# Design and Tabulation Forms

## **Estimate of Quantities**

NO.	DATE	TITLE
100-0A	10-28-97	Estimated Roadway Quantities (1 Division Project)
100-1A	07-15-97	Estimated Project Quantities (1 Division Project)
100-1C	04-17-12	Estimated Project Quantities (Up to a 5 Division Project)
100-1D	10-18-05	Project Description
100-4A	10-29-02	Estimate Reference Information
100-5	10-17-23	Curb and Gutter
100-7	10-16-12	Fencing
100-8	04-17-18	Removal of Fence
100-9	04-17-18	Transition Mat
100-10	10-21-14	Floating Silt Curtains
100-11	04-18-17	Erosion Control for Intake or Manhole Well
100-12A	08-01-08	Estimated Erosion Control Project Quantities P.S. & E. Only
100-13	10-15-13	Silt Ditches
100-14	10-17-17	Silt Basins
100-15	10-15-13	Silt Dikes
100-16	10-19-10	Tabulation of Intercepting Ditches
100-17	04-20-10	Tabulation of Silt Fences
100-18	10-16-18	Silt Fences for Ditch Checks
100-19	10-19-21	Perimeter and Slope Sediment Control Device
100-20	08-01-08	Planting Quantities Listing
100-21	04-21-20	Fill For Culverts Used in Bridge Replacements
100-22	04-21-15	Rolled Erosion Control
100-23	04-17-18	Rock Erosion Control
100-24	10-17-23	PCC Pavement
100-25	10-17-23	HMA Pavement
100-26	10-15-13	Incidental Items
100-27	04-17-18	Proposed Posted Speed Limit
100-28	10-19-10	Longitudinal Grooving
100-32	10-16-18	Rock Check Dam
100-33	10-16-18	Temporary Sediment Control Basin

## **Estimate of Quantities**

NO.	DATE	TITLE
100-34 100-36 100-37	10-17-17 10-16-18 04-18-17	

		ESTIMATED ROADWAY QUANTITIES (1 DIVISION PROJECT)			100-0A 10-28-97
Item No.	Item Code	Item	Unit	Total	As Built Qty.

					100-1A 07-15-97
		ESTIMATED PROJECT QUANTITIES			
		(1 DIVISION PROJECT)			
Item No.	Item Code	Item	Unit	Total	As Built Qty.

					ANTITIES PROJECT)		Division 1: Division 2: Division 3: Division 4: Division 5:							100-1C 04-17-12
			1						Quantities					
Item No.	Item Code	Item	Unit			Est	timated					As Built		
				Division 1	Division 2	Division 3	Division 4	Division 5	Total	Division 1	Division 2	Division 3	Division 4	Division 5

100-1D 10-18-05

#### **PROJECT DESCRIPTION**

					100-4A 10-29-02
		<b>ESTIMATE</b>	REFERENCE	INFORMATION	
Item No.	Item Code			Description	

100\_05 10/17/23

### CURB AND GUTTER

									Refer to P	/-102							
Line No.	Station From	Station To	Side	Length (LF)	Width (LF)	Width 1.5 (LF)	Width 2.0 (LF)	Width 2.5 (LF)	Width 3.0 (LF)	Width 3.5 (LF)	Width 4.0 (LF)	Width 4.5 (LF)	Width 5.0 (LF)	Width 5.5 (LF)	Modified Subbase (CY)	Special Backfill (TON)	Remarks

COUNTY PROJECT NUMBER

SHEET NUMBER

FILE NO.

100-7 10-16-12

**FENCING** 

\* Bid Item

Refer to MI-101, MI-102, MI-103, MI-104, 510-3, and 510-5

	Locat	ion				Chain L	ink				Deer			Fie	-1d				
From		To				Clidili E	THE				DCCI			110	. I u		Ch	nannel Crossing	
				cido		Fence		Gate	Fence	Brace		Gate	Fence	Brace	Ga	ate			Pomanke
Station	Offset	Station	Offset	Siue	Length*	Туре	No.*	Туре	Length*	Panels*	No.*	Туре	Length*	Panels*	No.*	Type	Length*	Type	Remarks
					LF		EACH		LF	EACH	EACH		LF	EACH	EACH		LF		

Removal of Field Fence is incidental to Clearing and Grubbing.  Location From To Type  Length Remarks
Station Offset Station Offset LF

	TF		FION N	ΊΑΤ	100-09 04-17-18
Location	Side	Length	Width	Area	Remarks
Station		LF	LF	SF	

F	Refer to EC-2	CURTAI	СИ	
Hanging	Containment	Clean-out (Containment)	Maintenance of Floating Silt Curtain	Remarks
LF	LF	LF	LF	
_	Hanging	Hanging  Keter Containment of Ontainment	Hanging  Containment of Clean-out  Clean-out (Containment)	Hanging  Containment of Containment)  Maintenance of Floating Silt Curtain

100-11 04-18-17

## EROSION CONTROL FOR INTAKE OR MANHOLE WELL

Possible Detail: 570-5

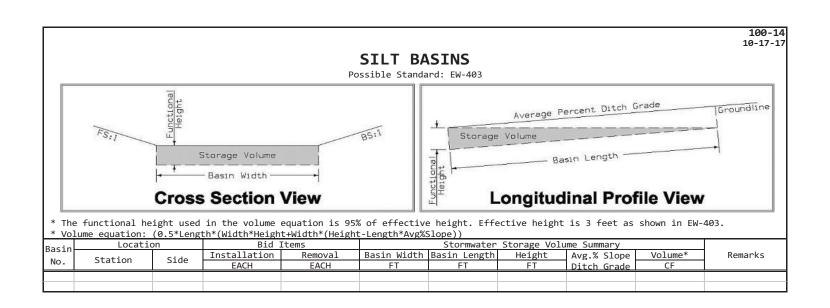
Location	Side	Co	Remarks		
Station	Side	Installation	Maintenance	Removal	Remarks
		EACH	EACH	EACH	

	ESTIMATED EROSION CONTROL PROJECT QUANTITIES P.S. & E. ONLY
No.	Item Unit Division

100-13 10-15-13

#### SILT DITCHES

Refer to EW-403
Station to Station Side LF Remarks



				100-15 10-15-13
			DIKES EW-403	
	ocation	Side	Length	Remarks
Station t	o Station	LF	Kellul KS	

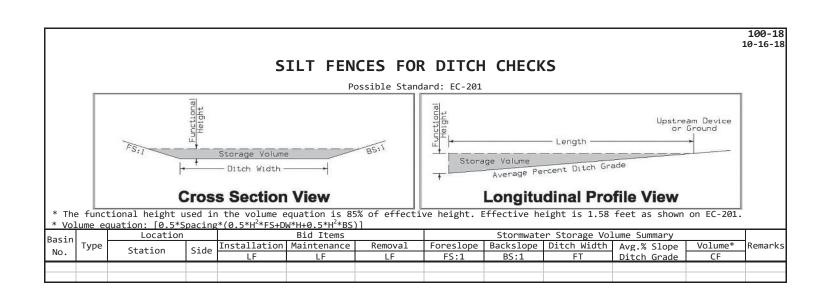
100-16

10-19-10

# TABULATION OF INTERCEPTING DITCHES

Location	Location					
Station to Station	Side	Length	Remarks			
Station to Station	2 Tae	LF				

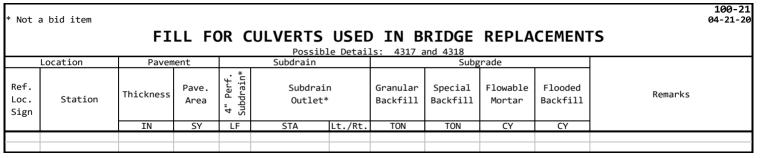
					100-17 04-20-10
TA	BULATION		_	FENCES	
		er to	EC-201		
L	ocation		Length		
Begin Station	End Station	Side	Length	Remark	(S
begin Station	Eliu Station	Side	LF		



										100-19 10-19-21
	ļ	PERI	METER,	SLOPE A		CH CHECK le Standards:		NT CONTROL	DEVICES	
Le	ocation		Per	imeter and Si	lope	Ditch	Check			
			Lengt	h of Install	ation	Length of I	nstallation		Remarks	
Begin Station	End Station	Side	9 inch Dia	12 inch Dia	20 inch Dia	12 inch Dia	20 inch Dia		Reliidi'KS	
			LF	LF	LF	LF	LF			
	•									

							100-20 08-01-08
		PLANTING	QUANTITIES LISTING				
No.	Code	Botanical Names	Common Name	Size	Unit	Total	As Built Quan.

* Not a	a bid item	FI	LL FO	OR C	ULVERTS	USED	) IN B	RIDGE	REPLA	CEMEN	100-21 04-21-20
							ls: 4317 a	_			_
	Location	Pavem	ent		Subdrain			Subg	rade		
Ref. Loc. Sign	Station	Thickness	Pave. Area	4" Perf. Subdrain*	Subdrain		Granular Backfill	Special Backfill	Flowable Mortar	Flooded Backfill	Remarks
		IN	SY	LF	STA	Lt./Rt.	TON	TON	CY	CY	

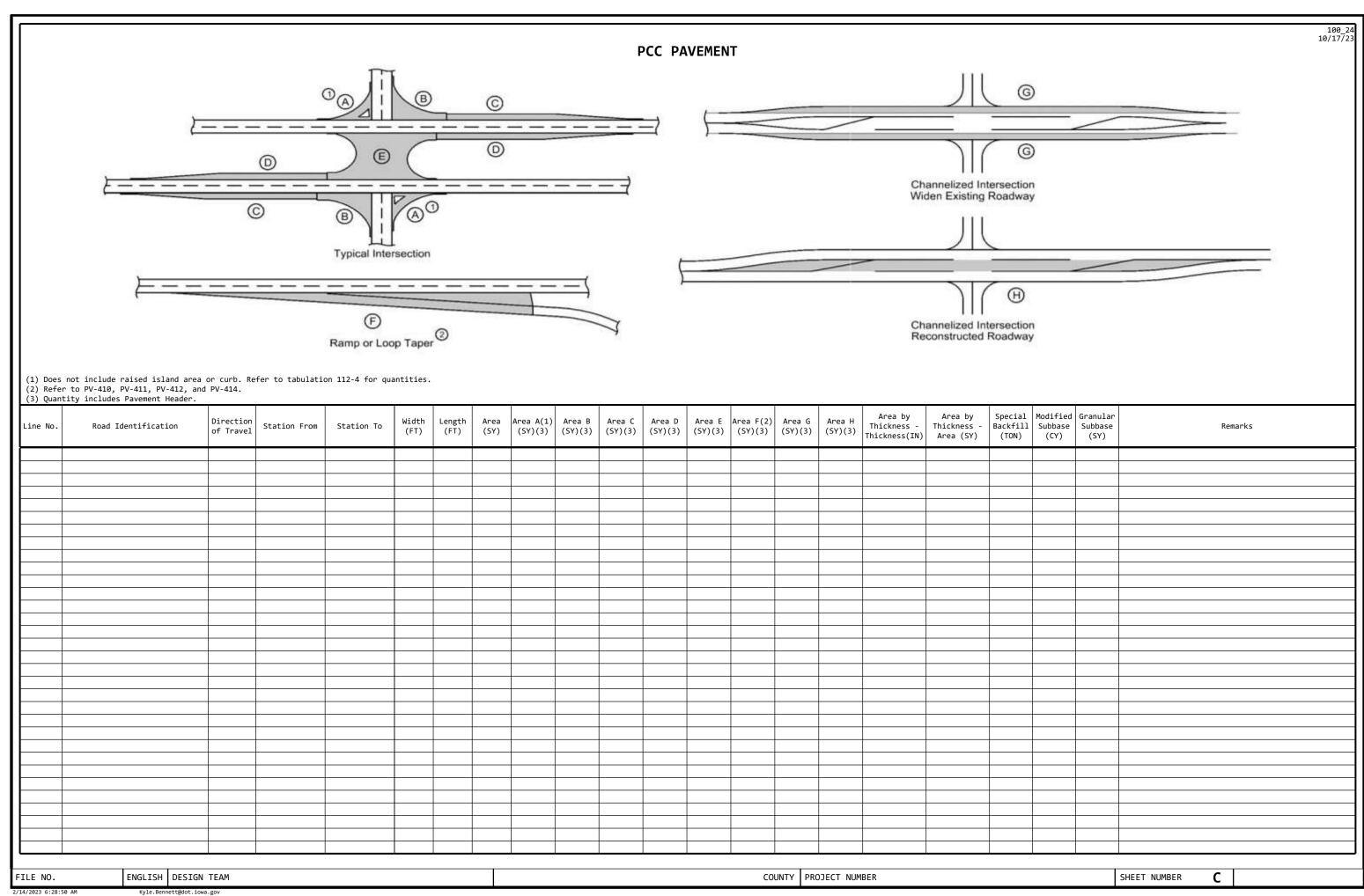


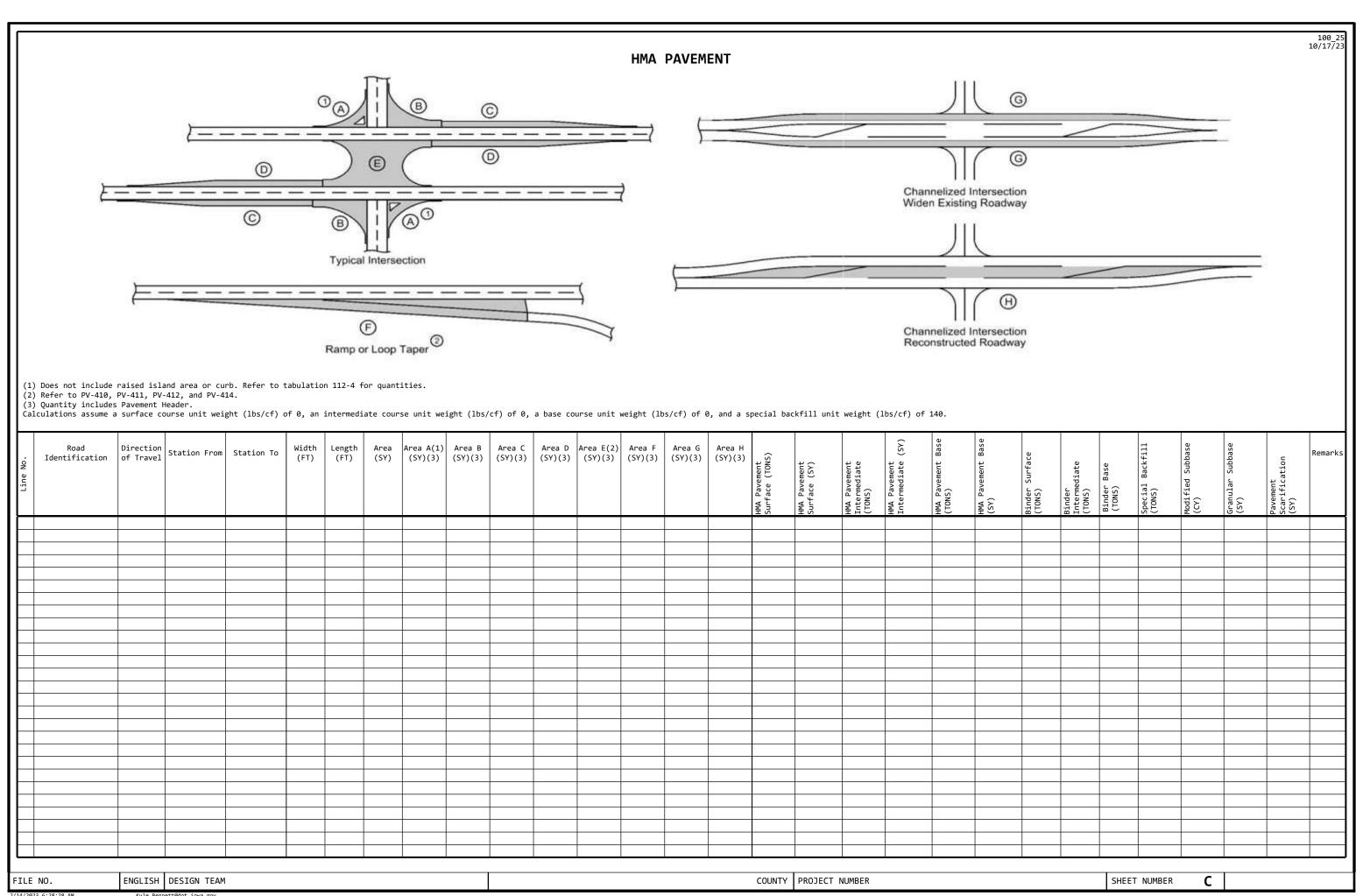
												e	100-22 94-21-15
ROLLED EROSION CONTROL  Refer to EC-101, EC-103 and EC-104													
Locati	on		I		(H)	Turf Rei	nforcement	Mat (TRM)	(EC-104)	Slope Protection	Special Ditch		
Road Identification	Begin	End	Side		W	Type 1	Type 2	Type 3	Type 4	(EC-103)	Control (EC-101)	Remarks	
	Station	Station		FT	FT	Squares	Squares	Squares	Squares	Squares	Squares		

100-23 04-17-18

#### **ROCK EROSION CONTROL**

Refer to EC-301 and Detail 570-8														
Locati				Rock Erosion Control (REC)				Material Bid Quantities						
	'	1	1	1 ( ) '		Type 1	Type 2	Type 3	Type 4	Type 5	Eng.	Class E	Erosion	1 1
Road Identification	Begin Station	End Station	Side		W	Rock Ditch	Rock		Rock Splash		Fabric	Revetment	Stone	Remarks
	<u></u> '	1	Lt./Rt.	FT_	FT	Check	Ditch	Flume	Basin	Protection	SY	TON	TON	1
	'													
	,	1	'	,			1			,	1	,	1	

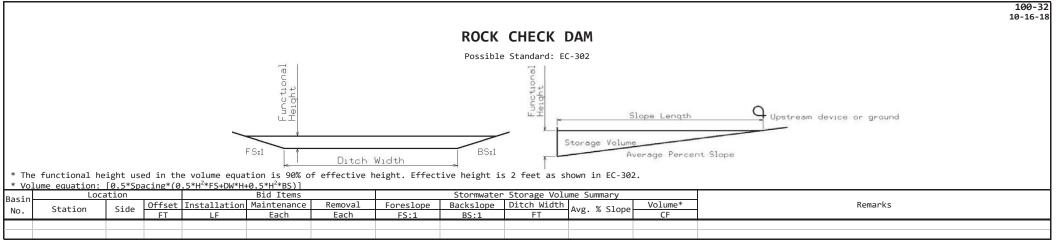


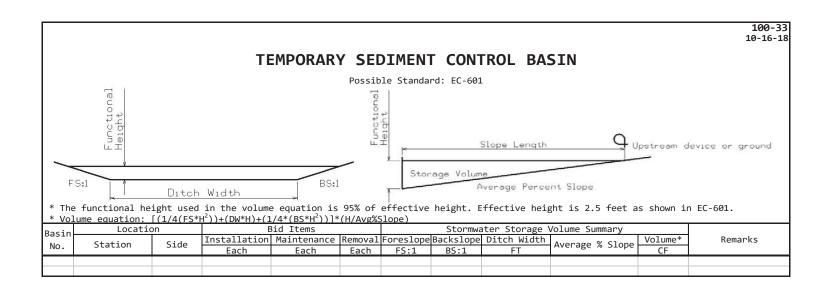


	100-26 10-15-13 INCIDENTAL ITEMS											
Spec	Special or unique items where method of measurement / basis of payment is not indicated in the specifications or other contract documents.											
No.	Incidental Item	Unit	Quantity		Incidental To	Remarks						
	The Identity   Item Code   Item   Ite											

						100-27 04-17-18
		PROPOS	ED POST	ED SPEE	D LIMIT	•
Road Identification	Begin Station	End Station	Propose	d Posted Spee	ed Limit	Remarks
	ŭ		35 or less	40 - 45	over 45	

			100-28 10-19-10
	LONGIT	UDINAL GROOVING	
Location	Total SY	Remarks	





	STORMWATER DRAINAGE BASIN AND STORAGE												
	Refer to EC Standards and 570s Details.												
Drainage Basin Location													
Basin	Station to Station	Side	Discharge Point	Point	Disturbed	with Storage	rn Storage without Storage Best Management Practice Provided Provided		Total Storage Volume Provided	Total Storage Volume Required	Storage Volume Met?	Remarks	
No.			Station	Side	Area								
				0.00	Acres	Acres	Acres		CF	CF	Yes/No		

100-34

100-36 10-16-18

# OPEN-THROAT CURB INTAKE SEDIMENT FILTER

Possible Standard: EC-602

Location	Side	Installation	Maintenance	Removal	Remarks
Station		LF	EACH	EACH	

100-37 04-18-17

#### GRATE INTAKE SEDIMENT FILTER BAG

Possible Detail: 570-7

Location	Side	Installation	Maintenance	Removal	Remarks
Station		EACH	EACH	EACH	

# **Design Information**

NO.	DATE	TITLE
101-4		Rural Design Designation
101-5		Urban Design Designation
101-6	04-30-02	Rural Urban (Combination) Design Designation
101-7	04-30-02	Interstate Design Designation
101-8	10-21-14	Wedge Course for Superelevated Curves
101-10		Painted Islands
101-16		Alignment Coordinates
101-17		Spiral/Circular Curve Data
101-18	04-19-22	Superelevation Data

04-30-02	101-4
DESIGN D	ATA RURAL
20 AADT 20 AADT 20 DHV TRUCKS Total Design ESALs	V.P.D. V.P.D. V.P.H.

04-30-02	2		101-5
DES	IGN	DATA	URBAN
20	AADT		V.P.D.
20	AADT		V.P.D.
20	DHV		V.P.H.
TRUCK	(S		%
Total Desig	n ESAI	Ls	

04-30-02				101-6
	DESIGN	I DA	TA	
RI	JRAL		u	RBAN
20 AADT 20 AADT 20 DHV TRUCKS Total Design ESALs	V.P.D. V.P.D. %	20 20 20 TRU0 Tota Desi		V.P.D. V.P.D. V.P.H.

								-	-			WEDGE (	OURSE I	OR SIIDI	ERELEVA	TED CUR	VES							101-8 10-21-14
												WLDGL (				ILD CON	VLJ							
* Bid Item													Re	efer to Detai	1 560-4.									
		ase cours	se unit we	ight (1	hs/cf)	of 0 ar	nd an in	termedia	ate cour	se unit	weight (lbs/c	f) of 0.												
			Existing	-A (-								.,	Pro	posed							Omit		Shoulder	
			Cross										PC Stations					PT Stations			Base	HMA	Fill	
PC	PT	Radius	Slope at	W-	w.	e	l 1	×	Y	m											Widening		Including	Remarks
Station	Station		PC/PT	1	0	_	_				Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section E-E	Section D-D	Section C-C	Section B-B	Section A-A	Unit?	wedge	60% Shrink	
		FT	%	FT	FT	%	FT	FT	IN	FT	1		1						1		Y/N	TONS	CY	

101-10 04-21-15

#### **PAINTED ISLANDS**

Refer to PM-110, 560-5, and 108-22.

Offsets are located from mainline.

	Point	Α	Point	В	Point	С	
Road Identification	Station	Offset	Station	Offset	Station	Offset	Remarks
	Station	FT	Station	FT	Station	FT	

								ALI	GNMENT C	OORDINAT	ES								<b>101-16</b> 10-20-09
		_	Datat as Tassas			Danta Catual			Danta Como		Cimala Cu	DT M	DI -6 000		Fad Come		1		
Name	Location		Coord	lt natas		begin Spiral	Inatas		Begin curve	Inatas	Simple cu	rve ri or master	Tri or Sus		Eng curve	instee		End Spiral	Instan
Name	Location	Station	Point on Tangen Coord Y (Northing)	X (Fasting)	Station	Begin Spiral Coord Y (Northing)	X (Fasting)	Station	Begin Curve Coord Y (Northing)	X (Fasting)	Station	rve PI or Master Coord Y (Northing)	X (Fasting)	Station	End Curve Coord Y (Northing)	X (Fasting)	Station	Y (Northing)	inates X (Easting)
			1 (Northing)	A (Edsting)		1 (NOT CHANGE	A (Edsting)		1 die ching	x (Lustring)		1 (Northing)	A (Edsting)		1 (NOT CHING)	x (Lustring)		1 deciding	x (Lustring)
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	STIME OF CIRCULAR CONVE DATA											<b>101-17</b> 04-19-11				
Name	Location	$\Delta_{scs}$				Sotral Da	ta	Horiz	ontal Alignmen	: Data		C	Remarks			
Name	Location	△scs	θs	Ls	Ts	Es	Xc Xc	Yc	L.T.	S.T.	$\Delta_{c}$	T	urve Data L	R	E	Relia KS
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																				101-18 04-19-22
											LEVATION									
I										26	PV-300 Serie	es								
Road Identification	Circular Curve or Spiral Curve	Radius	Super	elevatior	tion Data Standard		Continu A A	Cartina Al Al	Soction P P	Section C'-C'	Section C-C	Section D-D	Case A	Case B	Case C	Case S	Case T	Case U	Remarks	
Identification			e	L	X	Road Plan	Section A-A	Section A -A	Section p-p	Section C -C	Section C-C	Section D-D	Case A	Case b	case c	Case 3	Case I	Case U	Reliidi KS	
	Name	FT	%	FT	FT	1														

# **Access and Maintenance Data**

NO.	DATE	TITLE
102-3	10-16-18	Access Points and Safety Ramps
102-4	10-18-11	Locations of Road Closure Barricades
102-5	04-18-17	Existing Pavement
102-5A	10-20-15	Existing HMA Pavement for Recycling
102-6C	04-18-17	Full Depth Patches
102-10	10-16-18	Partial Depth PCC Finish Patches
102-11	04-18-17	Partial Depth HMA Finish Patches
102-12	04-18-17	Partial Depth Irregular HMA Finish Patches
102-14	04-18-17	Partial Depth HMA or PCC Repair Patches
102-16	10-21-14	Notches and Runouts for Resurfacing

102-3 10-16-18

#### ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of Unclassified Pipe calculated is based on using Corrugated Metal Pipe.

(1) Refer to MI-210
(2) Refer to EW-501.
(3) Refer to EW-501 or EW-502.

\*Predetermined for access point not constructed with this project.

Location		Туре		ngth of Open			1 2	(2)		1	Pipe Culve	rt 3			Driveway		Driveway	
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case	1½" Dropped Curb	3" Dropped Curb	W	PR	SR	Н	Size	Pipe Length	Lt.	Rt.	Aprons	HMA	PCC	Surfacing Material	Remarks
		or rredecermence	1 or 2	LF	LF	FT	FT	FT	FT	IN	LF	LF	LF	No.	SY	SY	TON	

102-4 10-18-11

### LOCATIONS OF ROAD CLOSURE BARRICADES Refer to SI-181 and SI-182.

		Reter to	<u>51-181 and</u>	d SI-182.	
	Location	W	SI-181	SI-182	Remarks
No.	Station	LF	LF	No.	

																					102 04-18-
											EX:	STING	PAVE	MENT							
			Locatio	n					Sur	face	Ва	ase	Sub	base	Rem	noval	Coarse Aggre	gate		Reinforcement	
No.	County	Route	Dir. of Travel	Begin Ref. Loc. Sign	End Ref. Loc. Sign	Year	Type	Project Number	Туре	Depth IN	Туре	Depth IN	Туре	Depth IN	Туре	Depth IN	Source	Туре	Durability Class	Туре	Remarks

																102-5A
																10-20-15
							TING HMA				ING					
For i	nformational purposes or	nly. When	designed R	AP is specit	fied, proc	ess the R	AP to control t	he uniformity	of the fina	al mixture.						
					Asphalt	Binder					Mi					
Route No.	Location	Year Placed	Layer	Thickness	Grade	Content	Description	Quality	Size	Content	% of -4 that	% of +4 that	% of +4 that	% of +4 that	% Crushed	% Limestone
NO.		Flaceu			or auc	Concent	besci ipcion	Туре	3120	Correction	is Type 2	is Type 2	is Type 3	is Type 4	% Cl usileu	% Limescone

																	-			102-6C 04-18-17
									Dossible C			PTH PAT		-105 and PR-140						
	Loc	ation			Dimension	1		PCC Pa		candarus: P	K-101, PK-1	02, PK-103,								
Count	Station	Reference	Lane	Length	Width	Patch Thickness	With Dowels	Without Dowels	CRC	Ramp with Dowels	HMA Patches	Composite HMA	Subbase Patches	Subbase Patch w/ 'EF' Joint		'CD' Joints	'CT' Joints	'EF' Joints	Anchor Lugs Removal	Remarks
		Location Sign					PR-103	PR-102	PR-104	PR-105			PR-140	PR-101	PR-101 or PR-140			PR-101		
$\overline{}$			L, R, or B	FT	FT	IN	SY	SY	SY	SY	SY	TON	SY	SY	No.	No.	No.	No.	No.	

								102-10 10-16-18
				PART			FINISH PA	
	Location					ble Standar Quantities		
Begin Station	Begin Reference	End Reference	Lane	Finis	sh Patches	1	and Crack ir Patches	Remarks
	Location Sign	Location Sign		Number	SF	Number	LF	

		PAR	TIAL	DEPTH REG	GULAR H	HMA FI	102-11 04-18-17 NISH PATCHES
	Loca	ntion		Dimension Of Patch		mated :ities	Remarks
No.	Station	Reference Location Sign	Lane	Length x Width	SY	TON	nemarks

		PARTIAL	DEPTH II	RREGI	ULAR HI	MA FIN	ISH PA	102-12 04-18-17 TCHES
Begin Station	End Station	Location  Begin  Reference  Location Sign	End Reference Location Sign	Lane	Estir Number of Patches	mated Quanti	ities TON	Remarks

												102-14 04-18-17
		P/	ARTIAL DE	PTH HMA	OR	PCC	<b>REPAI</b>	R PATO	CHES			
		Loca	tion			<b>T</b>	Dimer	nsion	Es	t. Quantit	ies	
			Begin	End Reference		Type HMA		atch	PCC	ш	MA	Remarks
No.	Begin Station	End Station	Reference Location Sign	Location Sign	Lane	or PCC	Length	Width	FCC		nia.	Kelliai Ks
							FT	FT	SF	SY	TONS	

		NO.	TCUES	AND DI	INOLITS	EOP	RESURFACI	NG	102-16 10-21-14
① Bid item.	Applies only to 1			Refer	to PR-201	and PR-202			
Location Station	Type of Notch or Runout	S	I	DI	L	M	Pavement ① Scarification	Remarks	
		IN	IN	IN	FT	IN	SY		

SECTION

103

# **Soils Data**

NO.	DATE	TITLE
103-1	10-17-17	Embankment with Moisture and Density Control
103-3	10-16-12	Proposed Subgrade Treatment
103-5	10-15-13	Settlement Plates
103-6	10-17-17	Embankment with Moisture Control
103-7	08-01-08	Shrinkage Data
103-10	04-18-17	Topsoil Stripping and Placement
103-11	10-17-17	Select Treatment
103-12	10-20-20	Slide Repair

SECTION

104

### **Drainage Structure Data**

<u> Dramage (</u>	oti aotai o		
NO.	DATE	TITLE	
104-3	10-17-17	Drainage Structure By Road Contractor	
104-4	10-17-17	Roadway Items for Drainage Structures Installed by Culvert Contractor	
104-5A	10-15-13	Intakes and Utility Accesses	
104-5B	10-20-15	Storm Sewer	
104-5C	10-17-17	List of Subdrain Work	
104-6	04-19-22	Wick Drain or Sand Drain Fields	
104-8	04-19-22	Bridge End Drains	
104-8A	04-19-22	Scour Protection or Rock Flume for Bridge End Drain	
104-8B	04-19-22	Bridge End Drains (with Letdown)	
104-9	10-17-17	Longitudinal Subdrain Shoulder and Backslope	
104-10	08-01-08	Adjustment of Fixtures	
104-11	08-01-08	Rebuilding of Intakes and Utility Accesses	
104-12	10-17-17	Subdrain and Grading at Side Piers	
104-13	04-18-17	Foreslope Flattening and Drainage Structures by Road Contractor (Mainline Pipes)	
104-14	10-15-19	Linear Trench Drain	

							103-1 10-17-17
	EMBAN	<b>KMENT</b>	WITH MOISTU	RE AND	<b>DENSITY</b>	CONTROL	
Location							
Station to Station	Lane	Depth	Compact			Remarks	
		FT	CY				

															103-3 10-16-12				
								PROPOSED	SUBGRAD	E TREAT									
								(For Additional Details see Soils	No.	to	.)								
	Locat	tion			Description	1		Туре						Available From					
No.	Begin	End Station	Side	Туре	Depth	Width	Area	Material	Shrink %	Qu	Quantity		Quantity		Quantity		Quantity Location or Station to Station		Remarks
	Station	Station			FT	FT	SF			CY	CY TON		CY TON		CY	Station to Station			

				103-5 10-15-13
			IT PLATES Road Plan EW-212	
No.	Loca	ation	Remarks	
	Station	Offset		

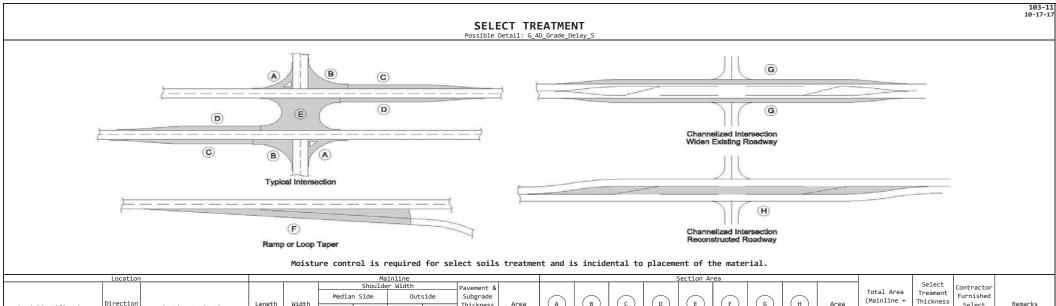
103-6 10-17-17

#### EMBANKMENT WITH MOISTURE CONTROL

Moisture Control is required for all Class 10 fill placed in all locations and depths. Stability berms placed outside the normal foreslope template and topsoil will not require Moisture Control.

			103-7 08-01-08
SHRI	NKAG	E DATA	
Material	%	Remarks	

						103-10 04-18-17								
TOPSOIL STRIPPING AND PLACEMENT														
	Locatio	n		Tonsoil Strinning	Topsoil Placement									
Road Identification	Dir. of Traffic	Begin Station	End Station	Thickness	Thickness	Remarks								
	Irattic	J.		IN	IN									



(A)

Area

Thickness

(x)

(B)

(c)

(D)

(E)

(F)

 $(\mathsf{G})$ 

(H)

Area

Section)

Remarks

Select

Treatment

(Y1

Direction

of Travel

Road Identification

Width

(GM)

PM

(P0)

(GO

Length

Station to Station

										SLIDE R	EPAIR					103-12 10-20-20
Site No.			Side	Class 13 Excavation Waste	Embankment-in- Place	Excavation Roadway and Borrow	, Class 10 Waste	Class "E" Revetment	Engineering Fabric	Erosion Stone	Gra. Material Blankets & Subdrain	Macadam Stone Slope Protection		Strip, Salvage & Spread	Remarks	
				CY	CY	CY	CY	Tons	SY	Tons	CY	SY	CY	CY		

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.  * Not a bid item  * Diameter or equivalent diameter  (2) UNCL = Unclassified Pipe CMP = Corrugated Metal Pipe RCP = Reinforced Concrete Pipe LCP = Arch or Elliptical Low Clearance Pipe SARC = Steel Arch Pipe  (3) Backfill according to DR-101  **  **  **  **  **  **  **  **  **			r	DRAINAGE STRUCTURE BY ROAD CONTR	RACTOR	10-17 10-17
	* Not a bid item  1 Diameter or equivalen 2 UNCL = Unclassified P	t diameter ipe CMP = Corrugate	ed on using Reinforced Concrete Pipe.			
Location Type Vi Or A B Company Compan	Drain age Area Tocation Typ	e Siz Of Pipe Peddir New Peddir	Camber* (GR-102)  Apron Guard* (GR-213) (GR-213) (GR-213) (GR-214) (GR-204) (GR-104)	(R-122) Ormections (R-122) Ormeted Ormerted Ormeted Or	Lin. Ft. Ahead Degrees Rt. Location	20   The San Trans   The San T
ACRE IN LF FT FT IN OUT No.	ACRE	IN LF	FT FT IN OUT No. No. No. No. No. No. Type	e No. Type FT Lt. Rt. Other Other		vation Type CY CY CY CY CY CY

	ROADWAY ITEMS FOR DRAINAGE STRUCTURES INSTALLED BY CULVERT CONTRACTOR * Not a Bid Item Backfill according to DR-111															104-4 10-17-17
Location	Design Number	Size	Kind	Dike Rt. Location	-	Contractor   Compactir   Backfill	w/Moisture	Compaction w/Moisture	Floodable* Backfill	Porous* Backfill	Flooded Backfill	Excavation		Revetment	Engineering Fabric	Remarks
				Lt. Station	Elev.	rpe Adjacent	Control	and Density CY	(A) CY	(B) CY	(A+B) CY	Туре	Quantity CY	Type Quantity TONS	/ SY	

* Bid	iameter or equivalent diamet Item `SW-545	STORM SEWER									104-5B 10-20-15								
		INTAKES AND UTILITY AC	CESSE	S										PIPES					
														e wall to insi h to center of			e. An addit	ional 2 ft	length is added to
No.	Location Station and	*Type or Standard Road Plan	Form		Extension	Notes	Line	Intake/ Utility	Class	Pipe	Bid*	Design	Slope	Connected Pipe Joint		Flow Lines		Pipe Profile	Notes
NO.	Offset	*Type or Standard Road Plan	Grade Elev.		Length**	Notes	Number	Access No.	'D'	Size	Length FT	Length	%	(DR-121)	Inlet Elevation	Outlet Elevation	Other Elevation	Sheet No.	Notes
	_																		

104-5C 10-17-17 LIST OF SUBDRAIN WORK Possible Standards: DR-121, DR-201, DR-203, DR-301, DR-302, DR-303, DR-305 and DR-306. Possible Detail: 500-10. \* Not a bid item Location Pipe Aprons Outlets Class "A" Connected Pipe Granular Trench Porous Crushed Type of Installation Joints\* Material Drain Backfill\* Remarks Concrete, C.M.P., or Plastic DR-201 DR-203 500-10 DR-305 DR-306 Stone\* No. Station to Station Blanket CY DR-121 DR-301, DR-302, DR-303 IN LF No. No. No. Type No. No.

														104-6 04-19-22
	WICK DRAIN OR SAND DRAIN FIELDS													
							Possible Star	ndards: DR-301	and DR-305,	Detail 500-10	, and Ta	bulation	104-50	
* Not a bid item.														
Location	Sand	Drains	Wick	Drains	Horiz	ontal Strip D		Granular	DR-301		Subo	rain Out	lets	
Station to Station	Number of Drains*	Total Length	Number of Drains*	Total Length	Longitudinal	Transverse		Material for Blanket and Subdrain	Tuno 2	Porous Backfill*	500-10	DR-	305	Remarks
	ni atil2.	LF	ni atili2.	LF	LF	LF	LF	CY	LF	CY	NO.	TYPE	NO.	

104-8 04-19-22 BRIDGE END DRAINS 1 Refer to Standard Road Plan SW-538 Location Installation Information Elevation Length Distance Bridge Bridge Remarks DI-1 or DI-2 1 Form (L2)  $\binom{\mathsf{c}}{}$ (L1)(в) Station Corner Grade

104-8A 04-19-22

### SCOUR PROTECTION OR ROCK FLUME FOR BRIDGE END DRAIN

Refer to Standard Road Plan DR-401 and DR-402

				Kerer to Stande	ir a Roda i Ian DR	401 dild Dit 402				
	Location		Bid Items	Scou	r Protection (DR	-401)	Roo			
Bridge Station	Bridge Corner	Distance DI-1 or DI-2	Bridge End Drain	Control, Wood Excelsior Mat	Type 2	Transition Mat	Macadam Stone Base	Engineering Fabric	Erosion Stone	Remarks
				EC-101	EC-104	EC-105				
		FT	TYPE	SQ	SQ	SF	TONS	SY	TONS	

① Refer to	Standard	Road Plan S	W-539		BR	IDGE	END [	PRAINS	5 (WI	LH LE.	TDOWN	)	104-8B 04-19-22
L	ocation				Eleva		tallation	Informat	tion	Lon	gth		
Bridge Station	Bridge Corner	Distance DI-1 or DI-2	Form Grade	A	В	С	D	E	L1	L2	L3	L4)	Remarks

104-9 10-17-17

#### LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

\* Not a bid item. Bridge berm quantities assume a trench depth of 24 inches.

Refer to Soils Sheets assume a trench depth of 24 inches.

		Location						Longi	tudinal Su	ubdrain (DR-303)			Subd	rain Outlet			
Line	Road or Lane			-	Depth	Shou	lder	Back	slope	Bridge Berm (EW-	203 or El	V-204)	DR-303, D	DR-305 or DR-306	Porous* Backfill	Class "A"* Crushed	Remarks
No.	Identification	Station to	Station	Side	(D)	Size	Length	Size	Length	Standard Road Plan	Size	Length	Station	Standard Road Plan	васктііі	Stone	Relial KS
					IN	IN	FT	IN	FT	and Type	IN	FT		and Type	CY	CY	

				104-10 08-01-08
			ADJUSTMENT OF FIXTURES	
No.	Location Station	Type of Fixture	Adjustment	

		REBUILI	DING OF INTAKES AND UTILITY ACCESSES	104-11 08-01-08
No.	Location Station	Туре	Adjustment	
			_	

104-12 10-17-17 SUBDRAIN AND GRADING AT SIDE PIERS Refer to DR-306 and EW-211 Lane(s) to which the pier is adjacent

Not a Bid Item. Quantities assume a trench depth of 24 inches.

Location Grading Longitudinal Subdrain (Shoulder) Precast 2 Class "A" Direction Porous Dimensions Outlet Concrete Туре Plastic Crushed Remarks No. of 1 Station Location Backfill Headwall Stone 2 No. Pipe Traffic DR-306 No. LF W A AL TL В LF CY CY

104-13 04-18-17

## FORESLOPE FLATTENING AND DRAINAGE STRUCTURES BY ROAD CONTRACTOR (MAINLINE PIPES) Refer to Standard Road Plans DR-121, DR-122, and DR-213.

\* Not a bid item

	Existing Information	of New FlowLine Aprons and Papes			New Apr	on Apro	'   'y⊦	e 'C' ctions*	Connected Pipe Joint*	Embank In-Place	Class 20	Remarks											
Location	Size and Type of Culvert	Size	Type of	Const.	Elevat	ions	Total	(LF)	Extensi	ons (LF)	Apr		Left Side	t Section: Right		No.	(DR-2	3) (DF	-122)	(DR-121)	In-Place		Relial KS
	*1	IN	Culvert	LF	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	NO.* FT	NO.*	FT	IN C	UT NO.	TYPE	NO.	TYPE	CY	CY	
1																							

104-14 10-15-19

### LINEAR TRENCH DRAIN Possible Standard: SW-521

① Bid Item ② Not a bid item. Assumes a 6" wide by 8" deep trench.

Station to Station	Direction	Side	Length 1	Curb	Curb Type	Т	TC	PCC 2	Remarks
	of Travel		LF			IN	IN	CY	

### **Title Sheet Data**

105

NO.	DATE	TITLE
105-1	09-27-94	Mileage Summary
105-3	10-18-05	Index of Sheets
105-4	10-18-11	Standard Road Plans

SECTION

## Widening and Resurfacing (Stage Improvement)

106

NO.	DATE	TITLE
106-1	04-18-17	Strengthening Courses
106-2	04-18-17	Leveling Courses
106-4	04-16-13	Shoulders for Widening & Resurfacing
106-5	10-21-14	Areas For Pavement or Base Widening
106-7	08-01-08	Fabric Reinforcement for Control of Reflective Cracking
106-8	04-19-11	Longitudinal Joint Repair

	MILEAGE SUMMAR	MILEAGE SUMMARY				
Div.	Location	Lin. Ft.	Miles			

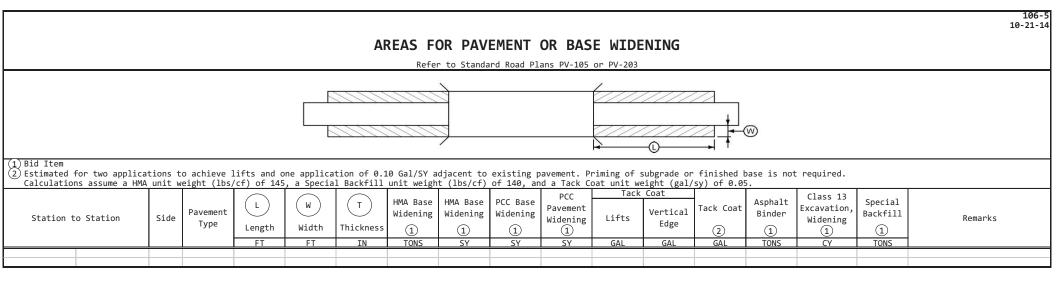
	INDEX OF SHEETS	<b>105-3</b> 10-18-05
No.	Description	

			105-4 10-18-11
		STANDARD ROAD PLANS	
	T	The following Standard Road Plans apply to construction work on this project.	
Number	Date	Title	

	STRENGTHENING COURSES													
	Loc	ation	JIKLIK		outs	Hot Mix Asphalt Pavement								
Being Ref. Location Sign	End Ref. Location Sign	Begin Station	End Station	(Lin. Back	Ft.) Ahead	Thickness Inches	Tons							

LEVELING COURSES													
	Loca	tion		Hot Mix Asph	alt Pavement								
Begin Ref. Location Sign	End Ref. Location Sign	Begin Station	End Station	Average Thickness Inches	Tons	Remarks							

#### 



106-7 08-01-08

# TABULATION OF FABRIC REINFORCEMENT FOR CONTROL OF REFLECTIVE CRACKING

Begin Station	End	Side	Width	Area
Station	Station		Lin. Ft.	Sq. Yds.

						106-8 04-19-11								
LONGITUDINAL JOINT REPAIR														
Begin	End	Length	Side	Width	Pay Length	Remarks								
Station	Station	FT		IN	LF									

### **Earthwork and Excavation Data**

houlder Material Availability Ving Dikes Grading for Guardrail Installations Grading for High Tension Cable Guardrail Installations Gock Splitting Babulation of Template Quantities and Adjustments
Grading for Guardrail Installations Grading for High Tension Cable Guardrail Installations Gock Splitting abulation of Template Quantities and Adjustments abulation of Template Quantities and Adjustments abulation of Template Quantities and Adjustments
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abulation of Template Quantities and Adjustments
lowing and Shaping

			107-7 08-01-08
SHOUL	DER MATI	ERIAL	AVAILABILITY
Begin Station	End Station	Side	Estimated Quantity Availability  CY

				107-22 04-16-13
		NG DIKES		
Location Station	Top Elevation	Length	Bridge Skew	Earthwork
Station	Elevation	FT	Skew	CY

①	Lane(s)	to which the ir	nstallat	tion is adjace	nt.			GRA	ADIN	G FC	OR G		ORAII	L INSTAL	LATIONS	107-23 10-18-11
		Location						Dimen	sions (	Feet)				Eart	hwork	
No.	Direction O	Station	Side	Foreslope at Guardrail	X1)	(Y1)	(X2)	(Y2)	(X3)	(Y3)	X4)	(Y4)	Z	Excavation Class 10	Embankment In Place	Remarks

107-24 10-19-21 GRADING FOR HIGH TENSION CABLE GUARDRAIL INSTALLATIONS Refer to Standard Road Plan EW-302 1 Lane(s) to which the installation is adjacent. Location Protection Earthwork Dimensions Length Direction Foreslope at Earthwork Remarks of 1 Station Side Guardrail  $\mathsf{C}_\mathsf{A}$  $C_0$  $C_T$  $(C_A+C_0+C_T)$ Type Traffic FT FT FT FT CY

			107-25 08-01-08
	TABULATION OF	ROC	K SPLITTING
	Location		
No.	Station to Station	Side	Remarks

Refer to Standard Road	d Plans EW-1	101 and EW-1	.02.			TAI	BULATIO	ON OF 1	EMPLAT	E QUAN	TITIES	AND A	DJUSTM	ENTS						107-28 04-21-15	
				C	Cut				Fill								ecks	Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]
				[3]/1.3	[1]-[2]-[3]	[5]/1.3	[4]+[6]	[3]+[5}		[18]-[2]	[9]+[10]			[11]+[12]+[13]	[14]-[7]					[19]/1.40	[20]-[18]
					T																
																					1
																					1
																					1
																					1
																					1
					+																

														107-29 04-15-14							
TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS																					
Refer to Standard Road Plans EW-101 and EW-102.																					

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS																107-30 04-15-14									
								T	<b>FABUL</b>	ATIC							DJUS	TMEN	TS						
Refer to Standard Road Plans EW-101 and EW-102.																									
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			107-31 04-19-11
		SHAPING Plan EW-101	
Station to Station	D FT	Remarks	

# **Lighting-Signing-Guardrail**

NO.	DATE	TITLE
108-1	10-21-14	Lighting Installations
108-2	08-01-08	Electrical Ducts
108-2A	08-01-08	Listing of Lighting and Signal Work
108-8A	10-16-18	Steel Beam Guardrail at Concrete Barrier or Bridge Rail End Section
108-8B	04-19-16	Steel Beam Guardrail for Side Obstacle (Two-Way Protection)
108-8C	04-19-16	Steel Beam Guardrail for Side Obstacle (One-Way Protection)
108-8D	10-19-21	Steel Beam Guardrail at Railroad Signals
108-9A	04-20-10	High Tension Cable Guardrail
108-11A	08-01-08	Highway Lighting Data
108-12	10-21-14	Wire, Cable, and Connectors
108-13A	10-18-22	Safety Closures
108-15	08-01-08	Concrete Steps and Combined Concrete Steps and Retaining Wall Construction
108-16	10-19-10	Combined Sidewalk and Retaining Wall Construction
108-18	10-21-14	Concrete Barrier at Median Locations
108-18B	10-17-23	Concrete Barrier at Side Locations
108-20	04-15-14	Concrete Barrier with MSE Wall
108-22		Pavement Marking Line Types
108-23A	08-01-08	Traffic Control Plan
108-23B	10-17-17	Traffic Control Closure Table(s)
108-24	04-21-15	Safety Grate Treatment
108-25	10-21-14	511 Travel Restrictions
108-26A	08-01-08	Staging Notes
108-27	10-17-17	Temporary Floodlighting Luminaries
108-28	08-01-08	Temporary Traffic Signals
108-29	04-21-15	Pavement Marking Symbols and Legends
108-30	04-16-13	Crash Cushions
108-33		Temporary Barrier Rail
108-34		Chevrons
108-35	04-17-12	Temporary Lane Separator System

						108-1 10-21-14
	LIG	NS				
	Location		LI-10	Remarks		
No.	Station	Туре	Α	E FT	Туре	Remarks

				108-2 08-01-08										
ELECTRICAL DUCTS														
Location	Conduit	Dia.	Length	Remarks										
	Type	IN	FT											

									108-2A 08-01-08						
				LISTING	OF LIGH	HTING	AND	SIGN	NAL WORK						
	Handholes			Conduits											
No.	Station	Туре	Line	Loca	tion	Conduit	Dia.	Length	Notes						
			No.	From	To	Type	IN								

STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION

Possible Standards: BA-200, BA-201, BA-202, BA-205, BA-206, BA-210, BA-211, BA-221, BA-225, BA-250, BA-260, LS-625, LS-626, LS-630, LS-635, SI-172, SI-173 and SI-211.

(1) Lane(s) to which the obstacle is adjacent. (2) Not a bid item. Incidental to guardrail installation.

		OCALION		Layout Lengths							Delineators and Object Markers (2)					Bid Items									
	1 Side				Layout	Lengths				۱ '	errileacor s	and objec	L Hai Kei	3 (2)		DIG Teems									l .
				BA-25	0, BA-260,	LS-630, or I	LS-635				Delineator	Dolinoston Ohi		Object Marker					BA-	250 or LS-0	530		BA-260 or LS-635		í
No. Lion tride dian		Station	Offset					Long-Span S	ig-span System St_172 St_173 Bolted End Post Steel Beam Barrier						End Te	rminal		Barrier Transition	End Terminal	Remarks					
NO.	Φ ∈ I σ ← I	Station		( VT1 )	( VF )	( VT2 )	( ET )			31-211	111		Т	ne 3	Anchor	Adapter	Guardraii							rerminal	ı
	3 T G										Type 1	Type 2	,,					Section	Tangent	Flared	Tangent	Flared	Section	Tangent	ı
	A Pir							BA-211	_		White	OM2-2	OM3-L	OM3-R	BA-202	BA-210	BA-200	BA-201	BA-205	BA-206	LS-625	LS-626	BA-221	BA-225	1
			FT	LF	LF	LF	LF	STATION	TYPE	TYPE	EACH	EACH	EACH	EACH	TYPE EACH	EACH	LF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	

(1)Lane	STEEL BEAM GUARDRAIL FOR SIDE OBSTACLE (TWO-WAY PROTECTION)  Possible Standards: BA-200, BA-205, BA-206, BA-210, BA-211, BA-251, LS-625, LS-626, LS-631, SI-172, SI-173, and SI-211.  Lane(s) to which the obstacle is adjacent.																108-8B 04-19-16									
	Location Layout Lengths Side BA-251 or LS-631													D	Delineators and Object Markers						Items					
'						L	Approad	ch Side (A)	)	<u> </u>	Traili	ing Side 🗇		Long-Span Sy	vstem .	1 1	Delineator	Ob.	bject Mark	ker	Ι,	End T€	Terminal	_		- 1
No.	E ij :	an an	Station	(Or)	(D <sub>0</sub> )											SI-211	SI-172		SI-173		Steel Beam			Post	Remarks	Ì
1 1	o.   in transfer   2 cation   2 c		Station			(ET)	(VT2 <sub>A</sub> )	(VF <sub>A</sub> )	(VT1 <sub>A</sub> )	(VT1 <sub>T</sub> )	(VF <sub>T</sub> )	(VT2 <sub>T</sub> )	) (ET)	1			Type 1	Type 2 Type 3		Guardrail	Standard	Count	Adapter		Ì	
- C		- 8 - 8 - 8			Ι.,	1 .	1 -	Ι ,	1	1 - 1	1	Ι,	1 1	BA-211	١.	1	White	OM2-2	OM3-L	OM3-R	BA-200	┨ ,		BA-210		Ì
	3 0	0 Σ		FT	FT	LF	LF	LF	LF	LF	LF	LF	LF	STATION	TYPE	TYPE	EACH	EACH	EACH	EACH	LF	٦	EACH	EACH		
				-	1		-					-	-		-			L		-	-					

108-8C 04-19-16

# STEEL BEAM GUARDRAIL FOR SIDE OBSTACLE (ONE-WAY PROTECTION) Possible Standards: BA-200, BA-203, BA-203, BA-206, BA-210, BA-211, BA-252, LS-625, LS-625, LS-632, SI-172, SI-173, and SI-211.

Lane	(S) to	) Wnich	the obstacle	is adjac	ent.																			
	L	ocatio	n					Layout	Lengths					D	elineators	and Object	+ Mankon	-			Bid Items			
		Side			l L			BA-252 or	LS-632		_			D	errileacor's	and objec	.c markers	5			BIU I CEIIIS			ı
	$\sim$ $\Gamma$						Approac	ch Side (A)		Trailin	ng Side(⊺)	Long-Span S	vetom		Delineator	Oh	ject Mark	or			End Te	rminal		1
No.	] # [	utside edian	Station	(O <sub>L</sub> )	$\left( D_{0}\right)$	(ET)	(VT2 <sub>A</sub> )	(VF <sub>A</sub> )	(VT1 <sub>A</sub> )	(VT1 <sub>T</sub> )	(EA)	cong-span s	yscem	SI-211	SI-172 Type 1	Type 2	SI-173		Steel Beam Guardrail	W-Beam End Anchor	Standard	Count	Post Adapter	Remarks
9		9 €				$\sim$ $ $			$\overline{}$	$\sim$	$\sim$	BA-211			White	OM2-2	OM3-I	OM3-R	BA-200	BA-203	-		DA 240	1
1 7	! \   .	# 8													wnite	UM2-2	UM3-L		BA-200		_		BA-210	i
١,	, 0 ,	0 2		FT	FT	LF	LF	LF	LF	LF	LF	STATION	TYPE	TYPE	EACH	EACH	EACH	EACH	LF	EACH		EACH	EACH	

108-8D 10-19-21

## STEEL BEAM GUARDRAIL AT RAILROAD SIGNALS

Possible Standards BA-200, BA-204, BA-205, BA-253, LS-625, LS-633, SI-172, SI-173 and SI-211.

(1) Lane(s) to which the obstacle is adjacent.

	Lunc (3	) to writtin the t	JUJCUCIC	15 dajace									
	Lo 1	cation		Layout	Lengths	D	elineators	and Obje	ct Marker	S	Bid I	tems	
No.	ion ffic (	Station	$\bigcirc$	(VT)		SI-211	Delineator SI-172	0b	ject Mark SI-173	er	Thrie-Beam	End Terminal	Remarks
NO.	recti	Station		VI	(ET)	31-211	Type 1	Type 2	Тур	e 3	End Anchor	Standard	
	Dir			34.375'			White	OM2-2	OM-3L	OM-3R	BA-204		
			FT	LF	LF	TYPE	EACH	EACH	EACH	EACH	EACH	EACH	
													•

$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		ane(s) to whi	adjacent.		HIGH	_	ION CA		JARDRAII	L	108-9 04-20-1
No. $\begin{array}{ c c c c c c c c c c c c c c c c c c c$			Location				Dimensions	3	Bid Ite	ems	
FT FT FT No.	No.	of ①		Side	D <sub>0</sub>	C <sub>A</sub>	Co	C <sub>T</sub>	Length (C <sub>A</sub> +C <sub>0</sub> +C <sub>T</sub> )	Anchor	Remarks
					FT	FT	FT	FT	FT	No.	

108-11A 08-01-08

HIGHWAY LIGHTING DATA

										WI	RE, (	CABLE	AND	CON	NECTO	RS			108-12 10-21-14
				Conne	ectors							Phase	Lines				Gro	und	
Circuit Number	Туре	Quan.	Type	Quan.	Туре	Quan.	Type	Quan.	Size	Quan.	Remarks								
		No.		No.		No.		No.	A.W.G.	LF									

108-13A 10-18-22

#### **SAFETY CLOSURES**

Refer to Section 2528 of the Standard Specifications

	0 50000000 25.	-0 01 0110 000	naara specii icacions
Station	Closur	е Туре	Domonics
Station	Road Qty.	Hazard Qty.	Remarks

C	ONC	RE	ΓE :	STEPS	AND	СОМВ		CONCRETE		AND	RETA	AININ	108-15 08-01-08 IG WALL
						1	CON	<u>STRUCTION</u>					
Location			St	eps	Lugs	Lan	dings	Retaining Wall	Concrete	Steel	Handr	ail	
Station	Side	W	H	Number Required	Number	Number	LF	Number	CY	LB	Length LF	Post Number	Remarks

108-16 10-19-10

## COMBINED CONCRETE SIDEWALK AND RETAINING WALL

			See	MI-221					
Location		Retaining Wa	all	Side	walk	Con	crete		
Station to Station Side	Туре	Height, H	Thickness	Width, W	Thickness	Retaining Wall	Sidewalk & Footing	Porous Backfill	Reinforcing Steel
Station to Station Side		FT	FT	FT	FT	CY	CY	CY	LB

						CONC	CRETE BARRIER AT MEDIAN LOCATIONS See BA-100, BA-101, and BA-102.			108-: 10-21-:
	Begin	End	Standard	Barrier	Bid Items Type					Expansion Joints
No.	Station	Station	Road Plan	BA-100 or BA-102 LF	BA-101 EACH	Footing	Remarks	Station	Side	Remarks

108\_18B 10/17/23

# CONCRETE BARRIER AT SIDE LOCATIONS

Refer to BA-102, BA-103, BA-104, BA-105, BA-106, BA-107, BA-108 and BA-150.

- Lane(s) to which the installation is adjacent.
   Refer to the Shoulders tabulation (112-9) for quantities.
   \* Bid Item

sion Joint Remarks

				108-20 04-15-14
CONCR	RETE BARF		R WITH	 WALL
Station t	o Station	Side	W IN	Remarks

108-22 04-16-13

#### PAVEMENT MARKING LINE TYPES

\*BCY4 - Place on the same side of the roadway to match existing markings near the project.
\*\*NPV4 - For estimating purposes only. No Passing Zone Lines will be located in the field.
BCY4: Broken Centerline (Yellow) @ 0.25

ECY4: Edge Line Left (Yellow) @ 1.00

See PM-110

\*\*\*MNV4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

NPY4: No Passing Zone Line (Yellow) @ 1.25 BLW4: Broken Lane Line (White) @ 0.25 ELW4: Edge Line Right (White) @ 1.00

1			Location							Le	ngth by L	ine Type (	(Unfactored	d)						
Road ID	Station to Station	Dir. of	Marking Type	Side	BCY4*	DCY4	NPY4**	BLW4	ELW4	ELY4										Remarks
		Travel		L C R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	

TRAFFIC CONTROL PLAN

* Thi	s is t	to only a indic	be us	ed in	conj that	unctio	n wit	h Tab	ulati	on 10	98-23 <i>F</i>								TR	RAFI	FIC	CO	NTR	OL (	CLC	SUR	E T	ΓΑΒΙ	LE(	S)																	108- 10-1
Hauc.	u a. c.	3 11.010	aces c	TINCS	CHAC	Tune C	1054.	C3 G.	C 1.0 C		WEG.																			•																	
												Al														oon											PM										
	12:00	12:30	1:00	1:30 2	2:00	2:30 3:	00 3:	30 4	:00 4	:30 5	:00 5	:30 6	5:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:6	00 10:3	30 11:	00 11:	30 12	2:00 12	:30 1	:00 1	:30 2	:00 2	:30 3:	00 3:	30 4:	00 4:	30 5:0	0 5:30	6:00	6:30	7:00	7:30 8	3:00 8	3:30	9:00 9:3	0 10:0	00 10:	30 11:	00 11
SUN																		-																													
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FULL		_																		_	_															_											
EDT		_		_						_								_	_		_													_		_					_				_		
CAT		_		_	_		_	_	_	_	_	_	_					_	_	_	_	_	_		_		_	_	_	_	_	_	_	_	_	_				_	_	_		_	_		_
ıΑι	1																																														

SAFETY GRATE TREATMENT Refer to DR-503.										108-24 04-21-15									
① L	ane(s)	to which the	insta	llati	on is a	djacent			110		.0 DIX	505.							
No.	ction (b) raffic	Location Station	Side	Туре	Culv Sk Ang Ahe	ew gle	A	В	С	Dir	mension E	ons F	G	Н	J	Midspan Support Required	Wing Flare	wall Angle	Remarks
	Direc of Tr					rees Right										Case	Degi Ahead	rees Back	

											108-25 10-21-14
				511 TRAVEL RESTRICT	ONS						
Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Remarks

108-26A 08-01-08 STAGING NOTES TEMPORARY FLOODLIGHTING LUMINAIRES

Possible Standard: LI-130

No. Location Station Offset Number Lumin. Remarks

TEMPO	RARY 1	ΓRAF	FIC SIGN	108-28 08-01-08 IALS
		Tyr		
Location Station	One Lane Traffic	Haul Road	Intersection	Remarks
	Location	Location One Lane	Location One Lane Haul	Station One Lane Haul Intersection

										PAV	'EMENT	MARK	ING S		.S AND	LEGI	ENDS									108-29 04-21-15
Road Identification	Locat	Side	<b>↑</b>	RTAW	<b>†</b>	<b>Å</b>	<b>₹</b>	<b>⇔</b>	<b>←</b>	↑ FERW	1 LLRW	RIRW	X RRCW	000	Ł WCSW	LE.	SCHOOL	XING	STOP	AHEAD	ONLY	BIKE	LANE	EXIT	Groove Cuts	Remarks
			SIAW	KIAW	LIAW	CSRW	CSLW	CSTW	CKEW	FERW	LLKW	KERW	KKCW	DLSW	wcsw	WF3b	SCEW	ANGW	SIFW	Aribw	ONLW	DIKW	LANW	XIIW	EACH	

**CRASH CUSHIONS** \* Bid Item

1 Lane(s) to which the installation is adjacent.
2 Complete this section when using the Temporary Crash Cushion bid item and Earthwork is needed for Sand Barrel placement. Refer to BA-500 (1) Sand Barrel Details (2) Spare Parts Kit Crash Cushion (Select One)\* Earthwork\* Direction of Traffic Obstacle Width (Select One)\* Excavation Class 10 Embankment in Place Temporary Redirective Temporary Severe Use Permanent Severe Use Χ Permanent Severe Use V W Υ Z Temporary Location Side Obstacle Description Remarks Station Length Length Length Length Length FT CY CY EACH EACH FT FT FT FT FT

108-30 04-16-13

108-33 10-15-19

#### TEMPORARY BARRIER RAIL

Possible Standard: BA-401 Possible Detail: 560-7

\* Not a bid item. Anchorage requirements are based on TBR locations shown in the plans. TBR alignments that vary from what is shown in the plans may result in additional TBR sections requiring anchorage.

		Length	(Selec	t One)	Anchored*	Modular Glare	
No.	Station to Station	Length	Concrete	Steel	Anchor eu	Screen System	Remarks
		LF	BA-401	560-7	(Y/N)	(Y/N)	

				108-34 10-19-10
Refer		EVRON	<b>IS</b> Plan SI-1	75
Station to Station	G	Guidance Marker - Chevron	S	Remarks
		EACH	FT	

108-35 04-17-12

# **TEMPORARY LANE SEPARATOR SYSTEM**

See TC-61

	JCC 1C 01	
Station to Station	Length	Remarks
	L L C	

# **Removal and Disposition**

NO.	DATE	TITLE
110-1	04-16-13	Removal of Pavement
110-2	04-16-13	Removal of Existing Structures
110-3	08-01-08	Flume Removal
110-4	08-01-08	Curb Removal
110-5	10-20-15	Sidewalk Removal
110-6	08-01-08	Breaking Up Pavement
110-7A	04-17-12	Removal of Steel Beam Guardrail
110-7B	10-19-10	Removal of Cable Guardrail
110-8	04-17-18	Removal of Concrete Drives
110-9	10-18-11	Culvert Abandonment
110-10	08-01-08	Salvage and Removal of Buildings
110-11	08-01-08	Asbestos Removal in Buildings
110-12	10-20-20	Pollution Prevention Plan
110-12L	10-20-20	Pollution Prevention Plan
110-13	04-20-10	Delivery and Stockpiling
110-14	04-16-13	Sanitary or Storm Sewer Abandonment or Removal
110-15	04-16-13	Removal of Intakes and Utility Accesses
110-16	04-16-13	Removal of Light Poles and Concrete Footings
110-17	04-18-17	Clearing and Grubbing
110-18	04-18-23	Removal of Existing Longitudinal Subdrains
110-19	04-18-23	Removal of Existing Longitudinal Subdrains when Existing Pavement is Removed

* Not a Bid Ite	em		R		<b>)F PAVEM</b> bulation 102-		110-1 04-16-13
Begin Station	End Station	Side	Pavement Type	Area	Saw Cut*	Remarks	
				SY	LF		

			110-2 04-16-13
	REMOVAL OF EXIST	ING STRUCTURES	
Location	Description	Remarks	

						110-3 08-01-08
		FL	UME	RE	MOV	AL
	Location	Remove Slope Drain				
No.	Station	Lin. Cor		Lin. Met		Remarks
		Left	Rt.	Left	Rt.	

				110-4 08-01-08
	CURE	3 RI	EMOVAL	
Begin	End	Side	Length	Remarks
Station	Station		STA	

110-5 10-20-15									
* Not a bid item									
Begin	End	Area Saw Cut*		Remarks					
Station	Station	SY	LF						

110- 08-01-0								
BREAKING	G UP	PAVE	MENT					
Station to Station	Width	Area SY	Remarks					

	110-7/ 04-17-1									
REMOVAL OF STEEL BEAM GUARDRAIL										
(1) Lane(s) to which the installation is adjacent. (2) Includes length of End Terminals and End Anchors.										
	Location									
No.	Oirection⊕ of Traffic	Station t	co Station	Side	Removal of Guardrail 2					
					<u> </u>					

	Not a bi	d item o which the installation i	s adiacer		MOVAL O	F CABLE	GUARDRAIL	10-19
<u> </u>	411C(3) CC	Location	J da jacci	10		Post *		
	n jc			Туре	Cable	Footings, Concrete	End Terminal*	Remarks
os rection Traffi	Traf	Station to Station Side	Side	Side (High/Low Tension)	Remove	Remove	Remove	Relial KS
	Dir				LF	Yes/No	No.	

110-08 04-17-18

## REMOVAL OF CONCRETE DRIVES

Not a R	id T+om

* NOT A BIG ITEM									
Location		Area	Saw Cut*	Remarks					
Station	Side	SY	LF	Reliidi KS					

110-9 10-18-11

# **CULVERT ABANDONMENT**

Refer to Details 4315 and 4316

\* Not a bid item

		Fill Material		4"	
Location Station	Description	Flowable Mortar	Granular Backfill*	Perforated Subdrain*	Remarks
		CY	TON	LF	

								110-10 08-01-08
			SALVAGE AND REMOVAL	OF BUIL	DINGS			
Item No.	Parcel No.	Address	Item	Foundation	Former Owner	Use of Building Previous/Present	Age Of Bldg.	Asbestos Content In Bldgs.

					A:	SBESTOS REMO	VAL IN BUILDINGS				08-01-08
			Т			Friable	Asbestos			Non-Friable Asbestos	
		Age Pir		Pipe Wrap		Material By Area					
Parcel No.	Address	Item	Of	Use Of Building Previous/Present	Location and Identification	Percent & Type Lin. Of Asbestos Ft.		rcent & Type of Asbestos	Sq. Ft.	Location and Identification	Percent & Type Sq. Of Asbestos Ft.

110-12

#### POLLUTION PREVENTION PLAN

This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP).

This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed during construction, will be readily available for review.

All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The Contractor shall be responsible for compliance and implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.

#### I. ROLES AND RESPONSIBILITES

#### A. Designer:

- 1. Prepares Base PPP included in the project plan.
- Prepares Notice of Intent (NOI) submitted to Iowa DNR.
- 3. Is signature authority on the Base PPP. If consultant designed, signature from Contracting Authority is also required.

#### B. Contractor:

- 1. Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP
- 2. Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications.
- Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications. 4. Installs and maintains appropriate controls. This work may be subcontracted as documented through Subcontractor Request Forms (Form 830231).
- Supervises and implements good housekeeping practices according to Paragraph III, C, 2.
- 6. Conducts joint required inspections of the site with inspection staff. When Contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the Contractor) is still responsible to review and sign inspection reports.
- 7. Complies with training and certification requirements of Section 2602 of the Standard Specifications.
- 8. Submits amended PPP site map according to Section 2602 of the Standard Specifications.

#### C. Subcontractors:

- 1. Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if: responsible for sediment or erosion controls; involved in land disturbing activities; or perorming work that is a source of potential pollution as defined in this PPP. Subcontracted work items are identified in Subcontractor Request Forms (Form 830231). All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
- 2. Implement good housekeeping practices according to Paragraph III, C, 2.

#### D. RCE/Project Engineer:

- 1 Is Project Storm Water Manager
- 2. On projects where DOT is the Contracting Authority, is current with erosion control training or certification.
- 3. Takes actions necessary to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, and directing additional inspections at construction project sites that are experiencing problems with achieving permit compliance.
- 4. Orders the taking of measures to cease, correct, prevent, or minimize the consequences of non-compliance with the storm water requirements of the Applicable Permit.
- 5. Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.
- 6. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order or recommend such other actions as necessary to meet storm water requirements.
- 7. Is familiar with the Project PPP and storm water site map.
- 8. On projects where DOT is Contracting Authority, is responsible for periodically monitoring inspection reports to determine whether deficiencies identified in inspection reports were adequately and timely addressed, and if not, has the authority and responsibility to direct immediate actions to correct the deficiencies.
- 9. Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.
- 10. Is signature authority on Notice of Discontinuation.
- 11. Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231)
- 12. Makes information to determine permit compliance available to the DNR upon their request.

#### E. Inspector:

- 1. Updates PPP through fieldbook entries and storm water site inspection reports if there is a change in design, construction, operation, or maintenance which has a significant effect on the discharge of pollutants from the project.
- . Makes information to determine permit compliance available to the DNR upon their request.
- Conducts joint required inspections of the site with the contractor/subcontractor.
- Completes an inspection report after each inspection.
- 5. Is signature authority on storm water inspection reports.

#### II. PROJECT SITE DESCRIPTION

- A. This Pollution Prevention Plan (PPP) is for the construction of a \*Describe Type of Facility\*. B. This PPP covers approximately \*Provide # Of Acres\* acres with an estimated \*Provide # of Acres\* acres being disturbed. The portion of the PPP covered by this contract has \*Provide # of Acres\* acres disturbed.
- C. The PPP is located in an area of \*Provide # of Types Of Soil Association\* soil association (\*Provide Soil Association Type or\* \*Types\*). The estimated weighted average runoff coefficient number for this PPP after completion will be \*Provide runoff coefficient Number\*
- D. Storm Water Site Map is located in the R sheets. Proposed slopes are shown in cross sections, details, or standard road plans Supplemental information is located in the Tabulations in the C or CE sheets.

  E. The base storm water site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion
- control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been

#### POLLUTION PREVENTION PLAN

installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be documented by fieldbook entries and amended PPP site map.

F. Runoff from this work will flow into \*List Outlets for Runoff\*.

#### III. CONTROLS

A. The Contractor's ECIP specified in Article 2602.03 of the Standard Specifications for accomplishment of storm water controls should clearly describe the intended sequence of major activities, and for each activity define the control measure and the timing during the construction process that the measure will be implemented.

Preserve vegetation in areas not needed for construction.

C. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries, amended PPP site map, or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water site inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B of the Standard Specifications.

#### 1. EROSION AND SEDIMENT CONTROLS

- a. Stabilization Practices
- 1) Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.
- 2) Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have:
  - a) Permanently ceased on any portion of the site, or
  - b) Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.
- 3) Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above.
- 4) Permanent and Temporary Stabilization practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C or R sheets.
- 5) Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips
- 6) Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets. Additional information may be found in the Tabulations in the C or T Tabulation sheets, or is referenced in Section 2105 of the Standard Specifications

b. Structural Practices

- 1) Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water from surface when discharging basins, and controls to direct storm water to vegetated areas.
- 2) Structural practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found on the B or R sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C or R sheets.
- c. Storm Water Management

Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the storm water site map and Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation. The installation of these devices may be subject to Section 404 of the Clean Water Act.

2 OTHER CONTROLS

Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.

a. Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.

- b. Material Delivery, Storage and Use Implement practices to prevent discharge of construction materials during delivery, storage, and use.
- c. Stockpile Management Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.
- Waste Disposal Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.
- e. Spill Prevention and Control Implement chemical spill and leak prevention and response procedures to contain and clean up spills and prevent material discharges to the storm drain system and waters of the state.
- f. Concrete Residuals and Washout Wastes Waste shall not be discharged to a surface water and is not allowed to adversely affect a water of the state. Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located. Designated washout areas should be located at least 50 feet away from storm drains, streams or other water bodies. Care should be taken to ensure these facilities do not overflow during storm events.

g. Concrete Grooving/Grinding Slurry - Do not discharge slurry to a waterbody or storm drain. Slurry may be applied on foreslopes or removed from the project.

- h. Vehicle and Equipment Storage and Maintenance Areas Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onsite fuels and proper disposal of used engine oil or other fluids on site. Employ washing practices that prevent contamination of surface and ground water from wash water. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
- i. Litter Management Ensure employees properly dispose of litter. Minimize exposure of trash if exposure to precipitation or storm water would result in a discharge of pollutants.

  j. Dewatering - Properly treat water to remove suspended sediment before it re-enters a waterbody or discharges off-site.
- Measures are also to be taken to prevent scour erosion at dewatering discharge point.
- 3. APPROVED STATE OR LOCAL PLANS

During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at

110-12 10-20-20

#### POLLUTION PREVENTION PLAN

#### IV. MAINTENANCE PROCEDURES

The Contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their

#### V. INSPECTION REQUIREMENTS

- A. Inspections shall be made jointly by the Contractor and the Contracting Authority's inspector at least once every seven calendar days. Storm water site inspections will include:
  - 1. Date of the inspection.
  - 2. Summary of the scope of the inspection.
  - 3. Name and qualifications of the personnel making the inspection.
  - 5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
    Major observations related to the implementation of the PPP.

  - 7. Identification of corrective actions required to maintain or modify erosion and sediment control measures.
- B. Include storm water site inspection reports in the Amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

#### VI. NON-STORM WATER DISCHARGES

This includes subsurface drains (i.e. longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of headwalls or blocks, Class A stone, erosion stone or other appropriate materials.

This also includes uncontaminated groundwater from dewatering operations, which will be controlled as discussed in Section III of the

#### VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION

Silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

- A. Base PPP Initial Pollution Prevention Plan.
- B. Amended PPP Base PPP amended during construction. May include Plan Revisions or Contract Modifications for new items, storm water site inspection reports, fieldbook entries made by the inspector, amended PPP site map by the Contractor, ECIP, NOI, co-permittee certifications, and Subcontractor Request Forms. Items amending the PPP are stored electronically and are readily available upon
- request.
  C. Fieldbook Entries This contains the inspector's daily diary and bid item postings.
- D. Controls Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).
- E. Signature Authority Representative authorized to sign various storm water documents.

#### CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature			
Printed or	Typed	Name	
Signature			

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#### POLLUTION PREVENTION PLAN

This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution

This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed during construction, will be readily available for review.

All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The Contractor shall be responsible for compliance and implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.

#### I. ROLES AND RESPONSIBILITES

#### A. Designer:

- 1. Prepares Base PPP included in the project plan.
- Prepares Notice of Intent (NOI) submitted to Iowa DNR.
- 3. Is signature authority on the Base PPP. If consultant designed, signature from Contracting Authority is also required.

#### B. Contractor:

- 1. Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP
- 2. Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications.
- 3. Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications
- 4. Installs and maintains appropriate controls. This work may be subcontracted as documented through Subcontractor Request Forms (Form 830231).
- 5. Supervises and implements good housekeeping practices according to Paragraph III, C, 2.
- 6. Conducts joint required inspections of the site with inspection staff. When Contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the Contractor) is still responsible to review and sign inspection reports.
- 7. Complies with training and certification requirements of Section 2602 of the Standard Specifications.
- 8. Submits amended PPP site map according to Section 2602 of the Standard Specifications.

#### C. Subcontractors:

- 1. Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if: responsible for sediment or erosion controls; involved in land disturbing activities; or performing work that is a source of potential pollution as defined in this PPP. Subcontracted work items are identified in Subcontractor Request Forms (Form 830231). All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
- 2. Implement good housekeeping practices according to Paragraph III, C, 2.

#### D. RCE/Project Engineer:

- 1. Is Project Storm Water Manager.
- 2. Takes actions necessary to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, and directing additional inspections at construction project sites that are experiencing problems with achieving permit compliance
- 3. Orders the taking of measures to cease, correct, prevent, or minimize the consequences of non-compliance with the storm water requirements of the Applicable Permit.
- 4. Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.
- 5. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order or recommend such other actions as necessary to meet storm water requirements.
- 6. Is familiar with the Project PPP and storm water site map.
- 7. Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.
- 8. Is signature authority on Notice of Discontinuation.
- Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231)
- 10. Makes information to determine permit compliance available to the DNR upon their request.

#### F. Inspector:

- 1. Updates PPP through fieldbook entries and storm water site inspection reports if there is a change in design, construction,
- operation, or maintenance which has a significant effect on the discharge of pollutants from the project. Makes information to determine permit compliance available to the DNR upon their request.
- Conducts joint required inspections of the site with the contractor/subcontractor.
- 4. Completes an inspection report after each inspection.
- 5. Is signature authority on storm water inspection reports.

#### II. PROJECT SITE DESCRIPTION

- A. This Pollution Prevention Plan (PPP) is for the construction of a \*Describe Type of Facility\*.
- B. This PPP covers approximately \*Provide # Of Acres\* acres with an estimated \*Provide # of Acres\* acres being disturbed. The portion of the PPP covered by this contract has \*Provide # of Acres\* acres disturbed.
- C. The PPP is located in an area of \*Provide # of Types Of Soil Association\* soil association (\*Provide Soil Association Type or\* \*Types\*). The estimated weighted average runoff coefficient number for this PPP after completion will be \*Provide runoff coefficient Number\*.
- D. Storm Water Site Map Multiple sources of information comprise the base storm water site map including:
  1. Drainage Patterns Plan and Profile sheets and Situation plans.

  - Proposed Slopes Cross Sections.
  - Areas of Soil Disturbance Construction limits shown on Plan and Profile sheets.
  - . Location of Structural Controls Tabulations in C sheets.
  - 5. Locations of Non-structural Controls Tabulations in C sheets.
  - 6. Locations of Stabilization Practices Generally within construction limits shown on Plan and Profile sheets.
  - Surface Waters (including wetlands) Project Location Map and Plan and Profile sheets.
  - 8. Locations where Storm Water is Discharged Plan and Profile sheets.

#### POLLUTION PREVENTION PLAN

E. The base storm water site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be documented by fieldbook entries and amended PPP site map.

F. Runoff from this work will flow into \*List Outlets for Runoff\*.

A. The Contractor's ECIP specified in Article 2602.03 of the Standard Specifications for accomplishment of storm water controls should clearly describe the intended sequence of major activities, and for each activity define the control measure and the timing during the construction process that the measure will be implemented.

B. Preserve vegetation in areas not needed for construction.

C. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries, amended PPP site map, or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water site inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B of the Standard Specifications.

1. EROSION AND SEDIMENT CONTROLS

- a Stabilization Practices
- 1) Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.
- 2) Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have:
  - a) Permanently ceased on any portion of the site, or b) Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.
- 3) Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above.
- 4) Permanent and Temporary Stabilization practices to be used for this project are located in the Estimated Project Ouantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C sheets. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C sheets.
- 5) Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips.
- 6) Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C sheets. Additional information may be found in Tabulations in the C or T sheets or is referenced in Section 2105 of Standard Specifications.
- b. Structural Practices
- 1) Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water
- from surface when discharging basins, and controls to direct storm water to vegetated areas.

  2) Structural practices to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found in the B sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C sheets.
- c. Storm Water Management

Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C sheets. The installation of these devices may be subject to Section 404 of the Clean Water Act.

2 OTHER CONTROLS

Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive applicable laws, rules or regulations shall apply.

- a. Vehicle Entrances and Exits Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.
- b. Material Delivery, Storage and Use Implement practices to prevent discharge of construction materials during delivery, storage, and use.
- c. Stockpile Management Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.
- d. Waste Disposal Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.
- Spill Prevention and Control Implement chemical spill and leak prevention and response procedures to contain and clean up spills and prevent material discharges to the storm drain system and waters of the state.

  f. Concrete Residuals and Washout Wastes - Waste shall not be discharged to a surface water and is not allowed to adversely
- affect a water of the state. Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located. Designated washout areas should be located at least 50 feet away from storm drains, streams or other water bodies. Care should be taken to ensure these facilities do not overflow during storm events.
- g. Concrete Grooving/Grinding Slurry Do not discharge slurry to a waterbody or storm drain. Slurry may be applied on foreslopes or removed from the project. h. Vehicle and Equipment Storage and Maintenance Areas - Perform on site fueling and maintenance in accordance with all
- environment laws such as proper storage of onsite fuels and proper disposal of used engine oil or other fluids on site. Employ washing practices that prevent contamination of surface and ground water from wash water. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
- i. Litter Management Ensure employees properly dispose of litter. Minimize exposure of trash if exposure to precipitation or storm water would result in a discharge of pollutants.
- Dewatering Properly treat water to remove suspended sediment before it re-enters a waterbody or discharges off-site Measures are also to be taken to prevent scour erosion at dewatering discharge point.
- 3. APPROVED STATE OR LOCAL PLANS

During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at

110-12L 10-20-20

110-12L 10-20-20

#### POLLUTION PREVENTION PLAN

#### IV. MAINTENANCE PROCEDURES

The Contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

#### V. INSPECTION REQUIREMENTS

- A. Inspections shall be made jointly by the Contractor and the Contracting Authority's inspector at least once every seven calendar days. Storm water site inspections will include:
- 1. Date of the inspection.
- 2. Summary of the scope of the inspection.
- Name and qualifications of the personnel making the inspection.
- 5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
- Major observations related to the implementation of the PPP.
- 7. Identification of corrective actions required to maintain or modify erosion and sediment control measures.

  B. Include storm water site inspection reports in the amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

#### VI. NON-STORM WATER DISCHARGES

This includes subsurface drains (i.e. longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of headwalls or blocks, class A stone, erosion stone or other appropriate materials. This also includes uncontaminated groundwater from dewatering operations, which will be controlled as discussed in Section III of the

#### VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION

Silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

- A. Base PPP Initial Pollution Prevention Plan.
- B. Amended PPP Base PPP amended during construcion. May include Plan Revisions or Contract Modifications for new items, storm water site inspection reports, fieldbook entries made by the inspector, amended PPP site map by the Contractor, ECIP, NOI, co-permittee certifications, and Subcontractor Request Forms. Items amending the PPP are stored electronically and are readily available upon
- C. Fieldbook Entries This contains the inspector's daily diary and bid item postings.
- D. Controls Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).
- E. Signature Authority Representative authorized to sign various storm water documents.

#### CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature			
Printed or	Typed	Name	 
Signature			
Printed or	Typed	Name	 

	110-13 04-20-10
Remarks	

DELIVERY AND STOCKPILING
Quantity Units Delivery Location Contact Name & Number

Item Description

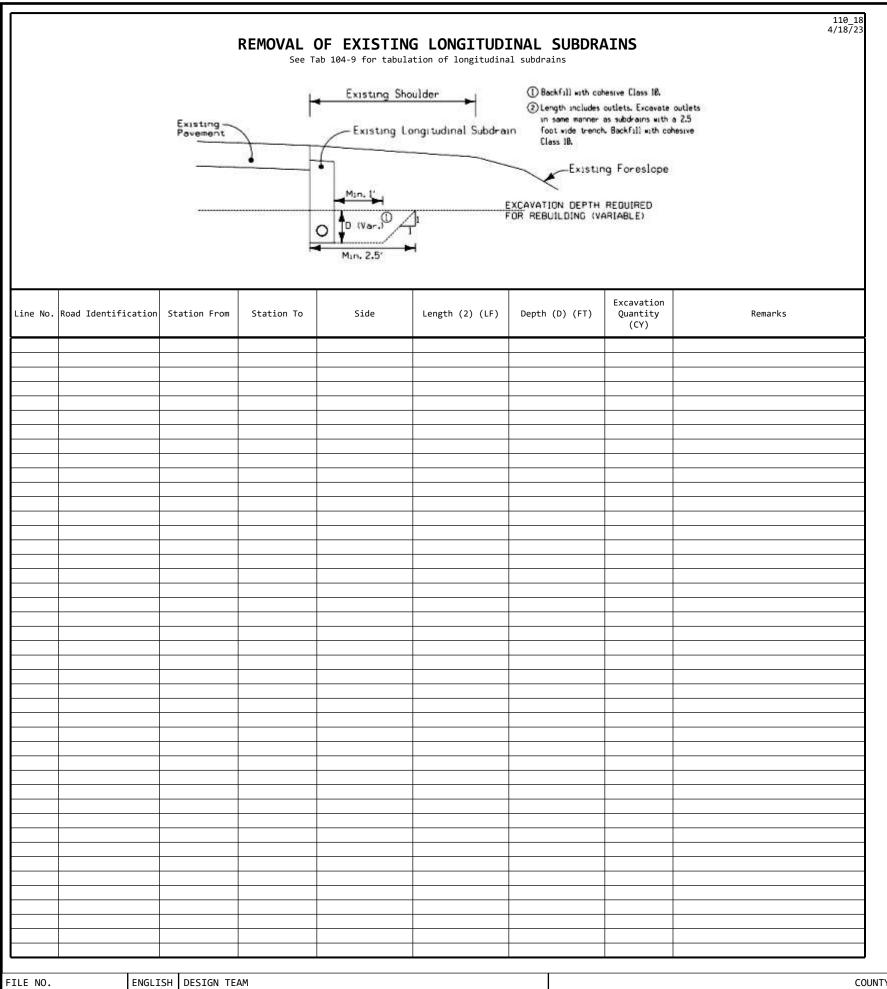
* Not a bid item	SANI	TARY OR STORM SEWI	ER ABAND	ONMENT	OR REMOVAL	110-14 04-16-13
	Sanitary or	Abandonment, Plug Only	Length ≤ 36 inch	of Pipe > 36 inch	Fill Material*	
Location/Description	Storm Sewer	or Abandonment, Plug and Fill or Removal	diameter	diameter	Flowable Mortar or CLSM	Remarks
			LF	LF	CY	

	REMOVAL OF INTAKE	S AND UTIL	110-15 04-16-13 LITY ACCESSES
No.	Location/Description	Туре	Remarks

		REMOVAI	OF LIG	HT POLES A	110-1 04-16-1 ND CONCRETE FOOTINGS
	Location			Removal of	
No.	Station	Offset Left Right	Removal of Light Pole	Concrete Footing for Light Pole	Remarks

																					04-18-17
							CLEAR	ING AN	ND GRU	BBING											
Location Station to Station or		-				Tre	es, Stumps	, and Logs	and Down T	imber Mate	rial Diamet	ters				All Other	Materials	Est	imated Quan	Herbicide	
Ref. Loc. Sign to Ref. Loc. Sign	Direction of Travel		3"-6"	>6"-9"	>9"-12"	>12"-15"	>15"-18"	>18"-24"	>24"-30"	>30"-36"	>36"-42"	>42"-48"	>48"-60"	>60"-72"	>72"	Length	Width	Units	Area	Application	Remarks
or Description												لــــــــــــــــــــــــــــــــــــــ				FT	FT	Units	Acres	Each	

110-17



COUNTY	PROJECT NUMBER	SHEET NUMBER	С	

110\_19 4/18/23 REMOVAL OF EXISTING LONGITUDINAL SUBDRAINS WHEN EXISTING PAVEMENT IS REMOVED See Tab 104-9 for tabulation of longitudinal subdrains ① Backfill with cohesive Class 10. Existing Shoulder (2) Length includes outlets. Excavate outlets in same manner as subdrains with a 5 foot wide trench, Backfill with cohesive Class 10. - Existing Longitudinal Subdrain Existing Foreslope \_\_\_\_\_EXCAVATION DEPTH REQUIRED FOR REBUILDING (VARIABLE) Excavation Roadway Identification Line No. Station From Station To Length (2) (LF) Depth (D) (FT) Quantity Remarks (CY) FILE NO. ENGLISH DESIGN TEAM COUNTY PROJECT NUMBER SHEET NUMBER C

**11**1

### **Miscellaneous Construction Forms**

NO.	DATE	TITLE
111-1	04-17-12	Coordinated Operations
111-2	02-28-89	Revisions
111-23	10-17-17	Listing of Project Revisions
111-25	10-18-11	Index of Tabulations

SECTION

112

### **Pavement Construction Forms**

NO.	DATE	TITLE
112-3	04-16-13	Railroad Approach Sections
112-4	10-21-14	Curbs and Raised Islands
112-5	10-20-15	Concrete Medians
112-6	04-18-17	Bridge Approach Section
112-7	10-19-10	Rumble Strip Panels
112-8	04-15-14	Median Crossovers
112-9	10-20-20	Shoulders
112-10	10-20-20	Milled Rumble Strips

111-01 04-17-12

### **COORDINATED OPERATIONS**

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work

TA	BULATION OF	REVISIONS	111-2 02-28-89
TO:	E:	DATE COUNTY PROJECT NO WORK CLASS nts of the following revised she	ets with revisions as show
Sheet No.		evision Description	

			111-23 10-17-17
		LISTING OF PROJECT REVISIONS	
Date	Sheet No.	Description of Revisions	

		111-25 10-18-11
	INDEX OF TABULATIONS	
Tabulation	Tabulation Title	Sheet No.

112-4 10-21-14

### **CURBS AND RAISED ISLANDS**

Refer to PV-20, PV-102, and 6000s Detail Series.

①Bid Item	i		Refer to	PV-20, PV-102, and 6000S L	Detail Series.		
			Island Interior	Curb and	d Gutter		
Point No.	lo. Station Offset		Area (1)	Curb Type	Gutter Width	Length (1)	Remarks
			SY	euro Type	FT	LF	

						112-5 10-20-15
* Bid item			CONCR	RETE ME	DIANS	
Begin Station	End Station	Туре	Area*	Modified Subbase CY	Special Backfill CY	Remarks

* Not a bid ite	Landston Assessed Bossessed																			
Bridge Station	Loca		Ahead	Т	Pay	Non-Reinf. Pavement	Single-	Double- Reinf. Pavement	Stan	ndard Road P BR Series Fixed or		* Perforated	Subdrain O	utlet	*Porous	* Class 'A'	* Modified	*Polymer	* Special	Remarks
Bridge Station En	Liid	Deg LEFT	rees RIGHT	Thickness	FT	Area SY	Area	Area	Approach	I I ADUTTING	0   30001 0211 4	STA	Side	Backfill Backfill CY CY		Subbase TON	Grid SY	Backfill TON		

112-6 04-18-17

112-7 10-19-10

### **RUMBLE STRIP PANELS**

Refer to Standard Road Plan PV-10.

l	_ocation		Pav	/ement	Remarks		
Road Ident.	Station	Side	New	Existing	Reliidi KS		

	* Not a bid item												112-8 04-15-14	
* Not a bid it Road Ident.	Location Station	Standard Road Plan	Detour Pavement	Special Backfill	Granular Shoulder	Embankment in Place	Class 10 Excavation	Class 13 Excavation	Removal of Pavement		18" Unclassified Roadway Pipe		Beveled Pipe and Guard	Remarks
		No.	SY	TON	TON	CY	CY	CY	SY	LF	LF	LF	No.	

SHOULDERS

112-9 10-20-20

1 Lane(s) to which the shoulder is adjacent.
(2) See Typ. 7156, 7157, or 7158.
(3) Bid Item.
(4) Applies only for Paved Shoulders constructed on project with existing granular shoulders.
(5) Bid Item. Typ. 7156, 7157, or 7158.
(6) Does not include shrink.

Calculations assume a HMA unit weight (lbs/cf) of 0, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/cf) of 140.	l							
Location Quantities								
Road 9 5 Shoulder Shoulder Paved Shoulder	Earth Shoulder Construction Alternates							
Identification U.E. Station to Station Side Width Width Width Length Government Governme	③ HMA PCC ₽							
FT FT Q FT FT CY 3 TON TON/STA TONS SY 3 SY 3 TON 3 TON/STA TON 3 TON/STA CY 3 TON 3 TON/STA CY 3 TON 3 TON/STA	STA CY 6 CY 6							

112-10 10-20-20

#### MILLED RUMBLE STRIPS

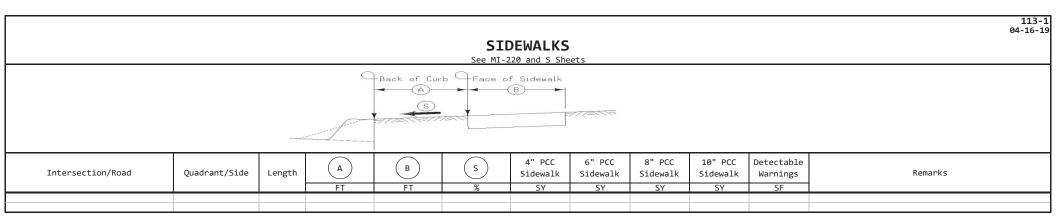
See PV-12 and PV-13

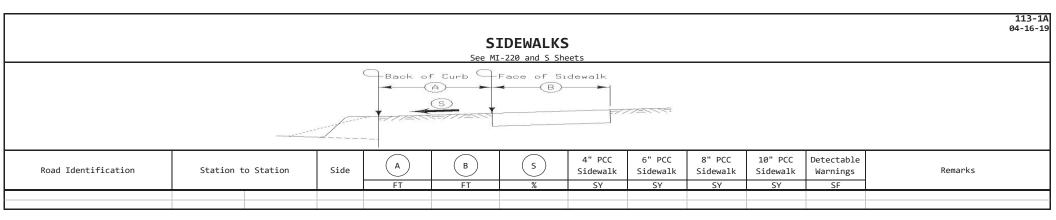
* Calculated at 18" width for	^ Shoulder.										
		Fog Seal*	Effective Shoulder Width								
Road Identification	61.11.1.61.11	Shoulder	Rumble Strip Type	L		ion Length	(Milled Rumble Strip)	PCC Paved HMA Pav	HMA Paved	Granular\	Remarks
	Station to Station	Pavement	(Centerline,		PCC	HMA	Shoulder			Earth	
		Type	Rt or Lt Shoulder)	TN	STA	STA	GΔI	FT	FT	FT	

# 113

## **Sidewalks**

NO.	DATE	TITLE
113-1	04-16-19	Sidewalks
113-1A	04-16-19	Sidewalks
113-2	04-16-13	Pedestrian Path Closures
113-3	10-18-11	Pedestrian Channelizers
113-10	04-18-17	Sidewalk Compliance
113-10		Sidewalk Compliance





PEDESTRIAN	PATH	CLOSUR	113-2 04-16-13 <b>RES</b>						
Refer to TC-601. *Assumes 6 foot wide barricade.									
Closures may need to be removed and re-established.		Г							
Location	Side	Type III Barricades*	Remarks						
		NO.							

			113-3 10-18-11						
PEDESTRIAN CHANNELIZERS									
Station to Station	Length	Remarks							
	LF								

												113-10 04-18-17	
Point to Point	Sidewalk Designation	" PCC		Δ Elevation	Slope	Acceptable Constructed Range		Measured Slope Initials	Remarks	VALUES	FOR INFORMAT		SLOPES
	, and the second	2	FT	FT	%	Pos. or Neg.	Quadrant?	%		Point	Station	Offset	Elevation

						SIDE	WALK C	OMPLIA	NCE					113-10A 04-21-20
* 8	- vale						See S S	heets						
* Does not include  Staking required Refer to tabulati	curb by Contracting Authority per Article 2511.03 of on 113-01 for bid quantities.	the Standar	rd Specific	ations.										
Point to Point	Sidewalk Designation	_" PCC Sidewalk	Distance*	Δ Elevation	Slope	Acceptable Constructed Range	Staking Required on this	Measured Slope	Initials	Remarks	VALU		MATION ONLY: RMINE DESIGNED SI	LOPES
TOTHE CO TOTHE	SIGEMAIN DESIGNACION	2 ·	FT	FT	%	Pos. or Neg.	Quadrant?	%	111111113	Kellul K3	Point	Northing	Easting	Elevation

**SECTION** 

190

# **Signing**

NO.	DATE	TITLE
190-01	10-15-13	Sign Support Structures
190-10	10-15-13	Overhead Bridge Mounted Sign Bracket Assemblies
190-11	10-15-13	Signing Materials for At-Grade Crossovers
190-25	10-21-14	Reference Location Signs and Delineators
190-50	10-15-13	Materials for Type 'B' Signs
190-51	10-15-13	Materials for Type 'A' Signs
190-52	04-18-17	Materials for Overhead Sign Support Structures
190-54	04-18-17	Signing Materials for Expressway At-Grade Intersections
190-61	10-15-13	Existing Signs to be Reinstalled
190-62	10-15-13	Existing Signs to be Removed
190-65	10-15-13	Special Sign Mounting Brackets
190-66	10-21-14	Summary of Type 'A' Signs
190-67	10-16-18	Catwalks and Lighting to be Removed

SECTION

# **Dynamic Message Signing**

192

NO.	DATE	TITLE
192-01	04-18-17	Materials for Steel Roadside DMS Sign Support
		J II

			190-01 10-15-13
		SIGN SUPPORT STRUCTURES	
		The following Bridge Standards apply to construction work on this project.	
Number	Date	Title	

				190-10 10-15-13
VERHEAD BRIDGE MOUNTED	SIGN BRACKET AS	SEMBLIES		
FOR TRAFFIC	BRIDGE LOCATION	2 BRACKET	3 BRACKET	4 BRACKET
		EACH	EACH	EACH
_			FOR TRAFFIC BRIDGE LOCATION 2 BRACKET	FOR TRAFFIC BRIDGE LOCATION

	SIG	NING MATE	RIALS FO	R AT-GRAD	E CROSSOVERS	190-11 10-15-13
STATION LOCATION	TYPICAL SIGNING DETAIL	TYPE 'A' SIGN AREA	WOOD 4" x 4"	POSTS 4" x 6"	TYPE II DELINEATOR - YELLOW	REMARKS
	DETAIL	SF	LF	LF	EACH	

																																	:	190-25 0-21-14
								F	REFE	RENG	CE L	OCAT	TION	SIGN	NS AN	D DEL	INE	ATOF	RS															
											Re	efer to	SI-171	, SI-17	2 and SI	-173.																		
																			Tn	termedi	ate				Deline	eators				0bj	ect Mar	rkers	Instal	lation
Begin Station	End Station	Location			Refere	ence Lo	cation Si	igns				Er	nhanced	Referer	nce Loca	tion Sigr	ns			ence Lo Signs		Тур	e I	Туре	IA	Тур	e II	Туре	e III	Type 1	Type 2	Type 3	Туре	Offset
			D10-1	D10-2	D10-3	D10-5	D10-6 D	010-7	D10-8	D10-9	D10-1A	D10-2	A D10-3	A D10-5A	A D10-6A	D10-7A D	10-8A	D10-9A	D10-1D	D10-2D	D10-30	White	Yellow	White '	Yellow	White	Yellow	White	Yellow					

																																		190-50 10-15-13
														MAT	ERIA	LS I	FOR	TYP	'E '	B' S	IGN	S												
		9	IGN NUME	BER			SIGN LOCATION		SIGN	SIGN	NEW	W	OOD POS	TS	PI	ERFORATI	FD SOUA	ARE STI	FFI TUB	3F		W8x21		STEEL BR	EAKAWA		2x26			II	NSTALLA <sup>*</sup>	TION	SEE	
NUMBER	ROUTE	COLINE	EXIT	Road ID	SEQ.	DIR OF TRAVEL		FAB INFO	WIDTH	HEIGHT	AREA		4 x 6	R		м			ANCHOR		L	М	R	FOOTING 2'8" x 7'6"	L	M1	M2	R	FOOTING 2'8" x 9'	TYPE	DIM 'X	'DIM 'Y'	. SIGNING	REMARKS
	ROUTE	COUNTY	NUMBER				MILEPOST		FT	FT	SF	FT	FT	FT	FT	FT	R FT				FT	FT	FT	EACH	FT	FT	FT	FT	EACH	TYPE	FT	FT	NOTES	
																																T		
																															-		+	
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																							190-51 10-15-13
									MAT	ERIAL	S FOR	TYPE	'A'	SIGNS	1								
TYPE A SIGNING	DIR OF	SIGN LOCATION	b	WOOD POSTS	5		PERFO	)RATED SQU	JARE STEEL	TUBE			POST			TYP	PE A SIGN MO	UNTING BRAC	KETS			INSTALLATION	
TYPICALS	TRAVEL	STATION	NO. OF POSTS	LEG 1	LEG 2	LEG 1	LEG 2	LEG 3	CONC	ANCHOR	CLEDDACE	NO. OF POSTS	LENGTH	ANCHORS	ONE POST BRACKET	TWO POST	AUXILIARY	Н	F	(F1)	TYPE	DIM 'X' FT SEE SIGNING NOTES	REMARKS
				FI	FI	FI	FI	FI	CONC	SOIL	SLIPBASE		FI	EACH									
-					_											-							

															190-52 04-18-17
				M/	TERIAL	S FOR	OVERHEA	D SIGN	SUPPORT	STRUC	ΓURES				
		1004	ATTON						INSIDE	OUTSIDE	ADDITIONAL	STEM HETGHT		OUNDATION QUANTITIE	S
<u> </u>	LOCATION  REFERENCE STATE PLAN COORDINATES DIRECT					SPAN	STRUCTURE	SIGN TRUSS STANDARD	FOUNDATION	FOUNDATION	'1	L'		REINFORCING EPOXY-	STRUCTURAL
ROADWAY	REFERENCE	STATION	STATE PLAN	COORDINATES	DIRECTION	LENGTH	DESIGNATION	SERIES	OFFSET	OFFSET	INSIDE	OUTSIDE	(CLASS 20)	COATED STEEL	CONCRETE
	LOCATION SIGN		NORTH	SOUTH	OF TRAVEL				FT	FT	FT	FT	CY	LB	CY

					SIGNI	NG MATER	RIALS	FOR E	XPRES	SWAY	AT-GF	RADE ]	INTERS	SECTIO	)NS							190-54 04-18-17
NO.	COUNTY	JURISDICTION	ROUTE 1	ROUTE 2	REFERENCE LOCATION SIGN	STATION	TYPICAL	R1-1B	R1-2	R5-1A	SI R6-1A	IGNS R6-1C	R6-3B	R6-3C	OM-1	TYPE	20-FT	IGTH 24-FT	PSST Post Anchor	SPECIAL MOUNTING BRACKETS	STOP ISLANDS PRESENT	REMARKS
					SIGN												EACH	EACH	EACH	DIVACKETS	TRESENT	

									190-61 10-15-13
		<b>EXISTING S</b>	IGNS T	O BE R	EINSTA	LLED			
DIRI	RECTION	LOCATION STATION	NUMBER	SQUARE	WOOD	POSTS	INSTAL	LATION	SEE SIGNING
OF T	TRAVEL	LOCATION STATION	OF POSTS	TUBE STEEL POSTS	4" x 4" LF	4" x 6" LF	TYPE	DIM 'X'	NOTES

		E	XISTI	NG SI	GNS T	O BE	REMOVE	D		190-62 10-15-13
SIGN NUMBER OR DESCRIPTION	LOCATION STATION	DIRECTION OF TRAVEL	TYPE 'A' SIGN ASSEMBLY  RA  EACH	TYPE 'B' SIGN ASSEMBLY  RB  EACH	EXISTIN	REINSTALL IG SIGNS  TYPE 'B'  RR  EACH	CONCRETE FOUNDATION RF	SUPPORT STRUCTURE & FOUNDATION RS	APPLICABLE SIGNING NOTES	REMARKS

190-65 10-15-13

## SPECIAL SIGN MOUNTING BRACKETS

BRACKET TYPE	QUANTITY
BRACKET TIPE	EACH

190-66 10-21-14

## SUMMARY OF TYPE 'A' SIGNS

Sign Number	Quantity	Size	Total Sign Area
Sign Number	EACH	IN	SF

		CA	ΓWALKS AND	I TGUTTN	NG TO BE	DEMOVE	n	190-67 10-16-18
STRUCTURE		CA	LOCATI		NG TO BE	KLMOVL	REMOVAL OF	
NO.	ROUTE	COUNTY	STATION	REFERENCE LOCATION SIGN	DIRECTION OF TRAVEL	ROAD ID	CATWALK AND LIGHTING EACH	REMARKS

												192-1 04-18-17
				MATER	CALS FOR	STEEL	ROADSIDE	DMS SIGN	SUPPOR	Г		
DMS		LOCATI	ON		HORIZONTAL OFFSET TO	SKEW ANGLE	OFFSETS TO I	NEAR CORNERS OTING	LENGTH OF		FOUNDATION QUANTITIES	
NUMBER/NAME	ROUTE	STATION	REFERENCE LOCATION SIGN	DIRECTION OF	CENTER OF	SKLW ANGLE	Y1	Y2	POST	EXCAVATION (CLASS 20)	REINFORCING- EPOXY-COATED STEEL	STRUCTURAL CONCRETE
			LUCATION SIGN	TRAVEL	POST	DEGREES	FT	FT	FT	CY	LB	CY