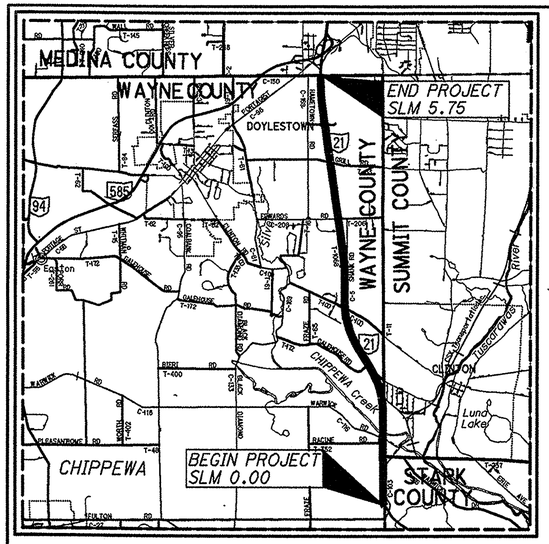


LOCATION MAP

LATITUDE: 40 °56'48" LONGITUDE: 81 °39'28"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED _____

INTERSTATE & DIVIDED HIGHWAY _____

UNDIVIDED STATE & FEDERAL ROUTES _____

OTHER ROADS _____

DESIGN DESIGNATION

CURRENT ADT (2010)	18370
DESIGN YEAR ADT (2022)	21820
DESIGN HOURLY VOLUME (2022)	2706
DIRECTIONAL DISTRIBUTION	0.62
TRUCKS (24 HOUR B&C)	0.13
Td	0.07
DESIGN SPEED	3R PROJECT
LEGAL SPEED	60

DESIGN FUNCTIONAL CLASSIFICATION:
0.00 - 1.42 RURAL PRINCIPAL ARTERIAL
1.42 - 5.75 URBAN PRINCIPAL ARTERIAL

NHS PROJECT	YES
DESIGN EXCEPTIONS	NONE REQUIRED

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

WAY-21-0.00

CHIPPEWA TWP.

WAYNE COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT IS 5.75 MILES LONG AND WILL INCLUDE PAVEMENT REPAIR, PAVEMENT PLANING, RESURFACING WITH ASPHALT CONCRETE, PAVEMENT MARKINGS, GUARDRAIL, MINOR STRUCTURE REHABILITATION AND ROCK SLIDE REPAIR WORK.

PROJECT EARTH DISTURBED AREA:	N/A ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	N/A ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A ACRES

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.

2008 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 AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (H) OF THE OHIO REVISED CODE, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

APPROVED _____ John Hart, P.E.
DATE 1/19/10 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 1-27-10 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.	PID NO.	CONSTRUCTION PROJECT NO.	RAILROAD INVOLVEMENT
E040(600)	77318		CSX

WAY-21-0.00

1 / 69

STRUCTURE/CULVERT ENGINEERS SEAL:

STATE OF OHIO
DAVID C. MOLLENSHOTT
E-50210
REGISTERED PROFESSIONAL ENGINEER

SIGNED: David C. Mollenshott
DATE: 1/15/10

ROADWAY ENGINEERS SEAL:

STATE OF OHIO
BRUCE A. DALTON
E-53790
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Bruce A. Dalton
DATE: 1/15/10

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	10/19/07	MT-35.10	4/20/01	TC-52.10	1/19/07				
BP-5.1	7/28/00	MT-95.30	7/17/09	TC-52.20	1/19/07			800	1/15/10
BP-9.1	4/15/05	MT-95.40	7/17/09	TC-61.30	4/17/09			832	5/5/09
		MT-95.50	4/17/09	TC-65.10	1/21/05				
DM-4.3	4/17/09	MT-99.20	1/16/09	TC-65.11	1/21/05				
DM-4.4	4/17/09	MT-101.70	1/16/09	TC-71.10	1/15/10				
		MT-101.90	1/16/09	TC-73.10	1/19/01				
GR-1.1	7/16/04	MT-102.20	4/17/09	TC-82.10	10/16/09				
GR-2.1	1/16/04	MT-102.30	4/17/09						
GR-3.1	10/16/09	MT-105.10	1/16/09						
GR-3.2	10/16/09								
GR-4.2	1/19/07	TC-41.10	10/19/07						
GR-6.1	4/18/03	TC-41.20	1/19/01						
		TC-42.10	1/19/07						
RM-1.1	7/18/08	TC-42.20	7/16/04						
RM-4.1	10/20/06	TC-51.11	4/20/01						

SUPPLEMENTAL SPECIFICATIONS

SPECIAL PROVISIONS

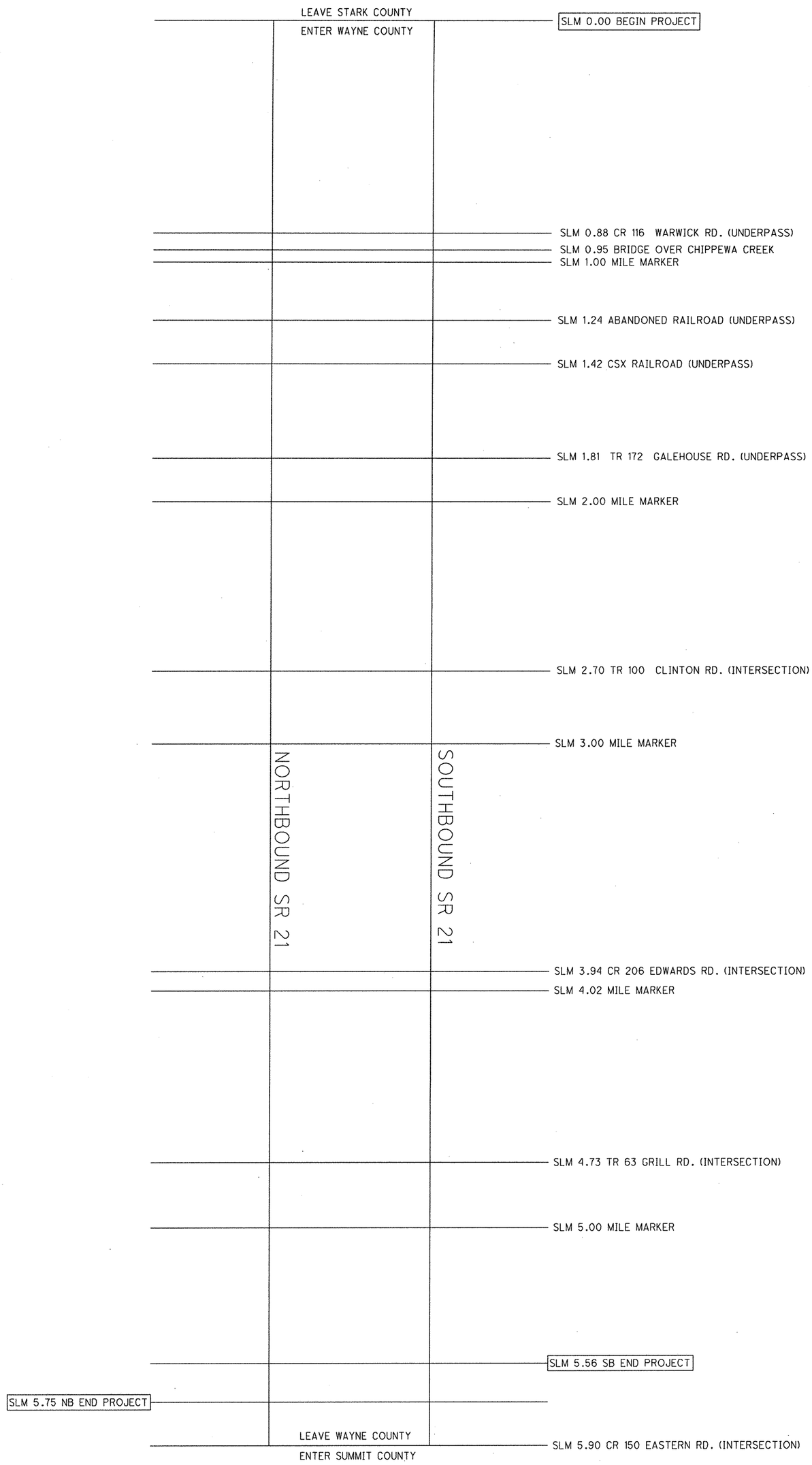
UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG
CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:

DISTRICT THREE PRODUCTION DEPARTMENT

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GT001.dgn
WORKSTATION: mschafra DATE: 1/15/2010
WAY - SR-21-0.00
100209 PID - 77318
Dist 3 4/15/2010

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GB001.dgn
WORKSTATION: ahill DATE: 12/9/2009



2/69	WAY-21-0.00	STRAIGHT LINE DIAGRAM	CALCULATED MER / CHECKED BAD

PROJECT GROUND COORDINATES - US SURVEY FEET

PRIMARY PROJECT CONTROL POINTS

PROJECT COORDINATES (FEET) ARE RELATIVE TO STATE PLANE GRID COORDINATES (METERS)
BY A PROJECT ADJUSTMENT FACTOR (PAF) MULTIPLIER OF 3.281200954

	C/L OF RIGHT OF WAY SR 21		PLAN WAY-21-0.00 (1956) USED FOR ALIGNMENT			
NAME	STATION	OFFSET(ft)	NORTH(ft)	EAST(ft)	ELEVATION(ft)	FEATURE
CP13	72+18.22	3.63	459524.5134	2204070.9800	983.65	IPINS
CP12	86+77.87	42.16	460949.2460	2203742.9080	1013.86	RSPKS
CP05	94+36.77	1011.69	462113.6685	2204258.3890	1172.39	IPINS
CP08	98+74.99	-574.22	461689.0559	2202662.4150	1036.59	RSPKS
CP11	109+48.71	7.95	462908.2325	2202588.8250	1080.70	IPINS
CP06	116+72.21	874.22	463967.6942	2202950.3270	1179.66	IPINS
CP07	117+46.28	-1502.75	462827.1154	2200863.4710	1014.72	RSPKS
CP10	121+54.76	8.67	463946.3518	2201977.8940	1117.10	IPINS
CP09	132+62.20	7.04	464979.7176	2201588.7810	1150.23	IPINS
CP03	134+98.40	937.77	465412.6001	2202440.5320	1195.61	RSPKS
CP04	138+45.00	-1164.66	465361.6264	2200310.1630	1179.27	RSPKS
CP01	143+33.08	-55.92	466027.8650	2201346.8330	1172.39	IPINS
CP02	168+35.85	-14.28	468534.4109	2201369.9770	1163.67	IPINS
CP37	299+24.39	58.93	481509.4152	2199759.3080	1185.23	IPIN
CP35	305+55.73	58.58	482140.3278	2199735.8900	1178.94	IPIN
CP102	311+49.44	-78.63	482732.3910	2199585.0070	1174.45	IPIN
CP33	312+34.60	93.89	482814.9165	2199758.7530	1173.63	IPIN
CP38	312+34.61	93.86	482814.9230	2199758.7240	1173.58	IPIN
CP100	321+43.15	-296.59	483763.1048	2199443.5050	1158.76	GOVCON

STATE PLANE GRID COORDINATES - METERS

PRIMARY PROJECT CONTROL POINTS

HORIZONTAL DATUM - NAD83(COR96), OHIO NORTH ZONE (3401) FROM CORS
VERTICAL DATUM - NAVD88 (GPS DERIVED FROM CORS)

NAME	NORTH(m)	EAST(m)	ORTHO HT(m)	DESCRIPTION
CP13	140047.659	671726.911	299.818	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT CONTROL" CAP
CP12	140481.870	671626.925	309.024	SURVEY MARK SPIKE
CP05	140836.747	671784.027	357.346	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT CONTROL" CAP
CP08	140707.339	671297.627	315.954	SURVEY MARK SPIKE
CP11	141078.903	671275.200	329.398	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT CONTROL" CAP
CP06	141401.792	671385.373	359.561	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT CONTROL" CAP
CP07	141054.182	670749.370	309.287	SURVEY MARK SPIKE
CP10	141395.287	671089.008	340.493	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT CONTROL" CAP
CP09	141710.223	670970.420	350.591	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT CONTROL" CAP
CP03	141842.151	671230.005	364.421	"SURVEY MARK" SPIKE
CP04	141826.616	670580.740	359.443	"SURVEY MARK" SPIKE
CP01	142029.663	670896.682	357.345	3/4 IRON BAR WITH 3.5" ALLUMINUM "ODOT CONTROL" CAP
CP02	142793.574	670903.736	354.689	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT CONTROL" CAP
CP37	146747.920	670412.858	361.258	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT CONTROL" CAP
CP35	146940.201	670405.721	359.343	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT CONTROL" CAP
CP102	147120.642	670359.737	357.973	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT CONTROL" CAP
CP33	147145.793	670412.689	357.725	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT CONTROL" CAP
CP38	147145.795	670412.680	357.708	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT CONTROL" CAP
CP100	147434.769	670316.612	353.192	NGS MONUMENT DISK IN CONCRETE "RICK" 1983

MONUMENTS TO BE SET DURING CONSTRUCTION

ITEM 604 MONUMENT ASSEMBLY	ITEM 604 REFERENCE MONUMENT
===========	===========
0	0

STATE ROUTE 21 MONUMENTATION / ALIGNMENT

	C/L OF RIGHT OF WAY SR 21		PLAN WAY-21-0.00 (1956) USED FOR ALIGNMENT			
NAME	STATION	OFFSET(ft)	NORTH(ft)	EAST(ft)	ELEVATION(ft)	FEATURE
SC13	106+12.28	7.96	462622.6829	2202766.7230	1070.73	IPINS
SC11	110+32.57	8.21	462979.5508	2202544.7040	1083.24	IPINS
SC10	112+30.82	8.01	463147.7113	2202439.7110	1089.04	IPINS
SC09	114+30.63	8.06	463317.3380	2202334.1040	1095.24	IPINS
SC08	116+33.10	8.11	463489.3116	2202227.4130	1101.59	IPINS
SC07	118+35.41	8.55	463663.9632	2202125.9010	1107.56	IPINS
SC06	120+28.78	9.21	463834.2423	2202034.9220	1113.50	IPINS
SC05	122+41.43	9.35	464024.6506	2201941.0420	1119.78	IPINS
SC04	124+40.66	9.29	464206.0029	2201859.3850	1125.57	IPINS
SC03	126+40.44	8.77	464390.4376	2201783.4450	1131.65	IPINS
SC02	128+41.13	8.33	464578.3096	2201713.7510	1137.52	IPINS
SC01	130+53.42	7.35	464779.4312	2201646.7540	1143.87	IPINS
CENTERLINE OF RIGHT OF WAY STATE ROUTE 21 ALIGNMENT						
CL01	20+62.75 Minus	0	450802.9254	2205648.0824	0	DEFAULT
CL02	17+62.75 Minus	0	450963.2543	2205394.5617	0	DEFAULT
CL03	8+55.58	0	453163.4898	2204149.3733	0	DEFAULT
CL04	11+55.58	0	453463.3732	2204142.4442	0	DEFAULT
CL05	65+33.86	0	458841.5674	2204112.0619	0	DEFAULT
CL06	96+93.58	0	461838.7038	2203245.7201	0	DEFAULT
CL07	115+71.31	0	463432.4814	2202252.8744	0	DEFAULT
CL08	147+57.37	0	466455.9510	2201386.4445	0	DEFAULT
CL09	169+98.32	0	468696.8997	2201384.0846	0	DEFAULT
CL10	180+72.76	0	469767.7258	2201307.5240	0	DEFAULT
CL11	288+85.69	0	480472.2831	2199780.4810	0	DEFAULT
CL12	296+89.04	0	481272.0740	2199709.0155	0	DEFAULT
CL13	308+00.44	0	482382.7311	2199668.4110	0	DEFAULT
CL14	311+78.96	0	482761.1836	2199663.9586	0	DEFAULT
CL15	311+79.01	0	482761.2375	2199663.9580	0	DEFAULT
CL16	322+43.54	0	483821.2670	2199751.8073	0	DEFAULT

STATE ROUTE 21 MONUMENTATION / ALIGNMENT

HORZ. DATUM - NAD83(CORS96), OHIO NORTH ZONE VERT. DATUM - NAVD88 GPS DERIVED

NAME	NORTH(m)	EAST(m)	ORTHO HT(m)	DESCRIPTION
SC13	140991.877	671329.417	326.359	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT TRAV." CAP
SC11	141100.639	671261.753	330.172	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT TRAV." CAP
SC10	141151.889	671229.755	331.940	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT TRAV." CAP
SC09	141203.585	671197.569	333.830	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT TRAV." CAP
SC08	141255.997	671165.053	335.765	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT TRAV." CAP
SC07	141309.225	671134.116	337.585	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT TRAV." CAP
SC06	141361.120	671106.389	339.395	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT TRAV." CAP
SC05	141419.150	671077.777	341.310	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT TRAV." CAP
SC04	141474.420	671052.891	343.074	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT TRAV." CAP
SC03	141530.630	671029.747	344.928	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT TRAV." CAP
SC02	141587.887	671008.506	346.717	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT TRAV." CAP
SC01	141649.182	670988.088	348.652	5/8" IRON BAR WITH YELLOW PLASTIC "ODOT TRAV." CAP
CENTERLINE OF RIGHT OF WAY STATE ROUTE 21 ALIGNMENT				
CL01	137389.612	672207.559	0.000	TS
CL02	137438.475	672130.294	0.000	SC
CL03	138109.033	671750.802	0.000	CS
CL04	138200.427	671748.691	0.000	ST
CL05	139839.520	671739.431	0.000	PC
CL06	140752.947	671475.399	0.000	PT
CL07	141238.677	671172.813	0.000	PC
CL08	142160.129	670908.754	0.000	PT
CL09	142843.095	670908.035	0.000	PC
CL10	143169.447	670884.702	0.000	PT
CL11	146431.837	670419.311	0.000	PC
CL12	146675.586	670397.530	0.000	PT
CL13	147014.077	670385.155	0.000	PC
CL14	147129.417	670383.798	0.000	PT
CL15	147129.433	670383.798	0.000	PC
CL16	147452.495	670410.572	0.000	PT

TOTAL MONUMENTS - QUANTITY CARRIED TO GENERAL SUMMARY

PROJECT ADJ. FACTOR = 3.281200954 State Plane Grid (meters) to Project Ground (US Survey Feet)
ENG./METRIC CONV.= 3.280833333 US SURVEY FOOT TO METERS CONVERSION FACTOR
UNITLESS FACTOR = 1.000112051 State Plane Grid to Project Ground (same units)

PAF BASED ON:	Elevation (FT)	Degrees	Minutes	Seconds	GRID SCALE FACTOR
MEAN PROJECT LATITUDE =		40	56	11	0.999941763
MEAN PROJECT ELEVATION =	1125				

State Plane Grid Coordinates derived through a series of Static, Rapid Static, & VRS RTK GPS observations.
Points having prefix 'CP' are project control points. Point CP01 (Project Base Point) located by means of averaging multiple 2+ hour Static GPS sessions solved through the National Geodetic Survey's Online Positioning User Service (OPUS). Subsiquent control points positioned by overlapping Rapid Static GPS observations with Static base sessions processed through Trimble Geomatics Office (TGO) software radiating vectors from CP1 to all control points.
Points with prefix 'MB" and 'MN' are centerline & reference monuments located.
Points with prefix 'RE' are existing Right of Way corners and points with prefix 'RP' are Right of Way Pin Monuments set this project.
Grid coordinates and distances (meters) values are multiplied by the PAF to obtain Project ground values in feet.

0 HORIZONTAL SCALE IN FEET

PID NO. 77318

R/W DESIGNER JEK
R/W REVIEWER

SURVEY CONTROL INFORMATION

WAY - 21 - 0.00

GENERAL

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

TELEPHONE
AT&T, CONSULTANT FOR AT&T
HLG ENGINEERING & SURVEYING
5980-G WILCOX
DUBLIN, OHIO 43106
614-760-8320

TELEPHONE
VERIZON BUSINESS
(FORMERLY MCI TELECOMMUNICATIONS)
120 RAVINE STREET
AKRON, OHIO 44303
330-253-8267

TELEPHONE
AT&T OF OHIO (FORMERLY SBC)
50 WEST BOWERY STREET, 4TH FLOOR
AKRON, OHIO 44308
330-384-8057

TELEPHONE
EMBARQ (FORMERLY SPRINT)
2025 AKRON ROAD
WOOSTER, OHIO 44691
330-262-1107

TELEPHONE
SPRINT (LONG DISTANCE)
11370 ENTERPRISE PARK DR.
SHARONVILLE, OH 45241
513-612-4204

CABLE
TIME WARNER CABLE
8385 BAVARIA ROAD
MACEDONIA, OHIO 44056
330-963-3620 EXT-114

GAS
DOMINION EAST OHIO
320 SPRINGSIDE DR., SUITE 320
AKRON, OHIO 44333

GAS
MARATHON ASHLAND PIPELINE
539 SOUTH MAIN STREET, RM 193M
FINDLAY, OHIO 45840
419-421-2211

GAS
BP OIL COMPANY
22782 STATE ROUTE 12
FOSTORIA, OH 44830-9682
419-435-3789

ELECTRIC
OHIO EDISON COMPANY
2600 SOUTH ERIE STREET
MASILLON, OHIO 44646
330-830-7085

ELECTRIC
OHIO EDISON TRANSMISSION
76 SOUTH MAIN STREET
AKRON, OHIO 44308
330-384-4835

CABLE
MASILLON CABLE TV
P.O. BOX 1000
MASILLON, OHIO 44348-1000
330-833-4134

TELEPHONE
DOYLESTOWN TELEPHONE CO.
28 EAST MARION STREET
DOYLESTOWN, OHIO 44230
330-658-6666

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ROUTINE MAINTENANCE

BETWEEN THE TIME THAT BIDS ARE TAKEN AND THE START OF CONSTRUCTION, THE MAINTAINING AGENCY MAY ENTER UPON THE PROJECT AND PERFORM ROUTINE MAINTENANCE SUCH AS CRACK SEALING, PATCHING, AND BERM AND SHOULDER REPAIR. THE EFFECTS, IF ANY, OF THE PERFORMANCE OF ROUTINE MAINTENANCE SHALL BE CONSIDERED AS INHERENT IN WORK OF THE CHARACTER PROVIDED FOR IN THE PLAN AND THE RESULTING CONDITIONS SHALL NOT BE CONSIDERED AS DIFFERING MATERIALLY FROM THOSE EXISTING AT THE TIME BIDS WERE TAKEN.

ROADWAY

ITEM 209 - LINEAR GRADING

THE CONTRACTOR IS REQUIRED TO PERFORM LINEAR GRADING ON THE GRADED SHOULDER. IT IS ANTICIPATED THAT THERE ARE AREAS WHERE THE GRADED SHOULDER IS AT A HIGHER ELEVATION THAN THE ADJACENT PROPOSED PAVEMENT. A 10:1 SLOPE SHALL BE ESTABLISHED, OR AS DIRECTED BY THE ENGINEER, WHEN PERFORMING ITEM 209 LINEAR GRADING. THE INTENT IS TO PROVIDE AN UNOBSTRUCTED AND POSITIVE FLOW OF STORM WATER FROM THE PAVEMENT TO THE DITCH. THE LINEAR GRADING SHALL BE PERFORMED AFTER THE PAVEMENT PLANING HAS BEEN COMPLETED AND BEFORE THE SURFACE COURSE IS PLACED. ALL LABOR AND EQUIPMENT NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER MILE FOR ITEM 209 LINEAR GRADING.

ITEM 604 - CASTINGS ADJUSTED TO GRADE

THE CASTING TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING CASTING TO THE SATISFACTION OF THE ENGINEER. IT IS NOT INTENDED TO PLACE NEW FRAMES WHERE NONE CURRENTLY EXIST. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

ITEM 604 - MONUMENT BOX ADJUSTED TO GRADE

THE MONUMENT BOX TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING ADJUSTABLE FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING MONUMENT BOX TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT ADJUSTABLE FRAMES.

APPROXIMATE LOCATION OF KNOWN CASTINGS THAT MAY NEED ADJUSTING

MANHOLE - 1 @ EDWARDS RD. IN MEDIAN

MONUMENT BOX - 1 @ SLM 1.24 (CENTERLINE MONUMENT AT ABANDONED RR BRIDGE)
1 @ SLM 1.30 (CENTERLINE MONUMENT AT ABANDONED RR BRIDGE)

CATCH BASIN - 1 @ EDWARDS RD. IN MEDIAN
1 @ CLINTON RD. SOUTHBOUND LT. TURN LANE

REFLECTED AND CARRIED TO THE GENERAL SUMMARY FROM SHEET 16.

PAVEMENT

PAVEMENT CORING INFORMATION

CO.	RTE.	SLM	ASPHALT DEPTH (IN.)	CONCRETE DEPTH (IN.)	WHEEL TRACK / SHOULDER	DIRECTION	YEAR CORED
WAY	21	0.40	4.5	0.0	SHOULDER	NB	2007
WAY	21	0.40	3.5	9.0	OUTSIDE	SB	2007
WAY	21	0.40	3.0	9.0	OUTSIDE	NB	2007
WAY	21	0.40	3.5	9.0	INSIDE	SB	2007
WAY	21	0.40	3.0	9.0	INSIDE	NB	2007
WAY	21	0.70	4.5	0.0	SHOULDER	SB	2007
WAY	21	2.15	4.0	0.0	SHOULDER	NB	2007
WAY	21	2.15	5.5	0.0	SHOULDER	SB	2007
WAY	21	2.15	3.0	9.0	OUTSIDE	NB	2007
WAY	21	2.15	3.0	9.0	OUTSIDE	SB	2007
WAY	21	2.15	3.0	9.0	INSIDE	NB	2007
WAY	21	2.15	3.5	9.0	INSIDE	SB	2007
WAY	21	3.00	4.0	0.0	SHOULDER	NB	2007
WAY	21	3.00	2.8	9.0	OUTSIDE	NB	2007
WAY	21	3.00	3.0	9.0	OUTSIDE	SB	2007
WAY	21	3.00	3.0	9.0	INSIDE	NB	2007
WAY	21	3.00	2.8	9.0	INSIDE	SB	2007
WAY	21	3.50	4.0	0.0	SHOULDER	SB	2007
WAY	21	5.15	4.5	0.0	SHOULDER	NB	2007
WAY	21	5.15	3.3	9.0	OUTSIDE	NB	2007
WAY	21	5.15	3.5	9.0	OUTSIDE	SB	2007
WAY	21	5.15	3.5	9.0	INSIDE	NB	2007
WAY	21	5.15	3.0	9.0	INSIDE	SB	2007
WAY	21	5.70	3.0	0.0	SHOULDER	NB	2007

ITEM 253, PAVEMENT REPAIR, AS PER PLAN
ITEM 253, PAVEMENT REPAIR, MISC.: PARTIAL DEPTH

THESE ITEMS OF WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING PAVEMENT WHICH MAY BE ASPHALT, CONCRETE, OR A COMBINATION OF EACH, IN AREAS OF EXISTING PAVEMENT FAILURE. CORING HAS BEEN PERFORMED TO HELP DETERMINE THE COMPONENTS THAT MAY BE ENCOUNTERED DURING THIS ITEM OF WORK. THE PAVEMENT CORING INFORMATION IS SHOWN ON THIS SHEET.

THE ENGINEER SHALL DESIGNATE THE LOCATIONS AND LIMITS OF THE AREAS TO BE REPAIRED. PAVEMENT REPAIR SHALL BE PERFORMED BEFORE PAVEMENT PLANING OF THE MAINLINE. THE REPAIR AREAS SHALL BE SAW CUT AND EXCAVATED TO PROVIDE STRAIGHT AND VERTICAL SURFACES AROUND THE PERIMETER OF THE REPAIR AREA. PAVEMENT PLANING MAY BE USED AS AN ALTERNATIVE TO SAW CUTTING AND EXCAVATING. THE PAVEMENT SHALL BE REMOVED WITHIN THE DESIGNATED AREAS BY METHODS WHICH WILL NOT DAMAGE ADJACENT PAVEMENT. FOR THE PARTIAL DEPTH REPAIRS, THE DEPTH OF REMOVAL SHALL BE SUFFICIENT TO REMOVE ALL DETERIORATED ASPHALT CONCRETE PAVEMENT WITH A MAXIMUM DEPTH OF 5" (TO TOP OF EXISTING 9" REINFORCED CONCRETE PAVEMENT), AND AN AVERAGE DEPTH OF 3.5" AND AN AVERAGE WIDTH OF 5 FT, FOR ESTIMATING PURPOSES. MOST PARTIAL DEPTH REPAIRS ARE TRANSVERSE REPAIRS AT CONCRETE JOINTS OR MID-SLAB CRACKS. FOR THE FULL DEPTH REPAIRS, THE AVERAGE DEPTH IS 12.5". THE INTENT OF THE FULL DEPTH REPAIRS ARE TO ONLY REPAIR THE WORST JOINTS THAT SHOW SIGNS OF PUMPING. OTHER DETERIORATED JOINTS SHALL HAVE ONLY PARTIAL DEPTH REPAIRS PERFORMED. THE MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17.

THE CONTRACTOR SHALL BE CAPABLE OF PERFORMING PAVEMENT REPAIRS 2 FEET WIDE.

REPLACEMENT MATERIAL SHALL BE ITEM 301, AS PER PLAN OR ITEM 448 TYPE 2 MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 3" AND 13" WITH A MAXIMUM PAVEMENT LIFT OF 6.5". ITEM 448 TYPE 2 CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 0" AND 5" WITH A MAXIMUM PAVEMENT LIFT OF 3". THE CONTRACTOR HAS THE OPTION OF USING EITHER ITEM 301, AS PER PLAN OR ITEM 448 TYPE 2 MATERIAL WHEN THE PAVEMENT REPAIR IS BETWEEN 3" AND 5" DEEP. ITEM 448 TYPE 2 MATERIAL SHALL BE PG64-28 FOR HEAVY MIX DESIGN PAVEMENTS. ALL EXISTING PAVEMENT AREAS WHICH WILL BE IN CONTACT WITH THE PAVEMENT REPAIR SHALL BE CLEANED AND COATED PER CMS 401.14, USING AN ASPHALT MATERIAL COMPLYING WITH 407.02. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT REPAIR. FOR PAYMENT PURPOSES ITEM 253 PAVEMENT REPAIR, MISC.: PARTIAL DEPTH IS TO BE USED FOR PARTIAL DEPTH ASPHALT CONCRETE REMOVAL AND REPLACEMENT ABOVE THE CONCRETE PAVEMENT AND ITEM 253 PAVEMENT REPAIR, AS PER PLAN IS FOR FULL DEPTH REPLACEMENT WHICH INCLUDES SAW CUTTING THE CONCRETE PAVEMENT, REMOVAL, AND REPLACEMENT WITH ASPHALT CONCRETE. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CUBIC YARD, (BY TICKET WEIGHT CONVERSION), OF ITEM 253, PAVEMENT REPAIR, AS PER PLAN OR ITEM 253 PAVEMENT REPAIR, MISC.: PARTIAL DEPTH. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 253 PAVEMENT REPAIR, MISC.: PARTIAL DEPTH 1800 CU. YD.
ITEM 253 PAVEMENT REPAIR, AS PER PLAN 100 CU. YD.

ITEM 617, COMPACTED AGGREGATE, AS PER PLAN

THIS ITEM OF WORK SHALL CONFORM TO ITEM 617 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS BOOK WITH EXCEPTION OF 617.02 (MATERIALS).

THE MATERIAL ON THIS PROJECT SHALL BE THE ASPHALT CONCRETE GRINDINGS RESULTING FROM ITEM 254. THE GRINDINGS USED FOR THIS WORK ARE TO BE PLACED AND COMPACTED AS DESCRIBED IN 617.05 WITH SPECIAL CARE TO CREATE PROPER COMPACTION. 100% OF THIS MATERIAL SHALL PASS A 1.5 INCH SIEVE. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO MEET THE TYPICAL SECTIONS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS REQUIRED TO APPLY THE ITEM 408 PRIME COAT WITHIN 5 CALENDAR DAYS OF PLACING THE COMPACTED AGGREGATE, AS PER PLAN.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER CU. YD. OF ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

CALCULATED MJS CHECKED BAD

GENERAL NOTES

WAY-21-0.00

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WORKSTATION:mschafra DATE:1/15/2010

PAVEMENT (CONTINUED)

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE

THE INTENT OF THE PLANING IS TO MILL 1.75 INCHES DEEP.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE TO ALL CATCH BASINS AND INLETS.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE EXCEPT AT INTERSECTIONS. IF THE PLANED MAINLINE IS EXPOSED TO TRAFFIC, THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE OF $1300 PER CALENDAR DAY.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT PLANING, ASPHALT CONCRETE. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SQUARE YARD OF PAVEMENT PLANING, ASPHALT CONCRETE.

ITEM 254 PATCHING PLANED SURFACE

AN ESTIMATED QUANTITY OF ITEM 254, PATCHING PLANED SURFACE HAS BEEN SET UP TO BE USED AS DIRECTED BY THE ENGINEER AS DESCRIBED IN CMS 254.04. THE LIMIT OF THE PATCHING DEPTH IS 0 TO 2 IN.

ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W-8-1-36) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

CARE SHALL BE TAKEN TO MATCH EXISTING PAVEMENT ELEVATIONS AT EXISTING PAVED BERMS, DRIVES, INTERSECTIONS, ETC.

INTERSECTIONS

INTERSECTIONS SHALL BE PLANED AND PAVED AS PER THE TABLE BELOW (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS).

ANY HAZARD OR UNSAFE CONDITION RESULTING FROM THE ABOVE WORK MUST BE CORRECTED IMMEDIATELY, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS REMINDED OF SECTIONS 105.01, 107.07 & 614.02A OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

INTERSECTION	SIDE	DISTANCE BACK FROM EDGE OF SR 21
GRILL RD.	LT.	15'
GRILL RD.	RT.	16'
EDWARDS RD.	LT.	16'
EDWARDS RD.	RT.	16'
CLINTON RD.	LT.	8'
CLINTON RD.	RT.	19'

ITEM 407, TACK COAT
ITEM 407, TACK COAT FOR INTERMEDIATE COURSE

AS PER 407.06 THE APPLICATION RATES SHALL BE 0.10 GAL. PER SQ. YD. AFTER THE 1.75" PAVEMENT PLANING AND SHALL BE 0.05 GAL PER SQ. YD. AFTER PLACEMENT OF ITEM 301, FOR ESTIMATING PURPOSES ONLY. THE RATE OF APPLICATION SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. A COMPLETE PAVEMENT SURFACE COVERAGE SHALL BE REQUIRED. AREAS OF TACK STRIPPED BY CONSTRUCTION EQUIPMENT OR TRAFFIC SHALL BE RE-COATED PRIOR TO PLACING ASPHALT CONCRETE. ALL COSTS AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER GALLON FOR ITEM 407, TACK COAT AND ITEM 407 TACK COAT FOR INTERMEDIATE COURSE.

ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN

IN ADDITION TO ITEM 623, THE CONTRACTOR SHALL PROVIDE FIELD SURVEYS FOR ALL ASPHALT CONCRETE TRANSITIONS. SEE PROFILE CORRECTION AT STRUCTURES DETAILS. FIELD SURVEY SHALL CONSIST OF ELEVATIONS TAKEN AT THE BRIDGE EXPANSION JOINT (WHERE APPLICABLE) AND EXTENDING AS SHOWN ON THE DETAILS. ELEVATIONS AFTER RESURFACING SHALL BE TAKEN ALONG EACH EDGE LINE AND LANE LINE AND SHALL BE TAKEN AT THE FOLLOWING DISTANCES: 0 FEET, 5 FEET, 10 FEET, 25 FEET, THEN EVERY 25 FEET AND AT THE END OF THE TRANSITION. THE CONTRACTOR SHALL PLOT THESE AT EACH LOCATION AT A SCALE OF 1 INCH EQUALS 10 FOOT HORIZONTALLY AND 1 INCH EQUALS 2 FOOT VERTICALLY. THIS SURVEY SHALL BE DONE AND THE PLOTTED RESULTS GIVEN TO THE ENGINEER AS SOON AS POSSIBLE AFTER THE PLACEMENT OF THE SURFACE COURSE.

PROFILE CORRECTION AT STRUCTURES

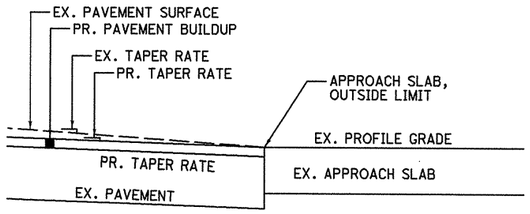
THE CONTRACTOR SHALL CORRECT THE PAVEMENT PROFILE WITH THE RESURFACTING OPERATIONS WHILE ENSURING A SMOOTH TRANSITION FROM THE PROPOSED TREATMENT ON THE APPROACH SLABS (OUTSIDE LIMITS) TO THE PROPOSED ROADWAY PAVEMENT BUILDUP.

THE MINIMUM DISTANCE BETWEEN CONSECUTIVE GRADE BREAKS IS:
100' WHERE THE POSTED SPEED IS 50 MPH OR GREATER
50' WHERE THE POSTED SPEED IS LESS THAN 50 MPH

THE FOLLOWING ARE TAPER RATES, BASED ON THE EXISTING PROFILE GRADE OF THE ROADWAY, WHICH SHALL BE MET TO ENSURE A SMOOTH TRANSTION.

SPEED	TAPER RATE
25	55:1
30	80:1
35	110:1
40	140:1
45	190:1
50	230:1
55	250:1
60	340:1
65	340:1
70	400:1

THE ABOVE WORK TO CORRECT THE PROFILE OF THE ROAD SHALL INCLUDE ALL LABOR AND EQUIPMENT NEEDED TO PERFORM THE WORK AND SHALL BE PAID FOR UNDER ITEM 623 CONSTRUCTION LAYOUT STAKES, AS PER PLAN.



ITEM SPECIAL - BERM REPAIR, FLEXIBLE

THIS ITEM OF WORK SHALL BE PERFORMED BEFORE THE PROPOSED 1.75" PLANING AND IT SHALL CONSIST OF PARTIAL DEPTH REPAIR OF THE EXISTING ASPHALT PAVED BERM IN AREAS EXHIBITING SEVERE CRACKING, DETERIORATION, AND SURFACE DISTORTIONS. THE ENGINEER SHALL DESIGNATE THE LOCATIONS AND LIMITS OF THE AREAS TO BE REPAIRED.

THE MATERIAL WITHIN THE DESIGNATED AREAS SHALL BE REMOVED BY METHODS WHICH WILL NOT DAMAGE THE ADJACENT BERM. THE DEPTH OF REMOVAL SHALL BE SUFFICIENT TO REMOVE ALL BROKEN AND LOOSE ASPHALT OR PRIMED AGGREGATE, BUT TO A MINIMUM OF 3 INCHES BELOW THE ADJACENT BERM THROUGHOUT THE REPAIR AREA.

REPLACEMENT MATERIAL SHALL BE ITEM 301, AS PER PLAN OR ITEM 448 TYPE 2 MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 3" AND 12" WITH A MAXIMUM PAVEMENT LIFT OF 6". ITEM 448 TYPE 2 CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 0" AND 5" WITH A MAXIMUM PAVEMENT LIFT OF 3". THE CONTRACTOR HAS THE OPTION OF USING EITHER ITEM 301, AS PER PLAN OR ITEM 448 TYPE 2 MATERIAL WHEN THE PAVEMENT REPAIR IS BETWEEN 3" AND 5" DEEP. ITEM 448 TYPE 2 MATERIAL SHALL BE PG64-28 FOR HEAVY MIX DESIGN PAVEMENTS. ALL EXISTING PAVEMENT AREAS WHICH WILL BE IN CONTACT WITH THE BERM REPAIR SHALL BE CLEANED AND COATED PER CMS 401.14, USING AN ASPHALT MATERIAL COMPLYING WITH 407.02. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER.

THE NUMBER OF CUBIC YARDS TO BE PAID SHALL BE FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE WORK, INCLUDING THE TACK COAT AND ASPHALT CONCRETE. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER TO MAKE REPAIRS ON THE PAVED BERM.

ITEM SPECIAL - BERM REPAIR, FLEXIBLE 500 CU YD

CALCULATED M.JS CHECKED BAD

GENERAL NOTES

WAY-21-0.00

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MAINTENANCE OF TRAFFIC

ITEM 614, MAINTAINING TRAFFIC: GENERAL

ON SR 21 ONE 11 FOOT LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES. ON SIDE ROADS, INCLUDING THOSE UNDER SR 21 WHERE STRUCTURE WORK IS BEING DONE, NO DETOURS ARE ALLOWED AND 1 LANE OF TRAFFIC SHALL BE MAINTAINED USING FLAGGERS. WHERE THERE ARE INTERSECTIONS ON SR 21, IT IS INTENDED TO MINIMIZE THE AMOUNT OF TIME THE TURN LANES ARE NOT OPERATIONAL DURING THE PHASE OF WORK. WORK AT THE INTERSECTIONS HAVE TIME LIMITATIONS WHICH ARE LISTED IN THE INTERIM COMPLETION DATES NOTES.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, PLAN DETAILS, STANDARD DRAWINGS, AND AS OUTLINED IN THE CONSTRUCTION AND MAINTENANCE SECTION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES CURRENT EDITION WITH THE LATEST REVISIONS. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED ON THIS PLAN.

INTERIM COMPLETION DATES

FOR ALL WORK, EXCEPT RPM'S, GUARDRAIL AND THE FINAL PAVEMENT MARKINGS, AT ALL OF THE INTERSECTIONS SHALL BE LIMITED TO THREE (3) CONSECUTIVE CALENDAR DAYS PER PHASE OF WORK ON SR 21 AS DISCUSSED IN THE SEQUENCE OF CONSTRUCTION (SR 21) NOTES ON SHEET 7. THE LIMITS ON SR 21 AT EDWARDS ROAD ARE MEASURED FROM THE CENTER OF THE INTERSECTION AND 1000 FEET IN EACH DIRECTION ON SR 21. THE LIMITS ON THE OTHER INTERSECTIONS, EXCLUDING EDWARDS ROAD, ARE MEASURED FROM THE CENTER OF THE INTERSECTION AND 400 FEET ALONG THE TURN LANE ON SR 21. FAILURE OF THE CONTRACTOR TO MEET THESE REQUIREMENTS WILL RESULT IN THE CONTRACTOR BEING ASSESSED A DISINCENTIVE OF $1300 PER CALENDAR DAY.

ITEM 614, MAINTAINING TRAFFIC

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHEN THEY ARE NOT APPLICABLE, WITH THE APPROVAL OF THE ENGINEER.

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OMUTCD, AND SUCH FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR TRAFFIC, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

ALL MAINTENANCE OF TRAFFIC SIGNS ARE PAID UNDER ITEM 614 MAINTAINING TRAFFIC.

BUTT JOINTS

BUTT JOINTS SHALL NOT BE CUT AND LEFT OPEN TO TRAFFIC. THEY SHALL BE FILLED IN WITH A TEMPORARY ASPHALT CONCRETE WEDGE USING ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.

CONSTRUCTION "BUMP" (W8-1-36) AND "ADVISORY SPEED" (W13-1-24) SIGNS SHALL BE ERECTED AND MAINTAINED DURING THE PERIOD THE BUTT JOINT IS LEFT OPEN. THESE SIGNS SHALL BE PAID FOR UNDER THE LUMP SUM ITEM FOR ITEM 614 MAINTAINING TRAFFIC.

WORK OPERATIONS

IN ADDITION TO THE REQUIREMENTS OF SECTION 614 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS THE FOLLOWING SHALL APPLY:

THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAVEL WHERE PRACTICAL. A FLAGGER SHALL BE USED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S VEHICLES AND EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT. AMBER LIGHT SHALL BE VISIBLE TO ALL DIRECTIONS OF TRAFFIC A MINIMUM OF 0.25 MILE.

THE CONTRACTOR SHALL ARRANGE CONSTRUCTION OPERATIONS SO AS TO PREVENT ANY INTERFERENCE TO THE CONTINUOUS FLOW OF TRAFFIC. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO THE CLOSED LANES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

THE CONTRACTOR IS ALLOWED TO WORK AT NIGHT. FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHT TIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE HIGHWAY. TO INSURE THE ADEQUACY OF THE FLOODLIGHTING PLACEMENT PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE. 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 CONTRACT PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY A MIN. OF 6 FT BEHIND GUARDRAIL OR 30 FT FROM THE NEAREST EDGE OF PAVEMENT WHEN VARIOUS OPERATIONS ARE SCHEDULED TO CONTINUE THE NEXT WORKDAY. ON WEEKENDS OR AT OTHER TIMES OF SUSPENSION OF WORK, THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA OUTSIDE OF THE ROADWAY RIGHT-OF-WAY. THE LOCATION SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA.

ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

TEMPORARY WEDGES AT INTERSECTIONS, PAVEMENT LAYER ENDS, APPROACH SLABS OR BRIDGE DECKS ARE TO BE CONSTRUCTED AS PER STANDARD DRAWING BP-3.1.

THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PAVEMENT THROUGHOUT THE PROJECT UNDER ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC DURING THE PERIOD FROM THE START OF WORK TO THE COMPLETION OF ALL WORK.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR MAINTENANCE OF TRAFFIC.

ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 100 CU YD

ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN

ON THIS PROJECT ITEM 301 COARSE AGGREGATE SHALL HAVE A TWO FACE CRUSH COUNT OF 75% PER ASTM D 5821. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT WILL BE 30%. ENSURE THAT A MINIMUM OF 50% OF THE VIRGIN FINE AGGREGATE USED IN THE ITEM 301 IS SAND MANUFACTURED FROM STONE OR AIR COOLED SLAG.

ALL COSTS TO BE INCLUDED IN ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

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

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.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (LEO'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. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEO'S SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES AND PROVIDE 72 HOURS ADVANCE NOTICE AS REQUIRED BY THE HIGHWAY PATROL LISTED BELOW:

WAYNE COUNTY
WOOSTER PATROL POST
1786 DOVER ROAD
WOOSTER, OH 44691
PHONE: (330) 264-0575
FAX: (330) 262-5910

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 FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 120 HOURS

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

IF THE CONTRACTOR WISHES 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.

MAINTENANCE OF TRAFFIC SCHEME

THE CONTRACTOR SHALL SCHEDULE THEIR WORK AND METHODS IN ORDER TO MEET THE INTENT OF THE PLANS. THE PAVEMENT SURFACES TO BE USED BY THE TRAVELING PUBLIC SHALL BE ABLE TO DRAIN FREELY. ALL COSTS TO MAINTAIN THE ROADWAY AS PER THE CONSTRUCTION AND MATERIALS SPECIFICATIONS AND THE PLANS SHALL BE INCLUDED IN ITEM 614 LUMP SUM MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED.

ITEM 614, WORK ZONE MARKING SIGN

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR TEMPORARY WORK ZONE MARKING SIGNS PER THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS, 614.04.

WORK ZONE MARKING SIGN: (OW-167-36) NO EDGE LINE = 16 EACH

CALCULATED MJS CHECKED BAD

MAINTENANCE OF TRAFFIC NOTES

WAY-21-0.00

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WORKSTATION:mschafro DATE:1/15/2010

MAINTENANCE OF TRAFFIC (CONTINUED)

614 WORK ZONE INCREASED PENALTIES SIGN

R11-H5a SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

THE SIGNS SHALL BE DUAL MOUNTED ON THE MAINLINE AND PLACED PER STANDARD CONSTRUCTION DRAWING MT-95.50.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19.

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT BID PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN 20 EACH

ITEM 614, WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A CERTIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS MAY BE CERTIFIED FROM ONE OF THE FOLLOWING ORGANIZATIONS:

1. AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA), PHONE NUMBER 1-800-272-8772, CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS).

2. NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC CONTROL, PHONE NUMBER 1-703- 235-0528.

3. THE OHIO CONTRACTORS ASSOCIATION, TRAFFIC CONTROL SUPERVISOR (OCA/TCS) WORK ZONE CLASS, ONLY IF TAKEN AFTER MAY 5, 2004, PHONE NUMBER 1-614-599-7915.

4. OHIO LABORERS TRAINING, TRAFFIC CONTROL SUPERVISORS CLASS, PHONE NUMBER 1-740-599-7915.

A COPY OF EACH WTS'S CERTIFICATION AND 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7) THE CONTRACTOR MAY DESIGNATE AN ALTERNATE WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY. EACH WTS SHALL HAVE A CURRENT WTS CERTIFICATION (WITH AN EXPIRATION DATE NO MORE THAN 5 YEARS FROM THE DATE OF ISSUE) FROM ANY OF THE APPROVED ORGANIZATIONS.

THE WTS POSITION HAS THE RESPONSIBILITY OF MONITORING TRAFFIC CONTROL DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS, AND BE ABLE TO BE ON SITE FOR ALL EMERGENCY TRAFFIC CONTROL NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF AND BE PREPARED TO EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TRAFFIC CONTROL DEVICES.

2. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TRAFFIC CONTROL MANAGEMENT IS DISCUSSED.

3. BE AVAILABLE FOR MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST OR WITHIN 36 HOURS.

4. BE AWARE OF, AND COORDINATE IF NECESSARY, ALL TRAFFIC CONTROL OPERATIONS, INCLUDING THOSE OF SUBCONTRACTORS AND SUPPLIERS.

5. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). A WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEO'S WHILE THEY ARE ON THE PROJECT.

ITEM 614, WORKSITE TRAFFIC SUPERVISOR (CONTINUED)

6. COORDINATE MEETINGS WITH ODOT PERSONNEL, LEO'S AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS WORK ZONE TRAFFIC CONTROL.

7. ENSURE COMPLIANCE WITH THE CONTRACT DOCUMENTS FOR SIGNS, BARRICADES, TEMPORARY CONCRETE BARRIER, PAVEMENT MARKINGS, PORTABLE MESSAGE SIGNS, AND OTHER TRAFFIC CONTROL DEVICES ON A DAILY BASIS; AND FACILITATE ANY CORRECTIVE ACTION NECESSARY.

8. NOTIFY THE CONTRACTOR OF THE NEED FOR CLEANING AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES, INCLUDING THE COVERING AND REMOVAL OF INAPPLICABLE SIGNS.

9. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TRAFFIC CONTROL DEVICES AND/OR TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, A WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:

A. INITIAL TRAFFIC CONTROL SETUP (DAY AND NIGHT REVIEW).
B. DAILY TRAFFIC CONTROL SETUP AND REMOVAL.
C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TRAFFIC CONTROL SETUP.
D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA.
E. REMOVAL OF TRAFFIC CONTROL DEVICES AT THE END OF A PHASE OR PROJECT.
F. ALL OTHER EMERGENCY TRAFFIC CONTROL NEEDS.

10. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 9 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORK DAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TRAFFIC CONTROL MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THIS DOCUMENT CAN BE FOUND IN THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION INSPECTION FORMS MANUAL DATED 10/15/06 OR CURRENT REVISION.

11. VERIFY THAT ALL FLAGGING OPERATIONS ARE BEING CONDUCTED PER THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

12. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND APPLICABLE STANDARDS AND SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

THE DEPARTMENT WILL NOT PAY THE UNIT PRICE BID FOR THE WTS FOR ANY DAY ON WHICH THE CONTRACTOR FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. SHOULD THE CONTRACTOR'S FAILURE TO PERFORM ANY OF THE DUTIES DESCRIBED ABOVE RESULT IN A MAINTENANCE OF TRAFFIC SAFETY ISSUE, THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT FOR ITEM 614 MAINTENANCE OF TRAFFIC FROM THE CONTRACTOR'S NEXT SCHEDULED ESTIMATE.

IF THREE OR MORE FAILURES TO PERFORM THE DUTIES SET FORTH ABOVE OCCUR, THE WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR THE WORKSITE TRAFFIC SUPERVISOR:

ITEM 614 WORKSITE TRAFFIC SUPERVISOR 5 MONTHS

CONSTRUCTION EQUIPMENT MEDIAN CROSSING

CONSTRUCTION EQUIPMENT SHALL CROSS THE MEDIAN ONLY AT THE EXISTING INTERSECTIONS AND U-TURN CROSSOVERS AND AT OTHER ADDITIONAL LOCATIONS APPROVED BY THE ENGINEER. A MAXIMUM OF TWO (2) ADDITIONAL EQUIPMENT CROSSINGS MAY BE ALLOWED.

THE CONTRACTOR SHALL BE RESPONSIBLE, AT HIS EXPENSE, FOR THE RESTORATION OF THE ADDITIONAL EQUIPMENT CROSSINGS TO A CONDITION AT LEAST EQUAL TO THAT EXISTING PRIOR TO HIS WORK OPERATIONS.

SEQUENCE OF CONSTRUCTION (SR 21)

THE INTENT IS TO MINIMIZE TRAFFIC BACKUPS AND PERFORM THE WORK AS QUICKLY AS POSSIBLE. THE SEQUENCE OF CONSTRUCTION SHALL BE AS FOLLOWS:

PHASE 1:
1. MILL AND FILL THE 3 FOOT WIDE MEDIAN SIDE SHOULDER.
2. APPLY A TEMPORARY EDGE LINE 2 FEET OUTSIDE THE NORMAL LOCATION OF THE EDGE LINE.
3. CLOSE THE RIGHT LANE AND DIVERT TRAFFIC INTO THE PASSING LANE AND MEDIAN SIDE SHOULDER AND BEGIN WORK IN THE ROCK FALL AREA. THE CONTRACTOR MAY PERFORM WORK ON THE OUTSIDE SHOULDER AND DRIVING LANE OUTSIDE OF THE ROCK CUT LIMITS AT THE SAME TIME AS PERFORMING THE ROCK CUT WORK.
4. AFTER ROCK CUT WORK IS COMPLETE, PERFORM PAVEMENT REPAIRS ON THE DRIVING LANE AND OUTSIDE SHOULDER AND THEN PLANE THE DRIVING LANE AND OUTSIDE SHOULDER.
5. MILL AND FILL 3 FT WIDE ON OUTSIDE SHOULDER ADJACENT TO THE EDGE LINE.
6. TACK COAT AND PLACE THE SURFACE COURSE ON THE DRIVING LANE AND OUTSIDE SHOULDER SIDE, INCLUDING THE COMPACTED AGGREGATE.
7. PLACE APPROPRIATE WORK ZONE PAVEMENT MARKINGS.

PHASE 2:
1. MOVE TRAFFIC TO THE RIGHT LANE AND OUTSIDE SHOULDER.
2. PERFORM PAVEMENT REPAIRS.
3. PERFORM PLANING ACROSS MEDIAN SHOULDER AND PASSING LANE.
4. WHILE TRAFFIC IS STILL IN THE DRIVING LANE SIDE, TACK COAT AND PLACE THE SURFACE COURSE ON THE MEDIAN SHOULDER AND PASSING LANE SIDE, INCLUDING THE COMPACTED AGGREGATE.
5. PLACE FINAL PAVEMENT MARKINGS, RPM'S, BARRIER REFLECTORS AND RUMBLE STRIPS.

614 WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS (R2-1) (50 MPH SPEED LIMIT) WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT OR MINIMUM SPEED LIMIT SIGNS WITHIN THE REDUCED SPEED ZONE. THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED LIMIT SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

SPEED REDUCTION SIGNS (W3-5) SHALL BE ERECTED IN ADVANCE OF THE SPEED REDUCTION AS SHOWN ON STANDARD CONSTRUCTION DRAWING MT-95.50. A SIGN TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE, TYPICALLY AT THE POINT WHERE ROADWAY AND SHOULDER WIDTHS RETURN TO NORMAL. ON DIVIDED HIGHWAYS WHERE THE SPEED LIMIT VARIES BY VEHICLE TYPE, THE R2-1 (SPEED LIMIT) SIGN AND THE R2-H2a (TRUCK SPEED LIMIT) SIGNS SHALL BE MOUNTED SIDE-BY-SIDE ON SEPARATE SUPPORTS. THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19.

THE WORK ZONE SPEED LIMIT SIGNS SHALL BE DUAL MOUNTED ON THE MAINLINE, BE MOUNTED ON TWO (2) ITEM 630 GROUND MOUNTED SUPPORTS, NO. 3 POSTS, AND PLACED PER STANDARD CONSTRUCTION DRAWING MT-95.50.

WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVING OF THE SIGNS AND SUPPORTS. SPEED LIMIT SIGNING FOR THE POINT OF RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE PAID FOR AS WORK ZONE SPEED LIMIT SIGNS. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

614	WORK ZONE SPEED LIMIT SIGN	48 EACH
614	SPEED ZONE AHEAD SYMBOL SIGN	4 EACH

CALCULATED MJS CHECKED BAD

MAINTENANCE OF TRAFFIC NOTES

WAY-21-0.00

DESIGN FILE: I: \projects\77318\Roadway\sheets\77318GN001.dgn MODELNAME: Sheet
WORKSTATION:mschafra DATE:1/15/2010

MAINTENANCE OF TRAFFIC (CONTINUED)

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 50 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, REPLACEMENT SIGN

FLAT SHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 5 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A PORTABLE 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 (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., RESPECTIVELY.

EACH 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 TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PCMS LOCATIONS SHALL BE LOCATED IN ADVANCE OF THE BEGINNING AND END OF THE PROJECT TO NOTIFY THE TRAVELLING PUBLIC OF CONSTRUCTION WORK BEING DONE. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS 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 SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH 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.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 6 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (CONTINUED)

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 OR PREPROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

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 SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.)

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. 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. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE 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.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
10 SIGN-MONTH

CALCULATED MJS
CHECKED BAD

MAINTENANCE OF TRAFFIC NOTES

WAY-21-0.00

8
69

DESIGN FILE: i:\projects\77318\Roadway\sheets\77318GN001.dgn MODELNAME: Sheet
WORKSTATION:mschafra DATE:1/15/2010

SHEET NUMBER												COCO CONTR 01	COCO CONTR 02	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
4	5	11	12	16	32	35													
						LUMP													
													LUMP	201	11000	LUMP		ROADWAY	
				12,115.66														CLEARING AND GRUBBING	
				396.88								12,115.66	0.00	202	38200	12,115.66	FT	GUARDRAIL REMOVED FOR REUSE	
				6								396.88	0.00	202	38410	396.88	FT	GUARDRAIL REMOVED FOR REUSE, BARRIER DESIGN	
				3								6	0	202	42040	6	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
												3	0	202	42620	3	EACH	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	
				3															
				6								3	0	202	47200	3	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	
				2	122							6	0	202	98100	6	EACH	REMOVAL MISC.: IMPACT ATTENUATOR	
						20,818						124	0	203	10000	124	CU YD	EXCAVATION	
				83								0	20,818	203	10001	20,818	CU YD	EXCAVATION, AS PER PLAN	35
												83	0	203	20001	83	CU YD	EMBANKMENT, AS PER PLAN	15
				106.67															
		11.08	10.70									106.67	0.00	209	15001	106.67	STATION	RESHAPING UNDER GUARDRAIL, AS PER PLAN	15
				10,553.16								21.78	0.00	209	60500	21.78	MILE	LINEAR GRADING	
				1,562.50								10,553.16	0.00	606	16500	10,553.16	FT	GUARDRAIL REBUILT, TYPE 5	
				365.63								1,562.50	0.00	606	16501	1,562.50	FT	GUARDRAIL REBUILT, TYPE 5, AS PER PLAN	15
												365.63	0.00	606	16600	365.63	FT	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5	
				12.50															
				18.75								12.50	0.00	606	16601	12.50	FT	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5, AS PER PLAN (A)	15
				6								18.75	0.00	606	16601	18.75	FT	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5, AS PER PLAN (B)	15
				3								6	0	606	26500	6	EACH	ANCHOR ASSEMBLY, TYPE T	
				1								3	0	606	28050	3	EACH	ANCHOR ASSEMBLY REBUILT, TYPE E-98	
												1	0	606	35001	1	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN	15
				3															
				6								3	0	606	35110	3	EACH	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 2	
				75								6	0	606	60010	6	EACH	IMPACT ATTENUATOR, TYPE 1-98 (BIDIRECTIONAL)	
												75	0	609	22000	75	FT	CURB, TYPE 3-B (ASPHALT CONCRETE)	
					2	2												EROSION CONTROL	
					36	1,640						2	2	659	00100	4	EACH	SOIL ANALYSIS TEST	
					320	14,772						36	1,640	659	00300	1,676	CU YD	TOPSOIL	
					16	739						320	14,772	659	10000	15,092	SQ YD	SEEDING AND MULCHING	
					16	739						16	739	659	14000	755	SQ YD	REPAIR SEEDING AND MULCHING	
												16	739	659	15000	755	SQ YD	INTER-SEEDING	
					0.07	2.06													
					0.07	3.05						0.07	2.06	659	20000	2.13	TON	COMMERCIAL FERTILIZER	
					3	82						0.07	3.05	659	31000	3.12	ACRE	LIME	
												3	82	659	35000	85	M GAL	WATER	
																		STRUCTURES	
																		WAY-21-0088 L (SFN 8501149)	61
																		WAY-21-0088 R (SFN 8501173)	61
																		WAY-21-0095 L (SFN 8501203)	61
																		WAY-21-0095 R (SFN 8501238)	61
																		WAY-21-0142 L (SFN 8501327)	61
																		WAY-21-0142 R (SFN 8501351)	61
																		WAY-21-0181 L (SFN 8501386)	62
																		WAY-21-0181 R (SFN 8501416)	62
																		DRAINAGE	
				2								2	0	604	09000	2	EACH	CATCH BASIN ADJUSTED TO GRADE	
				1								1	0	604	34500	1	EACH	MANHOLE ADJUSTED TO GRADE	
				2								2	0	604	39500	2	EACH	MONUMENT BOX ADJUSTED TO GRADE	
100																		PAVEMENT	
1,800												100	0	253	02001	100	CU YD	PAVEMENT REPAIR, AS PER PLAN	4
		121,256	117,251									1,800	0	253	90000	1,800	CU YD	PAVEMENT REPAIR, MISC.: PARTIAL DEPTH	4
		1,213	1,172									238,507	0	254	01000	238,507	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE (1.75")	
												2,385	0	254	01600	2,385	SQ YD	PATCHING PLANED SURFACE	
		12,127	11,725																
		5,198	5,021									23,852	0	407	10000	23,852	GALLON	TACK COAT	
		5,894	5,701									10,219	0	408	10000	10,219	GALLON	PRIME COAT	
												11,595	0	442	20000	11,595	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)	
		543	525																
		13,001	12,557									1,068	0	617	10101	1,068	CU YD	COMPACTED AGGREGATE, AS PER PLAN	4
		58,506	56,498									25,558	0	617	20000	25,558	SQ YD	SHOULDER PREPARATION	
												115,004	0	618	40100	115,004	FT	RUMBLE STRIPS (ASPHALT CONCRETE)	
	500											500	0	SPECIAL	690E60000	500	CU YD	BERM REPAIR, FLEXIBLE	

CALC'D | AMH | CHECKED | BAD

GENERAL SUMMARY

WAY-21-0.00

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SHEET NUMBER												COCO CONTR 01	COCO CONTR 02	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
5	6	7	8	11	12	16	31	32	33	35	39								
																		TRAFFIC CONTROL	
									839			839	0	621	00100	839	EACH	RPM	
									839			839	0	621	54000	839	EACH	RAISED PAVEMENT MARKER REMOVED	
						213						213	0	626	00100	213	EACH	BARRIER REFLECTOR	
											88	0	88	630	03100	88	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
											46	0	46	630	07600	46	FT	GROUND MOUNTED SUPPORT, W10X12 BEAM	
											6	0	6	630	80400	6	SQ FT	SIGN, PERMANENT OVERLAY	
											1	0	1	630	82000	1	EACH	SIGN BACKING ASSEMBLY	
											2	0	2	630	84500	2	EACH	GROUND MOUNTED BEAM SUPPORT FOUNDATION	
								8				8	0	630	84900	8	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
											7	0	7	630	85100	7	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
											1	0	1	630	85600	1	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION	
								4			7	4	7	630	86002	11	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
											2	0	2	630	86102	2	EACH	REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL	
											6	0	6	630	97700	6	EACH	SIGNING, MISC.: SIGN DATA COLLECTION	35
							18					18	0	632	26501	18	EACH	DETECTOR LOOP, AS PER PLAN	31
																		MAINTENANCE OF TRAFFIC	
				9,751	9,416							19,167	0	254	01000	19,167	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE (5.00")	
				9,751	9,416							19,167	0	254	01000	19,167	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE (6.75")	
				2,709	2,615							5,324	0	301	46001	5,324	CU YD	ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN	6
				488	472							960	0	407	14000	960	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
				474	457	2						933	0	442	20200	933	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	
	16											16	0	614	12460	16	EACH	WORK ZONE MARKING SIGN	
	100											100	0	614	13000	100	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		20										20	0	614	12484	20	EACH	WORK ZONE INCREASED PENALTIES SIGN	
		48										48	0	614	12470	48	EACH	WORK ZONE SPEED LIMIT SIGN	
		4										4	0	614	12410	4	EACH	SPEED ZONE AHEAD SYMBOL SIGN	
										4		0	4	614	12336	4	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
			5									5	0	614	12500	5	EACH	REPLACEMENT SIGN	
			50									50	0	614	12600	50	EACH	REPLACEMENT DRUM	
			10									10	0	614	18601	10	SGN MTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	8
	120											120	0	614	11110	120	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		5										5	0	614	11500	5	MONTH	WORKSITE TRAFFIC SUPERVISOR	
										98		0	98	614	13100	98	EACH	BARRIER REFLECTOR	
										98		0	98	614	13350	98	EACH	OBJECT MARKER, ONE WAY	
									11.31			11.31	0.00	614	20100	11.31	MILE	WORK ZONE LANE LINE, CLASS I, 642 PAINT	
									11.31			11.31	0.00	614	20550	11.31	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
									23.89			23.89	0.00	614	22100	23.89	MILE	WORK ZONE EDGE LINE, CLASS I, 642 PAINT	
									3,374			3,374	0	614	23200	3,374	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	
									3,374			3,374	0	614	23680	3,374	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	
									650			650	0	614	25200	650	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
									650			650	0	614	25620	650	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS III, 642 PAINT	
									194			194	0	614	26200	194	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
									194			194	0	614	26610	194	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
										4,848		0	4,848	622	40030	4,848	FT	PORTABLE CONCRETE BARRIER, 50"	
									21.78			21.78	0.00	644	00100	21.78	MILE	EDGE LINE	
									10.89			10.89	0.00	644	00200	10.89	MILE	LANE LINE	
									0.02			0.02	0.00	644	00300	0.02	MILE	CENTER LINE	
									3,374			3374	0	644	00400	3374	FT	CHANNELIZING LINE	
									254			254	0	644	00500	254	FT	STOP LINE	
									650			650	0	644	00700	650	FT	TRANSVERSE/DIAGONAL LINE	
									26			26	0	644	01300	26	EACH	LANE ARROW	
									0.84			0.84	0.00	646	10000	0.84	MILE	EDGE LINE	
									0.42			0.42	0.00	646	10100	0.42	MILE	LANE LINE	
												LUMP	LUMP	614	11000	LUMP		MAINTAINING TRAFFIC	
												5		619	16010	5	MONTH	FIELD OFFICE, TYPE B	
								LUMP				LUMP	LUMP	623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
	LUMP											LUMP		623	10001	LUMP		CONSTRUCTION LAYOUT STAKES, AS PER PLAN	5
												LUMP	LUMP	624	10000	LUMP		MOBILIZATION	

CALCD | CHECKED
ANH | BAD

GENERAL SUMMARY

WAY-21-0.00

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* - FOR TYPICALS, SEE SHEET 13 & 14

COUNTY	ROUTE		LOG POINT TO LOG POINT (STRAIGHT LINE MILEAGE)		LENGTH MILE	LENGTH FEET	WIDTH FEET AVG.	* TYPICAL	254 PAVEMENT AREA SQ YD	254 PAVEMENT PLANING, ASPHALT CONCRETE (1.75") SQ.YD	254 PAVEMENT PLANING, ASPHALT CONCRETE (5.00") SQ. YD	254 PAVEMENT PLANING, ASPHALT CONCRETE (6.75") SQ. YD	254 PATCHING PLANED SURFACE SQ.YD	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448) INCH	442 CU.YD.	407 TACK COAT @ 0.10 GAL/SY GALLON
WAY	21		0.00	0.02	0.02	106	36.00	1	424	424			4	1.75	21	42
WAY	21		0.02	0.85	0.83	4382	35.50	1	17,285	17,285			173	1.75	840	1,728
WAY	21		0.85	0.87	0.02	106	37.25	1	439	439			4	1.75	21	44
			BRIDGE & APPROACH SLABS													
WAY	21		0.90	0.93	0.03	158	37.50	1	658	658			7	1.75	32	66
			BRIDGE & APPROACH SLABS													
WAY	21		0.99	1.00	0.01	53	36.75	1	216	216			2	1.75	11	22
WAY	21		1.00	1.40	0.40	2112	36.50	1	8,565	8,565			86	1.75	416	857
			BRIDGE & APPROACH SLABS													
WAY	21		1.47	1.50	0.03	158	36.25	1	636	636			6	1.75	31	64
WAY	21		1.50	1.78	0.28	1478	35.50	1	5,830	5,830			58	1.75	283	583
WAY	21		1.78	1.80	0.02	106	37.00	1	436	436			4	1.75	21	44
			BRIDGE & APPROACH SLABS													
WAY	21		1.85	2.00	0.15	792	36.00	1	3,168	3,168			32	1.75	154	317
WAY	21		2.00	2.50	0.50	2640	34.00	1	9,973	9,973			100	1.75	485	997
WAY	21		2.50	2.60	0.10	528	34.50	1	2,024	2,024			20	1.75	98	202
WAY	21		2.60	2.69	0.09	475	40.50	1	2,138	2,138			21	1.75	104	214
WAY	21		2.69	2.71	0.02	106	48.50	2(NB)	571	571			6	1.75	28	57
WAY	21		2.71	2.73	0.02	106	44.50	2(NB)	524	524			5	1.75	25	52
WAY	21		2.73	3.00	0.27	1426	37.00	1	5,862	5,862			59	1.75	285	586
WAY	21		3.00	3.50	0.50	2640	35.75	1	10,487	10,487			105	1.75	510	1,049
WAY	21		3.50	3.76	0.26	1373	35.50	1	5,416	5,416			54	1.75	263	542
WAY	21		3.76	3.77	0.01	53	40.75	1	240	240			2	1.75	12	24
WAY	21		3.77	3.82	0.05	264	46.75	1	1,371	1,371			14	1.75	67	137
WAY	21		3.82	3.85	0.03	158	56.75	1	996	996			10	1.75	48	100
WAY	21		3.85	3.87	0.02	106	66.00	1	777	777			8	1.75	38	78
WAY	21		3.87	3.93	0.06	317	70.00	1	2,466	2,466			25	1.75	120	247
WAY	21		3.93	3.96	0.03	158	63.75	1	1,119	1,119			11	1.75	54	112
WAY	21		3.96	3.97	0.01	53	47.75	1	281	281			3	1.75	14	28
WAY	21		3.97	4.00	0.03	158	38.75	1	680	680			7	1.75	33	68
WAY	21		4.00	4.62	0.62	3274	35.50	1	12,914	12,914			129	1.75	628	1,291
WAY	21		4.62	4.71	0.09	475	44.25	1	2,335	2,335			23	1.75	114	234
WAY	21		4.71	4.72	0.01	53	53.00	1	312	312			3	1.75	15	31
WAY	21		4.72	4.74	0.02	106	64.00	1	754	754			8	1.75	37	75
WAY	21		4.74	4.75	0.01	53	53.50	1	315	315			3	1.75	15	32
WAY	21		4.75	4.80	0.05	264	40.00	1	1,173	1,173			12	1.75	57	117
WAY	21		4.80	5.75	0.95	5016	36.00	1	20,064	20,064			201	1.75	975	2,006
	EXTRA AREA FOR INTERSECTIONS								277	277			3	1.75	13	28
	EXTRA AREA FOR U-TURN MEDIANS AT SLM 0.74 & 1.63								530	530			5	1.75	26	53
WAY	21 SHLDRS		0.00	0.87	0.87	4,594	3.00	3	1,531		1,531	1,531				
WAY	21 SHLDRS		0.90	0.93	0.03	158	3.00	3	53		53	53				
WAY	21 SHLDRS		0.99	1.40	0.41	2,165	3.00	3	722		722	722				
WAY	21 SHLDRS		1.47	1.80	0.33	1,742	3.00	3	581		581	581				
WAY	21 SHLDRS		1.85	5.75	3.90	20,592	3.00	3	6,864		6,864	6,864				
	TOTALS								**121,256**	**9,751**	**9,751**	**1,213**		**5,894**	**12,127**

FOR MAINTENANCE OF TRAFFIC ON PAVED SHOULDER

407 TACK COAT FOR INTERM. COURSE @ 0.05 GAL/SY GALLON	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448) INCH (AVG)	442 CU.YD.	301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN INCH	301 CU. YD	618 RUMBLE STRIPS, (ASPHALT CONCRETE) FT	AGGREGATE SHOULDER PROPOSED WIDTH SL FT	AGGREGATE SHOULDER PROPOSED WIDTH SR FT	AGGREGATE SHOULDER AREA SQ YD	209 LINEAR GRADING MILE	408 PRIME COAT @ 0.40 GAL/SY GALLON	617 COMPACTED AGGREGATE, AS PER PLAN 1.5 INCHES AVG. THICKNESS CU YD	617 SHOULDER PREPARATION SQ.YD
					212	2.0	2.0	47	0.04	19	2	47
					8764	2.0	2.0	1,948	1.66	779	81	1,948
					212	2.0	2.0	47	0.04	19	2	47
					316	2.0	2.0	70	0.06	28	3	70
					106	2.0	2.0	24	0.02	9	1	24
					4224	2.0	2.0	939	0.80	375	39	939
					316	2.0	2.0	70	0.06	28	3	70
					2956	2.0	2.0	657	0.56	263	27	657
					212	2.0	2.0	47	0.04	19	2	47
					1584	2.0	2.0	352	0.30	141	15	352
					5280	2.0	2.0	1,173	1.00	469	49	1,173
					1056	2.0	2.0	235	0.20	94	10	235
					950	2.0	2.0	211	0.18	84	9	211
					212	2.0	2.0	47	0.04	19	2	47
					212	2.0	2.0	47	0.04	19	2	47
					2852	2.0	2.0	634	0.54	254	26	634
					5280	2.0	2.0	1,173	1.00	469	49	1,173
					2746	2.0	2.0	610	0.52	244	25	610
					106	2.0	2.0	24	0.02	9	1	24
					528	2.0	2.0	117	0.10	47	5	117
					316	2.0	2.0	70	0.06	28	3	70
					212	2.0	2.0	47	0.04	19	2	47
					634	2.0	2.0	141	0.12	56	6	141
					316	2.0	2.0	70	0.06	28	3	70
					106	2.0	2.0	24	0.02	9	1	24
					316	2.0	2.0	70	0.06	28	3	70
					6548	2.0	2.0	1,455	1.24	582	61	1,455
					950	2.0	2.0	211	0.18	84	9	211
					106	2.0	2.0	24	0.02	9	1	24
					212	2.0	2.0	47	0.04	19	2	47
					106	2.0	2.0	24	0.02	9	1	24
					528	2.0	2.0	117	0.10	47	5	117
					10032	2.0	2.0	2,229	1.90	892	93	2,229
77	1.75	74	5.00	425								
3	1.75	3	5.00	15								
36	1.75	35	5.00	201								
29	1.75	28	5.00	161								
343	1.75	334	5.00	1907								
488		**474**		**2,709**	**58,506**				**11.08**	**5,198**	**543**	**13,001**

CALC BY MER
CHKD BY BAD

PAVEMENT & SHOULDER DATA (NORTHBOUND)

WAY-21-0.00

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* - FOR TYPICALS, SEE SHEET 13 & 14

FOR MAINTENANCE OF TRAFFIC ON PAVED SHOULDER

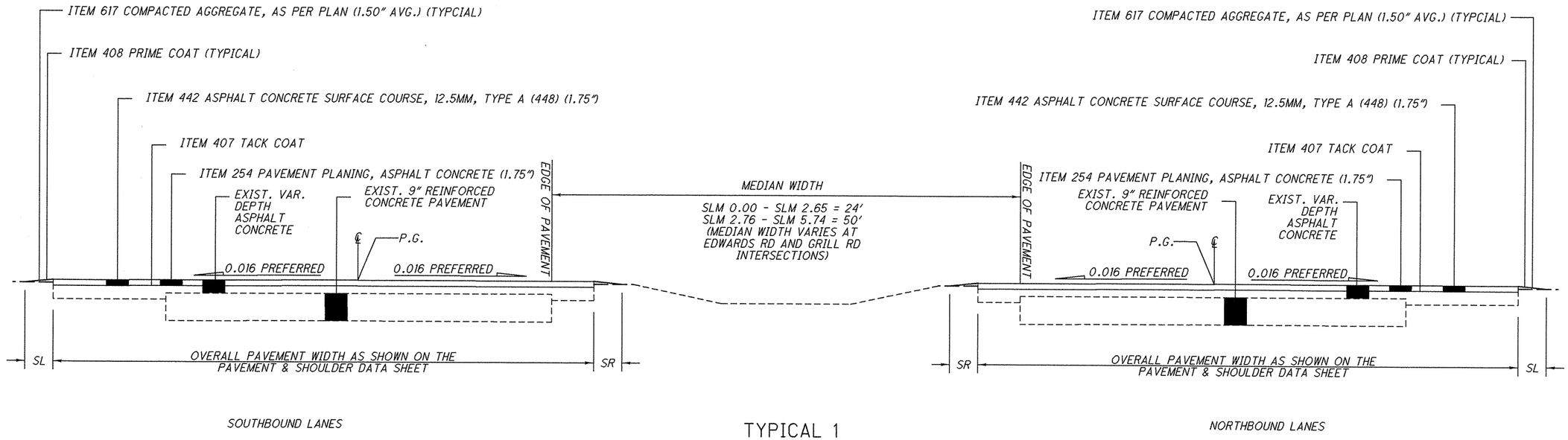
CALC BY: MER
CHKD BY: BAD

COUNTY	ROUTE		LOG POINT TO LOG POINT (STRAIGHT LINE MILEAGE)		LENGTH MILE	LENGTH FEET	WIDTH FEET AVG.	* TYPICAL	PAVEMENT AREA SQ YD	254 PAVEMENT PLANING, ASPHALT CONCRETE (1.75") SQ.YD	254 PAVEMENT PLANING, ASPHALT CONCRETE (5.00") SQ. YD	254 PAVEMENT PLANING, ASPHALT CONCRETE (6.75") SQ. YD	254 PATCHING PLANED SURFACE SQ.YD	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448) INCH	442 CU.YD.	407 TACK COAT @ 0.10 GAL/SY GALLON	407 TACK COAT FOR INTERM. COURSE @ 0.05 GAL/SY GALLON	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448) INCH (AVG	442 CU.YD.	301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN INCH	CU. YD	618 RUMBLE STRIPS, (ASPHALT CONCRETE) FT	AGGREGATE SHOULDER PROPOSED WIDTH SL FT	AGGREGATE SHOULDER PROPOSED WIDTH SR FT	AGGREGATE SHOULDER AREA SQ YD	209 LINEAR GRADING MILE	408 PRIME COAT @ 0.40 GAL/SY GALLON	617 COMPACTED AGGREGATE, AS PER PLAN 1.5 INCHES AVG. THICKNESS CU YD	617 SHOULDER PREPARATION SQ.YD
WAY	21		0.00	0.50	0.50	2640	35.75	1	10,487	10,487			105	1.75	510	1,049						5280	2.0	2.0	1,173	1.00	469	49	1,173
WAY	21		0.50	0.75	0.25	1320	35.75	1	5,243	5,243			52	1.75	255	524						2640	2.0	2.0	587	0.50	235	24	587
WAY	21		0.75	0.83	0.08	422	36.75	1	1,723	1,723			17	1.75	84	172						844	2.0	2.0	188	0.16	75	8	188
			BRIDGE & APPROACH SLABS																										
WAY	21		0.86	0.90	0.04	211	38.00	1	891	891			9	1.75	43	89						422	2.0	2.0	94	0.08	38	4	94
			BRIDGE & APPROACH SLABS																										
WAY	21		0.95	1.00	0.05	264	36.75	1	1,078	1,078			11	1.75	52	108						528	2.0	2.0	117	0.10	47	5	117
WAY	21		1.00	1.25	0.25	1320	36.25	1	5,317	5,317			53	1.75	258	532						2640	2.0	2.0	587	0.50	235	24	587
WAY	21		1.25	1.41	0.16	845	37.50	1	3,521	3,521			35	1.75	171	352						1690	2.0	2.0	376	0.32	150	16	376
			BRIDGE & APPROACH SLABS																										
WAY	21		1.49	1.50	0.01	53	36.00	1	212	212			2	1.75	10	21						106	2.0	2.0	24	0.02	9	1	24
WAY	21		1.50	1.81	0.31	1637	36.75	1	6,684	6,684			67	1.75	325	668						3274	2.0	2.0	728	0.62	291	30	728
			BRIDGE & APPROACH SLABS																										
WAY	21		1.86	2.00	0.14	739	36.75	1	3,018	3,018			30	1.75	147	302						1478	2.0	2.0	328	0.28	131	14	328
WAY	21		2.00	2.50	0.50	2640	35.50	1	10,413	10,413			104	1.75	506	1,041						5280	2.0	2.0	1,173	1.00	469	49	1,173
WAY	21		2.50	2.65	0.15	792	35.25	1	3,102	3,102			31	1.75	151	310						1584	2.0	2.0	352	0.30	141	15	352
WAY	21		2.65	2.67	0.02	106	39.50	2(SB)	465	465			5	1.75	23	47						212	2.0	2.0	47	0.04	19	2	47
WAY	21		2.67	2.68	0.01	53	48.50	2(SB)	286	286			3	1.75	14	29						106	2.0	2.0	24	0.02	9	1	24
WAY	21		2.68	2.71	0.03	158	49.25	2(SB)	865	865			9	1.75	42	86						316	2.0	2.0	70	0.06	28	3	70
WAY	21		2.71	2.76	0.05	264	40.25	2(SB)	1,181	1,181			12	1.75	57	118						528	2.0	2.0	117	0.10	47	5	117
WAY	21		2.76	3.75	0.99	5227	35.00	1	20,327	20,327			203	1.75	988	2,033						10454	2.0	2.0	2,323	1.98	929	97	2,323
WAY	21		3.75	3.88	0.13	686	35.75	1	2,725	2,725			27	1.75	132	272						1372	2.0	2.0	305	0.26	122	13	305
WAY	21		3.88	3.92	0.04	211	46.25	1	1,084	1,084			11	1.75	53	108						422	2.0	2.0	94	0.08	38	4	94
WAY	21		3.92	3.93	0.01	53	56.00	1	330	330			3	1.75	16	33						106	2.0	2.0	24	0.02	9	1	24
WAY	21		3.93	3.95	0.02	106	65.50	1	771	771			8	1.75	38	77						212	2.0	2.0	47	0.04	19	2	47
WAY	21		3.95	4.00	0.05	264	70.75	1	2,075	2,075			21	1.75	101	208						528	2.0	2.0	117	0.10	47	5	117
WAY	21		4.00	4.05	0.05	264	66.50	1	1,951	1,951			20	1.75	95	195						528	2.0	2.0	117	0.10	47	5	117
WAY	21		4.05	4.08	0.03	158	57.00	1	1,001	1,001			10	1.75	49	100						316	2.0	2.0	70	0.06	28	3	70
WAY	21		4.08	4.12	0.04	211	47.25	1	1,108	1,108			11	1.75	54	111						422	2.0	2.0	94	0.08	38	4	94
WAY	21		4.12	4.14	0.02	106	41.25	1	486	486			5	1.75	24	49						212	2.0	2.0	47	0.04	19	2	47
WAY	21		4.14	4.50	0.36	1901	35.50	1	7,498	7,498			75	1.75	365	750						3802	2.0	2.0	845	0.72	338	35	845
WAY	21		4.50	4.66	0.16	845	36.50	1	3,427	3,427			34	1.75	167	343						1690	2.0	2.0	376	0.32	150	16	376
WAY	21		4.66	4.71	0.05	264	45.75	1	1,342	1,342			13	1.75	65	134						528	2.0	2.0	117	0.10	47	5	117
WAY	21		4.71	4.72	0.01	53	54.00	1	318	318			3	1.75	15	32						106	2.0	2.0	24	0.02	9	1	24
WAY	21		4.72	4.74	0.02	106	65.50	1	771	771			8	1.75	38	77						212	2.0	2.0	47	0.04	19	2	47
WAY	21		4.74	4.75	0.01	53	54.00	1	318	318			3	1.75	15	32						106	2.0	2.0	24	0.02	9	1	24
WAY	21		4.75	4.82	0.07	370	44.50	1	1,829	1,829			18	1.75	89	183						740	2.0	2.0	164	0.14	66	7	164
WAY	21		4.82	5.50	0.68	3590	35.00	1	13961	13961			140	1.75	679	1,396						7180	2.0	2.0	1,596	1.36	638	66	1,596
WAY	21		5.50	5.56	0.06	317	35.25	1	1242	1242			12	1.75	60	124						634	2.0	2.0	141	0.12	56	6	141
	EXTRA AREA FOR INTERSECTIONS								201	201			2	1.75	10	20													
WAY	21 SHLDRS		0.00	0.83	0.83	4,382	3.00	3	1,461		1,461	1,461					73	1.75	71	5.00	406								
WAY	21 SHLDRS		0.86	0.90	0.04	211	3.00	3	70		70	70					4	1.75	3	5.00	19								
WAY	21 SHLDRS		0.95	1.41	0.46	2,429	3.00	3	810		810	810					41	1.75	39	5.00	225								
WAY	21 SHLDRS		1.49	1.81	0.32	1,690	3.00	3	563		563	563					28	1.75	27	5.00	156								
WAY	21 SHLDRS		1.86	5.56	3.70	19,536	3.00	3	6,512		6,512	6,512					326	1.75	317	5.00	1809								
	TOTALS									117,251	9,416	9,416	1,172		5,701	11,725	472		457		2,615	56,498				10.70	5,021	525	12,557

PAVEMENT & SHOULDER DATA (SOUTHBOUND)

WAY-21-0.00

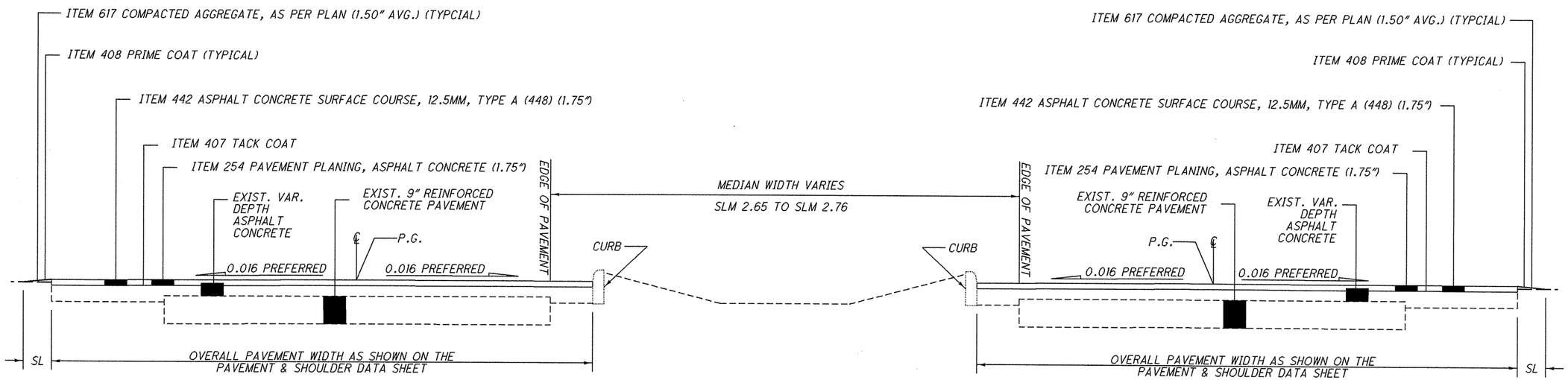
I:\projects\77318\roadway\sheets\77318GQ001.xls



SOUTHBOUND LANES

TYPICAL 1

NORTHBOUND LANES



SOUTHBOUND LANES

TYPICAL 2

NORTHBOUND LANES

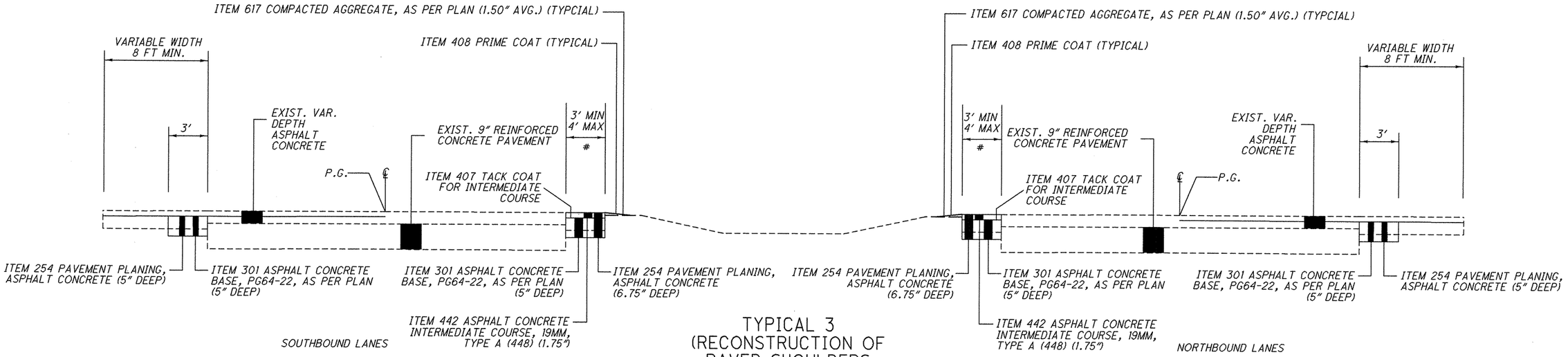
CALCULATED MER
CHECKED BAD

TYPICAL SECTIONS

WAY-21-0.00

13
69

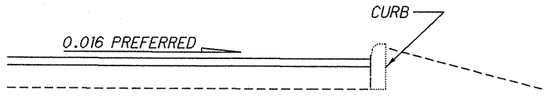
DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GY001.dgn
WORKSTATION:mschafro
DATE:1/15/2010
MODELNAME: Sheet



TYPICAL 3 (RECONSTRUCTION OF PAVED SHOULDERS FOR MOT PURPOSES)

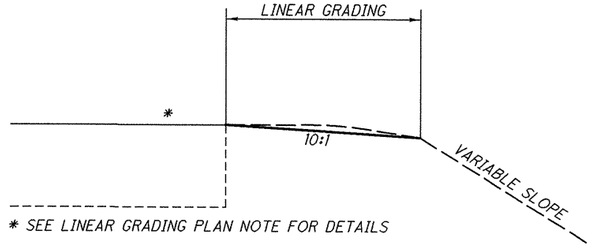
NOTE: 5" PAVEMENT PLANING ON THE OUTSIDE SHOULDER TO BE PERFORMED AFTER PLANING 1.75" DEEP ACROSS DRIVING LANE AND SHOULDER. 7" PAVEMENT PLANING ON INSIDE SHOULDER TO BE PERFORMED BEFORE 1.75" PAVEMENT PLANING.

REPLACE ONLY 3' WIDE.



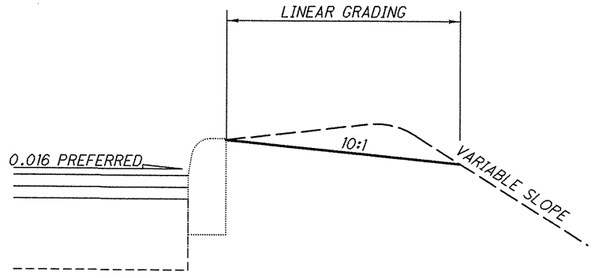
DETAIL OF CURBING AT STRUCTURES

AT EACH STRUCTURE THERE ARE SHORT LENGTHS OF CURBING EXTENDING FROM THE FORWARD AND REAR APPROACH SLABS ON BOTH THE LEFT AND RIGHT SIDE.



* SEE LINEAR GRADING PLAN NOTE FOR DETAILS

LINEAR GRADING DETAIL



LINEAR GRADING DETAIL (CURBED SECTION)

CALCULATED MER
CHECKED BAD

TYPICAL SECTIONS

WAY-21-0.00

14
69

DESIGN FILE: I: \projects\77318\Roadway\sheets\77318GY001.dgn MODELNAME: Sheet
WORKSTATION:mschafro DATE:1/15/2010

ITEM 202 - ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98

THIS ITEM CONSISTS OF REMOVING AN EXISTING ANCHOR ASSEMBLY, AND SALVAGING FOR REUSE AT A LOCATION SHOWN ON THE PLANS. THE RESULTING HOLES SHALL BE BACKFILLED AND COMPACTED. ELEMENTS THAT ARE NOT SALVAGEABLE SHALL BE DISPOSED OF PER 202.02.

ITEM 203 - EMBANKMENT, AS PER PLAN

AT SPECIFIED LOCATIONS AND LOCATIONS AS DIRECTED BY THE ENGINEER, EMBANKMENT SHALL BE PLACED AS TO PROVIDE A SUITABLE AREA TO CONSTRUCT GUARDRAIL AND TO PROVIDE STRUCTURAL INTEGRITY OF THE ROADWAY SHOULDER.

EMBANKMENT MATERIAL SHALL BE LIMITED TO CMS ITEM 304 LIMESTONE.

AREAS WHERE EMBANKMENT MATERIAL IS TO BE PLACED SHALL BE SCALPED. THE REQUIREMENTS FOR BENCHING SHALL BE WAIVED. THE DEPTH OF LAYERS IN WHICH THE EMBANKMENT IS PLACED SHALL BE LIMITED TO EIGHT (8) INCHES IN THICKNESS. THE METHOD OF COMPACTION AND EQUIPMENT USED SHALL BE SUFFICIENT TO COMPACT 95% OF STANDARD PROCTOR TO THE SATISFACTION OF THE ENGINEER.

THE METHOD OF MEASUREMENT FOR EMBANKMENT MATERIAL SHALL BE BY THE NUMBER OF CUBIC YARDS CONVERTED BY TICKET WEIGHT IN THE CARRIER AT THE WORK SITE, IN LIEU OF THE REQUIREMENTS OF 203.09. PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT BID PRICE PER CUBIC YARD FOR ITEM 203 - EMBANKMENT, AS PER PLAN AND SHALL INCLUDE ALL WORK DESCRIBED ABOVE.

ITEM 209 - RESHAPING UNDER GUARDRAIL, AS PER PLAN

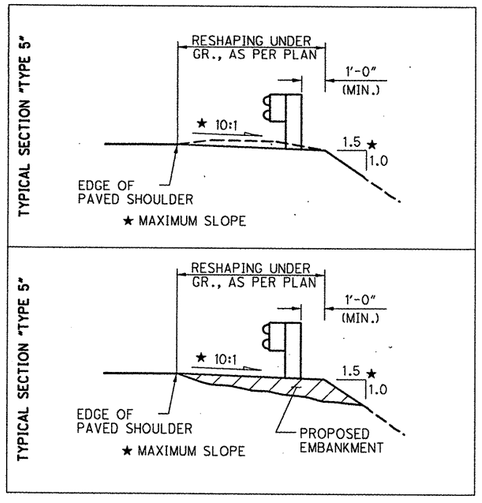
THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLANS.

THIS WORK SHALL BE COMPLETED AT LOCATIONS SPECIFIED FOR WORK AS WELL AS PER CMS 209.05 AND AS DESCRIBED HEREIN, AND SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER.

THE AREA IN FRONT OF, UNDER, AND BEHIND THE GUARDRAIL SHALL BE GRADED AND RESHAPED TO PROVIDE AN AREA THAT HAS A SLOPE OF 10:1 MAXIMUM (SEE DETAIL BELOW AS WELL AS THE GUARDRAIL DETAIL SHEETS FOR FURTHER DETAILS AND INFORMATION OF THE LIMITS OF THIS WORK).

EXCESS MATERIAL RESULTING SHALL BE USED ELSEWHERE FOR THIS ITEM IF SO DIRECTED OR DISPOSED OF PROPERLY. IF EXTRA MATERIAL IS REQUIRED IT SHALL BE PAID FOR WITH ITEM 203 - EMBANKMENT, AS PER PLAN. THIS WORK SHALL NOT BE STARTED UNTIL AFTER THE RESURFACING AND BERM WORK HAS BEEN COMPLETED.

THE ABOVE WORK SHALL BE PAID FOR PER STATION WITH ITEM 209, RESHAPING UNDER GUARDRAIL, AS PER PLAN WITH THE EXCEPTION OF ANY EXTRA MATERIAL REQUIRED TO MEET THE SLOPE REQUIREMENTS WHICH SHALL BE PAID BY ITEM 203 - EMBANKMENT, AS PER PLAN.



ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN

ONLY THE 12.5' SECTION OF THE BRIDGE TERMINAL ASSEMBLY, TYPE 1 CONTAINING POSTS 5 AND 6 AS SHOWN ON STANDARD CONSTRUCTION DRAWING GR-3.1, SHALL BE PROVIDED.

ITEM 606 - GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5, AS PER PLAN (A)

THIS 12.5' SECTION OF GUARDRAIL, BARRIER DESIGN, TYPE 5 SHALL BE PROVIDED WITH THE NO. 5 AND 6 POSTS AND BLOCKOUTS DESIGNATED BY CALLOUT NO. 3 ON STANDARD DRAWING GR-3.1. ONLY THE PANEL CONNECTING INTO THE EXISTING BRIDGE TERMINAL ASSEMBLY SHALL REQUIRE THE 8" X 8" X 14" BLOCKOUTS. THE PANEL ON THE OPPOSITE SIDE SHALL BE CONNECTED TO STANDARD 6" X 8" 14" BLOCKOUTS.

ITEM 606 - GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5, AS PER PLAN (B)

THIS 6.25' SECTION OF GUARDRAIL, BARRIER DESIGN, TYPE 5 SHALL BE PROVIDED WITH THE NO. 6 POST AND BLOCKOUT DESIGNATED BY CALLOUT NO. 3 ON STANDARD DRAWING GR-3.1. ONLY THE PANEL CONNECTING INTO THE EXISTING BRIDGE TERMINAL ASSEMBLY SHALL REQUIRE THE 8" X 8" X 14" BLOCKOUT. THE PANEL ON THE OPPOSITE SIDE SHALL BE CONNECTED TO A STANDARD 6" X 8" 14" BLOCKOUT.

ITEM 606 - GUARDRAIL REBUILT, TYPE 5, AS PER PLAN

REBUILD GUARDRAIL USING 9 FT POSTS.

CONNECTING GUARDRAIL TO EXISTING RAIL

IN LOCATIONS WHERE TYPE 5 GUARDRAIL, TERMINAL ASSEMBLIES, ETC. ARE TO BE CONNECTED TO EXISTING RAIL SOME MODIFICATIONS MAY BE REQUIRED, INCLUDING EXTRA POSTS, DRILLING HOLES AND POSSIBLY PARTIAL SECTIONS OF ADDITIONAL RAIL ELEMENTS. THE COST OF THIS ADDITIONAL WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR TYPE 5 GUARDRAIL. IF ADDITIONAL PORTIONS OF RAIL ELEMENT ARE USED THE LINEAL MEASUREMENT OF THIS ADDITIONAL PORTION SHALL BE ADDED FOR PAYMENT.

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 ON STANDARD CONSTRUCTION DRAWING GR-1.1. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

LOCATIONS OF GUARDRAIL

THE GUARDRAIL PROTECTION PROVIDED IN THIS PLAN SHALL BE LOCATED IN THE FIELD TO ASSURE THAT THE INSTALLATION WILL AFFORD THE MAXIMUM PROTECTION FOR TRAFFIC. THIS LOCATION SHALL BE POSITIONED AS FAR AS POSSIBLE FROM THE EDGE OF PAVEMENT WHILE MAINTAINING PROPER GRADE IN FRONT OF GUARDRAIL AS PER STANDARD DRAWINGS AND PLAN DETAILS.

SUGGESTED SEQUENCE OF GUARDRAIL WORK

1. GUARDRAIL WORK IS TO BEGIN AFTER THE LINEAR GRADING IS COMPLETED AND THE 617 MATERIAL IS PLACED.
2. REMOVE THE GUARDRAIL.
3. PERFORM THE RESHAPING UNDER GUARDRAIL INCLUDING COMPLETING THE EMBANKMENT, AS PER PLAN.
4. REBUILD/CONSTRUCT THE GUARDRAIL RUN.
5. INSTALL BARRIER REFLECTORS.

ITEM 606 - ANCHOR ASSEMBLY REBUILT, TYPE E-98

THIS ITEM SHALL CONSIST OF REUSING SALVAGED ELEMENTS FROM AN EXISTING ANCHOR ASSEMBLY, AND CONSTRUCTING A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY AT A LOCATION SHOWN IN THE PLANS.

THE ANCHOR ASSEMBLY SHALL BE RECONSTRUCTED AS PER THE FOLLOWING GUARDRAIL END TERMINALS:

1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE ST., GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50 FEET (15.24 m), INCLUSIVE OF TWO 25 FOOT (7.62 m) LONG RAIL ELEMENTS. 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:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265M	SRT-350 (12.5, 8 Post) Slotted Rail Terminal Post Layout and Erection Details	6/20/97	3/6/98
SS142	Slotted Rail Terminal SRT-350 Post Layout and Erection Details (12.5, 9 Post)	4/12/00	7/31/00
SS141	ET-2000 PLUS PLAN, ELEVATION & SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET-2000 PLUS 50'-0" WITH 12'-6" PANELS & HBA POSTS 1-4 PLAN, ELEVATION & SECTION	5/22/00	7/31/00

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO 44224 (TELEPHONE: 330-346-0721)

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0" (15.24 m), INCLUSIVE OF FOUR 12'-6" (3.81m) LONG RAIL ELEMENTS. 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:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	FOUNDATION TUBES SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" x 18" (450mm X 450mm).

THE CONTRACTOR MAY USE A SALVAGED EXTRUDER WHEN ASSEMBLING THE ITEM 606 ANCHOR ASSEMBLY, TYPE E-98. ALL WELDS ON THE EXTERIOR OF THE SALVAGED EXTRUDER SHALL NOT BE DAMAGED AND THE FEEDER SHUTE SHALL NOT BE BENT.

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES (100mm) ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27¾ INCHES (706mm) FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES NOT PROJECT MORE THAN 4 INCHES (100mm) ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY REBUILT, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

CALCULATED MER CHECKED BAD

GUARDRAIL NOTES

WAY-21-0.00

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR_GN.dgn
WORKSTATION: ahill DATE: 12/9/2009

SHEET	202 GUARDRAIL REMOVED FOR REUSE (FT)	202 GUARDRAIL REMOVED FOR REUSE, BARRIER DESIGN (EACH)	202 ANCHOR ASSEMBLY REMOVED, TYPE T (EACH)	202 ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98 (EACH)	202 BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE (EACH)	202 REMOVAL MISC.: IMPACT ATTENUATOR (EACH)	203 EXCAVATION (CU YD)	203 EMBANKMENT, AS PER PLAN (CU YD)	209 RESHAPING UNDER GUARDRAIL, AS PER PLAN (STATION)	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448) (CU YD)	604 CATCH BASIN ADJUSTED TO GRADE (EACH)	604 MANHOLE ADJUSTED TO GRADE (EACH)	604 MONUMENT BOX ADJUSTED TO GRADE (EACH)	606 GUARDRAIL REBUILT, TYPE 5 (FT)	606 GUARDRAIL REBUILT, TYPE 5, AS PER PLAN (EACH)	606 ANCHOR ASSEMBLY REBUILT, TYPE E-98 (EACH)	606 ANCHOR ASSEMBLY, TYPE T (EACH)	606 BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 2 (EACH)	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN (EACH)	606 GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5 (FT)	606 GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5, AS PER PLAN (A) (FT)	606 GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5, AS PER PLAN (B) (FT)	606 IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL) (EACH)	609 CURB, TYPE 3-B (ASPHALT CONCRETE) (FT)	626 BARRIER REFLECTOR, TYPE A (EACH)	626 BARRIER REFLECTOR, TYPE A2 (EACH)	626 BARRIER REFLECTOR, TYPE B (EACH)
17	121.88		1						1.34					121.88			1								3		
18	540.63	112.50				1	2		6.86	2				540.63					1	112.50			1	75	10	2	
19																									3	10	
20	2009.38	134.38				1			21.76					2009.38						134.38			1		24	2	
21	1637.50	112.50				1			16.40					1637.50						100.00	12.50		1		21	2	7
22			1														1								2		6
23	1346.88		1	1					14.09					1346.88		1	1								15		
24	1450.00		1												1,450.00		1								16		
25	440.63		1		1				4.53					440.63			1	1							5		
26																									4		6
27	2165.63	12.50			1	1			21.66					2053.13	112.50			1		6.25		6.25	1		23	2	
28	1753.13	12.50			1	1			17.53					1753.13				1		6.25		6.25	1		20	2	8
29	250.00	12.50		1		1		5	2.50					250.00		1				6.25		6.25	1		7	2	5
30	400.00		1	1				78						400.00		1	1								6		
TOTAL	12115.66	396.88	6	3	3	6	2	83	106.67	2	2	1	2	10553.16	1,562.50	3	6	3	1	365.63	12.50	18.75	6	75	213		

CALC'D
MER
CHECKED
BAD

ROADWAY SUB-SUMMARY / PAVEMENT SUB-SUMMARY

WAY-21-0.00

16
69

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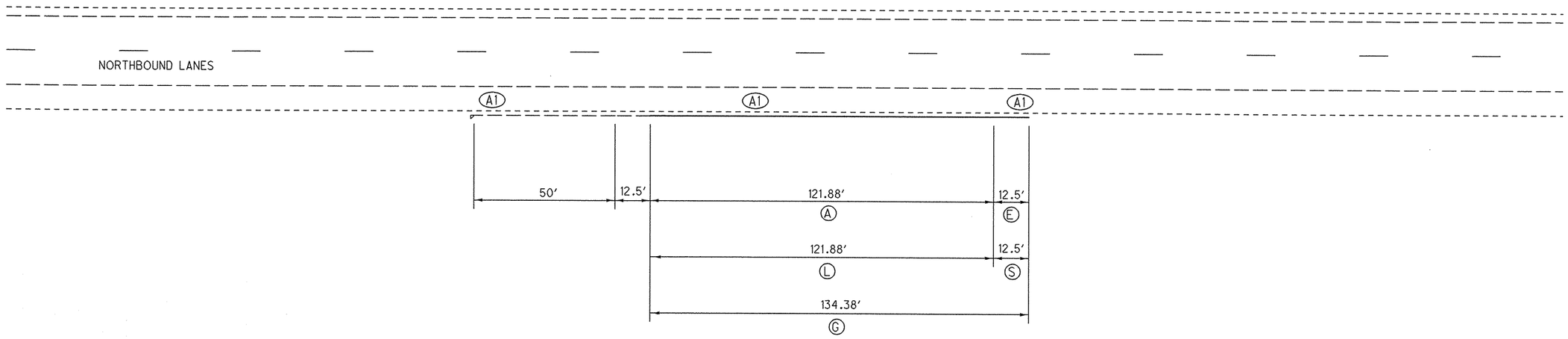
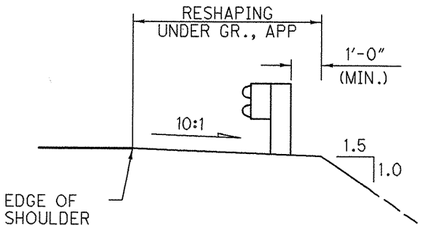


LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED FOR REUSE	FT		121.88	121.88
(E)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH		1	1
(G)	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STA		1.34	1.34
(L)	606	GUARDRAIL REBUILT, TYPE 5	FT		121.88	121.88
(S)	606	ANCHOR ASSEMBLY, TYPE T	EACH		1	1
(A1)	626	BARRIER REFLECTOR, TYPE A	EACH		3	3

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

TYPICAL SECTION "TYPE 5"

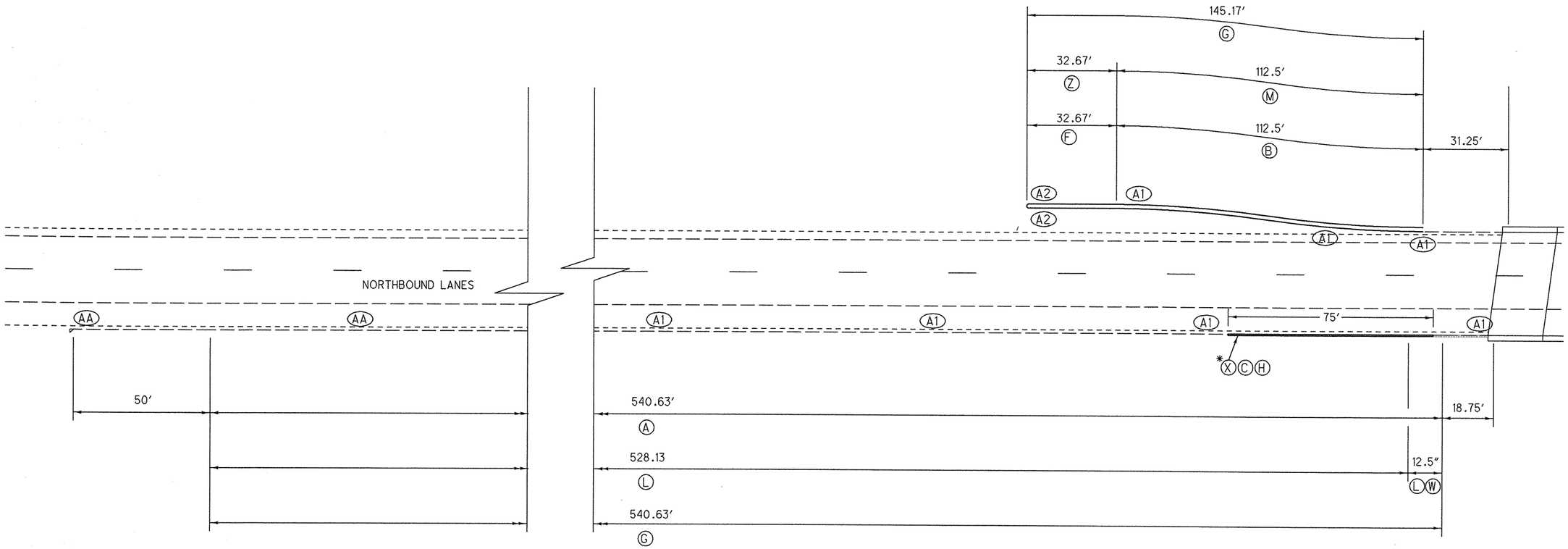


GUARDRAIL DETAILS
NORTHBOUND
SLM 0.12

WAY-21-0.00

17
69

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010

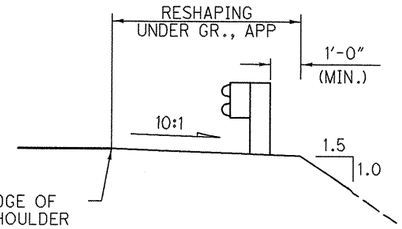


LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
A	202	GUARDRAIL REMOVED FOR REUSE	FT		540.63	540.63
B	202	GUARDRAIL REMOVED FOR REUSE, BARRIER DESIGN	FT	112.5		112.5
F	202	REMOVAL MISC.: IMPACT ATTENUATOR	EACH	1		1
C	203	EXCAVATION	CU YD		2	2
G	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STA	1.45	5.41	6.86
H	442	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448)	CU YD		2	2
L	606	GUARDRAIL REBUILT, TYPE 5	FT		540.63	540.63
M	606	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5	FT	112.5		112.5
W	606	BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN	EACH		1	1
X	609	CURB, TYPE 3-B (ASPHALT CONCRETE)	FT		75	75
Z	606	IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	EACH	1		1
A1	626	BARRIER REFLECTOR, TYPE A	EACH	3	7	10
A2	626	BARRIER REFLECTOR, TYPE A2	EACH	2		2

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

* PRIOR TO PLACEMENT OF PROPOSED ASPHALT CONCRETE CURB, THE CONTRACTOR WILL BE REQUIRED TO EXCAVATE 3″ DEEP, 2 FT WIDE, 75 FT LONG AND PLACE ITEM 442 SO AS TO HAVE A GOOD WORKING PLATFORM TO BUILD THE PROPOSED CURB. TAPER THE PROPOSED CURB FROM 0″ TO FULL HEIGHT IN THE FIRST 10″, THEN AT THE END OF THE CURB, BUTT THE PROPOSED CURB INTO THE EXISTING CONCRETE CURB. PLACE PROPOSED CURB AT THE FACE OF THE GUARDRAIL RUN.
IF CONTRACTOR DOESN'T PERFORM PROPOSED CURB WORK DURING THE GUARDRAIL REBUILDING STAGE, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REMOVAL AND REPLACEMENT OF THE RAIL TO PERFORM THE PROPOSED CURB WORK.

TYPICAL SECTION "TYPE 5"



N

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED MER
CHECKED

GUARDRAIL DETAILS
SLM 0.78 NORTHBOUND

WAY-21-0.00

18
69

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
(A1)	626	BARRIER REFLECTOR, TYPE A	EACH	1	2	3
(B1)	626	BARRIER REFLECTOR, TYPE B	EACH	6	4	10

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

N

0 20 40
HORIZONTAL SCALE IN FEET

CALCULATED MER
CHECKED BAD

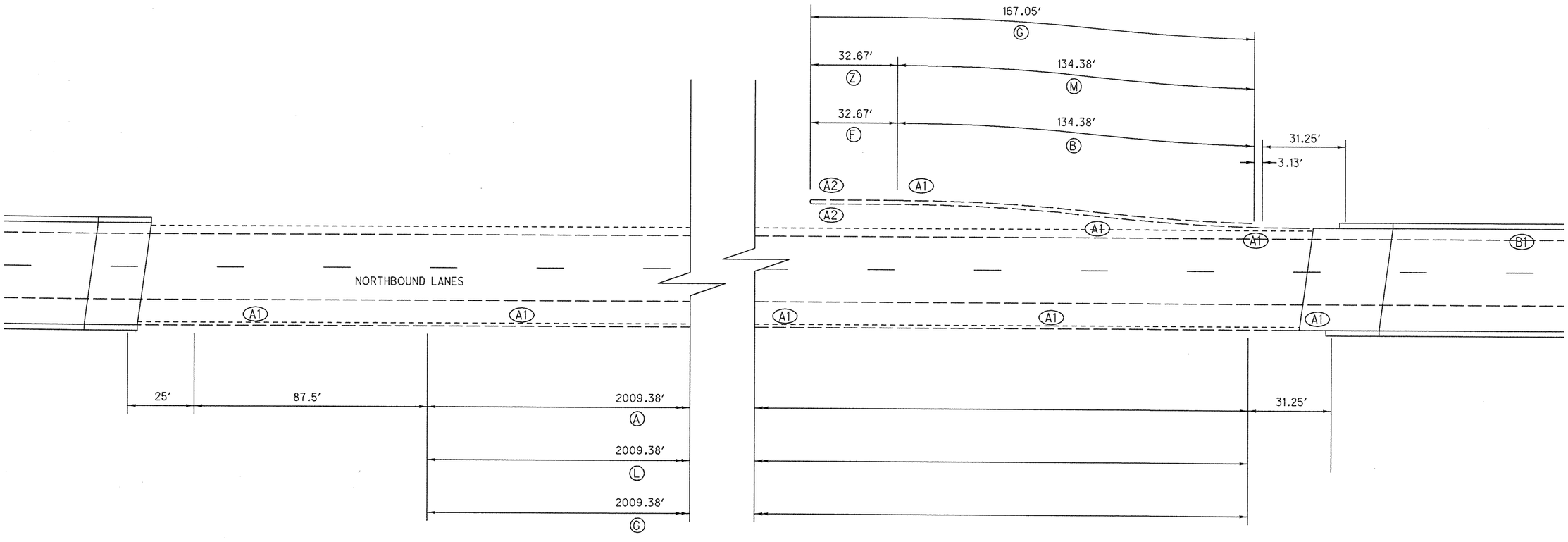
GUARDRAIL DETAILS NORTHBOUND

SLM 0.88

WAY-21-0.00

19
69

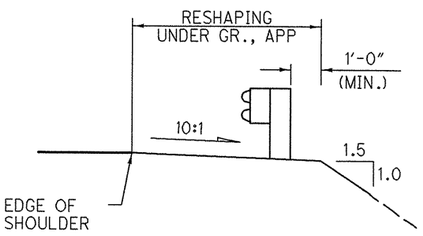
DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED FOR REUSE	FT		2009.38	2009.38
Ⓑ	202	GUARDRAIL REMOVED FOR REUSE, BARRIER DESIGN	FT	134.38		134.38
Ⓕ	202	REMOVAL MISC.: IMPACT ATTENUATOR	EACH	1		1
Ⓖ	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STA	1.67	20.09	21.76
Ⓛ	606	GUARDRAIL REBUILT, TYPE 5	FT		2009.38	2009.38
Ⓜ	606	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5	FT	134.38		134.38
Ⓩ	606	IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	EACH	1		1
Ⓐ1	626	BARRIER REFLECTOR, TYPE A	EACH	3	21	24
Ⓐ2	626	BARRIER REFLECTOR, TYPE A2	EACH	2		2

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

TYPICAL SECTION "TYPE 5"



N

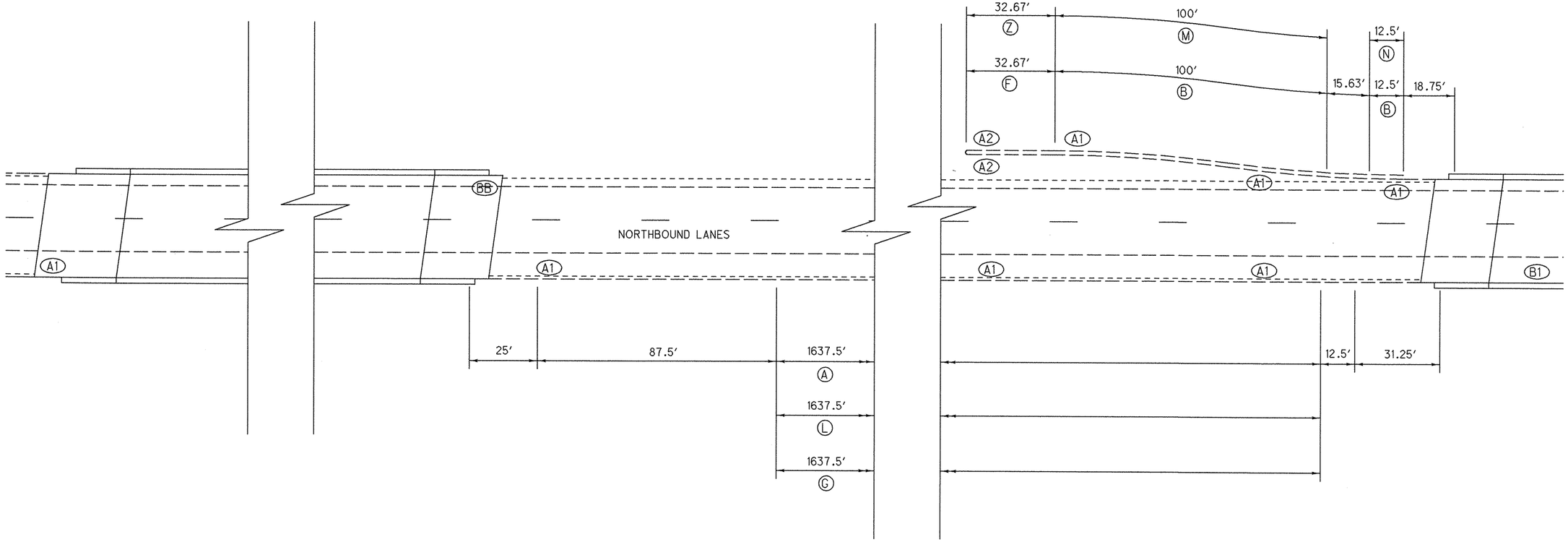
HORIZONTAL SCALE IN FEET
0
20
40

CALCULATED MER
CHECKED BAD

GUARDRAIL DETAILS
SLM 1.00
WAY-21-0.00

20
69

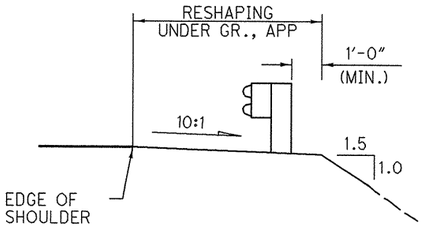
DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED FOR REUSE	FT		1637.5	1637.5
Ⓑ	202	GUARDRAIL REMOVED FOR REUSE, BARRIER DESIGN	FT	112.5		112.5
Ⓕ	202	REMOVAL MISC.: IMPACT ATTENUATOR	EACH	1		1
Ⓖ	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STA		16.4	16.4
Ⓛ	606	GUARDRAIL REBUILT, TYPE 5	FT		1637.5	1637.5
Ⓜ	606	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5	FT	100		100
Ⓝ	606	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5, AS PER PLAN (A)	FT	12.5		12.5
Ⓩ	606	IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	EACH	1		
A1	626	BARRIER REFLECTOR, TYPE A	EACH	3	18	21
A2	626	BARRIER REFLECTOR, TYPE A2	EACH	2		2
B1	626	BARRIER REFLECTOR, TYPE B	EACH	4	3	7

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

TYPICAL SECTION "TYPE 5"



N

0 20 40
HORIZONTAL
SCALE IN FEET

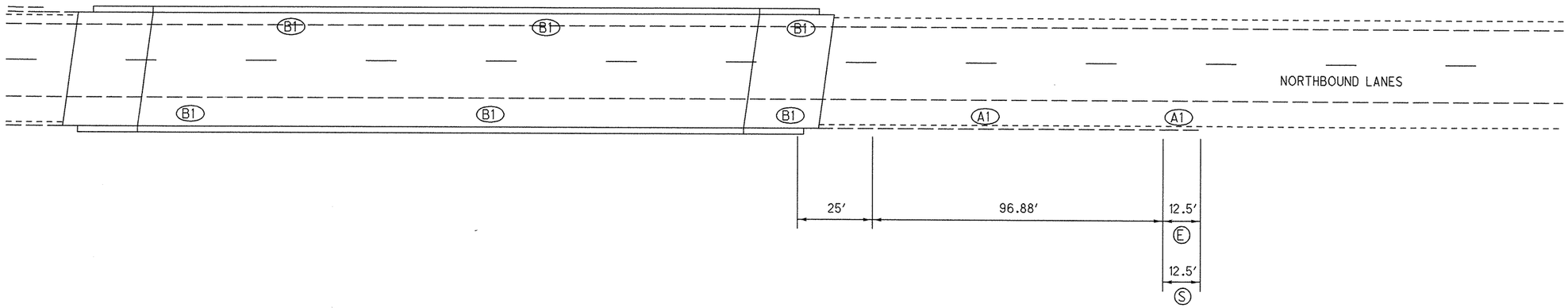
CALCULATED MER
CHECKED BAD

GUARDRAIL DETAILS
SLM 1.42 NORTHBOUND

WAY-21-0.00

21
69

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
(E)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH		1	1
(S)	606	ANCHOR ASSEMBLY, TYPE T	EACH		1	1
(A1)	626	BARRIER REFLECTOR, TYPE A	EACH		2	2
(B1)	626	BARRIER REFLECTOR, TYPE B	EACH	3	3	6

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010

N

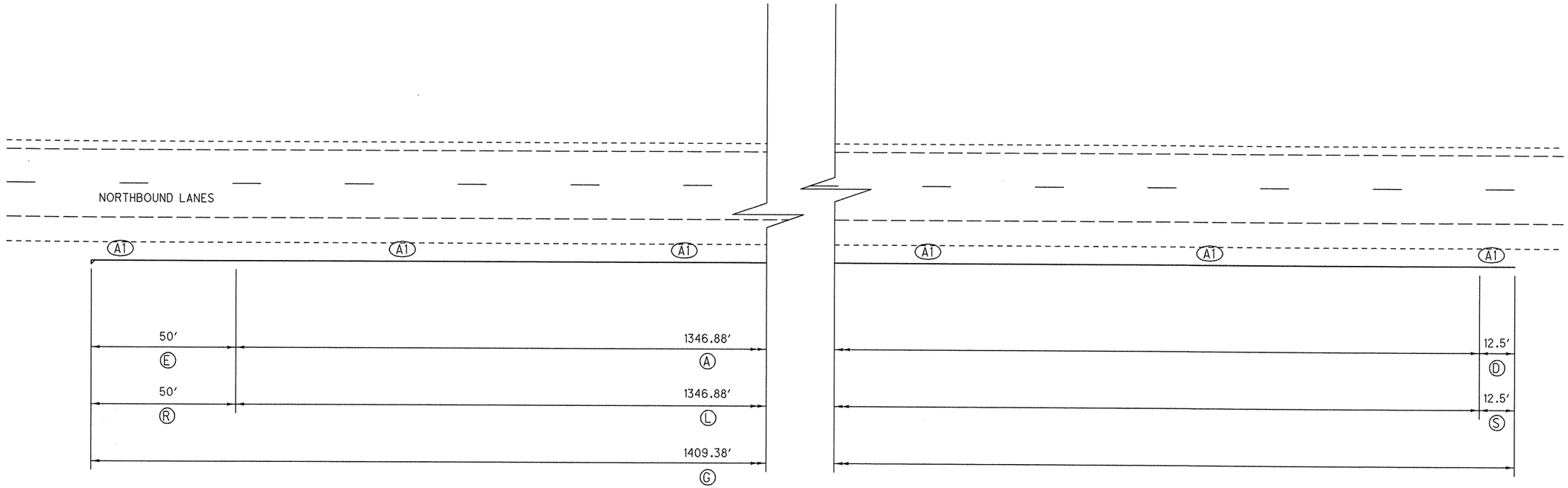
HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED MER
CHECKED BAD

GUARDRAIL DETAILS NORTHBOUND

SLM 1.83

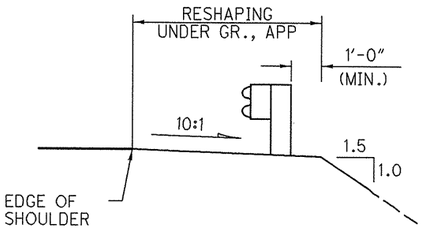
WAY-21-0.00



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED FOR REUSE	FT		1346.88	1346.88
Ⓓ	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH		1	1
Ⓔ	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	EACH		1	1
Ⓖ	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STA		14.09	14.09
Ⓛ	606	GUARDRAIL REBUILT, TYPE 5	FT		1346.88′	1346.88′
Ⓡ	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH		1	1
Ⓢ	606	ANCHOR ASSEMBLY, TYPE T	EACH		1	1
Ⓐ1	626	BARRIER REFLECTOR, TYPE A	EACH		15	15

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

TYPICAL SECTION "TYPE 5"



N

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED MER
CHECKED BAD

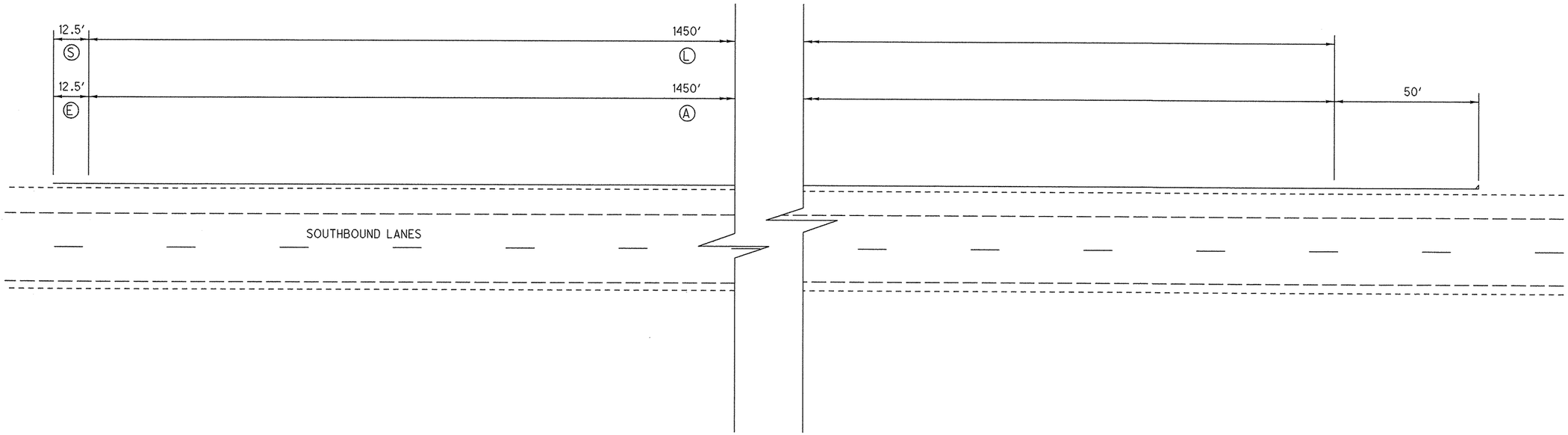
GUARDRAIL DETAILS NORTHBOUND

SLM 2.77

WAY-21-0.00

23
69

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED FOR REUSE	FT	1450		1450
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH	1		1
Ⓛ	606	GUARDRAIL REBUILT, TYPE 5, AS PER PLAN	FT	1450		1450
Ⓢ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
Ⓐ1	626	BARRIER REFLECTOR, TYPE A	EACH	16		16

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010

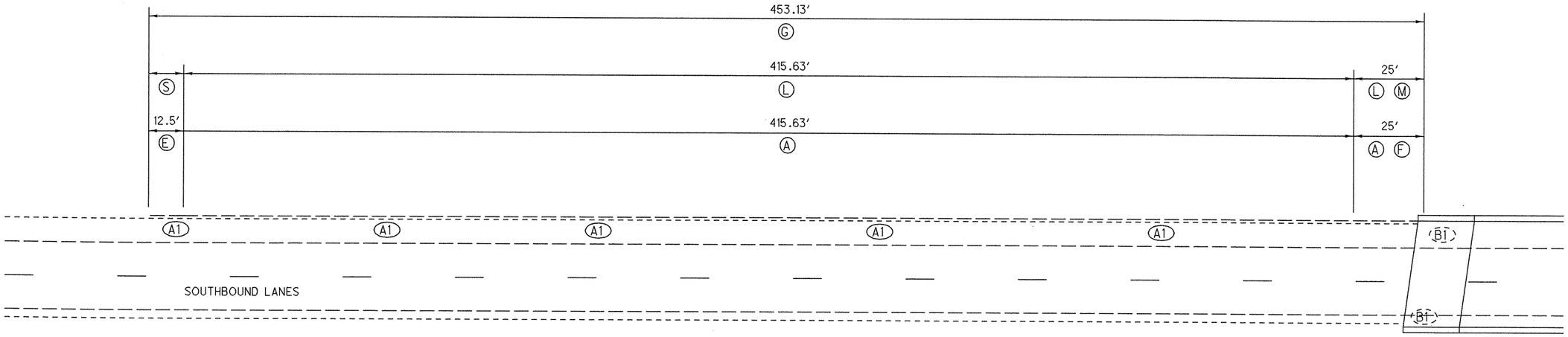
N

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED MER
CHECKED BAD

GUARDRAIL DETAILS SOUTHBOUND
SLM 0.10

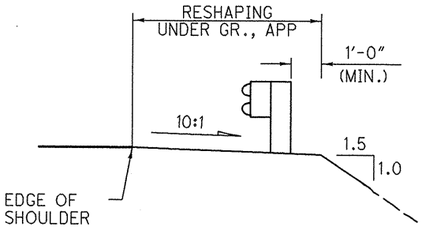
WAY-21-0.00



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED FOR REUSE	FT	440.63		440.63
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH	1		1
Ⓕ	202	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	EACH	1		1
Ⓖ	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STA	4.53		4.53
Ⓛ	606	GUARDRAIL REBUILT, TYPE 5	FT	440.63		440.63
Ⓜ	606	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 2	EACH	1		1
Ⓢ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
A1	626	BARRIER REFLECTOR, TYPE A	EACH	5		5

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

TYPICAL SECTION "TYPE 5"



GUARDRAIL DETAILS
SLM 0.78 SOUTHBOUND

WAY-21-0.00

25
69

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
A1	626	BARRIER REFLECTOR, TYPE A	EACH	2	2	4
B1	626	BARRIER REFLECTOR, TYPE B	EACH	3	3	6

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010

N

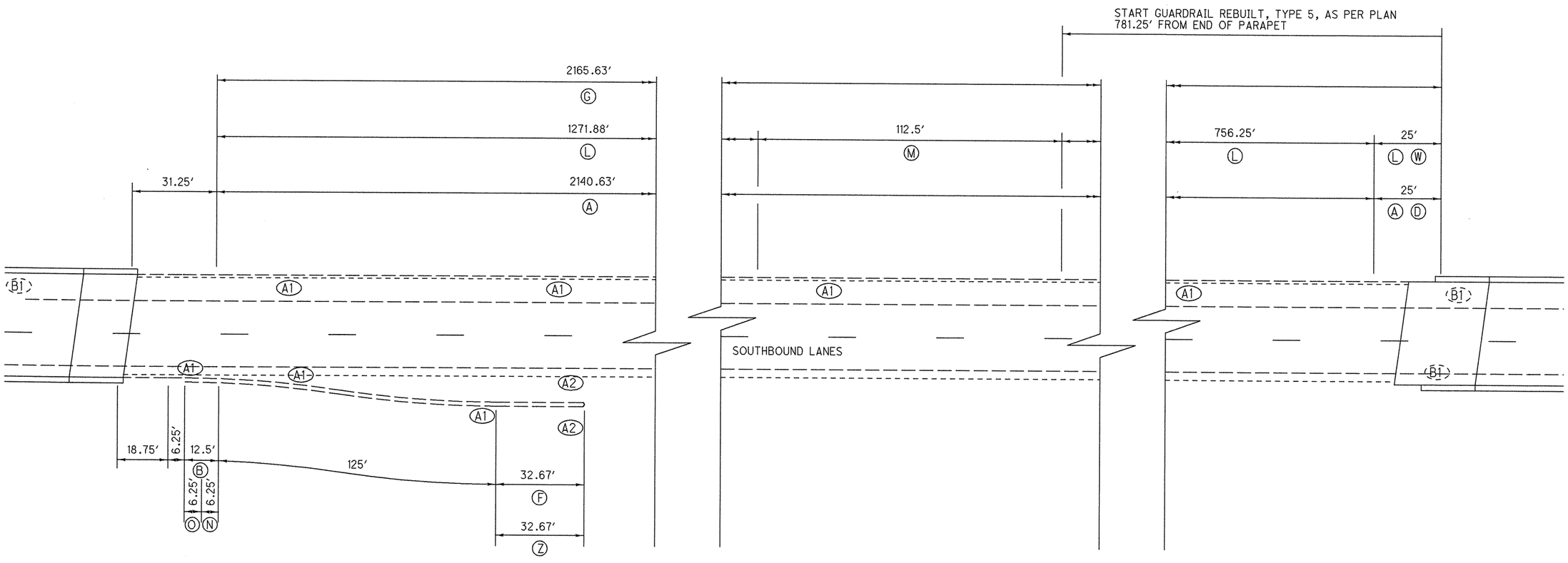
0 20 40
HORIZONTAL SCALE IN FEET

CALCULATED MER
CHECKED BAD

GUARDRAIL DETAILS SOUTHBOUND

SLM 0.88

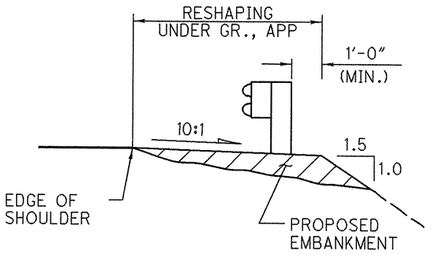
WAY-21-0.00



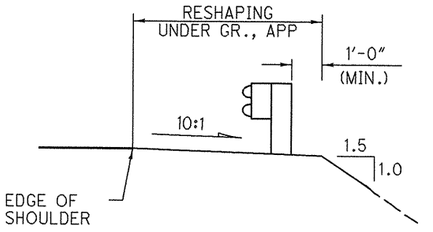
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
A	202	GUARDRAIL REMOVED FOR REUSE	FT	2165.63		2165.63
B	202	GUARDRAIL REMOVED FOR REUSE, BARRIER DESIGN	FT		12.5	12.5
D	202	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	EACH	1		1
F	202	REMOVAL MISC.: IMPACT ATTENUATOR	EACH		1	1
G	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STA	21.66		21.66
L	606	GUARDRAIL REBUILT, TYPE 5	FT		2053.13	2053.13
M	606	GUARDRAIL REBUILT, TYPE 5, AS PER PLAN	FT		112.5	112.5
N	606	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5	FT		6.25	6.25
O	606	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5, AS PER PLAN (B)	FT		6.25	6.25
W	606	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 2	EACH	1		1
Z	606	IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	EACH		1	1
A1	626	BARRIER REFLECTOR, TYPE A	EACH	20	3	23
A2	626	BARRIER REFLECTOR, TYPE A2	EACH		2	2

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

TYPICAL SECTION "TYPE 5"



TYPICAL SECTION "TYPE 5"



HORIZONTAL SCALE IN FEET
0 20 40

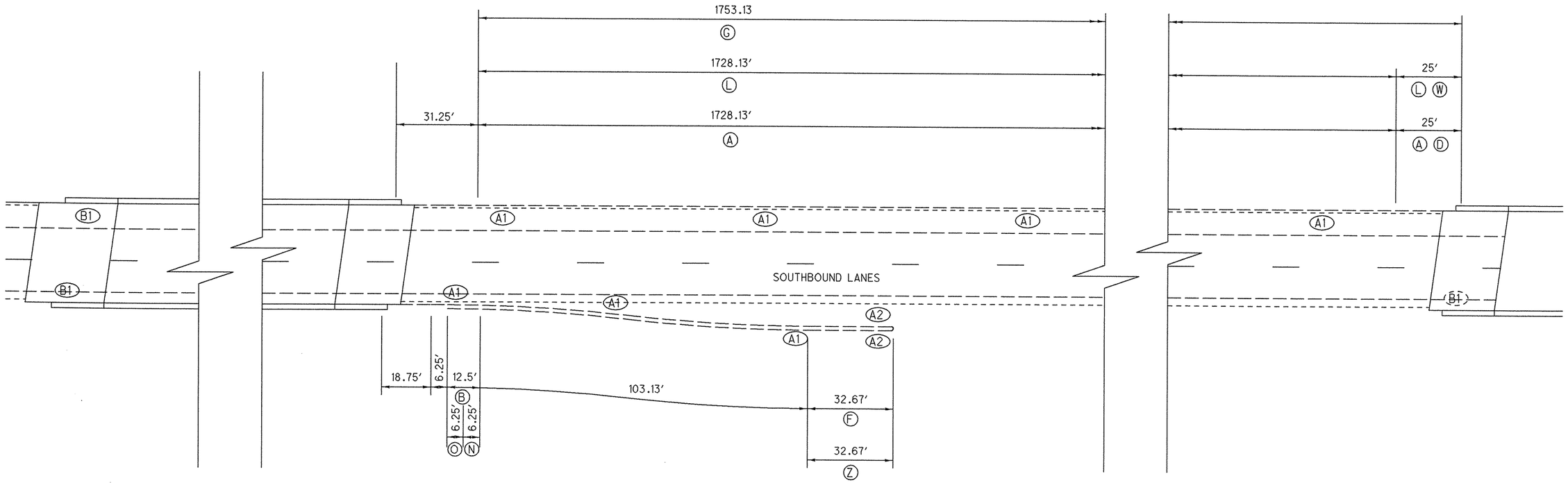
CALCULATED MER
CHECKED BAD

GUARDRAIL DETAILS
SLM 0.99 SOUTHBOUND

WAY-21-0.00

27
69

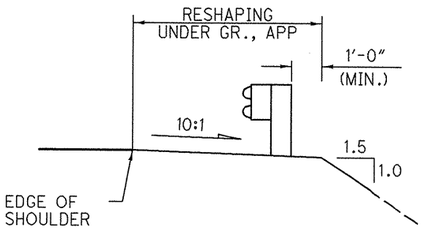
DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
A	202	GUARDRAIL REMOVED FOR REUSE	FT	1753.13		1753.13
B	202	GUARDRAIL REMOVED FOR REUSE, BARRIER DESIGN	FT		12.5	12.5
D	202	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	EACH	1		1
F	202	REMOVAL MISC.: IMPACT ATTENUATOR	EACH		1	1
G	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STA	17.53		17.53
L	606	GUARDRAIL REBUILT, TYPE 5	FT	1753.13		1753.13
N	606	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5	FT		6.25	6.25
O	606	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5, AS PER PLAN (B)	FT		6.25	6.25
W	606	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 2	EACH	1		1
Z	606	IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	EACH		1	1
A1	626	BARRIER REFLECTOR, TYPE A	EACH	17	3	20
A2	626	BARRIER REFLECTOR, TYPE A2	EACH		2	2
B1	626	BARRIER REFLECTOR, TYPE B	EACH	4	4	8

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

TYPICAL SECTION "TYPE 5"



HORIZONTAL SCALE IN FEET
0 20 40

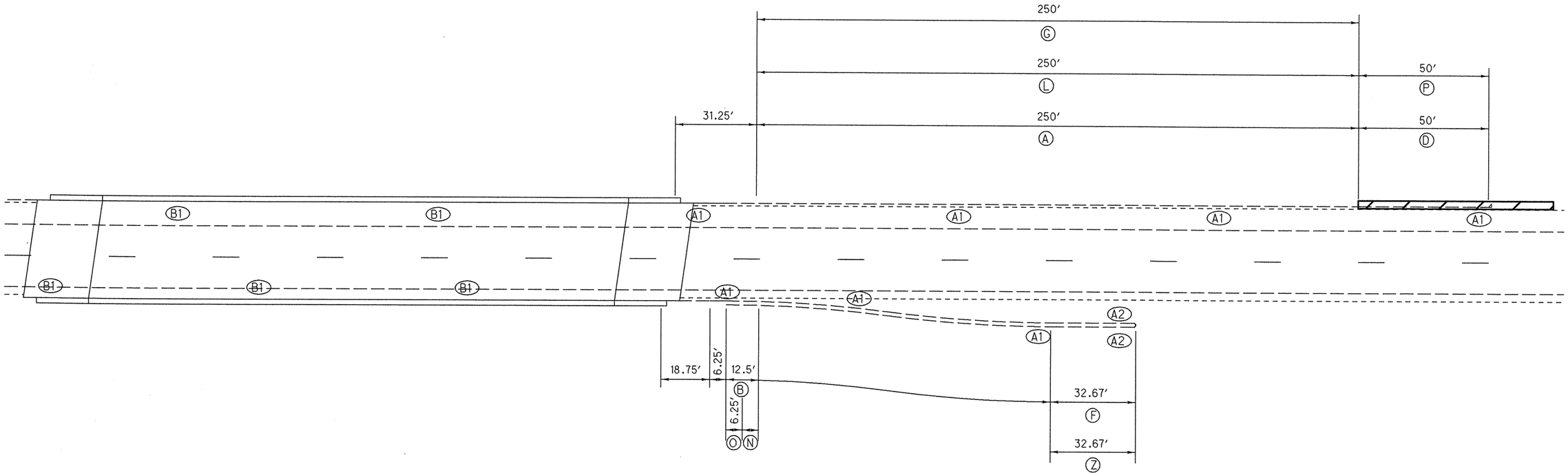
CALCULATED MER
CHECKED BAD

GUARDRAIL DETAILS
SLM 1.41 SOUTHBOUND

WAY-21-0.00

28
69

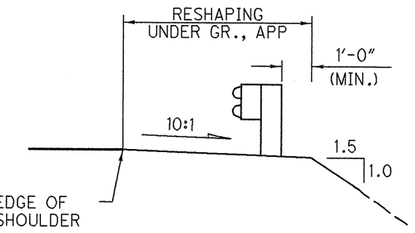
DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED FOR REUSE	FT	250′		250′
Ⓑ	202	GUARDRAIL REMOVED FOR REUSE, BARRIER DESIGN	FT		12.5	12.5
Ⓓ	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	EACH	1		1
▨	203	EMBANKMENT, AS PER PLAN	CU YD	5		5
Ⓕ	202	REMOVAL MISC.: IMPACT ATTENUATOR	EACH		1	1
Ⓖ	209	RESHAPING UNDER GUARDRAIL, AS PER PLAN	STA	2.5		2.5
Ⓛ	606	GUARDRAIL REBUILT, TYPE 5	FT	250		250
Ⓝ	606	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5	FT		6.25	6.25
Ⓞ	606	GUARDRAIL REBUILT, BARRIER DESIGN, TYPE 5, AS PER PLAN (B)	FT		6.25	6.25
Ⓟ	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH	1		1
Ⓩ	606	IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	EACH		1	1
A1	626	BARRIER REFLECTOR, TYPE A	EACH	4	3	7
A2	626	BARRIER REFLECTOR, TYPE A2	EACH		2	2
B1	626	BARRIER REFLECTOR, TYPE B	EACH	2	3	5

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

TYPICAL SECTION "TYPE 5"



HORIZONTAL SCALE IN FEET
0 20 40

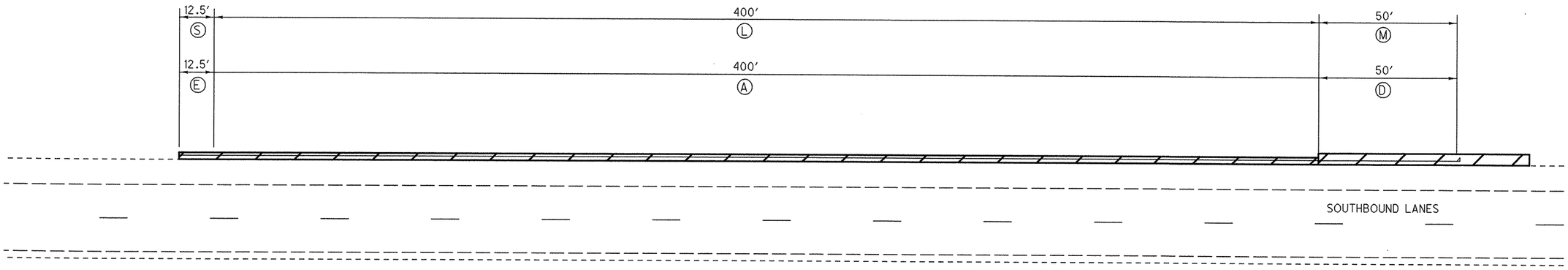
CALCULATED MER
CHECKED BAD

GUARDRAIL DETAILS
SOUTHBOUND
SLM 1.82

WAY-21-0.00

29
69

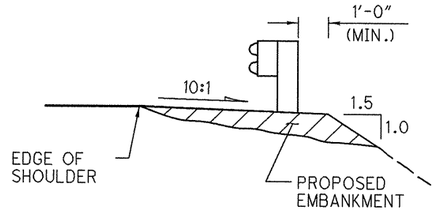
DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010



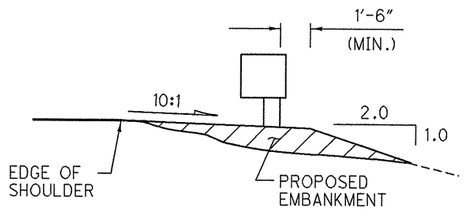
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITIY		TOTAL
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED FOR REUSE	FT	400		400
Ⓓ	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	EACH	1		1
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH	1		1
▨	203	EMBANKMENT, AS PER PLAN	CU YD	78		78
Ⓛ	606	GUARDRAIL REBUILT, TYPE 5	FT	400		400
Ⓜ	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH	1		1
Ⓢ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
Ⓐ1	626	BARRIER REFLECTOR, TYPE A	EACH	6		6

ALL QUANTITIES CARRIED TO THE SUB-SUMMARY SHEET, SHEET 16.

TYPICAL SECTION "TYPE 5"



TYPICAL SECTION "E-98"



DESIGN FILE: I:\projects\77318\Roadway\sheets\77318GR001.dgn
WORKSTATION: mschafra DATE: 1/19/2010

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED MER
CHECKED BAD

GUARDRAIL DETAILS SOUTHBOUND

SLM 2.79

WAY-21-0.00

ITEM 632, DETECTOR LOOP, AS PER PLAN

AN ESTIMATED QUANTITY OF 632 DETECTOR LOOP, AS PER PLAN HAS BEEN PROVIDED WHEN WIRE IS CUT, BROKEN OR DESTROYED DUE TO PAVEMENT PLANING, PAVEMENT REPAIR OR BUTT JOINT OPERATIONS. THIS ITEM SHALL ALSO BE USED FOR REPLACEMENT OF DETECTOR LOOPS THAT HAVE BEEN DAMAGED DUE TO PAVEMENT FAILURE. IT IS IMPERATIVE THAT REPLACEMENT OF LOOP DETECTORS BE INSTALLED AND FULLY FUNCTIONAL IN THE SHORTEST POSSIBLE TIME. THE CONTRACTOR SHALL HAVE REPLACEMENT LOOP DETECTORS INSTALLED AND FULLY FUNCTIONAL WITHIN 7 CALENDAR DAYS OF DESTRUCTION OF THE ORIGINAL LOOP.

THE CONTRACTOR SHALL NOTIFY MATT BLANKENSHIP, DISTRICT 3 ROADWAY SERVICES MANAGER, (PHONE 419-207-7045) 5 WORKING DAYS IN ADVANCE OF ANY PLANING OPERATIONS OR PAVEMENT REPAIR WORK THAT WILL DAMAGE DETECTOR LOOP INSTALLATIONS. THIS NOTIFICATION IS NEEDED FOR DISTRICT 3 TO SCHEDULE TEMPORARY SIGNAL TIMING MODIFICATIONS FOR THE TIME PERIOD WHEN THE DETECTOR LOOPS ARE OUT OF OPERATION. THE CONTRACTOR SHALL THEN RENOTIFY MR. BLANKENSHIP WITHIN 2 WORKING DAYS AFTER THE DAMAGED DETECTOR LOOPS ARE REPLACED SO THAT HE CAN RESCHEDULE DISTRICT CREWS TO RESTORE SIGNAL TIMINGS TO THE ORIGINAL SETTINGS.

FAILURE TO COMPLY WITH THE ABOVE STATED REQUIREMENTS WILL RESULT IN THE ASSESSMENT OF LIQUIDATED DAMAGES ACCORDING TO SECTION 108.07 OF THE CMS FOR EACH CALENDAR DAY BEYOND THE SPECIFIED LIMIT.

THE NEW LOOP DETECTORS SHALL BE PLACED AFTER THE PLANING AND PAVEMENT REPAIR OPERATIONS ARE COMPLETED WITHIN THE LOOP DETECTOR AREAS. THE LOOP DETECTORS SHALL NOT BE CUT INTO THE SURFACE COURSE.

NEW LOOP DETECTORS SHALL BE PLACED AT THE SAME LOCATIONS AND BE THE SAME SIZE AND TYPE AS THE EXISTING, OR AS DIRECTED BY THE ENGINEER. THE LOOP DETECTOR WIRE SHALL BE REPLACED TO THE PULL BOX OR POLE, WHICHEVER IS APPLICABLE, UNDER ITEM 632 AND TC-82.10.

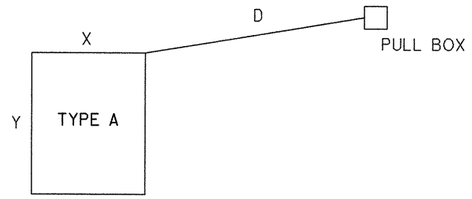
THIS WORK SHALL INCLUDE THE POURED EPOXY INSULATED SPLICE(S) REQUIRED TO CONNECT THE LOOP DETECTOR WIRE TO EXISTING LEAD-IN CABLE AT THE PULL BOX OR POLE. THE SPLICES SHALL BE IN ACCORDANCE WITH SECTION 725.15 OF THE CMS. PAYMENT SHALL BE MADE PER EACH LOOP DETECTOR CONNECTED TO THE LEAD-IN CABLE.

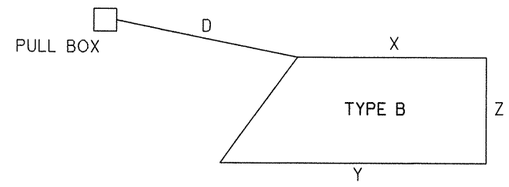
THE CONTRACTOR WILL BE PROVIDED WITH DETAILED PLANS AT THE PRE CONSTRUCTION MEETING SHOWING DETECTOR LOOP PLACEMENTS. A TABLE SHOWING DIMENSIONS AND LOCATIONS IS PROVIDED BELOW FOR THE PURPOSE OF ESTIMATING.

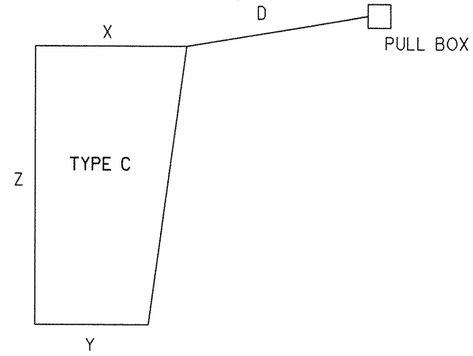
PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH OF ITEM 632 DETECTOR LOOP, AS PER PLAN.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 632 DETECTOR LOOP, AS PER PLAN 18 EACH







THE INTERSECTIONS INVOLVED ARE AS FOLLOWS:

ROUTE	SLM	LOCATION	TYPE	DIMENSION (FT)			
				D	X	Y	Z
SR 21	3.82	SR 21 SOUTH OF EDWARDS RD. (NBDL)	A	22	6	8	
SR 21	3.82	SR 21 SOUTH OF EDWARDS RD. (NBPL)	A	33	6	8	
SR 21	3.85	SR 21 SOUTH OF EDWARDS RD. (NBDL)	A	21	6	8	
SR 21	3.85	SR 21 SOUTH OF EDWARDS RD. (NBPL)	A	33	6	8	
SR 21	3.88	SR 21 SOUTH OF EDWARDS RD. (NBDL)	A	23	6	8	
SR 21	3.88	SR 21 SOUTH OF EDWARDS RD. (NBPL)	A	35	6	8	
SR 21	3.93	SR 21 SOUTH OF EDWARDS RD. (NBLTL)	A	76	6	30	
SR 21	3.95	SR 21 NORTH OF EDWARDS RD. (SBLTL)	A	70	6	30	
SR 21	3.99	SR 21 NORTH OF EDWARDS RD. (SBDL)	A	23	6	8	
SR 21	3.99	SR 21 NORTH OF EDWARDS RD. (SBPL)	A	32	6	8	
SR 21	4.02	SR 21 NORTH OF EDWARDS RD. (SBDL)	A	21	6	8	
SR 21	4.02	SR 21 NORTH OF EDWARDS RD. (SBPL)	A	32	6	8	
SR 21	4.05	SR 21 NORTH OF EDWARDS RD. (SBDL)	A	20	6	8	
SR 21	4.05	SR 21 NORTH OF EDWARDS RD. (SBPL)	A	31	6	8	
SR 21	3.94	EDWARDS RD. WEST OF SR 21	B	12	10	15	8
SR 21	3.94	EDWARDS RD. WEST OF SR 21	C	12	8	6	20
SR 21	3.94	EDWARDS RD. EAST OF SR 21	B	12	12	17	8
SR 21	3.94	EDWARDS RD. EAST OF SR 21	C	12	8	6	20

CALCULATED MER CHECKED BAD

LOOP DETECTOR NOTES & DETAILS

WAY-21-0.00

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318TM001.dgn MODELNAME: Sheet
WORKSTATION:mschafro DATE:1/19/2010

LOCATION		AREA	203 EXCAVATION	623 CONSTRUCTION LAYOUT STAKES	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	659 SOIL ANALYSIS TEST	659 TOPSOIL	659 SEEDING AND MULCHING	659 REPAIR SEEDING AND MULCHING	659 INTER-SEEDING	659 COMMERCIAL FERTILIZER	659 LIME	659 WATER						
		SQ YD	CU YD	LUMP	EACH	EACH	EACH	CU YD	SQ YD	SQ YD	SQ YD	TON	ACRE	M GAL						
REMOVE U-TURN																				
MEDIAN	SLM 0.50	182	71	LUMP	4	2		20	182	9	9	0.04	0.04	1.5						
REMOVE U-TURN																				
MEDIAN	SLM 1.22	60	17	LUMP	4	2		7	60	3	3	0.01	0.01	0.5						
REMOVE U-TURN																				
MEDIAN	SLM 2.17	78	35	LUMP				9	78	4	4	0.02	0.02	0.6						
TOTALS CARRIED TO GENERAL SUMMARY			**122**	**LUMP**	**8**	**4**	**2**	**36**	**320**	**16**	**16**	**0.07**	**0.07**	**3**						

NOTE: CENTERLINE OF MEDIAN DITCH SHALL MATCH THE EXISTING PROFILE GRADE AT EACH END OF THE WORK LIMITS. FINAL GRADE SHALL INCLUDE GRADING AROUND EXISTING CATCH BASINS AT ABOVE LISTED LOCATIONS.

CALC BY: MJS
CHKD BY: BAD

U-TURN MEDIAN CROSSING SUB-SUMMARY

WAY-21-0.00

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AUXILIARY & LONG LINE MARKINGS

ROUTE	COUNTY	SLM FROM	SLM TO	HIGHWAY MILES	614 WORK ZONE LANE LINE, CLASS I, 642 PAINT	614 WORK ZONE LANE LINE, CLASS III, 642 PAINT	614 WORK ZONE EDGE LINE, CLASS I, 642 PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	614 WORK ZONE STOP LINE, CLASS I, 642 PAINT	614 WORK ZONE STOP LINE, CLASS III, 642 PAINT	614 WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	614 WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS III, 642 PAINT	644 EDGE LINE TOTAL (PAY QUANTITY) (WHITE)	644 EDGE LINE TOTAL (PAY QUANTITY) (YELLOW)	644 LANE LINE	644 CENTER LINE SOLID LINE EQUIVALENT	644 CENTER LINE TOTAL (PAY QUANTITY)	646 ON BRIDGE DECKS EDGE LINE TOTAL (PAY QUANTITY) (WHITE)	646 ON BRIDGE DECKS EDGE LINE TOTAL (PAY QUANTITY) (YELLOW)	646 ON BRIDGE DECKS LANE LINE	644 AUXILIARY MARKINGS (740.04) CHANNELIZING LINE 8"	STOP LINE 24"	TRANSVERSE/ DIAGONAL LINE (WHITE) 24"	LANE ARROW LEFT	LANE ARROW RIGHT	LANE ARROW THROUGH	LANE ARROW COMBINATION	WORD ON PAVEMENT "ONLY" 72 INCH	WORD ON PAVEMENT "ONLY" 96 INCH	DOTTED LINE, 4"	HANDICAP SYMBOL MARKING	SPECIAL AIR SPEED ZONE MARKING
		FROM	TO	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	FT	MILE	MILE	MILE	MILE	MILE	MILE	MILE	MILE	FT	FT	FT	EACH				EACH		FT	EACH	EACH
SR21 NB	WAY	0.00	5.75	5.75	5.75	5.75	11.50							5.54	5.54	5.54			0.21	0.21	0.21												
SR21 SB	WAY	0.00	5.56	5.56	5.56	5.56	11.12							5.35	5.35	5.35			0.21	0.21	0.21												
SR21 & CLINTON RD.								173	173								0.010	0.01				173	30		2	2						
SR21 & EDWARDS RD.								3,053	3,053	194	194	650	650				0.020	0.01				3,053	194	650	14	4						
SR21 & GRILL RD.								148	148													148	30		4							
SR21 NB AT ROCK CUT AREA AT PCB							0.69																									
SR21 SB AT ROCK CUT AREA AT PCB							0.58																									
TOTAL				11.31	11.31	11.31	23.89	3,374	3,374	194	194	650	650	10.89	10.89	10.89	0.030	0.02	0.42	0.42	0.42	3,374	254	650	20	6						
														21.78					0.84						26							

RAISED PAVEMENT MARKERS

ROUTE	COUNTY	SLM FROM	SLM TO	DETAIL	621 RAISED PAVEMENT MARKER REMOVED	621 RPM	PRISMATIC RETRO-REFLECTOR TYPES ONE-WAY WHITE	TWO-WAY YELLOW / YELLOW	TWO-WAY WHITE / RED	TWO-WAY YELLOW / RED	TWO-WAY BLUE / BLUE	REMARKS
		FROM	TO		EACH	EACH	EACH					
SR 21 NB	WAY	0.00	5.75	5	380	380			380			
SR 21 SB	WAY	0.00	5.56	5	368	368			368			
SR21 & CLINTON RD.					6	6			6			SB CHANNELIZING LINE LEFT TURN LANE, NB CHANNELIZING LINE RIGHT TURN LANE
SR21 & EDWARDS RD.					79	79			79			SB & NB CHANNELIZING LINE & GORE AREA CHANNELIZING LINES, NB RT TURN LANE CHANNELIZING
SR21 & GRILL RD.					6	6			6			SB & NB CHANNELIZING LINE LEFT TURN LANES
TOTAL					839	839			839			

DETAIL	DESCRIPTION
1	MULTILANE UNDIVIDED TYPICAL SPACING
2	TAPERED ACCEL. LANE
3	DECELERATION LANE
4	PARALLEL ACCEL LANE
5	MULTILANE DIVIDED/EXPRESSWAY
6	STOP APPROACH
7	2 LANE APPR. WITH TURN LANE
8	THROUGH APPROACH
9	3 LANE APPR. WITH TURN LANE
10	3 LANE DIVIDED TO 2 LANE TRANSITION
11	3 LANE UNDIVIDED TO 2 LANE TRANSITION
12	TWO LANE NARROW BRIDGE
13	TWO WAY LEFT TURN LANE
14	ONE LANE BRIDGE
15	HORIZONTAL CURVE
16	HORIZONTAL CURVE ALT.
17	STOP APPROACH ALT.
18	FIRE HYDRANT
GAP	CENTER LINE AT 80 FT. TYP.

NOTES

1) THRU LANES SHALL BE STRIPED AT 12' WIDTHS.

2) FOR ALL WORK ZONE MARKINGS, THE 642 PAINT USED SHALL BE TYPE 1.

3) WORK ZONE STOP LINES SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS:
EDWARDS RD. - ALL 4 LEGS

CALC BY MJS

CHKD BY BAD

PAVEMENT MARKING / RPM SUB-SUMMARY

WAY-21-0.00

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DESIGN FILE: I:\projects\77318\Roadway\sheets\77318TC001.dgn
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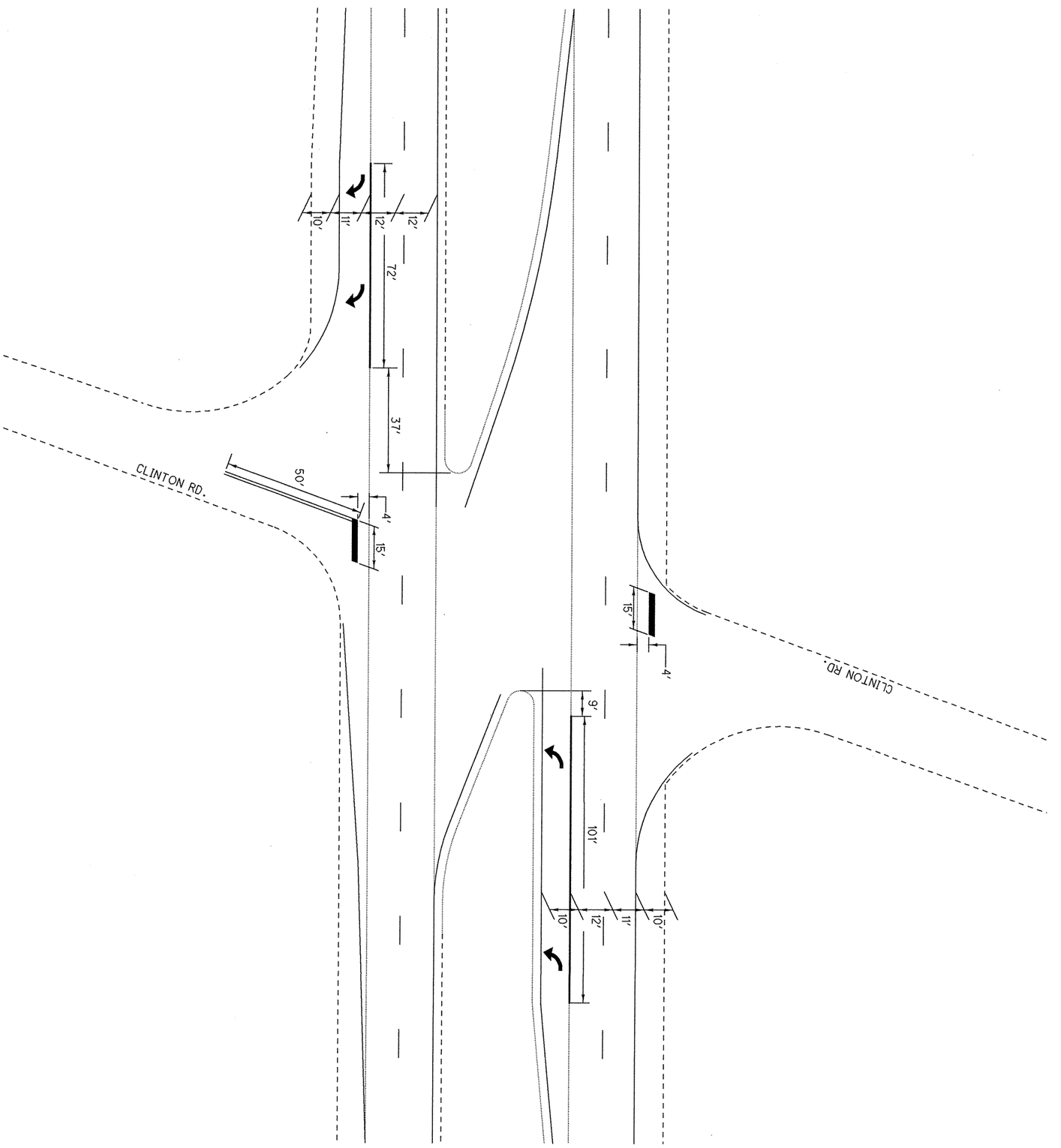

33A 69	WAY-21-0.00	PAVEMENT MARKINGS SR 21 AT CLINTON ROAD	CALCULATED AH CHECKED MJS	0 20 10 40 HORIZONTAL SCALE IN FEET	N

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318TC001.dgn
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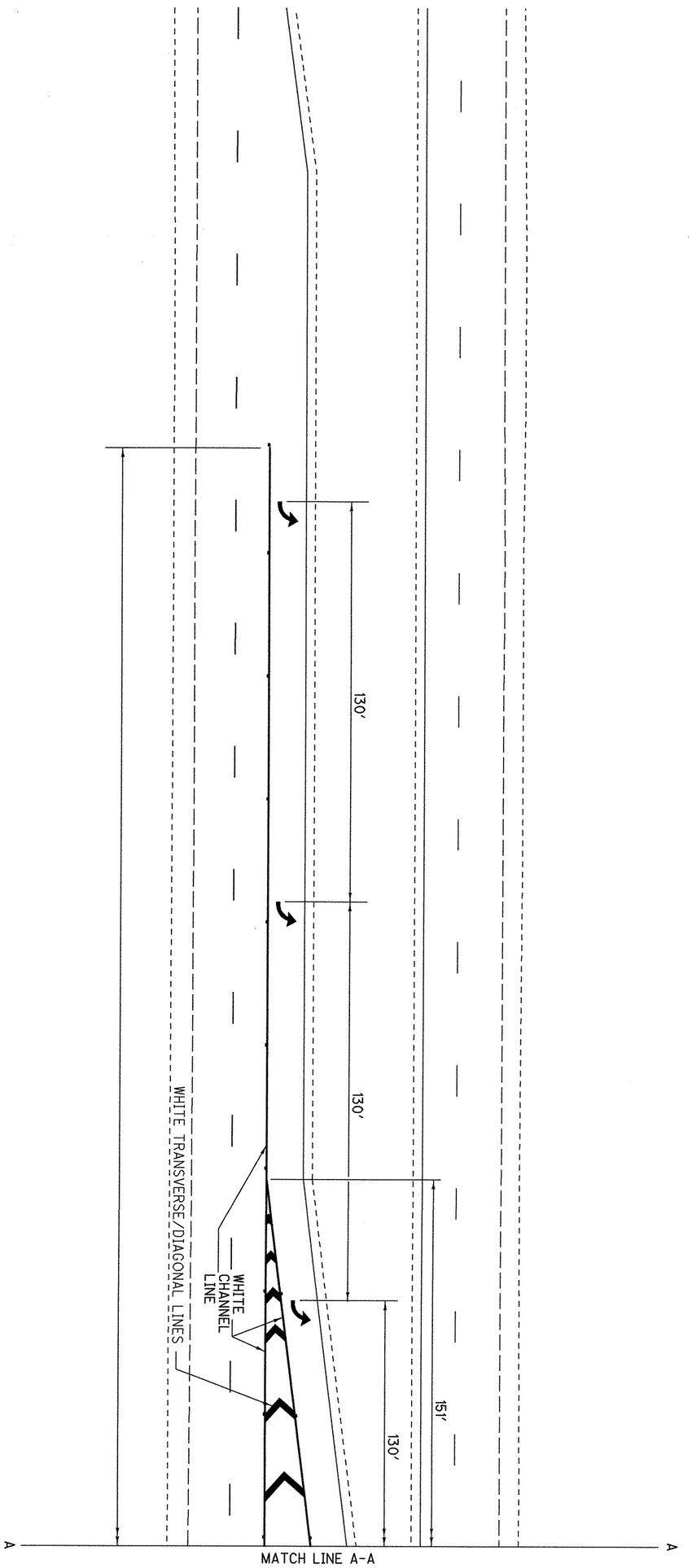

33B 69	WAY-21-0.00	PAVEMENT MARKINGS SR 21 AT EDWARDS ROAD	CALCULATED AH CHECKED MJS	0 20 10 40 HORIZONTAL SCALE IN FEET

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318TC001.dgn
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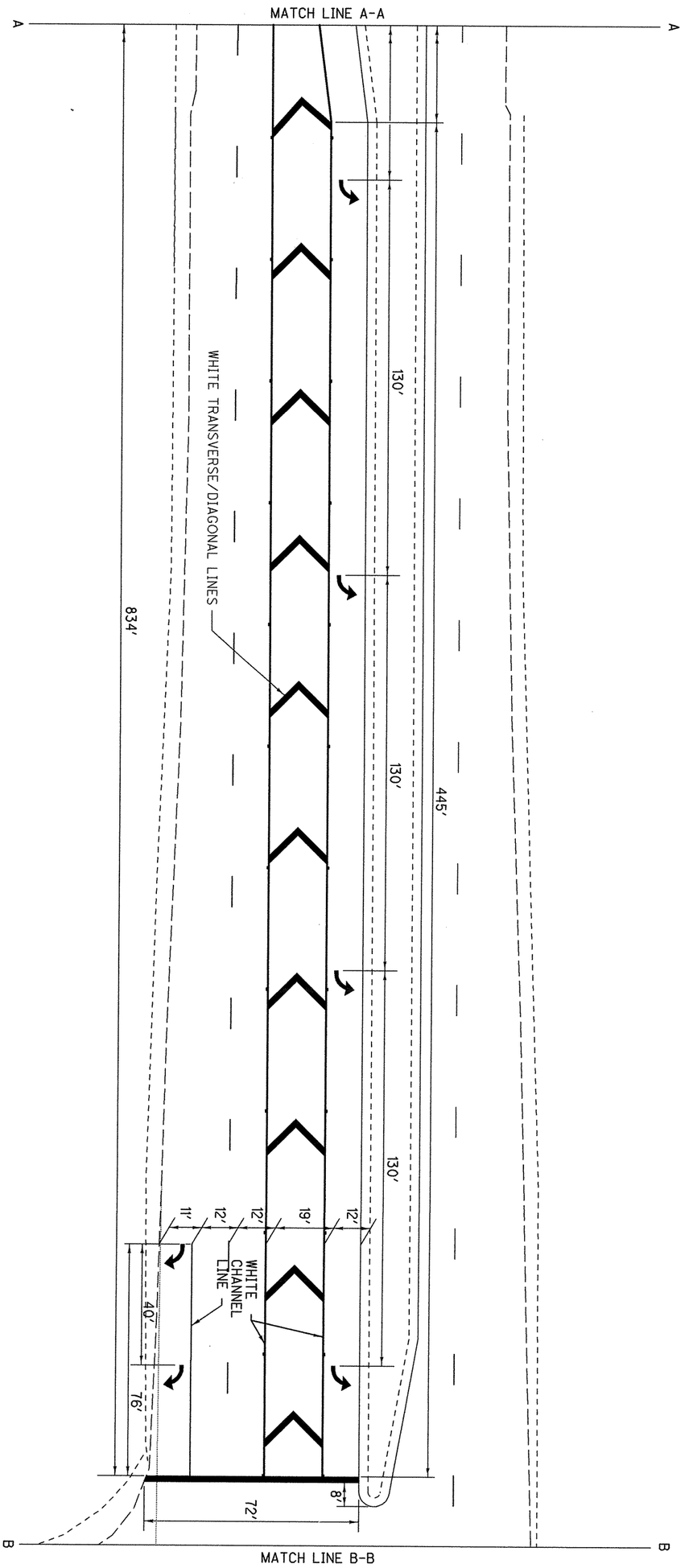

33C 69	WAY-21-3.75	PAVEMENT MARKINGS SR 21 AT EDWARDS ROADS	CALCULATED AH CHECKED MJS	0 20 10 40 HORIZONTAL SCALE IN FEET

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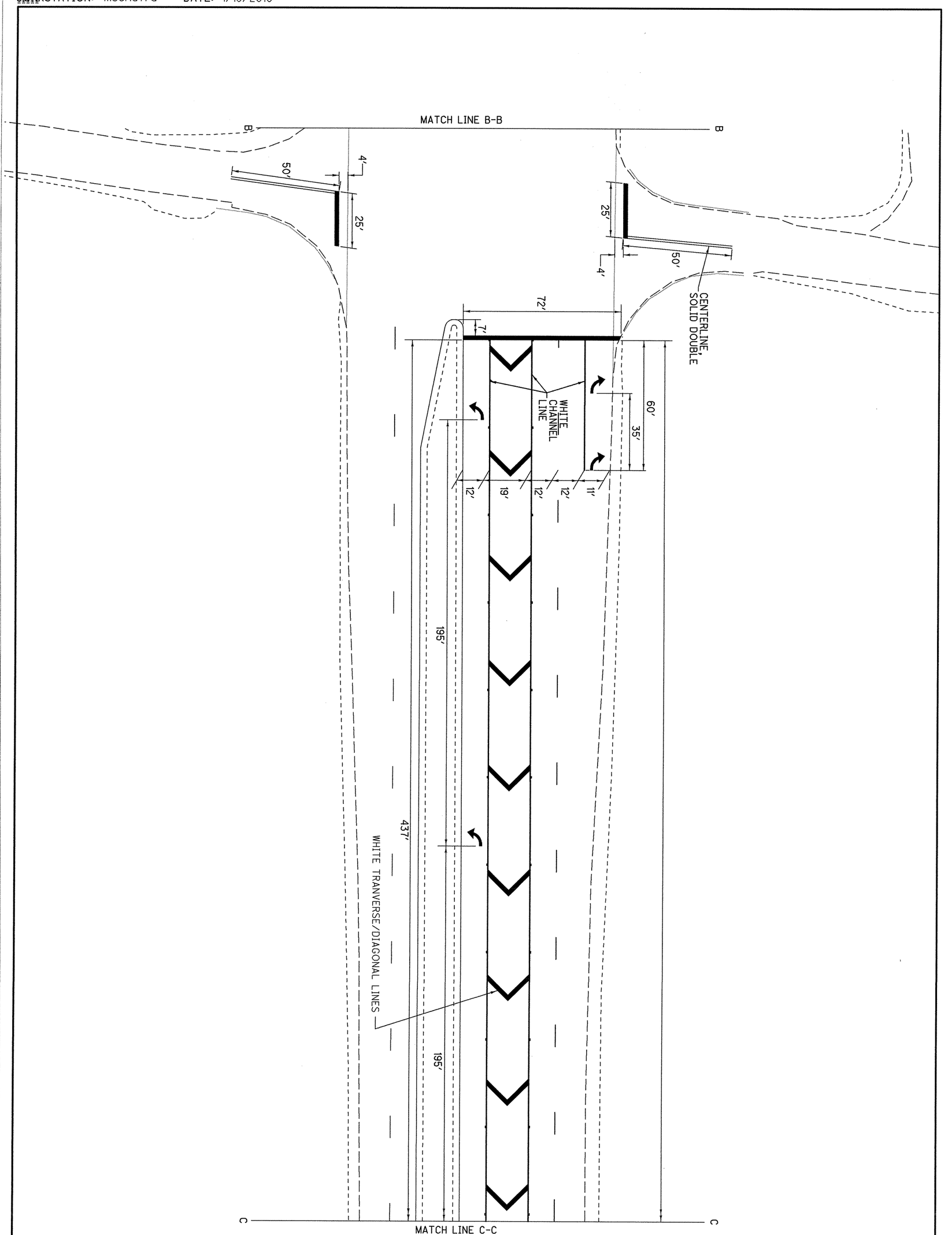
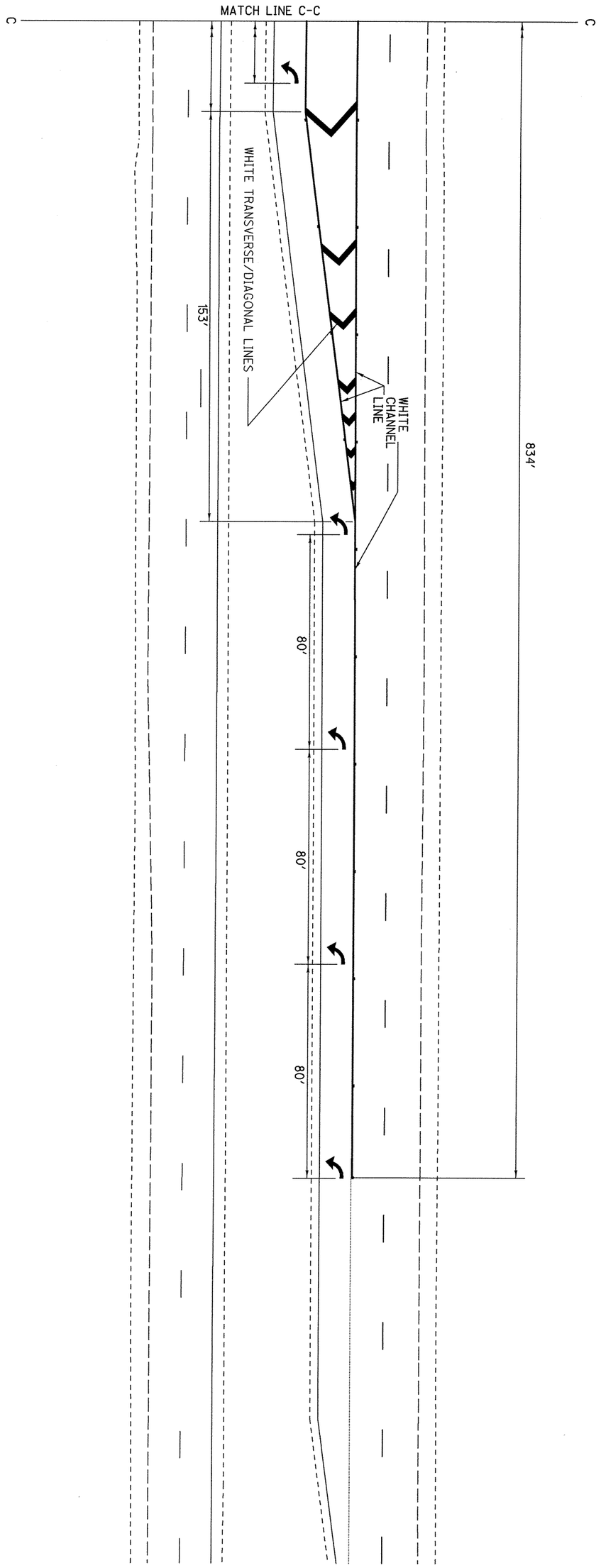
WORKSTATION: mschafra DATE: 1/15/2010



330 / 69	WAY-21-0.00	PAVEMENT MARKINGS SR 21 AT EDWARDS ROAD	CALCULATED AH CHECKED MJS	0 20 10 40 HORIZONTAL SCALE IN FEET

DESIGN FILE: I:\projects\77318\Roadway\sheets\77318TC001.dgn
WORKSTATION: mschafra DATE: 1/15/2010



33E 69	WAY-21-0.00	PAVEMENT MARKINGS SR 21 AT EDWARDS ROAD	CALCULATED AH CHECKED MJS	0 20 10 40 HORIZONTAL SCALE IN FEET

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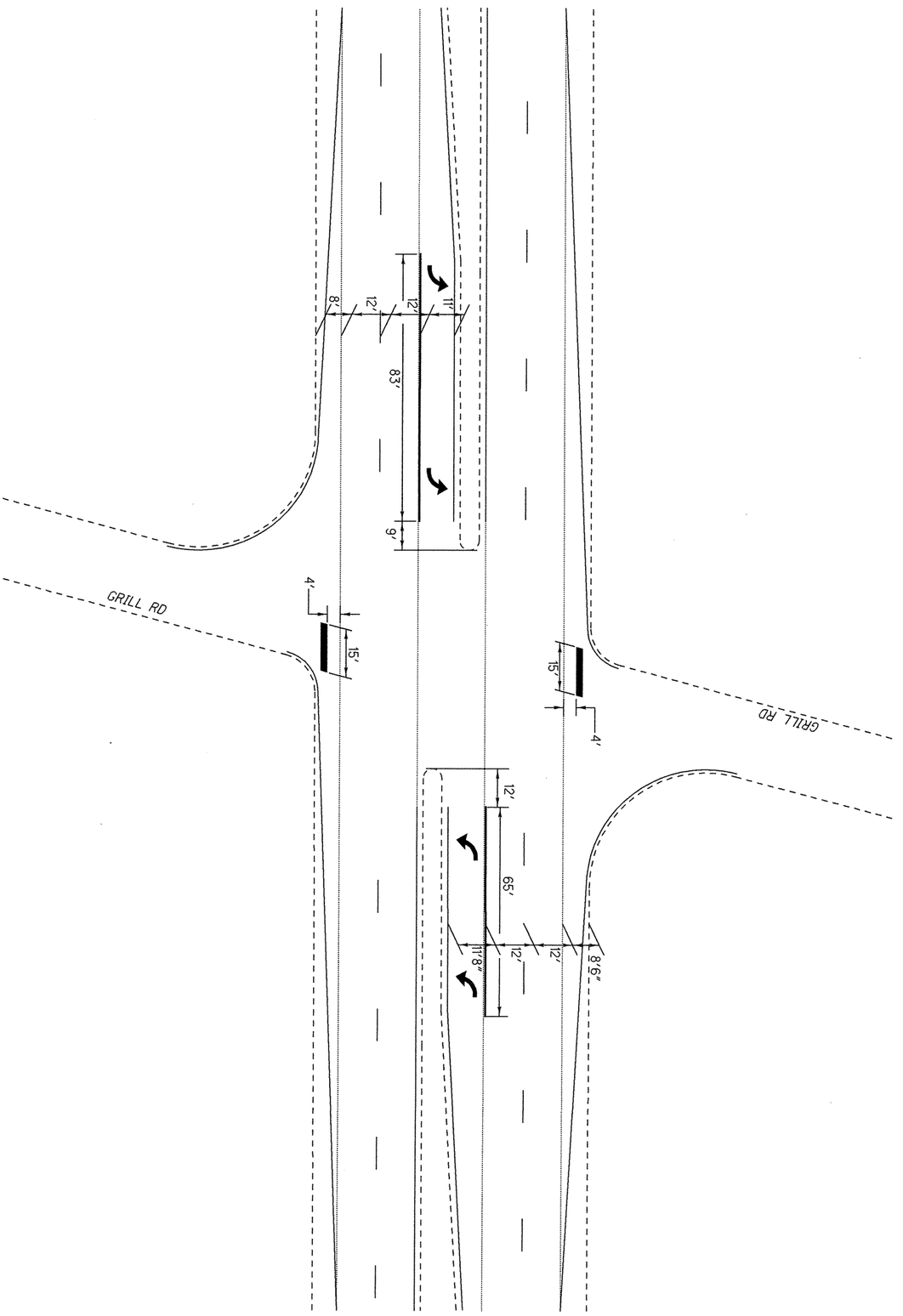
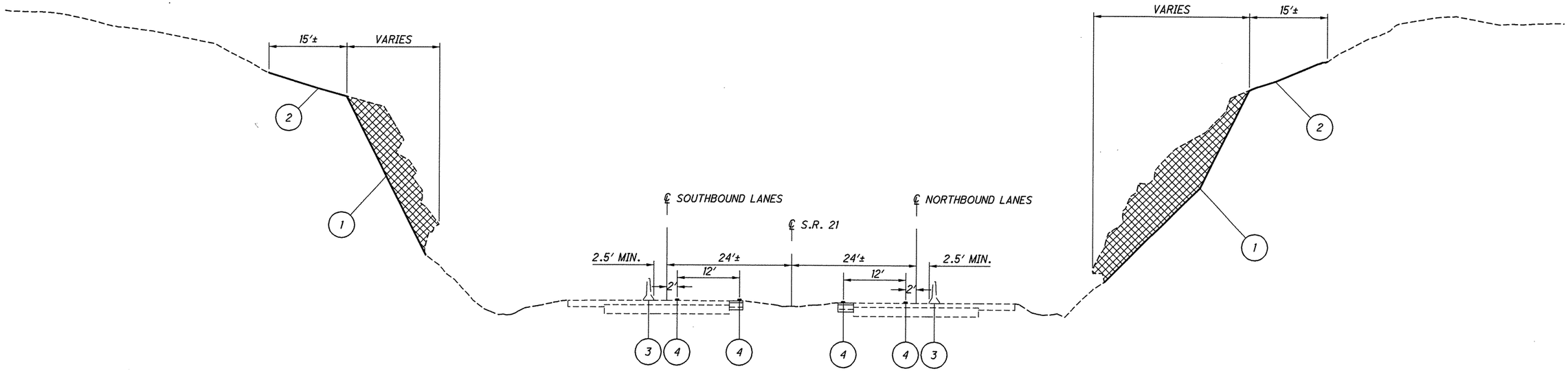
WORKSTATION: mschafra DATE: 1/15/2010



33F 69	WAY-21-0.00	PAVEMENT MARKINGS SR 21 AT GRILL ROAD	CALCULATED AH CHECKED MJS	0 20 10 40 HORIZONTAL SCALE IN FEET



ROCKFALL TYPICAL SECTION

Sta. 107+50 to Sta. 131+50 Rt.
Sta. 109+50 to Sta. 129+50 Lt.

1. ITEM 203, EXCAVATION, AS PER PLAN
2. ITEM 659, OVERBURDEN SOIL SLOPE RESTORATION
3. ITEM 622, PORTABLE CONCRETE BARRIER, 50"
4. ITEM 614 WORK ZONE EDGE LINE, CLASS I, 642 PAINT

DESIGN FILE: I: \projects\ 77318\ Roadway\ SHEETS\ 77318GY002.dgn
WORKSTATION: mschafro DATE: 1/19/2010 MODELNAME: Sheet

ROCKFALL TYPICAL SECTION

WAY-21-0.00

34
69

ELEVATION DATUM

ALL ELEVATIONS ARE ORTHOMETRIC HEIGHTS USING THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND THE GEOID03 GEOID. HORIZONTAL POSITIONS ARE BASED ON THE OHIO STATE PLANE NORTH ZONE, A LAMBERT CONFORMAL CONIC MAP PROJECTION, THE NORTH AMERICAN DATUM OF 1983 ADJUSTED TO THE NATIONAL SPATIAL REFERENCE SYSTEM OF 2007 (NAD 83 (NSRS 2007)), AND THE GRS80 ELLIPSOID.

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.

EXISTING PLANS

EXISTING PLANS ENTITLED STA-21-17.80; WAY-21-0.00; SUM-21-0.00 MAY BE INSPECTED IN THE ODOT DISTRICT 3 OFFICE IN ASHLAND, OHIO.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

MAINTAINING PAVEMENT

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT THE PAVEMENT FROM ANY DAMAGE ASSOCIATED WITH THE ROCK REMOVAL WORK. ANY DAMAGE TO THE ROADWAY SHALL BE REPAIRED BY THE CONTRACTOR AND IS INCIDENTAL TO THE EXCAVATION ITEM.

IT SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THE LANES AND SHOULDER OF S.R. 21 OUTSIDE OF THE CLOSURE ARE MAINTAINED CLEAN, DRY, AND FREE OF CONSTRUCTION DEBRIS OF ANY KIND AS PER CMS 107.10. FAILURE TO MAINTAIN THE PAVEMENT WILL RESULT IN LIQUIDATED DAMAGES.

ITEM 614 MAINTAINING TRAFFIC

ALL ADDITIONAL WORK ITEMS CALLED OUT IN STANDARD CONSTRUCTION DRAWING MT-95.40 THAT ARE NOT SEPERATELY ITEMIZED IN THIS PLAN SHALL BE PAID FOR UNDER THE LUMP SUM PAY ITEM FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 622 PORTABLE CONCRETE BARRIER, 50"

ITEM 622 PORTABLE CONCRETE BARRIER, 50" SHALL BE USED FOR PROTECTION OF THE WORK AREA DURING ITEM 203, EXCAVATION, AS PER PLAN ACTIVITIES. STANDARD CONSTRUCTION DRAWINGS MT-95.40, MT-101.70, AND RM-4.1 SHALL BE FOLLOWED. A REDUCED WORK ZONE SPEED LIMIT OF 50 MPH IS TO BE USED FOR THE SPEED LIMIT FOR TABLE II ON MT-95.40. THE FOLLOWING ITEMS SHALL BE INCLUDED IN THE GENERAL SUMMARY:

ITEM 622 PORTABLE CONCRETE BARRIER, 50"	4848 FT
ITEM 614 OBJECT MARKER, ONE WAY	98 EACH
ITEM 614 BARRIER REFLECTOR	98 EACH
ITEM 614 WORK ZONE IMPACT ATTENUATOR, (UNIDIRECTIONAL)	4 EACH

ITEM 203, EXCAVATION, AS PER PLAN

THE SCALING LIMITS REPRESENTED ON THE CROSS SECTIONS ARE FOR ESTIMATING PURPOSES ONLY AND WILL BE ADJUSTED BASED ON FIELD CONDITIONS. THE LOCATION AND LIMITS OF MECHANICAL SCALING OF LOOSE ROCK SHALL BE AS DIRECTED BY THE ENGINEER. THE ESTIMATE LIMITS SHOWN ON THE CROSS SECTIONS DO NOT REPRESENT IN ANY MANNER THE FINAL FACE OF THE SCALING LIMITS. BLASTING WILL NOT BE PERMITTED.

THE DEPARTMENT WILL MEASURE ROCK EXCAVATION BASED ON GROUND SCANNING OF THE FINAL FACE COMPARED TO PRECONSTRUCTION GROUND SCANS. THE PRECONSTRUCTION GROUND SCANS WERE COMPLETED BY THE ODOT OFFICE OF AERIAL ENGINEERING IN APRIL 2009. THE POST CONSTRUCTION GROUND SCANS SHALL BE COMPLETED BY THE ODOT OFFICE OF AERIAL ENGINEERING.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO EXCAVATE AND DISPOSE OF THE ROCK AND ASSOCIATED DEBRIS. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CUBIC YARD OF ITEM 203, EXCAVATION, AS PER PLAN. THE FOLLOWING QUANTITY IS TO BE CARRIED TO THE GENERAL SUMMARY:

ITEM 203 EXCAVATION, AS PER PLAN 20,818 CU YD

INSPECTION MAN LIFT

THE CONTRACTOR IS TO PROVIDE A MAN LIFT FOR ODOT PERSONNEL TO UTILIZE FOR INSPECTION. COST OF THIS MAN LIFT IS CONSIDERED INCIDENTAL TO THE COST OF ITEM 203, EXCAVATION, AS PER PLAN.

SEEDING AND MULCHING

THE OVERBURDEN SOIL SLOPE SHALL BE RESTORED AND SEEDED FOLLOWING COMPLETION OF SCALING ACTIVITIES.

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

659, SOIL ANALYSIS TEST 2 EACH

659, TOPSOIL 1,640 CU YD

659, SEEDING AND MULCHING 14,772 SQ YD

659, REPAIR SEEDING AND MULCHING 739 SQ YD

659, INTER-SEEDING 739 SQ YD

659, COMMERCIAL FERTILIZER 2.06 TON

659, LIME 3.05 ACRES

659, WATER 82 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.

ITEM 630, SIGNING,MISC.: SIGN DATA COLLECTION

THIS ITEM OF WORK SHALL CONSIST OF COLLECTING AND RECORDING INFORMATION FOR ANY WORK INVOLVING PERMANENT SIGNING INCLUDING SIGN REMOVAL, SIGN REMOVAL AND RE-ERECTION, SIGN RELOCATION OR NEW SIGN INSTALLATION ON THIS PROJECT. DISTRICT THREE HAS A SIGN INVENTORY SYSTEM IN OPERATION. WORK PERFORMED ON EXISTING SIGNS AND INSTALLATION OF NEW SIGNS WILL AFFECT THE ACCURACY OF THE INVENTORY. ALL EXISTING SIGNS REMOVED ON THE PROJECT SHALL BE RECORDED COMPLETELY AND ACCURATELY SO THEY CAN BE REMOVED FROM THE INVENTORY. THE BAR CODE STICKER NUMBER FOR ANY SIGNS THAT ARE NEW, REMOVED AND RE-ERECTED OR RELOCATED SHALL ALSO BE RECORDED COMPLETELY AND ACCURATELY. NEW SIGNS REQUIRE NEW BAR CODE STICKERS WHICH WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRECONSTRUCTION MEETING. ANY STICKERS NOT USED ARE TO BE RETURNED TO ODOT DISTRICT THREE TRAFFIC DEPARTMENT.

THE INFORMATION SHALL BE COLLECTED FROM ALL SIGNS REMOVED, REMOVED AND RE-ERECTED, RELOCATED OR INSTALLED ON THE PROJECT AND RECORDED COMPLETELY AND ACCURATELY BY A PERSON FAMILIAR WITH SIGNING TERMINOLOGY. THE INFORMATION REQUIRED APPEARS ON A FORM WHICH WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRECONSTRUCTION MEETING. ALL SECTIONS OF THE FORM SHALL BE COMPLETED FROM THE INFORMATION COLLECTED FOR EACH SIGN. NOTE THAT THE STRAIGHT LINE MILEAGE LOG POINT OF THE SIGN REMOVAL, REMOVAL AND RE-ERECTION, RELOCATION OR INSTALLATION IS TO BE PROVIDED. PROJECT STATIONING IS NOT ACCEPTABLE. AFTER THE FORM IS COMPLETED, IT SHALL BE RETURNED TO ODOT DISTRICT THREE TRAFFIC DEPARTMENT. A COPY OF THIS FORM IS AVAILABLE UPON REQUEST FOR THE CONTRACTOR TO REVIEW FOR BIDDING PURPOSES. FOR A COPY OF THIS FORM PLEASE CALL 1-800-276-4188, EXTENSION 207-7045 - ROADWAY SERVICES MANAGER. ALL COMPLETED FORMS FOR THE PROJECT ARE TO BE PROVIDED TO THE ENGINEER NOT LATER THAN 30 CALENDAR DAYS AFTER COMPLETION OF SIGNING WORK ITEMS.

PAYMENT FOR THE LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PERFORM THE ABOVE WORK WHICH INCLUDES COLLECTION OF INFORMATION, COMPLETION OF THE FORMS SUPPLIED TO THE CONTRACTOR, INSTALLATION OF BAR CODE STICKERS, MEASURING OF THE SIGNS AND ANY OTHER WORK IN ORDER TO COMPLETE THE FORM SHALL BE INCLUDED IN THE COST OF ITEM 630 - SIGNING, MISC.: SIGN DATA COLLECTION PER EACH.

CALCULATED HYH
CHECKED BAD

ROCKFALL NOTES

WAY-21-0.00

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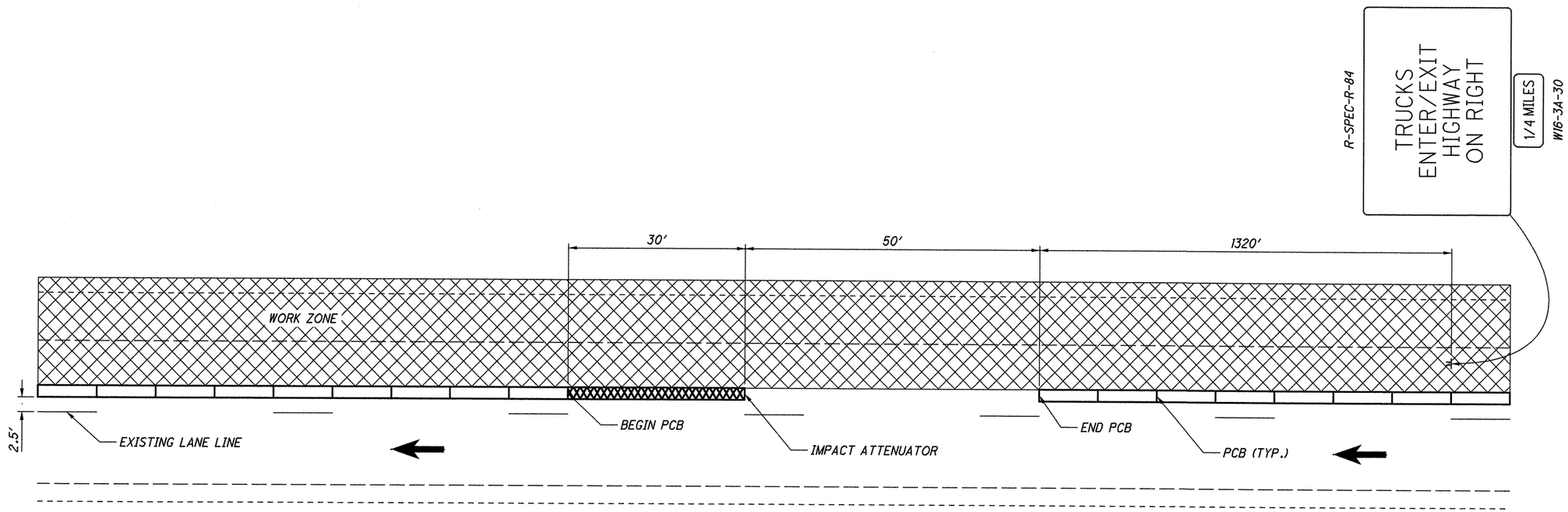
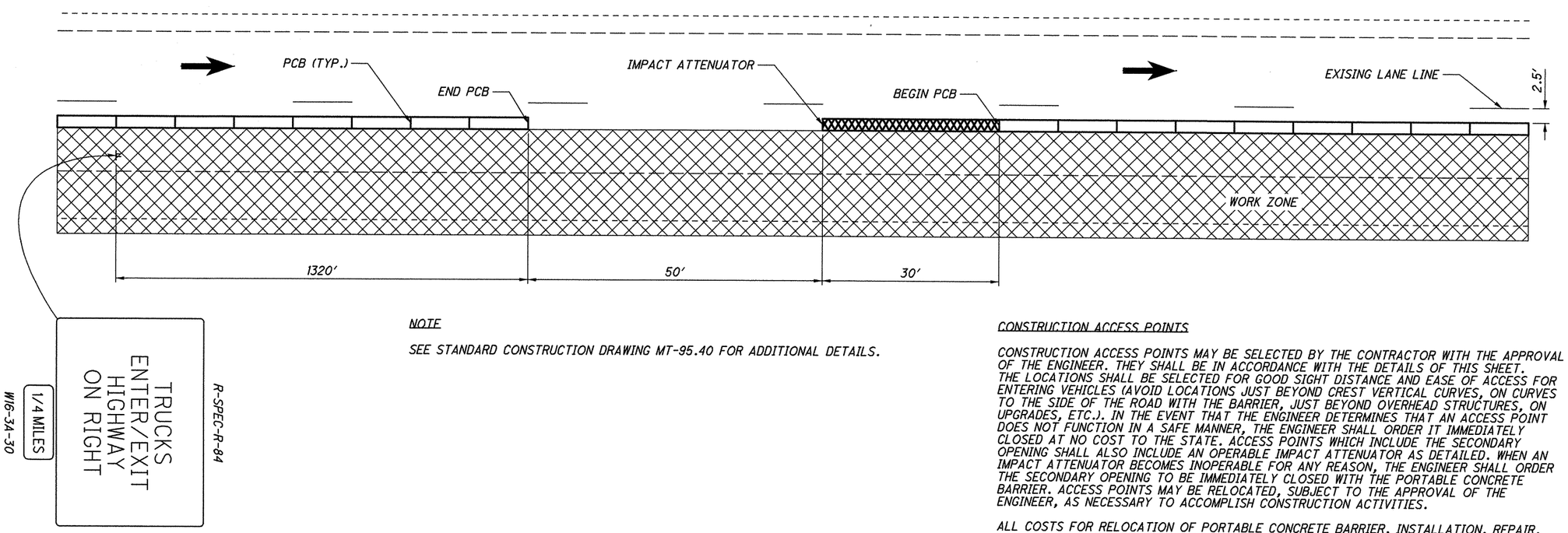




NOTE

SEE STANDARD CONSTRUCTION DRAWING MT-95.40 FOR ADDITIONAL DETAILS.

CONSTRUCTION ACCESS POINTS

CONSTRUCTION ACCESS POINTS MAY BE SELECTED BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER. THEY SHALL BE IN ACCORDANCE WITH THE DETAILS OF THIS SHEET. THE LOCATIONS SHALL BE SELECTED FOR GOOD SIGHT DISTANCE AND EASE OF ACCESS FOR ENTERING VEHICLES (AVOID LOCATIONS JUST BEYOND CREST VERTICAL CURVES, ON CURVES TO THE SIDE OF THE ROAD WITH THE BARRIER, JUST BEYOND OVERHEAD STRUCTURES, ON UPGRADES, ETC.). IN THE EVENT THAT THE ENGINEER DETERMINES THAT AN ACCESS POINT DOES NOT FUNCTION IN A SAFE MANNER, THE ENGINEER SHALL ORDER IT IMMEDIATELY CLOSED AT NO COST TO THE STATE. ACCESS POINTS WHICH INCLUDE THE SECONDARY OPENING SHALL ALSO INCLUDE AN OPERABLE IMPACT ATTENUATOR AS DETAILED. WHEN AN IMPACT ATTENUATOR BECOMES INOPERABLE FOR ANY REASON, THE ENGINEER SHALL ORDER THE SECONDARY OPENING TO BE IMMEDIATELY CLOSED WITH THE PORTABLE CONCRETE BARRIER. ACCESS POINTS MAY BE RELOCATED, SUBJECT TO THE APPROVAL OF THE ENGINEER, AS NECESSARY TO ACCOMPLISH CONSTRUCTION ACTIVITIES.

ALL COSTS FOR RELOCATION OF PORTABLE CONCRETE BARRIER, INSTALLATION, REPAIR, REPLACEMENT, AND REMOVAL OF IMPACT ATTENUATORS, AND RELATED COSTS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC.

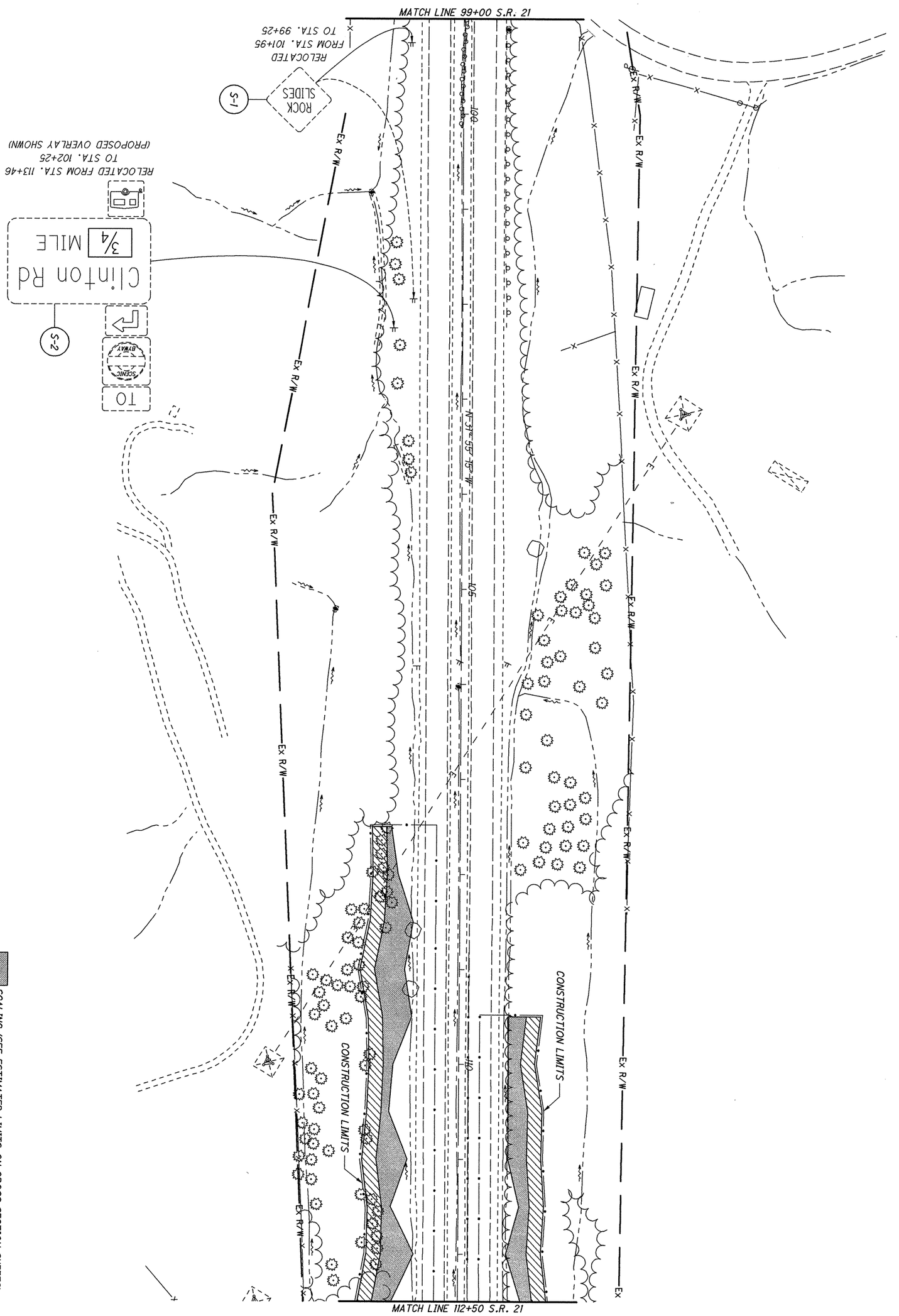
MAINTENANCE OF TRAFFIC CONSTRUCTION ACCESS POINTS, TYPICAL

CALCULATED HYH
CHECKED BAD

WAY-21-0.00

DESIGN FILE: I: \projects\77318\Roadway\sheets\77318MP001.dgn MODELNAME: Sheet
WORKSTATION:mschafra DATE:1/19/2010

DESIGN FILE: I: \projects\77318\Roadway\SHEETS\77318GP001.dgn
WORKSTATION:mschafra DATE:1/19/2010 MODELNAME: Sheet



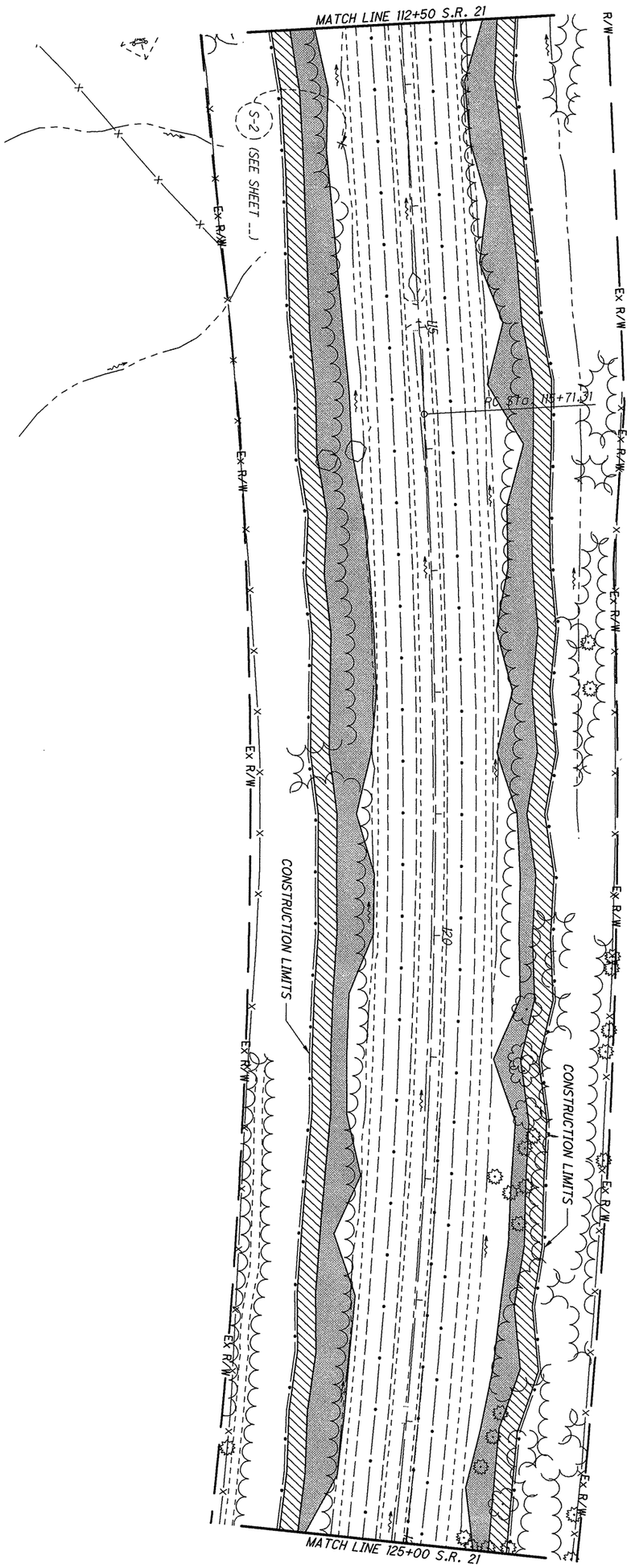
SCALING (SEE ESTIMATED LIMITS ON CROSS SECTION SHEETS)

OVERBURDEN SOIL SLOPE RESTORATION WITH ITEM 659 (SEE ESTIMATED LIMITS ON CROSS SECTION SHEETS)

SEE ADDITIONAL NOTES ON SHEET 35.

37 / 69	WAY-21-0.00	PLAN - S.R. 21 STA. 99+00 TO STA. 112+50	CALCULATED HYH CHECKED BAD	0 50 25 100 HORIZONTAL SCALE IN FEET

DESIGN FILE: I: \projects\77318\Roadway\SHEETS\77318GP002.dgn
WORKSTATION:mschafra DATE: 1/19/2010 MODELNAME: Sheet



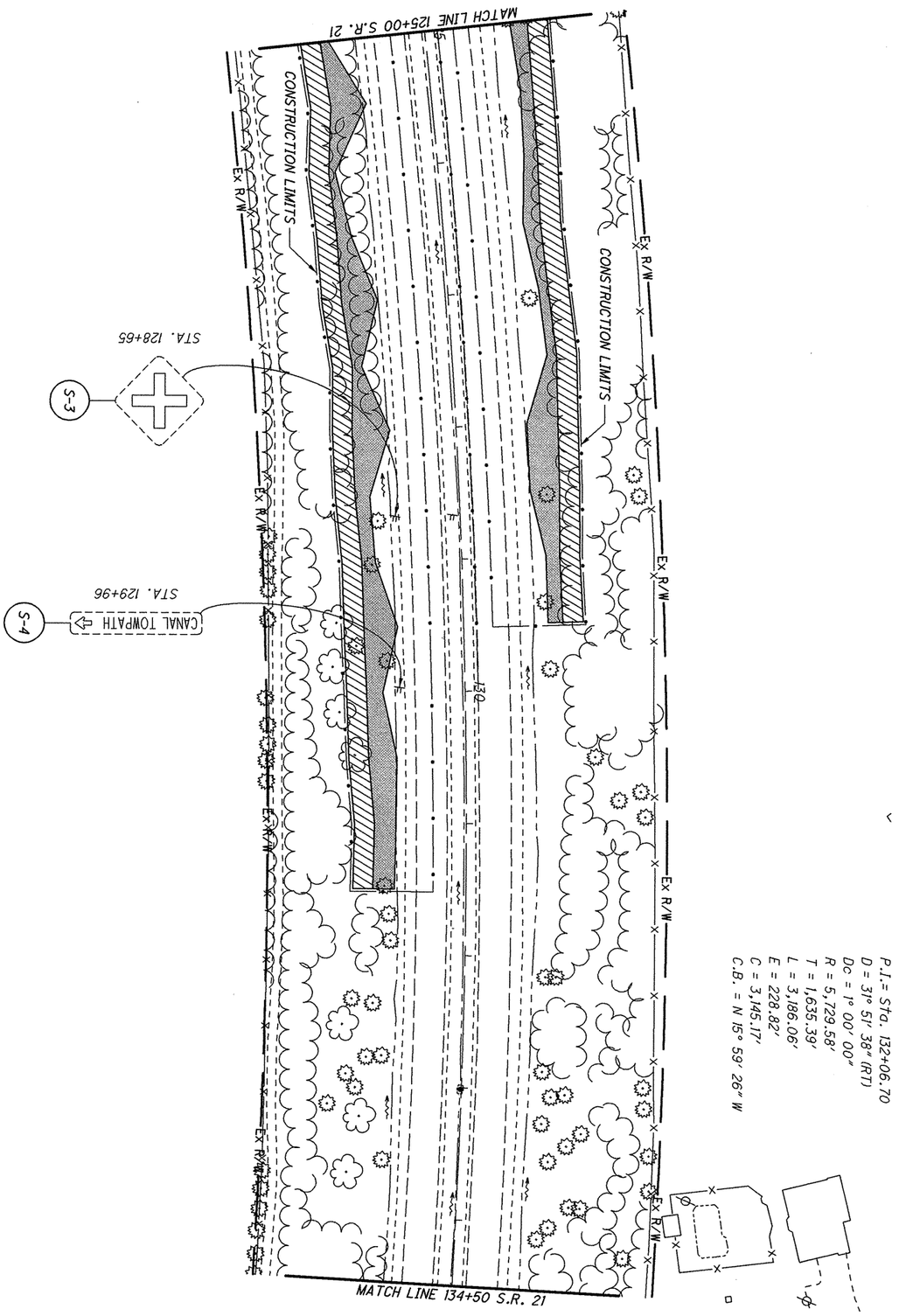
SCALING (SEE ESTIMATED LIMITS ON CROSS SECTION SHEETS)

OVERBURDEN SOIL SLOPE RESTORATION WITH ITEM 659 (SEE ESTIMATED LIMITS ON CROSS SECTION SHEETS)

SEE ADDITIONAL NOTES ON SHEET 35.

38/69	WAY-21-0.00	PLAN - S.R. 21 STA. 112+50 TO STA. 125+00	CALCULATED HYH CHECKED BAD	0 50 25 100 HORIZONTAL SCALE IN FEET

SCALING (SEE ESTIMATED LIMITS ON CROSS SECTION SHEETS)
OVERBURDEN SOIL SLOPE RESTORATION WITH ITEM 659 (SEE ESTIMATED LIMITS ON CROSS SECTION SHEETS)
SEE ADDITIONAL NOTES ON SHEET 35.



REF. NO.	STATION FROM	STATION TO	SIDE	630 GROUND MOUNTED SUPPORT, NO. 3 POST	GROUND MOUNTED SUPPORT, W10X12 BEAM	SIGN, PERMANENT OVERLAY	GROUND MOUNTED BEAM SUPPORT FOUNDATION	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL	SIGN BACKING ASSEMBLY	SIGNING, MISC.: SIGN DATA COLLECTION	
				FT	FT	SQ FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
S-1	101+95	99+25	RT	33				1		2			1	
S-2	113+46	102+25	RT		46	6	2	4	1	1	2	1	5	
S-3	128+65		RT	31				1		2				
S-4	129+96		RT	24				1		2				
TOTALS CARRIED TO GENERAL SUMMARY				88	46	6	2	7	1	7	2	1	6	

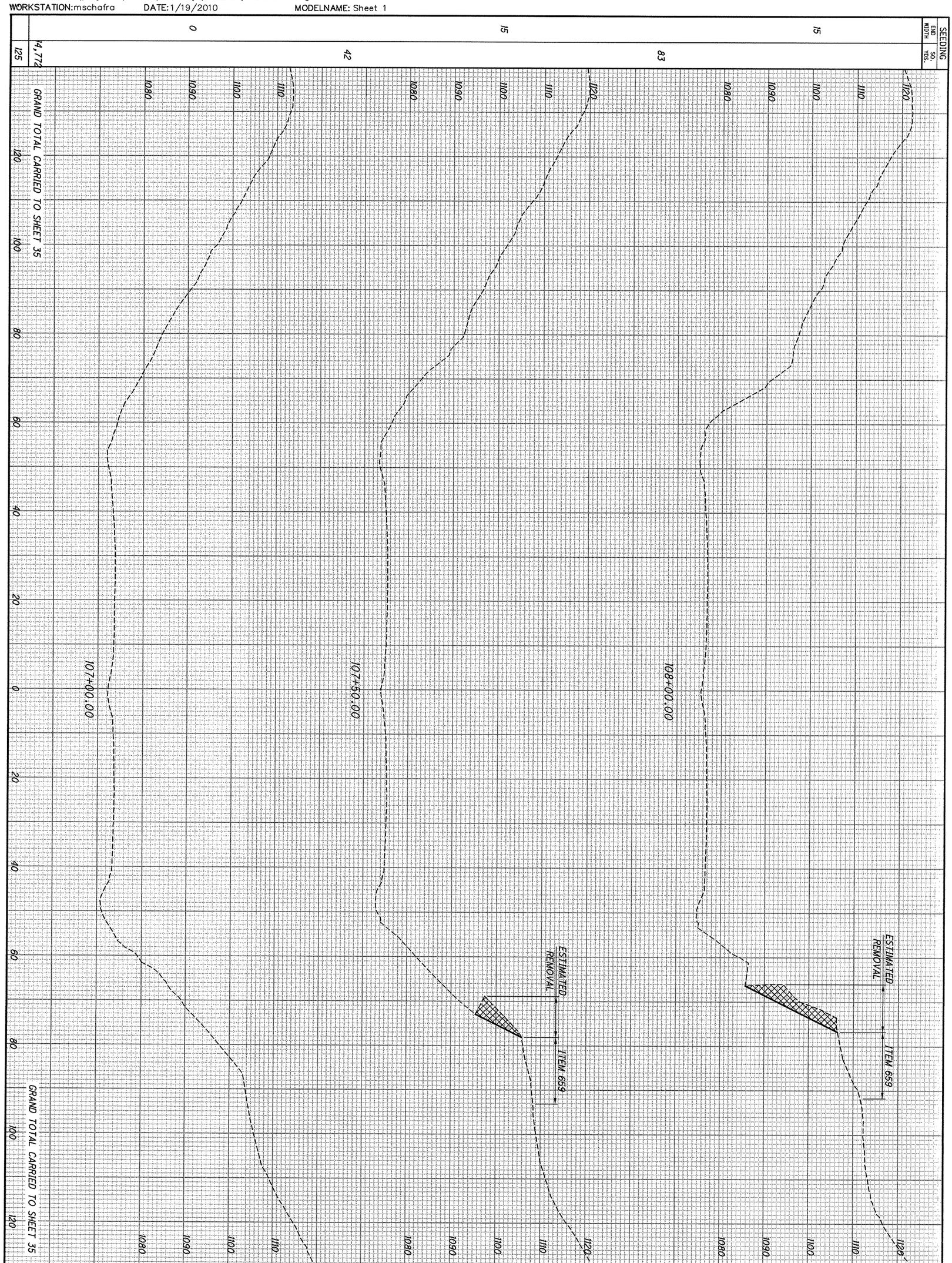
WAY-21-0.00

PLAN - S.R. 21
STA. 125+00 TO STA. 135+00

CALCULATED HYH
CHECKED BAD

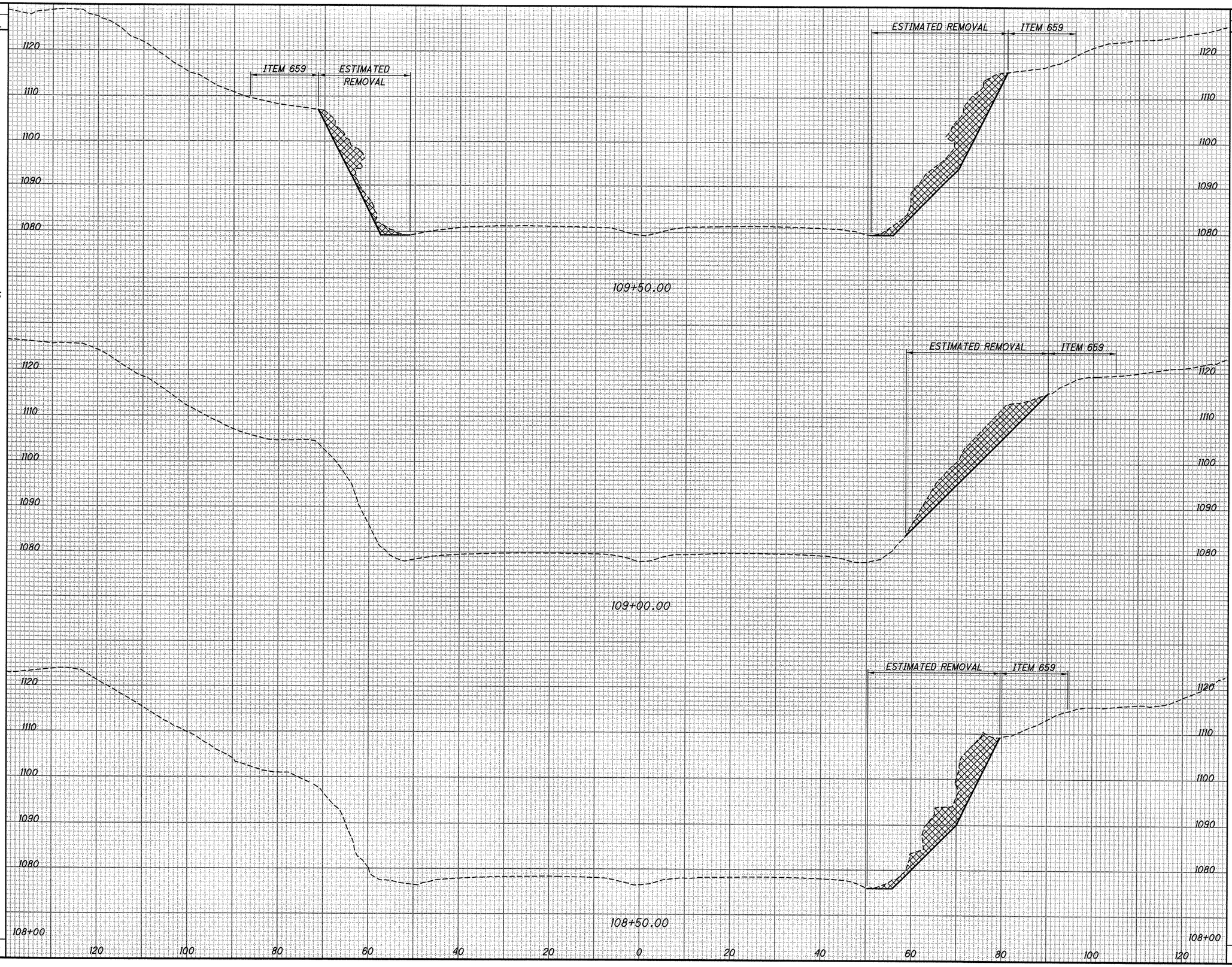
0 50
25 100
HORIZONTAL SCALE IN FEET

DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318XS001.dgn
WORKSTATION: mschafra DATE: 1/19/2010 MODELNAME: Sheet 1



40 / 69	WAY-21-0.00	CROSS SECTIONS - S.R. 21 STA. 107+00.00 TO STA. 108+00.00	CALCULATED HYH CHECKED BAD

SEEDING	
END WIDTH	SQ. YDS.
30	125
15	83
15	83
15	15
	291



END AREA		VOLUME	
CUT	FILL	CUT	FILL
215			
		329	
140			
		262	
143			
		186	
58			
		777	

CALCULATED HYH
CHECKED BAD

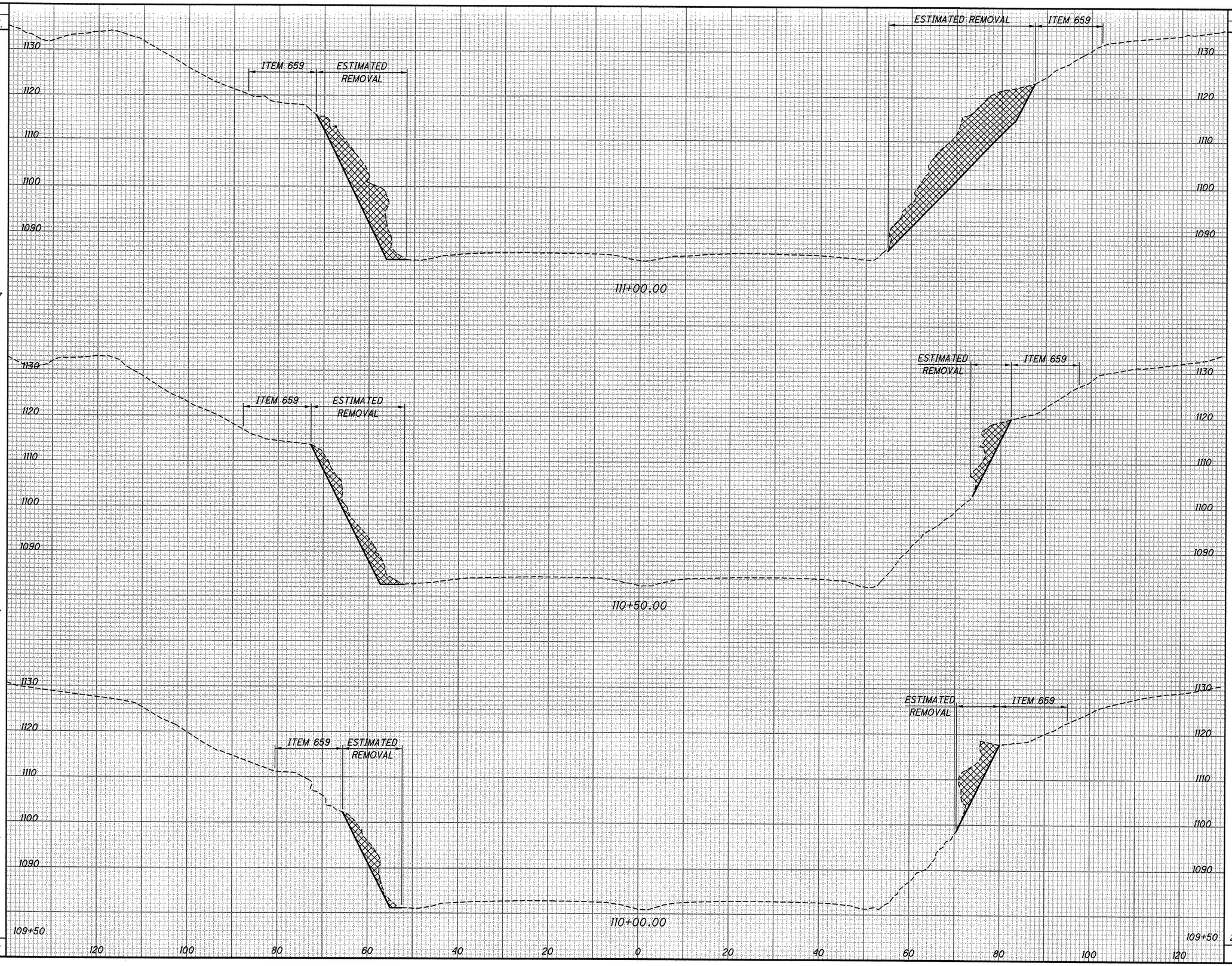
CROSS SECTIONS - S.R. 21
STA. 108+50.00 TO STA. 109+50.00

WAY-21-0.00

41
69

DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318XS001.dgn MODELNAME: Sheet 2
WORKSTATION:mschafra DATE:1/19/2010

SEEDING	
END WIDTH	SQ. YDS.
30	167
30	167
30	167
30	501



END AREA	
CUT	FILL
396	
106	
58	
215	

VOLUME	
CUT	FILL
465	
152	
253	
870	

CALCULATED HYH
CHECKED BAD

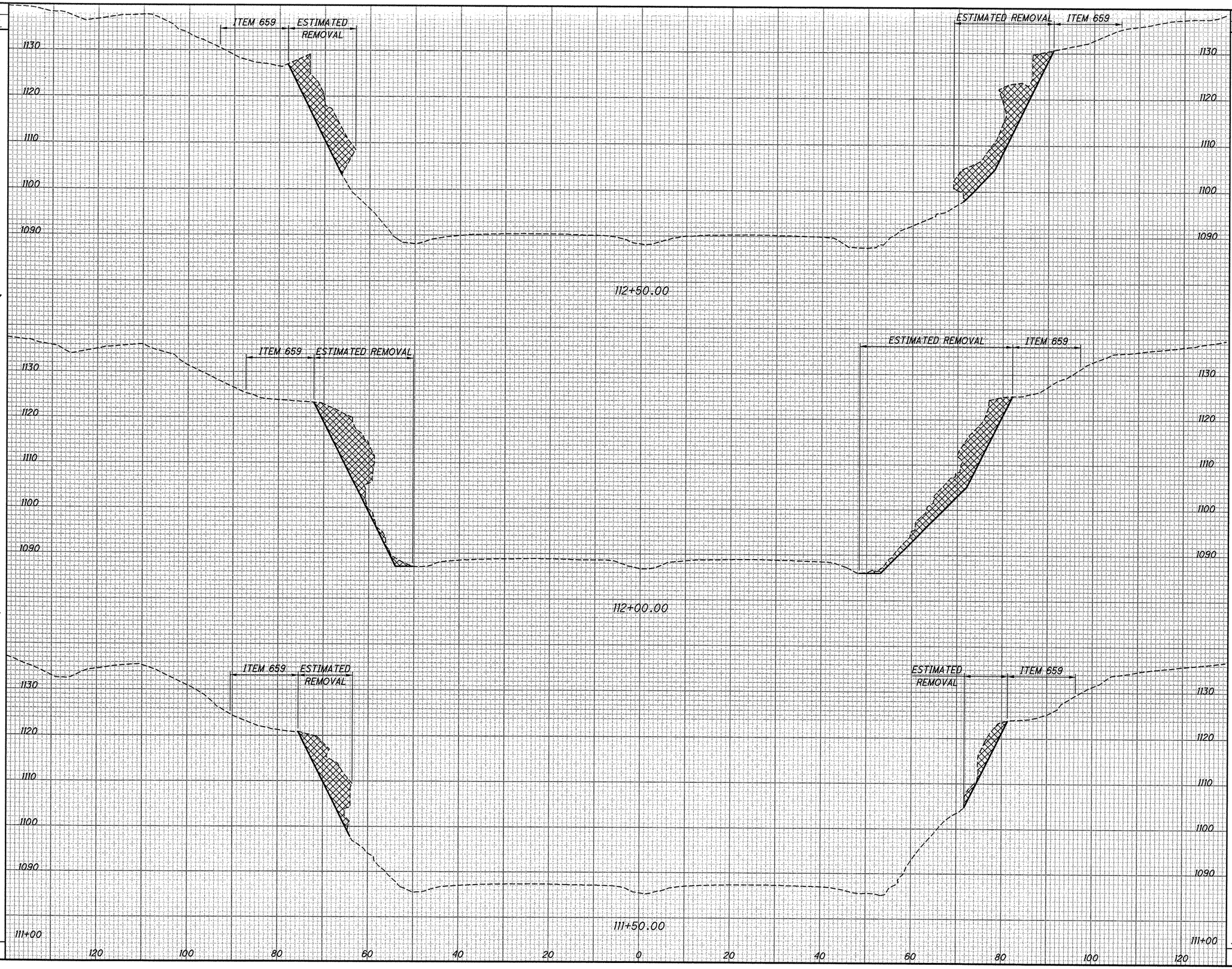
CROSS SECTIONS - S.R. 21
STA. 110+00.00 TO STA. 111+00.00

WAY-21-0.00

42
69

DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318XS001.dgn
WORKSTATION:mschafro DATE:1/19/2010 MODELNAME: Sheet 3

SEEDING	
END WIDTH	SQ. YDS.
30	167
30	167
30	167
30	501



END AREA		VOLUME	
CUT	FILL	CUT	FILL
243		472	
267		352	
113		471	
396		1,295	

CALCULATED HYH

CHECKED BAD

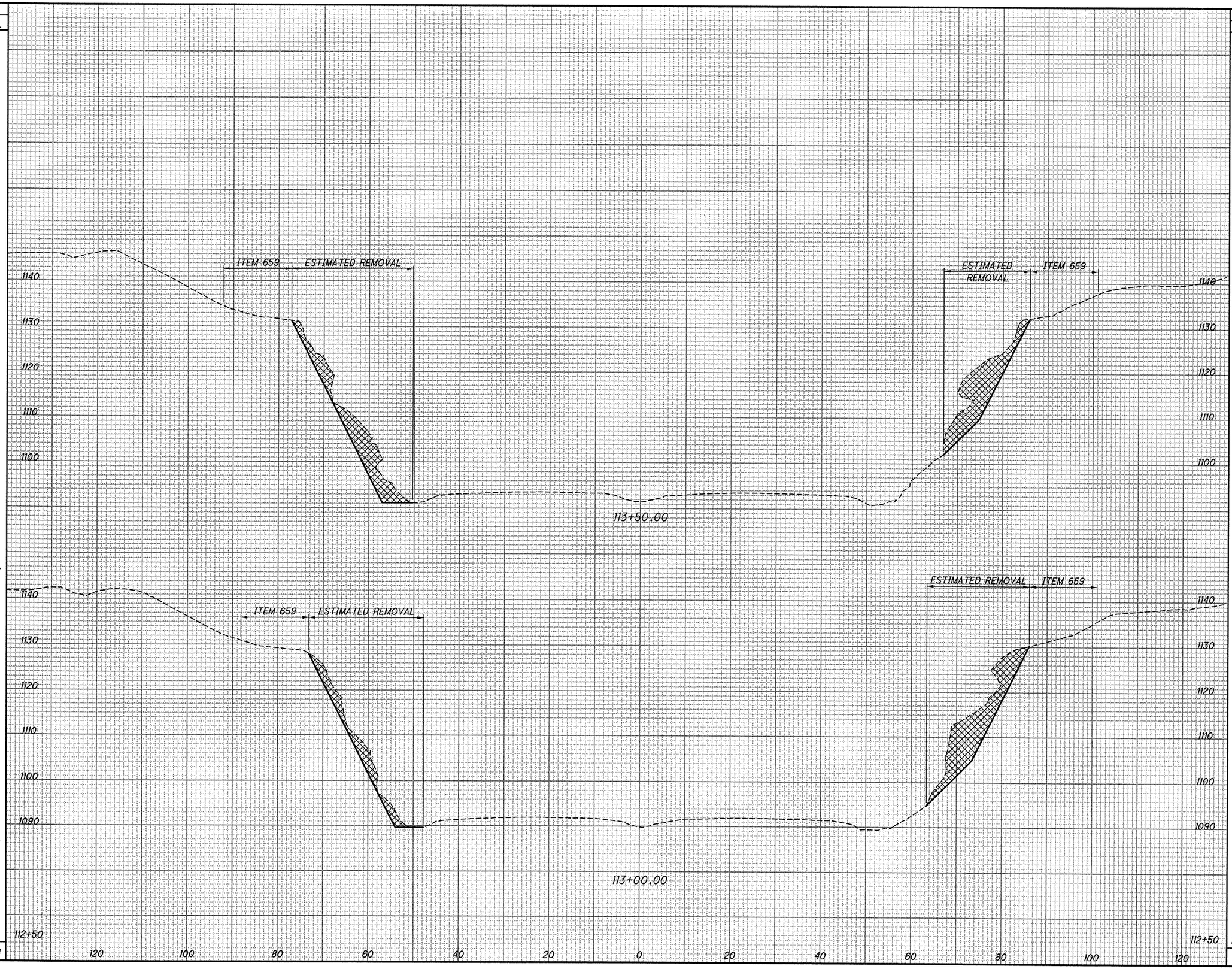
CROSS SECTIONS - S.R. 21
STA. 111+50.00 TO STA. 112+50.00

WAY-21-0.00

43
69

DESIGN FILE: I: \projects\77318\Roadway\SHEETS\77318XS001.dgn
WORKSTATION:mschafra DATE:1/19/2010 MODELNAME: Sheet 4

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
30					
		243			
30	167				
30		212			
	167				
30		243			
	334				842



CALCULATED HYH
CHECKED BAD

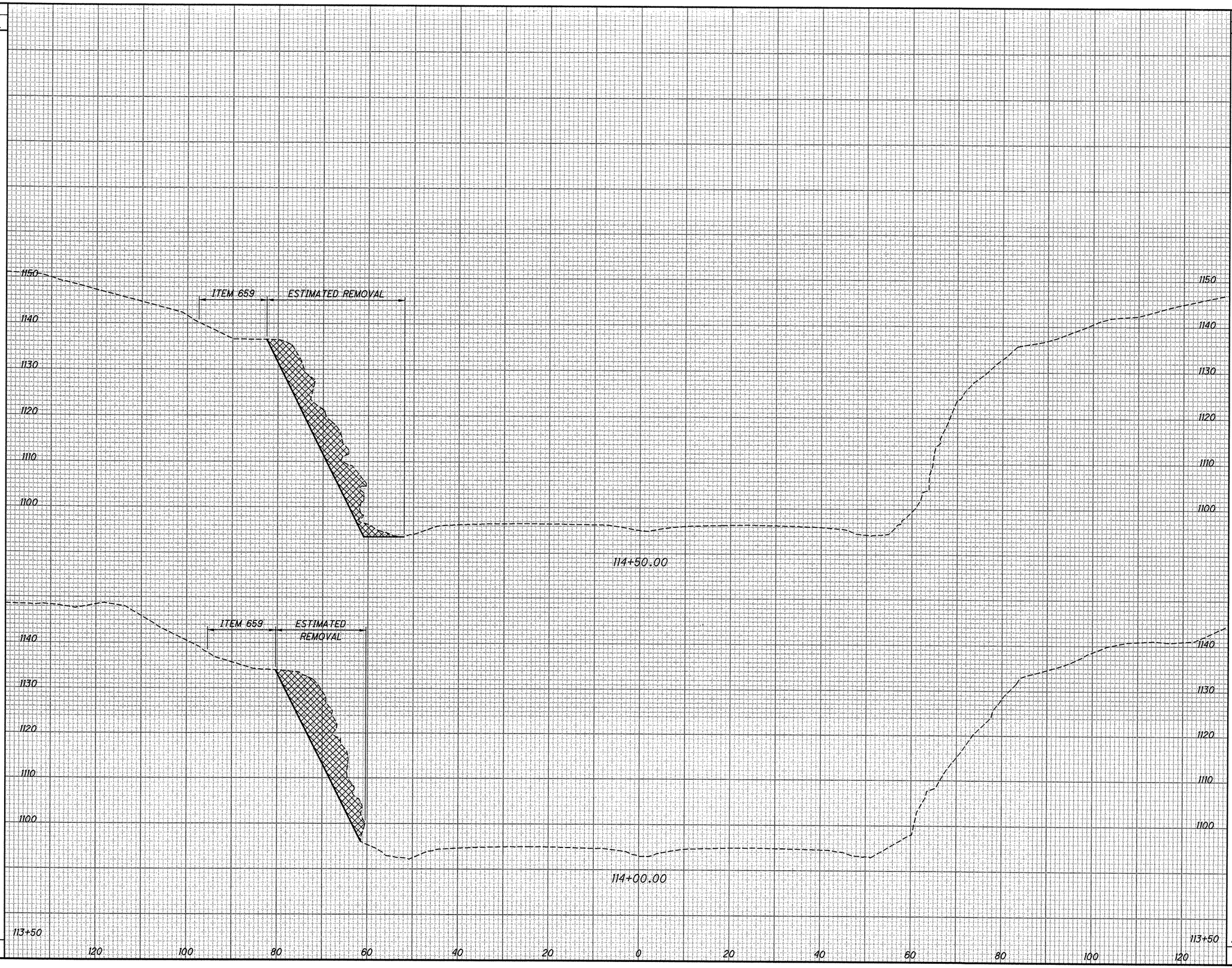
CROSS SECTIONS - S.R. 21
STA. 113+00.00 TO STA. 113+50.00

WAY-21-0.00

44
69

DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318XS001.dgn MODELNAME: Sheet 5
WORKSTATION:mschafro DATE:1/19/2010

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
15	83	203		377	
15	125	204		414	
30	208	243		791	



CALCULATED HYH
CHECKED BAD

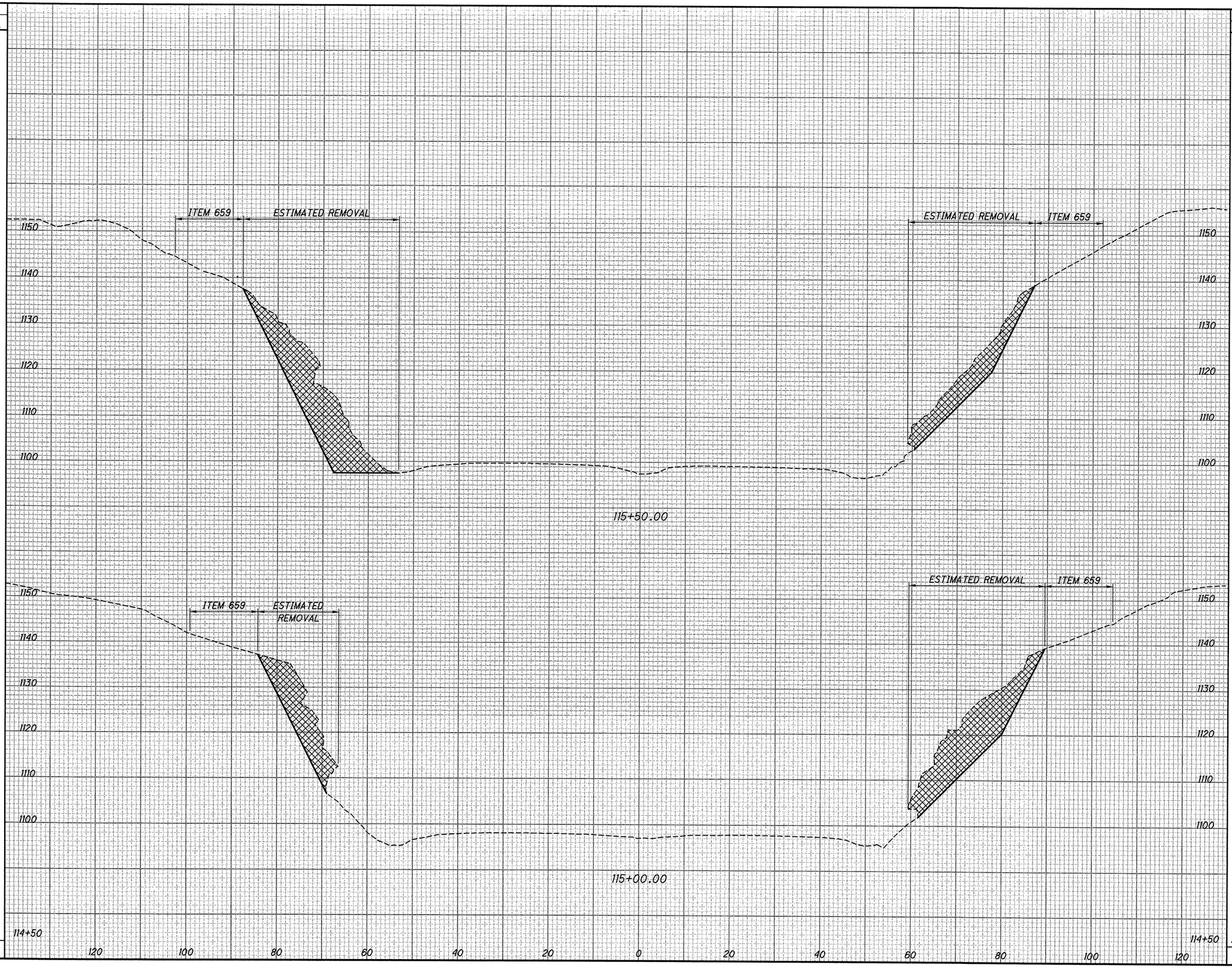
CROSS SECTIONS - S.R. 21
STA. 114+50.00 TO STA. 114+00.00

WAY-21-0.00

45
69

DESIGN FILE: I: \projects \77318 \Roadway\ SHEETS\ 77318XS001.dgn MODELNAME: Sheet 6
WORKSTATION:mschafra DATE: 1/19/2010

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
30					
		430			
30	167				771
		403			
	125				561
15		203			
	334				1,332



CALCULATED HYH
CHECKED BAD

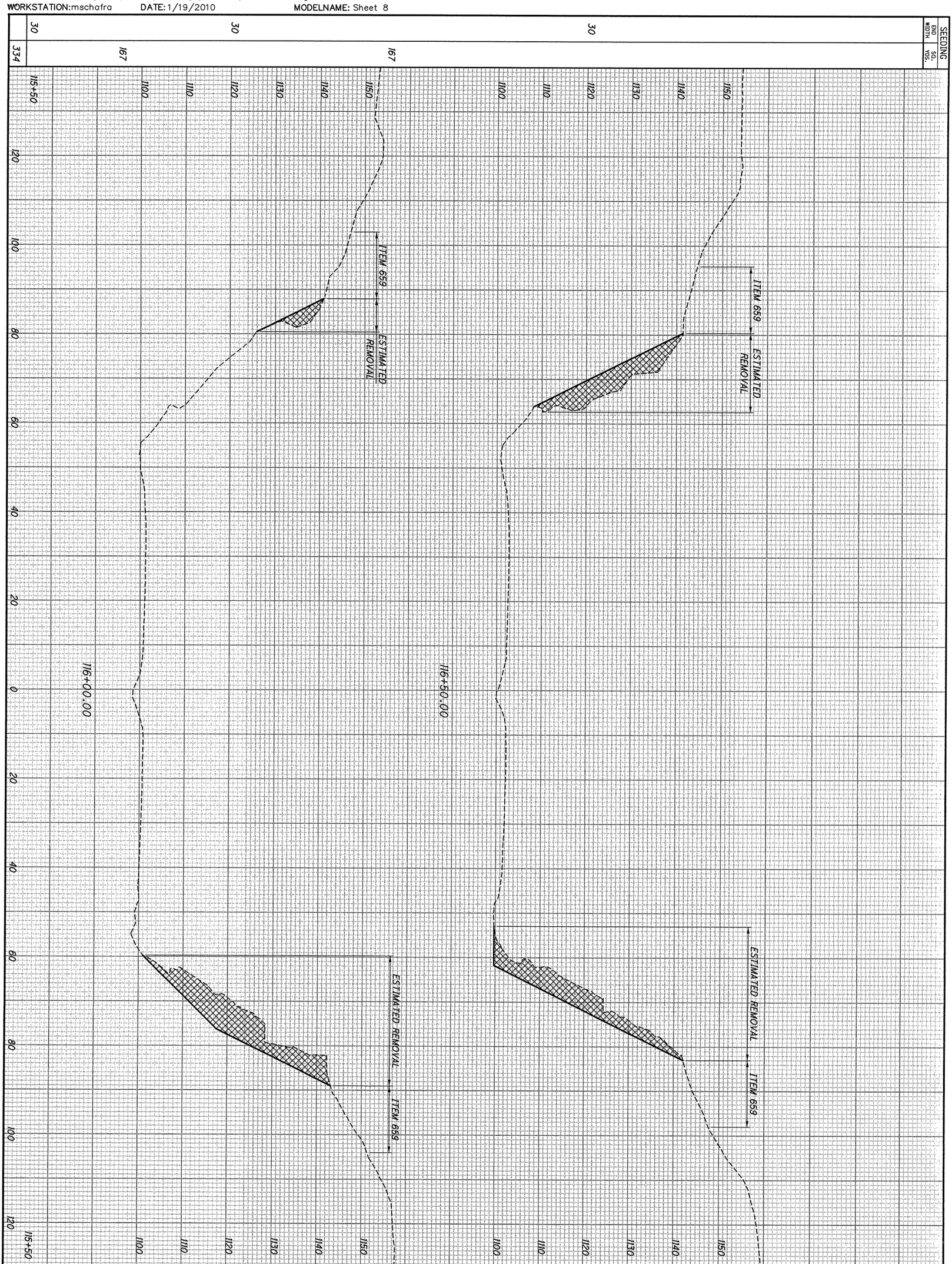
CROSS SECTIONS - S.R. 21
STA. 115+00.00 TO STA. 115+50.00

WAY-21-0.00

46
69

DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318XS001.dgn MODELNAME: Sheet 7
WORKSTATION:mschafro DATE:1/19/2010

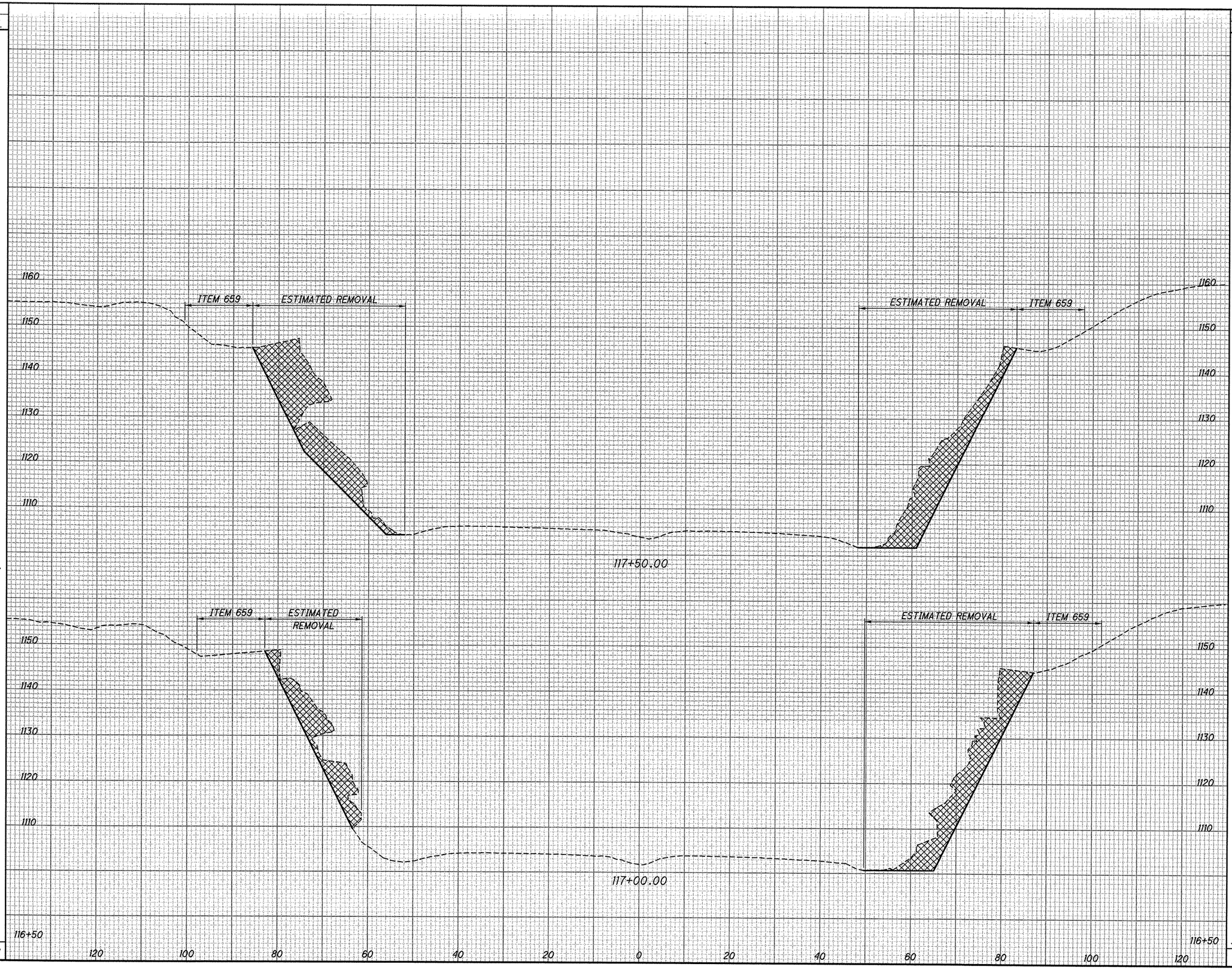
DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318XS001.dgn
WORKSTATION:mschafra DATE:1/19/2010 MODELNAME: Sheet 8



47/69	WAY-21-0.00	CROSS SECTIONS - S.R. 21 STA. 116+00.00 TO STA. 116+50.00

CALCULATED HYH
CHECKED BAD

SEEDING	
END WIDTH	SQ. YDS.
30	167
30	167
30	334



END AREA		VOLUME	
CUT	FILL	CUT	FILL
511			830
385			634
300			1,464

CALCULATED HYH

CHECKED BAD

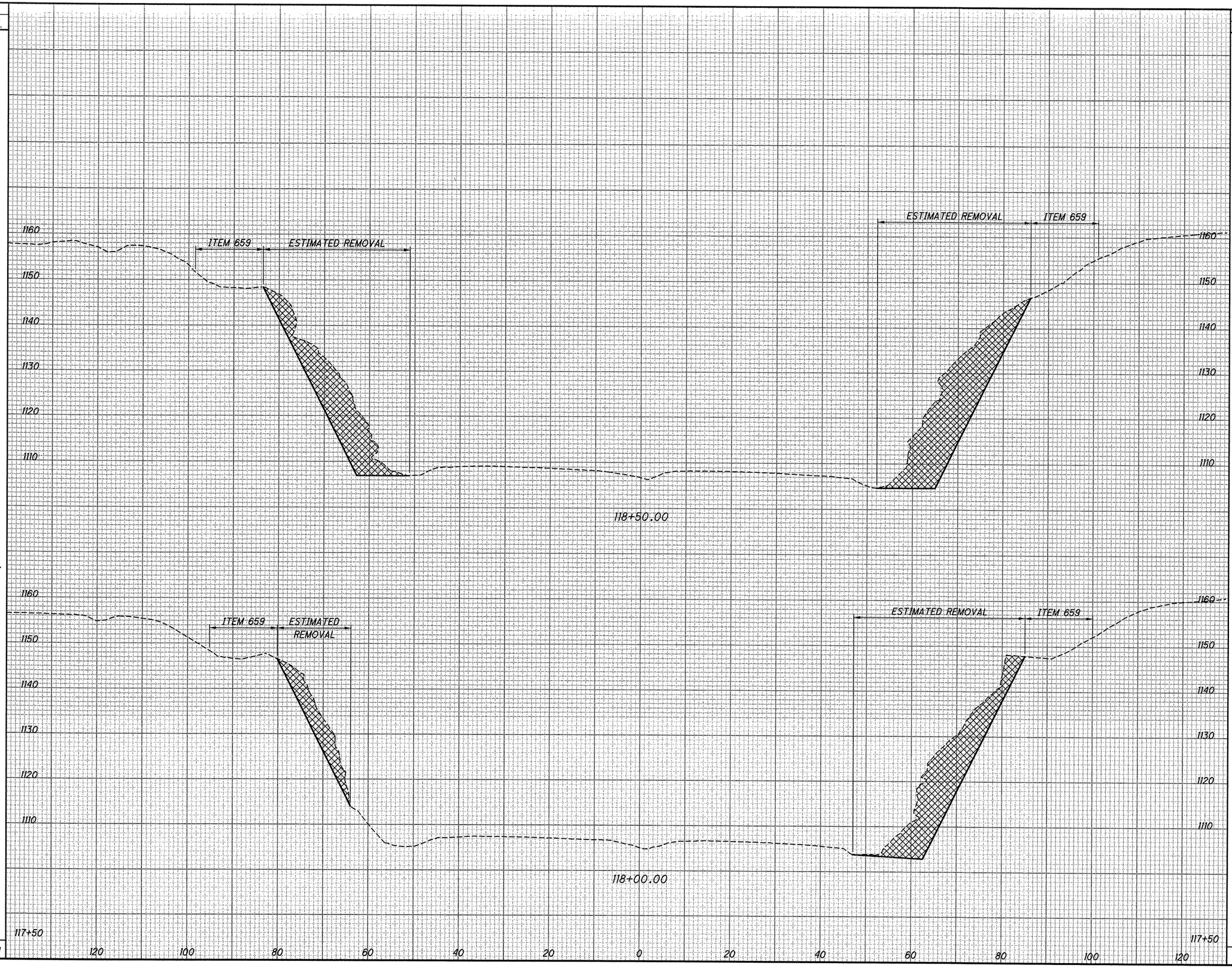
CROSS SECTIONS - S.R. 21
STA. 117+00.00 TO STA. 117+50.00

WAY-21-0.00

48
69

DESIGN FILE: i:\projects\77318\Roadway\SHEETS\77318XS001.dgn
WORKSTATION:mschafra DATE:1/19/2010 MODELNAME: Sheet 9

SEEDING	
END WIDTH	SQ. YDS.
30	167
30	167
30	334



END AREA		VOLUME	
CUT	FILL	CUT	FILL
607		922	
389		833	
511		1,755	

CALCULATED HYH
CHECKED BAD

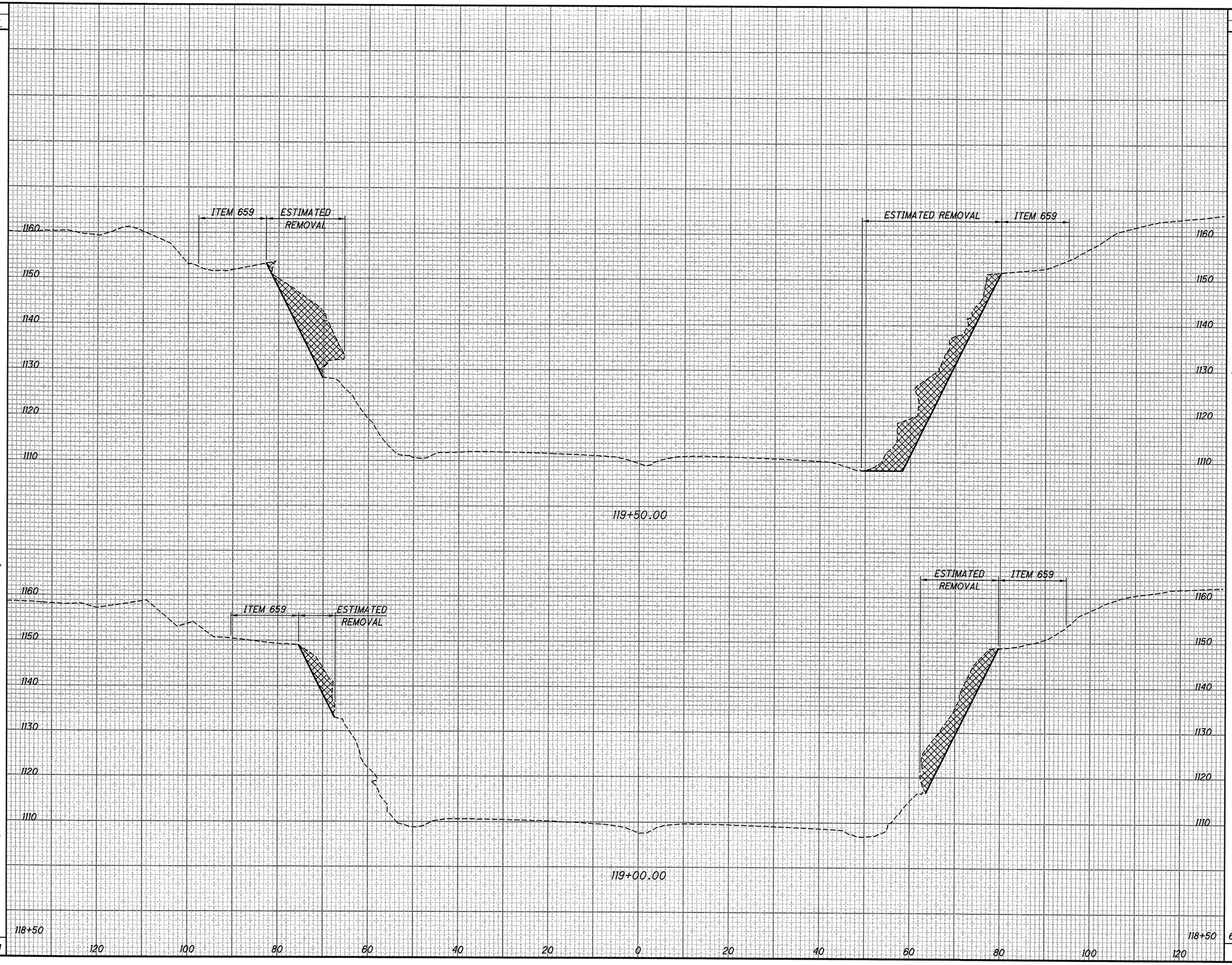
CROSS SECTIONS - S.R. 21
STA. 118+00.00 TO STA. 118+50.00

WAY-21-0.00

49
69

DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318XS001.dgn MODELNAME: Sheet 10
WORKSTATION:mschafro DATE:1/19/2010

SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL	HYH	BAD
30	167	278					
30	167	141					
30	334	607		388			
				693			
				1,081			



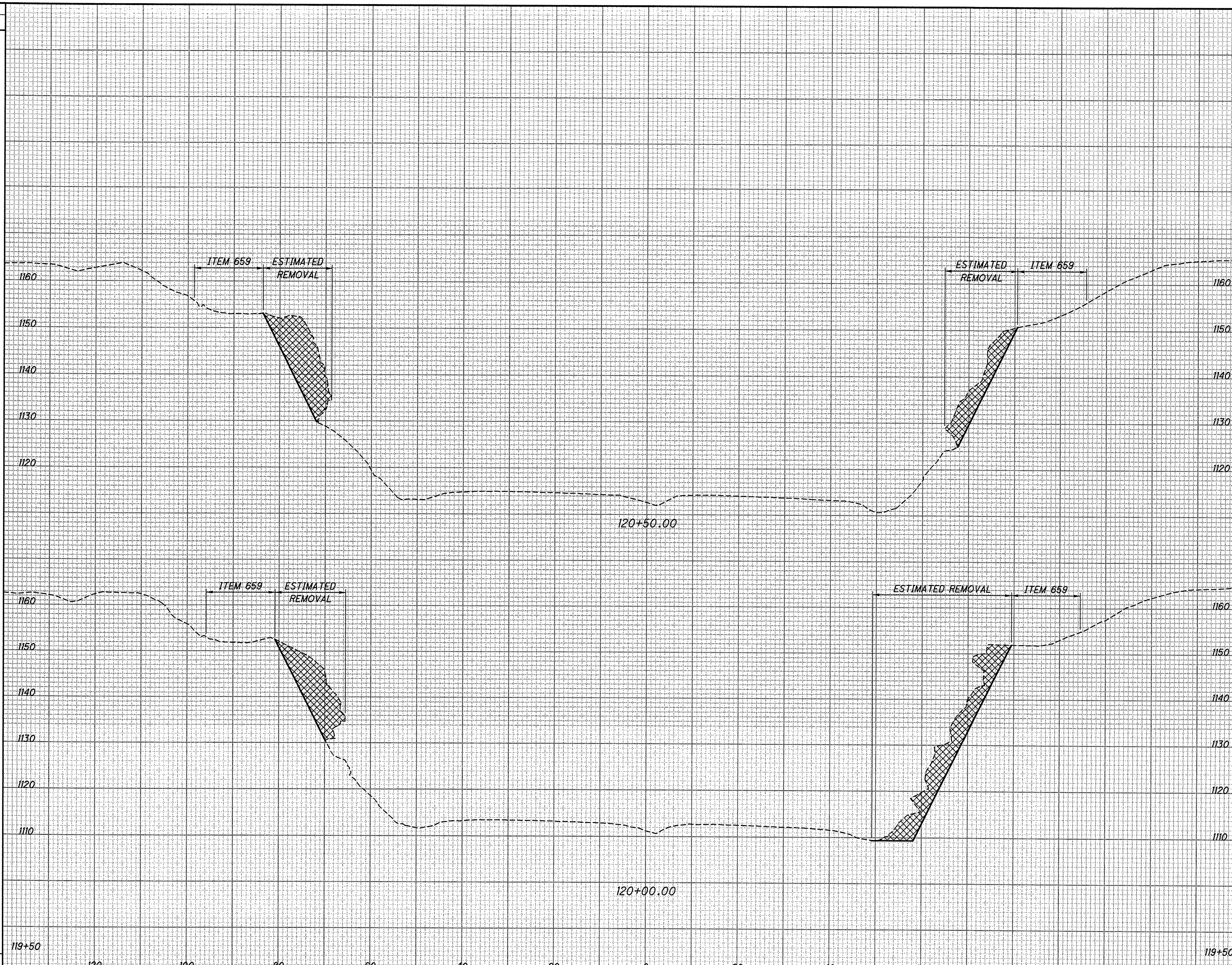
CROSS SECTIONS - S.R. 21
STA. 119+00.00 TO STA. 119+50.00

WAY-21-0.00

50
69

DESIGN FILE: I: \projects\77318\Roadway\SHEETS\77318XS001.dgn MODELNAME: Sheet 11
WORKSTATION:mschafra DATE:1/19/2010

SEEDING	
END WIDTH	SQ. YDS.
30	
	167
30	
	167
30	
	334



END AREA		VOLUME	
CUT	FILL	CUT	FILL
228			
		483	
294			
		530	
278			
		1,013	

CALCULATED HYH
CHECKED BAD

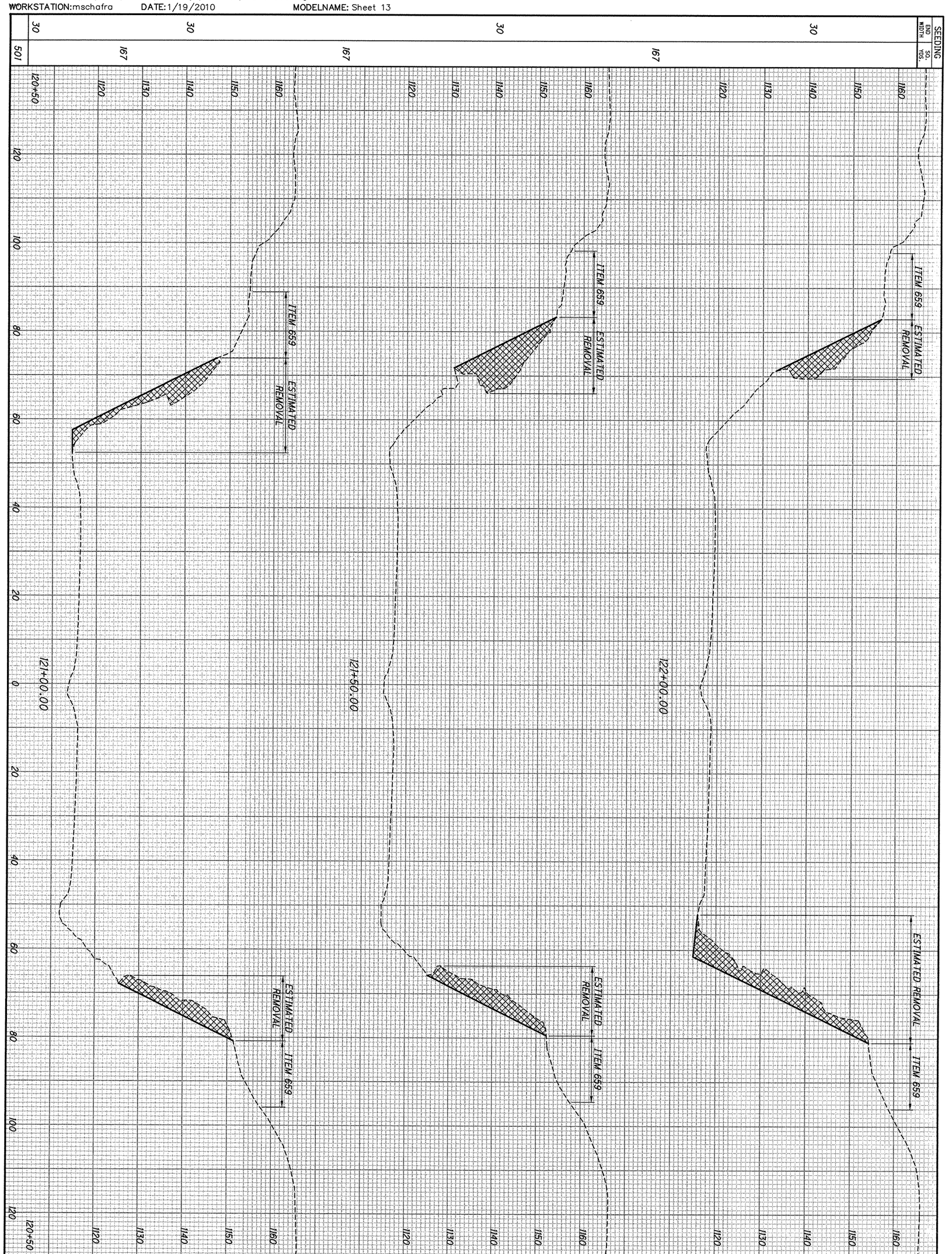
CROSS SECTIONS - S.R. 21
STA. 120+00.00 TO STA. 120+50.00

WAY-21-0.00

51
69

DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318XS001.dgn MODELNAME: Sheet 12
WORKSTATION:mschafra DATE:1/19/2010

DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318XS001.dgn
WORKSTATION: mschafra DATE: 1/19/2010 MODELNAME: Sheet 13



END AREA CUT
END AREA FILL
VOLUME CUT
VOLUME FILL

228	176	95	335	
1,023	374	251	398	

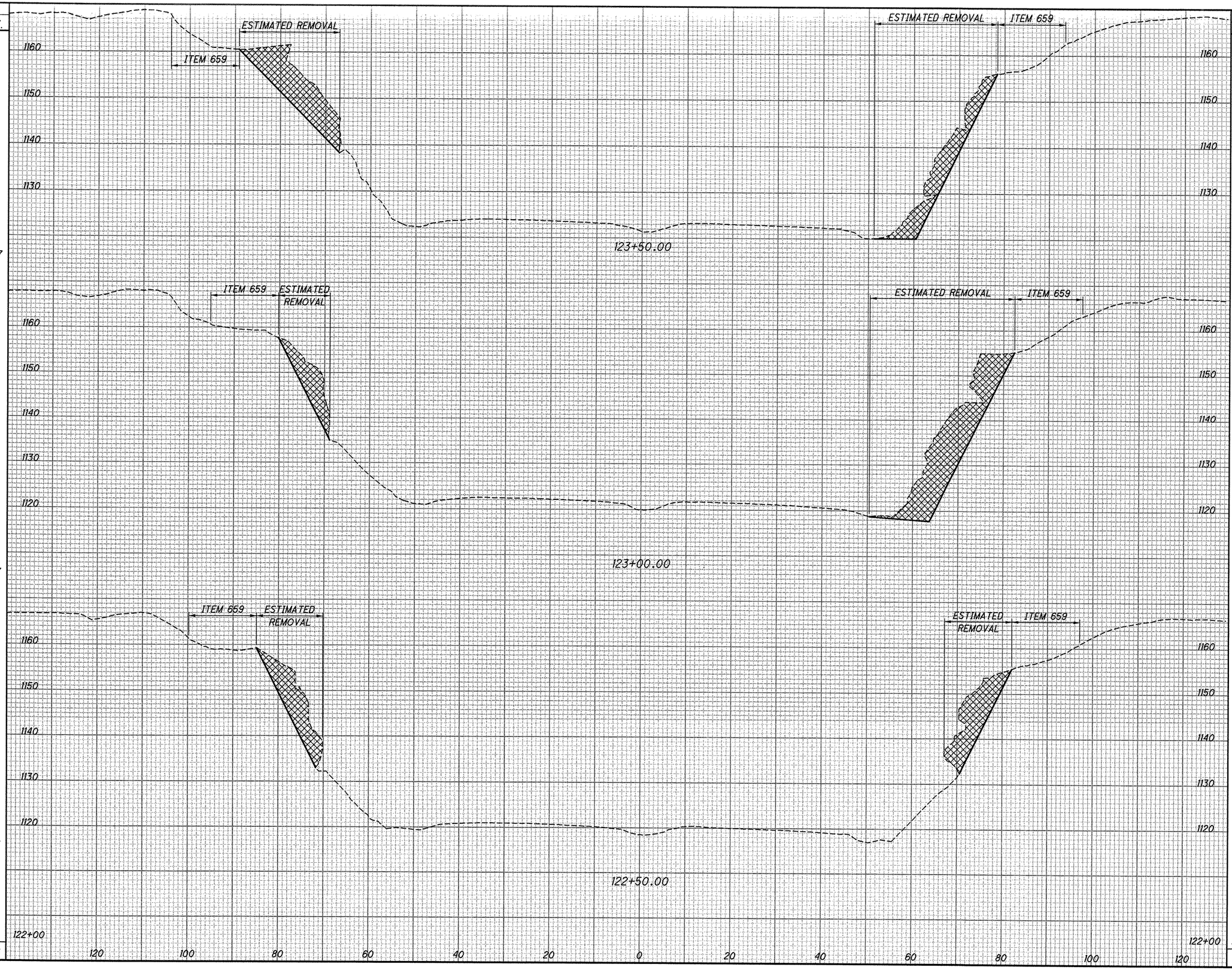
52/69

WAY-21-0.00

CROSS SECTIONS - S.R. 21
STA. 121+00.00 TO STA. 122+00.00

CALCULATED HYH
CHECKED BAD

SEEDING	
END WIDTH	SQ. YDS.
30	167
30	167
30	167
30	501



END AREA	
CUT	FILL
280	
328	
213	
335	

VOLUME	
CUT	FILL
563	
501	
507	
1,571	

CALCULATED HYH

CHECKED BAD

CROSS SECTIONS - S.R. 21

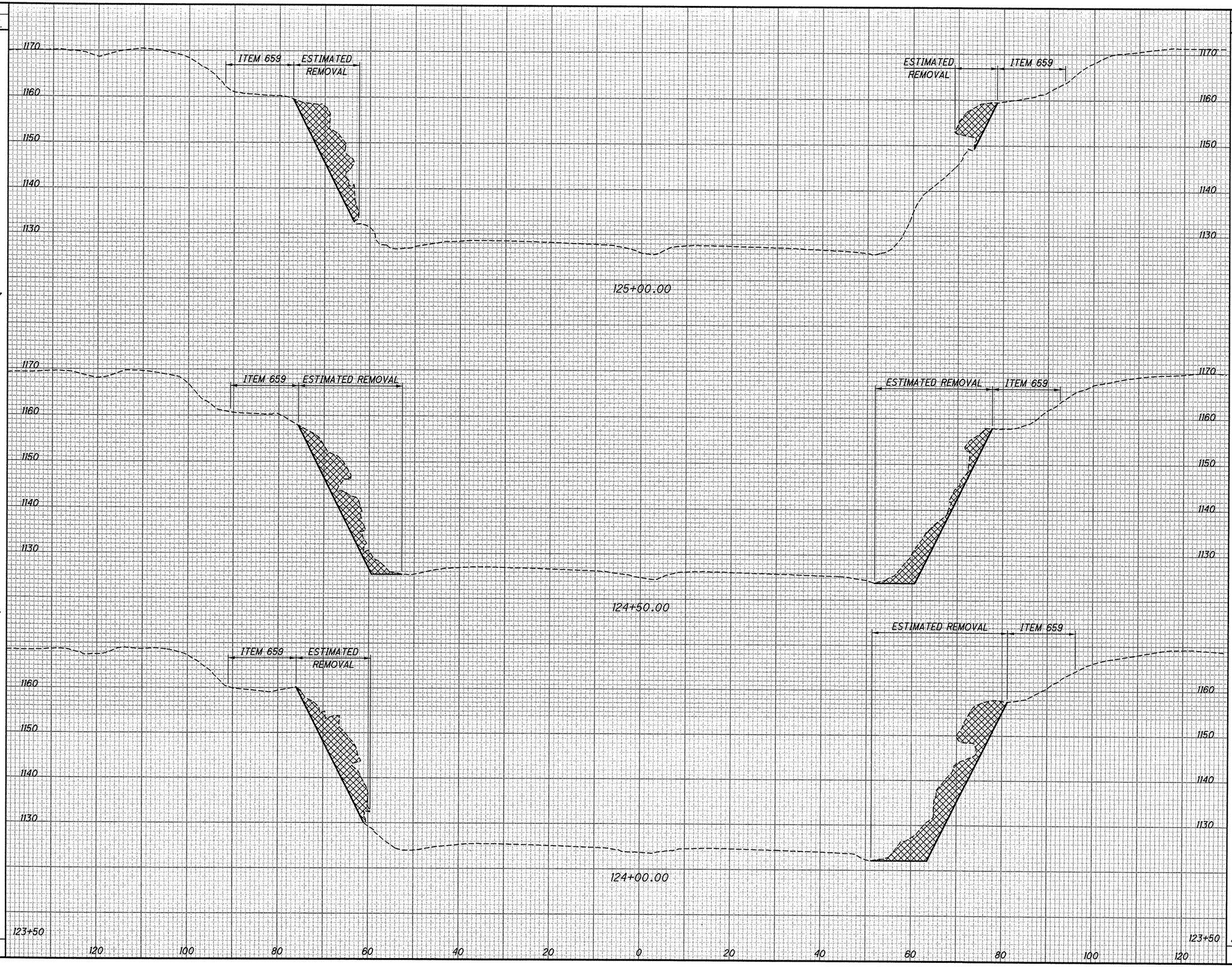
STA. 122+50.00 TO STA. 123+50.00

WAY-21-0.00

53
69

DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318XS001.dgn MODELNAME: Sheet 14
WORKSTATION:mschafro DATE:1/19/2010

SEEDING	
END WIDTH	SQ. YDS.
30	167
30	167
30	167
30	
	501



END AREA	
CUT	FILL
162	
210	
314	
280	

VOLUME	
CUT	FILL
344	
485	
550	
1,379	

CALCULATED HYH
CHECKED BAD

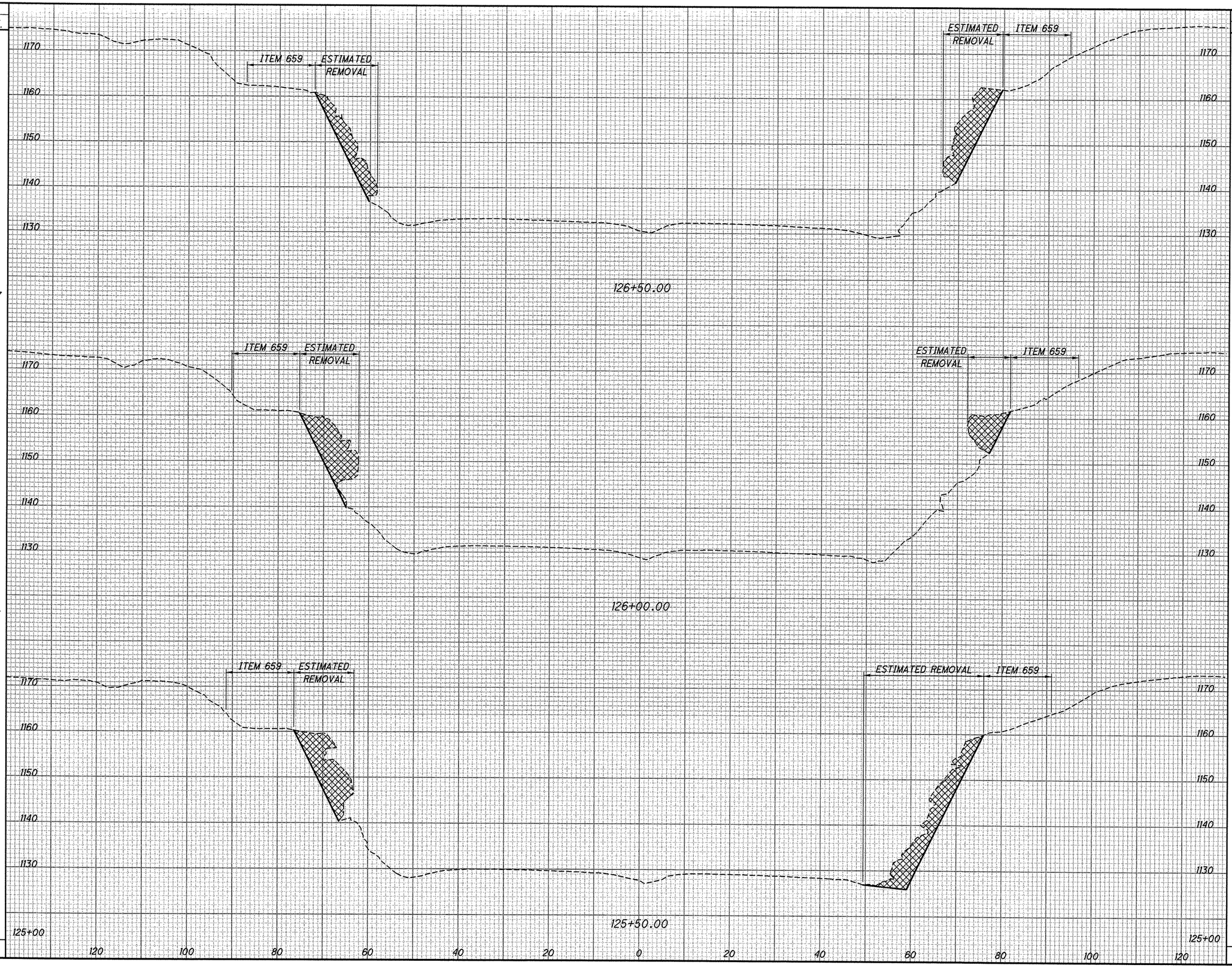
CROSS SECTIONS - S.R. 21
STA. 124+00.00 TO STA. 125+00.00

WAY-21-0.00

54
69

DESIGN FILE: I: \projects \77318 \ Roadway \ SHEETS \ 77318XS001.dgn MODELNAME: Sheet 15
WORKSTATION:mschafra DATE:1/19/2010

SEEDING	
END WIDTH	SQ. YDS.
30	167
30	167
30	167
30	501



END AREA		VOLUME	
CUT	FILL	CUT	FILL
171		416	
278		377	
129		269	
162		1,062	

CALCULATED HYH
CHECKED BAD

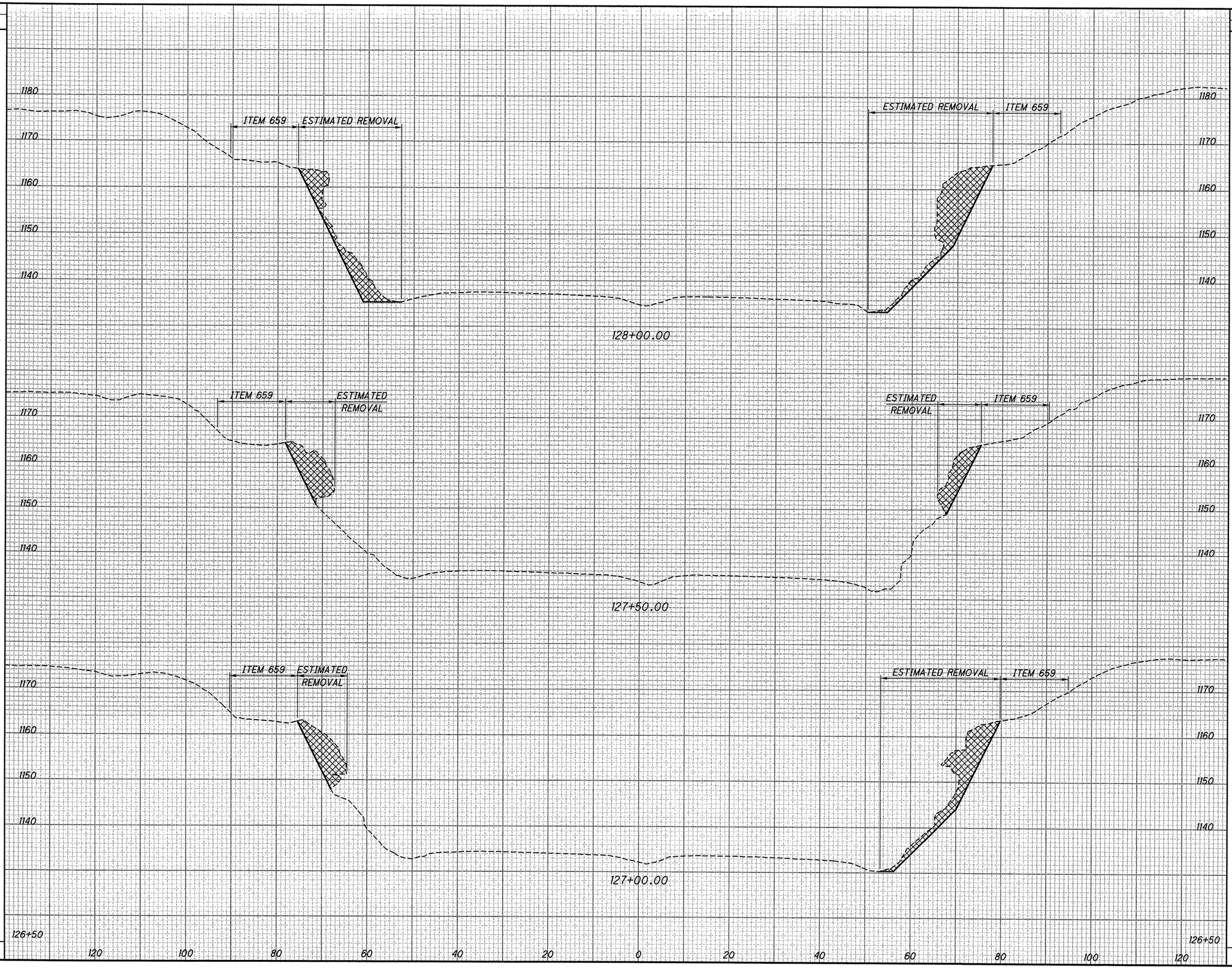
CROSS SECTIONS - S.R. 21
STA. 125+50.00 TO STA. 126+50.00

WAY-21-0.00

55
69

DESIGN FILE: I: \projects\ 77318\ Roadway\ SHEETS\ 77318XS001.dgn
WORKSTATION:mschafro DATE:1/19/2010 MODELNAME: Sheet 16

SEEDING	
END WIDTH	SQ. YDS.
30	
	167
30	
	167
30	
	167
30	
	501



END AREA	
CUT	FILL
217	
119	
174	
171	

VOLUME	
CUT	FILL
311	
271	
319	
901	

CALCULATED HYH
CHECKED BAD

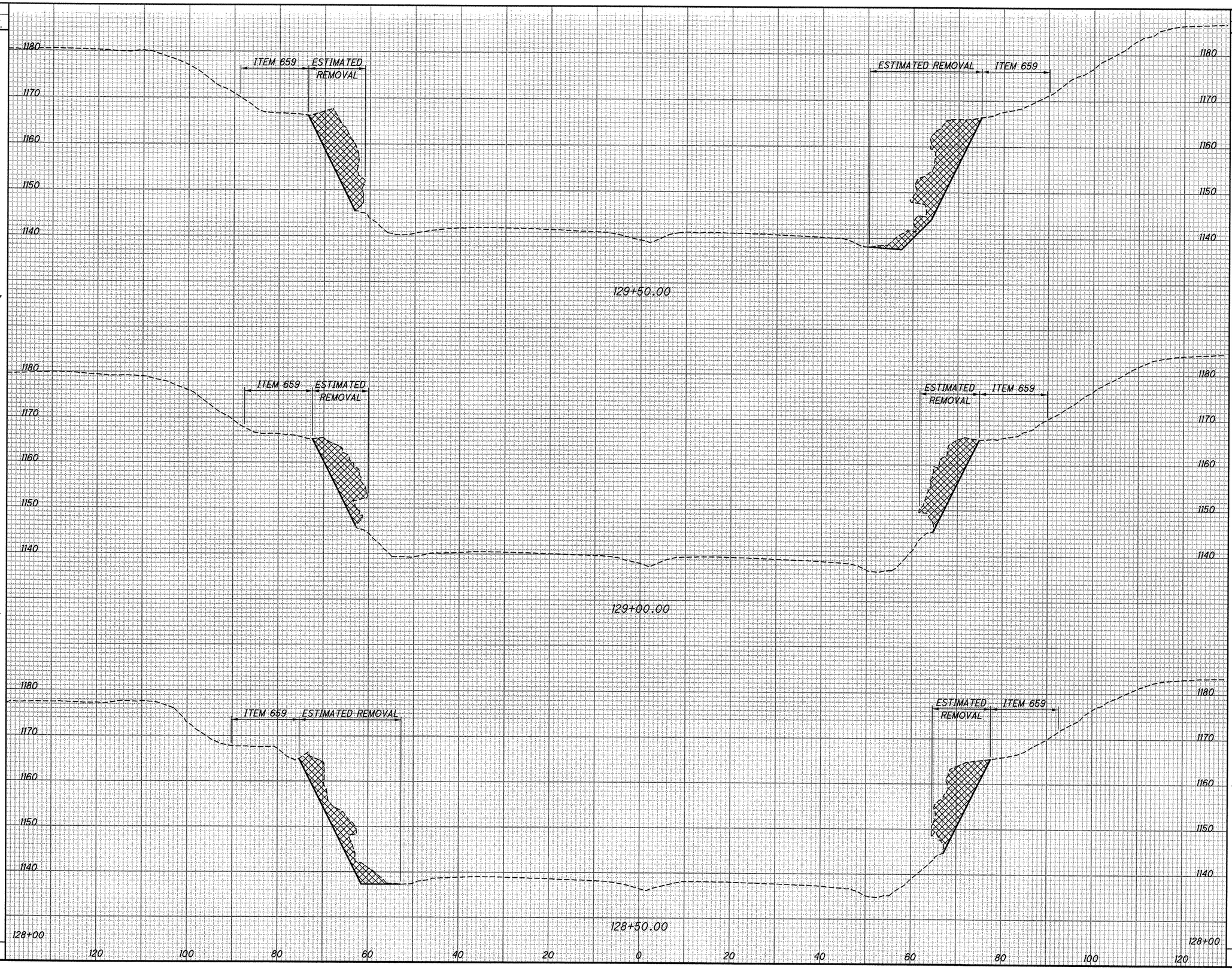
CROSS SECTIONS - S.R. 21
STA. 127+00.00 TO STA. 128+00.00

WAY-21-0.00

56
69

DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318XS001.dgn
WORKSTATION:mschafro DATE:1/19/2010 MODELNAME: Sheet 17

SEEDING	
END WIDTH	SQ. YDS.
30	167
30	167
30	167
30	501



END AREA	
CUT	FILL
276	
192	
206	
217	

VOLUME	
CUT	FILL
433	
369	
392	
1,194	

CALCULATED HYH
CHECKED BAD

CROSS SECTIONS - S.R. 21
STA. 128+50.00 TO STA. 129+50.00

WAY-21-0.00

57
69

DESIGN FILE: I: \projects\7318\Roadway\SHEETS\77318XS001.dgn
WORKSTATION:mschafro DATE:1/19/2010 MODELNAME: Sheet 18

SEEDING	
END WIDTH	SQ. YDS.
15	
	83
15	
	83
15	
	125
30	
	291

END AREA	
CUT	FILL
42	
103	
131	
276	

VOLUME	
CUT	FILL
134	
217	
377	
728	

CALCULATED HYH

CHECKED BAD

CROSS SECTIONS - S.R. 21
STA. 130+00.00 TO STA. 131+00.00

WAY-21-0.00

58
69

131+00.00

ESTIMATED REMOVAL — ITEM 659

130+50.00

ESTIMATED REMOVAL — ITEM 659

130+00.00

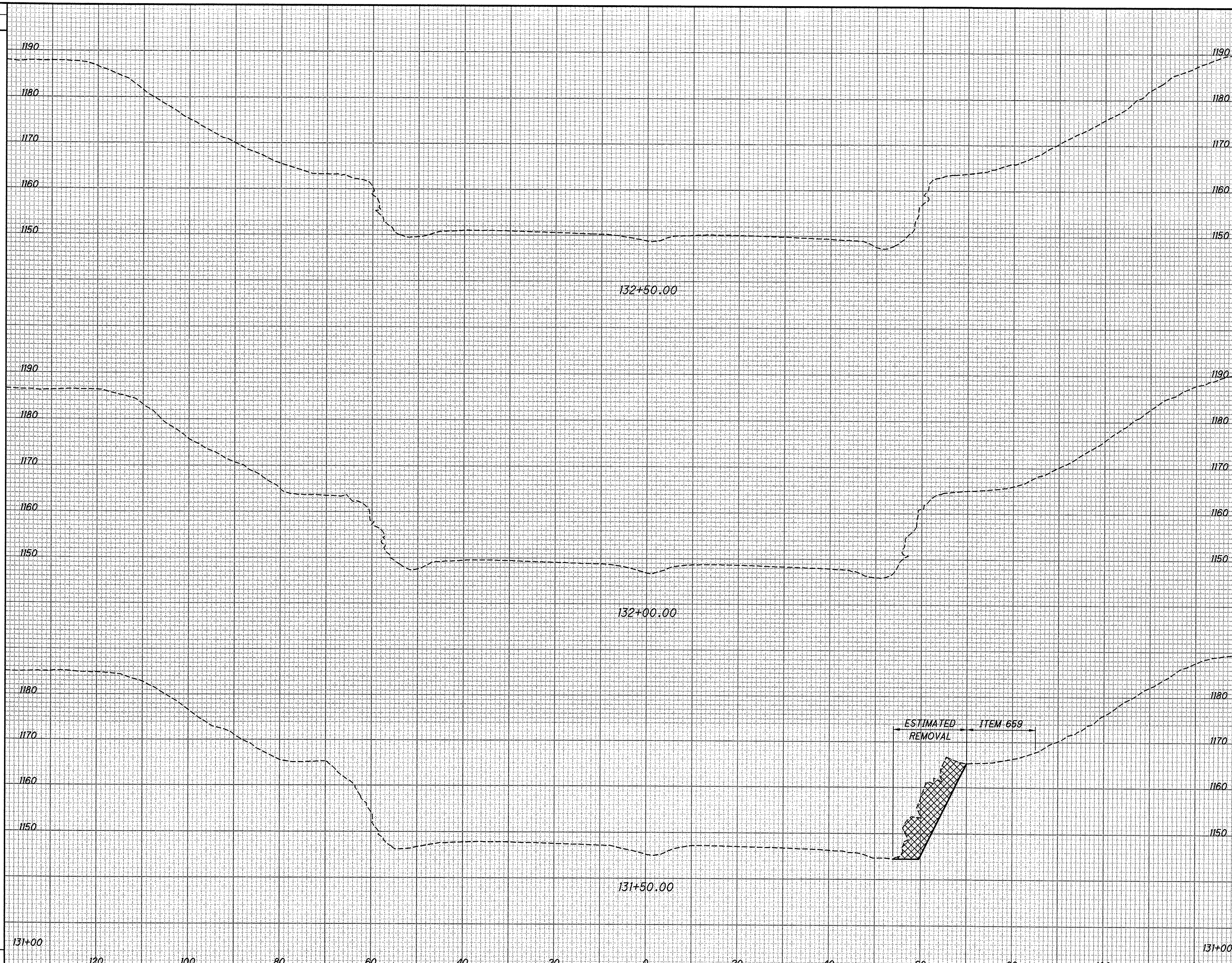
ESTIMATED REMOVAL — ITEM 659

1180 1170 1160 1150 1140 129+50

120 100 80 60 40 20 0 20 40 60 80 100 120

DESIGN FILE: I: \projects\77318\Roadway\SHEETS\77318XS001.dgn
WORKSTATION:mschafro DATE:1/19/2010 MODELNAME: Sheet 19

SEEDING	
END WIDTH	SQ. YDS.
0	
	42
15	
	83
15	125



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0			
		108	
117			
		147	
42		510	

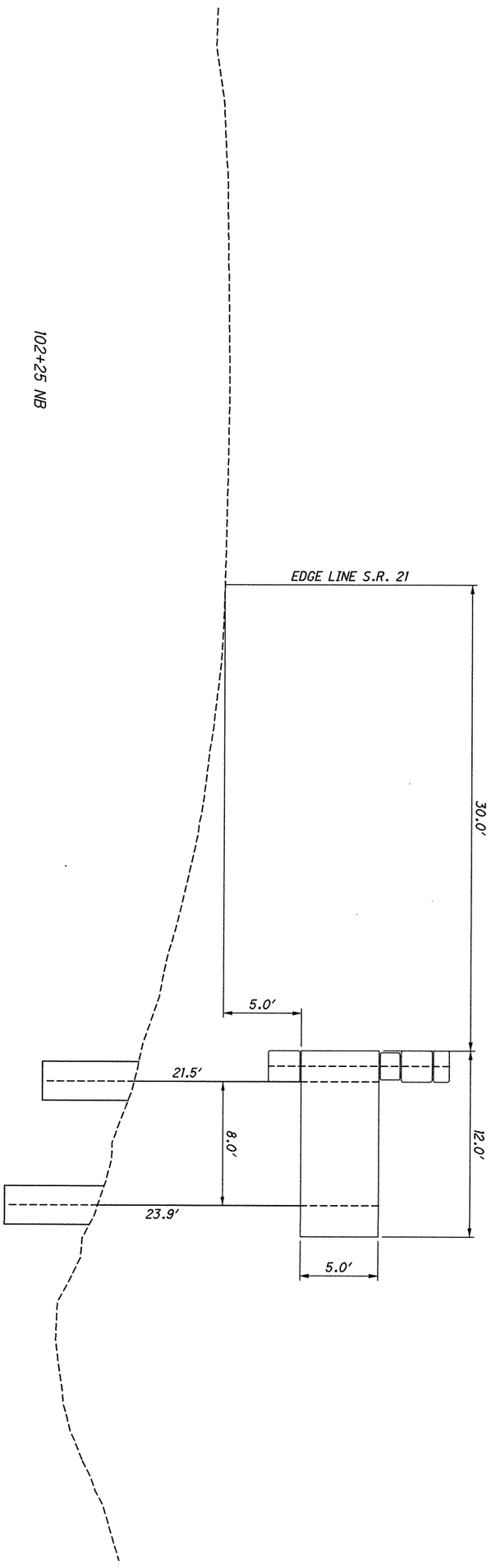
CALCULATED HYH CHECKED BAD

CROSS SECTIONS - S.R. 21
STA. 131+50.00 TO STA. 132+50.00

WAY-21-0.00

DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318XS001.dgn MODELNAME: Sheet 20
WORKSTATION:mschafra DATE:1/19/2010

DESIGN FILE: I:\projects\77318\Roadway\SHEETS\77318TE001.dgn
WORKSTATION: mschafra DATE: 1/19/2010 MODELNAME: Sheet



60 / 69	WAY-21-0.00	GUIDE SIGN ELEVATION DETAILS	CALCULATED HYH / CHECKED BAD

WAY-21-0088 L (8501149) FUNDING COCO CONTR01

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	605	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10400	557	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	

WAY-21-0088 R (8501173) FUNDING COCO CONTR01

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	606	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10400	559	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	
516	46700	2	EACH	RESET BEARING	64
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	64

WAY-21-0095 L (8501203) FUNDING COCO CONTR01

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	693	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10400	1047	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	

WAY-21-0095 R (8501238) FUNDING COCO CONTR01

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	695	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10400	1051	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	

WAY-21-0142 L (8501327) FUNDING COCO CONTR01

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	932	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10400	1388	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	
516	46700	7	EACH	RESET BEARING	64
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	64

WAY-21-0142 R (8501351) FUNDING COCO CONTR01

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	921	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10400	1400	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	

DESIGN AGENCY
DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED GTS
DRAWN GTS
REVIEWED RDN
DATE 1/10
CHECKED DJV
REVISED

STRUCTURE SUMMARY

WAY-21-0.00

DESIGN FILE: I:\projects\77318\structures\strsum.dgn
WORKSTATION:dmollens DATE:1/20/2010

WAY-21-0181 L (8501386) FUNDING COCO CONTR01

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	559	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10400	831	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	

WAY-21-0181 R (8501416) FUNDING COCO CONTR01

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	555	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10400	838	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	

DESIGN AGENCY
DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED GTS | DRAWN GTS | REVIEWED RDN | DATE 1/10
CHECKED DJV | REVISED

SUMMARY

WAY-21-0.00

STRUCTURE SUM

DESIGN FILE: I: \projects\77318\structures\strsum.dgn
WORKSTATION:dmollens DATE:1/20/2010

STRUCTURE FILE NO.	BRIDGE NO.	LOCATION	BRIDGE TYPE	SKEW	BRIDGE DECK LIMITS	DECK WIDTH	PROPOSED WORK
8501149	WAY-21-0088 L	OVER WARWICK ROAD (C.H. 116)	3 SPAN STEEL BEAM	24°32'30"± L.F.	131'-11"±	38'-0"±	DECK SEALING, SEALING PARAPETS, PIER CAP AND COLUMNS
8501173	WAY-21-0088 R	OVER WARWICK ROAD (C.H. 116)	3 SPAN STEEL BEAM	24°32'30"± L.F.	132'-3"±	38'-0"±	DECK SEALING, SEALING PARAPETS, PIER CAP AND COLUMNS, RESET BEARINGS
8501203	WAY-21-0095 L	OVER CHIPPEWA CREEK	3 SPAN STEEL BEAM	20° L.F.	248'-0"±	38'-0"±	DECK SEALING, SEALING PARAPETS, PIER CAP ENDS AND COLUMNS
8501238	WAY-21-0095 R	OVER CHIPPEWA CREEK	3 SPAN STEEL BEAM	20° L.F.	248'-9"±	38'-0"±	DECK SEALING, SEALING PARAPETS, PIER CAP ENDS AND COLUMNS
8501327	WAY-21-0142 L	OVER CSXT RR	4 SPAN STEEL BEAM	49°45'05" L.F.	328'-7"±	38'-0"±	DECK SEALING, SEALING PARAPETS, PIER CAP ENDS SEALING, RESET BEARINGS
8501351	WAY-21-0142 R	OVER CSXT RR	4 SPAN STEEL BEAM	49°45'05" L.F.	331'-5"±	38'-0"±	DECK SEALING, SEALING PARAPETS AND PIER CAP ENDS SEALING
8501386	WAY-21-0181 L	OVER T.R. 172	3 SPAN STEEL BEAM	56°39'46"± L.F.	196'-9"±	38'-0"±	DECK SEALING AND SEALING PARAPETS
8501416	WAY-21-0181 R	OVER T.R. 172	3 SPAN STEEL BEAM	56°39'46"± L.F.	198'-5"±	38'-0"±	DECK SEALING AND SEALING PARAPETS

DESIGN AGENCY
DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
GTS	GTS	RDN	1/10
CHECKED	REVISED		
DCM			

STRUCTURE INFORMATION

WAY-21-0.00

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DESIGN FILE: I:\projects\77318\structures\strinfor.dgn
WORKSTATION:dmollens DATE:1/20/2010

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATION AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 & 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURES. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATION FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICALS, 2002, INCLUDING THE 2003, 2004, 2005 AND 2006 SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DECK PROTECTION METHOD:

SRS DECK SEALING

EXISTING PLANS:

THE ORIGINAL CONSTRUCTION PLANS OF THE EXISTING BRIDGES ARE AVAILABLE UPON REQUEST AT THE DISTRICT 3 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, ASHLAND, OH.

STRUCTURE #	PLAN NAME	DATE
WAY-21-0088 L/R	STA-21-17.80, WAY-21-0.00, SUM-21-0.00 WAY-21-(0.87) (0.94) (1.24) PART 1	1956 1997
WAY-21-0095 L/R	STA-21-17.80, WAY-21-0.00, SUM-21-0.00 WAY-21-(0.87) (0.94) (1.24) PART 1	1956 1997
WAY-21-0142 L/R	STA-21-17.80, WAY-21-0.00, SUM-21-0.00 WAY-21-(1.39) (1.80) PART 2	1956 1997
WAY-21-0181 L/R	STA-21-17.80, WAY-21-0.00, SUM-21-0.00 WAY-21-(1.39) (1.80) PART 2	1956 1997

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR REPOSITIONING EXISTING STRUCTURE TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 516 - RESET BEARING:

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN THE BRIDGE BEARING. REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PAD (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARING TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARING IS VERTICALLY ALIGNED AT 60° F (15° C) AND LUBRICATING SLIDING SURFACES. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516-RESET BEARING.

DESIGN AGENCY: DISTRICT THREE, OFFICE OF PRODUCTION

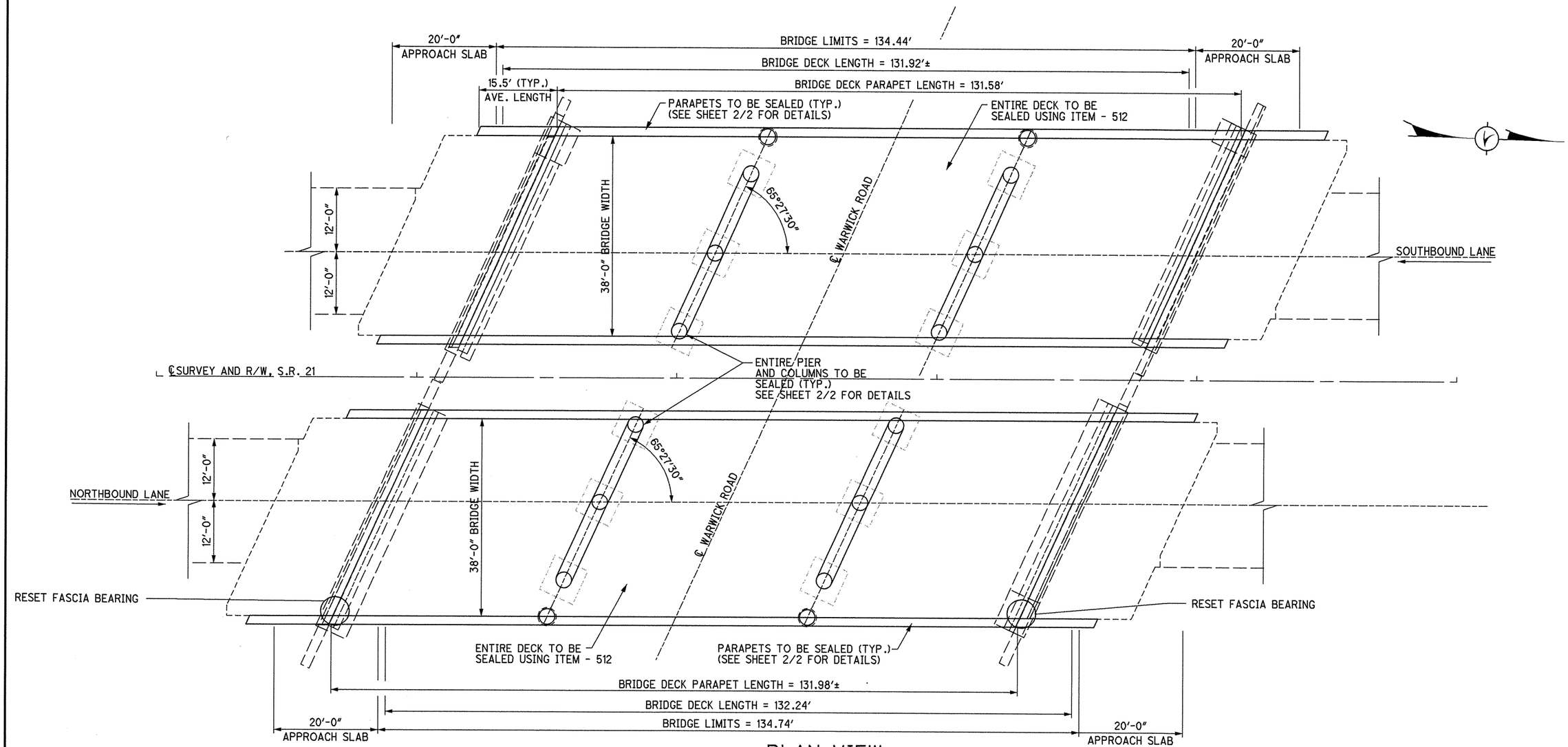
DESIGNED GTS | DRAWN GTS | REVIEWED RDN | DATE 1/10

CHECKED DCM | REVISED | STRUCTURAL FILE NUMBER

STRUCTURE GENERAL NOTES

WAY-21-0.00

DESIGN FILE: I:\projects\77318\structures\strnotes.dgn
WORKSTATION:dmollens DATE:1/20/2010



PLAN VIEW

ITEM	QUANTITY		UNIT	DESCRIPTION
	0088L	0088R		
512	605	606	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	557	559	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS
516		2	EACH	RESET BEARING
516		LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

NOTES:

1) GUARDRAIL NOT SHOWN.

2) THE PARAPETS, PIER CAPS/ COLUMNS SHALL BE SEALED WITH ITEM 512-SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEE SHEET 2/2 FOR DETAILS.

3) THE ENTIRE DECK SHALL BE SEALED WITH ITEM 512-TREATING OF CONCRETE BRIDGE DECK WITH SRS.

4) RESET BEARINGS AT LOCATIONS SHOWN.

DESIGN AGENCY
DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
GTS	GTS	RDN	1/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		8501149/8501173	

PLAN VIEW
WAY-21-0088 L/R OVER WARWICK ROAD

WAY-21-0.00

1 / 2

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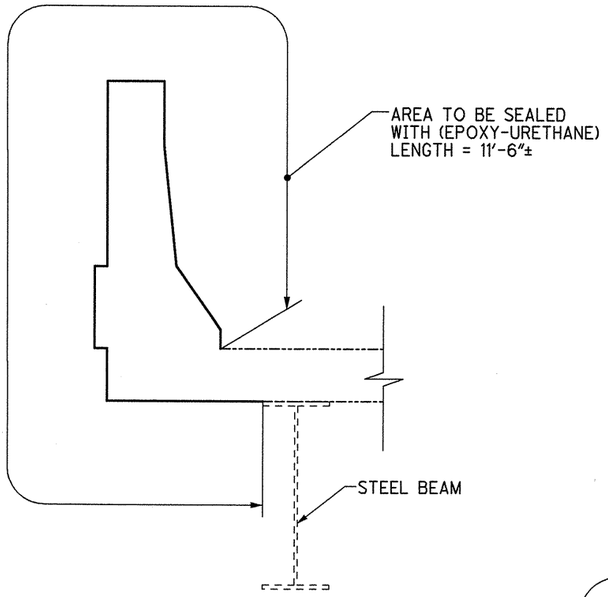
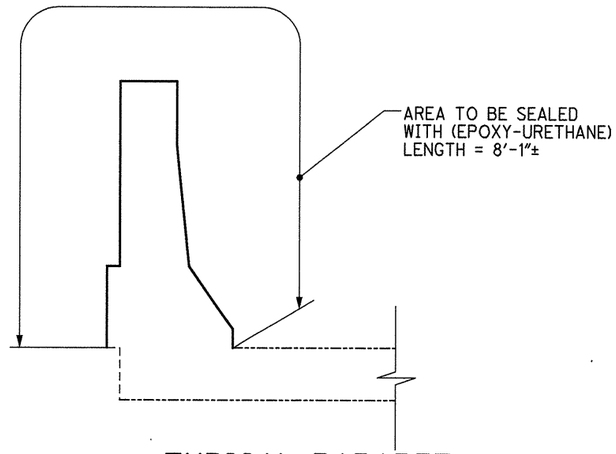
DESIGN FILE: I: \projects \ 77318 \ structures \ Way21 \ Way210088.dgn
WORKSTATION:dmollens DATE:1/20/2010



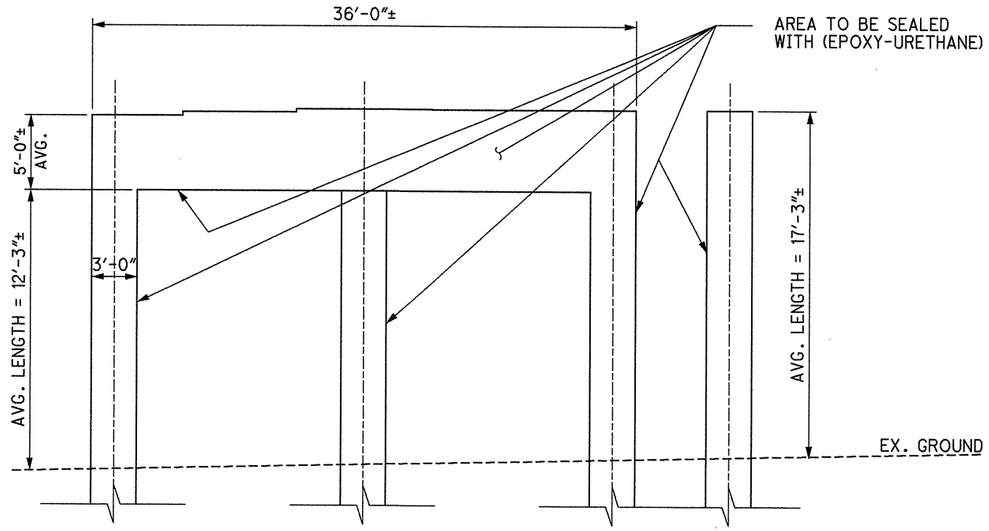
TYPICAL PARAPET ON DECK

LEFT STRUCTURE PARAPET LENGTH = 131'-7"±
RIGHT STRUCTURE PARAPET LENGTH = 132'-0"±



TYPICAL PARAPET OFF DECK

AVE. LENGTH = 15'-6"±



PIER CAP ELEVATION VIEW

PIER WIDTH = 3'-0"

ITEM	QUANTITY		UNIT	DESCRIPTION
	0088L	0088R		
512	605	606	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO SHEET 1/2.

NOTES:

1) THE PARAPETS SHALL BE SEALED WITH ITEM 512-SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

2) THE PIER CAPS/COLUMNS SHALL BE SEALED WITH ITEM 512-SEALING OF CONCRETE (EPOXY-URETHANE).

DESIGN FILE: I:\projects\77318\structures\Way21\Way210088.dgn
WORKSTATION:dmollens
DATE:1/20/2010

DESIGN AGENCY
DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
GTS	GTS	RDN	1/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		8501149/8501173	

SEALING DETAILS
WAY-21-0088 L/R OVER WARWICK ROAD

WAY-21-0.00

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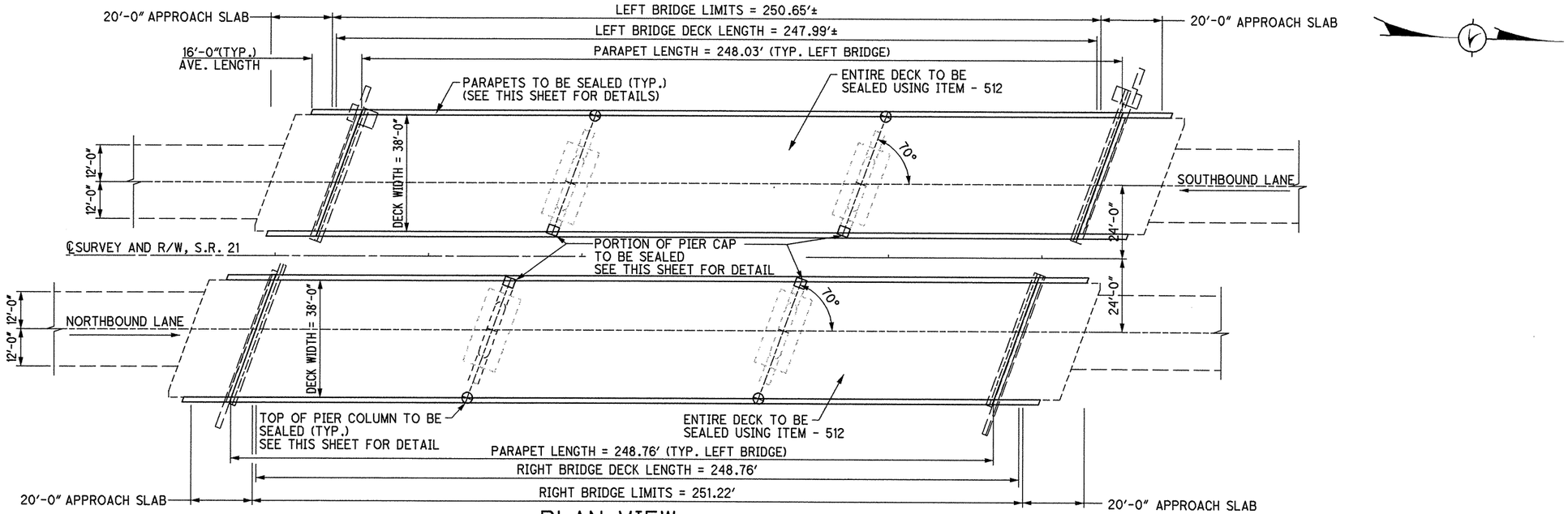
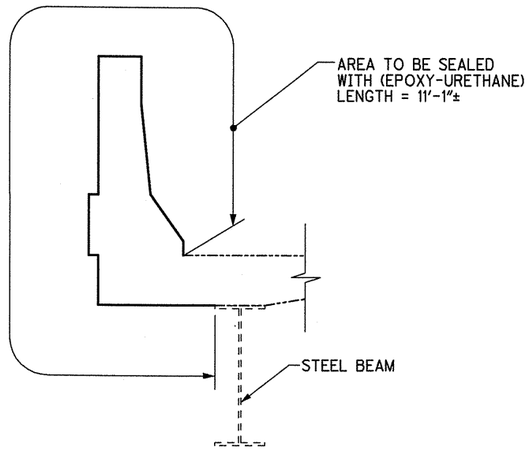
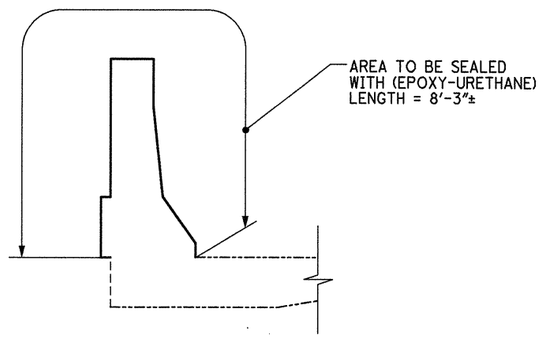


PLAN VIEW



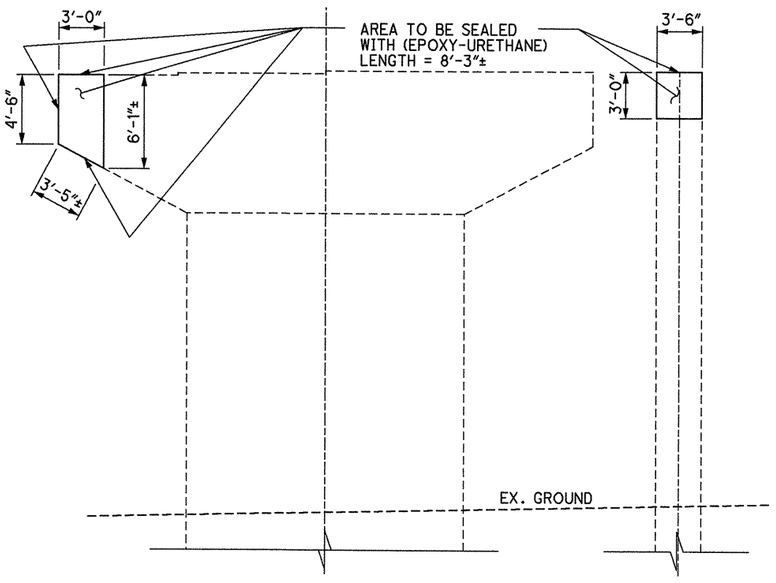
TYPICAL PARAPET ON DECK

LEFT STRUCTURE PARAPET LENGTH = 248.03'±
RIGHT STRUCTURE PARAPET LENGTH = 248.76'±



TYPICAL PARAPET OFF DECK

AVE. LENGTH = 16'-0"



PIER CAP ELEVATION VIEW

PIER WIDTH = 3'-6"

ITEM	QUANTITY		UNIT	DESCRIPTION
	0095L	0095R		
512	693	695	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	1047	1051	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

NOTES:

1) GUARDRAIL NOT SHOWN.

2) THE PARAPETS AND ENDS OF PIER CAPS SHALL BE SEALED WITH ITEM 512-SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

3) THE ENTIRE DECK SHALL BE SEALED WITH ITEM 512-TREATING OF CONCRETE BRIDGE DECK WITH SRS.

DESIGN AGENCY
DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
GTS	GTS	RDN	1/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		8501203/8501238	

PLAN VIEW
WAY-21-0095 L/R OVER CHIPPEWA CREEK

WAY-21-0.00

1 / 1

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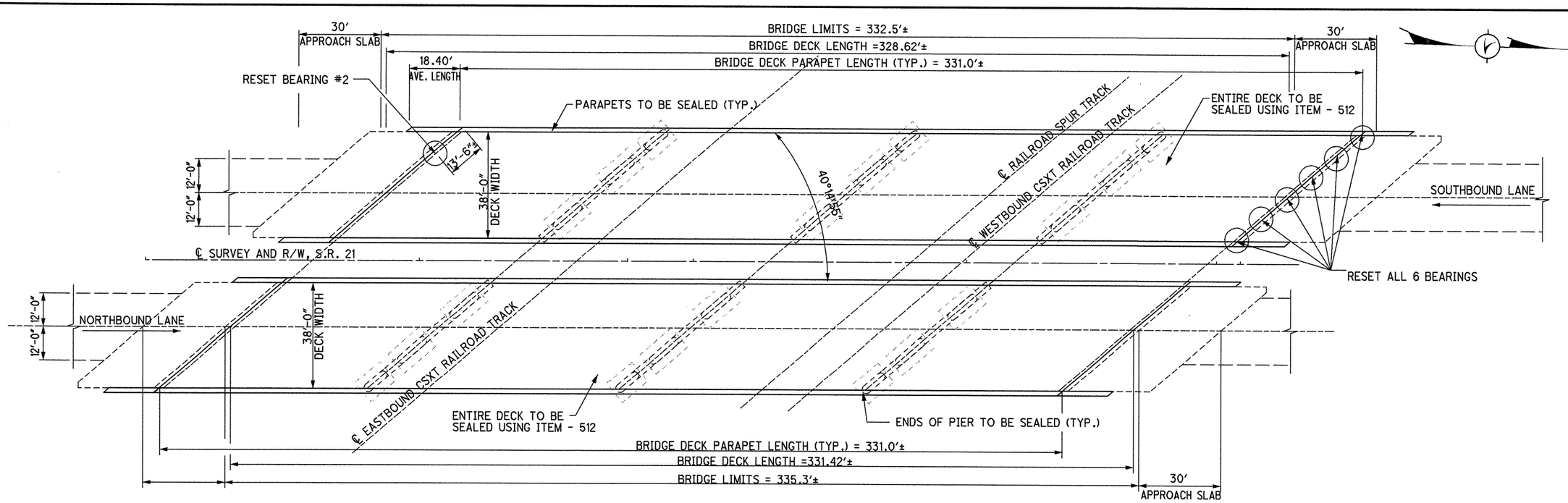
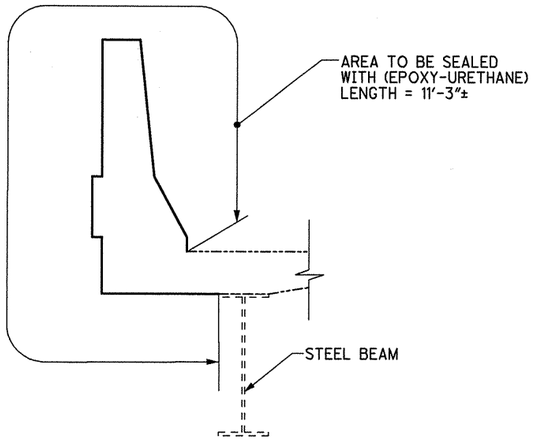
DESIGN FILE: i:\projects\77318\structures\Way21\Way210094.dgn
WORKSTATION:dmollens
DATE:1/20/2010

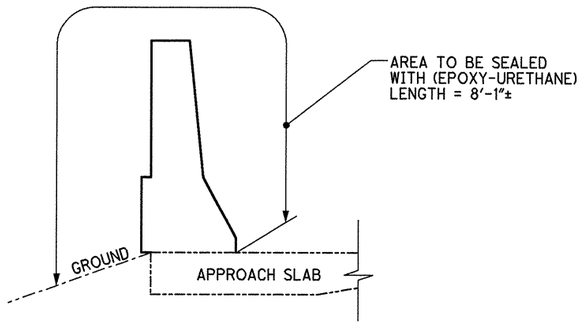


PLAN VIEW



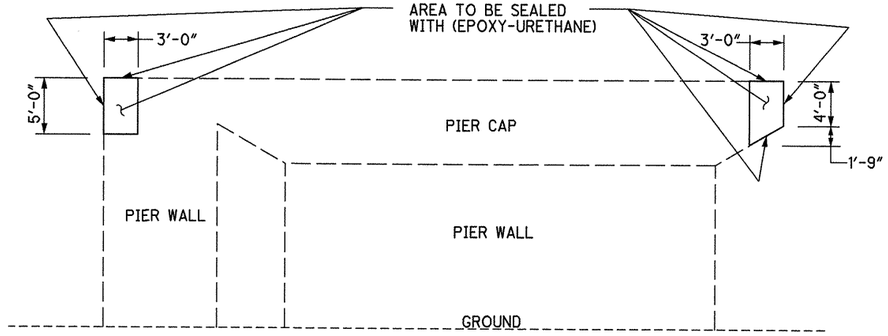
TYPICAL PARAPET ON DECK

LEFT STRUCTURE AVG. PARAPET LENGTH = 331.0′±
RIGHT STRUCTURE AVG. PARAPET LENGTH = 326.63′±



TYPICAL PARAPET OFF DECK

AVE. LENGTH OFF DECK = 18.40′±/CORNER



TYPICAL PIER CAP

(6 PIERS)
(PIER WIDTH = 3′-0″)

ITEM	QUANTITY 0142L	QUANTITY 0142R	UNIT	DESCRIPTION
512	932	921	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	1388	1400	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS
516	7		EACH	RESET BEARING
516	LUMP			JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

NOTES:

1) GUARDRAIL NOT SHOWN.

2) THE PARAPETS AND ENDS OF PIER SHALL BE SEALED AS DETAILED ABOVE WITH ITEM 512-SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

3) THE ENTIRE DECK SHALL BE SEALED WITH ITEM 512-TREATING OF CONCRETE BRIDGE DECK WITH SRS.

4) RESET BEARINGS AT LOCATIONS SHOWN.

DESIGN AGENCY
DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
GTS	GTS	RDN	1/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		8501327/8501351	

PLAN VIEW
WAY-21-0142 L/R OVER CSXT RR

WAY-21-0.00

1 / 1

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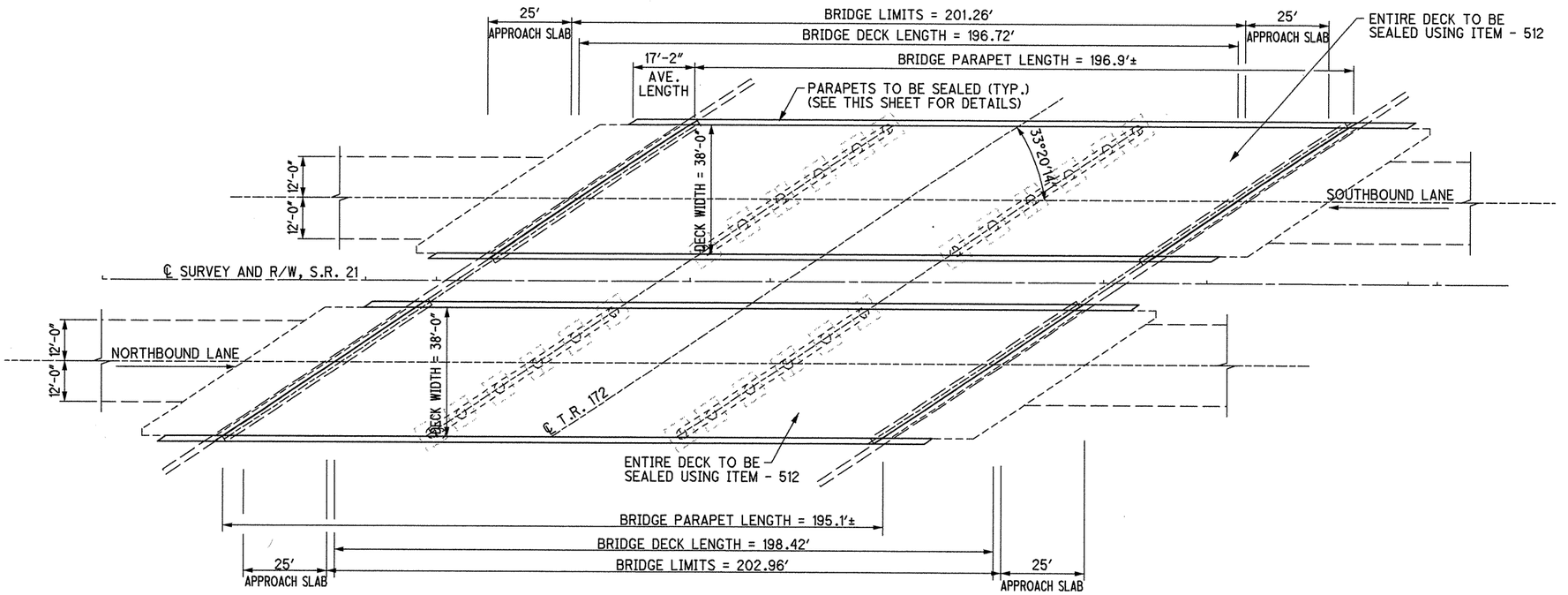
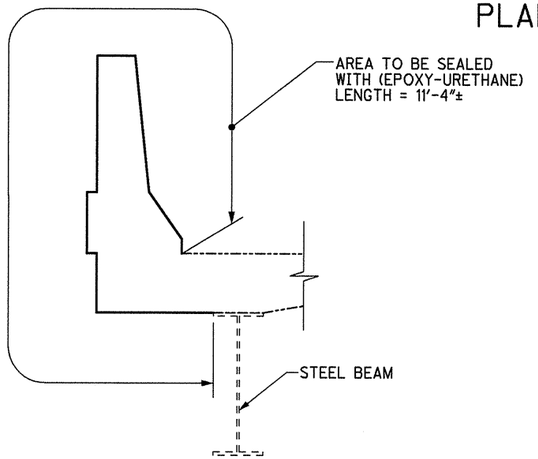
DESIGN FILE: i:\projects\77318\structures\Way21\Way210142.dgn
WORKSTATION:dmollens DATE:1/20/2010

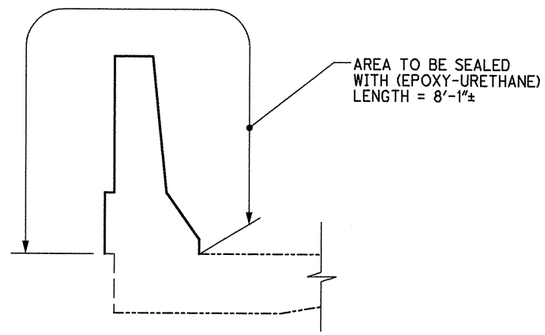


PLAN VIEW



TYPICAL PARAPET ON DECK

LEFT STRUCTURE AVG. PARAPET LENGTH = 196.9′±
RIGHT STRUCTURE AVG. PARAPET LENGTH = 195.1′±



TYPICAL PARAPET OFF DECK

AVE. LENGTH = 17′-2″±

ITEM	QUANTITY 0181L	QUANTITY 0181R	UNIT	DESCRIPTION
512	559	555	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	831	838	SQ YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

NOTES:

1) GUARDRAIL NOT SHOWN.

2) THE PARAPETS SHALL BE SEALED WITH ITEM 512-SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

3) THE ENTIRE DECK SHALL BE SEALED WITH ITEM 512-TREATING OF CONCRETE BRIDGE DECK WITH SRS.

DESIGN AGENCY
DISTRICT THREE
OFFICE OF PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
GTS	GTS	RDN	1/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		8501416/8501386	

PLAN VIEW
WAY-21-0181 L/R OVER CH 172

WAY-21-0.00

1 / 1

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DESIGN FILE: I:\projects\77318\structures\Way21\Way210181.dgn
WORKSTATION:dmollens
DATE:1/20/2010

PROJECT DESCRIPTION

CORRECTIVE ACTIONS FOR THE REMEDIATION OF A ROCK CUT SLOPE PRODUCING ROCKFALL DEBRIS. THE ESTIMATED WORK EXTENDS ALONG BOTH NORTHBOUND AND SOUTHBOUND LANES.

HISTORIC RECORDS

HISTORICAL BORING RECORDS WERE AVAILABLE FOR REVIEW FROM THE 1959 SOIL PROFILE AND THE PLAN VIEW AND CROSS SECTIONS FOR THE CONSTRUCTION OF PROJECT F-1010 (3) STA-WAY-SUM-21-(17.80)(0.00)(0.00); CIRCA 1960. THE RECORDS INDICATE THAT THE PROJECT AREA IS LOCATED IN A THROUGH CUT CONSTRUCTED IN GLACIAL TILL OVERBURDEN SOILS UNDERLINE BY SANDSTONE WITH A 10-FOOT WIDE BENCH AT THE SOIL/BEDROCK CONTACT. THE OVERBURDEN SOILS ENCOUNTERED WITHIN THE CUT TYPICALLY RANGED FROM SANDY SILT (A-4a) TO SILT AND CLAY (A-6a) RANGING IN THICKNESS BETWEEN 2 AND 35 FEET AND WERE NOTED AS CONTAINING ROCK FRAGMENTS. THE SANDSTONE ENCOUNTERED IN THE BORINGS WAS OF VARYING QUALITY, WITH SEVERAL REFERENCES TO FRIABLE, POORLY CEMENTED AND POROUS. ADDITIONALLY, SEVERAL THIN LAYERS OF ARGILLACEOUS, CARBONACEOUS, SILICEOUS SHALE, OR MICACEOUS SHALE WERE NOTED THROUGHOUT THE DESCRIPTIONS ABOVE THE ROAD GRADE.

MINING RECORDS FOR THE AREA INDICATES THAT A MAPPED UNDERGROUND COAL MINE IS LOCATED ALONG THE NORTH EDGE OF THE PROJECT IMMEDIATELY NORTH OF CLINTON ROAD, AND MULTIPLE SUSPECTED DRIFT ENTRIES ARE LOCATED ALONG THE SOUTHERN EDGE OF THE PROJECT WITHIN THE NORTHERN VALLEY WALL OF THE CHIPPEWA CREEK FLOOD PLAIN IMMEDIATELY NORTH OF GALEHOUSE ROAD.

GEOLOGY

THE PROJECT AREA IS LOCATED IN THE KILLBUCK-GLACIATED PITTSBURGH PLATEAU WHICH IS CHARACTERIZED BY RIDGES AND RELATIVELY FLAT UPLANDS DEFINED BY STEEP VALLEY WALLS WITH ALTERNATING BROAD AND NARROW STREAM VALLEYS. THE UPLANDS CONTAIN THIN GLACIAL TILL DEPOSITS OVERLYING BEDROCK COMPRISED MAINLY OF SANDSTONE OF MISSISSIPPIAN AGE WITH SHALE, SANDSTONE, SILTSTONE, LIMESTONE, CLAYSTONE, AND COAL OF LOWER PENNSYLVANIAN AGE FOUND IN THE MAJOR STREAM VALLEY AND LOWER VALLEY WALLS. THE BROAD STREAM VALLEYS HAVE THIN GLACIAL DEPOSITS AND ALLUVIUM.

RECONNAISSANCE

TYPICALLY THE CUT IS COMPRISED PREDOMINATELY OF FRIABLE SANDSTONE IN MODERATELY WEATHERED CONDITION. THE SLOPES CONTAIN SEVERAL ALTERNATING LAYERS WITH VARYING DEGREES OF RESISTANCE TO WEATHERING. HOWEVER, SEVERAL PREDOMINATE JOINT SETS CAN BE SEEN ALONG WHICH LARGER BLOCKS ARE BEING PRODUCED AT JOINT INTERSECTIONS. TYPICALLY THE STRENGTH OF THE SANDSTONE LAYERS RANGE FROM WEAK TO MODERATELY STRONG. SEVERAL AREAS OF DIFFERENTIAL WEATHERING WITHIN BOTH THE RIGHT AND LEFT CUT SLOPES WERE NOTED. THE LEFT CUT APPEARS TO HAVE MORE DRAMATIC UNDERCUTTING THAN THE RIGHT CUT. THREE STRATIGRAPHIC SECTIONS WERE DEVELOPED FOR THE CUT SLOPE EXPOSURES FOR THE RIGHT AND LEFT SECTIONS AT STA. 113+00, 120+50, AND 128+00.

AT SEVERAL LOCATIONS ROCKFALL DEBRIS HAS CLOGGED THE DITCH LINE, WHICH IS RUNNING ON SANDSTONE, RESULTING IN THE DRAINAGE UNDERCUTTING THE PAVED SHOULDER.

SEVERAL LARGE SECTIONS, RANGING FROM 3 FEET TO 15 FEET IN LENGTH AND UP TO 3 FOOT IN WIDTH WERE NOTED AS BEING UNSTABLE AND HELD IN PLACE BY TREES GROWING FROM FRACTURES WITHIN THE ROCK CUT FACE.

HEAVY SEEPAGE WAS NOTED WITHIN THE RIGHT CUT SLOPE BETWEEN APPROXIMATELY STA. 123+10 AND 124+50 AT APPROXIMATELY ELEVATION 1147 FEET. ADDITIONALLY, AT APPROXIMATELY STA. 124+00 WATER WAS NOTED FLOWING THROUGH THE PAVED SHOULDER INTO THE ROADWAY DITCH.

THE UPPER SOIL OVERBURDEN CUT IS HEAVILY VEGETATED FROM THE OVERBURDEN BENCH TO THE TOP OF THE CUT. WITHIN THE AREA OF THE POWER LINE CROSSING, THE OVERBURDEN BENCH BETWEEN THE SOIL AND ROCK CUT APPEARS TO BE AT LEAST 30 FEET IN WIDTH. THE REMAINDER OF THE OVERBURDEN BENCH IS GENERALLY 10 FEET IN WIDTH WITH ISOLATED AREAS NOTED AS BEING AS NARROW AS 5 FEET DUE TO LOSS OF THE ROCK FACE OR SLOUGHING OF THE SOIL SLOPE ONTO THE BENCH.

DRAINAGE CONTROL IS LOCATED AT THE TOP OF THE CUT THROUGH A PLAN DITCH CONSTRUCTED ABOVE THE SOIL CUT SLOPE, RANGING FROM A 1-FOOT DEEP CONCRETE GUTTER TO A 1.5 TO 2.5-FOOT DEEP SOD DITCH. THE CONCRETE GUTTER IS LOCATED FROM STA. 105+20 TO 111+10 RIGHT, AND FROM STA. 106+20 TO 119+10 LEFT. THE RIGHT GUTTER IS CARRIED THROUGH A 48-INCH DIAMETER STORM DRAIN FOR A DISTANCE OF 100 FEET DISCHARGING INTO AN UNPROTECTED DITCH FLOWING TO THE ROADSIDE DITCH. THE LEFT GUTTER DISCHARGES IN TO A DUMP ROCK ROADSIDE DITCH FLOWING INTO THE ROADSIDE DITCH. SOD DITCH IS LOCATED BETWEEN STA. 110+10 TO 114+00 RIGHT AND FROM STA. 119+10 TO 128+00 LEFT WITH BOTH SIDES DISCHARGING INTO A CONCRETE GUTTER. THE REMAINDER OF THE CUT DOES NOT HAVE A DRAINAGE CONTROL MEASURE AT THE TOP OF THE SOIL CUT.

DURING THE FIELD RECONNAISSANCE, POSSIBLE MINE OPENINGS WERE NOTED IMMEDIATELY NORTHEAST OF GALEHOUSE ROAD, ALONG THE SOUTHERN LIMITS OF THE PROJECT. ADDITIONALLY, INDICATIONS OF MINING WERE NOTED WEST OF GALEHOUSE ROAD PAST THE POWER LINE CROSSING. ODNR RECORDS INDICATE MINING ACTIVITIES WITHIN THE AREA, BUT NO RECORDS OF MAPPED MINE WORKING WERE AVAILABLE.

LEGEND

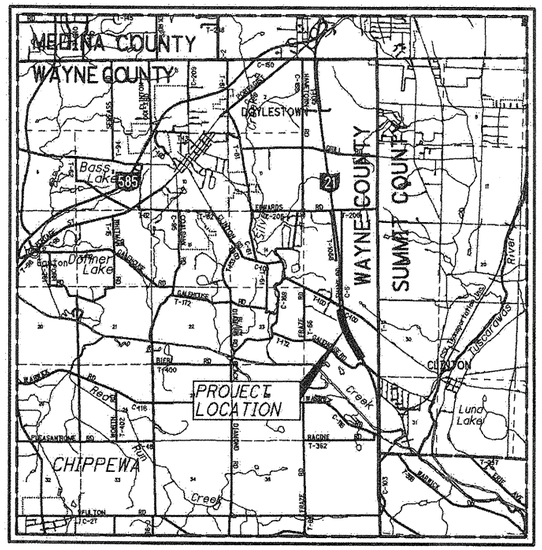
DESCRIPTION
SANDSTONE
SANDY SILT (A-4a)
SILT AND CLAY (A-6a)

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2009.

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE GEOTECHNICAL EXPLORATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1600 WEST BROAD STREET OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET.



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

N

PARTICLE SIZE DEFINITIONS

12"	3"	2.0 mm	0.42 mm	0.074 mm	0.005 mm
BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
		No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE		

RECON. - PPP & SAT 09/23/08 & 10/05/09
LIDAR SCAN - ODOT AERIAL 04/09
DRAWN - JAG 10/09
REVIEWED - PPP 10/29/09

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF GEOTECHNICAL ENGINEERING
1600 W. BROAD ST. COLUMBUS, OH 43223

PID NO. 77318

ROCKFALL EXPLORATION

WAY-21-0.00

1 / 4

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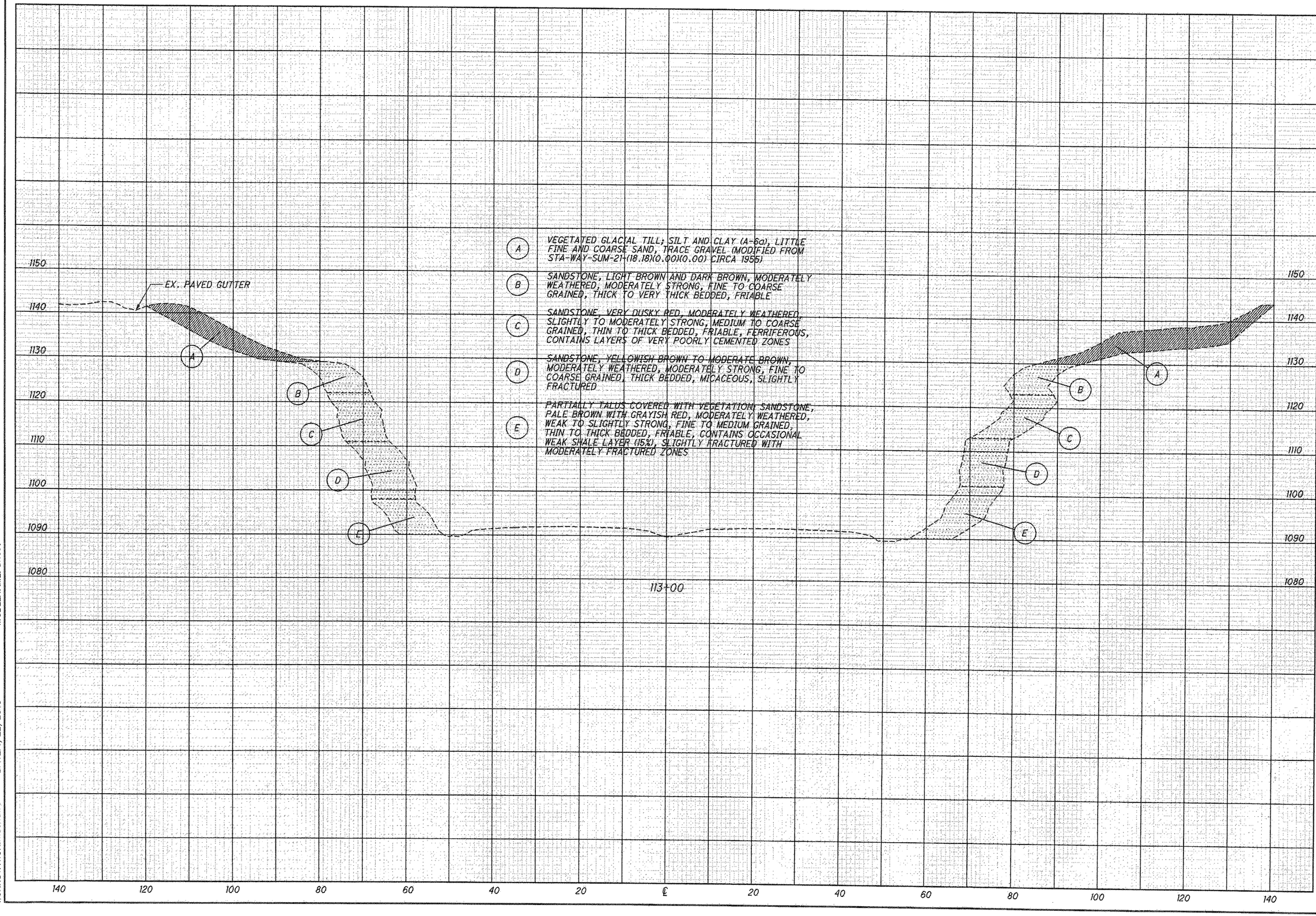

A — VEGETATED GLACIAL TILL; SILT AND CLAY (A-6a), LITTLE FINE AND COARSE SAND, TRACE GRAVEL (MODIFIED FROM STA-WAY-SUM-21-(18.18)0.00)0.00) CIRCA 1955)

B — SANDSTONE, LIGHT BROWN AND DARK BROWN, MODERATELY WEATHERED, MODERATELY STRONG, FINE TO COARSE GRAINED, THICK TO VERY THICK BEDDED, FRIABLE

C — SANDSTONE, VERY DUSKY RED, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, MEDIUM TO COARSE GRAINED, THIN TO THICK BEDDED, FRIABLE, FERRIFEROUS, CONTAINS LAYERS OF VERY POORLY CEMENTED ZONES

D — SANDSTONE, YELLOWISH BROWN TO MODERATE BROWN, MODERATELY WEATHERED, MODERATELY STRONG, FINE TO COARSE GRAINED, THICK BEDDED, MICACEOUS, SLIGHTLY FRACTURED

E — PARTIALLY TALUS COVERED WITH VEGETATION; SANDSTONE, PALE BROWN WITH GRAYISH RED, MODERATELY WEATHERED, WEAK TO SLIGHTLY STRONG, FINE TO MEDIUM GRAINED, THIN TO THICK BEDDED, FRIABLE, CONTAINS OCCASIONAL WEAK SHALE LAYER (15%), SLIGHTLY FRACTURED WITH MODERATELY FRACTURED ZONES

HORIZONTAL SCALE IN FEET
0 5 10 20

DRAWN JAG
CHECKED PPP

ROCKFALL EXPLORATION CROSS SECTION STA. 113+00

WAY-21-0.00

2 / 4

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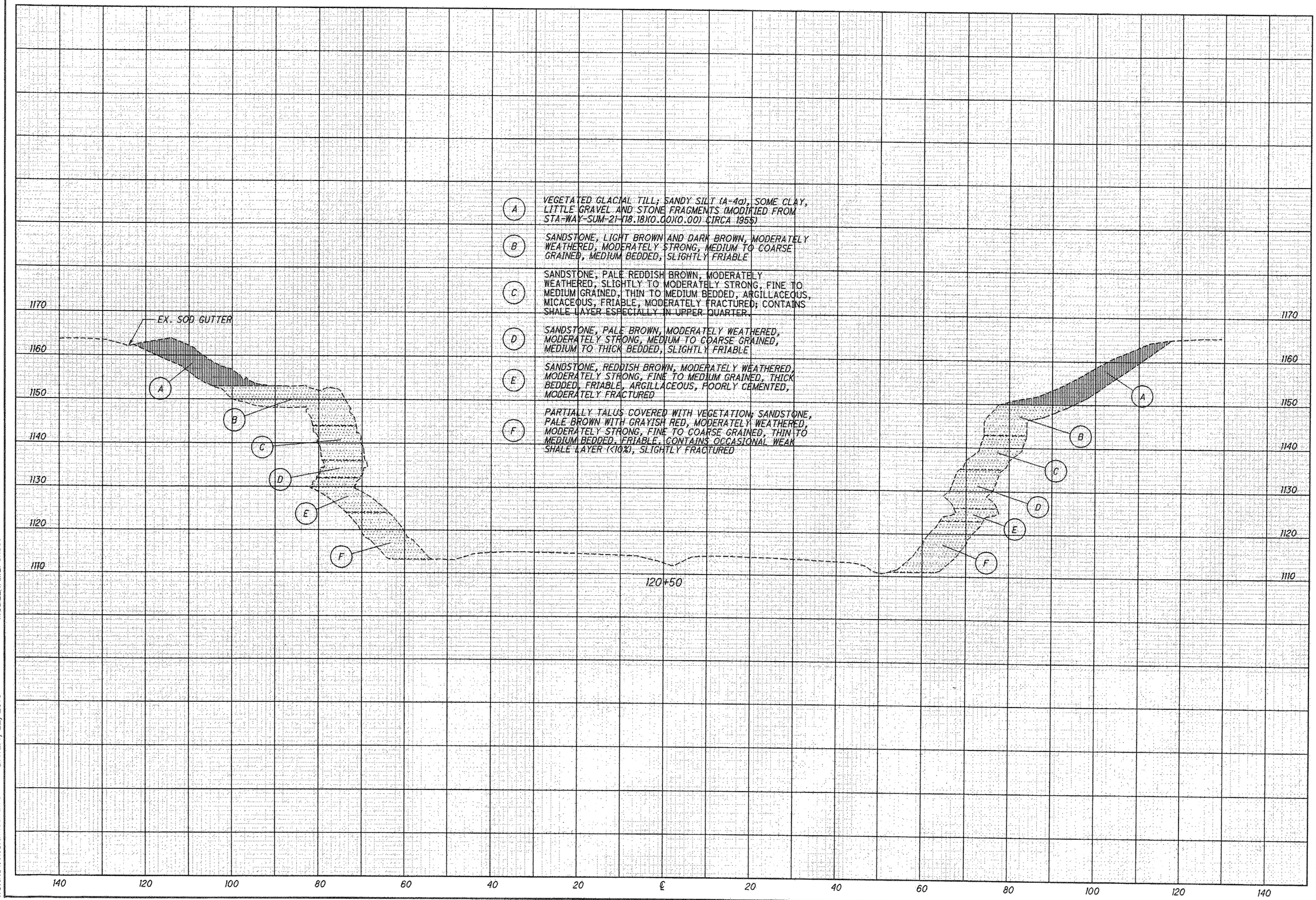

A — VEGETATED GLACIAL TILL; SANDY SILT (A-4a), SOME CLAY, LITTLE GRAVEL AND STONE FRAGMENTS (MODIFIED FROM STA-WAY-SUM-21-(18.18)(0.00)(0.00) CIRCA 1955)

B — SANDSTONE, LIGHT BROWN AND DARK BROWN, MODERATELY WEATHERED, MODERATELY STRONG, MEDIUM TO COARSE GRAINED, MEDIUM BEDDED, SLIGHTLY FRIABLE

C — SANDSTONE, PALE REDDISH BROWN, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO MEDIUM GRAINED, THIN TO MEDIUM BEDDED, ARGILLACEOUS, MICACEOUS, FRIABLE, MODERATELY FRACTURED; CONTAINS SHALE LAYER ESPECIALLY IN UPPER QUARTER.

D — SANDSTONE, PALE BROWN, MODERATELY WEATHERED, MODERATELY STRONG, MEDIUM TO COARSE GRAINED, MEDIUM TO THICK BEDDED, SLIGHTLY FRIABLE

E — SANDSTONE, REDDISH BROWN, MODERATELY WEATHERED, MODERATELY STRONG, FINE TO MEDIUM GRAINED, THICK BEDDED, FRIABLE, ARGILLACEOUS, POORLY CEMENTED, MODERATELY FRACTURED

F — PARTIALLY TALUS COVERED WITH VEGETATION; SANDSTONE, PALE BROWN WITH GRAYISH RED, MODERATELY WEATHERED, MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, FRIABLE, CONTAINS OCCASIONAL WEAK SHALE LAYER (<10%), SLIGHTLY FRACTURED

HORIZONTAL SCALE IN FEET
0 5 10 20

DRAWN JAG
CHECKED PPP

ROCKFALL EXPLORATION
CROSS SECTION STA. 120+50

WAY-21-0.00

3 | 4

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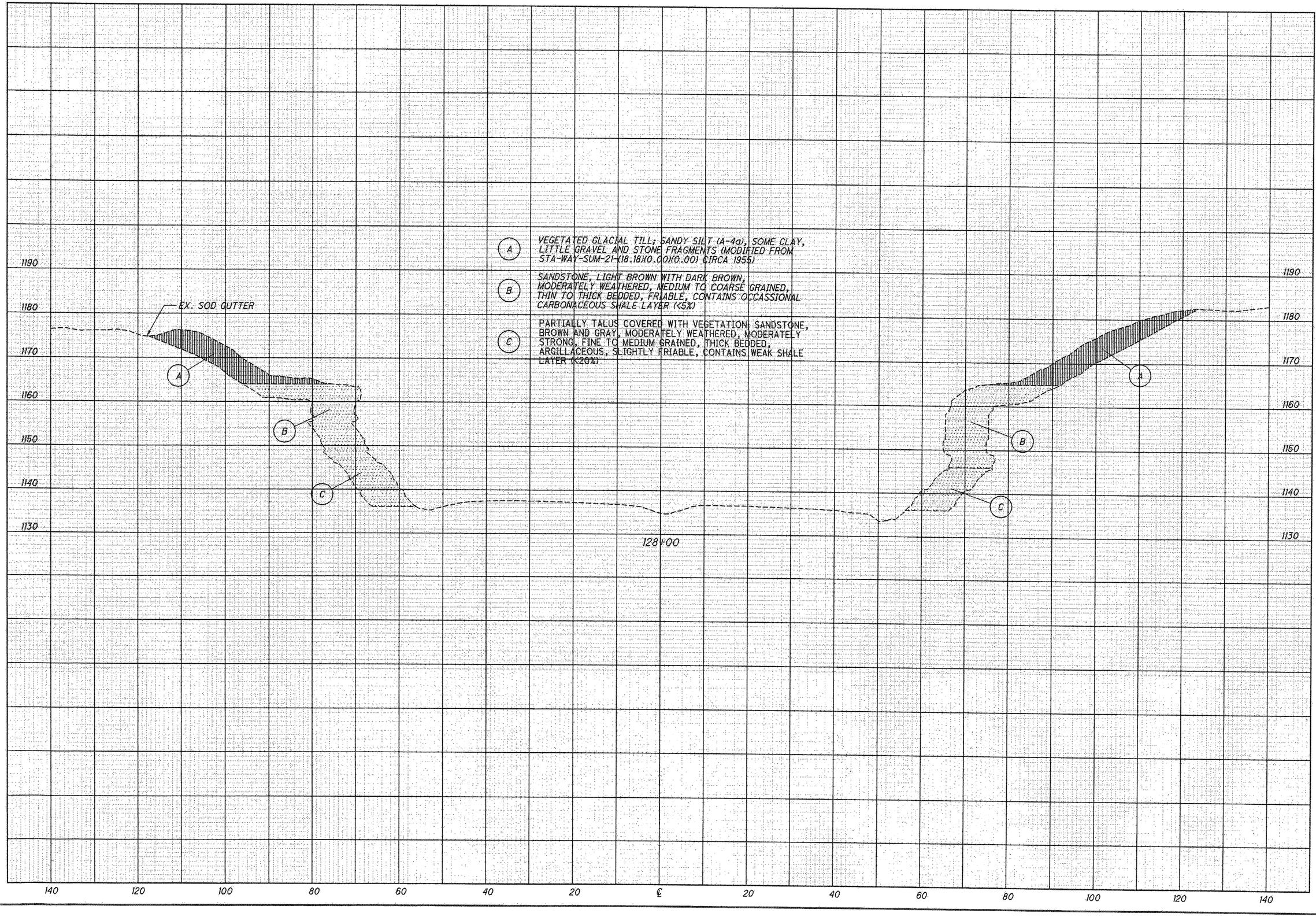

HORIZONTAL SCALE IN FEET
0 5 10 20

DRAWN JAG
CHECKED PPP

ROCKFALL EXPLORATION
CROSS SECTION STA. 128+00

WAY-21-0.00

4/4

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