ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, THE CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR. THE LIST CURRENTLY CONTAINS CLASS III WITH A MINIMUM LEGIBILITY DISTANCE OF 650 FT. THE SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLE-SHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. SURFACES OF A 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

PLACEMENT, OPERATION, MAINTENANCE AND ACTIVATION OF THE SIGN BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF A 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO THE SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OF PREPROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ONBOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHRASES SHOULD BE EMPLOYED. ALTHOUGH THREE-PHRASES MAY BE USED IN USUAL CONDITIONS. THE PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHRASE TO BE READ AT LEAST ONCE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.03(C). THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE TO THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOUR PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 104.04.

THIS PROJECT SHALL REQUIRE 2 (TWO) ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGNS.TO BE INSTALLED AT THE PROJECT SITE 1 (ONE) WEEK PRIOR TO INITIATING WORK.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER SIGN-MONTH FOR EACH ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO PERFORM THE WORK AS DESCRIBED ABOVE.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN.

6 SIGN-MONTH

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

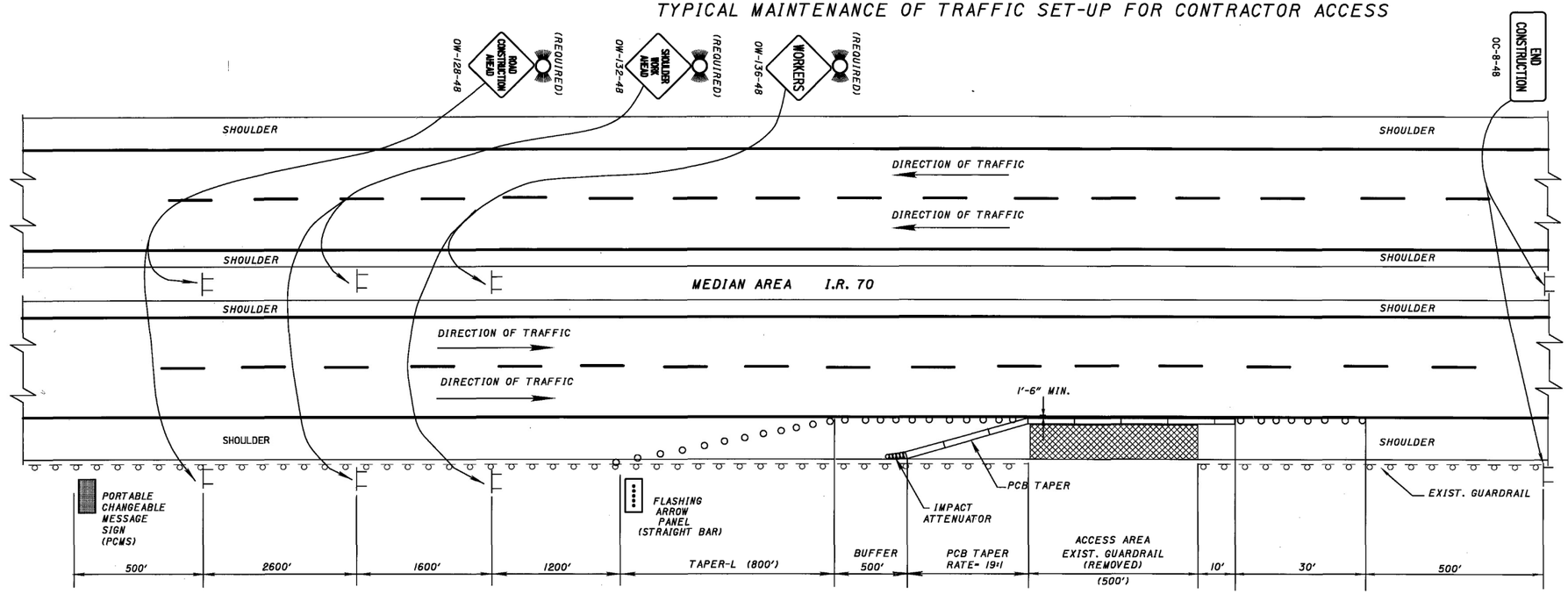
LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR..... 80 HOURS

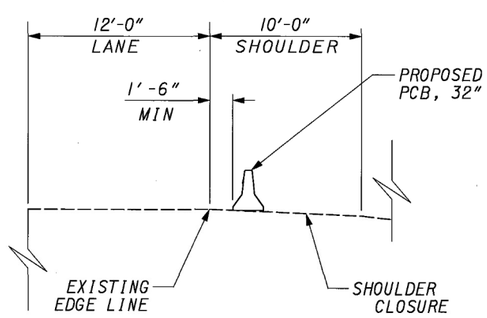
THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF CONTRACTORS WISH TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

TYPICAL MAINTENANCE OF TRAFFIC SET-UP FOR CONTRACTOR ACCESS



TYPICAL SECTION MAINTENANCE OF TRAFFIC



LEGEND

DRUMS

PORTABLE CONCRETE BARRIER (PCB)

ATTENUATOR

CALCULATED J.L.R. CHECKED N.K.

MAINTENANCE OF TRAFFIC GENERAL NOTES

MUS-70-25.98

M0702501.MDS 07/13/06

SHEET NUMBER										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	2	2A	3	4	6	13	14	15	16						
														ROADWAY	
	LUMP									201	11000	LUMP		CLEARING AND GRUBBING	
							1			202	20010	1	EACH	HEADWALL REMOVED	
							122.0			202	35200	122.0	FT	PIPE REMOVED, OVER 24"	
					600					202	38000	600	FT	GUARDRAIL REMOVED	
	705.0									202	75000	705.0	FT	FENCE REMOVED	
						6481				203	10000	6481	CU YD	EXCAVATION	
						35823				203	20000	35823	CU YD	EMBANKMENT	
	900									209	10001	900	FEET	DITCH CLEANOUT, AS PER PLAN	2
	9.5									209	60200	9.5	STATION	LINEAR GRADING	
					600					606	13000	600	FT	GUARDRAIL, TYPE 5	
	985.0									607	15000	985.0	FT	FENCE, TYPE 47	
					600					618	40100	600	FT	RUMBLE STRIPS, (ASPHALT CONCRETE)	
					6					626	00100	6	EACH	BARRIER REFLECTOR, TYPE A	
														EROSION CONTROL	
	1									659	00100	1	EACH	SOIL ANALYSIS TEST	
						15583				659	00520	15583	SQ YD	SEEDING AND MULCHING, CLASS 3A	
	800									659	14000	800	SQ YD	REPAIR SEEDING AND MULCHING	
	1.40									659	20000	1.40	TON	COMMERCIAL FERTILIZER	
	3.2									659	31000	3.2	ACRE	LIME	
	42.0									659	35000	42.0	M GAL	WATER	
	LUMP									832	15000	LUMP		STORM WATER POLLUTION PREVENTION PLAN	
	38000									832	30000	38000	EACH	EROSION CONTROL	
														DRAINAGE	
							3.3			601	11000	3.3	SQ YD	RIPRAP USING 6" REINFORCED CONCRETE SLAB	
							26.4			601	32200	26.4	CU YD	ROCK CHANNEL PROTECTION, TYPE C, WITH FILTER	
								42		601	34200	42	CU YD	ROCK CHANNEL PROTECTION, TYPE C, WITHOUT FILTER	
							1			602	20000	1	CU YD	CONCRETE MASONRY	
		50								603	00900	50	FT	6" CONDUIT, TYPE B	
		50								603	01400	50	FT	6" CONDUIT, TYPE E	
		50								603	01500	50	FT	6" CONDUIT, TYPE F	
							82.0			603	16200	82.0	FT	36" CONDUIT, TYPE A, 707.01 OR 707.02	
		5								604	36600	5	EACH	PRECAST REINFORCED CONCRETE OUTLET	
		50								605	13402	50	FT	6" UNCLASSIFIED PIPE UNDERDRAINS, FOR SPRINGS	
		100								605	32200	100	FT	AGGREGATE DRAINS, FOR SPRINGS	
														LANDSCAPING	
							30			661	20060	30	EACH	DECIDUOUS SHRUB, 3' HEIGHT, VIBURNUM PRUNIFOLIUM - BLACKHAW	
							10			661	40040	10	EACH	DECIDUOUS TREE, 1" CALIPER, ACER RUBRUM - RED MAPLE	
									80	661	99900	80	EACH	PLANTING, MISC.: FERTILIZER PACKETS	
									0.5	662	30000	0.5	M GAL	LANDSCAPE WATERING	
														MAINTENANCE OF TRAFFIC	
				80						614	11100	80	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
			1							614	12346	1	EACH	WORK ZONE IMPACT ATTENUATOR, (UNIDIRECTIONAL) OVER 45 MPH, FOR 24" WIDE HAZARDS	
			18							614	13300	18	EACH	BARRIER REFLECTOR, TYPE B	
			18							614	13350	18	EACH	OBJECT MARKER, ONE WAY	
				6						614	18601	6	SIGN MNTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	4
		25								616	10000	25	M GAL	WATER	
			700							622	40020	700	FT	PORTABLE CONCRETE BARRIER, 32"	
										614	11000	LUMP		MAINTAINING TRAFFIC	
										619	16000	4	MONTH	FIELD OFFICE, TYPE A	
										623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
										624	10000	LUMP		MOBILIZATION	

CALCULATED U.R.

CHECKED N.K.

GENERAL SUMMARY

MUS-70-25.98

ALL GRADING LINES INDICATE FINISH GRADING

CHANNEL RELOCATION

CONST. LIMITS

EXISTING CHANNEL

EXISTING CULVERT (TO BE REMOVED)

PROPOSED CULVERT EXTENSION

CONST. LIMITS

PROPOSED FENCE, TYPE 47

CONST. LIMITS

EXISTING FENCE (TO BE REMOVED)

BEGIN PROJECT
BEGIN WORK WESTBOUND
STA. 688+00
S.L.M.-25.98
E040306

END WORK WESTBOUND
STA. 696+00
S.L.M.-26.13

END PROJECT
END WORK MEDIAN
STA. 705+00
S.L.M.-26.30
E040306

(1-GR) ITEM 202 GUARDRAIL REMOVED
STA. 688+00 TO 696+00 - 600 FEET. *

ITEM 606 GUARDRAIL, TYPE 5
STA. 688+00 TO 696+00 - 600 FEET. *

ITEM 626 BARRIER REFLECTOR, TYPE A
STA. 688+00 TO 696+00 - 6 EACH. *

(1-RS) ITEM 618 RUMBLE STRIPS, ASPHALT CONCRETE
STA. 688+00 TO 696+00 - 600 FEET. *

(1-F) ITEM 202 FENCE REMOVED
STA. 688+00 TO STA. 696+00
705.0 FEET **

(2-F) ITEM 607 FENCE TYPE, 47
STA. 688+00 TO STA. 696+00
(PLACED AT 5.0' FROM PROPOSED R/W) 985.0 FEET **

* CARRIED TO GENERAL SUMMARY
** CARRIED TO GENERAL NOTES SHEET 2.

(1-RS) PROPOSED GUARDRAIL

RUMBLE STRIPS STA. 688+00 TO STA. 696+00

(1-GR)

BEGIN MEDIAN DITCH CLEANOUT STA. 696+00

END MEDIAN DITCH CLEANOUT STA. 705+00

WESTBOUND MEDIAN DITCH

℄ SURVEY AND CONSTRUCTION I.R. 70

BEGIN WORK EASTBOUND DITCH STA. 1+50

℄ EASTBOUND DITCH

N 57° 58′ 25″ E

N 70° 17′ 58″ E

N 67° 40′ 40″ E

N 71° 28′ 55″ E

END WORK EASTBOUND DITCH STA. 11+00

NOTE:
SEE GENERAL NOTES SHEET 2 FOR DITCH ELEVATION AND EXCAVATION QUANTITIES.

STA. 0+00 ℄ EASTBOUND DITCH = STA. 688+20.11 170.42' RT.
℄ SURVEY AND CONSTRUCTION I.R. 70

BENCHMARKS

BM 1
TOP OF CENTERLINE MONUMENT AT
P.T. STA. 689+56.24
ELEV. = 1007.55

VERTICAL DATUM
N.A.V.D. 1988

BM 2
TOP OF MAG NAIL SET IN PAVED BERM
74.85 FEET LEFT OF CENTERLINE
STATION 695+03.96
ELEV. = 1004.46

BM 3
TOP OF ¾INCH REBAR W/ O.D.O.T. CAP;
425.00 FEET LEFT OF EXISTING I-70
CENTERLINE STATION 691+20
ELEV. = 938.95

MUS-70-25.98

BORING LOCATION

LONGITUDE: 81°44′56″
LATITUDE: 39°58′44″

U.S.G.S. QUADRANGLE MAP:
432-16-N.E. NORWICH

PROJECT DESCRIPTION:

THIS PROJECT INVOLVES THE REPAIR OF AN EXISTING EMBANKMENT SLIP AND THE CONSTRUCTION OF DRAINAGE ITEMS AT SLM 25.98 WB-MILE MARKER 168.77 WB. I.R. 70

PROJECT DATA

SOIL AND WATER CONSERVATION MAPS: SHEETS: 44, 45
TOTAL AREA (RIGHT OF WAY) : 6.672 ACRES
PROJECT EARTH DISTURBED AREA: 4.660 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.125 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 5.79 ACRES
IMPERVIOUS (PAVED) AREA (PRE-CONSTRUCTION): 0.73 ACRE
IMPERVIOUS (PAVED) AREA (POST-CONSTRUCTION): 0.73 ACRE
RUN-OFF COEFFICIENT (PRE-CONSTRUCTION): 0.65
RUN-OFF COEFFICIENT (POST-CONSTRUCTION): 0.65
IMMEDIATE RECEIVING WATER: UNNAMED STREAM
SUBSEQUENT RECEIVING WATER: GEORGE'S RUN

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED J.R.
CHECKED N.K.

PROJECT SITE PLAN / GRADING DETAILS
STA. 687+00.00 TO STA. 702+00.00

MUS-70-26.20

6
17

MUS/T7086/PROD/DESIGN/M0702501.PPP 07/07/06

SEEDING END WIDTH	SEEDING SQ. YDS.
210	583
0	0
0	0
	583

480 460 440 420 400 380 360 340 320 300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄ I.R 70

1020 1000 980 960 940 920

295.00′
PROP. R/W
EX. R/W
281.17′
258.75
3% 2:1
C-2
2.0′
263.94′
ELEV. 939.18
36″ CONDUIT
236.86′
F. EL= 936.75

690+00

BEGIN EARTHWORK
STA. 690+00

STA. 690+00 AHEAD
STA. 690+00 BACK

689+50

PROP. R/W
EX. R/W

ALL OFFSETS ARE BASED UPON THE CENTERLINE OF I.R. 70.

℄ I.R. 70

480 460 440 420 400 380 360 340 320 300 280 260 240 220 200 180 160 140 120 100 80 60 40 20

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2	0		
0	0		
0	0		
		2	0
SHEET TOTAL		2	0

CALCULATED J.R.
CHECKED N.K.

CROSS SECTIONS - I.R. 70 WESTBOUND
STA. 689+00 TO STA. 690+00

MUS-70-25.98

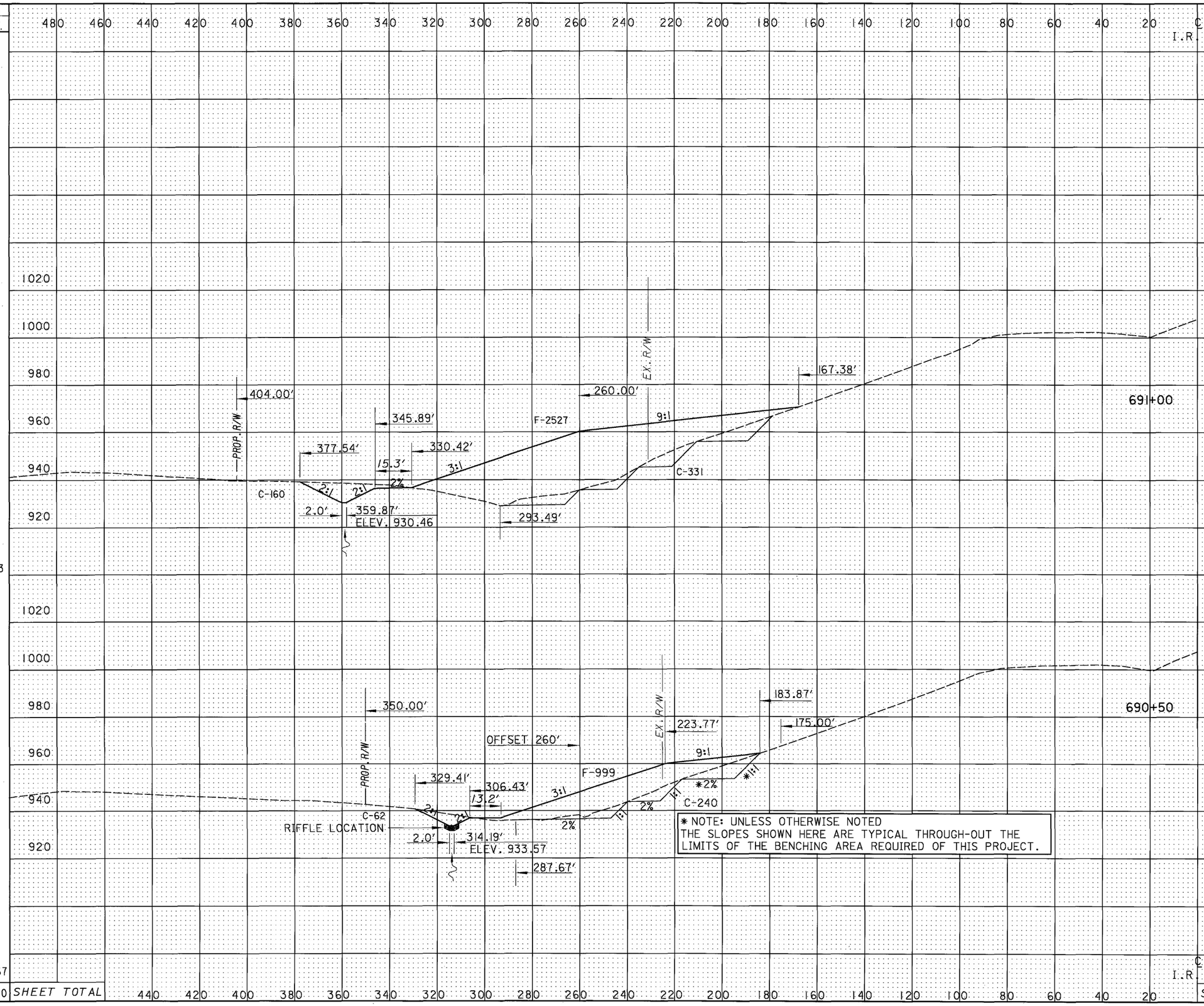
7/17

XSh+70EXT.PXS 7/26/06

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
250		491	2527		
	583			734	3265
210		302	999		
	1167			281	1925
	1750 SHEET TOTAL			1015	4190

CALCULATED J.R.
CHECKED N.K.

SECTIONS - I.R. 70 WESTBOUND
STA. 690+50 TO STA. 691+00



MUS-70-25.98

8
17

XSh+TOEXT.PXS 7/13/06

SEEDING END WIDTH	SEEDING SQ. YDS.
280	436
260	907
	544
1500	907
1020	544
1417	958
	2917

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
436	2886		
907	5172		
544	2700		
958	4840		
SHEET TOTAL 1865	10012		

CALCULATED J.R.

CHECKED N.K.

CROSS SECTIONS - I.R. 70 WESTBOUND
STA. 691+50 TO STA. 692+00

MUS-70-25.98

9 / 17

XSh170EXT.PXS 7/13/06

480 460 440 420 400 380 360 340 320 300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄ I.R. 70

1020 1000 980 960 940 920

260.00′ 167.10′ 433.00′ PROP. R/W F-2886 EX. R/W 9:1 3:1 352.95 399.07′ 377.56 C-56 2:1 7:1 C-380 2.0′ 386.56′ ELEV. 925.23 326.34′

692+00

692+00.00

428.00 PROP. R/W 260.00′ EX. R/W 167.38′ 9:1 F-2700 399.60′ 371.77′ 33.7′ 337.92′ 3:1 2% C-155 RIFFLE LOCATION 2:1 2:1 C-389 2.0′ 384.74′ ELEV. 927.85 307.90′

691+50

℄ I.R. 70

SHEET TOTAL

440 420 400 380 360 340 320 300 280 260 240 220 200 180 160 140 120 100 80 60 40 20

SEEDING END WIDTH	SEEDING SQ. YDS.
340	1778
300	1611
	3389

480 460 440 420 400 380 360 340 320 300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄ I.R. 70

1020 1000 980 960 940 920 900

433.00′ PROP. R/W

416.85′ 405.07′ 371.39′ 2% 2:1 2:1 3:1 9:1 F-3117 260.00′ EX. R/W 165.58′

C-4 2.0′ 414.59′ ELEV. 919.83 320.00′ C-392

693+00

438.00′ PROP. R/W

418.21′ 405.79′ 364.41′ 2:1 2:1 3:1 9:1 F-3104 260.00′ EX. R/W 166.18′

C-18 2.0′ 411.69′ ELEV. 922.79 320.00′ C-410

692+50

℄ I.R. 70

SHEET TOTAL

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
396	3117		
428	3104	763	5760
		800	5546
SHEET TOTAL		1563	11306

CALCULATED J.R.

CHECKED N.K.

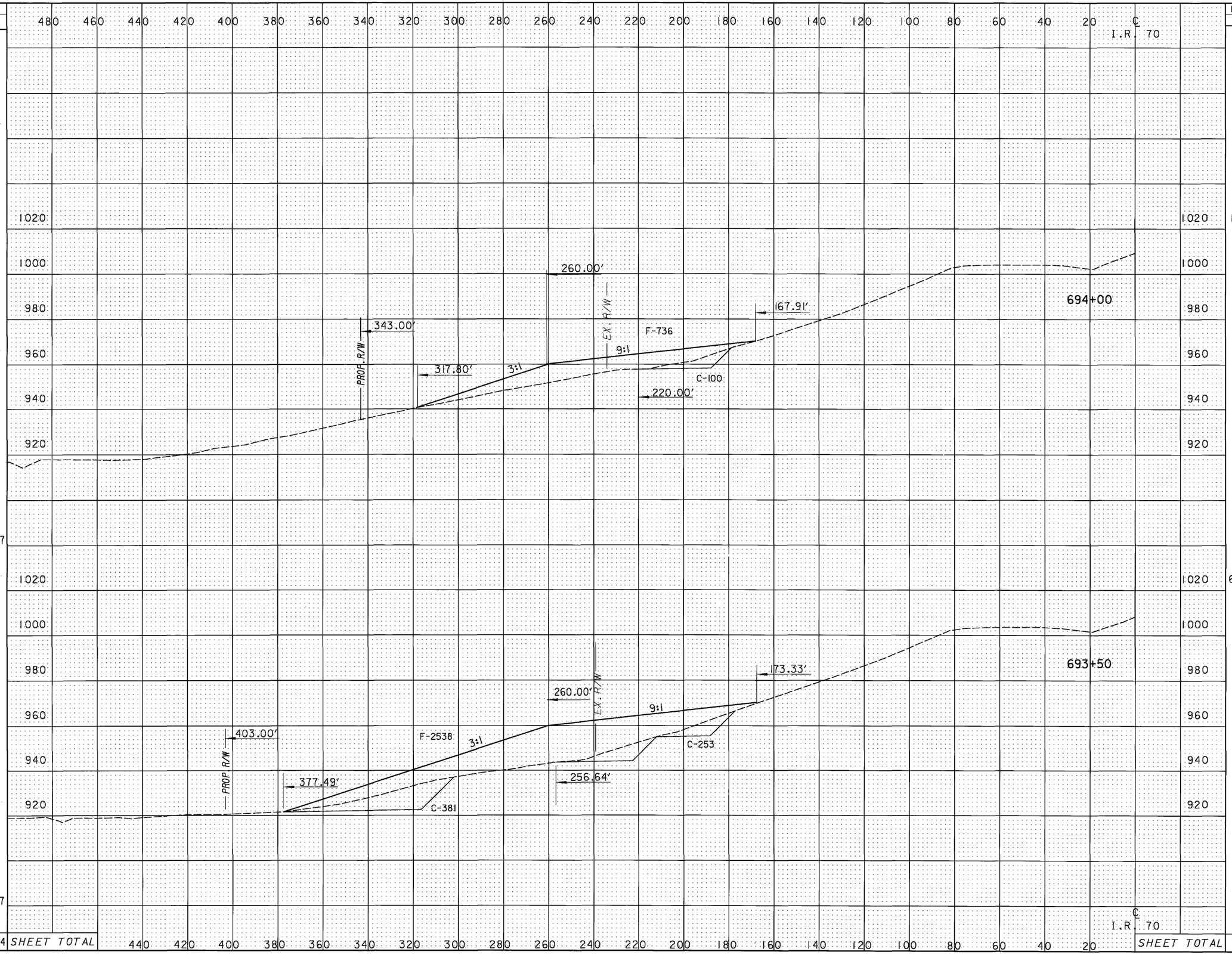
CROSS SECTIONS - I.R. 70 WESTBOUND STA. 692+50 TO STA. 693+00

MUS-70-25.98

10/17

XSh+70EXT.PXS 7/13/06

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
275		100	736		
325	1667			680	3031
		634	2538		
	1847			954	5236
	3514	SHEET TOTAL		1634	8267



CALCULATED J.R.

CHECKED K.K.

CROSS SECTIONS - I.R. 70 WESTBOUND
STA. 693+50 TO STA. 694+00

MUS-70-25.98

11
17

XSh+TOEXT.PXS 7/13/06

SEEDING	
END WIDTH	SQ. YDS.
140	
220	
	1375
	2375

480 460 440 420 400 380 360 340 320 300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 ℄ I.R 70

1020 1000 980 960 940 920 1000 1020 1000 980 960 940 920 1000 980 960 940 920

233.00′ PROP. R/W
217.13′
131.83′
F-201
6:1
695+00

283.00′ PROP. R/W
EX. R/W
259.89′
129.54′
F-435
5:1
C-168
186.20′
694+50

℄ I.R 70 SHEET TOTAL 440 420 400 380 360 340 320 300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 SHEET TOTAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	201		
168	435	156	589
		248	1084
		404	1673

CALCULATED J.R.
CHECKED N.K.

CROSS SECTIONS - I.R. 70 WESTBOUND
STA. 694+50 TO STA. 695+00

MUS-70-25.98

12/17

XSht70EXT.PXS 7/13/06

SEEDING SQ.YDS.		VOLUME CUT	VOLUME FILL
15583	TOTAL FROM SHEETS 7-13 CARRIED TO GENERAL SUMMARY	6481	35823
	TOTALS FROM SHEETS 7-13 CARRIED TO GENERAL SUMMARY		

CALCULATED J.R.

CHECKED N.K.

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0			0	0		
		STA. 695+75 AHEAD	0	0		
		STA. 695+75 BACK	0	102		
120	333		0	102	0	94
	722				0	281
	1055	SHEET TOTAL			0	375

END EARTHWORK
STA. 695+75

218.00'
EX. R/W
200.84'
7:1
F-102
142.21'
696+00
695+50
I.R. 70
℄

CROSS SECTIONS - I.R. 70 WESTBOUND
STA. 695+50 TO STA. 696+00

MUS-70-25.98

13/17

XSh+70EXT.PXS 7/13/06

RIPRAP USING 6" REINFORCED CONCRETE SLAB WITH CUT OFF WALL AS PER HW-2.1

℄ RELOCATED CHANNEL

LA-R/W

CONST. LIMITS

HEADWALL AS PER HW-2.2

POT Sta. 0+00.00

POT Sta. 0+27.71

PC Sta. 1+32.71

PC Sta. 1+42.71

PT Sta. 1+67.94

PC Sta. 2+17.04

PT Sta. 2+37.62

N 3° 15' 40" E 27.71

N 20° 22' 21" E 105.00

N 9° 30' 46" E 17.83

N 48° 07' 32" E 10.00

N 17° 27' 47" E 10.09

N 19° 28' 02" E 15.00

N 75° 54' 06" E 25.31

N 32° 31' 26" E 10.06

N 76° 01' 18" E 19.98

9.0'

+10.71

+15.21

+30.21

10 V.P.

PC Sta. 1+85.77

PT Sta. 2+07.04

PC Sta. 2+52.61

PT Sta. 3+02.55

PC Sta. 3+27.86

PT Sta. 3+74.86

PC Sta. 3+84.91

PT Sta. 4+11.75

PC Sta. 4+31.74

PT Sta. 4+81.63

0+00 1+00 2+00 3+00 4+00

EXIST. 36" CMP, 8 GA (TO REMAIN)

36" X 82.0' CONDUIT TYPE A, 707.01 OR 707.02

15.0' ROCK CHANNEL PROTECTION, TYPE C, WITH FABRIC FILTER, 30" THICK

EXIST. CHANNEL (TO BE BURIED BY PROPOSED EMBANKMENT)

(1-D) (2-D) (3-D) (4-D) (R1) (R2) (R3) (C1) (C2) (C3) (C4) (C5) (C6) (C7)

(C1) P.I. Sta = 1+55.34; Δ = 7° 05' 25" (LT); Dc = 28° 06' 04"; R = 203.89'; T = 12.63'; L = 25.23'; E = 0.39'

(C2) P.I. Sta = 1+96.67; Δ = 31° 08' 21" (RT); Dc = 146° 25' 41"; R = 39.13'; T = 10.90'; L = 21.27'; E = 1.49'

(C3) P.I. Sta = 2+27.49; Δ = 25° 12' 29" (LT); Dc = 122° 29' 04"; R = 46.78'; T = 10.46'; L = 20.58'; E = 1.16'

(C4) P.I. Sta = 2+80.63; Δ = 64° 45' 52" (RT); Dc = 129° 41' 35"; R = 44.18'; T = 28.02'; L = 49.94'; E = 8.13'

(C5) P.I. Sta = 3+52.24; Δ = 37° 36' 03" (LT); Dc = 80° 00' 31"; R = 71.61'; T = 24.38'; L = 47.00'; E = 4.04'

(C6) P.I. Sta = 3+98.92; Δ = 40° 22' 55" (RT); Dc = 150° 27' 42"; R = 38.08'; T = 14.00'; L = 26.84'; E = 2.49'

(C7) P.I. Sta = 4+58.19; Δ = 47° 09' 56" (LT); Dc = 94° 32' 23"; R = 60.60'; T = 26.46'; L = 49.89'; E = 5.52'

DRAINAGE AREA = 35 AC
Q50 = 75 C.F.S.
V50 = 12.5 F.P.S.

B4

PLANTING LEGEND

AR ACER RUBRUM - RED MAPLE

VP VIBURNUM PRUNIFOLIUM - BLACKHAW

ITEM 661 DECIDUOUS SHRUB, 3' HEIGHT
VIBURNUM PRUNIFOLIUM - BLACKHAW
TOTAL..... 30-EACH

ITEM 661 DECIDUOUS TREE, 1" CALIPER
ACER RUBRUM - RED MAPLE
TOTAL..... 10-EACH

CULVERT QUANTITES

(1-D)	36" CONDUIT TYPE A, 707.01 OR 707.02	82.0 FEET *
	CONCRETE MASONRY	1 CU.YD. *
(2-D)	RIPRAP USING 6" REINFORCED CONCRETE SLAB WITH CUT OFF WALL AS PER HW-2.2 6.0' x 5.0' ÷ 9 =	3.3 SQ.YD. *
(3-D)	ROCK CHANNEL PROTECTION, TYPE C, WITH FABRIC FILTER, 30" THICK (15.0' X 19.0' X 2.5') ÷ 27 =	26.4 CU.YD *
(4-D)	PIPE REMOVED, OVER 24"	122.0 FT. *
	HEADWALL REMOVED	1 EACH *

* CARRIED TO GENERAL SUMMARY

RIFFLE LOCATIONS

(R1) STA. 1+53.38 TO STA. 1+81.38

(R2) STA. 2+99.86 TO STA. 3+27.86

(R3) STA. 4+20.77 TO STA. 4+48.77

SEE RIFFLE DETAIL SHEET 15 FOR QUANTITES.

970 965 960 955 950 945 940 935 930 925 920

+50 936.60 939.05 937.85 935.02 931.57 926.86 922.65

935.95 933.55 931.49 929.43 927.37 925.03 923.25 921.17

EXIST. 36" CMP, 8 GA (TO REMAIN)

36" X 82.0' CONDUIT TYPE A, 707.01 OR 707.02 @ 6.0%

MASONRY COLLAR AS PER DM-1.1

STA. 0+27.71
℄ CULVERT
℄ EL. = 940.29

STA. 1+10.21
℄ CULVERT
℄ EL. = 935.37

EXIST. GROUND

PROPOSED CHANNEL

4.7%

STA. 4+81.63
ELEV.=919.83

MEETS EXISTING

1+00 2+00 3+00 4+00

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED N.K./J.R. CHECKED

PLAN AND PROFILE
CULVERT EXTENSION/ CHANNEL RELOCATON

MUS-70-25.98

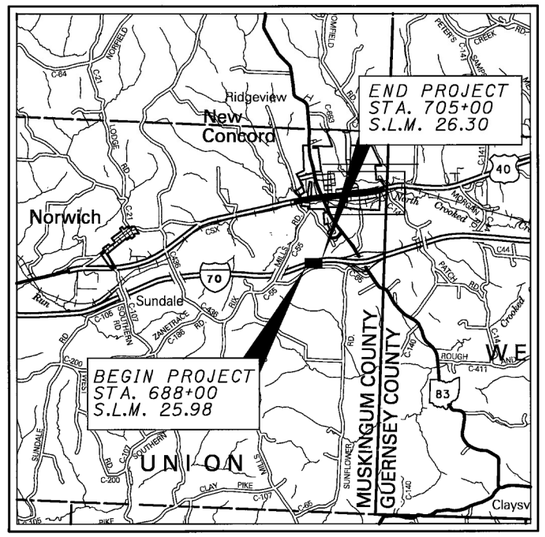
14/17

M070250LDPP 07/07/2006

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MUS-70-25.98

UNION TOWNSHIP
MUSKINGUM COUNTY



LOCATION MAP

LATITUDE: 39°58'44" LONGITUDE: 81°44'56"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE & DIVIDED HIGHWAY

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

DESIGN DESIGNATION MUS-70-25.98

CURRENT ADT (2007)	37800
DESIGN YEAR ADT (2027)	51800
DESIGN HOURLY VOLUME (2027)	4662
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	33%
DESIGN SPEED	70 MPH
LEGAL SPEED	65 MPH

DESIGN FUNCTIONAL CLASSIFICATION - INTERSTATE RURAL

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL AND GAS PRODUCERS PROTECTIVE SERVICE CALL: 1-800-929-0988

PLAN PREPARED BY:

DISTRICT NO. 5
OHIO DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPAIR OF AN EXISTING EMBANKMENT SLIP, PROPOSED DRAINAGE ITEMS, AND CHANNEL RELOCATION AT SLM 25.98 WB-MILE MARKER 168.77 WB. I.R. 70.

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2005 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 NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

PROJECT EARTH DISTURBED AREA = 4.660 ACRES

ESTIMATED CONTRACTOR EARTH DISTURBED AREA = 1.25 ACRES

NOTICE OF INTENT EARTH DISTURBED AREA = 5.79 ACRES

ENGINEERS SEAL:

STATE OF OHIO · NIKUNJ C. KADAKIA · E-53758 · REGISTERED PROFESSIONAL ENGINEER

SIGNED: N.C. Kadakia
DATE: August 08, 2006

STANDARD CONSTRUCTION DRAWINGS

BP-9.1	4-15-05	LA-1.1	7-28-00				
		LA-1.2	7-28-00				
DM-1.1	4-21-06						
DM-4.3	7-19-02	MT-35.10	4-20-01				
DM-4.4	7-19-02	MT-95.30	7-16-04				
		MT-101.70	10-18-02				
F-2.1	7-28-00	MT-105.10	10-18-02				
F-3.3	7-28-00	MT-105.11	10-18-02				
F-3.4	7-28-00						
		RM-4.2	4-18-03				
GR-1.1	7-16-04						
GR-2.1	1-16-04						
HW-2.1	4-21-06						

SUPPLEMENTAL SPECIFICATIONS

800	7-21-06
832	4-25-06

SPECIAL PROVISIONS

NWP#3	8-01-06

APPROVED _____
DATE 8-8-06 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 8-5-06 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. FAN E040 (306)

PID NO. 77086

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

MUS-70-25.98

1 / 17

MUS - IR 70 - 25.98
060494 PID - 77086
Dist 5 11/15/2006

M070250L GTS J. RAY 7/13/06

UTILITIES
THERE ARE NO KNOWN UNDERGROUND UTILITIES ON THIS PROJECT.

CONTINGENCY QUANTITIES
THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ELEVATION DATUM
ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM (1988).

WORK LIMITS
THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING
THE DEPARTMENT HAS NOT MARKED INDIVIDUAL TREES FOR REMOVAL. UNLESS SPECIFICALLY DESIGNATED AS "DO NOT DISTURB" IN THE PLANS, REMOVE ALL TREES AND STUMPS WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201 CLEARING AND GRUBBING.

BENCHING OF FOUNDATION SLOPES
ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. ALL OTHER SLOPED EMBANKMENT AREAS SHALL BE BENCHED AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL
THIS WORK SHALL CONSIST OF THE PLACEMENT OF THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

832, EROSION CONTROL ..... 38000 EACH.

ADDITIONAL SOIL INFORMATION
THE BORING LOG SHEETS CONTAIN ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN. ADDITIONAL SUBSURFACE INVESTIGATION INFORMATION MAY BE AVAILABLE FROM THE DISTRICT 5 OFFICE OR THE OFFICE OF GEOTECHNICAL ENGINEERING.

FIELD CONDITIONS
DUE TO EROSION AND CONTINUED SLOPE MOVEMENT SUBSEQUENT TO THE TIME OF SURVEY, THE CROSS SECTIONS AS SHOWN ON THE PLANS ARE TO BE CONSIDERED APPROXIMATE AND FOR ESTIMATING PURPOSES ONLY.

EXCAVATION
EXCAVATED MATERIAL SHALL NOT BE WASTED NOR STOCKPILED WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL REMOVE EXCESS MATERIAL THAT CANNOT BE USED FOR EMBANKMENT FROM THE PROJECT SITE.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL
WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

SEEDING AND MULCHING
THE FOLLOWING CALCULATIONS AND QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:
659, SEEDING AND MULCHING [15583] SQ. YD.
CARRIED FROM SHEET 13.

ITEM 659 COMMERCIAL FERTILIZER
[15583] X 9 S.F. ÷ 1 SQ.YD. X 20 LB. ÷ 1000 S.F.
X 1 TON ÷ 2000 LB. = 1.40 TON

ITEM 659 LIME
[15583] SQ.YD => 3.22 ACRE *

ITEM 659 WATER
[15583] X 9 S.F. ÷ 1 SQ.YD. X 300 GAL. ÷ 1000 S.FT.
X 1 ÷ 1000 = 42.0 MGAL.

659, SOIL ANALYSIS TEST ..... 1 EACH
659, COMMERCIAL FERTILIZER ..... 1.40 TON
659, LIME ..... 3.2 ACRE
659, WATER ..... 42.0 M. GAL.
659, REPAIR SEEDING AND MULCHING ..... 800 SQ.YD.

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.

REVIEW OF DRAINAGE FACILITIES
BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF ALL EXISTING DRAINAGE WORKS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL EXISTING DRAINAGE WORKS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

CONTRACTOR'S USE OF ODOT RIGHT-OF-WAY
THE CONTRACTOR IS REQUIRED TO HIRE A CULTURAL RESOURCE ENVIRONMENTAL CONSULTANT PER CONSTRUCTION AND MATERIAL SPRCIFICATIONS IN 105.16. PERFORM A CULTURAL RESOURCE INVESTIGATION FOR ALL WASTE AND BORROW AREAS OFF THE RIGHT-OF-WAY.

FENCE LENGTHS
THE FENCE LENGTHS SHOWN IN THE PLANS ARE HORIZONTAL DIMESIONS. MEASUREMENTS OF THE FINAL QUANTITIES SHALL BE MADE IN ACCORDANCE WITH ITEM 607.

ITEM 607 FENCE, TYPE 47 ..... 985.0 FT

ITEM 202 FENCE REMOVED
THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE PLANS TO REMOVE EXISTING FENCE INSIDE THE PROPOSED RIGHT-OF-WAY LIMITS, AS DIRECTED BY THE PROJECT ENGINEER. THE CONTRACTOR WILL BE RESPONCIBLE FOR THE REMOVAL AND DISPOSAL OF THE FENCE AS PER 202.

ITEM 202 FENCE REMOVED ..... 705.0 FEET

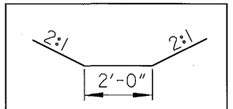
PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES
CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES SHALL BE MADE BY MEANS OF FIELD CUTTING THE EXISTING CONDUIT. THE PROPOSED CONDUIT SHALL BE ATTACHED TO THE EXISTING AS PER 603.08 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS MANUAL.

A MASONRY COLLAR SHALL BE USED TO JOIN THE 2 PIPES, AS PER STANDARD DRAWING DM-1.1.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 603 OR 522.

EASTBOUND DRAINAGE DITCH INFORMATION

TYPICAL - DITCH



STATION	SLOPE	PROPOSED DITCH ELEVATIONS	EXISTING ELEVATIONS EXISTING SLOPES	DIFFERENCE IN ELEVATION FT.	EXCAVATION SQ.FT.	END AREA CU.YD.	TOTAL EXCAVATION CU.YD.
1+00	0.070	980.65	980.65		0.00	2.83	**INFO ONLY
1+50	0.016	984.60	0.07		3.06	42.74	
2+00	0.025	985.40	987.56	2.16	43.10	99.28	
2+50	0.025	986.65	0.04		64.12	122.47	
3+00	0.025	987.90	991.79	3.89	68.15	123.35	
3+50	0.025	989.15	0.02		65.07	113.44	
4+00	0.025	990.40	994.26	3.86	57.44	95.27	
4+50	0.025	991.65	0.02		45.45	72.83	
5+00	0.025	992.90	996.62	3.72	33.21	53.05	
5+50	0.025	994.15	0.01		24.08	36.75	
6+00	0.025	995.40	997.40	2.00	15.61	21.38	
6+50	0.025	996.65	0.01		7.48	9.77	
7+00	0.010	997.90	998.73	0.83	3.07	7.37	
7+50	0.012	998.40	0.02		4.89	13.14	
8+00	0.038	999.00	1000.68	1.68	9.30	14.92	
8+50	0.030	1000.90	0.03		6.81	14.37	
9+00	0.040	1002.40	1003.56	1.16	8.71	16.56	
9+50	0.050	1004.40	0.05		9.17	16.45	
10+00	0.062	1006.90	1008.17	1.27	8.60	9.29	
10+50	0.031	1010.00	0.03		1.43	2.28	
11+00		1011.55	1011.54		1.03	1.91	** 889.44

THE ABOVE CHART DISPLAYS THE DATA NECESSARY TO COMPLETE THE EASTBOUND DITCHWORK. SEE SHEET 6 FOR LAYOUT.

THE WORK SHALL BE PAID FOR UNDER ITEM 209 LINEAR GRADING.

ITEM 209 LINEAR GRADING:
STATION 1+50 TO STATION 11+00 ..... 9.5 STATIONS

DITCH CLEANOUT, AS PER PLAN
THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO PROVIDE POSITIVE DRAINAGE TO THE CATCH BASIN LOCATED AT STA 696+00 IN THE WESTBOUND MEDIAN FROM STATION 696+00 TO STATION 705+00.

ITEM 209 DITCH CLEANOUT ..... 900.0 FEET

CALCULATED J.R.
CHECKED N.K.

GENERAL NOTES

MUS-70-25.98

M7000LGDN 07/07/06 JR

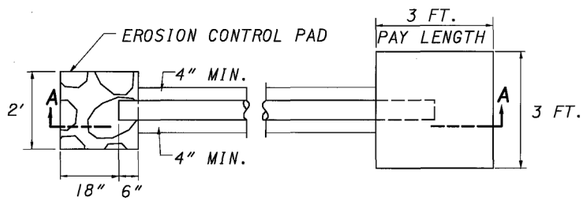
SPRING DRAINS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR DRAINING ANY SPRINGS SHOWN IN THE PLAN OR ENCOUNTERED DURING CONSTRUCTION. THE FOLLOWING TYPES OF PIPES MAY BE USED: 707.33, 707.41, 707.42 or 707.45 PERFORATED PER 707.31.

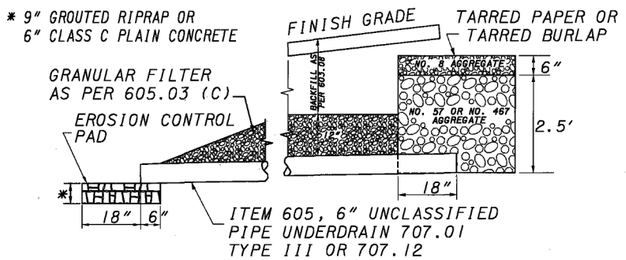
SPRING DRAINS SHALL BE CONSTRUCTED AS SHOWN ON STANDARD CONSTRUCTION DRAWING DM-1.1 AND PAID FOR AT THE CONTRACT PRICE FOR:

603, 6" CONDUIT, TYPE B	50 FEET
603, 6" CONDUIT, TYPE E	50 FEET
603, 6" CONDUIT, TYPE F	50 FEET
604, PRECAST REINFORCED CONCRETE OUTLET	5 EACH
605, 6" UNCLASSIFIED PIPE UNDERDRAINS FOR SPRINGS	50 FEET
605, AGGREGATE DRAINS FOR SPRINGS	100 FEET

SPRING DRAIN DETAIL



PLAN



SECTION A-A

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 25 M. GAL

ITEM 614, MAINTAINING TRAFFIC

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ITEM 614, MAINTAINING TRAFFIC - CONT.

TWO LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON IR 70 AT ALL TIMES, EXCEPT AS NOTED BELOW:

LANE CLOSURES FOR THE PURPOSE OF PLACING PORTABLE CONCRETE BARRIER OR DRUMS IN ORDER FOR THE CONTRACTOR TO COMPLETE THE WORK AS DESCRIBED IN THE PLANS SHALL BE PERMIITED AS FOLLOWS:

LANE CLOSURES SHALL ONLY BE IMPLEMENTED AT THE TIMES LISTED ON THE OHIO DEPARTMENT OF TRANSPORTATION'S WEB SITE, "PERMITTED LANE CLOSURE TIMES" SECTION, LOCATED AT THE ADDRESS SHOWN BELOW:

https://dotaw100.dot.state.oh.us/plcm/plcm_web.jsp

THE PERMITTED CLOSURE TIMES LISTED ON THE WEBSITE, 14 CALENDAR DAYS PRIOR TO THE BID LETTING DATE, SHALL BE IN EFFECT FOR THIS PROJECT.

NO WORK WITHIN ACTIVE TRAVEL LANES OR WHICH WILL SLOW TRAFFIC IS PERMITTED AT ANY OTHER TIMES.

WHEN NECESSARY, LANE CLOSURES SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE STANDARD DRAWINGS.

IT IS THE INTENT TO RESTRICT LANE CLOSURES TO THE MINIMUM AMOUNT OF TIME NECESSARY TO PERFORM THE WORK AS DESCRIBED IN THE PLANS. THE CONTRACTOR SHALL NOT COMMENCE ANY LANE CLOSURE BEFORE THE HOURS AS SPECIFIED OR COMMENCE ANY CLOSURE AT A TIME WHICH WILL NOT ALLOW COMPLETION OF THE WORK PRIOR TO THE HOURS SPECIFIED.

THE CONTRACTOR SHALL HAVE ON SITE AND IN WORKING AND OR SUITABLE CONDITION; ALL EQUIPMENT, TOOLS, LABORERS, LEO'S, TRAFFIC CONTROL DEVICES AND INCIDENTALS NECESSARY TO EFFICIENTLY PERFORM THE CLOSURE BEFORE INITIALIZING THE LANE CLOSURE.

PRIOR TO SETTING UP THE SHOULDER CLOSURE, THE CONTRACTOR AND THE PROJECT ENGINEER SHALL ESTABLISH A TIME FRAME FOR COMPLETION OF THE SET UP. THIS TIME FRAME SHALL PROVIDE THE CONTRACTOR THE OPPORTUNITY TO SAFELY AND EFFICIENTLY COMPLETE THE SHOULDER CLOSURE. ALL ADDITIONAL TIME WILL BE ASSESSED AS PER THE TABLE BELOW AND AS PER PROPOSAL NOTE 128.

UNAUTHORIZED LANE USE TABLE

DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED	TIME UNIT	DISINCENTIVE $ PER TIME UNIT
DRIVING LANES OF I.R. 70 EASTBOUND AND WESTBOUND DURING SHOULDER CLOSURES FOR EMBANKMENT AND DRAINAGE WORK.	EACH HOUR	$10,000
PASSING LANES OF I.R. 70 EASTBOUND AND WESTBOUND DURING SHOULDER CLOSURES FOR MEDIAN WORK.	EACH 15 MINUTES	$1,000

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DATE OF COMPLETION

IN ADDITION TO THE REQUIREMENTS OF SECTION 108.02 OF THE OHIO DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATION, AND IN CONSIDERATION OF THE DEPARTMENT'S INTENTION TO PROVIDE THE AWARDED CONTRACTOR WITH A MORE FLEXIBLE TIME FRAME FOR PERFORMING REQUIRED CONSTRUTION ACTIVITIES, THE AWARDED CONTRACTOR FOR THIS PROJECT SHALL BE GIVEN A DATE FOR PROJECT COMPLETION IN ACCORDANCE WITH THE FOLLOWING: ALL CONSTRUCTION SHALL BE COMPLETED ON OR BEFORE THE 75TH DAY FOLLOWING THE DATE OF THE DISTRICT HIGHWAY MANAGEMENT ADMINISTRATOR'S (OR DESIGNEE'S) WRITTEN AUTHORIZATION TO PROCEED WITH CONSTRUCTION ACTIVITIES, BUT NO LATER THAN THE COMPLETION DATE INDICATED IN THE PROPOSAL. THEREFORE, THE AWARDED CONTRACTOR HAS A WINDOW OF TIME IN WHICH TO CONSTRUCT THIS PROJECT. FAILURE TO COMPLETE ALL CONSTRUCTION ACTIVITIES, ONCE INITIATED, EITHER WITHIN THIS WINDOW OF TIME OR BY THE DATE GIVEN FOR COMPLETION SHALL RESULT IN ASSESSMENT OF LIQUIDATED DAMAGES AS PER CMS 108.07.

CALCULATED J.R.
CHECKED N.K.

MAINTENANCE OF TRAFFIC / GENERAL NOTES

MUS-70-25.98

GT00002A.GGN 7/13/06

MAINTAINING VEHICULAR TRAFFIC

THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE RESPONSIBLE LAW ENFORCEMENT AGENCY AND THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 PUBLIC INFORMATION OFFICER NOT LESS THAN 7 (SEVEN) DAYS PRIOR TO A SCHEDULED DISRUPTION OF TRAFFIC.

SUSPENSION OF WORK

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, THE ENGINEER WILL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

NIGHT VEST

ALL OF THE CONTRACTOR'S AND SUB-CONTRACTOR'S PERSONNEL WORKING DURING THE HOURS OF DARKNESS SHALL WEAR A 100% SILVER REFLECTIVE SAFETY VEST. THE SAFETY VEST SHALL BE PROVIDED BY THE CONTRACTOR. THE VEST MAY HAVE SEVERAL LIME OR ORANGE STRIPES ON IT.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIONAL PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

VEHICLES AND EQUIPMENT SHALL ALWAYS MOVE WITH, AND NOT ACROSS OR AGAINST THE FLOW OF TRAFFIC. VEHICLES AND OTHER EQUIPMENT SHALL NOT PARK OR STOP EXCEPT WITHIN DESIGNATED WORK AREAS; AND SHALL NOT ENTER AND LEAVE WORK AREAS IN A MANNER WHICH WILL BE HAZARDOUS TO, OR INTERFERE WITH THE NORMAL TRAFFIC FLOW. PERSONAL VEHICLES WILL NOT BE PERMITTED TO PARK WITHIN THE RIGHT-OF-WAY EXCEPT IN SPECIFIC AREAS DESIGNATED BY THE ENGINEER.

EQUIPMENT, VEHICLES AND MATERIALS SHALL NOT BE STORED OR PARKED WITHIN 30 FEET OF THE TRAVELED WAY UNLESS 6 FEET BEHIND PCB OR GUARDRAIL.

ALL WORK VEHICLES AND EQUIPMENT THAT ENTERS THE WORK ZONE MORE THAN ONCE A DAY MUST BE EQUIPPED WITH AT LEAST ONE FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT THAT IS VISIBLE IN ALL DIRECTIONS OF TRAFFIC FOR AT LEAST ONE QUARTER OF A MILE, DAY OR NIGHT.

PORTABLE CONCRETE BARRIER

THE FOLLOWING ESTIMATED QUANTITY SHALL BE USED TO IMPLEMENT THE SHOULDER CLOSURE PRIOR TO THE CONTRACTOR REMOVING THE GUARDRAIL TO PERFORM THE DRAINAGE AND EMBNKMENT WORK NORTH OF I.R. 70.

622, PORTABLE CONCRETE BARRIER 32"..... 700 FT.

OBJECT MARKERS AND BARRIER REFLECTORS

THE FOLLOWING ESTIMATED QUANTITIES ARE INCLUDED ON THE GENERAL SUMMARY TO BE PLACED ON THE PORTABLE CONCRETE BARRIER:

614, OBJECT MARKER, ONE WAY..... 18 EACH
614, BARRIER REFLECTOR, TYPE B..... 18 EACH

ITEM 614, WORK ZONE IMPACT ATTENUATOR, (UNIDIRECTIONAL) FOR 24" WIDE HAZARDS

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ONE OF THE FOLLOWING IMPACT ATTENUATORS:

1. THE QUADGUARD CZ, (24 INCHES WIDE SIX-BAY) WORK ZONE IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., 35 EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

   THE LENGTH OF THE SIX-BAY QUADGUARD CZ IS 20'-9". INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER:	QSCZCVR-T4
DRAWING NAME:	QUADGUARD CZ SYSTEM FOR CONSTRUCTION ZONES
REVISION DATE:	5/13/99 REV. J
ODOT APPROVAL DATE:	8/27/99
DRAWING NUMBER:	35-40-10
DRAWING NAME:	QUADGUARD SYSTEM CONCRETE PAD, CZ, QG
REVISION DATE:	11/19/97 REV. D
ODOT APPROVAL DATE:	8/27/99
DRAWING NUMBER:	35-40-16
DRAWING NAME:	QUADGUARD SYSTEM BACKUP ASSEMBLY, CZ, QG
REVISION DATE:	7/30/99 REV. F
ODOT APPROVAL DATE:	8/27/99
DRAWING NUMBER:	354051Z
DRAWING NAME:	QUADGUARD CZ SYSTEM NOSE ASSEMBLY, CZ, QG, 24, 30, 36
REVISION DATE:	5/17/99
ODOT APPROVAL DATE:	8/27/99
DRAWING NUMBER:	35-40-18
DRAWING NAME:	TRANSITION ASSEMBLY, 4 OFFSET, QG
REVISION DATE:	6/25/99 REV. F
ODOT APPROVAL DATE:	8/27/99
DRAWING NUMBER:	35400260
DRAWING NAME:	QUADGUARD SYSTEM PCMB ANCHOR ASSEMBLY
REVISION DATE:	11/19/97 REV. C
ODOT APPROVAL DATE:	8/27/99

2. THE TRACC (TRINITY ATTENUATING CRASH CUSHION) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

   THE TRACC IS 21'-0" LONG AND 2'-7" WIDE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER:	SS450
DRAWING NAME:	CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS
REVISION DATE:	3/12/99 REV. 1
ODOT APPROVAL DATE:	8/27/99
DRAWING NUMBER:	SS455
DRAWING NAME:	TRACC TRANSITION TO W-BEAM MEDIAN BARRIER PLAN, ELEVATION & SECTIONS
REVISION DATE:	2/18/99
ODOT APPROVAL DATE:	8/27/99
DRAWING NUMBER:	SS461
DRAWING NAME:	TRACC TRANSITION TO CONCRETE SAFETY SHAPE BARRIER PLAN, ELEVATION & SECTIONS
REVISION DATE:	6/30/99 REV. 1
ODOT APPROVAL DATE:	8/27/99
DRAWING NUMBER:	SS462
DRAWING NAME:	TRACC TRANSITION TO CONCRETE BARRIER SINGLE SLOPE PLAN, ELEVATION & SECTIONS
REVISION DATE:	6/30/99
ODOT APPROVAL DATE:	8/27/99

3. THE BARRIER SYSTEMS, INC. TAU-II IMPACT ATTENUATOR, DISTRIBUTED BY ROAD SYSTEMS INC., SALES SUPPORT, 2183 ELM TRACE, AUSTINTOWN, OH 44515, (TELEPHONE 330-799-9291)

   THE TAU-II FOR THIS NOTE IS A PARALLEL 8-BAY UNIT (24' LONG AND 35" WIDE). INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER:	A040416
DRAWING NAME:	UNIVERSAL TAU-II PARTS LIST
REVISION DATE:	4/22/04
ODOT APPROVAL DATE:	10/16/04
DRAWING NUMBER:	A040420
DRAWING NAME:	UNIVERSAL TAU-II FOUNDATION, FLUSH MOUNT BACKSTOP
REVISION DATE:	4/28/04
ODOT APPROVAL DATE:	10/16/04
DRAWING NUMBER:	A040105
DRAWING NAME:	UNIVERSAL TAU-II FOUNDATION, PCB BACKSTOP (REFERENCED ON A04020)
REVISION DATE:	1/07/04
ODOT APPROVAL DATE:	10/16/04
DRAWING NUMBER:	B040239
DRAWING NAME:	APPLICATION, FLUSH MOUNT BACKSTOP (TYPICAL FOR PARALLEL 60 MPH UNIT)
REVISION DATE:	4/21/04
ODOT APPROVAL DATE:	10/16/04

4. THE GREAT CZ IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC.

   THIS ATTENUATOR MAY BE USED UNTIL JANUARY 1, 2007 IF THE ITEM WAS PURCHASED BEFORE OCTOBER 1, 1998 AND IS IN THE CONTRACTOR'S INVENTORY.

THE CONTRACTOR SHALL PROVIDE A REPLACEMENT UNIT WHEN AN IMPACT IS SEVERE ENOUGH TO REQUIRE COMPLETE REPLACEMENT OF THE ATTENUATOR. THE CONTRACTOR SHALL HAVE A SPARE PARTS PACKAGE AVAILABLE ON THE PROJECT SITE AT ALL TIMES WHEN AN ATTENUATOR IS IN PLACE. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE COMPLETE SPARE PARTS PACKAGE FOR EVERY ONE TO SIX UNITS INSTALLED ON THE PROJECT SITE. FOR EXAMPLE, FIVE INSTALLED UNITS REQUIRE ONE SPARE PARTS PACKAGE AND SEVEN INSTALLED UNITS REQUIRE TWO SPARE PARTS PACKAGES.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT, MAINTAIN, REPAIR, REPLACE OR RELOCATE A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 614, WORK ZONE IMPACT ATTENUATOR, (UNIDIRECTIONAL) FOR 24" WIDE HAZARDS ..... 1 EACH

CALCULATED J.R.
CHECKED N.K.

MAINTENANCE OF TRAFFIC GENERAL NOTES

MUS-70-25.98

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