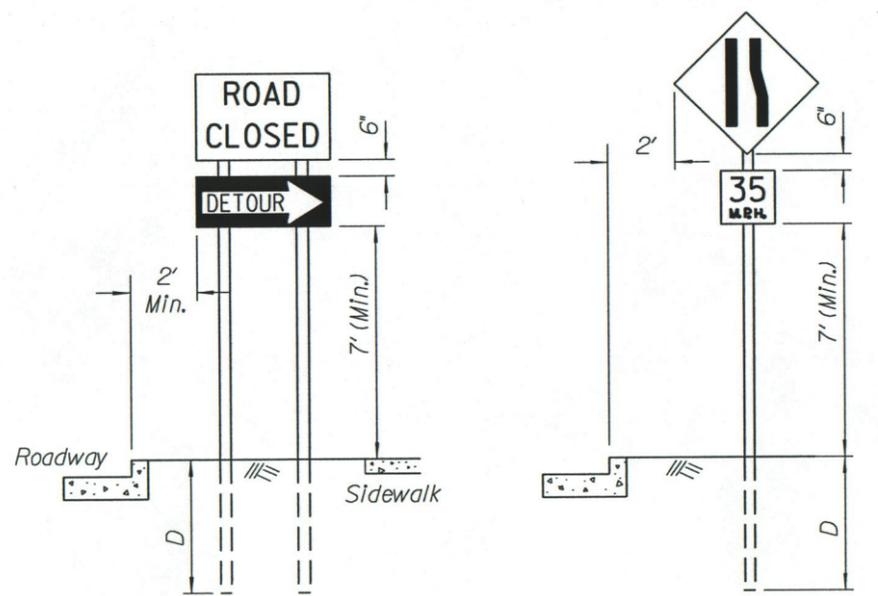


RURAL AREA



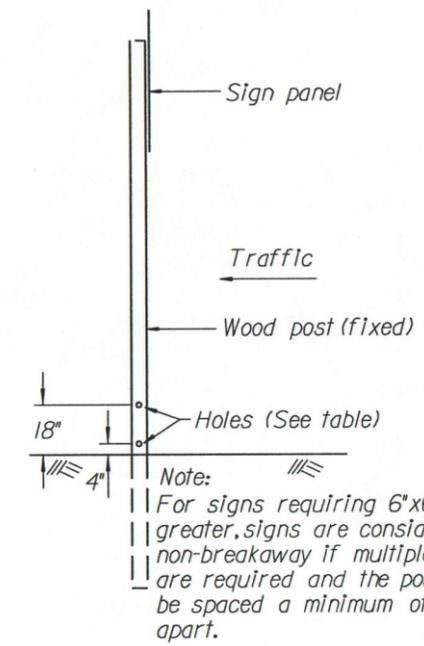
Front

Side



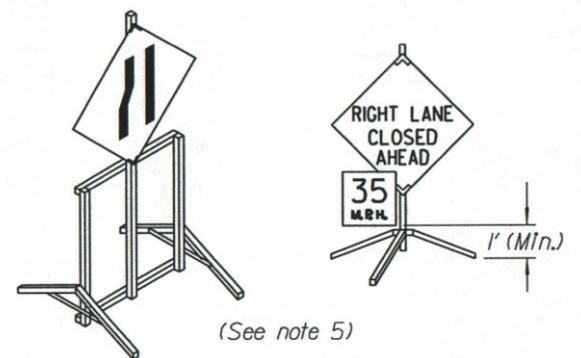
URBAN AREA

FIXED ROADWAY SIGNS

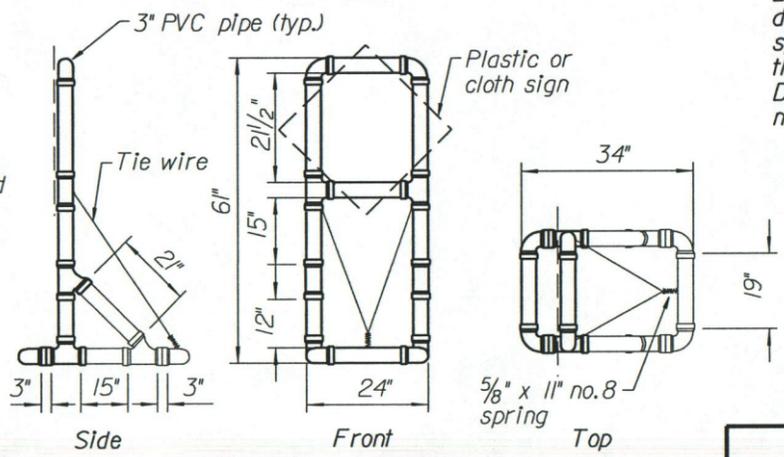


BREAKAWAY SUPPORT DETAIL
(FIXED SIGNS - 4" x 6" AND GREATER POSTS)

Note:
For signs requiring 6"x6" posts and greater, signs are considered to be non-breakaway if multiple posts are required and the posts cannot be spaced a minimum of 7 feet apart.



(See note 5)



Side

Front

Top

BREAKAWAY SIGN MOUNTING

PORTABLE SIGNS

- Notes:
1. Wood posts are 4" x 4" unless otherwise indicated.
 2. Mount signs that are wider than 3-feet or larger than 10 square feet on double posts.
 3. All lumber dimensions are nominal.
 4. The Contractor may submit alternate details for portable signs, however, sign mounts hold the sign face in a vertical plane. Portable signs may be mounted lower than fixed signs when approved by the CO.
 5. When parking is permitted within 200 feet of the sign, mount the sign a minimum of 7 feet above the pavement surface.
 6. The tubing that is shown in bold for the Portable Breakaway Sign Mount is held together with a 3/16-Inch No.6 solid braided nylon rope threaded through the pipe interior.
 7. When approved by the CO and the Utility Company, utility poles may be used for sign mounting.
 8. For posts greater than 4" x 4" see the Breakaway Support Detail. If breakaway design cannot be used, due to post spacing, the sign should be placed outside the clearzone or be shielded by barrier. Do not place holes in posts of non-breakaway signs.

Post size	D	Hole Dia.	Maximum Sign Area - Sq.ft.			
			1 Post	2 Posts	3 Posts	4 Posts
4" x 4"	4"	None Req'd	10	20		
4" x 6"	4"	1.5"		35	50	70
6" x 6"	5"	2"		50	75	100
6" x 8"	5"	3"		85	125	165

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

DETAIL

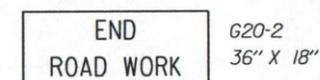
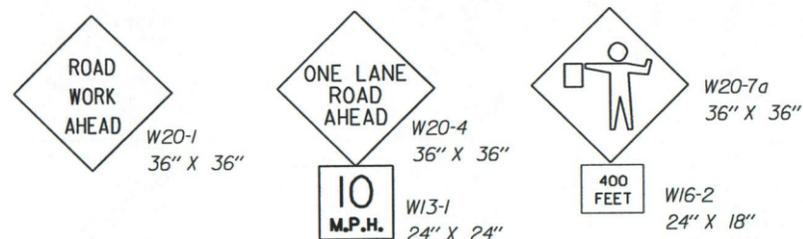
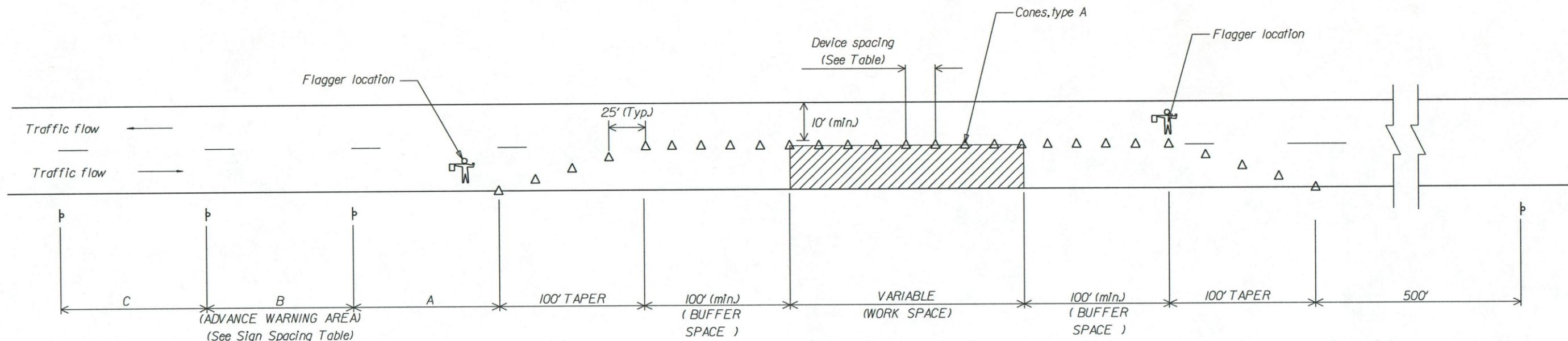
CONSTRUCTION TRAFFIC CONTROL
SIGN MOUNTING

DETAIL APPROVED FOR USE XX/XX
REVISID: XX/XX

DETAIL
E635-1

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 8/17/2006

TYPICAL APPLICATION: TWO WAY, TWO LANE ROADWAY, CLOSING ONE LANE USING FLAGGERS



- NOTES:
- Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
 - Signs shown are for one direction only. Repeat the signing for the opposite direction.

APPROACH SPEED (MPH)	CHANNELIZING DEVICE SPACING (FT)
	WORK AREA
25	50
30	60
35	70
40	80
45	90
50	100
55	100

POSTED SPEED LIMIT (MPH)	ADVANCE WARNING SIGN SPACING CHART		
	Recommended Distance Between Signs (feet)		
	A	B	C
≤ 35	200	200	200
40-50	350	350	350
55	500	500	500

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

DETAIL

**CONSTRUCTION TRAFFIC CONTROL
SINGLE LANE CLOSURE LAYOUT
(WITH FLAGGERS)**

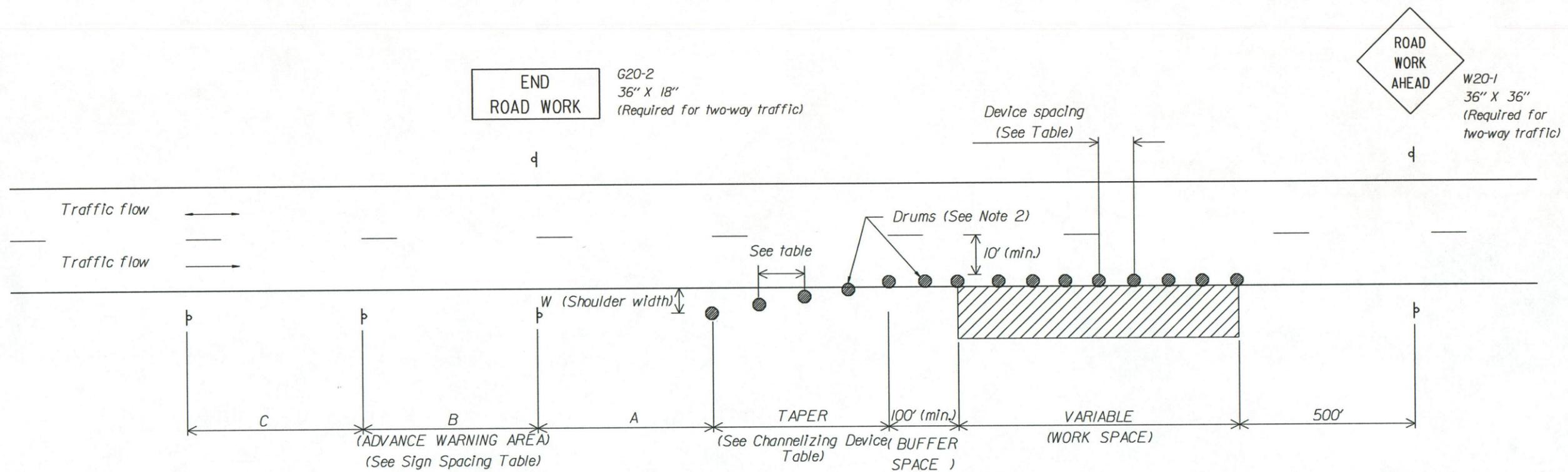
DETAIL APPROVED FOR USE --/----

REVISID: 05/00,04/15/02

DETAIL
E635-6

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TYPICAL APPLICATION: ONE WAY OR TWO WAY, TWO LANE ROADWAY, CLOSING SHOULDER



- NOTES:
- Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
 - For operations that require a shoulder closure for a day or less, drums may be substituted with cones, type A in the Work Area.

APPROACH SPEED (MPH)	MINIMUM TAPER LENGTH (FT)	CHANNELIZING DEVICE SPACING (FT)	
		TAPER AREA	WORK AREA
25	Taper formula: $L = \frac{WS}{3}$ for speeds of 45 or greater	25	50
30		30	60
35	$L = \frac{WS^2}{100}$ for speeds of 40 or less	35	70
40		40	80
45	Where: L- Minimum length of taper S- Numerical value of posted speed limit prior to work area or 85 percentile speed W- Width of offset	45	90
50		50	100
55		55	100

POSTED SPEED LIMIT (MPH)	Recommended Distance Between Signs (feet)		
	A	B	C
≤ 35	200	200	200
40-50	350	350	350
55	500	500	500
Expressway/Urban Parkway	1000	1600	2600

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

DETAIL

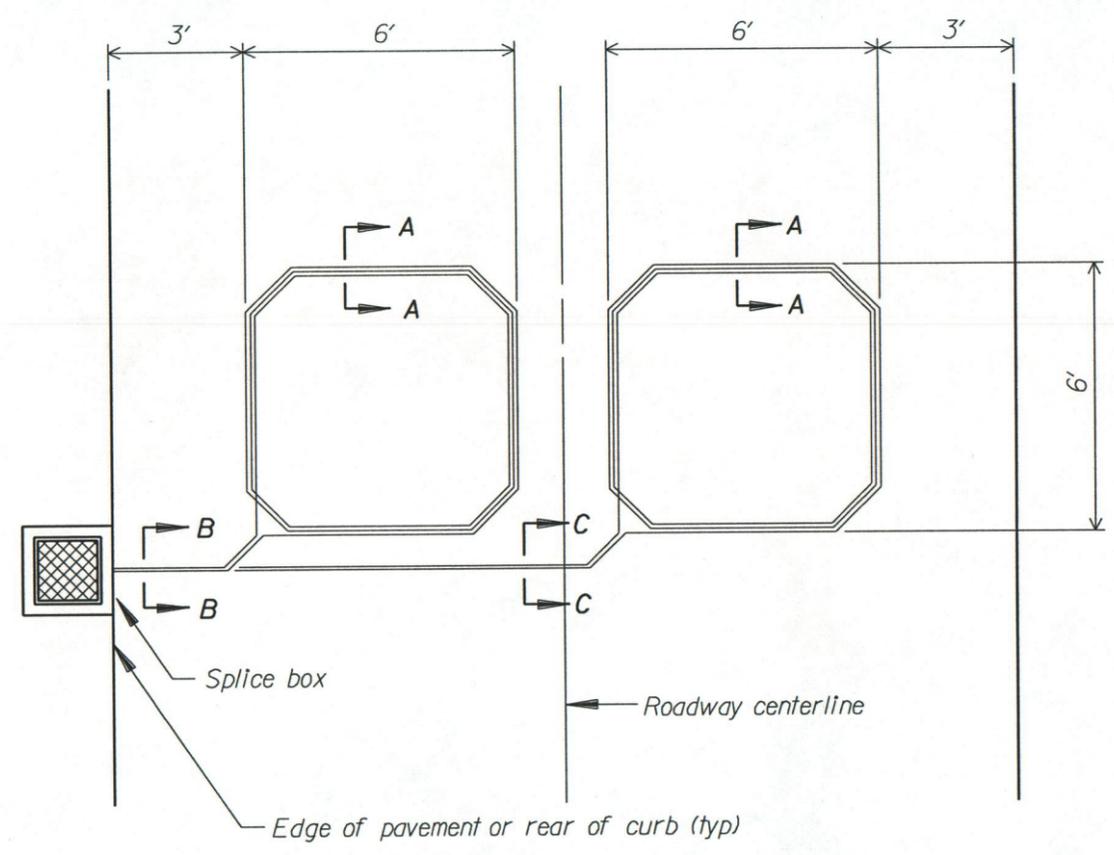
CONSTRUCTION TRAFFIC CONTROL
SHOULDER CLOSURE LAYOUT

DETAIL APPROVED FOR USE --/---
REVISED: 4/15/2002

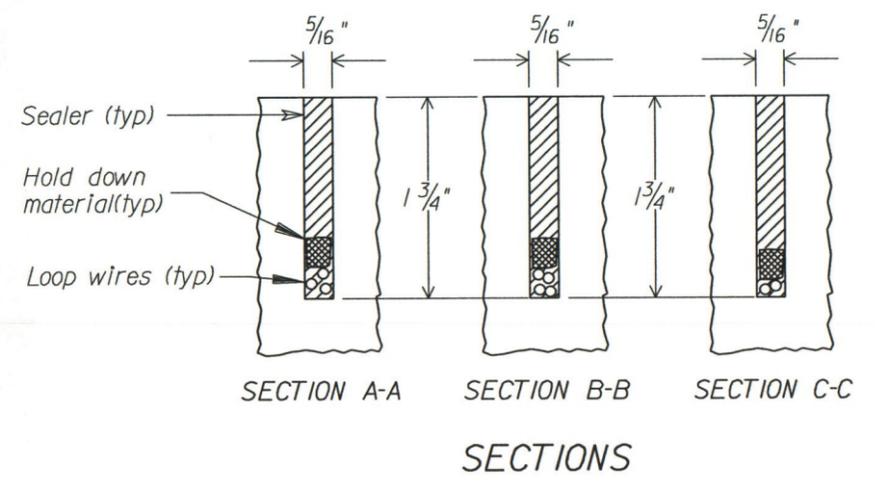
DETAIL
E635-7

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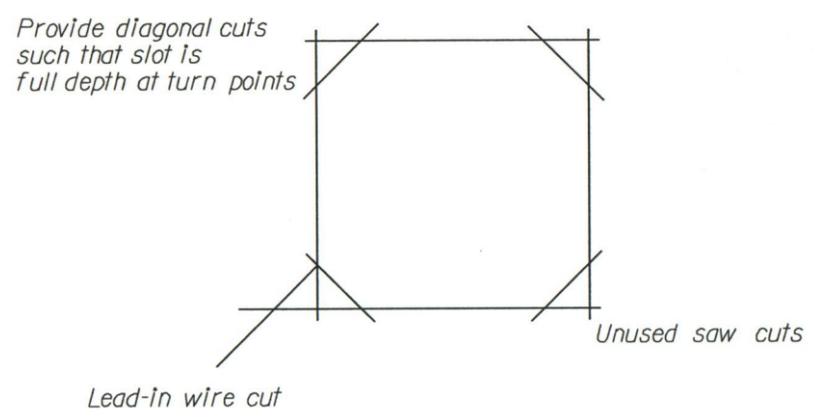
NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 4,903	NE	VA	PRA-FRSP II(I), I9(I), Etc.	63	64



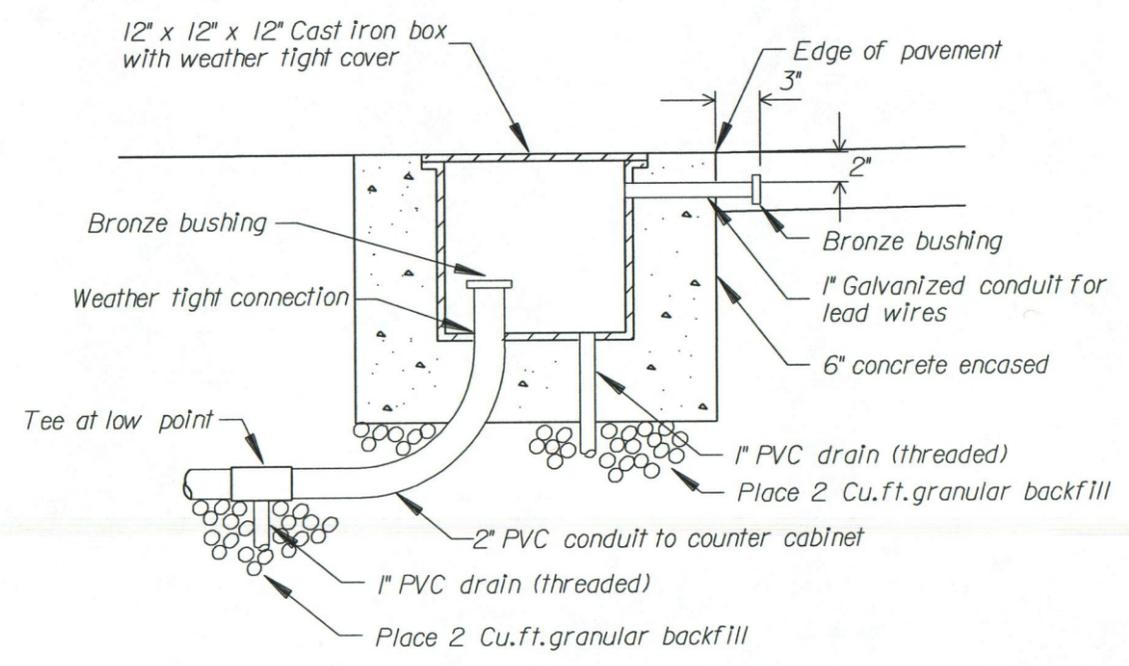
SCHMATIC OF VEHICLE LOOP DETECTORS



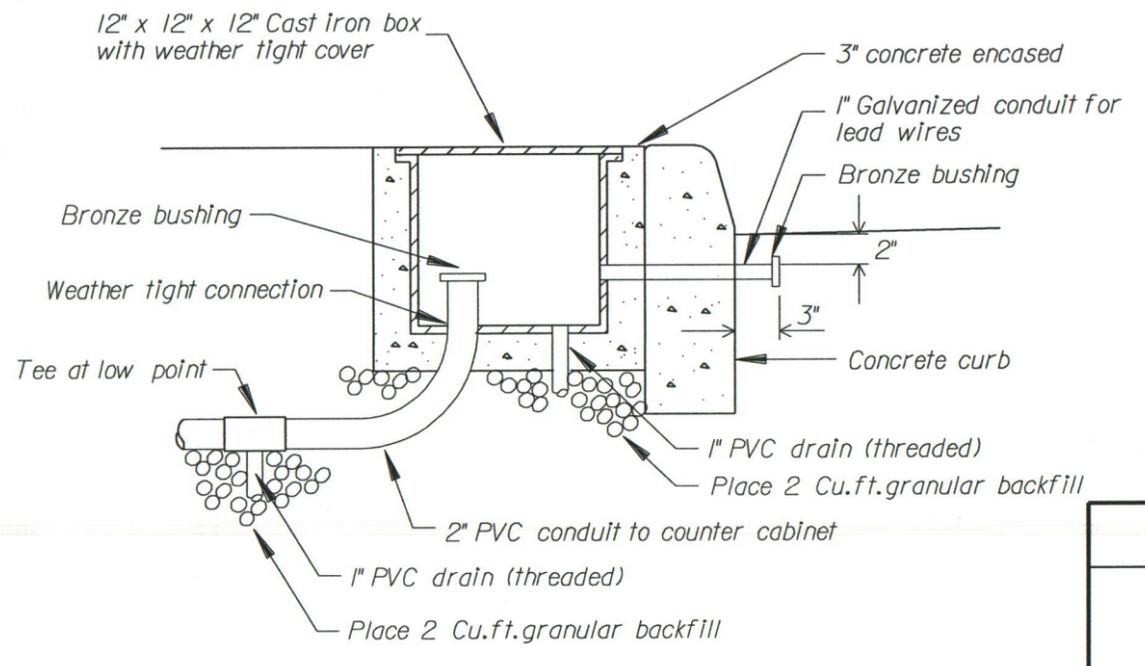
SECTIONS



SAW CUT LAYOUT



SPLICE BOX - WITHOUT CURB



SPLICE BOX - WITH CURB

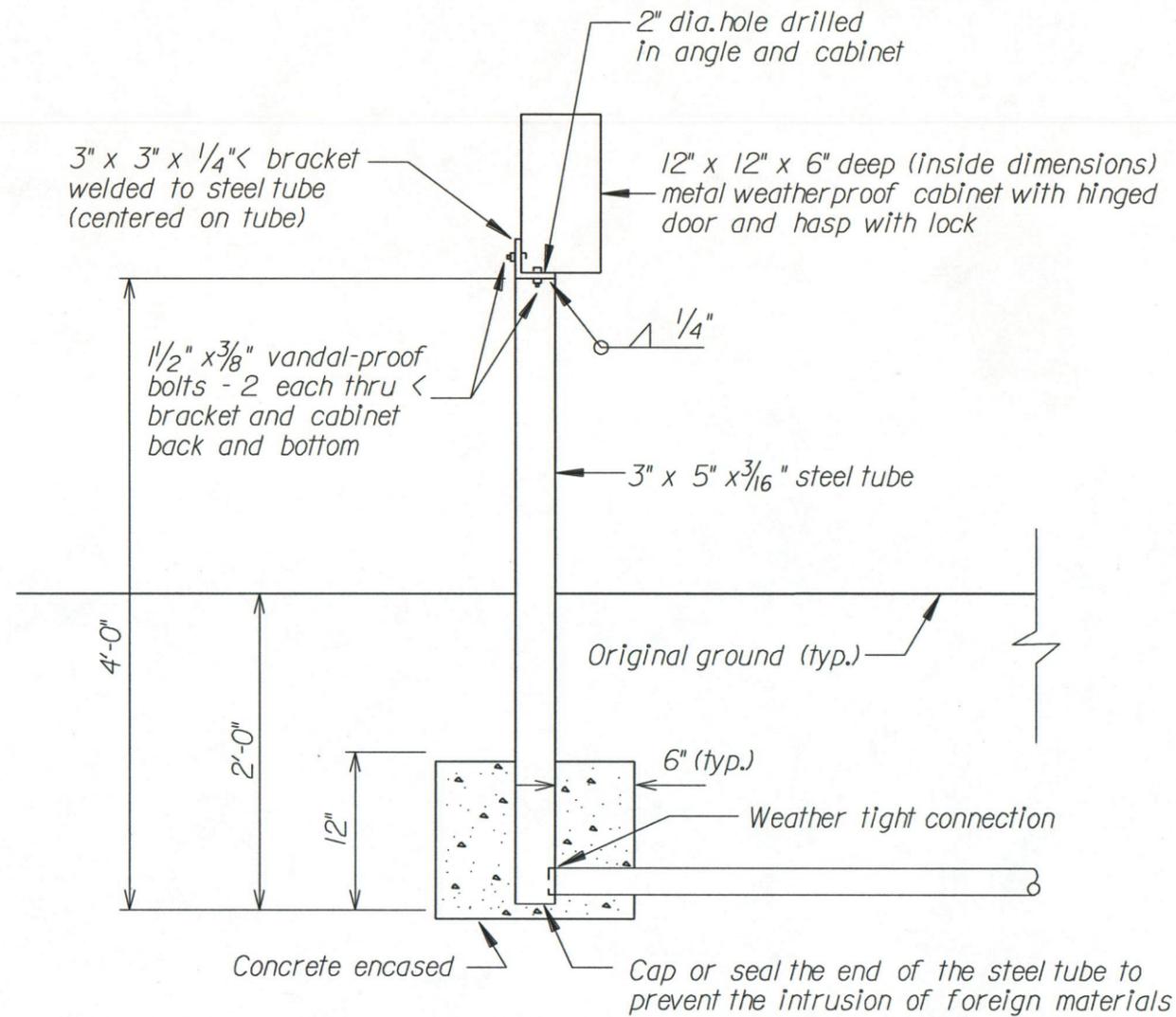
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U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL	
TRAFFIC DETECTION DEVICES	
DETAIL APPROVED FOR USE XX/XX	DETAIL
REVISED: XX/XX	E636-1

NPS NO.	REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
326 41,903	NE	VA	PRA-FRSP 11(1), 19(1), ETC.	64	64

Note:

1. Paint all exposed portions of the traffic counter cabinet and steel tube post NPS dark brown.



TRAFFIC COUNTER CABINET

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION EASTERN FEDERAL LANDS HIGHWAY DIVISION	
DETAIL	
TRAFFIC COUNTER CABINET	
DETAIL APPROVED FOR USE ---	DETAIL
REVISED:	E636-2