LONGITUDE: 81°05′48″ - MUMFORD RD

ENGINEERS SEAL:

FOR ALL PART 1 SHEETS EXCEPT THOSE NOTED

STATE OF OXIO

Jacob W.

Barbour E-77306

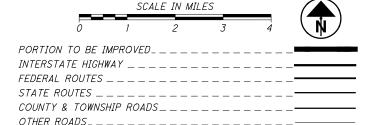
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ENGINEERS SEAL:

FOR PART 1 SHEETS: 7-8. 10, 17, 22-23, 43-46, 200-267, 294, 314-316,

318, 320, 323-329

SIGNED: Just W Ban DATE: 7/15/2020



DESIGN DESIGNATION

SEE SCHEMATIC PLANS

DESIGN EXCEPTIONS

LANE WIDTH, SHOULDER WIDTH, HORIZONTAL CURVE RADIUS, SSD (CREST VERTICAL)

APPROVAL DATE - 8/18/2020



PLAN PREPARED BY:



STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

GEA-COUNTY-WIDE SAFETY PROJECTS PART 1

GEAUGA COUNTY, OHIO

FOR PART 2, SEE GEA-87-19.75 FOR PART 3, SEE GEA-608-3.09

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PARTS 1, 2 AND 3

			STANDAR	RD CONSTR	UCTION D	PRAWINGS			PLEMENTAL PIFICATIONS	SPECIAL PROVISIONS
BP-3.1	01/17/20	DM-4.3	1/15/16	HW-2.1	7/20/18	TC-41.30	10/18/13	800-2	2020 7/17/20	WATERWAY
BP-3.2	1/18/19	DM-4.4	1/15/16	HW-2.2	7/20/18	TC-41.40	10/18/13	809	1/17/20	PERMITS
						TC-42.10	10/18/13	821	4/20/12	CONDITIONS
CB-1.1	7/19/19	BP-4.1	7/19/13	MT-97.10	4/19/19	TC-42.20	10/18/13	825	1/17/20	10/05/2020
CB-1.2	1/15/16	BP-5.1	1/18/19	MT-97.11	1/20/17	TC-52.10	10/18/13	832	10/19/18	
CB-2.1	7/20/18			MT-97.12	1/20/17	TC-52.20	7/20/18	836	1/19/18	
CB-2.2	7/20/18	MGS-1.1	1/19/18	MT-99.20	4/19/19	TC-61.30	7/19/19	875	1/18/19	
CB-2.3	1/15/16	MGS-2.1	1/19/18	MT-101.60	1/17/20	TC-65.10	1/17/14	921	4/20/12	
CB-4.2	1/18/13			MT-101.70	1/17/20	TC-65.11	7/21/17			
		MGS-4.2	7/19/13	MT-101.75	1/17/20	TC-71.10	1/19/18			
MH-1.2	1/15/16	MGS-4.3	1/18/13	MT-101.90	7/21/17	TC-81.22	4/17/20			
		MGS-5.3	7/15/16	MT-105.10	1/17/20	TC-85.10	4/17/20			
DM-1.1	7/21/17			MT-120.00	1/19/18					
DM-1.2	1/18/13	RM-1.1	7/18/14			RM-4.1	1/17/20			
DM-3.1	1/18/13	RM-4.2	4/17/20	TC-21.21	4/17/20					
DM-4 2	7/20/12	RM-7 1	7/18/14	TC-41 20	10/18/13					

PROJECT DESCRIPTION

CONSTRUCT SAFETY IMPROVEMENTS FOR MOTORIZED VEHICLES, AMISH BUGGIES AND PEDESTRIANS. INCLUDES INCREASED SHOULDER WIDTHS, INSTALLATION OF ADVANCED DETECTION SYSTEMS, CONFLICT WARNING SYSTEMS WITH FLASHING BEACONS, SCHOOL ZONE SIGNS, PEDESTRIAN WARNING SIGNS/BEACONS AND NEW PAVEMENT MARKINGS ALONG VARIOUS ROADWAYS IN GEAUGA COUNTY, INCLUDES RECONSTRUCTION OF NEWCOMB ROAD AND NASH ROAD.

PROJECT EARTH DISTURBED AREA: ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.63 ACRES NOTICE OF INTENT EARTH DISTURBED AREA: 29.88 ACRES

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO. DEPARTMENT OF TRANSPORTATION. INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

'I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE PART TIME CLOSING OF THE HIGHWAY TO TRAFFIC, AS NOTED ON SHEETS 16 - 17 . DURING WHICH TIME DETOURS WILL BE PROVIDED AS SHOWN HEREIN. PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED STRICT DEPUTY DIRECTOR

APPROVED_ DATFDIRECTOR, DEPARTMENT OF TRANSPORTATION

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ITEM SPECIAL - PIPE CLEANOUT
THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM DRAINAGE CONDUITS TO REMAIN AT THE DIRECTION OF THE ENGINEER. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK TO BE USED AT THE DIRECTION OF THE ENGINEER:

SPECIAL, PIPE CLEANOUT, 24" AND UNDER 100 FT. SPECIAL, PIPE CLEANOUT, 27" TO 48" 100 FT. SPECIAL, PIPE CLEANOUT, OVER 48" 100 FT.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	7,502 CU. YD.
659. SEEDING AND MULCHING	67.586 SQ. YD.
659, REPAIR SEEDING AND MULCHING	3,379 SQ. YD.
659. COMMERCIAL FERTILIZER	9.13 TON
659, LIME	13.96 ACRES
659. WATER	365 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

POST CONSTRUCTION STORM WATER TREATMENT
THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT
PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 (NEWCOMB ROAD, MUMFORD ROAD) OR ITEM 836 (SR 168) AS SPECIFIED IN THE PLANS.

VEGETATED FILTER STRIP

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE WITH VEGETATED FILTER

ITEM 670, SLOPE EROSION PROTECTION MAT, TYPE A 202

GEAUGA COUNTY GENERAL NOTES (APPLICABLE TO MUMFORD ROAD, NEWCOMB ROAD AND NASH ROAD)

ALL WORK ON THIS PROJECT SHALL AT ALL TIMES BE SUBJECT TO THE DIRECT INSPECTION OF THE GEAUGA COUNTY ENGINEER OR AUTHORIZED REPRESENTATIVE OF THE ENGINEER.

ALL CONSTRUCTION AND MATERIALS INCLUDED IN THIS PROJECT SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF OHIO DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS UNLESS SUPERCEDED BY THE MODIFICATIONS TO THE OHIO DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS FOR GEAUGA COUNTY AND THE STANDARD SPECIFICATIONS AND PROCEDURES FOR THE DESIGN AND CONSTRUCTION OF SUBDIVISION ROADS IN GEAUGA COUNTY.

THE STATIONING AND CENTERLINE INFORMATION SHOWN ON THE DRAWINGS ARE FOR CONSTRUCTION PURPOSES ONLY AND ARE NOT TO BE USED FOR RECORD PURPOSES.

ALL QUANTITIES LISTED ARE AN ESTIMATE FOR BIDDING PURPOSES. ACTUAL FINAL QUANTITIES MAY BE MORE OR LESS AS DEEMED NECESSARY BY THE ENGINEER FOR PROPER

THE BEDDING FOR THE TYPE "A" CULVERTS SHALL BE CLASS "B" AND THE SIZE NO. 57 AGGREGATE SHALL BE INSTALLED TO A DEPTH OF AT LEAST ONE-HALF THE DIAMETER OF THE CULVERT. ON MUMFORD ROAD, BACKFILL FOR THE REMAINING TRENCH SHALL LSM TYPE 100. ON NEWCOMB ROAD, BACKFILL FOR THE REMAINING TRENCH SHALL LSM TYPE 100 OR 304
AGGREGATE TAMPED OR COMPACTED EVERY 6 INCHES. RECYCLED
CONCRETE, SLAG, OR SAND IS NOT ALLOWED.

THE ROADWAY SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH O.D.O.T. ITEM 203 - ROADWAY EXCAVATION AND EMBANKMENT. SUBGRADE SHALL BE PROOF ROLLED IN ACCORDANCE WITH ITEM 204

SOIL STABILIZATION PARAMETERS SHALL BE APPROVED BY THE GEAUGA COUNTY ENGINEER PRIOR TO THE STABILIZING OF THE

A PROFESSIONAL GEOTECHNICAL ENGINEER SHALL BE REQUIRED FOR SOIL BORINGS, SOIL ANALYSIS, AND SOIL COMPACTION WHERE THE GEAUGA COUNTY ENGINEER DEEMS NECESSARY.

GUARDRAIL LOCATIONS MAY BE ADJUSTED IN THE FIELD DURING CONSTRUCTION BY THE GEAUGA COUNTY ENGINEER.

MONUMENT ASSEMBLIES SHALL BE BOXLESS PAVEMENT MONUMENTS PER THE GEAUGA COUNTY ENGINEER'S STANDARD CONSTRUCTION DRAWINGS. BOXLESS MONUMENTS SHALL BE INSTALLED AFTER FINAL SURFACE COURSE OF ASPHALT CONCRETE.

ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) MAY BE PLACED, WITHOUT ITEM 407, IMMEDIATELY AFTER ITEM 301 ASPHALT CONCRETE BASE UNLESS SURFACE OF IJEM 301/15 NOT ACCEPTABLE TO THE ENGINEER

ITEM 617, COMPACTED AGGREGATE, SHALL BE PLACED AFTER SURFACE COURSE.

EXCELSION MATTING SHALL BE USED IN ALL BITCHES. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE IN DITCHES. ITEM 670, DITCH EROSION PROTECTION MAT, TYPE G 36,000 SQ YD

ITEM 441 ASPHALT CONCRETE SURFACE COURSE. TYPE 1. (448), PG64-22, AS PER PLAN IN ADDITION TO THE REQUIREMENTS OF ITEM 441 THE

FOLLOWING SHALL APPLY.

PRIOR TO OR AT THE PRE-CONSTRUCTION CONFERENCE, THE CONTRACTOR SHALL SUBMIT A JOB MIX FORMULA IN A FORMAT APPROVED BY THE ENGINEER SHOWING THE DESIGN OF ALL MIXES. SOURCE AND GRADATION OF AGGREGATE AND PROPOSED ASPHALT CONTENT FOR THE ASPHALT COURSE OR COURSES PROPOSED TO BE USED FOR A PROJECT. THE PROPOSED SOURCE (ASPHALT PLANT) OF THE ASPHALT MIX MUST HAVE AN APPROVED QUALITY CONTROL PROGRAM ON FILE WITH THE GEAUGA COUNTY ENGINEER.

GRAVEL SHALL NOT BE PERMITTED IN ANY ODOT ITEM 441 SURFACE COURSES. AGGREGATE GRADATION FOR ALL MIXES SHALL MEET ODOT C&MS REQUIREMENTS.

NO MORE THAN 10% RECLAIMED ASPHALT CONCRETE PAVEMENT (RAP) (MEASURED BY DRY WEIGHT OF MIX) SHALL BE ALLOWED IN THE SURFACE COURSE. RECLAIMED ASPHALT SHINGLES (RAS) ARE NOT PERMITTED.

POLYMER MODIFIED SURFACE COURSES SHALL NOT BE PLACED WHEN THE AIR TEMPERATURE IS LESS THAN 60° F. BITUMINOUS PLANT MIXTURES SHALL NOT BE PLACED WHEN THE AIR TEMPERATURE IS BELOW THE MINIMUM ESTABLISHED AS FOLLOWS:

COURSE THICKNESS AIR TEMPERATURE 3.0 INCHES AND OVER 40° F 1.5 TO 2.9 INCHES 45° F 1.0 TO 1.4 INCHES LESS THAN 1.0 INCHES 60° F

PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, VBL WIDTH, VBL DEPTH IN ADDITION TO THE REQUIREMENTS OF ITEM 254. THE

FOLLOWING REQUIREMENTS APPLY TO THIS WORK.

BUGGY TRAFFIC IS KNOWN TO CAUSE RUTTING NEAR THE EDGE OF PAVEMENT LANES. PRIOR TO CONSTRUCTION, THE CONTRACTOR AND THE ENGINEER SHALL MEET IN THE FIELD TO IDENTIFY LOCATIONS ON MUMFORD ROAD THAT REQUIRE SPOT MILLING. PAVEMENT SHALL BE MILLED WITHIN THE LIMITS IDENTIFIED AND TO SUFFICIENT DEPTH TO PROVIDE A CONSISTENT BAVEMENT CROSS SLOPE VARIABLE DEPTH. CONSISTENT PAVEMENT CROSS SLOPE. VARIABLE DEPTH ASPHALT SHALL BE PLACED UNDER A SEPARATE PAY ITEM.

ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), AS PER PLAN (VARIABLE DEPTH)

(448), AS PER PLAN (VARIABLE DEPTH)
IN ADDITION TO THE REQUIREMENTS OF ITEM 441 THE
FOLLOWING SHALL APPLY. CONTRACTOR SHALL PLACE
VARIABLE DEPTH INTERMEDIATE COURSE IN THE LOCATIONS
IDENTIFIED FOR VARIABLE WIDTH, VARIABLE DEPTH PAVEMENT
PLANING AND/OR AT OTHER LOCATIONS IDENTIFIED IN THE
FIELD AT THE DIRECTION OF THE ENGINEER. VARIABLE DEPTH
INTERMEDIATE COURSE SHALL BE PLACED IN A MANNER TO
PROVIDE A CONSISTENT PAVEMENT CROSS SLOPE READY TO
PROVIDE A SUPPLIES OF COURSE RECEIVE A SURFACE COURSE.

IN ADDITION TO THE REQUIREMENTS OF ITEM 202, THE FOLLOWING REQUIREMENTS APPLY. PRIOR TO REMOVAL, THE CONTRACTOR SHALL OFFER TO RETURN THE ITEMS TO THE ADJACENT PROPERTY OWNER, ITEMS NOT ACCEPTED BY THE OWNER SHALL BE REMOVED AND PROPERLY DISPOSED. PAYMENT . BE MADE AT THE UNIT PRICE BID AND SHALL BE CONSIDERED FULL COMPENSATION FOR THE LABOR, MATERIAL EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK

ITEM 202, REMOVAL MISC.: 24 INCH ROCK AND OVER, PER EACH ITEM 202, REMOVAL MISC .: WOOD POST REMOVED, PER EACH

EARTHWORK CALCULATIONS

EXCAVATION AND EMBANKMENT QUANTITIES WERE DETERMINED FROM THE TOP OF EXISTING GROUND SURFACE TO THE BOTTOM OF THE PAVEMENT BASE/TOP OF SUBGRADE OR THE FINISHED OF THE PAVEMENT BASE/TOP OF SUBGRADE OR THE FINISHED GRADE. SOIL STABILIZATION IS NOT INCLUDED IN THE EARTHWORK QUANTITIES AND IS PAID FOR SEPARATELY.

ADJUSTMENTS FOR TOPSOIL STRIPPING / PLACEMENT HAVE NOT BEEN MADE. CONTRACTOR MAY ELECT TO STRIP AND STOCKPILE TOPSOIL FOR REUSE. NO ADDITIONAL PAYMENT SHALL BE MADE, BEYOND THAT MADE FOR ITEM 659 TOPSOIL, FOR STRIPPING, STOCKPILING, FURNISHING, SPREADING, PLACING, HAULING AND/OR DISPOSING TOPSOIL. EXCAVATION FOR OTHER MISCELLANDERS (F.C. DRAINACE FOR OTHER MISCELLANEOUS ITEMS (E.G. DRAINAGE STRUCTURES, PIPES, ETC.) IS INCLUDED IN THE COST OF THAT ITEM UNLESS OTHERWISE NOTED IN THE PLANS.

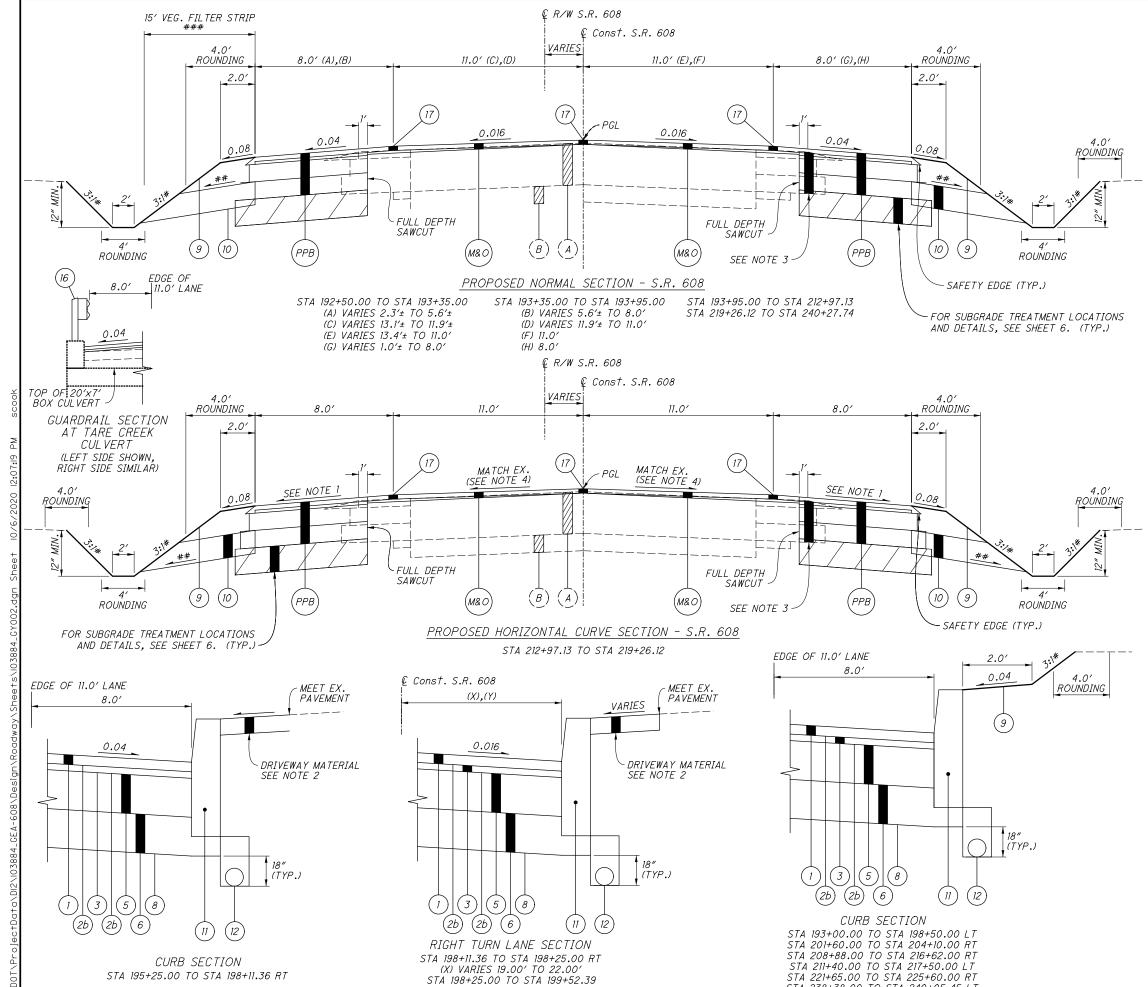
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			6														6	606	26150	6	EACH	ANCHOR ASSEMBLY, MGS TYPE E (NCHRP 350)	
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																		PAVEMENT		_
											10,159	10,159		254	01000	10,159	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1-1/2"		_
											2,187	2,187		301	46000	2,187	CY	ASPHALT CONCRETE BASE, PG64-22		_
			501								2,284	2,785		304	20000	2,785	CY	AGGREGATE BASE		-
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\dashv						-		 	-	-	2,660	2,660		407	20000	2,660	GAL	NON-TRACKING TACK COAT		_
			470								(170		408	10006	178		PRIMECOATY		-
\dashv		`	y 91 スプ	<u> </u>				1	-	-	950 (91 950	/)	441	50000	91 950		ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), ASPER PLAM, PG70-22M	7	-
			24								621	645		441	50300	\ 545\	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)		_
-		11										11		441	50701	11	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN	6	-
			100									100		452	10010	100		6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P		_
\dashv			189									189		452	12010	189	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P		_
											237	237		609	26000	237	FT	CURB, TYPE 6		_
\dashv	0.96											0.96		618	43000	0.96	MILE	RUMBLE STRIPES, CENTER LINE (ASPHALT CONCRETE)		-
	65 60											65		621 621	00100 54000	65 60	EACH EACH	RPM RAISED PAVEMENT MARKER REMOVED		_
1	00											60		021	34000	00	EACH	RAISED FAVEIWENT WARREN REWOVED		-
	5,090											5,090		874	20000	5,090	FT	LONGITUDINAL JOINT PREPARATION		_
																		TRAFFIC CONTROL		_
		10						<u> </u>	-			10		626	00102	10	EACH	BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL)		_
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\dashv							1		51.25	107.5		158.75 1		630 630	80100 80500	158.75 1	SF EACH	SIGN, FLAT SHEET SIGN, DOUBLE FACED, STREET NAME		_
士									2			2		630	80510	2	EACH	SIGN, STREET NAME		-
\dashv					1			 	15 11	13 16		28 27		630 630	84900 85001	28 27		REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL REMOVAL OF GROUND MOUNTED SIGN AND STORAGE, AS PER PLAN	88	-
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\dashv									2	<u> </u>		2		630	86271	2	EACH	REMOVAL OF GROUND MOUNTED PIPE SUPPORT AND STORAGE, AS PER PLAN	88	_
\dashv					1			1	7 2	1		8 2		630 630	87511 97700	8 2	EACH EACH	REMOVAL OF POLE MOUNTED SIGN AND STORAGE, AS PER PLAN SIGNING, MISC.: REMOVAL OF GROUND MOUNTED SIGN, SOLAR PANEL AND DELIVERY	88 88	_
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\dashv								1.94 0.96				1.94 0.96		646 646	10010 10200	1.94 0.96		EDGE LINE, 6" CENTER LINE (SOLID DOUBLE)		_
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- 1								1]									_ '

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(Y) 22.00'

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LEGEND

SEE SHEET 5 FOR PROPOSED PAVEMENT BUILDUP (PPB)
AND PROPOSED PAVEMENT PLANING & LEVELING DETAILS (M&O)

EXISTING LEGEND:

- (A) 12" TO 14"± ASPHALT CONCRETE
- (B) 6"± ASPHALT CONCRETE

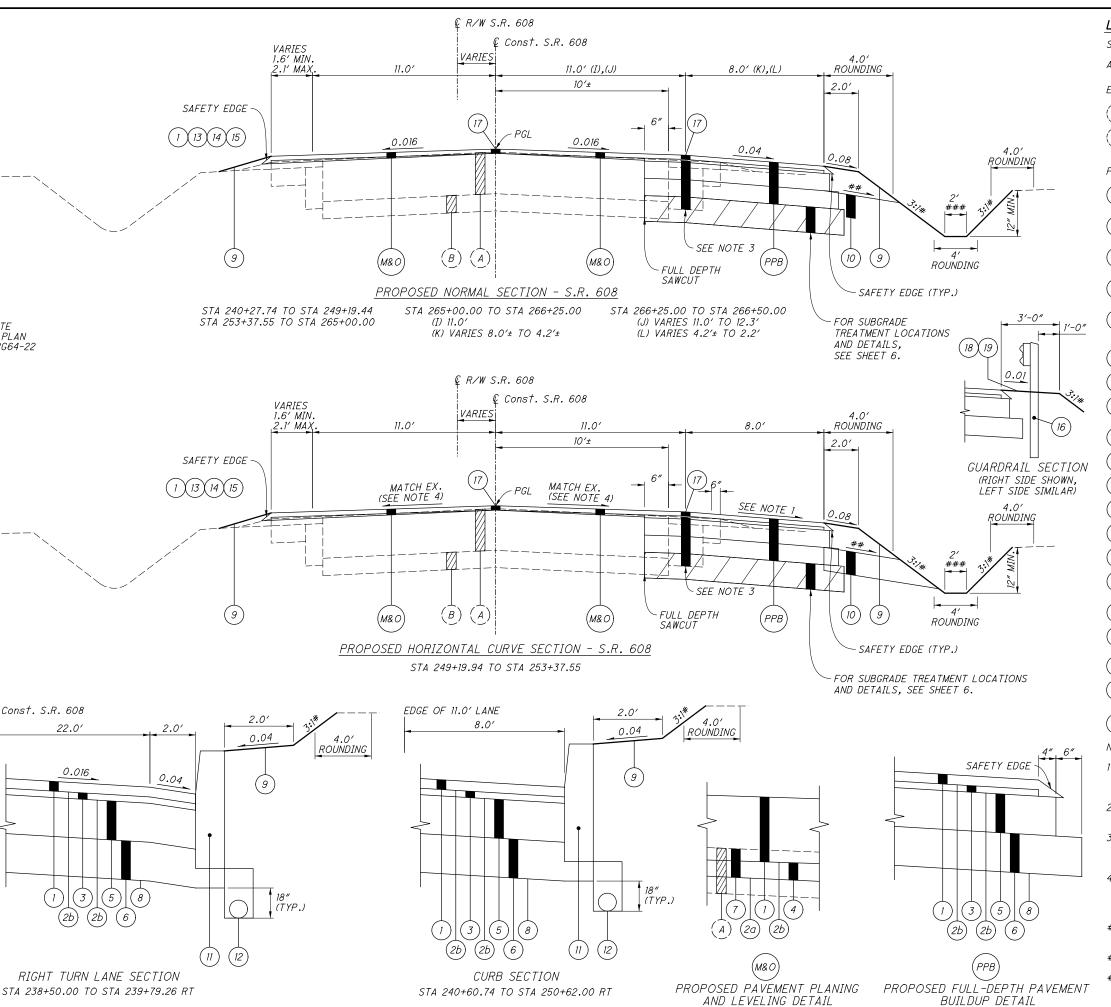
PROPOSED LEGEND:

- 1) ITEM 441 1 ½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M
- (2a) ITEM 407 NON-TRACKING TACK COAT (MILLED ASPHALT SURFACE)
- (2b) ITEM 407 NON-TRACKING TACK COAT (NEW ASPHALT SURFACE)
- 3) ITEM 441 1" ASPHALT CONCRETE INTERMEDIATE COURSE (YPE 1) (448), PG64-22
- 4) ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1) (448), AS PER PLAN (VARIABLE DEPTH, 6.5° MAX.), PG64-22 (PLACE IN MULTIPLE LIFTS
- (5) ITEM 301 6" ASPHALT CONCRETE BASE, PG64-22
- (6) ITEM 304 6" AGGREGATE BASE
- (7) ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE
- $(\ 8\)$ ITEM 204 SUBGRADE COMPACTION
- 9) ITEM 659 SEEDING AND MULCHING
- (10) ITEM 605 AGGREGATE DRAINS
- (11) ITEM 609 CURB, TYPE 6
- (12) ITEM 605 4" BASE PIPE UNDERDRAINS
- (13) ITEM 209 LINEAR GRADING, AS PER PLAN
- (14) ITEM 209 PREPARE SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
- (15) ITEM 617 COMPACTED AGGREGATE, AS PER PLAN
- (16) ITEM 606 GUARDRAIL, TYPE MGS OR ITEM 606 GUARDRAIL, TYPE 5
- (17) ITEM 875 LONGITUDINAL JOINT ADHESIVE

NOTES

STA 238+38.00 TO STA 240+05.45 LT

- 1. SHOULDER CROSS SLOPE SHALL MATCH CROSS SLOPE OF ADJACENT TRAVEL LANE OR 0.04, WHICHEVER IS GREATER.
- 2. SEE DRIVEWAY DETAILS FOR PAVEMENT MATERIAL BEHIND CURB.
- 3. FULL DEPTH SAWCUT AND EXISTING PAVEMENT TO BE REMOVED SHALL BE INCLUDED IN ITEM 203 EXCAVATION AS PER CMS 203.04E.
- 4. TRANSITION CROSS SLOPES FROM 0.016 TO MATCH EXISTING AND FROM MATCH EXISTING TO 0.016 OVER 65' BEFORE AND AFTER THE HORIZONTAL CURVES, RESPECTIVELY.
- # SLOPE SHALL BE 3:1 UNLESS SHOWN OTHERWISE ON THE CROSS SECTIONS.
- ## 0.08 SLOPE PREFERRED, 0.04 SLOPE MINIMUM.
- ### VEGETATED FILTER STRIP, 15' WIDTH STA 201+00.00 TO STA 211+40.00



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MEDIATE

S PER PLAN

4X.), PG64-22

€ Const. S.R. 608

22.0'

0.016

(3)

(5)

RIGHT TURN LANE SECTION

2.0'

0.04

LEGEND

SEE BELOW FOR PROPOSED PAVEMENT BUILDUP (PPB)

AND PROPOSED PAVEMENT PLANING & LEVELING DETAILS (M&O)

EXISTING LEGEND:

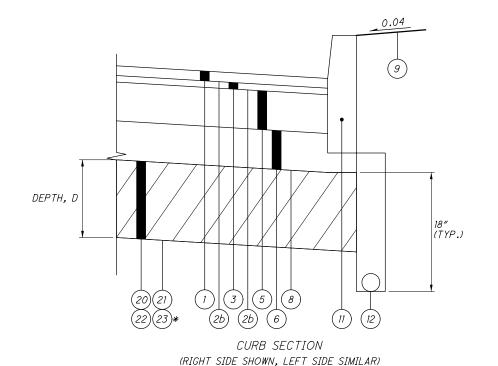
- (A) 12" TO 14"± ASPHALT CONCRETE
- (B)6"± ASPHALT CONCRETE

PROPOSED LEGEND:

- (1) ITEM 441 1½ "ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M
- ITEM 407 NON-TRACKING TACK COAT (MILLED ASPHALT SURFACE)
- ITEM 407 NON-TRACKING TACK COAT (NEW ASPHALT SURFACE)
- (3) ITEM 441 1" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE 1, (448), PG64-22
- (4) ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), AS PER PLAN (VARIABLE DEPTI 6.5" MAX.), PG64-22 (PLACE IN MULTIPLE LIF
- (5) ITEM 301 6" ASPHALT CONCRETE BASE, PG64-22
- ITEM 304 6" AGGREGATE BASE
- ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE
- (8) ITEM 204 SUBGRADE COMPACTION
- ITEM 659 SEEDING AND MULCHING
- (10) ITEM 605 AGGREGATE DRAINS
- (11) ITEM 609 CURB, TYPE 6
- (12) ITEM 605 4" BASE PIPE UNDERDRAINS
- (13) ITEM 209 LINEAR GRADING, AS PER PLAN
- ITEM 209 PREPARE SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
- ITEM 617 COMPACTED AGGREGATE, AS PER PLAN
- ITEM 606 GUARDRAIL, TYPE MGS OR ITEM 606 GUARDRAIL, TYPE 5
- ITEM 875 LONGITUDINAL JOINT ADHESIVE
- ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN, PG 64-22
- (19) ITEM 209 RESHAPING UNDER GUARDRAIL, AS PER PLAN

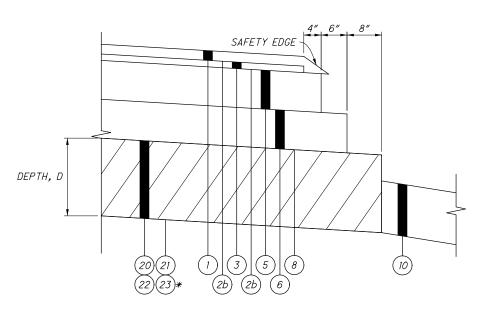
NOTES:

- SHOULDER CROSS SLOPE SHALL MATCH CROSS SLOPE OF ADJACENT TRAVEL LANE OR 0.04, WHICHEVER IS
- 2. SEE DRIVEWAY DETAILS FOR PAVEMENT MATERIAL BEHIND CURB.
- 3. FULL DEPTH SAWCUT AND EXISTING PAVEMENT TO BE REMOVED SHALL BE INCLUDED IN ITEM 203 EXCAVATION AS PER CMS 203.04E.
- 4. TRANSITION CROSS SLOPES FROM 0.016 TO MATCH EXISTING AND FROM MATCH EXISTING TO 0.016 OVER 65' BEFORE AND AFTER THE HORIZONTAL CURVES, RESPECTIVELY.
- # SLOPE SHALL BE 3:1 UNLESS SHOWN OTHERWISE ON THE CROSS SECTIONS.
- ## 0.08 SLOPE PREFERRED, 0.04 SLOPE MINIMUM.
- ### VEGETATED BIOFILTER, 4' WIDTH, STA 250+50 TO STA 257+50, RT.



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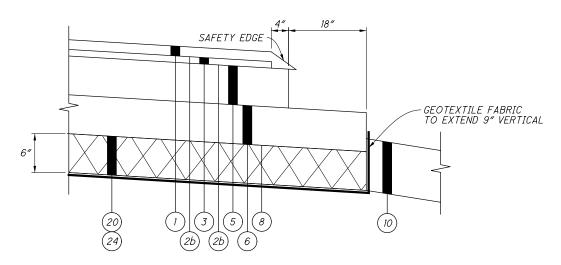
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NON-CURB SECTION
(RIGHT SIDE SHOWN, LEFT SIDE SIMILAR)

UNDERCUT DETAILS

STA 194+50.00 TO STA 209+75.00, BOTH SIDES, D = 12" STA 209+75.00 TO STA 218+00.00, BOTH SIDES, D = 12" STA 218+00.00 TO STA 226+50.00, BOTH SIDES, D = 15" STA 231+25.00 TO STA 237+00.00, BOTH SIDES, D = 12" STA 242+00.00 TO STA 246+00.00, RIGHT SIDE, D = 12" STA 253+75.00 TO STA 258+00.00, RIGHT SIDE, D = 12" STA 258+00.00 TO STA 262+50.00, RIGHT SIDE, D = 12"



GEOCELLULAR CONFINEMENT SYSTEM DETAIL
(RIGHT SIDE SHOWN, LEFT SIDE SIMILAR)

STA 226+50.00 TO STA 231+25.00, BOTH SIDES

LEGEND

SEE SHEET 5 FOR PROPOSED PAVEMENT BUILDUP (PPB)
AND PROPOSED PAVEMENT PLANING & LEVELING DETAILS (M&O)

EXISTING LEGEND:

- (A) 12" TO 14"± ASPHALT CONCRETE
- (B) 6"± ASPHALT CONCRETE

PROPOSED LEGEND:

- 1) ITEM 441 1 ½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M
- (2a) ITEM 407 NON-TRACKING TACK COAT (MILLED ASPHALT SURFACE)
- (NEW ASPHALT SURFACE)
- 3 ITEM 441 1" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE 1, (448), PG64-22
- 4) ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), AS PER PLAN (VARIABLE DEPTH, 6.5" MAX.), PG64-22 (PLACE IN MULTIPLE LIFTS
- (5) ITEM 301 6" ASPHALT CONCRETE BASE, PG64-22
- (6) ITEM 304 6" AGGREGATE BASE
- 7 ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE
- (8) ITEM 204 SUBGRADE COMPACTION
- (9) ITEM 659 SEEDING AND MULCHING
- (10) ITEM 605 AGGREGATE DRAINS
- (11) ITEM 609 CURB, TYPE 6
- (12) ITEM 605 4" BASE PIPE UNDERDRAINS
- (13) ITEM 209 LINEAR GRADING, AS PER PLAN
- 14) ITEM 209 PREPARE SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
- (15) ITEM 617 COMPACTED AGGREGATE, AS PER PLAN
- (16) ITEM 606 GUARDRAIL, TYPE MGS OR ITEM 606 GUARDRAIL, TYPE 5
- (17) ITEM 875 LONGITUDINAL JOINT ADHESIVE
- 18) ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN, PG 64-22
- (19) ITEM 209 RESHAPING UNDER GUARDRAIL, AS PER PLAN
- (20) ITEM 204 EXCAVATION OF SUBGRADE
- (21) ITEM 204 GRANULAR MATERIAL, TYPE B
- (22) ITEM 204 GEOTEXTILE FABRIC
- (23) ITEM 204 GEOGRID
- (24) ITEM SPECIAL GEOCELLULAR CONFINEMENT SYSTEM

G

EROSION CONTROL

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

VEGETATED FILTER STRIP

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THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT, PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

VEGETATED BIOFILTER

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS SPECIFIED IN THE PLANS.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, TOPSOIL, FURNISHED AND PLACED	1789 CU. YD.
659, SEEDING AND MULCHING	16117 SQ. YD.
659, REPAIR SEEDING AND MULCHING	806 SQ. YD.
659, COMMERCIAL FERTILIZER	2.18 TON
659, LIME	3.33 ACRES
659, WATER	87 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES. AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT, QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

DRAINAGE

ITEM 605 - AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT 50 FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT 25 FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE. THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

FARM DRAINS

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE CONSTRUCTION LIMITS BY ITEM 611 - CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 611 - TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY ITEM 611 - TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS. EROSION CONTROL PADS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE.

PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

611 6" CONDUIT, TYPE B	50 FT.
611 6" CONDUIT, TYPE E	50 FT.
611 6" CONDUIT TYPE F	50 FT.

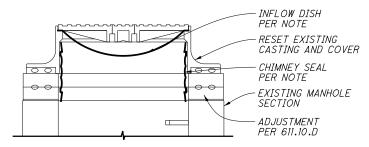
601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER 10 CU. YD.

DRAINAGE

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN

THIS ITEM SHALL CONSIST OF ADJUSTING SANITARY MANHOLES AND VAULTS TO GRADE PER ITEM 611 WITH THE FOLLOWING MODIFICATIONS:

ONCE ADJUSTMENT HAS BEEN COMPLETED PER ITEM 611. INSTALL CHIMNEY SEAL AND INFLOW DISH PER MANUFACTURER PROCEDURES AND RECOMMENDATIONS. ALL EQUIPMENT MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED IN THIS NOTE, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 611, MANHOLE ADJUSTED TO GRADE, AS PER PLAN.



CHIMNEY SEAL SHALL SPAN THE ENTIRE VERTICAL LENGTH OF THE ADJUSTMENT BY CONNECTING THE BOTTOM OF THE FRAME CASTING AND TOP THE MANHOLE CONE. CHIMNEY SEAL SHALL CONSIST OF A RUBBER SLEEVE AND EXPANSION BANDS TO COMPRESS THE SEAL TO THE MANHOLE.

CHIMNEY SEAL SHALL REMAIN FLEXIBLE THROUGHOUT A 50 YEAR DESIGN LIFE. ALLOWING REPEATED VERTICAL MOVEMENT OF THE FRAME OF NOT LESS THAN 2 INCHES AND/OR REPEATED HORIZONTAL MOVEMENT OF NOT LESS THAN 1/2 INCH. THE SLEEVE PORTION OF THE SEAL SHALL BE DOUBLE, TRIPLE OR QUADRUPLE PLEATED WITH A MINIMUM UNEXPANDED VERTICAL HEIGHT OF 8 INCHES, 10 INCHES OR 13 INCHES RESPECTIVELY. THE SLEEVE AND ANY EXTENSIONS SHALL HAVE A MINIMUM THICKNESS OF 3/16 INCHES AND SHALL BE MADE FROM A HIGH QUALITY RUBBER COMPOUND CONFORMING TO THE APPLICABLE MATERIAL REQUIREMENTS OF ASTM C-923, WITH A MINIMUM 1500 PSI TENSILE STRENGTH, A MAXIMUM 18% COMPRESSION SET AND A HARDNESS (DUROMETER) OF 48*5. THE AREA OF THE SEAL OR EXTENSION THAT COMPRESSES AGAINST THE MANHOLE FRAME CASTING AND THE CHIMNEY/CONE SHALL HAVE A SERIES OF SEALING FINS TO FACILITATE A WATERTIGHT SEAL.

EXPANSION BANDS SHALL BE INTEGRALLY FORMED FROM 16 GAUGE STAINLESS STEEL CONFORMING TO THE APPLICABLE MATERIAL REQUIREMENTS OF ASTM C-923, TYPE 304, WITH NO WELDED ATTACHMENTS. THE EXPANSION BANDS SHALL HAVE A MINIMUM ADJUSTMENT RANGE OF 2-1/2 DIAMETER INCHES AND A POSITIVE LOCKING MECHANISM WHICH SECURES THE BAND IN ITS EXPANDED POSITION AFTER TIGHTENING.

INFLOW DISH SHALL BE MANUFACTURED FROM A DURABLE HIGH DENSITY POLYETHYLENE COPOLYMER MATERIAL THAT MEETS ASTM D-1248 CLASS A, CATEGORY 5, TYPE III SPECIFICATION. THIS MATERIAL SHALL HAVE SUPERIOR STRESS CRACK RESISTANCE, COMBINED WITH A HIGH IMPACT STRENGTH AND SHALL HAVE A MINIMUM IMPACT BRITTLENESS TEMPERATURE OF 105° F IN ACCORDANCE WITH ASTM D 746-70. THE DISH SHALL HAVE A TENSILE STRENGTH OF 3700 PSI AND AN ELONGATION FACTOR OF 800% MEETING ALL REQUIREMENTS OF ASTM D 638-71A. THE THICKNESS OF THE DISH SHALL BE A UNIFORM 1/8".

THE DISH SHALL HAVE TWO 3/26" HOLES INSTALLED 180° APART, APPROXIMATELY 1" FROM THE TOP OF THE INSERT, TO ALLOW FOR CONSTANT VENTILATION. THIS "NO VALVE" METHOD OF VENTILATION SHOULD NOT BE AFFECTED BY GRIT ACCUMULATION. NOR HAVE ANY MOVING PARTS SUBJECT TO CORROSION. THE VENTING SYSTEM SHALL NOT ALLOW WATER TO COMPLETELY FILL THE INSERT, WHICH DURING COLD WEATHER COULD FREEZE AND LIFT THE MANHOLE COVER.

THE INFLOW DISH SHALL HAVE A CORROSION RESISTANT NYLON STRAP INSTALLED INTO THE DISH FOR EASY REMOVAL AND RE-INSTALLATION INTO THE MANHOLE FRAME.

PAVEMENT

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES.

ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 21 CU. YDS.

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 6 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

PAVEMENT RESTORATION FOR MONUMENT ASSEMBLY INSTALLATIONS

THE FOLLOWING QUANTITY IS PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF ITEM 623, MONUMENT ASSEMBLIES.

ITEM 301, ASPHALT CONCRETE BASE, PG64-22 3 CU. YDS.

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 6 INCHES AND A WIDTH OF TWO FEET AROUND THE PERIMETER OF THE MONUMENT ASSEMBLIES.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL CONSIST OF A BLEND OF 60% MINIMUM AIR COOLED BLAST FURNACE SLAB (ACBFS) OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE.

ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE. TYPE 1 (448), AS PER PLAN (VARIABLE DEPTH, 6.5" MAX), PG 64-22

THIS MATERIAL SHALL VARY IN LAYER THICKNESS AS INDICATED IN THE TYPICAL SECTIONS. INSTALL IN MULTIPLE LIFTS AS · NECESSARY.....

					SHEET	NUW.	 	٥٢٢٥٢		PART.	.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SE SHE
7-10	22	24	25	112				OFFICE CALCS	03/SAF/PV	04/STR/PV	05/BRO/BR		EXT	TOTAL			N
																DRAINAGE	_
		4.46							4.46			602	20000	4.46	CY	CONCRETE MASONRY	
			4,066						4,066			605	06000	4,066	FT	4" BASE PIPE UNDERDRAINS	
			821						821			605	31100	821	FT	AGGREGATE DRAINS	
		58							58			611	00300	58		4" CONDUIT, TYPE D	
			220						220			611	00410	220	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	_
50									50			611	00900	50	FT	6" CONDUIT, TYPE B	
50									50			611	01400	50		6" CONDUIT, TYPE E	
50									50			611	01500	50		6" CONDUIT, TYPE F	
		8							8			611	02000	8	FT	8" CONDUIT, TYPE C	
		1,849							1,849			611	04400	1,849	FT	12" CONDUIT, TYPE B	
		<u></u>										011	0.4000			IOW COMPLETE TWOSE D	_
		51 856							51 856			611 611	04900 05900	51 856	FT FT	12" CONDUIT, TYPE D 15" CONDUIT, TYPE B	+
		149							149			611	06100	149	FT	IS" CONDUIT, TYPE C	+
		89							89			611	06400	89		15" CONDUIT, TYPE D	_
		245							245			611	07400	245		18" CONDUIT, TYPE B	
		82							82			611	07900	82	FT	18" CONDUIT, TYPE D	
		234							234			611	08900	234		21" CONDUIT, TYPE B	\perp
		40 108							40 108			611 611	09400 10400	40 108	FT FT	21" CONDUIT, TYPE D 24" CONDUIT, TYPE B	_
		51							51			611	10400	51		24" CONDUIT, TYPE C	+
		01							07			OII	70000	07	, ,	27 0010011, 1712 0	+
		224							224			611	16400	224	FT	36" CONDUIT, TYPE B	
		2							2			611	98150	2		CATCH BASIN, NO. 3	
		12							12			611	98180	12		CATCH BASIN, NO. 3A	
		1							1			611	98370	1		CATCH BASIN, NO. 6	_
		2					+		2			611	98470	2	EACH	CATCH BASIN, NO. 2-2B	_
		2							2			611	98540	2	EACH	CATCH BASIN, NO. 2-4	-
		1							1			611	99574	1		MANHOLE, NO. 3	
		2							2			611	99655	2	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	
			9						9			611	99710	9	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																DAVENENT	_
					+			21,303		21,303		254	01000	21,303	SY	PAVEMENT PLANING, ASPHALT CONCRETE	+
24								1,555	1,579	21,505		301	46000	1,579		ASPHALT CONCRETE BASE, PG64-22	1
				145				ĺ	145			301	48000	145		ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)	
				12				1,681	1,693			304	20000	1,693		AGGREGATE BASE	
				79				5,124		5,203		407	20000	5,203	GAL	NON-TRACKING TACK COAT	
								1 201		1 201		441	- F-0779.1	1 201	CV	ASPHALT CONCRETE SURFACE COURSE, TYPE 1X(448), AS PER PLAN, PG 70-22M	
								1,281 251		1 , 281 251		441	50 2 00	1 , 281 251	CY CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (148), PG 64-22	+
								611		611		441	50201	611		ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), AS PER PLAN	
													4			(VARIABLE DEPTH, 6.5" MAX), PG 64-22	
				60					60			441	50400	60		ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS) , PG 64-22	
	38								38			441	50701	38	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN, PG 64-22	
				266					266			452	10050	266	SY	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	+
-				266 815					815			452	12050	200 815		8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	+
				0.0				4,427	4,427			609	26000	4,427		CURB, TYPE 6	+
								16		16		617	10101	16		COMPACTED AGGREGATE, AS PER PLAN	
								4,794		4,794		875	10000	4,794	LB	LONGITUDINAL JOINT ADHESIVE	
																WATER WARY	
			2						2			638	10800	2	EACH	WATER WORK VALVE BOX ADJUSTED TO GRADE	+
			1						2			638	10900	1		SERVICE BOX ADJUSTED TO GRADE	+
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