

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

ON THIS PROJECT 301 COARSE AGGREGATE WILL HAVE A TWO FACE CRUSH COUNT OF 75% PER ASTM D 5821. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT WILL BE 20%. ENSURE THAT A MINIMUM OF 50% OF THE VIRGIN FINE AGGREGATE USED IN THE 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 302 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN

ON THIS PROJECT 302 COARSE AGGREGATE WILL HAVE A TWO FACE CRUSH COUNT OF 75% PER ASTM D 5821. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT WILL BE 20%. ENSURE THAT A MINIMUM OF 50% OF THE VIRGIN FINE AGGREGATE USED IN THE 301 IS SAND MANUFACTURED FROM STONE OR AIR COOLED SLAG.

WHERE 302 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN MATERIAL MEETS EXISTING ASPHALT OR CONCRETE PAVEMENT, PG GRADE LIQUID ASPHALT SHALL BE USED TO COAT THE VERTICAL FACE INSTEAD OF TACK COAT MATERIAL.

ALL COSTS TO BE INCLUDED IN ITEM 302 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN.

ITEM 407. TACK COAT

ITEM 407. TACK COAT FOR INTERMEDIATE COURSE

AS PER 407.06 THE APPLICATION RATES SHALL BE 0.08 GAL. PER SQ. YD. PRIOR TO THE LEVELING COURSE AND SHALL BE 0.03 GAL PER SQ. YD. PRIOR TO THE SURFACE COURSE FOR ESTIMATING PURPOSES ONLY. FOR TACK COAT, 702.13 APPLICATION RATE SHALL BE 0.08 GAL. AND THIS SHALL BE PLACED ON THE CONCRETE BASE ON SR 94 FULL DEPTH AREA. 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 RECOATED PRIOR TO PLACING ASPHALT CONCRETE. ALL COST 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 442. ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)

ALL LONGITUDINAL PAVEMENT JOINTS SHALL BE CLOSED BEFORE THE END OF EACH WORK DAY. BEFORE THE JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT OWP-171 (UNEVEN PAVEMENT) SIGNS. THESE SIGNS SHALL ONLY REMAIN WHILE THE CONDITION EXISTS.

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC.

IN ADDITION TO SECTION 401.14 AND STANDARD DRAWING BP-3.1, TRANSVERSE, FEATHERED, OR BUTT JOINTS SHALL BE SEALED WITH A 6 INCH WIDE BAND OF ASPHALT CEMENT ACROSS THE TOP SURFACE. THE LONGITUDINAL BUTT JOINT SHALL BE SEALED WITH ASPHALT CEMENT ON THE VERTICAL FACE AND 6 INCHES WIDE ON THE PLANED SURFACE BEFORE PAVING.

CARE SHALL BE TAKEN TO MATCH EXISTING PAVEMENT ELEVATIONS AT EXISTING PAVED BERMS, DRIVES, INTERSECTIONS, ETC. THE COST OF THIS WORK AND THE PLACEMENT OF THE "UNEVEN PAVEMENT" SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

ITEM 442. ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448)

THIS ITEM SHALL BE USED FOR CORRECTION OF CROWN, PROFILE AND ANY OTHER IRREGULARITIES. THE AVERAGE THICKNESS SHALL BE 0.75".

BEFORE THE LONGITUDINAL JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT OWP-171 (UNEVEN PAVEMENT) SIGNS. THESE SIGNS SHALL ONLY REMAIN WHILE THE CONDITION EXISTS.

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (OW-62) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN, AS DIRECTED BY THE ENGINEER. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

ITEM 442. ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN

ALL REQUIREMENTS OF 442 PREVIOUSLY STATED APPLY EXCEPT AS FOLLOWS. FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS. MINIMUM PG BINDER CONTENT IS 6.0 PERCENT. USE A PG 64-22 BINDER. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT.

ITEM 442. ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448), AS PER PLAN

ALL REQUIREMENTS OF 442 PREVIOUSLY STATED APPLY EXCEPT AS FOLLOWS. FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS. USE A PG 64-22 BINDER. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT.

ITEM 448. ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 (DRIVEWAYS)

THIS ITEM OF WORK SHALL BE USED AT THE LOCATIONS OF PAVED DRIVEWAYS. ALL LABOR, MATERIAL, AND EQUIPMENT NEEDED TO PLACE AN ASPHALT SURFACE COURSE FOR THE ASPHALT DRIVEWAYS SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE PER CUBIC YARD FOR ITEM 448 - ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22: (DRIVEWAYS)

ITEM 604. CASTINGS ADJUSTED TO GRADE:

ANY UNIT OF THIS ITEM MAY BE NON PERFORMED IF SO DIRECTED BY THE ENGINEER AND THE SURFACE SHALL BE FEATHERED TO MEET THE EXISTING CASTING OR INLET IN A MANNER ACCEPTABLE TO THE ENGINEER. ALL ADJUSTING RINGS SHALL HAVE THE ENGINEER'S APPROVAL BEFORE USING.

UNDER ITEM 604.03, ADJUSTMENT TO GRADE, PARAGRAPH (A), THE CASTING TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING CASTING OR GRATE 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 MATERIAL REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

ITEM 604 CATCH BASIN ADJUSTED TO GRADE- 23 EACH
ITEM 604 MANHOLE ADJUSTED TO GRADE- 2 EACH

ITEM 604. MONUMENT ASSEMBLY REMOVED AND RESET

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO REMOVE AND RESET MONUMENT ASSEMBLIES IN THE FULL DEPTH PAVEMENT REPLACEMENT AREA ON SR 94, PART B.

ALL LABOR AND MATERIALS SHALL BE INCLUDED IN THE BID PRICE TO COMPLETE THIS ITEM.

3 EACH ITEM 604, MONUMENT ASSEMBLY, REMOVED AND RESET

ITEM 617. COMPACTED AGGREGATE, TYPE A, 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 AS JUDGED BY THE ENGINEER. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO MEET THE TYPICAL SECTIONS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

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

703.05 AGGREGATE FOR ASPHALT CONCRETE (INTERMEDIATE AND SURFACE COURSES)

REMOVE THE PHRASE "THAT WILL BE EXPOSED TO TRAFFIC OVER THE WINTER MONTHS" FROM ITEMS b. AND c. OF C. GENERAL REQUIREMENTS FOR COURSE AND FINE AGGREGATE OF 703.05 (PAGE 767 OF THE 2002 CONSTRUCTION AND MATERIAL SPECIFICATIONS).

ITEM SPECIAL - MISC.: ASPHALT GRINDINGS

FROM THE ASPHALT GRINDINGS GENERATED ON THIS PROJECT, 5000 CU YDS TOTAL SHALL BE DELIVERED BY THE CONTRACTOR TO THE MEDINA COUNTY ODOT PROPERTY LOCATED AT 3320 MEDINA RD., SR 18, MEDINA, OH 44256.

THE CONTRACTOR SHALL DELIVER 2500 CU YDS IN 2004 AND 2500 CU YDS IN 2005.

ODOT WILL PROVIDE THE EXACT LOCATION OF THE STORAGE AREA ON THE PROPERTY TO THE CONTRACTOR AT THE PRECONSTRUCTION MEETING. THE GRINDINGS ARE NOT TO BE DELIVERED WET. THE GRINDINGS ARE TO BE DELIVERED BETWEEN THE HOURS OF 7:30 AM AND 3:30 PM.

THE MATERIAL IN THIS ITEM WILL BE PAID FOR BY THE CU YD. AND ALL ASSOCIATED COSTS TO LOAD AND TO DELIVER TO THE SITE SHALL BE INCLUDED IN ASPHALT GRINDINGS FOR PAYMENT. PAY SHALL BE BY CU YD PER ITEM SPECIAL, MISC.: ASPHALT GRINDINGS.

DESIGN FILE: *****DONFILESPECIFICATIONS*****
WORKSTATION: \$TERMINAL\$ DATE: \$\$\$\$\$\$

CALCULATED
JPF
CHECKED
BAD

GENERAL NOTES

MED-18-0.00

8
118

GENERAL SUMMARY

SHEET NUMBER													ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET
6	7	8	18	19	34	35	39	49	51	69	82							
																	ROADWAY	
LUMP							LUMP			LUMP	LUMP	201	11000	LUMP		CLEARING AND GRUBBING		
										LUMP	LUMP	202	11000	LUMP		STRUCTURE REMOVED		
					82					167	80	202	23000	329	SQ YD	PAVEMENT REMOVED		
										167	80	202	23900	247	SQ YD	CONCRETE BASE REMOVED		
				213						1800		202	30000	2614	SQ FT	WALK REMOVED		
												202	32001	132	FT	CURB REMOVED, AS PER PLAN	51	
				80						455		202	32500	535	FT	CURB AND GUTTER REMOVED		
										10	308	202	35100	318	FT	PIPE REMOVED, 24" AND UNDER		
							200					202	38000	200	FT	GUARDRAIL REMOVED		
							19					202	42000	19	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A		
				2								SPECIAL	20252990	2	EACH	PARKING BLOCK REMOVED	7	
								1064				202	54100	1064	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE	9	
				2						1		202	58100	3	EACH	CATCH BASIN REMOVED		
1												202	98100	1	EACH	REMOVAL MISC.: MAILBOX SUPPORT	7	
							2725					202	38200	2725	FT	GUARDRAIL REMOVED FOR REUSE		
				190						132	520	203	10000	842	CU YD	EXCAVATION		
										81	675	203	20000	756	CU YD	EMBANKMENT		
				37			619					203	20001	656	CU YD	EMBANKMENT, AS PER PLAN	37	
										355	147	204	10000	502	SQ YD	SUBGRADE COMPACTION		
							4183					209	15060	4183	FT	RESHAPING UNDER GUARDRAIL		
			26.42									209	60500	26.42	MILE	LINEAR GRADING		
							132					209	80000	132	EACH	GRADING MAILBOX APPROACHES		
										2	4	604	38500	6	EACH	MONUMENT ASSEMBLY		
		3										604	40000	3	EACH	MONUMENT ASSEMBLY REMOVED AND RESET		
							356.25					606	13000	356.25	FT	GUARDRAIL, TYPE 5		
							2725					606	16500	2725	FT	GUARDRAIL REBUILT, TYPE 5		
							12					606	17900	12	EACH	GUARDRAIL POST		
												606	22000	2	EACH	ANCHOR ASSEMBLY, TYPE B-98		
							2					606	22010	12	EACH	ANCHOR ASSEMBLY, TYPE E-98		
							6					606	26500	6	EACH	ANCHOR ASSEMBLY, TYPE T		
							4					606	35140	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4		
							1925					606	98000	1925	FT	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL	37	
				160					168	1400		608	10000	1728	SQ FT	4" CONCRETE WALK		
										400		608	15000	400	SQ FT	8" CONCRETE WALK		
				67					627			608	52001	694	SQ FT	CURB RAMP, AS PER PLAN	52-54	
23												630	02100	23	FT	GROUND MOUNTED SUPPORT, NO. 2 POST		
3												630	85100	3	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION		
							2					SPECIAL	69050100	2	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	35	
							1					SPECIAL	69050200	1	EACH	MAILBOX SUPPORT SYSTEM, DOUBLE	35	
																	EROSION CONTROL	
										25	9	601	32104	34	CU YD	ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER		
										165	605	659	00300	770	CU YD	TOPSOIL		
										1488	5453	659	10000	6941	SQ YD	SEEDING AND MULCHING		
										0.20	0.74	659	20000	0.94	TON	COMMERCIAL FERTILIZER		
										0.31	1.13	659	31000	1.44	ACRE	LIME		
										8	30	659	35000	38	M GAL	WATER		
												832	10000	1	EACH	STORM WATER POLLUTION PREVENTION PLAN		
												832	20000	LUMP		EROSION CONTROL		

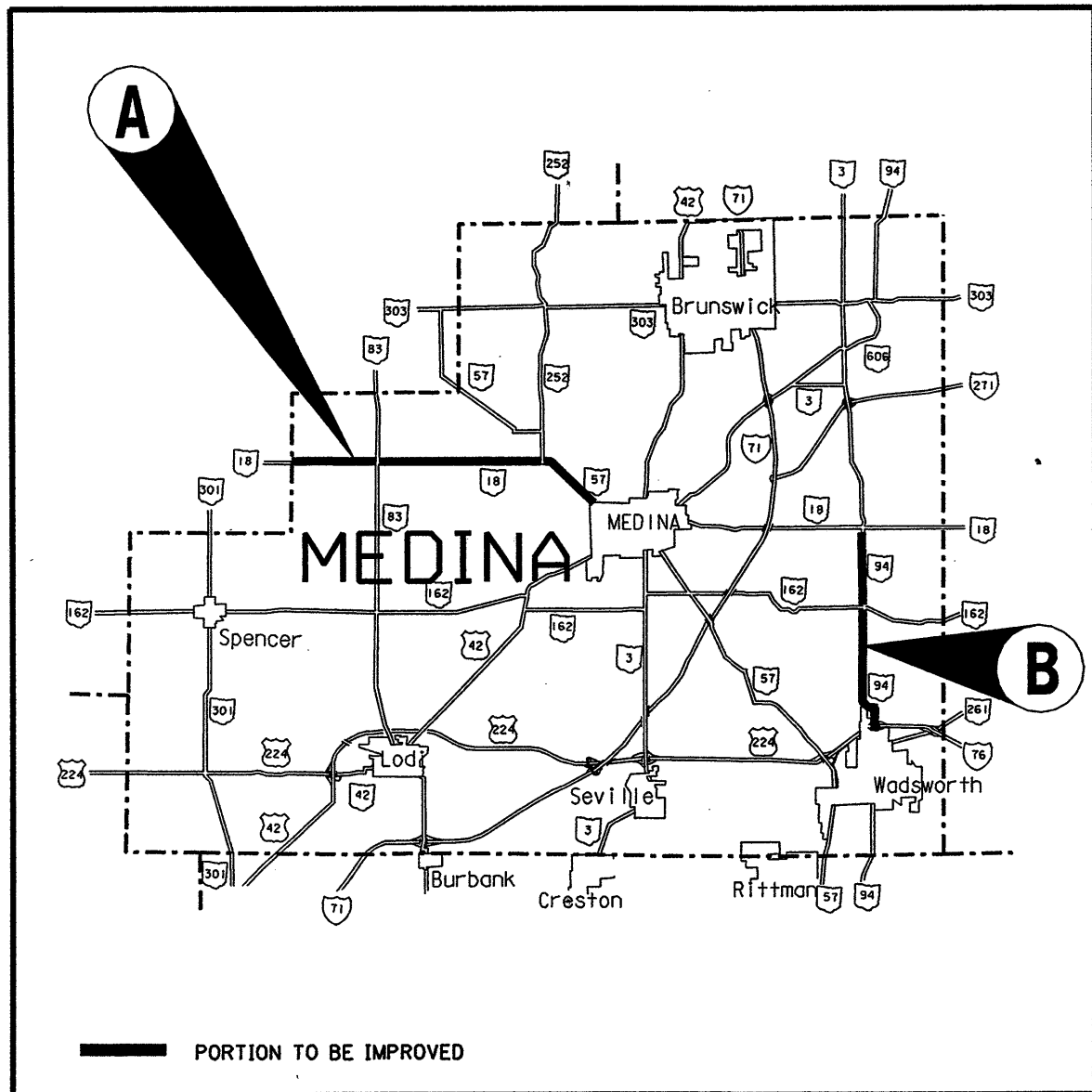
CALC BY: JPT
CHKD BY: BAD

GENERAL SUMMARY

MED-18-0.00

OHIO DEPARTMENT OF TRANSPORTATION

LOCATION MAP



LATITUDE: N41°10'05"

LONGITUDE: W82°04'24"

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINI		NET LENGTH miles	CITY	VILLAGE
				BEGIN	END			
A	MEDINA	SR 18	0.00-8.05	0.00	9.10	9.10		
B	MEDINA	SR 94	5.50	5.53	7.45	1.92		
B	MEDINA	SR 94	5.50-10.58	8.10	11.01	2.91		

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- 71 - CULVERT MED-18-0285 ESTIMATED QUANTITIES
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PROJECT DESCRIPTION: THIS PROJECT WILL INCLUDE RESURFACING WITH AN INTERMEDIATE AND A SURFACE COURSE OF ASPHALT CONCRETE, FULL DEPTH ASPHALT REPLACEMENT, PAVEMENT REPAIR, PAVEMENT PLANING, ADJUSTMENT OF CASTINGS WHERE NECESSARY, PAVEMENT MARKINGS, GUARDRAIL RECONSTRUCTION, REPLACEMENT OF STRUCTURE MED-18-0285, AND THE REPLACEMENT OF THE CULVERT MED-18-4.25 AND VARIOUS OTHER STRUCTURE WORK AS DETAILED IN THE PLANS.

CONVERSION OF METRIC STANDARD DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.02 OF THE 2002 CONSTRUCTION AND MATERIAL SPECIFICATIONS. CONVERSIONS SHALL BE APPROXIMATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

PROJECT EARTH DISTURBED AREA = 14.0 ACRES
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA = 1.25 ACRES
 NOTICE OF INTENT EARTH DISTURBED AREA = 15.25 ACRES

2002 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AS PER THE DETOUR NOTES ON SHEETS 10-13, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

11-7-03 *Thomas M. O'Leary*
 APPROVED DATE DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

APPROVED DATE DIRECTOR, DEPARTMENT OF TRANSPORTATION

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE
GRADED SHOULDER WIDTH	SR 18 & SR 94 4/04/02
LANE WIDTH	SR 18 & SR 94 4/04/02

FOR DESIGN DESIGNATIONS SEE SHEET 2

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7-28-00	RM-1.1	4-18-03	TC-41.50	7-18-03	MT-95.31	4-19-02	802	7-19-02
BP-4.1	7-28-00	RM-4.2	4-18-03	TC-65.10	10-19-01	MT-95.32	4-19-02	832	2-12-03
				TC-65.12	10-19-01	MT-96.10	4-19-02	833	2-12-03
GR-1.1	4-18-03	CB-1.1	7-19-02	TC-71.10	4-19-02	MT-96.11	4-19-02	841	4-19-02
GR-2.1	4-18-03	CB-2.2	7-19-02	TC-73.10	1-19-01	MT-96.20	4-19-02	846	4-19-02
GR-3.4	4-18-03	CB-4.2	7-19-02			MT-96.25	4-20-01	848	2-8-02
GR-4.2	10-17-03					MT-97.11	4-19-02	864	7-11-00
GR-5.1	4-18-03	MH-1.2	7-19-02			MT-99.20M	1-30-95	871	7-19-02
GR-5.2	4-18-03					MT-101.20	10-18-02	908	4-18-03
		DM-1.1	7-18-03			MT-101.60	10-18-02	954	9-9-97
DS-1-92	7-18-03	DM-1.4	7-19-02			MT-101.70	10-18-02		SPECIAL PROVISIONS
PCB-91	7-19-02	DM-4.3	7-19-02			MT-105.10	10-18-02		WATERWAY PERMIT
		DM-4.4	7-19-02			MT-105.11	10-18-02		NWP #3 11-03-03

TWO WORKING DAYS BEFORE YOU DIG
 Call 800-362-2764
 TOLL FREE
 OHIO UTILITIES PROTECTION SERVICE
 NON-MEMBERS MUST BE CALLED DIRECTLY



ROADWAY ENGINEER'S SEAL	STRUCTURAL ENGINEER'S SEAL
SIGNED: <i>Bruce A. Dalton</i> DATE: 11-07-03	SIGNED: <i>Charles A. Laughrey</i> DATE: 11-07-03

PART A - SR 18
DESIGN DESIGNATION (ENGLISH UNITS)

S.L.M.	0.00-2.27	2.27-2.69	2.69-2.98	2.98-7.45	7.45-7.78	7.78-8.05	8.05-9.10
CURRENT ADT (2004)	5930	5930	7380	7380	7380	11160	11160
DESIGN YEAR ADT (2016)	6880	6880	9060	9060	9060	13480	13480
DESIGN HOURLY VOLUME (2016)	688	688	906	906	906	1213	1213
DIRECTIONAL DISTRIBUTION	55%	55%	55%	55%	55%	55%	55%
TRUCKS (24 HOUR B&C)	22%	22%	18%	18%	18%	19%	19%
DESIGN SPEED	55 MPH	35 MPH	35 MPH	55 MPH	35 MPH	35 MPH	55 MPH
LEGAL SPEED	55 MPH	35 MPH	35 MPH	55 MPH	35 MPH	35 MPH	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:							
	RURAL PRINCIPAL ARTERIAL (SLM 0.00-8.95)						
	URBAN PRINCIPAL ARTERIAL (SLM 8.95-9.10)						
NHS PROJECT	YES	YES	YES	YES	YES	YES	YES

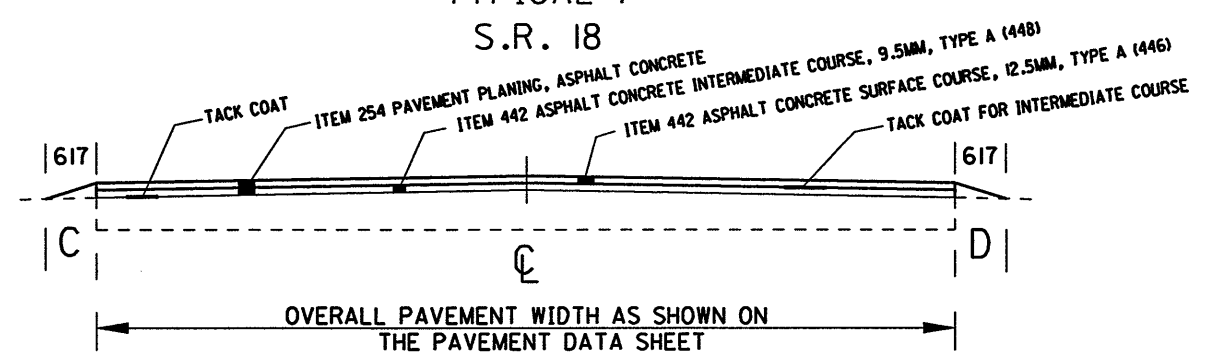
DESIGN TO MEET NORMAL DESIGN CRITERIA

PART B - SR 94
DESIGN DESIGNATION (ENGLISH UNITS)

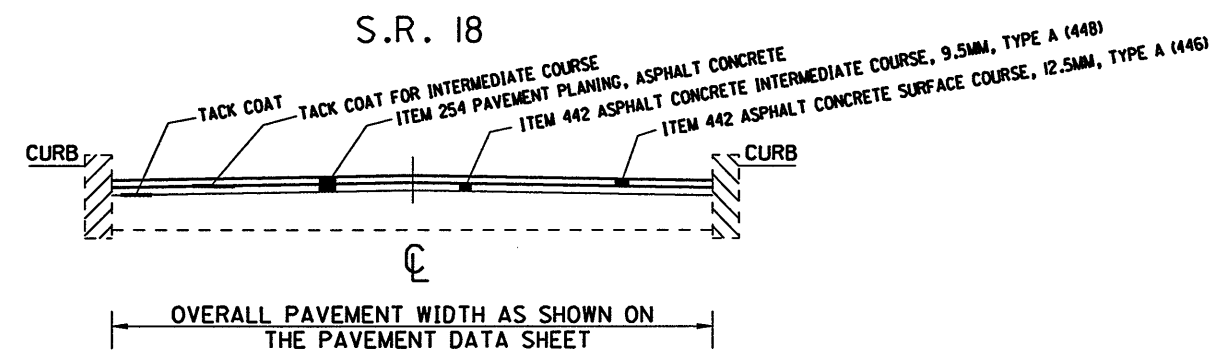
S.L.M.	5.53-5.83	5.83-7.70	7.70-8.30	8.30-9.12	9.12-11.01
CURRENT ADT (2004)	6760	6760	6760	6760	6760
DESIGN YEAR ADT (2016)	8170	8170	8170	8170	8170
DESIGN HOURLY VOLUME (2016)	817	817	817	817	817
DIRECTIONAL DISTRIBUTION	60%	60%	60%	60%	60%
TRUCKS (24 HOUR B&C)	6%	6%	6%	6%	6%
DESIGN SPEED	35 MPH	55 MPH	50 MPH	35 MPH	55 MPH
LEGAL SPEED	35 MPH	55 MPH	50 MPH	35 MPH	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:					
	URBAN MINOR ARTERIAL (SLM 5.53-5.80)				
	RURAL MAJOR COLLECTOR (SLM 5.80-15.61)				
NHS PROJECT	NO	NO	NO	NO	NO

DESIGN TO MEET NORMAL DESIGN CRITERIA

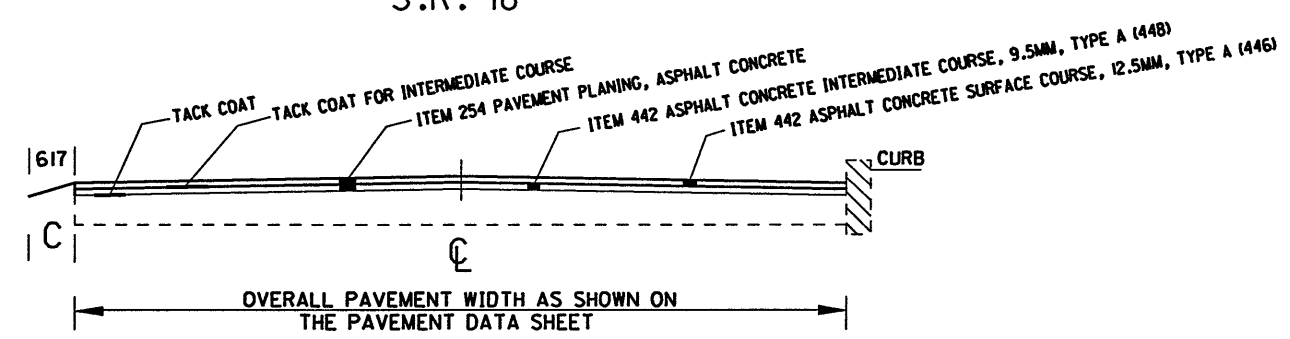
TYPICAL 1
 S.R. 18



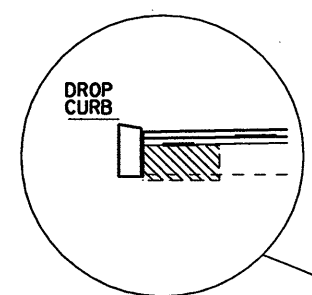
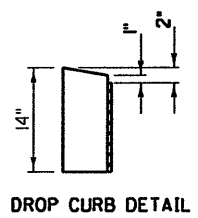
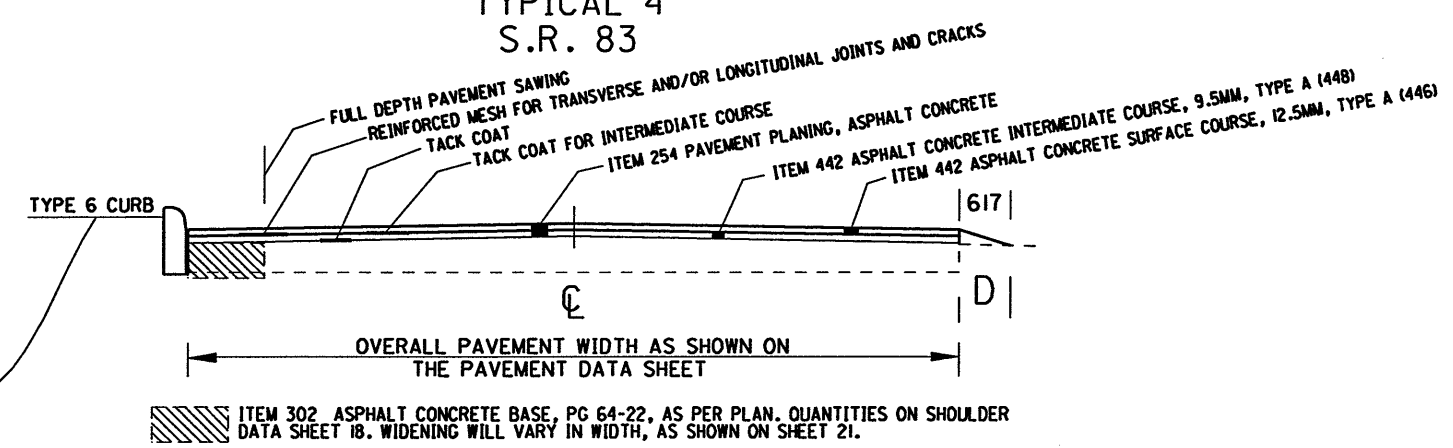
TYPICAL 2
 S.R. 18



TYPICAL 3
 S.R. 18

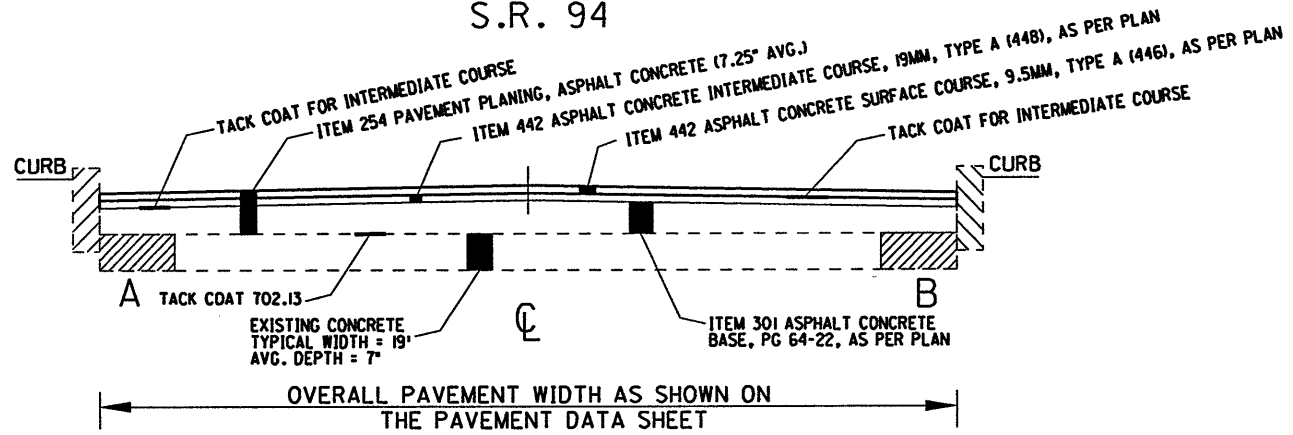


TYPICAL 4
 S.R. 83



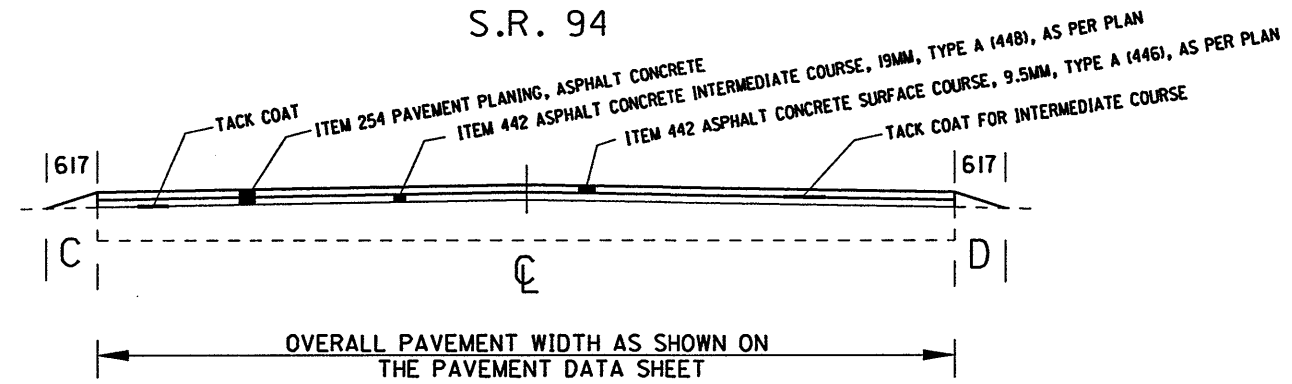
NOTE:
 PAVEMENT PLANING TO BE THE SAME THICKNESS AS THE PROPOSED INTERMEDIATE AND SURFACE COURSES.

TYPICAL 5
S.R. 94

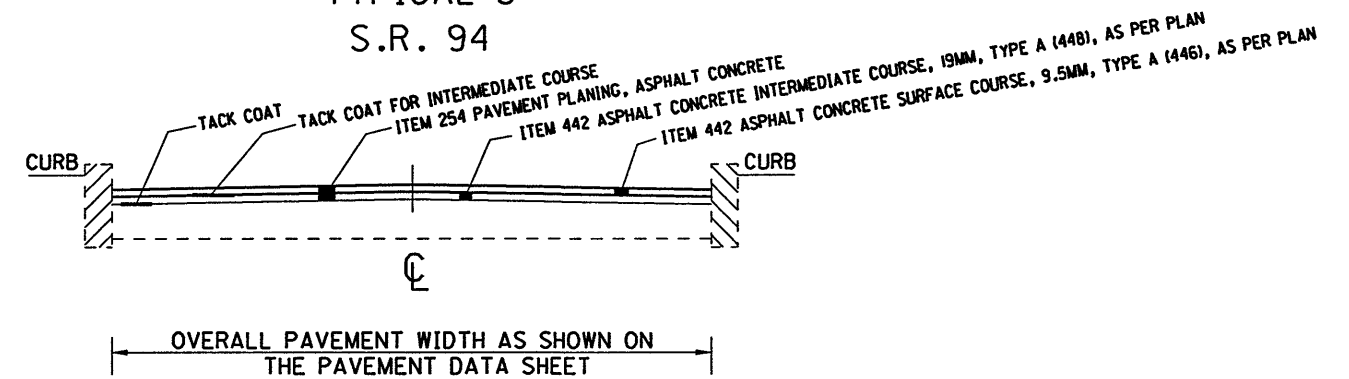


SHOWN ON SHOULDER DATA SHEET - ITEM 302 ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN. WIDENING WILL VARY IN WIDTH PER SIDE, SINCE EXISTING CONCRETE VARIES. PLACE ITEM 302 TO CURB EDGE IN THIS AREA. GO 6" WIDER THAN EXISTING EDGE OF ROAD IF CURB IS BROKEN UP OR NOT REMAINING. ITEM 301 WILL THEN BE 6" IN FROM THE ITEM 302 EDGE IN NON-CURBED AREA.

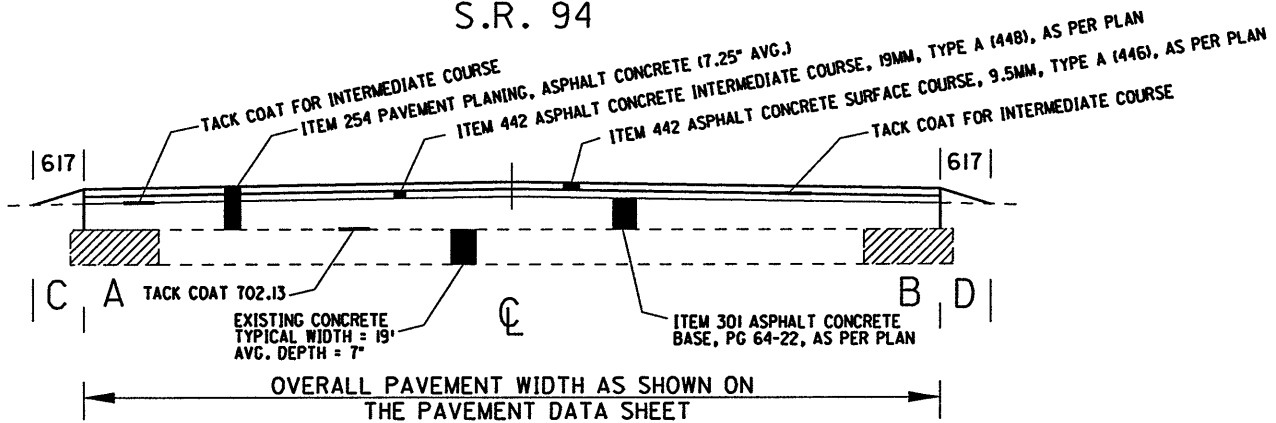
TYPICAL 7
S.R. 94



TYPICAL 8
S.R. 94

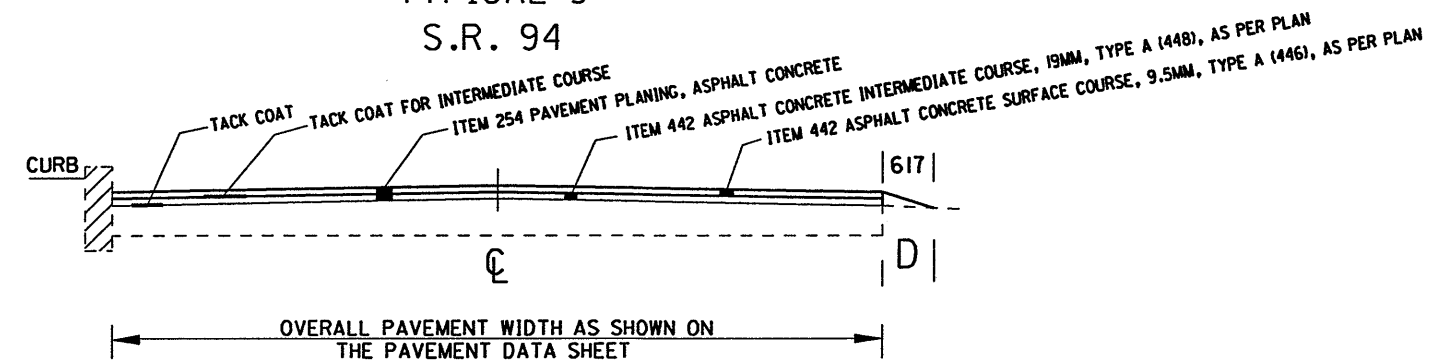


TYPICAL 6
S.R. 94



SHOWN ON SHOULDER DATA SHEET - ITEM 302 ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN. WIDENING WILL VARY IN WIDTH PER SIDE, SINCE EXISTING CONCRETE VARIES. PLACE ITEM 302 6" WIDER THAN EXISTING EDGE OF ROAD. ITEM 301 WILL THEN BE 6" IN FROM THE ITEM 302 EDGE.

TYPICAL 9
S.R. 94



NOTE:
PAVEMENT PLANING TO BE THE SAME THICKNESS AS THE PROPOSED INTERMEDIATE AND SURFACE COURSES, EXCEPT IN THE FULL DEPTH ASPHALT REPLACEMENT AREA'S.

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.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

CONTINGENCY QUANTITIES

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

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

PROGRESSION OF WORK:

GUARDRAIL SHALL BE REMOVED PRIOR TO ANY EMBANKMENT WORK AT THE GUARDRAIL RUN. GUARDRAIL WORK SHALL BE DONE AFTER RESURFACING, EMBANKMENT AND BERM WORK SO AS TO ESTABLISH PROPER GRADES FROM WHICH TO CONSTRUCT THE GUARDRAIL.

PAVEMENT CONTROL:

AN AUTOMATIC SCREED CONTROL, HAVING A 20 FT. MINIMUM SKI-ARM, SHALL BE USED FOR PLACING THE INTERMEDIATE COURSE AND SURFACE COURSE ON EXISTING PAVEMENT WIDTHS OF 20 FT. AND OVER.

SPECIAL ATTENTION SHALL BE GIVEN TO SUPER-ELEVATED CURVES. THE SUPER-ELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER.

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

BUTT JOINTS

BUTT JOINTS SHALL NOT BE CUT AND LEFT OPEN TO TRAFFIC. THEY SHALL BE FILLED IN WITH A TEMPORARY ASPHALT CONCRETE WEDGE, OF SUFFICIENT LENGTH, AS DIRECTED IN THE PLANS OR BY THE ENGINEER.

CONSTRUCTION "BUMP" (OW-62) AND "ADVISORY SPEED" (OW-143) 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.

INTERSECTIONS AND DRIVES:

RURAL-INTERSECTIONS SHALL BE PAVED TO THE END OF THE RADII OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS)

URBAN-INTERSECTIONS SHALL BE PAVED TO THE BACK OF CROSSWALKS OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS)

EXISTING PAVED DRIVES SHALL BE PAVED SO AS TO PROVIDE A SMOOTH TRANSITION BETWEEN THE HIGHWAY AND THE DRIVE, (DISTANCE FROM EDGE OF ROADWAY MAY VARY - AT EACH DRIVE) AS DIRECTED BY THE ENGINEER.

EXISTING AGGREGATE DRIVES SHALL BE PAVED WITH AN APRON THE WIDTH OF THE 617 BERM OR 2.0 FT. MINIMUM. THE SLOPE OF THIS APRON SHALL BE THE SAME AS THE ADJACENT PAVEMENT SLOPE OR AS DIRECTED BY THE ENGINEER. ITEM 617 AGGREGATE SHALL BE PLACED ADJACENT TO THIS APRON TO PROVIDE A SMOOTH TRANSITION FROM THE APRON TO THE EXISTING DRIVE, (WIDTH OF THIS 617 APPLICATION MAY VARY.) AS DIRECTED BY THE ENGINEER. AN ADDITIONAL QUANTITY HAS BEEN ESTIMATED TO COMPLETE THIS WORK AND IS SHOWN ON THE "SHOULDER DATA" SHEET.

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 104.04, 107.07 & 614.02 (a): PUBLIC CONVENIENCE AND SAFETY.

UTILITIES

EXTREME CAUTION SHOULD BE EXERCISED IN AREAS WITH UTILITIES. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ALL DAMAGE INFLICTED ON UTILITIES IN THE EXECUTION OF THIS CONTRACT.

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS. THE OHIO DEPARTMENT OF TRANSPORTATION DOES NOT GUARANTEE THE COMPLETENESS OF THIS LIST.

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: VERIZON.
6223 NORWALK RD.
MEDINA, OHIO 44256
(330) 723-9580

MCI TELECOMMUNICATIONS
2270 LAKESIDE BLVD.
RICHARDSON, TEXAS 75082
(972) 656-1759

AT&T c/o P.E.A. of OHIO
5980-1 WILCOX PLACE
DUBLIN, OHIO 43016
(614) 760-8320

WITTEL COMMUNICATIONS
ONE TECHNOLOGY CENTER
TULSA, OK 74103
1-866-945-8351

GAS: COLUMBIA GAS OF OHIO INC.
7080 FRY RD.
MIDDLEBURG HEIGHTS, OHIO 44130
(440) 891-2428

COLUMBIA GAS TRANSMISSION CORP.
589 N. STATE. RD.
MEDINA, OHIO 44256
(330) 723-4900

DOMINION EAST OHIO
1000 WEST WILBETH RD.
AKRON, OHIO 44314
(330) 798-7104

GATHERCO
5772 DRESSLER RD.
NORTH CANTON, OHIO 44720
(330) 498-9553

SUN PIPELINE
TEN CENTER - 26TH FLOOR
1801 MARKET ST.
PHILADELPHIA, PA 19103-1699
(610) 670-3261

ELECTRIC: OHIO EDISON CO.
6326 LAKE AVE.
ELYRIA, OHIO 44035
(440) 326-3231

LORAIN-MEDINA RURAL ELECTRIC
P.O. BOX 158 RD
WELLINGTON, OHIO 44090
1-800-222-5673

WATER: CITY OF WADSWORTH
120 MAPLE ST.
WADSWORTH, OHIO 44889
(330) 334-1581

MEDINA COUNTY SANITARY ENG.
791 WEST SMITH RD.
MEDINA, OHIO 44256
(330) 723-9575

MEDINA COUNTY ENGINEER
791 WEST SMITH RD.
MEDINA, OHIO 44256
(330) 723-3641

RURAL LORAIN CO. WATER
42401 SR 303, BOX 567
LAGRANGE, OHIO 44050
(440) 355-6060

UTILITIES - CONT.

CABLE: ADELPHIA CABLE
8385 BAVARIA RD.
MACEDONIA, OHIO 44056
(330) 963-3620 X-101

ARMSTRONG UTILITIES
1141 W. LAFAYETTE RD.
MEDINA, OHIO 44256
(330) 722-3141

TIME-WARNER CABLE
1575 LEXINGTON AVE.
MANSFIELD, OHIO 44901
(419) 756-6091 X-5109

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

SECTIONS 105.06 AND 107.17 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS REQUIRE, AMONG OTHER THINGS, THAT THE CONTRACTOR COOPERATE WITH ALL UTILITIES LOCATED WITHIN THE LIMITS OF THIS CONSTRUCTION PROJECT AND TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

WORK LIMITS

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

CLEARING AND GRUBBING

WITHIN THE LIMITS OF THIS PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201 - CLEARING AND GRUBBING.

MONUMENT ASSEMBLY

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NUMBER III/118 IN THE R/W PLANS.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ITEM IS TO BE USED FOR DUST CONTROL PURPOSES BY CHANGE ORDER:

ITEM 616 WATER

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES:

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

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

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

DESIGN FILE: i:\projects\18311\gennotes.dgn
WORKSTATION: jf1inch DATE: 11/20/03

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GENERAL NOTES

MED-18-0.00

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118

TREE REMOVAL RESTRICTIONS

THIS PROJECT IS WITHIN THE KNOWN SUMMER BREEDING RANGE OF THE FEDERAL ENDANGERED INDIANA BROWN BAT AND MAY IMPACT THAT SPECIES HABITAT. THE SUMMER ROOSTING AND BROOD REARING HABITAT OF THIS SPECIES IS IN LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING, OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES, OR CAVITIES. ANY UNAVOIDABLE CUTTING OF SUCH TREES SHALL BE PERFORMED ONLY BEFORE APRIL 15 OR AFTER SEPTEMBER 15 WHEN THIS SPECIES WOULD NOT BE USING SUCH HABITAT.

PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT, EXCEPT ON SR 83.

PLACEMENT OF ASPHALT CONCRETE

ON ALL OF SR 18 & 83, AND ON THE "PLANE AND PAVE" AREA'S OF SR 94)

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

BRIDGE LOCATION MARKER SIGN

THE BRIDGE LOCATION MARKER SIGN INDICATES THE COUNTY, THE ROUTE, AND THE STRAIGHT LINE MILEAGE OF THE STRUCTURE. THE CONTRACTOR SHALL REMOVE THE EXISTING BRIDGE LOCATION MARKER SIGNS AND REERECT THE SIGNS IN KIND. IF THERE ARE ANY QUESTIONS ON THE LOCATION, PLEASE CONTACT THE DISTRICT BRIDGE ENGINEER.

ALL COSTS, INCLUDING THE SIGN REMOVAL, SIGN REERECTION, POST REMOVAL, AND POST INSTALLATION SHALL BE INCLUDED IN THE FOLLOWING PAY ITEMS:

- ITEM 630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION 3 EACH
- ITEM 630 GROUND MOUNTED SUPPORT, NO. 2. 22.5 FT.

COORDINATION OF WORK BETWEEN CONTRACTORS:

THE CONTRACTOR IS ADVISED OF THE PRESENCE OF POSSIBLY THREE (3) OTHER CONSTRUCTION CONTRACTS WITHIN OR IN THE VICINITY OF THE WORK LIMITS OF THIS PROJECT AND 105.08 COOPERATION BETWEEN CONTRACTORS IS REQUIRED. PROJECTS THAT MAY BE UNDER CONSTRUCTION AT THE SAME TIME ARE:

MED-18-16.03 PID 4082 (WIDENING SR 94 FOR TURN LANES, TRAFFIC IS MAINTAINED), AND MED-94-7.49 PID 16589 (RAILROAD BRIDGE REPLACEMENT, TRAFFIC IS DETOURED).

THERE ALSO WILL BE A PROJECT USING SR 94 AS A DETOUR ROUTE -- MED-57-9.90 PID 19892 (SAFETY PROJECT). THE PORTION OF SR 94 FROM SR 162 AND TO THE SOUTH WILL BE USED FOR THIS DETOUR.

ITEM SPECIAL - PARKING BLOCK REMOVED

THIS ITEM SHALL CONSIST OF THE REMOVAL OF THE EXISTING CONCRETE PARKING BLOCKS AND PINS. THE BLOCKS AND PINS SHALL BE DISPOSED OF AS PER CMS 202.

ITEM 202 - REMOVAL MISC.: MAILBOX SUPPORT

THIS ITEM SHALL CONSIST OF THE REMOVAL OF THE EXISTING BRICK MAILBOX SUPPORT AT SLM 1.00± LT. ON SR 18 PART A. THE BRICK SHALL BE DISPOSED OF AS PER CMS 202. PAYMENT SHALL INCLUDE ALL LABOR AND REMOVAL OF MATERIALS TO COMPLETE THE ITEM. NEW MAILBOX SUPPORT SHALL BE PUT UP THE SAME DAY. PAYMENT WILL BE AT UNIT BID PRICE OF 1 EACH, ITEM 202 - REMOVAL MISC.: MAILBOX SUPPORT

ITEM SPECIAL - REINFORCEMENT MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS

THIS WORK CONSISTS OF PLACEMENT OF A SELF ADHESIVE GLASS FIBER MESH OVER JOINTS AND CRACKS DESIGNATED IN THE PLAN AND/OR BY THE ENGINEER PRIOR TO PLACEMENT OF THE SURFACE COURSE OF ASPHALT CONCRETE.

FURNISH GLASGRID KNITTED GLASS FIBER STRAND MESH MEETING THE FOLLOWING PROPERTIES:

PROPERTIES	GLASGRID NO. 0230
MATERIAL WIDTH	3 FT.
MATERIAL - SELF ADHESIVE FIBERGLASS STRAND COATED WITH ELASTROMERIC POLYMER PER ASTM 4963	20% MIN DRY PICKUP
TENSILE STRENGTH PER G.R.I. GG 1-87 WIDTH LENGTH	1120 LBS/IN 560 LBS/IN
ELONGATION AT BREAK (MIN)	< 5%
MELTING POINT (MIN) ASTM D276	> 425° F
MASS/UNIT AREA (MIN) ASTM D5261-92	16 OZ/SQ. YD.
GRID PATTERN	0.5 IN x 0.5 IN

BEFORE INSTALLATION, SUBMIT A LETTER TO THE PROJECT WITH A STATEMENT CERTIFYING MATERIAL RECEIVED MEETS THE ABOVE PROPERTIES. SUBMIT TO THE PROJECT ACTUAL DATED (SALES FLYER DATA NOT ACCEPTABLE) TEST DATA WITH THE CERTIFICATION LETTER.

PERFORM ALL REQUIRED REPAIRS PRIOR TO PLACING MESH.

PLACE MESH IN AREAS DESIGNATED IN THE PLAN AND/OR BY THE ENGINEER. WHEN THE MESH IS TO BE APPLIED ON AN INTERMEDIATE COURSE, MARK THE CRACK LOCATIONS AS DESIGNATED IN THE PLAN OR BY THE ENGINEER.

ENSURE ALL AREAS WHERE MESH IS TO BE PLACED ARE FREE OF ALL DIRT AND OTHER LOOSE MATERIALS BY SWEEPING OR OTHER APPROVED METHOD. PLACE THE MESH ON A PAVEMENT SURFACE THAT IS BETWEEN 40°F AND 140°F. ALLOW FOR THE TACK COAT TO CURE BEFORE PLACING MESH.

PLACE MESH UNDER TENSION TO PREVENT RIPPLING. REMOVE RIPPLES BY PULLING, OR IF NECESSARY (IN CURVES FOR EX.) BY CUTTING AND FLATTENING THE MESH. OVERLAP TRANSVERSE JOINTS OF THE MESH 3 TO 6 INCHES. OVERLAP LONGITUDINAL JOINTS OF THE MESH BY 1 INCH MINIMUM. ROLL THE MESH SURFACE 2 PASSES WITH A RUBBER COATED DRUM ROLLER, RUBBER TIERED ROLLER OR OTHER METHOD ACCEPTABLE TO THE MANUFACTURE. CLEAN RUBBER TIRE ROLLER IF BUILD UP ON THE RUBBER SURFACE INTERFERES WITH MESH PLACEMENT. DO NOT USE A STEEL DRUM ROLLER.

PLACED MESH WILL HANDLE SPEED CONTROLLED EMERGENCY OR CONSTRUCTION TRAFFIC BUT DAMAGED SECTIONS MUST BE REMOVED AND/OR REPAIRED. COVER MESH WITH ASPHALT CONCRETE THE SAME DAY UNLESS WEATHER BECOMES UNSUITABLE.

THE DEPARTMENT WILL MEASURE MESH PLACEMENT BY THE SQ YD OF JOINT OR CRACK COVERED. USE THE 3' WIDE MESH ON THIS PROJECT.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES, COMPLETED IN PLACE, AT THE CONTRACT PRICES, AS DESCRIBED ABOVE.

ITEM 253. PAVEMENT REPAIR

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING PAVEMENT OR PAVED BERM WHICH MAY BE ASPHALT, BRICK, CONCRETE, OR A COMBINATION OF EACH, IN AREAS OF EXISTING PAVEMENT FAILURE.

THE ENGINEER SHALL DESIGNATE THE LOCATIONS AND LIMITS OF THE AREAS TO BE REPAIRED. PAVEMENT REPAIR SHALL BE PERFORMED AFTER PAVEMENT PLANING. THE REPAIR AREAS SHALL BE ROUGHLY RECTANGULAR IN SHAPE AND CUT OR SAWEED TO A NEAT LINE. THE PAVEMENT SHALL BE REMOVED WITHIN THE DESIGNATED AREAS BY METHODS WHICH WILL NOT DAMAGE THE ADJACENT PAVEMENT. THE DEPTH OF REMOVAL, AS DIRECTED BY THE ENGINEER, SHALL BE SUFFICIENT TO REMOVE ALL DETERIORATED PAVEMENT (ESTIMATED DEPTH MAY VARY FROM 2" TO 12"). THE MATERIALS SO REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 203.05.

REPLACEMENT MATERIAL SHALL BE ITEM 301 OR ITEM 448, TYPE 2 MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. THE REPAIR AREAS SHALL BE PAINTED WITH BITUMINOUS MATERIAL (SIDES AND BOTTOM) AT AN APPLICATION RATE OF 0.25 GAL/SQ YDS. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER. MAXIMUM LIFT THICKNESS SHALL BE 3".

THE QUANTITY FOR PART B ON SR 94 SHALL INCLUDE REPLACING ANY INSUFFICIENT PAVEMENT/CONCRETE UNDER THE FINAL PLANING OPERATION AS DETERMINED BY THE ENGINEER.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CU YD, (BY TICKET WEIGHT CONVERSION), OF ITEM 253, PAVEMENT REPAIR.

- 400 CY - PART A
- 500 CY - PART B

ITEM 254. PAVEMENT PLANING. ASPHALT CONCRETE

(ON SR 18 AND SR 94)

THIS ITEM OF WORK SHALL BE COMPLETED AT THE LOCATIONS SHOWN IN THE PLANS AND IN AREAS DESIGNATED BY THE ENGINEER. PLANING IS TO BE PERFORMED AS DIRECTED. REMOVAL OF EXISTING PAVEMENT SURFACE MAY BE REQUIRED TO ELIMINATE ADVERSE SURFACE DISTORTION, WHICH IN THE JUDGEMENT OF THE ENGINEER, CANNOT BE SATISFACTORILY CORRECTED IN THE PAVING COURSES.

THESE AREAS MAY VARY IN DEPTH, AS DIRECTED BY THE ENGINEER. THESE AREAS MAY INCLUDE MATERIAL DISPLACED BY RUTTING OR SHOVING, ASPHALT SURFACE PATCHES, CONCRETE PATCHES, TRANSVERSE BUMPS, JOINTS AT STRUCTURES, ADJOINING PAVEMENTS, RAILROADS, ETC.

AN AUTOMATIC MILLING HEAD PROFILE CONTROL HAVING A MINIMUM 30 FOOT SKI-ARM SHALL BE USED DURING PLANING OPERATION.

(ON SR 18 ONLY)

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 MORE THAN TWENTY-ONE (21) CALENDAR DAYS. THE 21 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 21 DAYS THAT THE ROADWAY REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07. PLANED AREAS WHICH CREATE A LONGITUDINAL JOINT BETWEEN TRAVELED LANES SHALL BE COMPLETED IN SUCH A MANNER SO AS TO REMOVE THE JOINT BEFORE THE END OF EACH DAY'S WORK. BEFORE THIS JOINT IS EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL ERECT OW-171 SIGNS (UNEVEN PAVEMENT). THESE SIGNS SHALL REMAIN ONLY WHEN THE CONDITION EXISTS.

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 THE CONSTRUCTION AND MATERIALS SPECIFICATIONS MANUAL 254.05. PATCHING DEPTH IS 0 TO 2 IN.

RPM GENERAL NOTES

Materials Supplied by The Department

ALL MATERIALS ARE TO BE CONTRACTOR FURNISHED, EXCEPT THAT THE DEPARTMENT SHALL SUPPLY RPM MATERIALS IN THE QUANTITIES SHOWN HEREIN TO THE CONTRACTOR. PAY ITEMS FOR THE DEPARTMENT SUPPLIED MATERIALS SHALL BE INDICATED AS "INSTALLATION ONLY".

AT THE PRE-CONSTRUCTION CONFERENCE AN AUTHORIZATION FOR PICK UP FORM WILL BE FURNISHED BY THE DISTRICT CONSTRUCTION ADMINISTRATOR AND THE CONTRACTOR WILL BE INFORMED OF THE LOCATION OF THE DEPARTMENT SUPPLIED MATERIALS TO BE PICKED UP. FOR SOME PROJECTS HAVING QUANTITIES OF LESS THAN 20 RPMS, THE CONTRACTOR MAY PICK UP RPM MATERIALS AT THE DISTRICT OFFICES. QUANTITIES OVER 20 RPMS WILL BE PICKED UP AT THE RECYCLER'S WAREHOUSE OR AS ARRANGED WITH THE DISTRICT. THE CONTRACTOR SHALL PICK UP DEPARTMENT SUPPLIED RPM MATERIALS AT THE SPECIFIED LOCATION(S) FOR TRANSPORT TO THE WORK SITE OR TO THE CONTRACTOR'S STORAGE FACILITY. THE RECYCLED RAISED PAVEMENT MARKER (RPM) AUTHORIZATION FORM IS TO BE SIGNED BY THE DISTRICT CONSTRUCTION ENGINEER PRIOR TO PICK UP OF THE RPMS. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND / OR THE PARTIES LISTED ON THE AUTHORIZATION FORM IN WRITING AT LEAST FIVE (5) CALENDAR DAYS PRIOR TO PICK UP OF THE DEPARTMENT SUPPLIED MATERIALS. THE CONTRACTOR SHALL STORE THE RPMS WITHOUT DAMAGE OR CONTAMINATION WITH FOREIGN MATTER. A DEDUCTION IN THE AMOUNT OF THE ACTUAL COST TO THE DEPARTMENT SHALL BE MADE FOR MATERIALS DAMAGED BY THE CONTRACTOR OR FOR CASTINGS RECEIVED BY THE CONTRACTOR WHICH WERE NOT INSTALLED AND WERE NOT RETURNED TO THE DEPARTMENT.

Return of Non-performed Raised Pavement Marker Materials Supplied by the Department

RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY THE DEPARTMENT, THAT ARE NON-PERFORMED SHALL BE CAREFULLY REPACKED OR PACKED IN THE BOXES IN THE SAME STYLE AND QUANTITY AS ORIGINALLY RECEIVED FROM THE DEPARTMENT. CASTING STYLES SHALL NOT BE MIXED WITHIN ANY ONE CONTAINER. THE CONTRACTOR SHALL CLEARLY MARK ON THE OUTSIDE OF EACH CONTAINER, THE COLOR OF THE PRISMATIC RETRO-REFLECTOR, AND THE STYLE OF CASTING. BOXES SHALL BE PLACED ON SKIDS OR PALLETS IN THE SAME STYLE (LOW PROFILE OR CONVENTIONAL, REFLECTORISED OR NON REFLECTORISED) AND NO MORE THAN 420 RPMS (OR 21 BOXES) ON ONE SKID.

ONLY USE THE BOXES SUPPLIED BY THE RAISED PAVEMENT MARKER RECYCLER. BOXES MUST BE MARKED WITH THE RECYCLER'S PART OR CATALOG NUMBER AND THE PROJECT NUMBER. THE RECYCLER'S CATALOG OR PART NUMBERS MAY BE OBTAINED FROM THE OFFICE OF TRAFFIC ENGINEERING IN COLUMBUS, OHIO OR FROM THE RECYCLER. BOXES NOT MARKED WITH THE PROPER RECYCLER'S CATALOG OR PART NUMBERS, AND THE DEPARTMENT'S PROJECT NUMBER WILL NOT BE ACCEPTED AT THE RECYCLER'S WAREHOUSE.

NON PERFORMED MATERIALS WILL BE RETURNED TO THE LOCATION AS SPECIFIED BY THE DISTRICT CONSTRUCTION ENGINEER WITHIN 30 DAYS OF THE COMPLETION OF THE PROJECT.

THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL NEEDED TO PERFORM THE WORK, SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE PAY ITEM.

IF THE DEPARTMENT HAS TO REPACKAGE THE RPMS CORRECTLY, THE CONTRACTOR WILL BE ASSESSED THE ACTUAL COST FOR REPACKAGING THE MATERIALS BY THE DEPARTMENT'S FORCES.

Loading of Materials Supplied by the Department at the Recycler's Warehouse

TRUCKS SHALL HAVE A LOADING HEIGHT OF 48 INCHES AND BE ABLE TO BACK UP FLUSH TO THE LOADING DOCK.

TRUCKS SHALL NOT HAVE ANY OBSTRUCTIONS OR PROTRUSIONS THAT PREVENT THE LOADING BY A STANDARD FORKLIFT OR LIFT TRUCK. SEMI TRUCKS OR 20 FOOT COMMERCIAL TRUCKS ARE THE MOST APPROPRIATE TRUCKS FOR LOADS IN EXCESS OF 4 PALLETS (ONE PALLET - 21 BOXES - 2100 LBS).

STAKE BODY TRUCKS ARE APPROPRIATE TO LOAD LESS LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT BY CHAINING OR STRAPPING DOWN AS NEEDED.

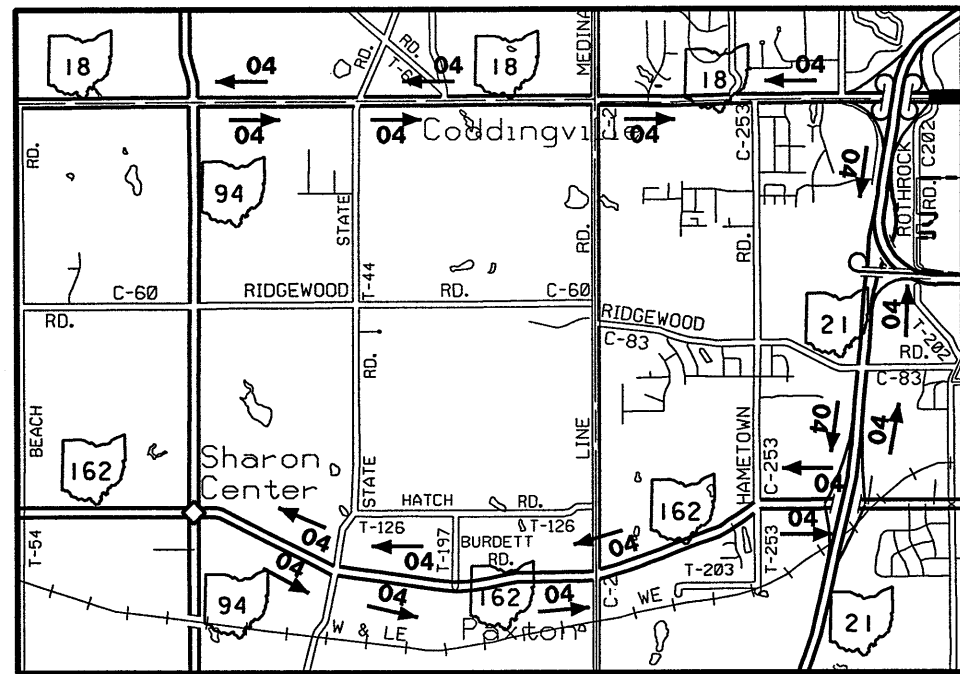
PICKUP TRUCKS ARE APPROPRIATE FOR LOADS OF APPROXIMATELY ONE PALLET, PROVIDED THE PICKUP TRUCK IS RATED FOR THE LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT.

DUMP TRUCKS, TILT BED TRUCKS, AND NON COMMERCIAL MOVING VANS WILL NOT BE LOADED.

THE WAREHOUSE SUPERVISOR WILL REFUSE TO LOAD ANY TRUCK THAT IS UNSAFE TO LOAD OR UNSUITABLE FOR THE LOAD BEING PLACED ON THE TRUCK.

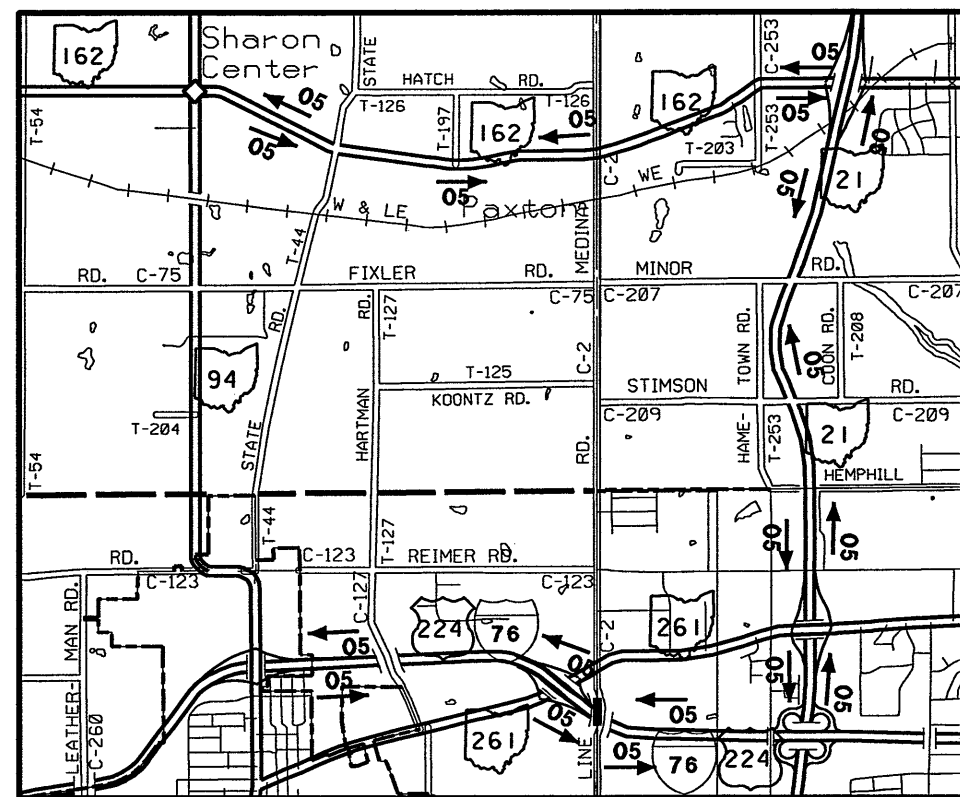
ITEM 202 RAISED PAVEMENT MARKER REMOVED FOR STORAGE
ALL RAISED PAVEMENT MARKERS REMOVED BY THE CONTRACTOR SHALL BE DELIVERED TO THE NEAREST ODOT COUNTY GARAGE.

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04
04 S.R. 94 DETOUR 2004 - PART 04

DETOUR - 28 DAYS



05
05 S.R. 94 DETOUR 2005 - PART 05

DETOUR - 28 DAYS

WORKSITE TRAFFIC SUPERVISOR

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

- 1). AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION A.T.S.S.A. , PHONE NUMBER 1-800-272-8772, CERTIFIED WORKSITE TRAFFIC SUPERVISOR (WTS)
- 2). THE NATIONAL SAFETY COUNCIL, TRAFFIC CONTROL ZONES SUPERVISORS COURSE, PHONE NUMBER 1-800-441-5103
- 3). NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC CONTROL, PHONE NUMBER 1-703-235-0528

A CERTIFIED WTS SHALL BE PRESENT WHEN THE CONTRACTOR OR SUBCONTRACTOR INSTALLS A TRAFFIC RESTRICTION, LANE CLOSURE, ETC. THE CONTRACTOR OR SUBCONTRACTOR MUST PRESENT A COPY OF CERTIFICATES FOR ALL WTS TO THE ENGINEER. A WTS MUST BE PRESENT WHEN THE WORK ZONE IS BEING SET UP OR REMOVED.

THE WTS POSITION IS ESTABLISHED FOR THE PURPOSE OF MONITORING THE TRAFFIC CONTROL PLAN (TCP) AND CORRECTING ANY TRAFFIC CONTROL DEFICIENCIES IN THE WORK ZONE. THE WTS MUST ALSO COORDINATE WITH ALL LAW ENFORCING AGENCIES RESPONSIBLE FOR THE ROADWAY UNDER CONSTRUCTION AND RETRIEVE ALL CRASH REPORTS (OH-1) THAT OCCUR WHEN TEMPORARY TRAFFIC CONTROL DEVICES ARE IN PLACE. THE WTS SHALL OVERSEE ALL OPERATIONS THAT AFFECT THE MOVEMENT OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH THE WORK ZONE. TRAFFIC CONTROL AND CRASH DATA EVALUATION WILL BE THE WTS MAIN RESPONSIBILITY WHEN A WORK ZONE IS IN PLACE.

DAILY, INCLUDING WEEKENDS AND HOLIDAYS, THE WTS SHALL SPEND A MINIMUM OF ONE HOUR REVIEWING THE WORK ZONE AND/OR CRASH DATA FOR DEFICIENCIES AND MAINTAINING THE WORK ZONE.

WEEKLY, THE WTS MUST RETRIEVE/COLLECT ALL CRASH REPORTS (OH-1) FROM ALL LAW ENFORCING AGENCIES, EVALUATE THE CRASHES, AND RECOMMEND SOLUTIONS TO ADDRESS ANY ISSUES WITH THE TCP THAT ARE POTENTIALLY CREATING CRASHES WITHIN THE WORK ZONE. THE WTS MUST PRESENT THESE SOLUTIONS TO THE ENGINEER FOR APPROVAL WEEKLY. UPON APPROVAL BY THE ENGINEER AND THE DISTRICT WORK ZONE TRAFFIC MANAGER (DWZTM), THE CONTRACTOR MUST IMPLEMENT THE RECOMMENDED SOLUTIONS TO THE WORK ZONE WITHIN ONE WEEK - ADDITIONAL COST TO BE PAID UNDER CONSTRUCTION AND MATERIALS SPECIFICATIONS - 109. THE WTS MUST INSPECT THE WORK ZONE AT THE BEGINNING AND THE END OF EACH WORK DAY AND ONE TIME PER WEEK DURING THE HOURS OF DARKNESS. THE FOLLOWING ITEMS SHALL BE INCLUDED, BUT NOT RESTRICTED TO, IN EACH REVIEW: TRAFFIC CONTROL DEVICE CONDITION; PLACEMENT; VISIBILITY; TRAFFIC FLOW CONDITIONS; INCIDENTS; CONGESTION POINTS; DELAYS; ADEQUACY OF ADVANCED INFORMATIONAL SIGNS BEYOND PROJECT LIMITS; INTERACTION OF WORK VEHICLES AND TRAFFIC; ACCIDENTS; PROPER STORAGE OF MATERIALS AND EQUIPMENT; CONFORMANCE WITH TCP; ADEQUACY OF TCP; CONFLICTING OR NON-CONFORMING PAVEMENT MARKINGS. THE WTS SHALL HAVE THE NECESSARY AUTHORITY TO IMMEDIATELY PERFORM ANY CORRECTIVE WORK. A RECORD OF EACH DAYS REVIEW SHALL BE GIVEN TO THE ENGINEER THE FOLLOWING WORKDAY IN WRITING AND SHALL INCLUDE ALL DEFICIENCIES AND RESOLUTIONS TO THE DEFICIENCIES. THE INSPECTION WILL BE DOCUMENTED ON THE LONG/SHORT TERM WORK ZONE REVIEW FORM PROVIDED BY ODOT. WEEKLY, THE INSPECTION FORM MUST BE ACCOMPANIED BY ALL OF THE OH-1 CRASH REPORTS AND THE PROPOSED SOLUTIONS TO ANY IDENTIFIED CRASH PROBLEMS.

WORKSITE TRAFFIC SUPERVISOR - CONT.

IF THE RESTRICTIONS ARE SHORT TERM, THE WTS SHALL MONITOR THE ZONE FOR COMPLIANCE, DURING LANE CLOSURES; HE SHALL MAKE SURE ALL TRAFFIC CONTROL ITEMS ARE FUNCTIONING PROPERLY. TRAFFIC CONTROL AND CRASH DATA EVALUATION WILL BE THE WTS MAIN RESPONSIBILITY DURING IMPLEMENTATION OF ZONES OR SHORT TERM ZONES. THE WTS SHALL PROVIDE THE DWZTM A SKETCH OF THE TRAFFIC CONTROL PLAN (TCP) EVERYDAY THERE IS TO BE A SHORT TERM TRAFFIC RESTRICTION, LANE CLOSURE, ETC. THIS TCP SHALL SHOW HOW THE WORK ZONES ARE TO BE IMPLEMENTED.

THE WTS SHALL BE ON STANDBY 24-HOUR BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. A 24-HOUR CONTACT NUMBER(S) SHALL BE MADE AVAILABLE TO THE ENGINEER TO CONTACT THE WTS.

FAILURE OF THE CONTRACTOR TO COMPLY WITH ANY OF THE ABOVE, SHALL CONSTITUTE CAUSE FOR THE PROJECT ENGINEER TO DEDUCT \$500.00 PER DAY FROM MONEY DUE TO THE CONTRACTOR NOT AS A PENALTY, BUT AS A LIQUIDATION DAMAGE.

PAYMENT FOR THE WTS SHALL BE INCLUDED UNDER THE ITEM 614 - "WORKSITE TRAFFIC SUPERVISOR" BY MONTH.

ITEM 614. MAINTAINING TRAFFIC

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT ON SR 94 AS SPECIFIED IN THE MOT NOTES ON SHEETS 12-13.

THE CONTRACTOR SHALL NOTIFY THE DISTRICT 3 WORKZONE TRAFFIC MANAGER, LARRY STORMER, 419-207-7092, IN WRITING A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF THE DATE EACH DETOUR IS NEEDED. THE STATE OF OHIO WILL INSTALL, MAINTAIN AND SUBSEQUENTLY REMOVE THE DETOUR SIGNING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE GATES AND BARRICADES AND ADVANCED WARNING SIGNS AS SHOWN ON STANDARD CONSTRUCTION DRAWINGS AND AS SPECIFIED IN THE PLANS.

NOTICE OF CLOSURE

THE CONTRACTOR SHALL NOTIFY IN WRITING, SEVEN (7) DAYS PRIOR TO EACH PHASE OF CONSTRUCTION, TO THE FOLLOWING AGENCIES:

- SHARON TOWNSHIP TRUSTEES
- ODOT PUBLIC INFORMATION OFFICER
- SHARON POLICE
- OHIO STATE HIGHWAY PATROL
- SHARON FIRE DEPARTMENT
- WADSWORTH FIRE DEPARTMENT
- MEDINA COUNTY SHERIFF
- MEDINA COUNTY ENGINEER
- ALL AFFECTED SCHOOLS AND SCHOOL DISTRICTS
- MEDINA COUNTY MANAGER

MAINTENANCE OF TRAFFIC NOTES

MED-18-0.00

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DESIGNATED LOCAL MAINTENANCE ROUTE

A LOCAL MAINTENANCE ROUTE, OTHER THAN THE OFFICIAL SIGNED ODOT DETOUR ROUTE, WILL BE DESIGNATED BY AGREEMENT BETWEEN ODOT AND LOCAL GOVERNMENTAL AGENCIES PRIOR TO THE HIGHWAY CLOSURE.

DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL MAINTENANCE ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DIRECTED BY THE ENGINEER.

THE FOLLOWING ITEMS ARE TO BE USED AS DIRECTED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE THE DESIGNATED LOCAL MAINTENANCE ROUTE BY CHANGE ORDER.

ITEM 253 PAVEMENT REPAIR

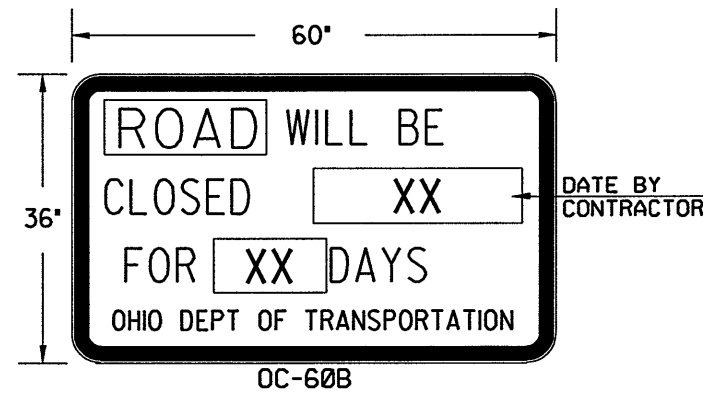
ITEM 407 TACK COAT

ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

ITEM 617 COMPACTED AGGREGATE, TYPE A

NOTICE OF CLOSURE SIGNS (SR 94)

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF EACH SCHEDULED ROAD CLOSURE SECTION. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.



XX - TO BE FILLED AND DETERMINED BY THE CONTRACTOR

ITEM 614 - MAINTAINING TRAFFIC

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

MAINTAINING TRAFFIC

ALL DRIVEWAY ACCESSSES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION OF THIS PROJECT. ALL COSTS INVOLVED IN MAINTAINING DRIVEWAY ACCESS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED IN THE PLANS.

CULVERT LIMITATIONS

THE ROADWAY SHALL NOT BE CLOSED TO TRAFFIC FOR REMOVAL OR MODIFICATION OF THE EXISTING CONDUITS UNTIL ALL NEW CONDUITS NECESSARY TO PLACE THE ROADWAY BACK INTO SERVICE HAVE BEEN TESTED, APPROVED AND ARE DELIVERED TO THE PROJECT SITE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH 108.07 OF THE CMS.

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, AND THE APPROPRIATE PROPOSAL NOTE.

PART A - SR 18

WORK ZONE MARKING SIGN: (OW-167-36) NO EDGE LINE	=	25 EACH
WORK ZONE MARKING SIGN: (R-33-24) DO NOT PASS	=	21 EACH
WORK ZONE MARKING SIGN: PASS WITH CARE	=	14 EACH
TOTAL	=	60 EACH

PART B - SR 94 (PLANE AND PAVE SECTION ONLY)

WORK ZONE MARKING SIGN: (OW-167-36) NO EDGE LINE	=	9 EACH
WORK ZONE MARKING SIGN: (R-33-24) DO NOT PASS	=	7 EACH
WORK ZONE MARKING SIGN: PASS WITH CARE	=	2 EACH
TOTAL	=	18 EACH

ITEM SPECIAL, 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.

THE FOLLOWING QUANTITY HAS BEEN PROVIDED IN THE GENERAL SUMMARY. 25 EACH

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO CONSTRUCT A TEMPORARY ASPHALT WEDGE FROM THE EXISTING PAVEMENT TO THE PLANED SURFACE AT BUTT JOINTS AND OTHER LOCATIONS THAT RESULT IN A DROP-OFF IN EXCESS OF 1/2 in, AS DIRECTED BY THE ENGINEER. THIS QUANTITY SHALL ALSO BE USED AT PLANED SURFACES WHERE A TEMPORARY ASPHALT WEDGE IS NEEDED AROUND CASTINGS, AS DIRECTED BY THE ENGINEER.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 100 CU YD

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 USED BUT IN GOOD CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE 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.

THE FOLLOWING QUANTITY HAS BEEN PROVIDED IN THE GENERAL SUMMARY. 20 EACH

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MAINTENANCE OF TRAFFIC NOTES

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CONSTRUCTION WORK SEGMENTS

THE CONTRACTOR SHALL HAVE MAXIMUM WORK ZONES AS SPECIFIED BELOW:

THIS PROJECT SHALL BE DIVIDED UP INTO THE FOLLOWING SECTIONS OF WORK FOR CONSTRUCTION PHASING PURPOSES.

WORK THAT SHALL BE STARTED AND COMPLETED IN CONSTRUCTION YEAR 2004:

SECTION 1 - ALL OF SR 18 AND SR 83

SECTION 2 - SR 94 FROM SLM 9.90 TO SLM 11.01 (NORTH PROJECT LIMIT).

SECTION 3 - SR 94 FROM SLM 9.06 (NORTH OF SR 162) TO SLM 9.90 (RIDGWOOD RD.).

WORK THAT MAY BE STARTED AND COMPLETED IN CONSTRUCTION SEASON 2004 IF THE DEPARTMENT ALLOWS. SEE NOTE E UNDER SR 94 - TIME LIMITS, SEQUENCING WORK, AND LIQUIDATED DAMAGES. IF THE DEPARTMENT DOES NOT ALLOW THE WORK IN CONSTRUCTION YEAR 2004 THEN THE WORK SHALL BE STARTED AND COMPLETED IN CONSTRUCTION YEAR 2005

SECTION 4 - SR 94 FROM SLM 8.10 (FIXLER RD.) TO SLM 9.06

WORK THAT SHALL BE STARTED AND COMPLETED IN CONSTRUCTION YEAR 2005:

SECTION 5 - SR 94 FROM SLM 5.56 (SOUTH PROJECT LIMITS) TO SLM 7.45

SR 18 - TIME LIMITS, SEQUENCING WORK AND LIQUIDATED DAMAGES

A. WORK SHALL BE STARTED AND COMPLETED ON SECTION 1 IN CONSTRUCTION YEAR 2004.

B. ALL OF THE STRUCTURE AND CULVERT WORK, EXCEPT FOR STRUCTURE MED-18-0685, SHALL BE COMPLETED BEFORE PLANING OPERATIONS BEGIN. THE INTENT IS TO PLANE AND PAVE AFTER THE STRUCTURE WORK IS COMPLETED. STRUCTURE WORK REQUIRING LANE CLOSURES IS NOT TO BEGIN UNTIL APRIL 19, 2004.

C. STRUCTURES REQUIRING PART WIDTH CONSTRUCTION MAY ALL BE PERFORMED AT THE SAME TIME. IT IS NOT INTENDED TO WORK ON ONE STRUCTURE UNTIL COMPLETED THEN START ON ANOTHER.

D. STRUCTURE MED-18-0172 IS LIMITED TO A MAXIMUM OF FORTY-FIVE (45) CONSECUTIVE CALENDAR DAYS TO COMPLETE ALL WORK ON THIS STRUCTURE.

E. THE CULVERT REPLACEMENT AT MED-18-2.85 IS LIMITED TO A MAXIMUM OF NINETY (90) CONSECUTIVE CALENDAR DAYS TO COMPLETE ALL WORK. IT IS EXPECTED TO PLACE ALL ASPHALT CONCRETE, INCLUDING THE SURFACE COURSE, AS PER THE PLANS THEN HAVE THE PLANING OPERATIONS PLANE THROUGH THIS AREA. THIS WORK WILL PROVIDE CONTINUOUS PLANING AND PAVING OPERATIONS RESULTING IN A SMOOTH RIDE.

F. THE CULVERT REPLACEMENT AT MED-18-4.25 IS LIMITED TO A MAXIMUM OF SIXTY (60) CONSECUTIVE CALENDAR DAYS TO COMPLETE ALL WORK. IT IS EXPECTED TO PLACE ALL ASPHALT CONCRETE, INCLUDING THE SURFACE COURSE, AS PER THE PLANS THEN HAVE THE PLANING OPERATIONS PLANE THROUGH THIS AREA. THIS WORK WILL PROVIDE CONTINUOUS PLANING AND PAVING OPERATIONS RESULTING IN A SMOOTH RIDE.

G. STRUCTURE MED-18-0657 IS LIMITED TO A MAXIMUM OF FORTY-FIVE (45) CONSECUTIVE CALENDAR DAYS TO COMPLETE ALL WORK ON THIS STRUCTURE.

H. STRUCTURE MED-18-0685 WORK CAN BE PERFORMED BEFORE, DURING OR AFTER PAVING OPERATIONS.

I. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES

FAILURE OF THE CONTRACTOR TO MEET ANY OF THE REQUIREMENTS SPECIFIED ABOVE, LIQUIDATED DAMAGES WILL BE ASSESSED PER CMS 108.07.

SR 94 - PAVEMENT PLANING LIMITATIONS

PLANING IS TO BE PERFORMED IN A CONTINUOUS OPERATION WITHIN EACH SECTION (SEE THIS SHEET FOR SECTION LIMITS). AT INTERSECTING STREETS, THE PLANING DEPTH SHALL BE REDUCED TO THE DEPTH OF THE INTERMEDIATE AND SURFACE COURSE THICKNESS IN ORDER TO MINIMIZE THE IMPACT TO CROSS TRAFFIC. EVERYWHERE OTHER THAN INTERSECTIONS AND STRUCTURES, WITHIN THE FULL DEPTH ASPHALT REPLACEMENT LIMITS, THE MAXIMUM DEPTH OF PAVEMENT PLANING TO BE PERFORMED IN ONE PASS IS THREE (3) INCHES. THE PAVEMENT DROPOFF SHALL NOT EXCEED THREE (3) INCHES

ASPHALT GRINDINGS SHALL BE USED AT BEGINNINGS, ENDS, INTERSECTIONS, AND STRUCTURES WITHIN THE CLOSED ROADWAY SECTION TO ALLOW LOCAL TRAFFIC IN AND OUT OF THE CONSTRUCTION SECTION. THE CONTRACTOR SHALL ENSURE THAT ACCESS IN AND OUT OF THE CONSTRUCTIONS AREAS ARE MAINTAINED AT ALL TIMES. FAILURE OF THE CONTRACTOR TO MEET ANY OF THE REQUIREMENTS SPECIFIED ABOVE, LIQUIDATED DAMAGES WILL BE ASSESSED PER CMS 108.07.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED TO MAINTAIN ACCESS AT ALL TIMES DURING CONSTRUCTION AS DIRECTED BY THE PROJECT ENGINEER.

ITEM 410 TRAFFIC COMPACTED SURFACE, TYPE B, AS PER PLAN 200 CU YD

SR 94 - MAINTAINING DRIVEWAY ACCESS

THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 3 DAYS ADVANCED WRITTEN NOTICE TO ALL ADJACENT PROPERTY OWNERS PRIOR TO WORKING IN FRONT OF OR ON DRIVEWAYS. ONE COPY OF THE WRITTEN NOTIFICATION IS TO BE PROVIDED TO THE PROJECT ENGINEER FOR ODOTS RECORDS.

WEDGE

IN ORDER TO MAINTAIN DRIVEWAY ACCESS AT ALL TIMES, THE CONTRACTOR IS TO USE THE ASPHALT GRINDINGS FOR WEDGES. THESE WEDGES ARE TO BE PLACED WHEN THE PLANING REMOVES MORE THAN 1.5 INCHES OF PAVEMENT IN A PASS. COMPACTION REQUIREMENT WILL NOT BE WAIVED. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED TO MAINTAIN DRIVEWAYS DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE TAPER RATE SHALL BE 1 FT. (RUN) PER 1 INCH (RISE).

ITEM 410 TRAFFIC COMPACTED SURFACE, TYPE B, AS PER PLAN 70 CU YD

BASE

PLAN SHEET 34 CONTAINS A LISTING OF DRIVEWAYS WHICH ARE TO BE RECONSTRUCTED. THESE DRIVEWAYS HAD TO BE REMOVED IN PART IN ORDER TO PROVIDE A TEMPORARY TRANSITION TO MEET THE PLANED SURFACE OF THE ROADWAY DUE TO THE POTENTIAL NON-TRAVERSABLE "HUMP" CAUSED BY THE PLANING OPERATIONS. THESE DRIVEWAYS ARE TO BE REMOVED AND ASPHALT GRINDINGS INSTALLED AFTER THE FIRST PLANING AND BEFORE THE SECOND PLANING OPERATIONS. IN ORDER TO MAINTAIN DRIVEWAY ACCESS AT ALL TIMES, THE CONTRACTOR IS TO USE THE ASPHALT GRINDINGS AS A BASE FOR THE DRIVE AREAS THAT WILL BE REPLACED. ASPHALT GRINDINGS A MINIMUM OF 4 INCHES THICK ARE TO BE USED ON A TEMPORARY BASIS TO PROVIDE AN APRON AND DRIVE CONNECTION TO THE EDGE OF THE ROADWAY. COMPACTION REQUIREMENT WILL NOT BE WAIVED THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED TO MAINTAIN DRIVEWAYS DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.

ITEM 410 TRAFFIC COMPACTED SURFACE, TYPE B, AS PER PLAN 60 CU YD

SR 94 - TIME LIMITS, SEQUENCING WORK AND LIQUIDATED DAMAGES

A. SR 94 SHALL HAVE THE INTERMEDIATE COURSE PLACED WITHIN THREE (3) CONSECUTIVE CALENDAR DAYS AFTER ANY OF THE PLANING AND ALL OF THE REPAIR WORK HAS BEEN COMPLETED OF THE ROAD CLOSURE SECTION.

B. WORK SHALL BE STARTED AND COMPLETED ON SECTIONS 2 AND 3 IN CONSTRUCTION SEASON 2004. WORK ON SR 94 MAY BE PERFORMED CONCURRENTLY WITH WORK ON SR 18. THE AMOUNT OF WORK IN EACH SECTION IS DEFINED BELOW.

C. FOR SECTION 2, THE CONTRACTOR HAS TWENTY-EIGHT (28) CONSECUTIVE CALENDAR DAYS (INTERIM COMPLETION DATE) TO COMPLETE ALL OF THE WORK AS SPECIFIED IN THE PLANS AND NOTES EXCEPT FOR THE SURFACE COURSE, RAISED PAVEMENT MARKERS, PERMANENT PAVEMENT MARKINGS, LINEAR GRADING, AND GUARDRAIL WORK.

D. FOR SECTION 3, THE CONTRACTOR HAS TWENTY-EIGHT (28) CONSECUTIVE CALENDAR DAYS (INTERIM COMPLETION DATE) TO COMPLETE ALL THE WORK AS SPECIFIED IN THE PLANS AND NOTES EXCEPT FOR THE SURFACE COURSE, RAISED PAVEMENT MARKERS, PERMANENT LONG LINE PAVEMENT MARKINGS, LINEAR GRADING, AND GUARDRAIL WORK.

E. THE DEPARTMENT MAY ALLOW THE CONTRACTOR TO COMPLETE WORK FROM SLM 8.10 TO SLM 9.06 IN THE 2004 SEASON AFTER AUGUST 31, 2004 IF AND ONLY IF THE DEPARTMENT HAS DETERMINED THERE IS NO DETOUR CONSIDERATIONS OR CONFLICTS RESULTING FROM OTHER PROJECTS IN THE AREA. IF THE DEPARTMENT APPROVES THE PROGRESSION OF WORK IN THIS SECTION IN 2004, THE ROADWAY WORK SHALL BE COMPLETED ON OR BEFORE OCTOBER 15, 2004 (INTERIM COMPLETION DATE). OTHERWISE, THE ORIGINAL LIMITATIONS SET FORTH FOR SECTION 4 APPLY.

F. THE SURFACE COURSE, RAISED PAVEMENT MARKINGS AND THE PERMANENT PAVEMENT MARKINGS CAN BE PLACED ON SECTIONS 2 AND 3 (AND NOTE E ABOVE IF APPLICABLE) AT THE SAME TIME.

G. WORK SHALL BE PERFORMED ON SECTION 4 AND 5 IN CONSTRUCTION YEAR 2005. THE AMOUNT OF WORK IN EACH SECTION IS DEFINED BELOW. SUBJECT TO NOTE ABOVE.

H. FOR SECTION 4, THE CONTRACTOR HAS FIVE (5) CONSECUTIVE CALENDAR DAYS (INTERIM COMPLETION DATE) TO COMPLETE ALL OF THE WORK AS SPECIFIED IN THE PLANS AND NOTES EXCEPT FOR THE SURFACE COURSE, RAISED PAVEMENT MARKERS, PERMANENT PAVEMENT MARKINGS, LINEAR GRADING, AND GUARDRAIL WORK.

I. FOR SECTION 5, THE CONTRACTOR HAS TWENTY-EIGHT (28) CALENDAR DAYS (INTERIM COMPLETION DATE) TO COMPLETE ALL OF THE WORK AS SPECIFIED IN THE PLANS AND NOTES EXCEPT FOR THE SURFACE COURSE, RAISED PAVEMENT MARKERS, PERMANENT LONG LINE PAVEMENT MARKINGS, LINEAR GRADING, AND GUARDRAIL WORK.

J. THE SURFACE COURSE, RAISED PAVEMENT MARKINGS AND THE PERMANENT PAVEMENT MARKINGS CAN BE PLACED ON SECTIONS 4 AND 5 AT THE SAME TIME.

K. POSITIVE DRAINAGE IS BE PROVIDED AT ALL TIMES. DURING PLANING OPERATIONS, "BLEEDERS" CONSISTING OF A SMALL OPEN TRENCH ARE TO BE PROVIDED AND MAINTAINED AND SUBSEQUENTLY RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR TO MAINTAIN DRAINAGE AS PER CMS 105.14. THE "BLEEDERS" ARE TO BE PLACED FROM THE PLANED PAVEMENT TO THE OPEN DITCH IN ORDER TO PREVENT WATER FROM PONDING CREATED BY THE PLANING OPERATIONS. THE CONTRACTOR SHALL DETERMINE THE NUMBER AND LOCATIONS OF THESE BLEEDERS. THE MINIMUM SIZE OF A BLEEDER IS 18" WIDE AND 4" BELOW THE FINAL PLANING OPERATION. CONSIDER THE COST OF THIS WORK AS INCIDENTAL TO THE AFFECTED ITEMS.

L. NO LANES ARE TO BE CLOSED UNTIL PUBLIC SCHOOL ENDS FOR THE SCHOOL YEAR. THE ROADWAY WORK SHALL BE COMPLETED BEFORE THE FOLLOWING SCHOOL YEAR BEGINS. THE CONTRACTOR SHALL CONTACT THE SCHOOLS ONE WEEK IN ADVANCE TO ENSURE THE END AND BEGINING OF THE SCHOOL YEAR DATE AND SCHEDULE ACCORDINGLY.

FAILURE OF THE CONTRACTOR TO MEET ANY OF THE REQUIREMENTS SPECIFIED ABOVE, LIQUIDATED DAMAGES WILL BE ASSESSED PER CMS 108.07.

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SR 94 - TEMPORARY SIGNING

"DO NOT ENTER" SIGNS SHALL BE DUAL INSTALLATION, ONE ON EACH SIDE OF THE ROAD, AT EACH INTERSECTION AND ALL COMMERCIAL DRIVES. "WRONG WAY" SIGNS SHALL BE INSTALLED AT EACH CROSS STREET 200 FT. FROM INTERSECTIONS AND COMMERCIAL DRIVES, EVERY 500 FT. THERE AFTER. "ROAD CLOSED TO THROUGH TRAFFIC" SIGNS ARE TO BE INSTALLED AT EACH INTERSECTION. "ONE WAY" SIGNS ARE TO BE PLACED AS PREVIOUSLY STATED. ALL SIGNS ARE TO BE INSTALLED AS PER THE TRAFFIC STANDARD CONSTRUCTION DRAWINGS. PAYMENT FOR PROVIDING, MAINTAINING, REMOVAL, RE-ERECTING AND SUBSEQUENT REMOVAL ARE TO BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC.

SR 94 - MAINTENACE OF TRAFFIC

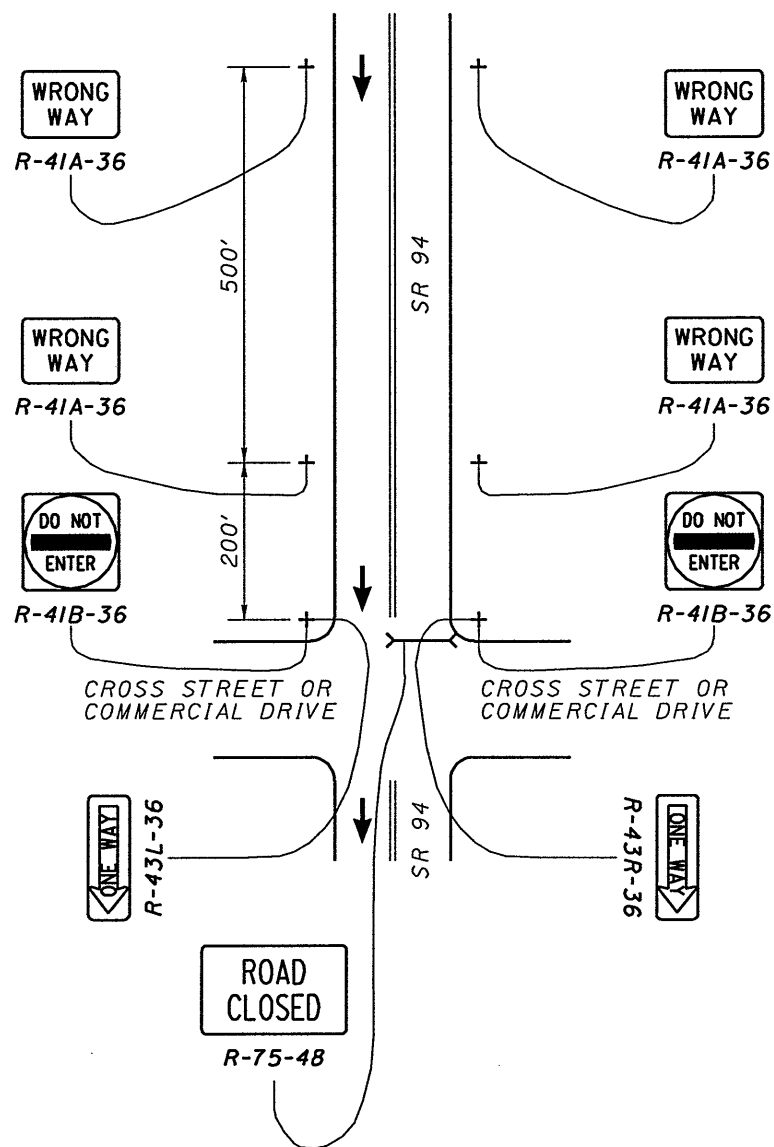
TRAFFIC IS TO BE DETOURED AS SHOWN ON PLAN SHEET 10. LOCAL TRAFFIC SHALL ONLY TRAVEL IN ONE DIRECTION AT ALL TIMES DURING CONSTRUCTION AND "ONE WAY" SIGNS ARE TO BE ERECTED BY THE ENGINEER EVERY 250 FEET (BOTH SIDES OF THE ROAD) OR OPPOSITE EVERY DRIVEWAY, WHICHEVER DISTANCE IS LESS, BY THE CONTRACTOR. THE ONE WAY OPERATION SHALL OPERATE IN THE SAME DIRECTION FOR BOTH LANES OF WORK IN ORDER TO MINIMIZE CONFUSION BY LOCAL TRAFFIC. AT THE REQUEST OF THE SHARON FIRE DEPARTMENT, THE ONE WAY SIGNS NORTH OF SR 162 SHALL BE SIGNED TO TRAVEL IN THE NORTHBOUND DIRECTION AND SOUTH OF SR 162 SHALL BE SIGNED TO TRAVEL IN THE SOUTHBOUND DIRECTION.

THE PROJECT IS DIVIDED INTO SHORT WORK SEGMENTS, OR SECTIONS TO GET AS MUCH ROADWAY WORK COMPLETED IN AS LITTLE TIME TO MINIMIZE THE INCONVENIENCE TO THE LOCAL TRAFFIC AND ADJACENT PROPERTIES.

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

SR 94 IS TO BE CLOSED TO ALL BUT LOCAL TRAFFIC OF ABUTTING PROPERTY OWNERS. ONE WAY TRAFFIC, SHALL BE MAINTAINED AT ALL TIMES. A DETOUR ROUTE SHALL BE PROVIDED AS SHOWN HERON. ALL SIGNING SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR.

THE CONTRACTOR SHALL USE THE SIGN R-76A-60 AS SHOWN BELOW AT THE BEGINNING, END, AND ALL INTERSECTING ROADS OF THE SECTION OF ROADWAY BEING CONSTRUCTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, MAINTAINING, AND REMOVING THESE SIGNS. AT START OF OFFICIAL DETOUR, R-76C AT ROAD CLOSURE GOING INTO ONE-WAY, R-75 GOING AGAINST ONE-WAY FLOW AT CLOSURE POINT.



SEE STANDARD CONSTRUCTION DRAWING TC-41.50 FOR MOUNTING ONE WAY SIGNS



R-76C-60



R-76A-60



R-75-48

GENERAL SUMMARY

SHEET NUMBER													ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET							
7	8		17	18	19	20	34	35	39		69	82													
																	DRAINAGE								
													LUMP	LUMP	503	11100	LUMP	COFFERDAMS, CRIBS AND SHEETING							
													LUMP	LUMP	503	21300	LUMP	UNCLASSIFIED EXCAVATION							
													3692	2552	509	10000	6244	POUND	EPOXY COATED REINFORCING STEEL						
													54	35	511	46201	89	CU YD	CLASS C CONCRETE, AS PER PLAN (RET WALL/WINGWALL-INCL. FTG.)	77&93					
													225	220	512	33000	445	SQ YD	TYPE 2 WATERPROOFING						
													29	24	516	13600	53	SQ FT	1" PREFORMED EXPANSION JOINT FILLER						
													LUMP	LUMP	518	21230	LUMP	POROUS BACKFILL WITH FILTER FABRIC							
														55				FT	6" CONDUIT, TYPE F						
														10				FT	8" CONDUIT, TYPE F						
														65				FT	12" CONDUIT, TYPE B						
														121			35	FT	12" CONDUIT, TYPE C						
																	286	FT	12" CONDUIT, TYPE D						
														20				FT	18" CONDUIT, TYPE B						
																		FT	36" CONDUIT, TYPE D						
																	15	FT	36" CONDUIT, TYPE D						
																	92	FT	8' X 4' CONDUIT, TYPE A, 706.05, (1'-6" COVER)						
																	81	FT	10' X 4' CONDUIT, TYPE A, 706.05, AS PER PLAN (1'-6" COVER)	77					
														3				EACH	CATCH BASIN, NO. 3A						
														1			1	EACH	CATCH BASIN, NO. 2-2B						
23																	604	09000	23	EACH	CATCH BASIN ADJUSTED TO GRADE				
														2				EACH	INLET, SIDE DITCH						
														1				EACH	MANHOLE, NO. 3						
2																	604	34500	2	EACH	MANHOLE ADJUSTED TO GRADE				
																	29	28	864	10100	57	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
													PAVEMENT												
														375				252	01500	375	FT	FULL DEPTH PAVEMENT SAWING			
900																	253	02000	900	CU YD	PAVEMENT REPAIR				
																		254	01000	332740	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE			
																		254	01600	10029	SQ YD	PATCHING PLANED SURFACE			
																	60	35	301	46000	95	CU YD	ASPHALT CONCRETE BASE, PG64-22		
																		301	46001	2047	CU YD	ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN	8		
														6		42		29	33	301	48000	110	CU YD	ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)	
																		29		302	46001	2884	CU YD	ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN	8
																		120	24	304	20000	144	CU YD	AGGREGATE BASE	
																		19	11	407	10000	14829	GALLON	TACK COAT	
																		407		407	13900	4050	GALLON	TACK COAT, 702.13	
																		7	4	407	14000	8597	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
																		408		408	10000	12193	GALLON	PRIME COAT	
																		442	00201	2972	CU YD	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN	8		
																		442	10000	6861	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)			
																		5	5	442	20100	3432	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448)	
																		442	20201	3467	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), AS PER PLAN	8		
														2		14		8	11	448	48020	35	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)	
																	82			452	10000	82	SQ YD	6" NON-REINFORCED CONCRETE PAVEMENT	
																		279		609	26000	734	FT	CURB, TYPE 6	
																		69		609	98000	69	FT	CURB, MISC.: DROP CURB	4
																		1273		617	10101	1405	CU YD	COMPACTED AGGREGATE, TYPE A, AS PER PLAN	8
																		30481		617	20000	30481	SQ YD	SHOULDER PREPARATION	
																				SPECIAL	69012050	125	SQ YD	REINFORCED MESH FOR TRANSVERSE AND/OR LONGITUDINAL JOINTS AND CRACKS	7
5000																	SPECIAL	69098700	5000	CU YD	MISC.: ASPHALT GRINDINGS	8			

CALC BY: JPF
CHKD BY: BAD

GENERAL SUMMARY

MED-18-0.00

* - FOR TYPICALS, SEE SHEET 3 SR 18D & SR 94D - ROUNDABOUT SECTION

PART	ROUTE	LOG POINT TO LOG POINT STRAIGHT LINE MILEAGE		LENGTH		WIDTH FEET AVG.	* T Y P I C A L	EXISTING PAVEMENT TYPE	PAVEMENT AREA SQ YD	254		301		407	407	407	442		442		442			
				MILE	FEET					PAVEMENT PLANING, ASPHALT CONCRETE SQ YD	PATCHING PLANED SURFACE SQ YD	ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN		TACK COAT FOR INTERMEDIATE COURSE @ 0.03 GAL/SY GAL/SY GALLON	TACK COAT @ 0.08 GAL/SY GALLON	TACK COAT @ 0.08 GAL/SY (702.13) GALLON	ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448)		ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)		ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448), AS PER PLAN		ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN	
												THICK AVG. INCH	CU YD				THICK AVG. INCH	CU YD	THICK AVG. INCH	CU YD	THICK AVG. INCH	CU YD		
A	SR 18	0.00	2.44	2.44	12883.2	30.0	1	404	42944	42944	2147			1288	3436		0.75	895	1.5	1789				
A	SR 18	2.44	2.61	0.17	897.6	28.0	2	404	2793	2793	140			84	223		0.75	58	1.5	116				
A	SR 18D	2.61	2.69	0.08	422.4	29.0	2	404	1361	1361	68			41	109		0.75	28	1.5	57				
A	SR 18	2.69	2.85	0.16	844.8	28.0	2	404	2628	2628	131			79	210		0.75	55	1.5	110				
A	SR 18	2.85	2.98	0.13	686.4	29.0	3	404	2212	2212	111			66	177		0.75	46	1.5	92				
A	SR 18	2.98	7.98	5.00	26400	30.0	1	404	88000	88000	4400			2640	7040		0.75	1833	1.5	3667				
A	SR 18	7.98	8.13	0.15	792	41.0	1	404	3608	3608	180			108	289		0.75	75	1.5	150				
A	SR 18	8.13	9.10	0.97	5121.6	28.0	1	404	15934	15934	797			478	1275		0.75	332	1.5	664				
EXTRA AREA FOR																								
INTERS., DRIVES, + M.B.									3996	900	45			120	320		0.75	83	1.5	167				
A	SR 83	12.793	12.846	0.05	279.8	25.5	4	404	793	793	40			24	63		0.75	17	1.5	33				
SUB-TOTAL SR 18				9.15	48327.8					161173	8059			4928	13142			3422	6845					
B	SR 94	5.56	5.91	0.35	1848	25.0	7	404	5133	5133	513			154	411				1.75	250	1.5	214		
B	SR 94	5.91	7.45	1.54	8131.2	25.0	6	404	22587	67760		4	903	1355	1807				1.75	1098	1.5	941		
B	SR 94	8.10	8.30	0.20	1056	25.0	7	404	2933	2933	293			88	235				1.75	143	1.5	122		
B	SR 94	8.30	8.57	0.27	1425.6	24.0	8	404	3802	3802	380			114	304				1.75	185	1.5	158		
B	SR 94D	8.57	8.65	0.08	422.4	22.0	9	404	1033	1033	103			31	83				1.75	50	1.5	43		
B	SR 94	8.65	9.06	0.41	2164.8	25.0	7	404	6013	6013	601			180	481				1.75	292	1.5	251		
B	SR 94	9.06	9.24	0.18	950.4	25.0	6	404	2640	7920		4	106	158	211				1.75	128	1.5	110		
B	SR 94	9.24	9.66	0.42	2217.6	24.0	5	404	5914	17741		4	246	355	473				1.75	287	1.5	246		
B	SR 94	9.66	10.03	0.37	1953.6	25.0	6	404	5427	16280		4	217	326	434				1.75	264	1.5	226		
B	SR 94	10.03	10.58	0.55	2904	24.0	5	404	7744	23232		4	323	465	620				1.75	376	1.5	323		
B	SR 94	10.58	11.01	0.43	2270.4	25.0	6	404	6307	18920		4	252	378	505				1.75	307	1.5	263		
EXTRA AREA FOR																								
INTERS., DRIVES, + M.B.									1790	800	80			54	143						1.75	87	1.5	75
SUB-TOTAL SR 94				4.80	25344.0					171567	1970		2047	3658	1657	4050			3467	2972				
TOTALS				13.95	73671.8					332740	10029		2047	8586	14799	4050			3422	6845	3467	2972		

CALC BY: JPF
CHKD BY: BAD

PAVEMENT DATA

MED-18-0.00

* - FOR TYPICALS, SEE SHEET 3

SR 94D - ROUNDABOUT SECTION

PART	ROUTE	LOG POINT TO LOG POINT		LENGTH		* TYPICAL	PAVED SHOULDER PROPOSED WIDTH FEET (AVG.)		PAVED SHOULDER AREA SQ YD	209		302		AGGREGATE SHOULDER PROPOSED WIDTH FEET (AVG.)		AGGREGATE SHOULDER AREA SQ YD	617		617		408
							A	B		LINEAR GRADING	ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN	C	D	SHOULDER PREPARATION	COMPACTED AGGREGATE, TYPE A, AS PER PLAN		PRIME COAT @ 0.40 GAL/SY				
							MILE	FEET		MILE	INCH	CU YD	SQ YD	SQ YD	CU YD			GALLON			
		STRAIGHT LINE MILEAGE																			
A	SR 18	0.00	2.44	2.44	12883.2	1				4.88				2.0	2.0	5726	5726	239			2290
A	SR 18	2.85	2.98	0.13	686.4	3				0.13				2.0		153	153	6			61
A	SR 18	2.98	7.98	5.00	26400	1				10.00				2.0	2.0	11733	11733	489			4693
A	SR 18	7.98	8.13	0.15	792	1				0.30				2.0	2.0	352	352	15			141
A	SR 18	8.13	9.10	0.97	5121.6	1				1.94				2.0	2.0	2276	2276	95			910
	EXTRA AREA FOR																				
	INTERS., DRIVES, + M.B.															1308	1308	55			523
A	SR 83	12.793	12.846	0.05	279.8	4	VAR.	181.2		0.11	13.75	69		2.0		62	62	3			25
	SUB-TOTAL SR 18		8.74	46163						17.36		69				21610	21610	902			8643
B	SR 94	5.56	5.91	0.35	1848	7				0.70				2.0	2.0	821	821	34			328
B	SR 94	5.91	7.45	1.54	8131.2	6	3.5	3.5	6324	3.08	7	1230		2.0	2.0	3614	3614	151			1446
B	SR 94	8.10	8.30	0.20	1056	7				0.40				2.0	2.0	469	469	20			188
B	SR 94D	8.57	8.65	0.08	422.4	9				0.16					2.0	94	94	4			38
B	SR 94	8.65	9.06	0.41	2164.8	7				0.82				2.0	2.0	962	962	40			385
B	SR 94	9.06	9.24	0.18	950.4	6	3.5	3.5	739	0.36	7	144		2.0	2.0	422	422	18			169
B	SR 94	9.24	9.66	0.42	2217.6	5	3.5	3.5	1725	0.84	7	335									
B	SR 94	9.66	10.03	0.37	1953.6	6	3.5	3.5	1519	0.74	7	295		2.0	2.0	868	868	36			347
B	SR 94	10.03	10.58	0.55	2904	5	3.5	3.5	2259	1.10	7	439									
B	SR 94	10.58	11.01	0.43	2270.4	6	3.5	3.5	1766	0.86	7	343		2.0	2.0	1009	1009	42			404
	EXTRA AREA FOR																				
	INTERS., DRIVES, + M.B.															612	612	26			245
	SUB-TOTAL SR 94		4.53	23918.4						9.06		2786				8871	8871	371			3550
TOTALS				13.27	70081.4					26.42		2855				30481	30481	1273			12193

CALC BY: JPF
CHKD BY: BAD

SHOULDER DATA

MED-18-0.00

REFERENCE NO.	PLAN AND PROFILE SHEET	STATION		SIDE	ITEM														SPECIAL	
					202	202	202	202		203	203		252	301	448	608	608	609		609
					WALK REMOVED	CURB AND GUTTER REMOVED	PARKING BLOCK REMOVED	CATCH BASIN REMOVED		EXCAVATION	EMBANKMENT, AS PER PLAN		FULL DEPTH PAVEMENT SAWING	ASPHALT CONCRETE BASE, PG 64-22 (DRIVEWAYS)	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS)	4" CONCRETE WALK	CURB RAMP, AS PER PLAN	CURB, TYPE 6		CURB MISC.; DROP CURB
FROM	TO	SQ FT	FT	EACH	EACH		CU YD	CU YD		FT	CU YD	CU YD	SQ FT	SQ FT	FT	FT	SQ YD			
R-1	21	676+94.37		LT				1												
R-2	21	678+43.36		LT				1												
R-3	21	676+94.37	678+85.82	LT		79.8														
R-4	32	676+44.55	676+77.25	LT	131															
R-5	32	676+99.50	677+20.10	LT	82															
R-6	32	676+99.00	677+11.00				2													
C-1	21	675+50.00	676+77.51	LT													135.3			
C-2	21	676+99.00	678+22.82	LT													143.6			
C-3	21	678+22.82	678+83.00	LT														68.5		
CR-1	32	676+70.75	676+77.50	LT													28.8			
CR-2	32	676+98.96	677+08.12	LT													38.6			
DR-1	21	676+89.00		LT					7.4			5.9	1.6							
PS-1	21	675+48.00	678+85.92	LT										375.3					125.1	
SW-1	32	676+44.55	676+70.76	LT												111.3				
SW-2	32	677+08.12	677+20.12	LT												48.7				
*	23	675+00.00	675+50.00						7	4										
*	24	675+75.00	676+25.00						17	16										
*	25	676+44.54	676+75.00						12	4										
*	26	676+76.17	676+94.38						9	3										
*	27	677+00.00	677+25.00						20	6										
*	28	677+50.00	678+00.00						40	4										
*	29	678+22.83	678+30.55						17	0										
*	30	678+43.23	679+00.00						61	0										
*	THESE QUANTITIES ARE FROM THE CROSS SECTION SHEETS FOR SR 83.																			
TOTALS CARRIED TO GENERAL SUMMARY					213	80	2	2		190	37		375	6	2	160	67	279	69	125

CALC BY _JPF_
CHKD BY _BAD_

ROADWAY SUB-SUMMARY LITCHFIELD CIRCLE

MED-18-0.00

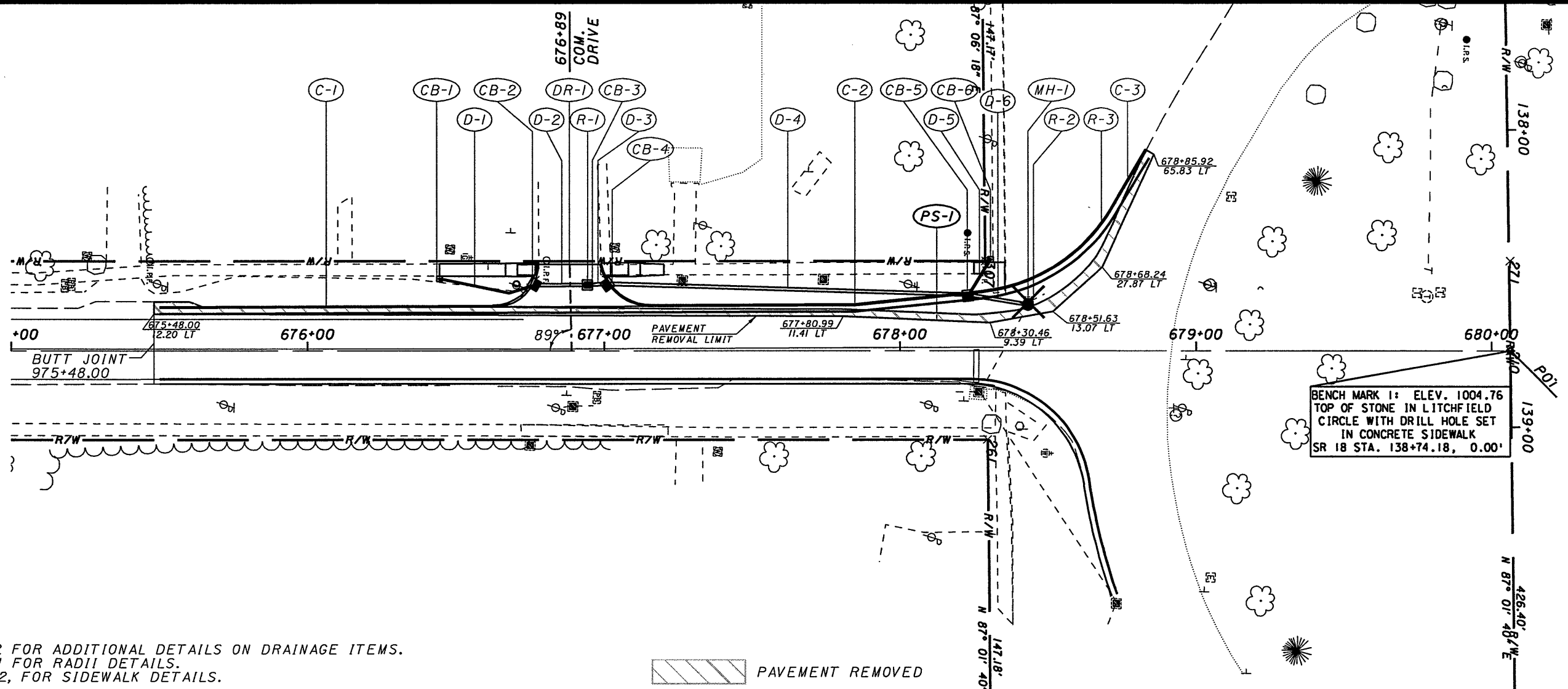
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		FROM	TO		6" CONDUIT, TYPE F	8" CONDUIT, TYPE F	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	18" CONDUIT, TYPE B		CATCH BASIN, NO.3A	CATCH BASIN, NO. 2-2B	INLET, SIDE DITCH	MANHOLE, NO. 3				
					FT	FT	FT	FT	FT		EACH	EACH	EACH	EACH				
CB-1	21	676+44.54		LT										1				
CB-2	21	676+76.17		LT							1							
CB-3	21	676+94.38		LT	10.0	10.0						1						
CB-4	21	677+01.45		LT							1							
CB-5	21	678+22.83		LT							1							
CB-6	21	678+30.55		LT										1				
D-1	21	676+44.54	676+76.17	LT	32.2													
D-2	21	676+76.17	676+94.38	LT			17.4											
D-3	21	676+94.38	677+01.45	LT			17.1											
D-4	21	677+01.45	678+22.83	LT				121.4										
D-5	21	678+30.55	678+22.83	LT	13.0													
D-6	21	678+22.83	678+43.23	LT			20.7											
MH-1	21	678+43.23		LT			10.0		20.0						1			
<p>THE CONDUIT QUANTITIES AT CB-3 AND MH-1 ARE FOR CONNECTING THE EXISTING CONDUITS INTO THE NEW CB AND MH AS SHOWN ON SHEET 21. THE LENGTH SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. CONDUIT REQUIRING REPLACEMENT WILL BE AT THE EXISTING SLOPE.</p>																		
TOTALS CARRIED TO GENERAL SUMMARY					55	10	65	121	20		3	1	2	1				

CALC BY _JFF_
CHKD BY _MJS_

ROADWAY SUB-SUMMARY LITCHFIELD CIRCLE

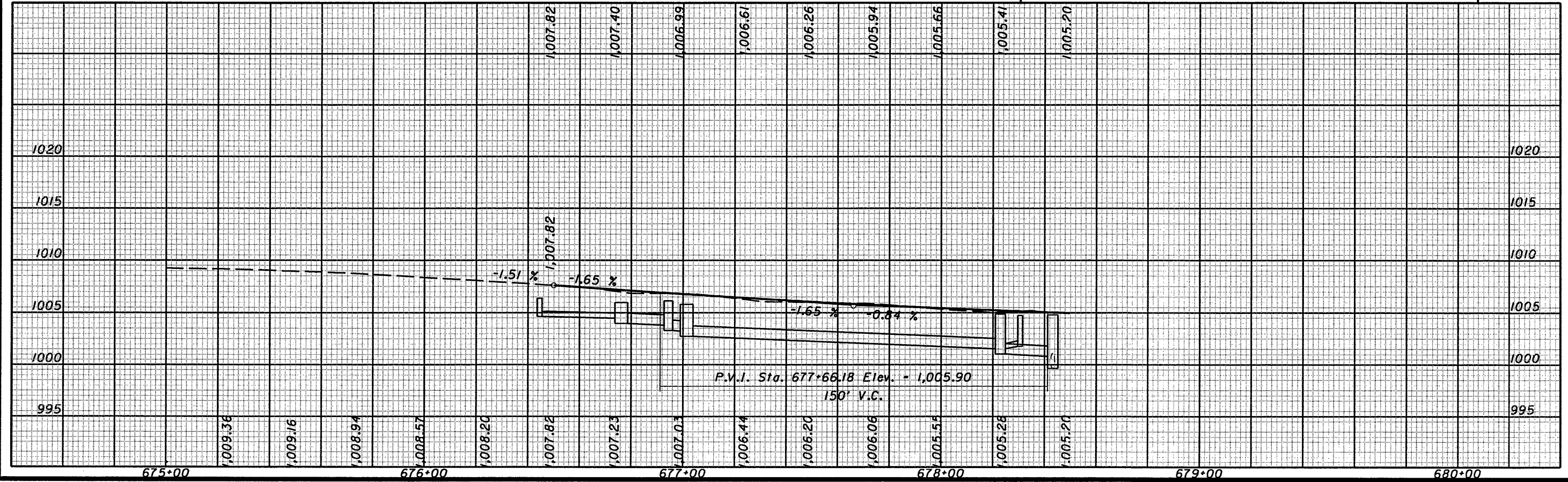
MED-18-0.00

DESIGN FILE: I:\projects\1831\gp200_83.dgn
 WORKSTATION: sdeer
 DATE: 11/3/2003



NOTES:
 1. SEE SHEET 22 FOR ADDITIONAL DETAILS ON DRAINAGE ITEMS.
 2. SEE SHEET 31 FOR RADIUS DETAILS.
 3. SEE SHEET 32, FOR SIDEWALK DETAILS.

PAVEMENT REMOVED



PLAN AND PROFILE
LITCHFIELD CIRCLE

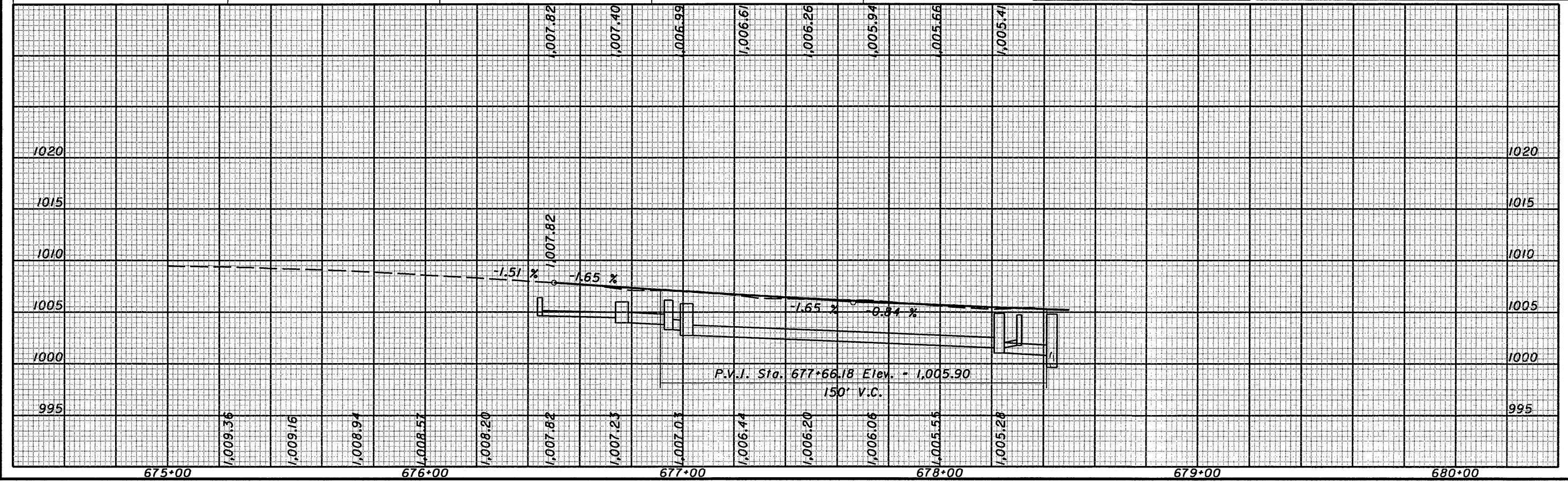
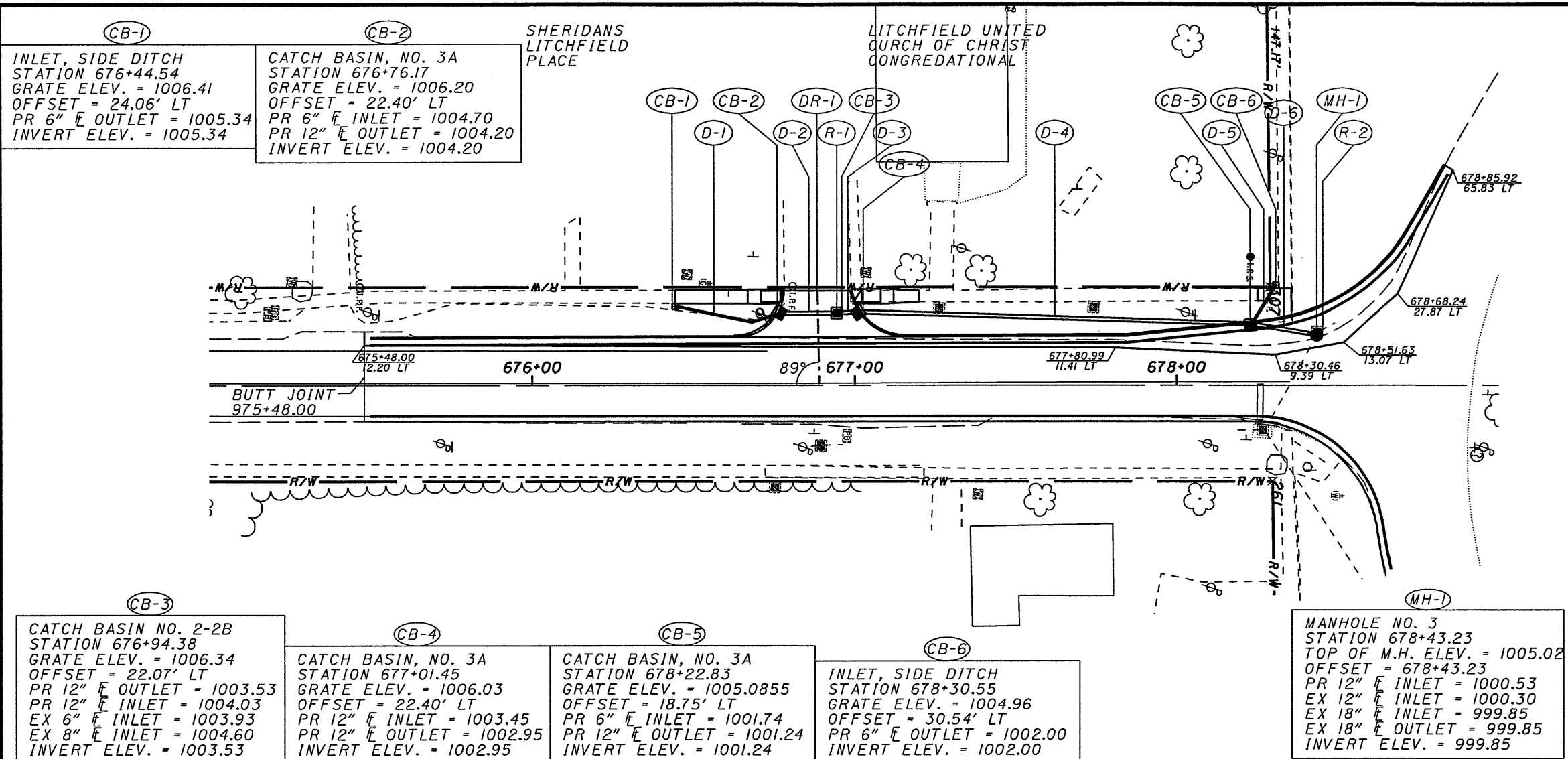
MED-18-0.00

21
118

CALCULATED
CHECKED

HORIZONTAL SCALE IN FEET

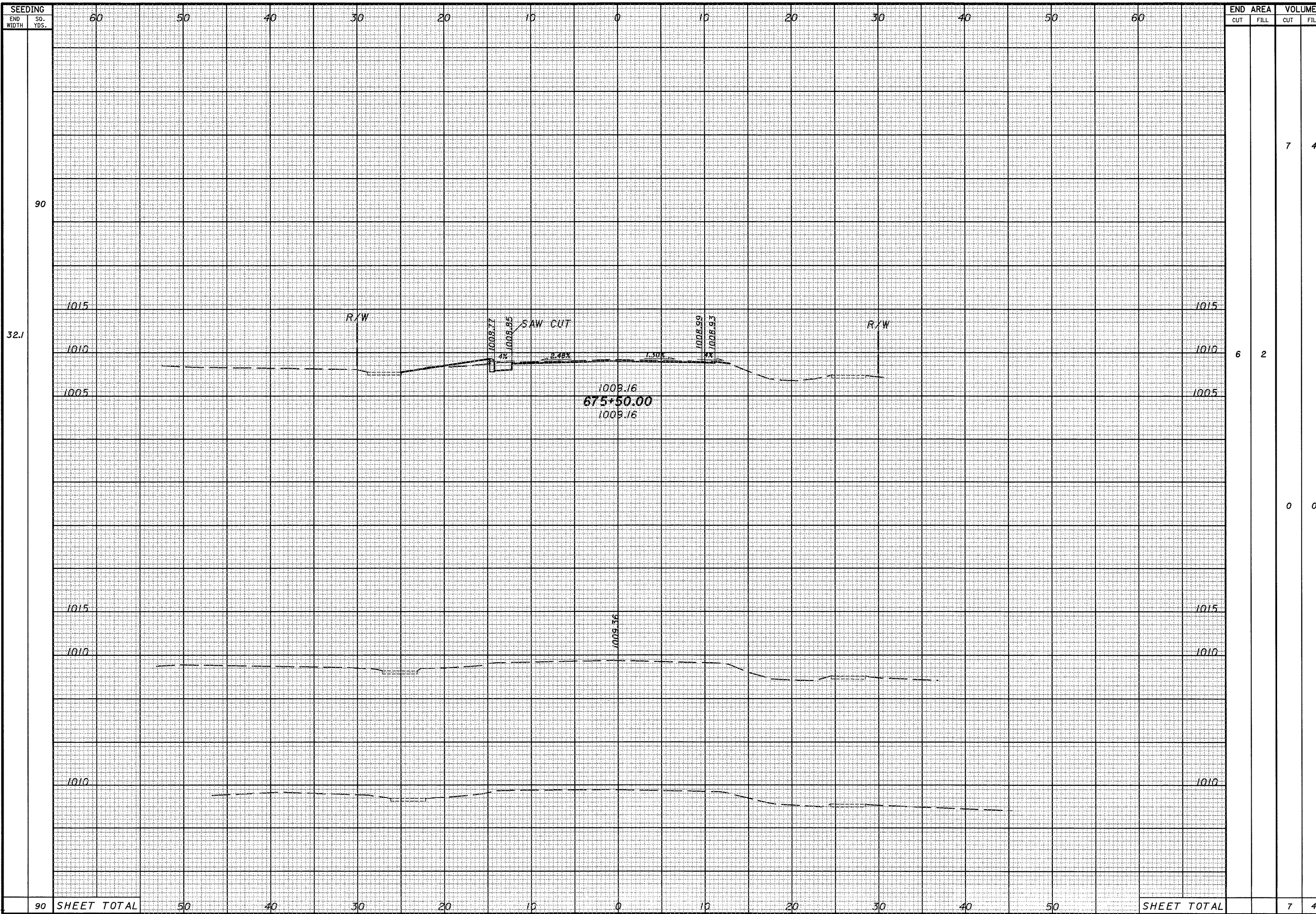
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 WORKSTATION: sdeer
 DATE: 11/3/2003



①-1 6" CONDUIT, TYPE F STATION 676+44.54 E INLET = 1005.34 OFFSET = 24.06' LT LENGTH = 32.2' STATION 676+76.17 E OUTLET = 1004.70 OFFSET = 21.71' LT SLOPE = 2.00%	
①-2 12" CONDUIT, TYPE B STATION 676+76.17 E INLET = 1004.20 OFFSET = 21.95' LT LENGTH = 17.4' STATION 676+94.38 E OUTLET = 1004.03 OFFSET = 22.07' LT SLOPE = 1.00%	
①-3 12" CONDUIT, TYPE B STATION 676+94.38 E INLET = 1003.53 OFFSET = 22.07' LT LENGTH = 17.1' STATION 677+01.45 E OUTLET = 1003.45 OFFSET = 22.40' LT SLOPE = 1.00%	
①-4 12" CONDUIT, TYPE C STATION 677+01.45 E INLET = 1002.95 OFFSET = 22.40' LT LENGTH = 121.4' STATION 678+22.83 E OUTLET = 1001.74 OFFSET = 18.75' LT SLOPE = 1.00%	
①-5 6" CONDUIT, TYPE F STATION 678+30.55 E INLET = 1002.00 OFFSET = 30.54' LT LENGTH = 13.0' STATION 678+22.83 E OUTLET = 1001.74 OFFSET = 18.75' LT SLOPE = 2.00%	
①-6 12" CONDUIT, TYPE B STATION 678+22.83 E INLET = 1001.24 OFFSET = 18.75' LT LENGTH = 20.7' STATION 678+43.23 E OUTLET = 1001.53 OFFSET = 15.38' LT SLOPE = 1.00%	

PLAN AND PROFILE
 LITCHFIELD CIRCLE
 MED-18-0.00
 22
 118

DESIGN FILE: I:\projects\1831\GX100_83.dgn
 WORKSTATION: sdeer DATE: 11/3/2003



32.1

90

1015
1010
1005

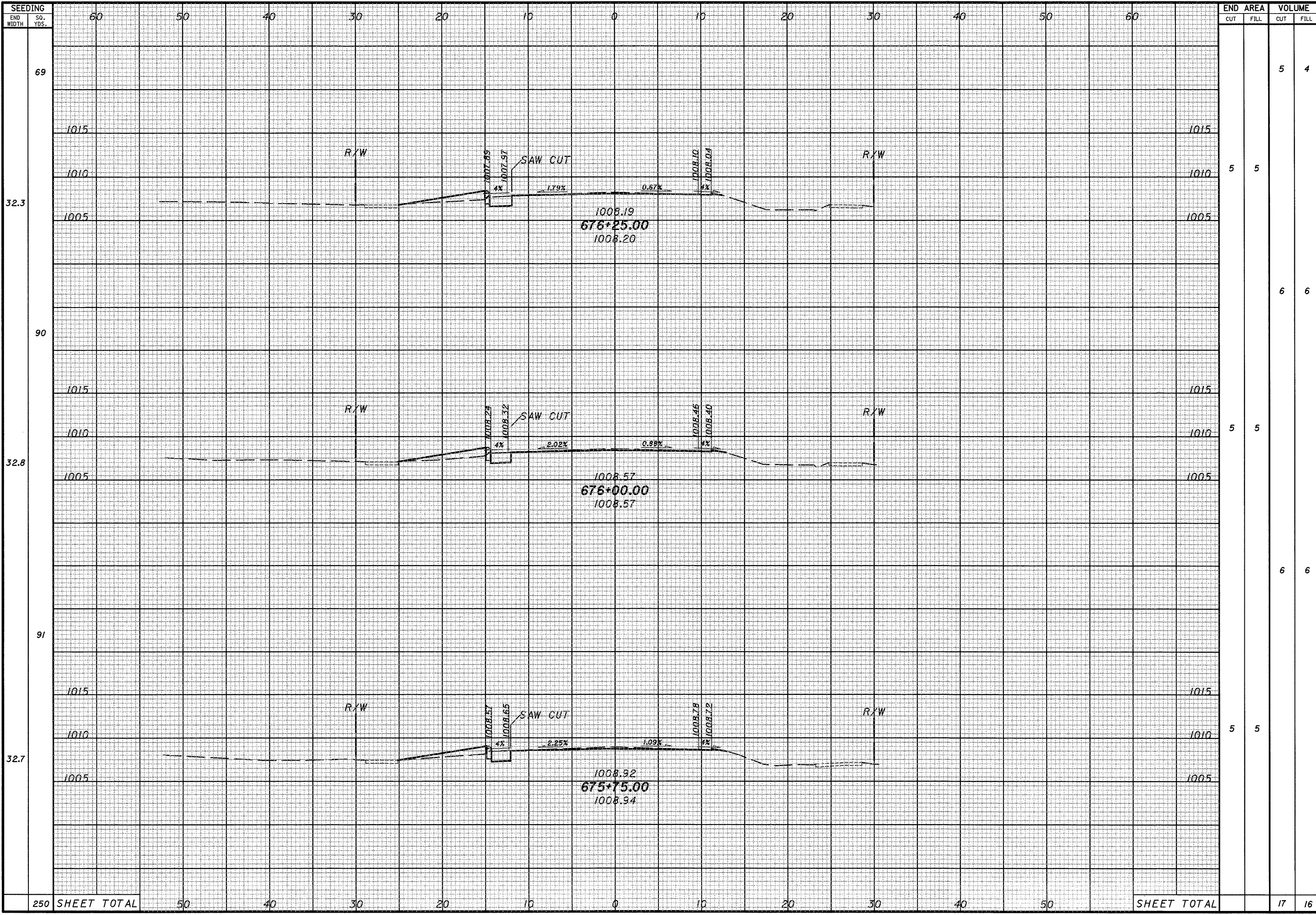
1010

90 SHEET TOTAL

SEEDING		END AREA		VOLUME	
END WIDTH	50. YDS.	CUT	FILL	CUT	FILL
60	50				
40	30				
20	10				
0	0				
10	10				
20	20				
30	30				
40	40				
50	50				
60	60				
				7	4
				6	2
				0	0
				7	4

CROSS SECTIONS LITCHFIELD CIRCLE
 STA 675+00.00 - STA 675+50.00
 MED-18-0.00
 23
 118

DESIGN FILE: I:\projects\1831\GX100_83.dgn
 WORKSTATION: sdeer DATE: 11/3/2003



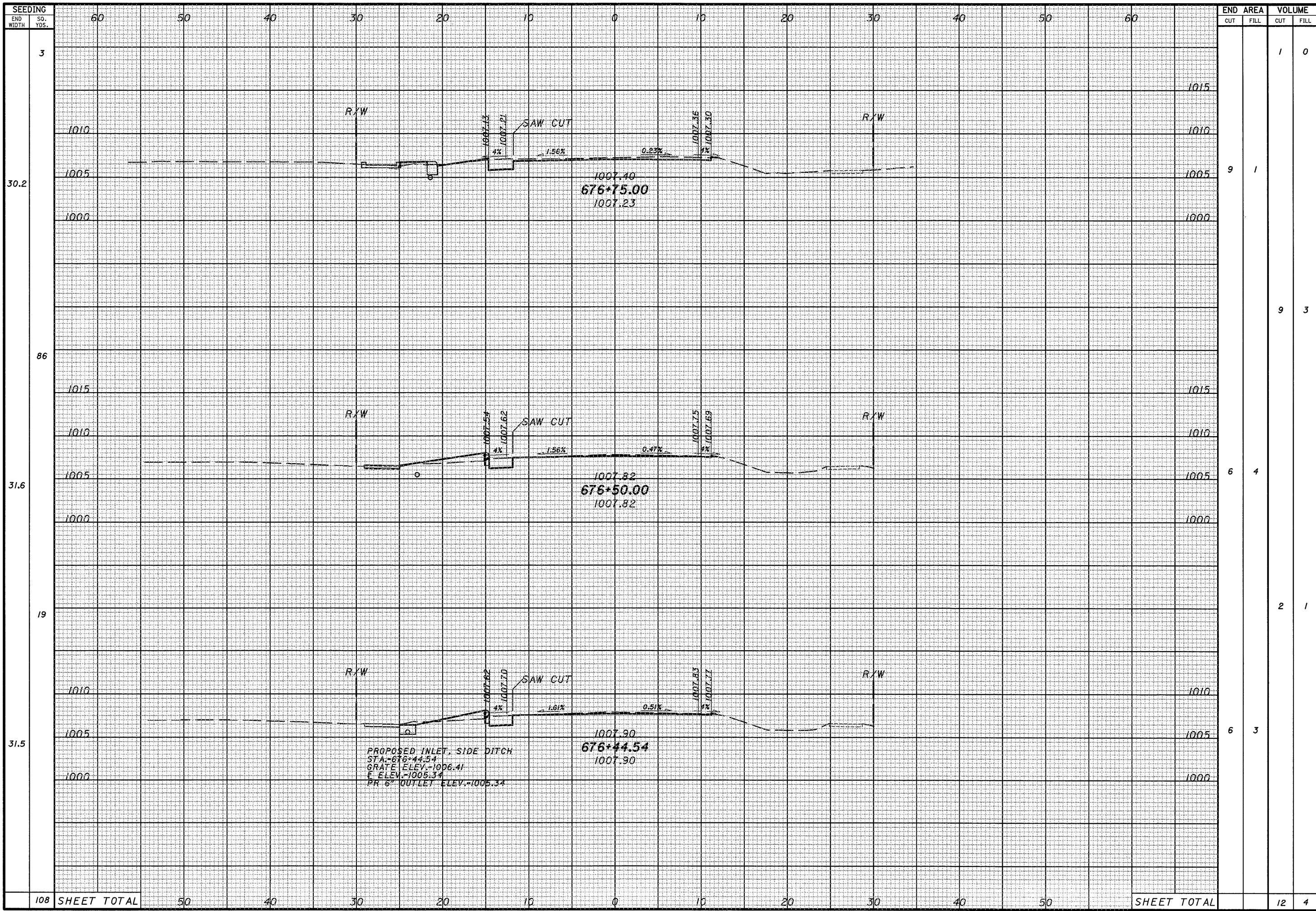
SEEDING END WIDTH	SO. YDS.	STATION												END AREA		VOLUME		CALCULATED SJD	CHECKED BAD						
		60	50	40	30	20	10	0	10	20	30	40	50	60	CUT	FILL	CUT			FILL					
69																				5	4				
32.3																				5	5				
90																				5	5				
32.8																				5	5				
91																				5	5				
32.7																				5	5				
250	SHEET TOTAL		50	40	30	20	10	0	10	20	30	40	50		SHEET TOTAL					17	16				

CROSS SECTIONS LITCHFILED CIRCLE
 STA 675+75.00 - STA 676+25.00

MED -18-0.00

24
118

DESIGN FILE: I:\projects\18311\GX100_83.dgn
 WORKSTATION: sdeer DATE: 11/3/2003

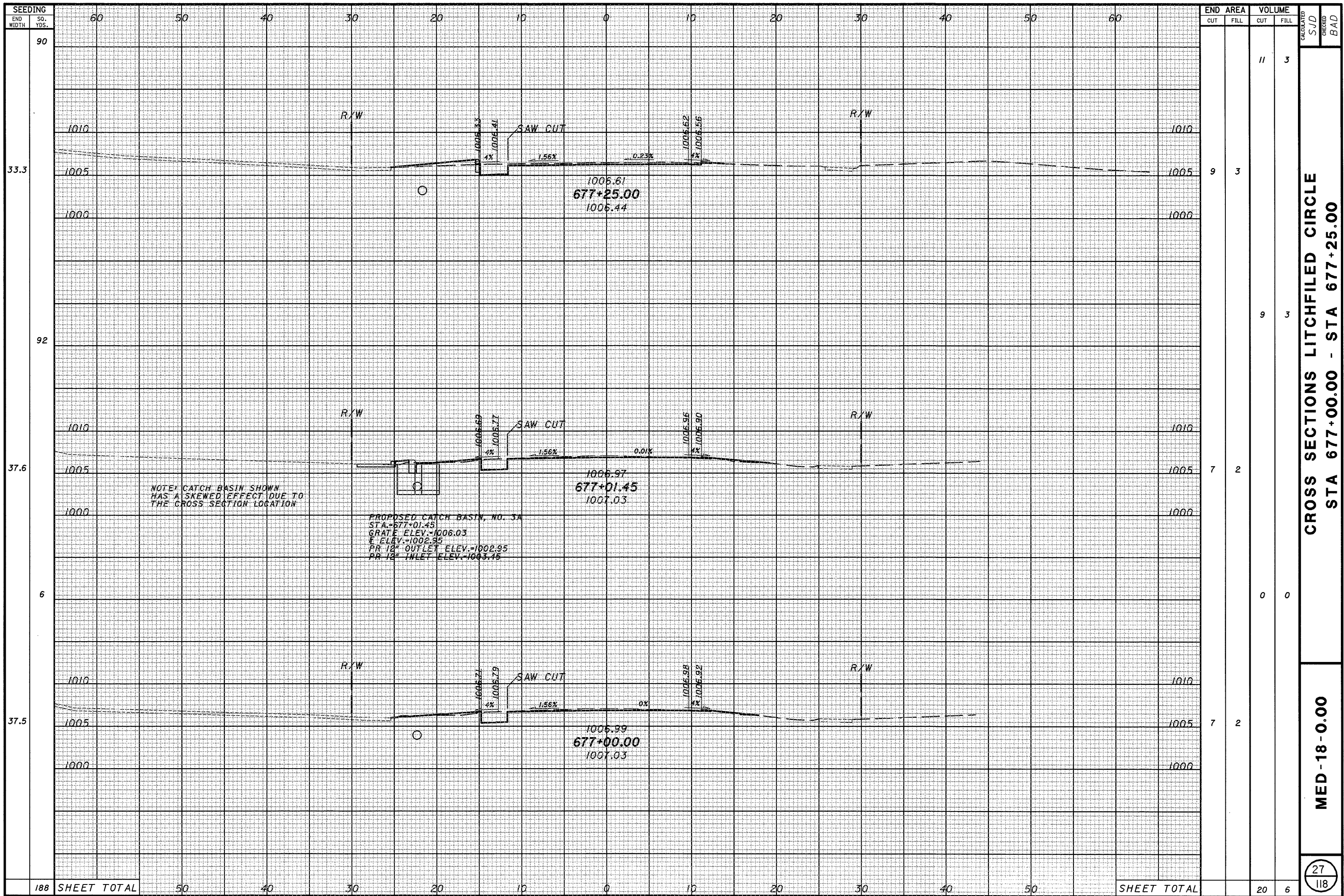


SEEDING														END AREA		VOLUME		
END WIDTH	SO. YDS.	60	50	40	30	20	10	0	10	20	30	40	50	60	CUT	FILL	CUT	FILL
3																		
30.2															9	1		
86																	9	3
31.6															6	4		
19																	2	1
31.5															6	3		
108	SHEET TOTAL	50	40	30	20	10	0	10	20	30	40	50	60			12	4	

CROSS SECTIONS LITCHFILED CIRCLE
 STA 676+44.54 - STA 676+75.00

MED - 18 - 0.00

DESIGN FILE: i:\projects\18311\GX100_83.dgn
 WORKSTATION: sdeer DATE: 11/3/2003

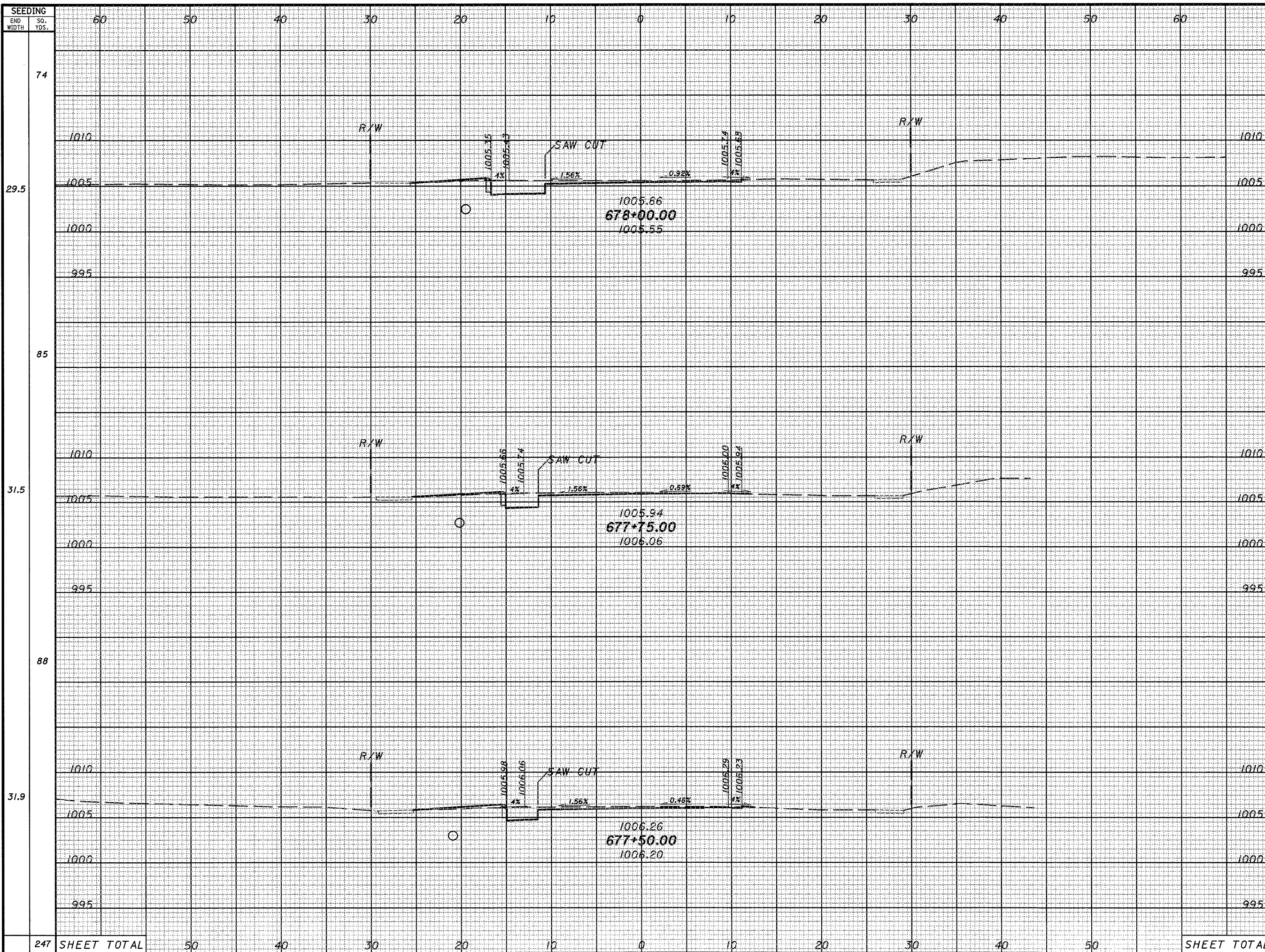


CROSS SECTIONS LITCHFIELD CIRCLE
 STA 677+00.00 - STA 677+25.00

MED-18-0.00

27
118

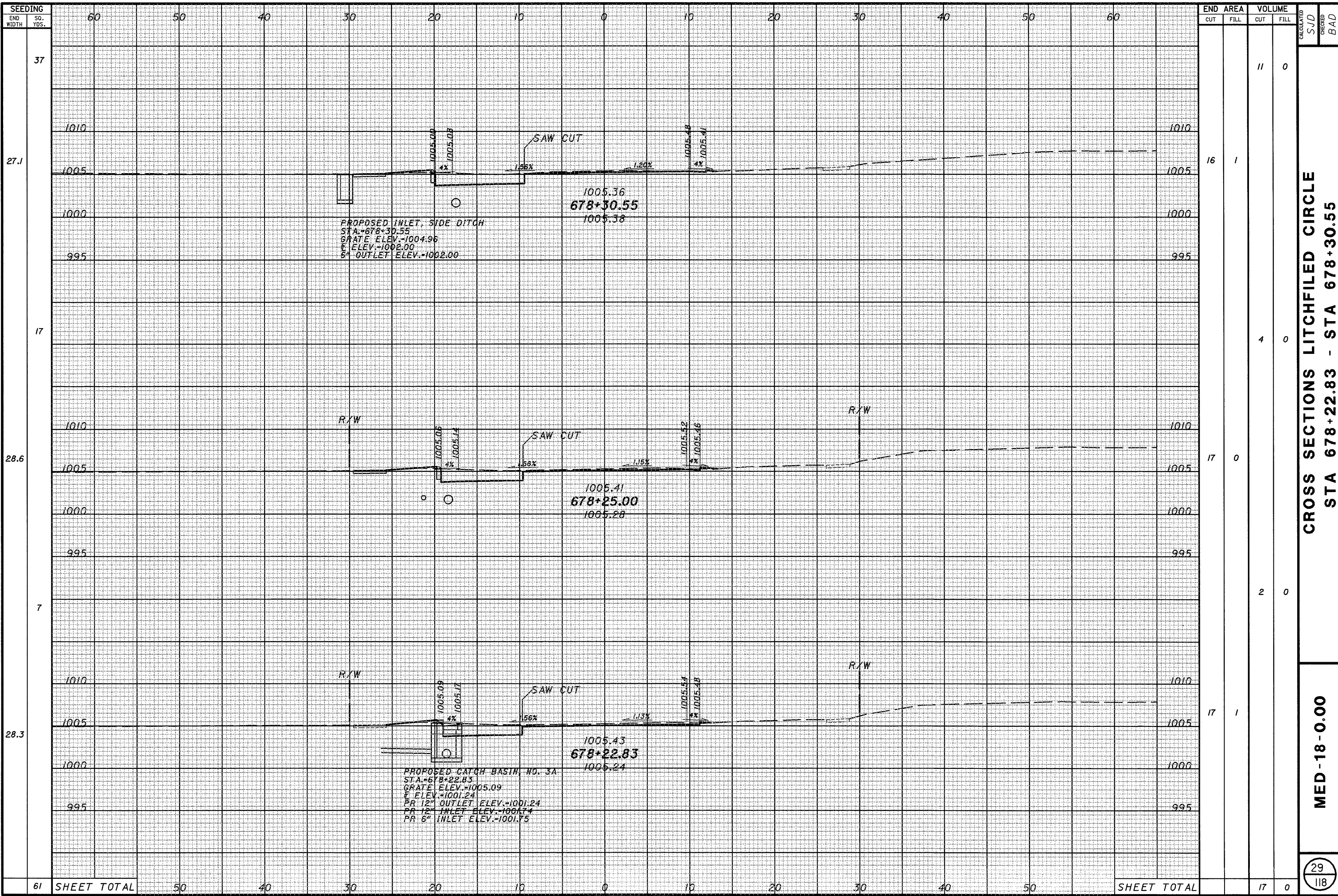
DESIGN FILE: I:\projects\1831\GX100_83.dgn
 WORKSTATION: sdeer DATE: 11/3/2003



END CUT	AREA FILL	VOLUME	
		CUT	FILL
		16	1
		14	1
		13	1
		9	1
		11	2
		10	2
247	SHEET TOTAL	50	40
		40	4

CALCULATED SJD CHECKED BAD
CROSS SECTIONS LITCHFIELD CIRCLE
STA 677+50.00 - STA 678+00.00
MED-18-0.00
 28
 118

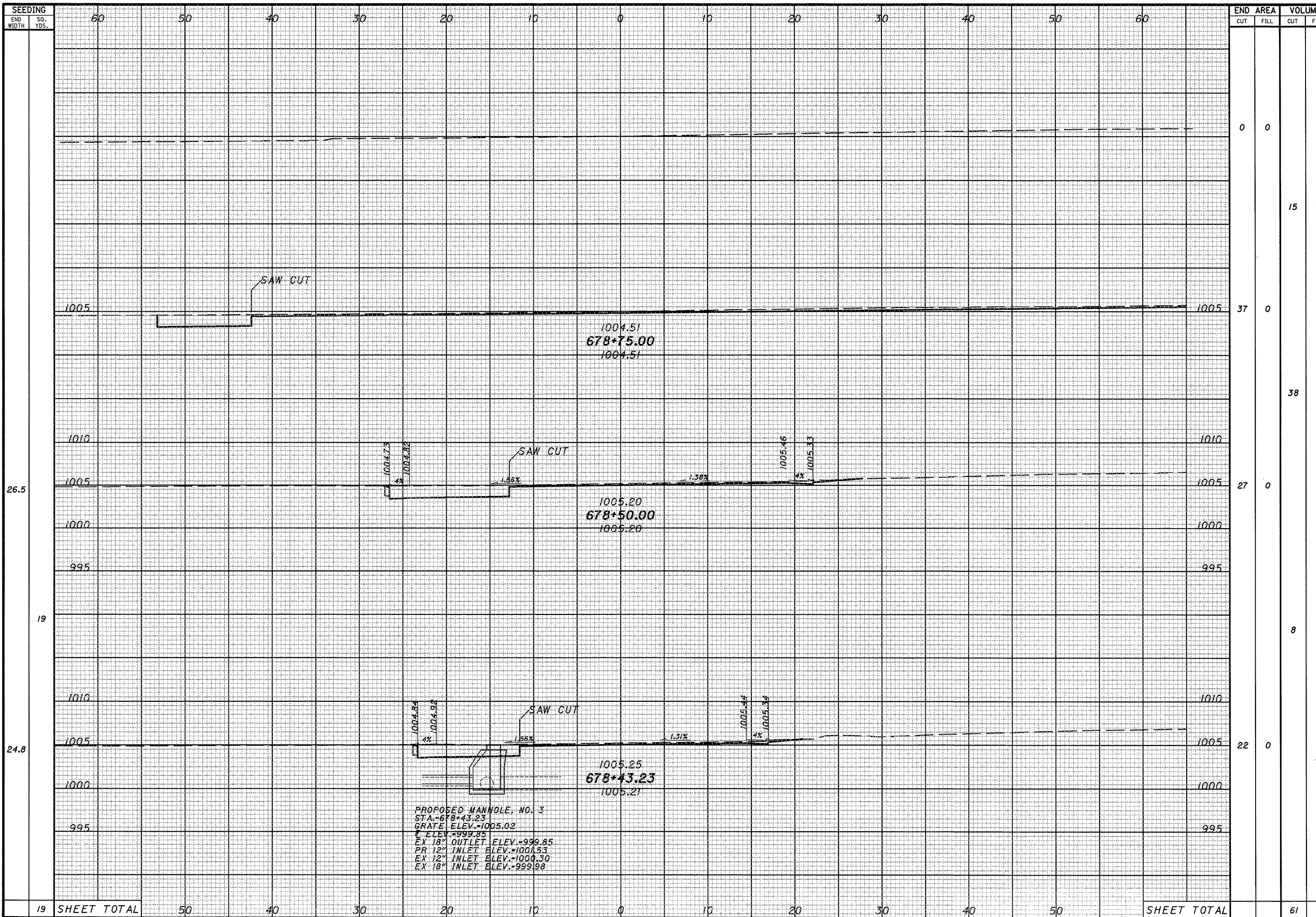
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 WORKSTATION: sdeer
 DATE: 11/3/2003



CALCULATED SJD
 CHECKED BAD
CROSS SECTIONS LITCHFILED CIRCLE
STA 678+22.83 - STA 678+30.55

MED - 18 - 0.00

DESIGN FILE: I:\projects\1831\CX100_83.dgn
 WORKSTATION: sdeer
 DATE: 11/3/2003



CROSS SECTIONS LITCHFIELD CIRCLE
 STA 678+43.23 - STA 679+00.00

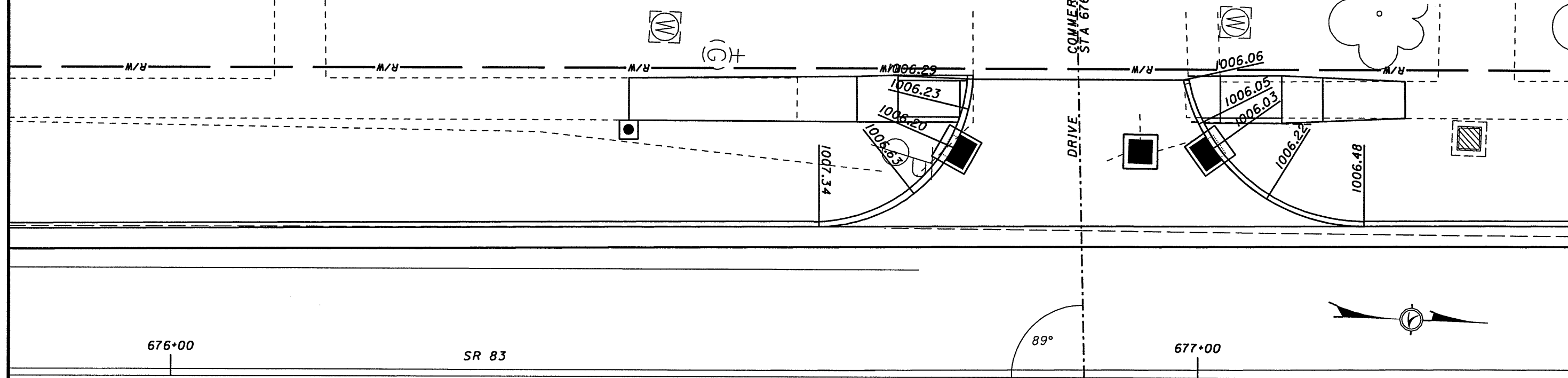
MED - 18 - 0.00

30
 118

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 WORKSTATION: sdeer
 DATE: 11/3/2003

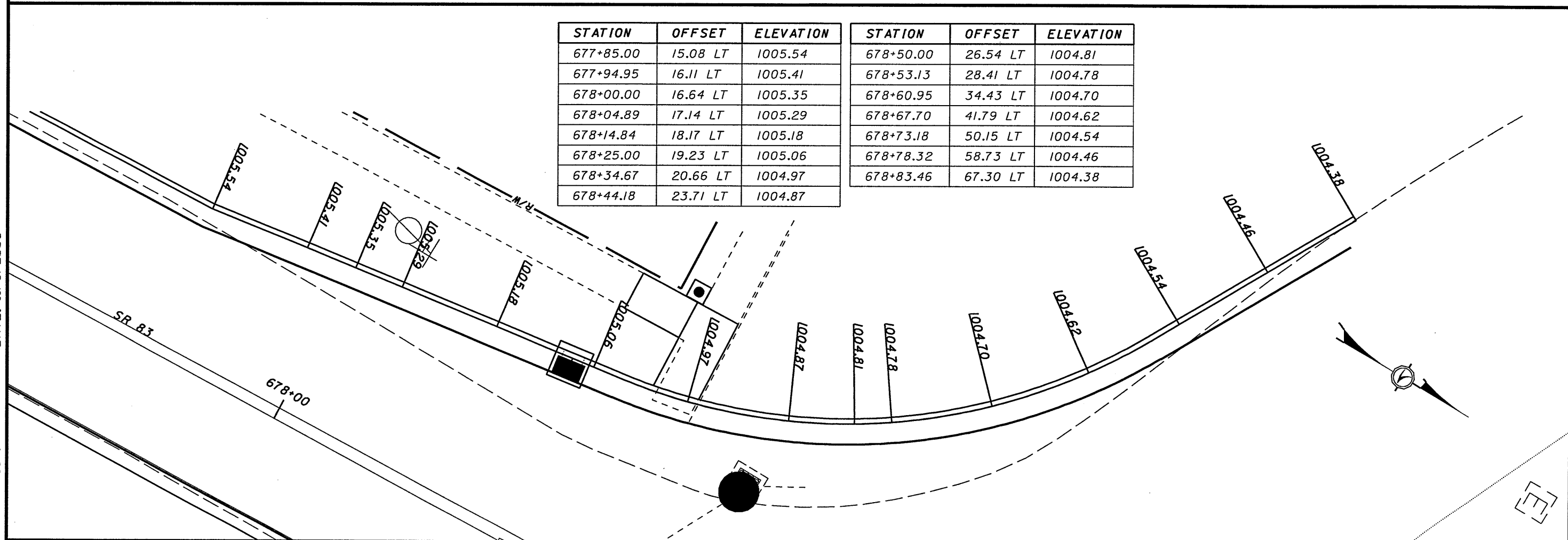
STATION	OFFSET	ELEVATION
676+63.09	14.62 LT	1007.34
676+72.36	17.87 LT	1006.63
676+76.17	22.40 LT	1006.20
676+77.63	26.15 LT	1006.23
676+78.02	29.00 LT	1006.29

STATION	OFFSET	ELEVATION
676+98.54	29.00 LT	1006.06
677+00.02	24.77 LT	1006.05
677+01.45	22.40 LT	1006.03
677+06.69	17.49 LT	1006.22
677+16.19	14.82 LT	1006.48



STATION	OFFSET	ELEVATION
677+85.00	15.08 LT	1005.54
677+94.95	16.11 LT	1005.41
678+00.00	16.64 LT	1005.35
678+04.89	17.14 LT	1005.29
678+14.84	18.17 LT	1005.18
678+25.00	19.23 LT	1005.06
678+34.67	20.66 LT	1004.97
678+44.18	23.71 LT	1004.87

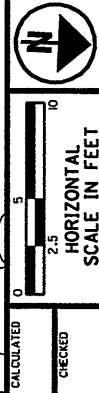
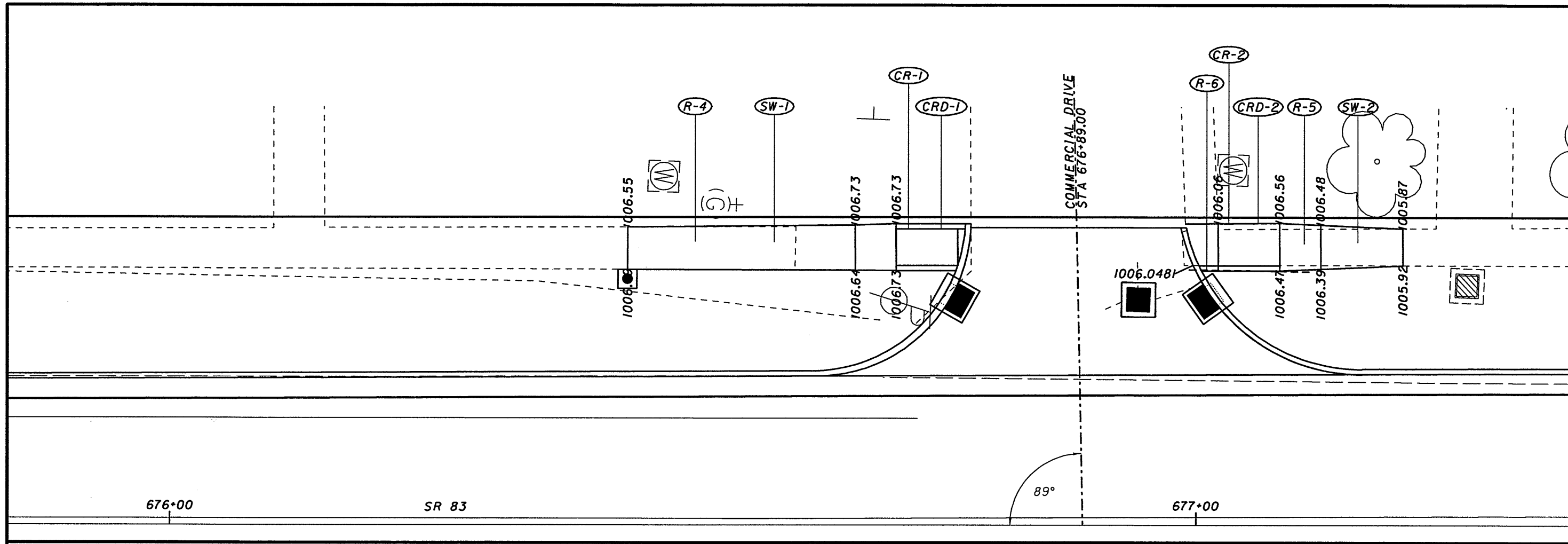
STATION	OFFSET	ELEVATION
678+50.00	26.54 LT	1004.81
678+53.13	28.41 LT	1004.78
678+60.95	34.43 LT	1004.70
678+67.70	41.79 LT	1004.62
678+73.18	50.15 LT	1004.54
678+78.32	58.73 LT	1004.46
678+83.46	67.30 LT	1004.38



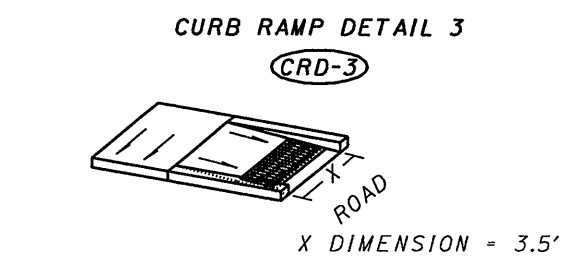
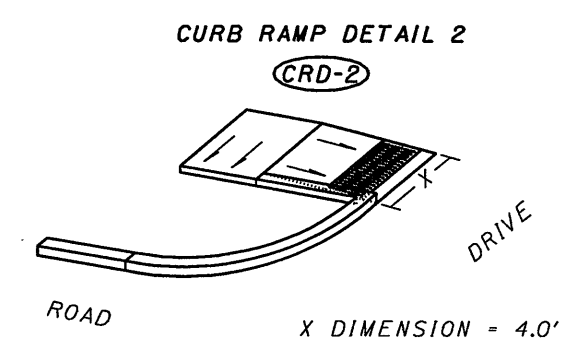
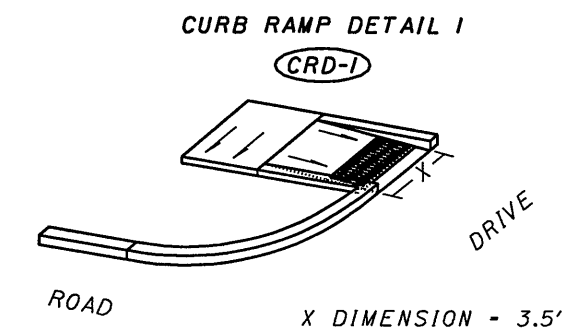
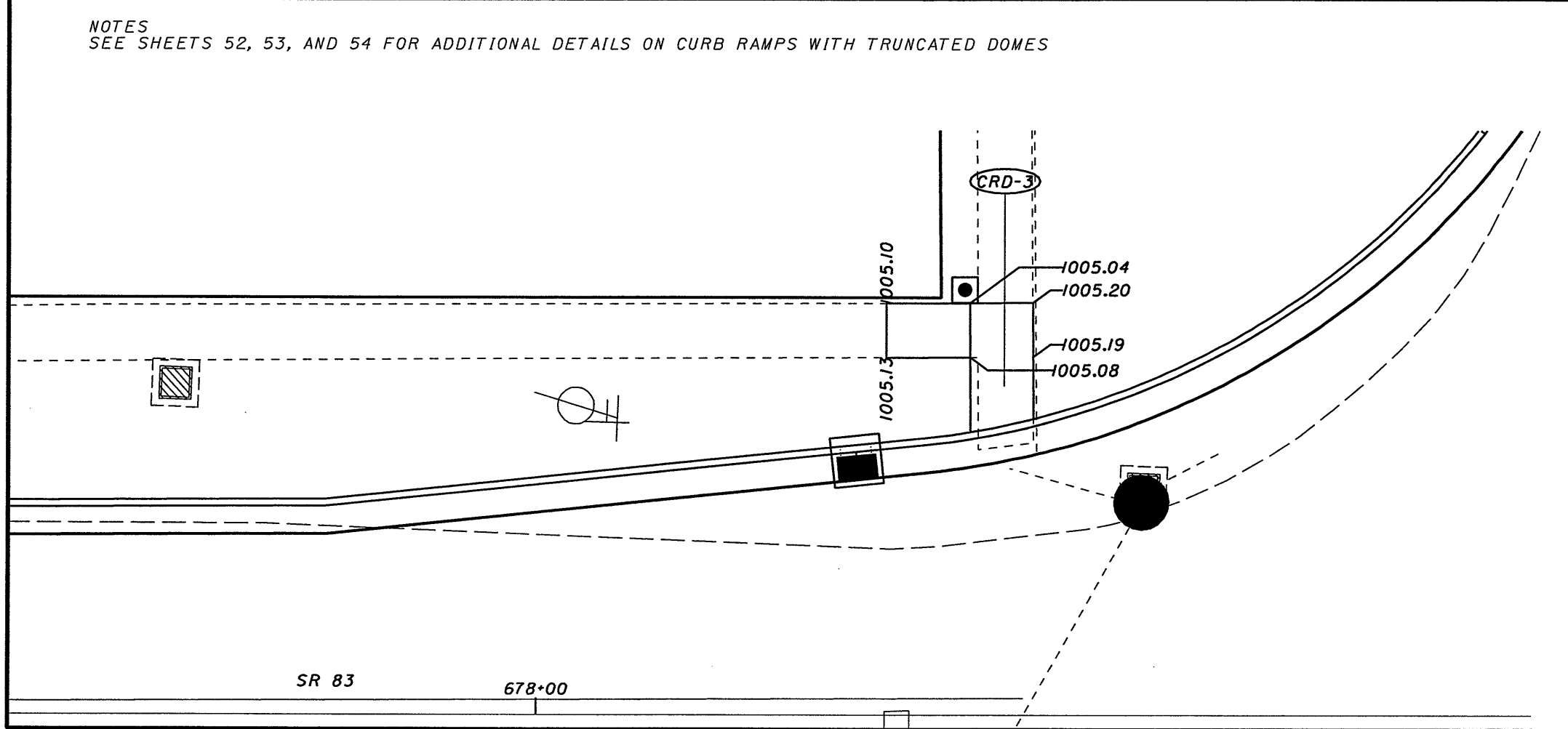
CALCULATED
 CHECKED
 HORIZONTAL SCALE IN FEET
 0 5 10
 2.5
 RADII DETAIL
 LITCHFIELD CIRCLE
 MED - 18 - 0.00
 31
 118

DESIGN FILE: i:\projects\183\183\SWDetail.dgn
 WORKSTATION: sdeer

DATE: 11/3/2003



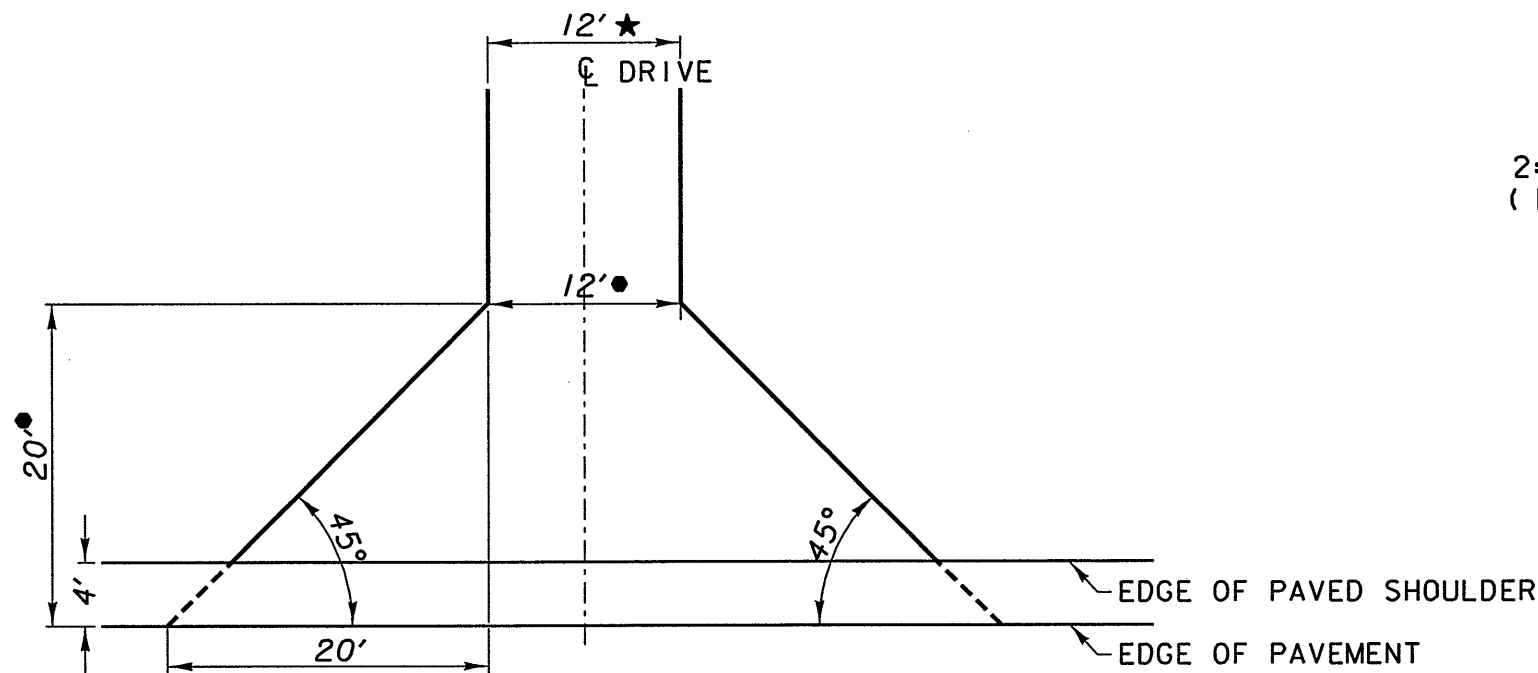
NOTES
 SEE SHEETS 52, 53, AND 54 FOR ADDITIONAL DETAILS ON CURB RAMPS WITH TRUNCATED DOMES



SIDEWALK DETAIL
 LITCHFIELD CIRCLE

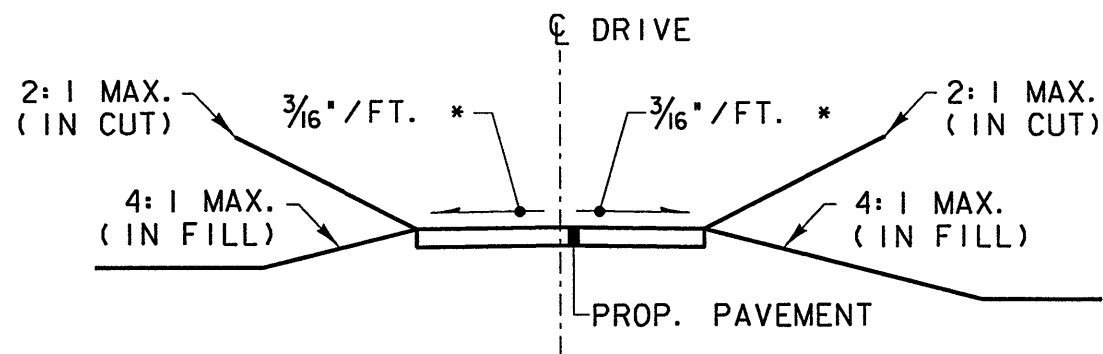
MED-18-0.00

32
 118



- FOR DETAILS NOT SHOWN, SEE STD. DRAWING BP-4.1
- ★ ACTUAL DIMENSIONS SHOWN ON THE PLANS
- UNLESS NOTED OTHERWISE ON THE PLANS

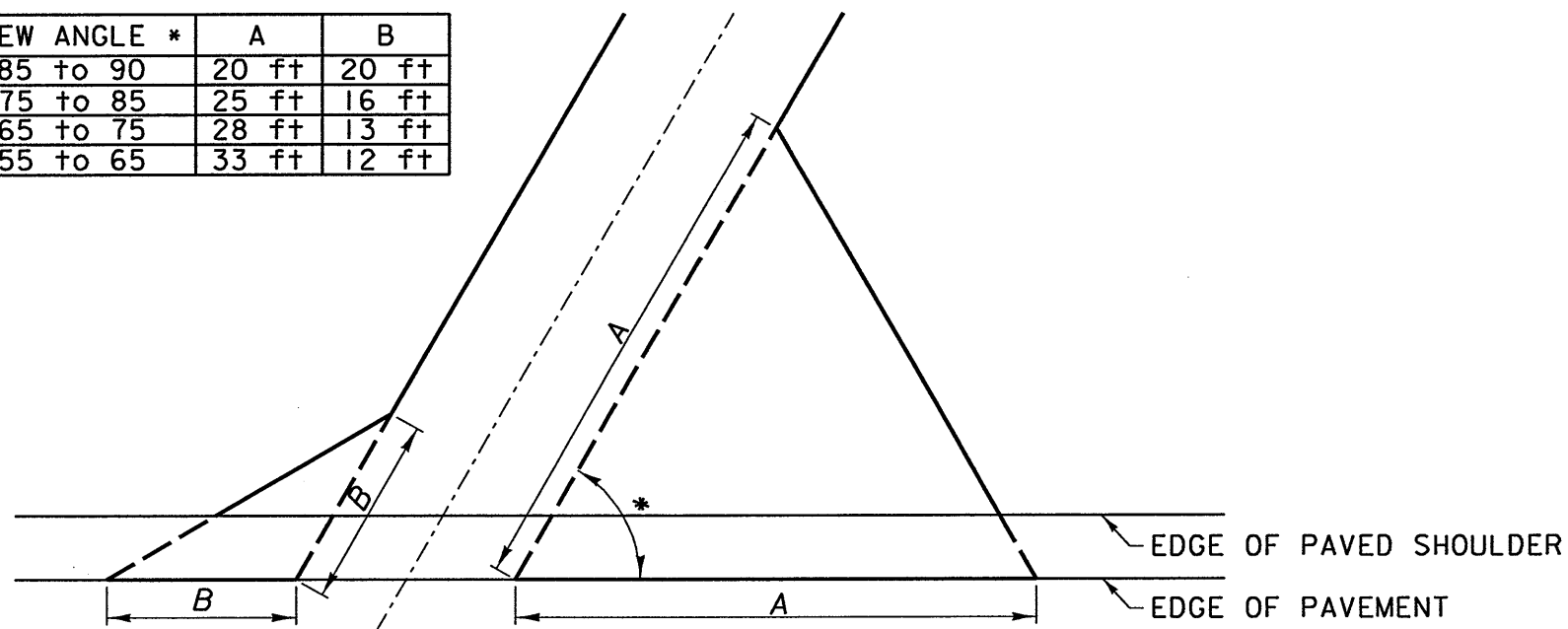
PLAN VIEW



* 3/8" / FT. CROSS SLOPE FOR AGGREGATE DRIVES

TYPICAL SECTION

SKEW ANGLE *	A	B
85 to 90	20 ft	20 ft
75 to 85	25 ft	16 ft
65 to 75	28 ft	13 ft
55 to 65	33 ft	12 ft



FOR DETAILS NOT SHOWN, SEE STD. DRAWING BP-4.1

SKEWED DRIVEWAY

COMMERCIAL DRIVE BUILDUP

- Ⓐ 8" - ITEM 452, 8" NON-REINFORCED CONCRETE PAVEMENT
- OR
- Ⓑ 1 1/4" - ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS)
- 4 3/4" - ITEM 301, ASPHALT CONCRETE BASE, PG 64-22 (DRIVEWAYS)

RESIDENTIAL DRIVE BUILDUP

- Ⓐ 6" - ITEM 452, 6" NON-REINFORCED CONCRETE PAVEMENT
- OR
- Ⓑ 1 1/2" - ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS)
- 3 3/4" - ITEM 301, ASPHALT CONCRETE BASE, PG 64-22 (DRIVEWAYS)

FIELD DRIVE BUILDUP

- Ⓐ 6" - ITEM 304, AGGREGATE BASE

**ITEM 301 - ASPHALT
CONCRETE BASE,
PG64-22 (DRIVEWAYS)**

HOUSE # 5563 (Residential)
16' X 10' = 160 SQ FT
(160) (0.313) /27 = 1.9 CU YD

HOUSE # 5701 (Residential)
22' X 10' = 220 SQ FT
(220) (0.313) /27 = 2.6 CU YD

BUSINESS # 6100 (Commercial)
60' X 10' = 600 SQ FT
(600) (0.396) /27 = 8.8 CU YD

HOUSE # 6152 (Residential)
16' X 10' = 160 SQ FT
(160) (0.313) /27 = 1.9 CU YD

HOUSE # 6216 (Residential)
19' X 10' = 190 SQ FT
(190) (0.313) /27 = 2.2 CU YD

HOUSE # 6239 (Residential)
16' X 10' = 160 SQ FT
(160) (0.313) /27 = 1.9 CU. YD.

Note: There are two drives at this residence. The Southern Drive at this location is to be left open. The Full Depth Pavement Replacement is to start just past the Southern drive and include the Northern drive at this location, start Full Depth at SLM 9.06.

HOUSE # 7225 (Residential)
16' X 10' = 160 SQ FT
(160) (0.313) /27 = 1.9 CU YD

HOUSE # 7296 (Residential)
17' X 10' = 170 SQ FT
(170) (0.313) /27 = 2.0 CU YD

HOUSE # 7559 (Residential)
16' X 10' = 160 SQ FT
(160) (0.313) /27 = 1.9 CU YD

BUSINESS # 7697 (Commercial)
60' X 10' = 600 SQ FT
(600) (0.396) /27 = 8.8 CU YD

HOUSE # 7712 (Residential)
18' X 10' = 180 SQ FT
(180) (0.313) /27 = 2.1 CU YD

HOUSE # 7755 (Residential)
20' X 10' = 200 SQ FT
(200) (0.313) /27 = 2.3 CU YD

HOUSE # 7756 (Residential)
16' X 10' = 160 SQ FT
(160) (0.313) /27 = 1.9 CU YD

HOUSE # 7777 (Residential)
16' X 10' = 160 SQ FT
(160) (0.313) /27 = 1.9 CU YD

TOTAL ITEM 301 = 42.1 CU YD

**ITEM 448 - ASPHALT CONCRETE SURFACE
COURSE, TYPE 1, PG64-22 (DRIVEWAYS)**

HOUSE # 5563 (Residential)
16' X 10' = 160 SQ FT
(160) (0.125) /27 = 0.7 CU YD

HOUSE # 5701 (Residential)
22' X 10' = 220 SQ FT
(220) (0.125) /27 = 1.0 CU YD

BUSINESS # 6100 (Commercial)
60' X 10' = 600 SQ FT
(600) (0.104) /27 = 2.3 CU YD

HOUSE # 6152 (Residential)
16' X 10' = 160 SQ FT
(160) (0.125) /27 = 0.7 CU YD

HOUSE # 6216 (Residential)
19' X 10' = 190 SQ FT
(190) (0.125) /27 = 0.9 CU YD

HOUSE # 6239 (Residential)
16' X 10' = 160 SQ FT
(160) (0.125) /27 = 0.7 CU. YD.

Note: There are two drives at this residence. The Southern Drive at this location is to be left open. The Full Depth Pavement Replacement is to start just past the Southern drive and include the Northern drive at this location, start Full Depth at SLM 9.06.

HOUSE # 7225 (Residential)
16' X 10' = 160 SQ FT
(160) (0.125) /27 = 0.7 CU YD

HOUSE # 7296 (Residential)
17' X 10' = 170 SQ FT
(170) (0.125) /27 = 0.8 CU YD

HOUSE # 7559 (Residential)
16' X 10' = 160 SQ FT
(160) (0.125) /27 = 0.7 CU YD

BUSINESS # 7697 (Commercial)
60' X 10' = 600 SQ FT
(600) (0.104) /27 = 2.3 CU YD

HOUSE # 7712 (Residential)
18' X 10' = 180 SQ FT
(180) (0.125) /27 = 0.8 CU YD

HOUSE # 7755 (Residential)
20' X 10' = 200 SQ FT
(200) (0.125) /27 = 0.9 CU YD

HOUSE # 7756 (Residential)
16' X 10' = 160 SQ FT
(160) (0.125) /27 = 0.7 CU YD

HOUSE # 7777 (Residential)
16' X 10' = 160 SQ FT
(160) (0.125) /27 = 0.7 CU YD

TOTAL ITEM 448 = 13.9 CU YD

ITEM 202 - PAVEMENT REMOVED

DRIVEWAYS

HOUSE # 7161 (Residential)
18' X 10' = 180 SQ FT
(180) / 9 = 20 SQ YD

HOUSE # 7251 (Residential)
17' X 10' = 170 SQ FT
(170) / 9 = 18.9 SQ YD

HOUSE # 7455 (Residential)
19' X 10' = 190 SQ FT
(190) / 9 = 21.1 SQ YD

HOUSE # 7823 (Residential)
20' X 10' = 200 SQ FT
(200) / 9 = 22.2 SQ YD

TOTAL ITEM 202 = 82.2 SQ YD

ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT

DRIVEWAYS

HOUSE # 7161 (Residential)
18' X 10' = 180 SQ FT
(180) / 9 = 20 SQ YD

HOUSE # 7251 (Residential)
17' X 10' = 170 SQ FT
(170) / 9 = 18.9 SQ YD

HOUSE # 7455 (Residential)
19' X 10' = 190 SQ FT
(190) / 9 = 21.1 SQ YD

HOUSE # 7823 (Residential)
20' X 10' = 200 SQ FT
(200) / 9 = 22.2 SQ YD

TOTAL ITEM 452 = 82.2 SQ YD

NOTE:

THE QUANTITIES FOR DRIVEWAYS ARE FOR THE FULL DEPTH PAVEMENT REPLACEMENT AREA'S ON SR 94. IF THESE DRIVES HAVE TO BE REPLACED, THEY WILL BE DONE AS PER OUR DRIVE DETAILS SHEET # 33. ALL JOINTS ARE TO BE SAW CUT. ACCESS TO THESE DRIVES FOR HOMEOWNERS IS TO BE MAINTAINED AT ALL TIMES. CONTACT EACH HOMEOWNER TO MAKE THEM AWARE OF THE WORK SCHEDULE, AS PER THE NOT NOTES.

ITEM SPECIAL. MAILBOX SUPPORT SYSTEM

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF EXISTING NON-STANDARD MAILBOX SUPPORTS AND FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED HARDWARE IN ACCORDANCE WITH THE DETAILS SHOWN, AND ATTACHING AN OWNER SUPPLIED MAILBOX, AT LOCATIONS DETERMINED BY THE ENGINEER.

IN ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE BOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION. SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO MAILBOXES MAY BE MOUNTED ON A SINGLE POST. [HARDWARE SHALL BE COMMERCIAL GRADE GALVANIZED STEEL.]

WOOD POSTS SHALL BE NOMINAL 4 IN. x 4 IN. (S4S) OR 4 1/2 IN. DIAMETER ROUND, AND CONFORM TO 710.14. STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 IN. I.D., AND CONFORM TO AASHTO M 181.

POSTS SHALL BE SET AS PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK WITH THE LOCAL POST MASTER AND NOTIFYING THE PROPERTY OWNERS PRIOR TO WORK.

GROUP MAILBOX SUPPORTS SHALL BE PLACED ON 3 FT. CENTERS AND THE TURNOUT LENGTHENED TO ACCOMMODATE THE GROUPING.

WHERE GUARDRAIL EXISTS, MAILBOXES AND THEIR SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL. SUPPORTS MUST STILL MEET THE BREAKAWAY REQUIREMENTS LISTED ABOVE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DESCRIBED ABOVE.

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, SINGLE
PART A - S.R. 18 1.00 SLM - 1 EACH
PART B - S.R. 94 = 1 EACH

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, DOUBLE
PART A - S.R. 18 6.72 SLM = 3 EACH

MAILBOXES

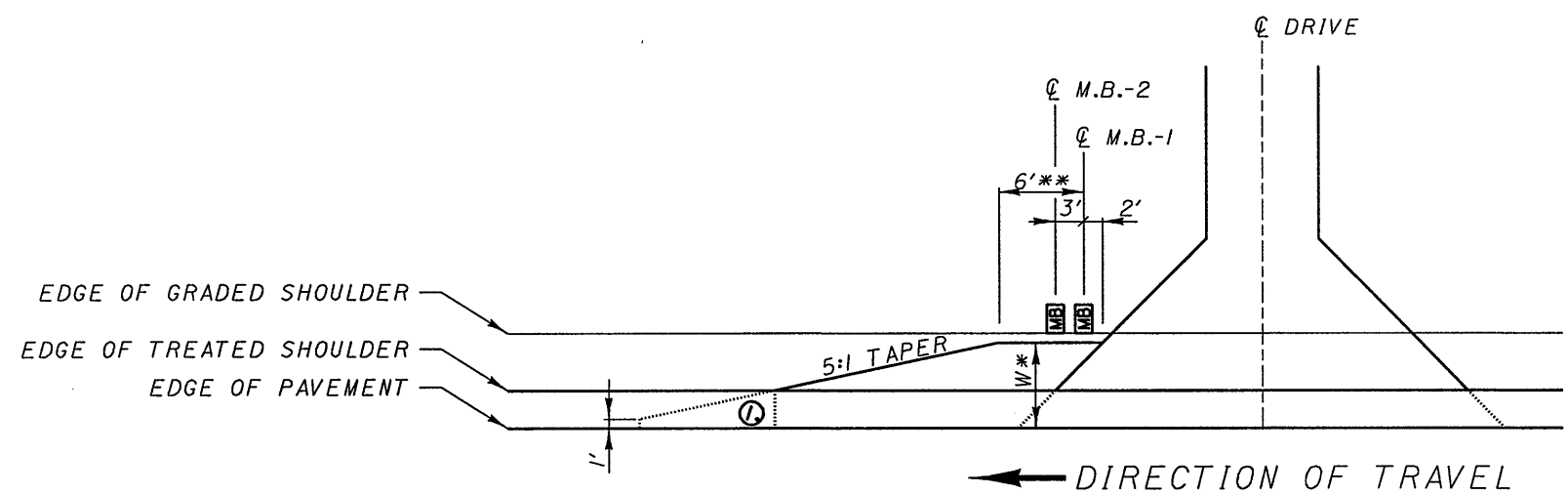
THE MAILBOX APPROACHES SHALL BE PAVED WITH 0.75 IN. OF ITEM 442 INTERMEDIATE COURSE ON PART A AND 1.75" ON PART B. USE 1.5 IN. ON PARTS A & B OF ITEM 442 SURFACE COURSE. THEY SHALL CONFORM AS MUCH AS PRACTICAL TO STANDARD DRAWING BP-4.1 OR AS DIRECTED BY THE ENGINEER.

GRADING SHALL BE PERFORMED IN THESE AREAS TO OBTAIN A BASE WHICH WILL ALLOW THE FINISHED GRADE TO BE FLUSH WITH ADJACENT PAVEMENT. A QUANTITY OF ITEM 617 SHOULDER RECONDITIONING, MISC.: COMPACTED AGGREGATE HAS BEEN PROVIDED FOR AREAS WHERE THE SHOULDER IS LOW PRIOR TO GRADING AND/OR LOW AREAS CAUSED BY THE REMOVAL OF UNSUITABLE MATERIAL. QUANTITIES TO PERFORM THIS WORK HAVE BEEN INCLUDED IN THE GENERAL SUMMARY AND ARE ESTIMATED AS FOLLOWS.

ITEM 209 - GRADING MAILBOX APPROACHES:
PART A - S.R. 18 - 127 EACH
PART B - S.R. 94 - 5 EACH

ITEM 617 - COMPACTED AGGREGATE, TYPE A, AS PER PLAN
PART A - S.R. 18 - 127 CU YD
PART B - S.R. 94 - 5 CU YD

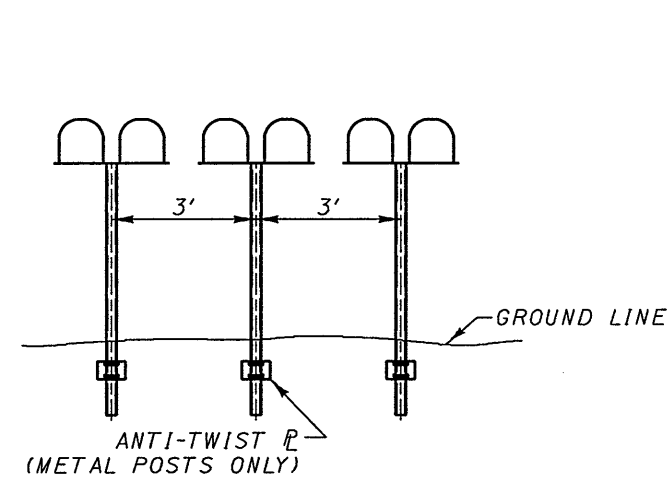
FOR DETAILS NOT SHOWN SEE STANDARD DRAWING BP-4.1



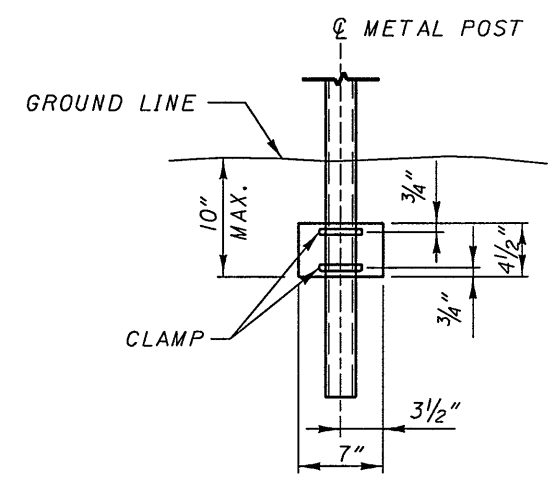
① END MAILBOX TURNOUT AT EDGE OF TREATED SHOULDER OR 1' WHICH EVER IS GREATER.

* WHERE MAILBOX POSTS ARE BEHIND GUARDRAIL, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL. WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 6 FT. MINIMUM, EXCEPT WHERE FIELD CONDITIONS WILL NOT PERMIT.

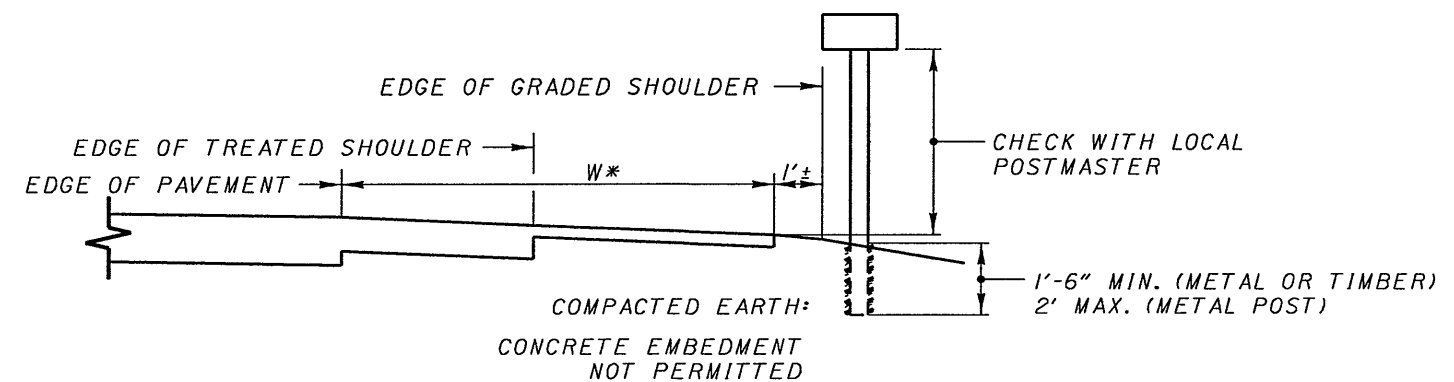
** 6' FOR SINGLE MAILBOX SUPPORT, ADD 3 FT. FOR EACH ADDITIONAL MAILBOX



GROUP MAILBOX INSTALLATION



ANTI-TWIST PLATE



CROSS SECTION / ELEVATION VIEW

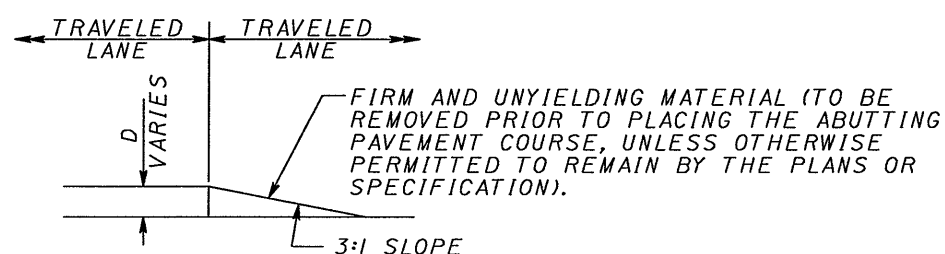
DESIGN FILE: i:\projects\18311\mailbox.dgn
WORKSTATION: jfinch DATE: 11/06/03

GENERAL NOTES

- IT IS INTENDED THAT THIS DRAWING BE USED FOR TREATMENT OF DROP-OFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS, AND THAT ARE NOT OTHERWISE PROVIDED FOR IN THE CONSTRUCTION PLANS. THE SUGGESTED TREATMENTS ARE INTENDED FOR HIGH VOLUME PROJECTS THAT WILL LAST AT LEAST SEVEN DAYS AND HAVE AN ACTIVE WORK ZONE 1 MILE (1.6 KM) OR LESS IN LENGTH. FOR GUIDANCE ON THE USE OF THIS SHEET, SEE L&D MANUAL VOLUME ONE, SECTION 500. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED HEREON, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614-MAINTAINING TRAFFIC.
- WHILE THE NEED FOR CERTAIN ADVISORY SIGNING IS NOTED HEREON, IT IS NOT INTENDED THAT THIS BE INDICATIVE OF ALL SIGNING THAT MAY BE REQUIRED TO ADVISE OR WARN MOTORISTS. ALL REQUIREMENTS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) MUST BE FULFILLED.
- IN URBAN OR OTHERWISE HEAVILY DEVELOPED AREAS WHERE PEDESTRIANS AND/OR BICYCLISTS MAY BE PRESENT IN SIGNIFICANT NUMBERS, ADDITIONAL SIGNING AND PROTECTIVE MEASURES OTHER THAN THOSE SHOWN HEREON MAY BE REQUIRED.
- THE DROP-OFF TREATMENT SELECTED FOR USE AT ANY GIVEN LOCATION SHALL BE AS APPROPRIATE FOR THE PREVAILING CONDITIONS AT THE SITE.
- WHERE CONCRETE BARRIER IS SPECIFIED, IT SHALL BE IN ACCORDANCE WITH SCD RM-4.2 AND ITEM 622.
- WHEN DRUMS ARE SPECIFIED FOR A DROP-OFF CONDITION, A MINIMUM NUMBER OF FOUR DRUMS SHALL BE USED. SPACING SHALL BE AS INDICATED IN THE PLANS OR AS SPECIFIED IN THE OMUTCD.
- WHEN OW-151 (LOW SHOULDER) SIGNS OR OW-155 (SHOULDER DROP-OFF) SIGNS OR OW-171 (UNEVEN LANES) SIGNS ARE REQUIRED, THEY SHALL BE PLACED 750' (230 M) IN ADVANCE OF THE CONDITION, ON ALL INTERSECTING ENTRANCE RAMP WITHIN THE LIMITS OF THE CONDITION AND IMMEDIATELY BEYOND ALL INTERSECTING ROADWAYS WITHIN THE LIMITS OF THE CONDITION. WHEN THE DROP-OFF CONDITION EXTENDS MORE THAN 0.5 MILE (800M), ADDITIONAL SIGNS SHOULD BE ERECTED AT INTERVALS OF 1.0 MILE (1600 M) OR LESS.
- FOR LOCATIONS, SUCH AS AT RAMP, LANE SHIFTS, LANE CLOSURES, ETC., WHERE TRAFFIC IS REQUIRED TO NEGOTIATE A DIFFERENCE IN ELEVATION BETWEEN PAVEMENTS, A 3:1 SLOPE TREATMENT SIMILAR TO THE OPTIONAL WEDGE TREATMENT SHALL BE PROVIDED.
- PORTABLE CONCRETE BARRIER SHALL BE PLACED ON THE SAME LEVEL AS THE TRAFFIC SURFACE AND SHALL NOT ENCRANCH ON LANE WIDTH(S) DESIGNATED AS THE MINIMUM REQUIRED FOR TRAFFIC USE. WHERE DRUMS ARE USED, AND THEIR PRESENCE WOULD REDUCE TRAVELED LANE WIDTHS TO LESS THAN 10' (3.0M), DRUMS MAY BE PLACED ON THE OPPOSITE LEVEL FROM THAT OF TRAFFIC PROVIDED THE DROP-OFF DEPTH DOES NOT EXCEED 5" (125) AND APPROVAL IS GRANTED BY THE PROJECT ENGINEER.
- PAVEMENT REPAIRS (OR SIMILAR WORK):
 - LENGTHS GREATER THAN 60' (18 M) OR LESS-UTILIZE APPROPRIATE TREATMENT FROM CONDITION 1.
 - LENGTHS OF 60' (18 M) OR LESS - REPAIRS SHALL BE EFFECTED IN ACCORDANCE WITH CMS 255.08. DRUMS MAY BE USED AS A SEPARATOR ADJACENT TO THE TRAVELED LANE.

OPTIONAL WEDGE TREATMENT (MILLING OR RESURFACING)

- THIS TREATMENT MAY BE USED WHEN PERMITTED FOR CONDITION I ONLY.
- OW-171 SIGN REQUIRED

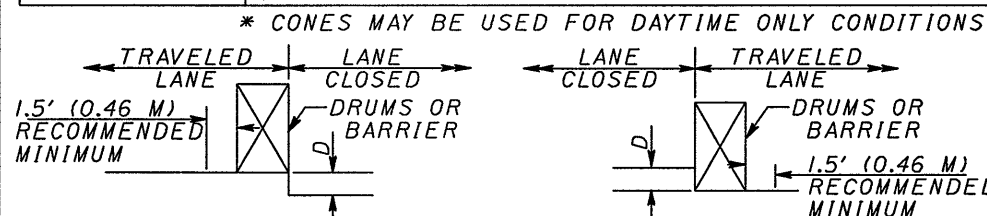


CONDITION I

DROP-OFFS BETWEEN TRAVELED LANES

- THESE TREATMENTS ARE TO BE USED FOR RESURFACING, PAVEMENT PLANING, EXCAVATION, ETC. BETWEEN OR WITHIN TRAVELED LANES.

D	TREATMENT
≤1/2" (≤40)	ERECT OW-171 SIGN
1/2"-3" (40-75)	1. LANE CLOSURE UTILIZING DRUMS* AS SHOWN BELOW OR 2. OPTIONAL WEDGE TREATMENT
>3"-5" (>75-125)	LANE CLOSURE UTILIZING DRUMS AS SHOWN BELOW
>5" (>125)	LANE CLOSURE UTILIZING PORTABLE CONCRETE BARRIER AS SHOWN BELOW



CONDITION II

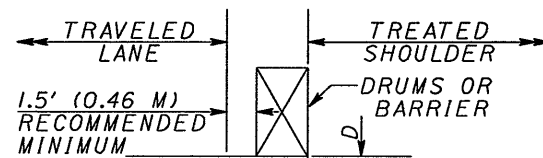
DROP-OFFS WITHIN GRADED SHOULDER AREA

THE TREATMENTS INDICATED BELOW ARE FOR USE IN CONJUNCTION WITH RESURFACING, PLANING, OR EXCAVATIONS WITHIN THE GRADED SHOULDER AREA.

THE GRADED SHOULDER AREA IS THAT FLAT OR GRADUALLY SLOPING AREA BETWEEN THE EDGE OF A NORMALLY TRAVELED LANE AND THE MORE STEEPLY SLOPING DITCH FORESLOPE OR EMBANKMENT SLOPE. ITS SURFACE MAY BE SOIL OR TURF, AND/OR IT MAY BE INCLUSIVE OF A "TREATED" AREA (IMPROVED WITH MAXIMUM WIDTH SHALL BE CONSIDERED TO BE 12' (3.6 M).

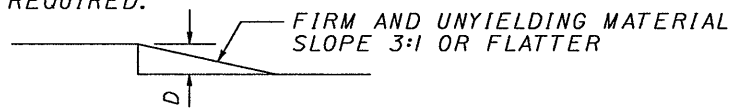
D	TREATMENT
≤1/2" (≤40)	ERECT OW-155 SIGNS
>1/2"-5" (>40-125)	1. IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING DRUMS AS SHOWN BELOW OR 2. IF MINIMUM LANE WIDTH* REQUIREMENTS CANNOT BE MET, CLOSE ADJACENT LANE UTILIZING DRUMS OR 3. OPTIONAL SHOULDER TREATMENT
>5"-12" (>125-305) DAYLIGHT ONLY	IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING DRUMS AS SHOWN BELOW.
>5"-24" (>125-610)	1. IF MINIMUM LANE WIDTH* REQUIREMENTS CAN BE MET, MAINTAIN LANES UTILIZING PORTABLE CONCRETE BARRIER AS SHOWN BELOW. OR 2. IF MINIMUM LANE WIDTH* REQUIREMENTS CANNOT BE MET, CLOSE ADJACENT LANE UTILIZING DRUMS.
>5"-24" (>125-610)	LANE CLOSURE UTILIZING PORTABLE CONCRETE BARRIER AS SHOWN BELOW

*MINIMUM LANE WIDTHS SHALL BE 10' (3.0 M) UNLESS OTHERWISE SPECIFIED IN THE PLANS.



OPTIONAL SHOULDER TREATMENT

- THIS TREATMENT MAY NOT BE USED WITHIN A BITUMEN SHOULDER WHERE A HOT LONGITUDINAL JOINT PER CMS 401.15 IS REQUIRED.
- OW-151 SIGNS REQUIRED.



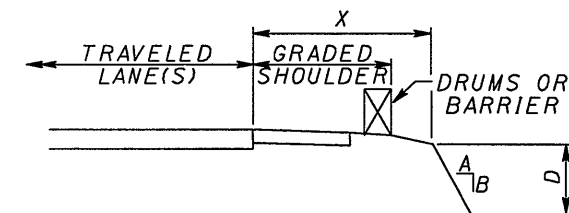
CONDITION III

DROP-OFFS BEYOND GRADED SHOULDER OR BACK OF CURB

- SEE NOTE 2 UNDER CONDITION II.
- USE CHART A OR B BELOW, AS APPLICABLE.

CHART A

USE FOR: 1. UNCURBED FACILITIES.
2. CURBED FACILITIES, WHERE:
A. CURBS ARE LESS THAN 6" (150) IN HEIGHT.
B. CURBS ARE 6" (150) OR GREATER IN HEIGHT AND THE LEGAL SPEED IS GREATER THAN 40 MPH (70 KM/H)

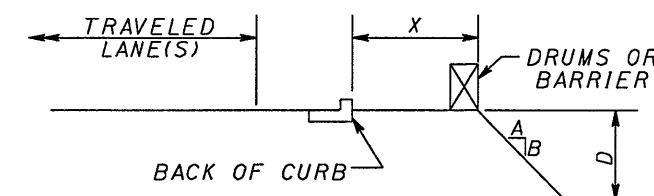


X	D	A/B	Treatment Required	
			Day	Night
0-4' (0-1.2 M)	ANY	ANY	(A)	(A)
4'-30' (1.2 M-9.1 M)	ANY	3:1 OR FLATTER	NONE	NONE
4'-12' (1.2 M-3.6 M)	≤3" (≤75)	STEEPER THAN 3:1	NONE	NONE
4'-12' (1.2 M-3.6 M)	>3"-≤12" (>75-≤305)	STEEPER THAN 3:1	DRUMS	DRUMS
4'-12' (1.2 M-3.6 M)	>12" (>305)	STEEPER THAN 3:1	DRUMS	BARRIER
>12'-20' (>3.6 M-6.1 M)	>12" (>305)	STEEPER THAN 3:1	NONE	NONE
>12'-20' (>3.6 M-6.1 M)	>12"-≤24" (>305-≤610)	STEEPER THAN 3:1	DRUMS	DRUMS
>12'-20' (>3.6 M-6.1 M)	>24" (>610)	STEEPER THAN 3:1	DRUMS	BARRIER
>20'-30' (>6.1 M-9.1 M)	<24" (<610)	STEEPER THAN 3:1	NONE	NONE
>20'-30' (>6.1 M-9.1 M)	>24" (>610)	STEEPER THAN 3:1	DRUMS	BARRIER
>30' (>9.1 M)	ANY	ANY	NONE	NONE

(A) USE TREATMENT SPECIFIED UNDER CONDITION II

CHART B

USE FOR: CURBED FACILITIES, WHERE THE CURB IS 6" (150) OR GREATER IN HEIGHT AND THE LEGAL SPEED IS 40 MPH (70 KM/H) OR LESS.



X	D	A/B	TREATMENT REQUIRED	
			DAY	NIGHT
0-10' (0-3.0 M)	<12" (<305)	ANY	NONE	DRUMS
0-10' (0-3.0 M)	>12" (>305)	ANY	DRUMS	DRUMS
>10' (>3.0 M)	ANY	ANY	NONE	NONE

NOTE: ALL METRIC DIMENSIONS (IN BRACKETS ()) ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

DATE: 11/05/03

WORKSTATION: jff/neh

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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. IM. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE GUARDRAIL, INSTALL EMBANKMENT, GRADE AND REINSTALL GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED ON THIS PROJECT UNTIL SUCH TIME THAT THE ENGINEER IS ASSURED OF SAID COMPLIANCE.

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.

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.

ITEM 201 - CLEARING AND GRUBBING

USE THIS ITEM AT THE LOCATIONS INDICATED IN THE PLANS AND AT LOCATIONS DIRECTED BY THE ENGINEER. THIS WORK SHALL CONSIST OF CLEARING ALL TREES AND STUMPS UNDER 12" IN SIZE 10' FROM THE FACE OF GUARDRAIL, BUT NOT THE VEGETATION. STUMPS CAN BE LEFT FLUSH WITH THE GROUND LEVEL. DISPOSE OF ALL MATERIAL ACCORDING TO 105.16 AND 105.17. ALL ABOVE WORK SHALL BE PAID FOR AS ITEM 201, LUMP, CLEARING AND GRUBBING.

ITEM 202 ANCHOR ASSEMBLY REMOVED, TYPE A

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING TYPE A, ANCHOR ASSEMBLY INCLUDING ALL POSTS, HARDWARE, RAIL ELEMENTS, AND CONCRETE ANCHORS. ALL ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF.

THE EXISTING CONCRETE ANCHOR AND CONCRETE AT POSTS SHALL BE REMOVED ENTIRELY. ALL HOLES REMAINING AFTER REMOVAL SHALL BE FILLED WITH GRANULAR MATERIAL OR EXCESS MATERIAL RESULTING FROM GUARDRAIL CONSTRUCTION. ALL FILL MATERIAL SHALL BE THOROUGHLY COMPACTED AND LEVELED, AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 202, ANCHOR ASSEMBLY REMOVED, TYPE A.

ITEM 203. EMBANKMENT, AS PER PLAN

USE THIS ITEM AT THE LOCATIONS INDICATED IN THE PLANS AND AT LOCATIONS DIRECTED BY THE ENGINEER. PLACE EMBANKMENT TO PROVIDE A SUITABLE AREA TO CONSTRUCT GUARDRAIL AND THE STRUCTURAL INTEGRITY OF THE ROADWAY SHOULDER.

SCALP AREAS WHERE EMBANKMENT MATERIALS ARE TO BE PLACED. THE REQUIREMENTS FOR BENCHING MAY BE WAIVED. LIMIT THE DEPTH OF EMBANKMENT LAYERS TO EIGHT (8) INCHES IN THICKNESS. USE A METHOD OF COMPACTION AND EQUIPMENT SUFFICIENT TO PROVIDE 80% OF REQUIRED COMPACTION AS PER CMS TABLE 203.07-1.

AFTER THE EMBANKMENT HAS BEEN PLACED, THE AREAS SHALL BE FERTILIZED, SEEDED, MULCHED, AND WATERED AS PER ITEM 659 AND INCLUDED COST IN THIS ITEM FOR PAYMENT.

THE DEPARTMENT WILL MEASURE EMBANKMENT MATERIAL BY THE NUMBER OF CUBIC YARDS MEASURED BY LOOSE VOLUME IN THE CARRIER AT THE WORK SITE, IN LIEU OF THE REQUIREMENTS OF 203.09. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR THE ABOVE WORK AS ITEM 203, CU. YD., EMBANKMENT, AS PER PLAN.

ITEM 209 - RESHAPING UNDER GUARDRAIL:

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

THIS WORK SHALL BE COMPLETED 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 THE GUARDRAIL SHALL BE GRADED AND RESHAPED TO PROVIDE AN AREA THAT HAS A SLOPE OF 10:1 MAX.

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 FT. WITH ITEM 209, RESHAPING UNDER GUARDRAIL, 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 GUARDRAIL MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL

WHERE DESIGNATED ON THE PLAN, THE EXISTING TYPE 5 GUARDRAIL SHALL BE RAISED OR LOWERED ON THE EXISTING WOOD POSTS AS PER STANDARD DRAWING GR-2. IM SO AS TO OBTAIN THE STANDARD 27.80 IN. HEIGHT. THE RAIL SHALL BE REATTACHED TO THE POSTS USING NEW POST BOLTS. FOR RAIL THAT REQUIRES BEING LOWERED THE POSTS SHALL BE CUT OR TRIMMED AND THE TOPS SHALL BE TREATED.

THE RAIL SHALL BE DISMANTLED ONLY TO THE EXTENT NECESSARY TO FIELD BORE NEW BOLT HOLES IN THE WOOD POSTS, AND TO RECONNECT THE RAIL AND BLOCK TO EXISTING POSTS.

THE EXISTING TYPE "A" ANCHOR ASSEMBLIES THAT ARE TO REMAIN SHALL NOT BE ADJUSTED. THE LAST RAIL ELEMENT SHALL BE TRANSITIONED TO MEET THESE ASSEMBLIES.

THE EXISTING TYPE "E" ANCHOR ASSEMBLIES THAT ARE TO REMAIN SHALL BE ADJUSTED AS DESCRIBED ABOVE. THE EXTRUDER SHALL ALSO BE ADJUSTED ON THE FIRST POST TO MATCH THE NEW RAIL HEIGHT. ALL WORK REQUIRED TO ADJUST EXISTING "E" ANCHORS SHALL BE INCLUDED IN THIS ITEM FOR PAYMENT.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID FOR ITEM 606, GUARDRAIL MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL, WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

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GUARDRAIL GENERAL NOTES

MED-18-0.00

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DATE: 11/03/03

WORKSTATION: jfinch

ITEM 606 - ANCHOR ASSEMBLY, TYPE B-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

- 1) THE SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330.545.4373).

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37' -6" (11.43 m), INCLUSIVE OF THREE 12' -6" (3.81 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
SS444 SS444M	Slotted Rail Terminal Post Layout and Erection Details SRT-350 (12.5, 8 Post)	7/12/99 Rev. 1 7/12/99	8/27/99
SS425M	Slotted Rail Terminal SRT-350 Post Layout and Erection Details (12.5, 9 Post)	6/21/97 Rev. 1	3/6/98

- 2) THE FLEAT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224 (TELEPHONE: 330.346.0721).

THE LENGTH OF THE FLEAT-350 IS CONSIDERED TO BE 37' -6" (11.43 m), INCLUSIVE OF THREE 12' -6" (3.81 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
FLT-M	Flared Energy Absorbing Terminal (FLEAT-350) Assembly	4/16/98	7/31/98

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 27 3/4 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.

THE FACE OF THE TYPE B-98 IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROXIMATELY 36 IN. WIDE X 12 IN. HIGH (915 mm W x 305 mm H) FOR THE SRT-350 AND 14 IN. WIDE X 20 IN. HIGH (350 mm W x 500 mm H) FOR THE FLEAT-350.

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

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

- 1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, 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	ET-2000 (1997) PLAN, ELEVATION & SECTIONS	6/20/97	3/6/98
SS142	ET-2000 PLUS 50' -0" PLAN, ELEVATION & SECTION 25' -0" RAIL, SLEEVE W/PL POSTS 1-4	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	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	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 27 3/4 INCHES (706) FORM 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, 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.

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GUARDRAIL GENERAL NOTES

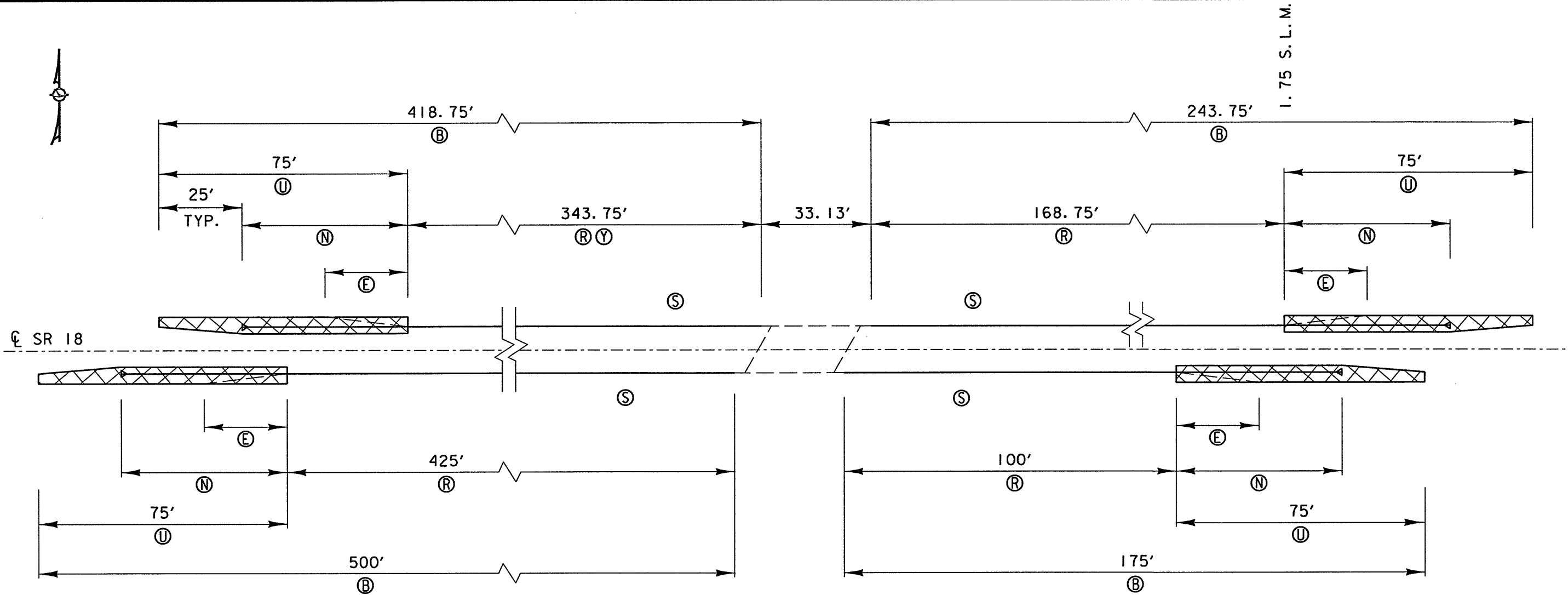
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DATE: 11/05/03

WORKSTATION: jfinch

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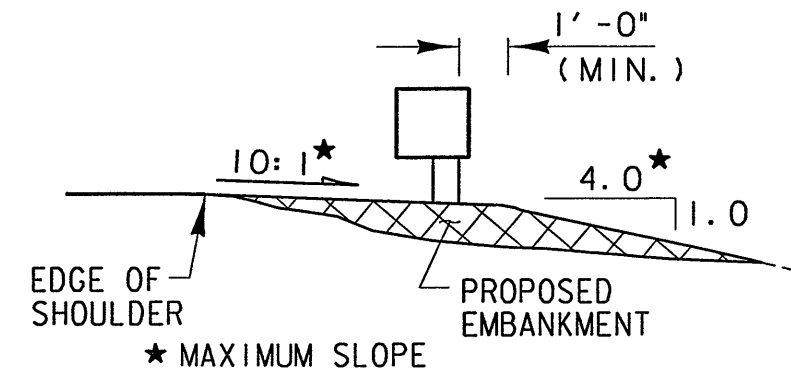


NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEET 39.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
ⓑ	201	CLEARING AND GRUBBING	LUMP			LUMP
ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
ⓧ	203	EMBANKMENT, AS PER PLAN	CU YD	15	15	30
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	150	150	300
Ⓨ	606	GUARDRAIL POST	EACH	6		6
Ⓝ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	2	2	4
Ⓡ	606	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL	FT	512.5	525	1037.5
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	8	8	16

TYPICAL SECTION "E-98"



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

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GUARDRAIL DETAIL
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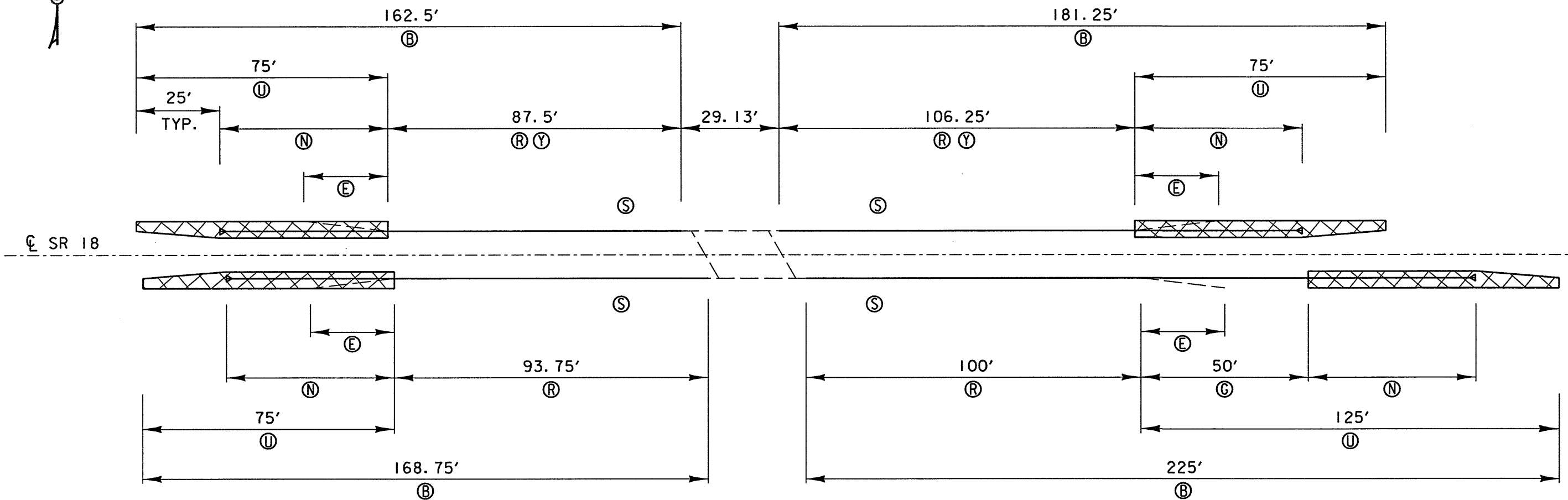
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DATE: 11/05/03

WORKSTATION: jfinch

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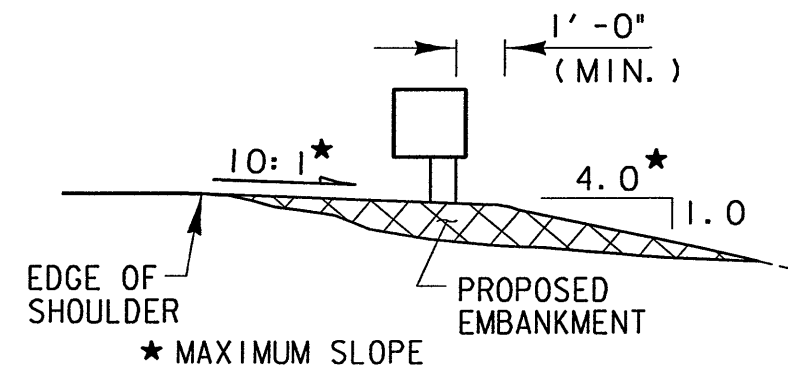


NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEET 39.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E-98" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
ⓑ	201	CLEARING AND GRUBBING	LUMP			LUMP
ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
ⓧ	203	EMBANKMENT, AS PER PLAN	CU YD	15	15	30
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	150	200	350
Ⓒ	606	GUARDRAIL, TYPE 5	FT		50	50
Ⓨ	606	GUARDRAIL POST	EACH	6		6
Ⓝ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	2	2	4
Ⓡ	606	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL	FT	193.75	193.75	387.5
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	4	5	9

TYPICAL SECTION "E-98"



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

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GUARDRAIL DETAIL
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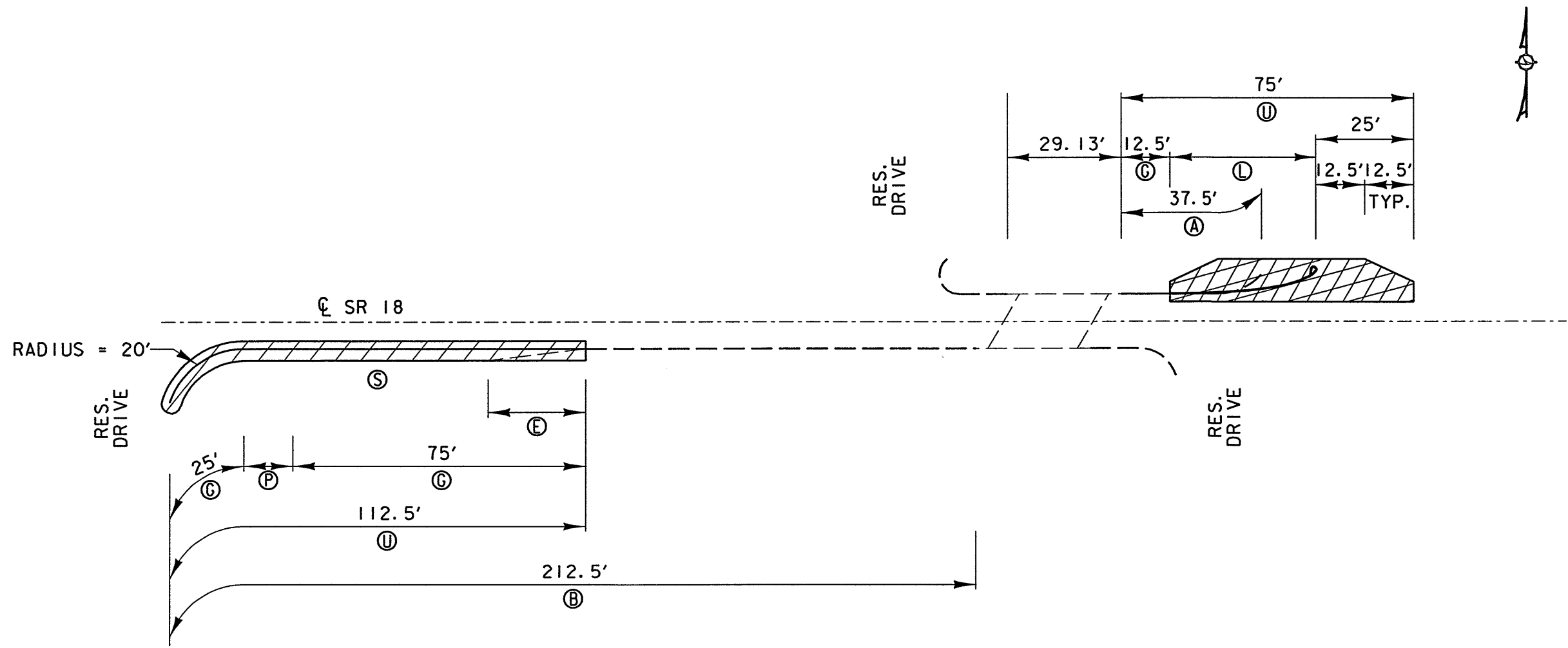
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DATE: 11/03/03

WORKSTATION: jfinch

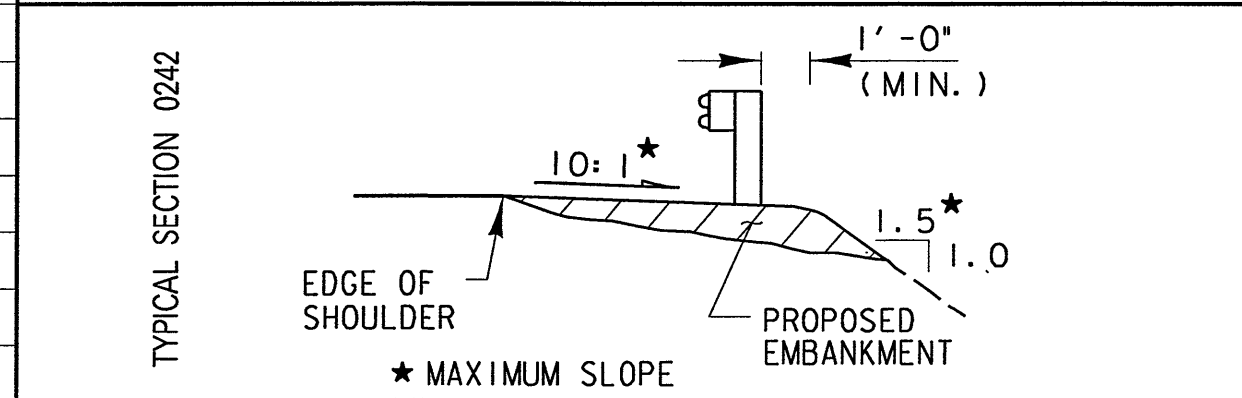
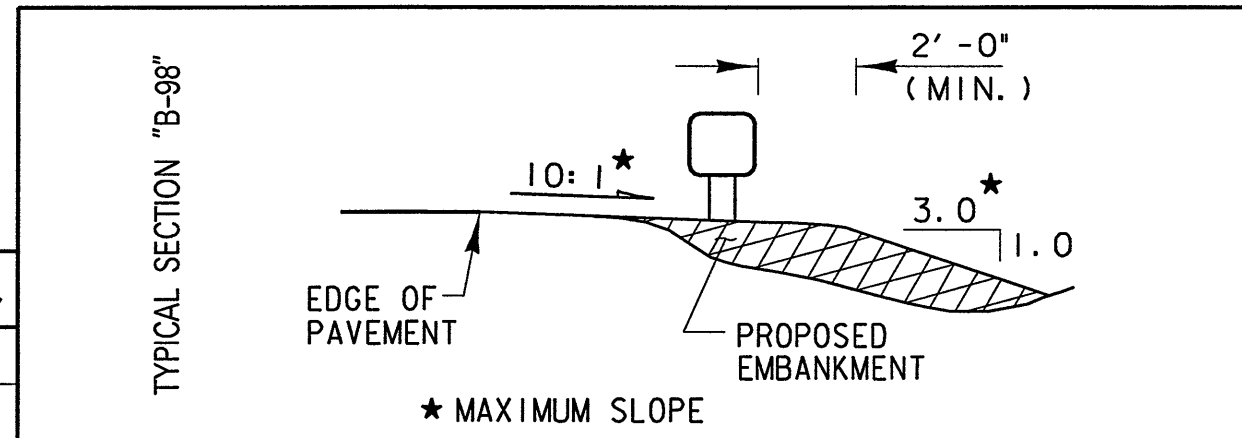
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NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEET 39.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "B" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE B AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
ⓑ	201	CLEARING AND GRUBBING	LUMP			LUMP
Ⓐ	202	GUARDRAIL REMOVED	FT	37.5		37.5
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH		1	1
	203	EMBANKMENT, AS PER PLAN	CU YD	20	30	50
Ⓚ	209	RESHAPING UNDER GUARDRAIL	FT	75	112.5	187.5
Ⓒ	606	GUARDRAIL, TYPE 5	FT	12.5	100	112.5
Ⓛ	606	ANCHOR ASSEMBLY, TYPE B-98	EACH	1		1
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH		1	1
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	2	3	5

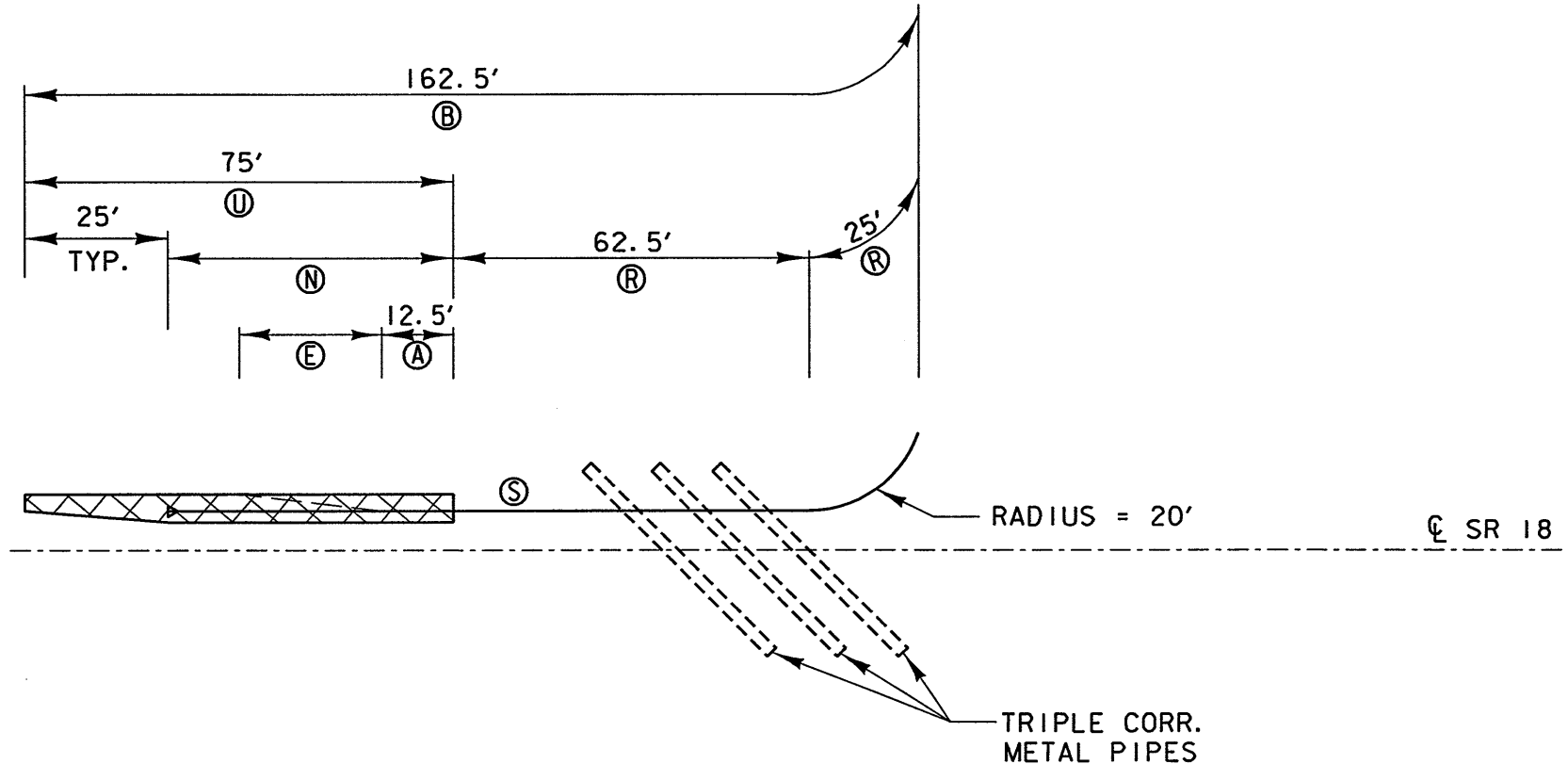


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 DATE: [blank]
 REVIEWED: [blank]
 STRUCTURAL FILE NUMBER: [blank]
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 DESIGNED: BAD
 CHECKED: [blank]
 GUARDRAIL DETAIL
 MED-18-0242 S.L.M.
 MED-18-0.00
 42 / 118

DATE: 11/03/03

WORKSTATION: jfinch

DESIGN FILE: i:\projects\18311\grd\rail.dgn

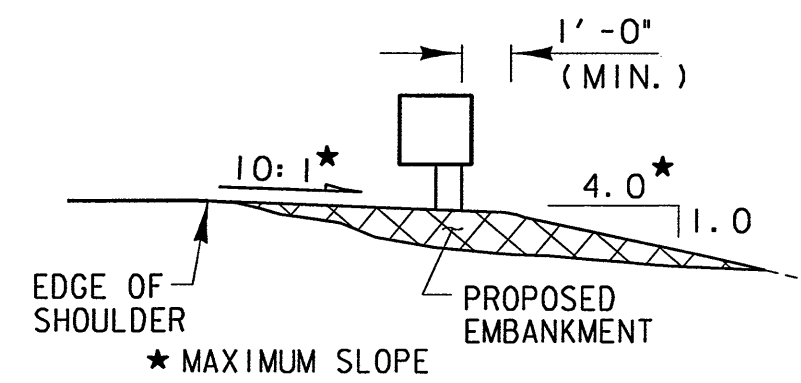


NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEET 39.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.
3. DO NOT DISTURB PINE TREE'S WHEN CLEARING AND GRUBBING AT THIS LOCATION.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
(B)	201	CLEARING AND GRUBBING	LUMP			LUMP
(A)	202	GUARDRAIL REMOVED	FT	12.5		12.5
(E)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1		1
(X)	203	EMBANKMENT, AS PER PLAN	CU YD	8		8
(U)	209	RESHAPING UNDER GUARDRAIL	FT	75		75
(N)	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1		1
(R)	606	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL	FT	87.5		87.5
(S)	626	BARRIER REFLECTOR, TYPE A	EACH	3		3

TYPICAL SECTION "E-98"



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

DATE
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DRAWN
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REVISOR

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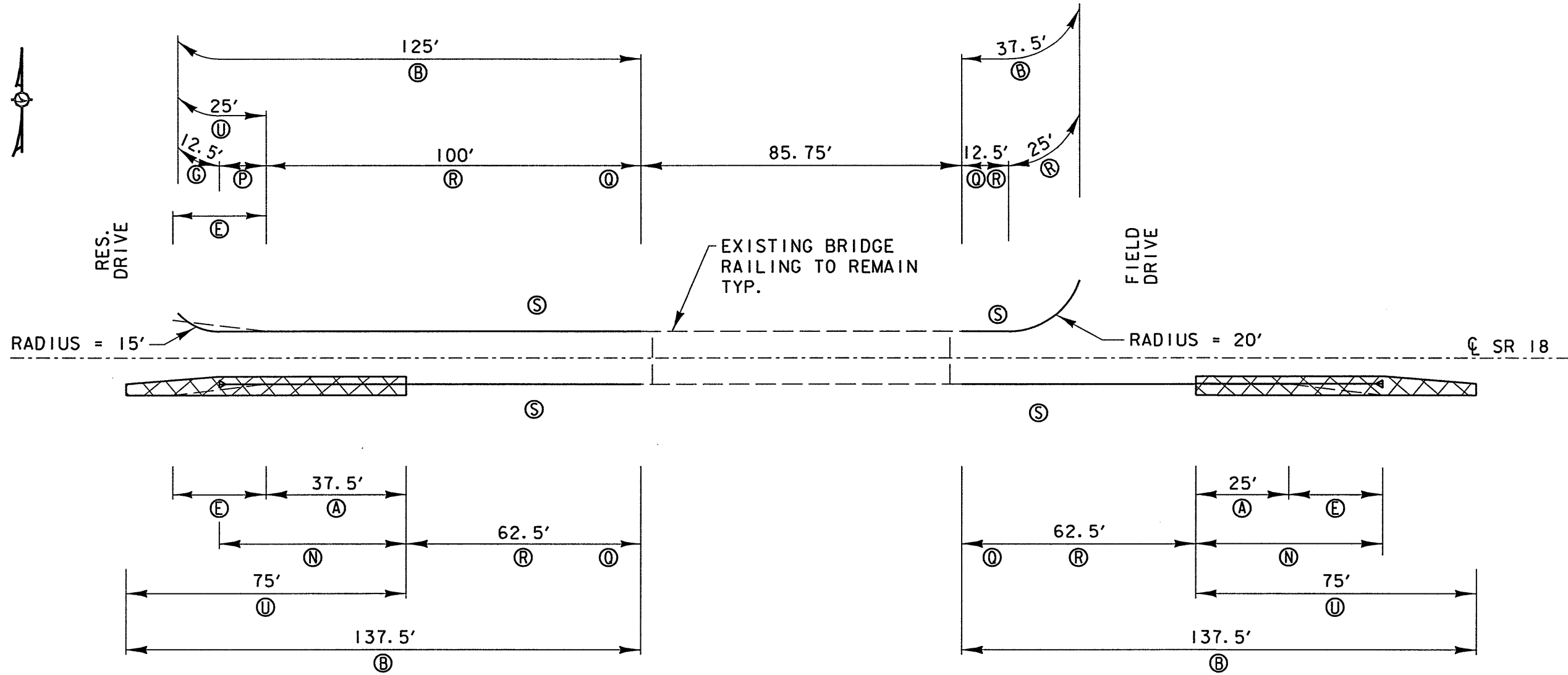
GUARDRAIL DETAIL
MED-18-0570 S.L.M.

MED-18-0.00

DATE: 11/03/03

WORKSTATION: jfinch

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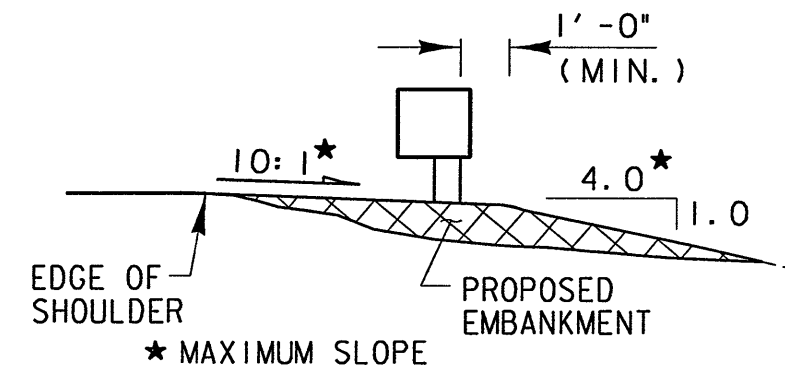


NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEET 39.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
ⓑ	201	CLEARING AND GRUBBING	LUMP			LUMP
Ⓐ	202	GUARDRAIL REMOVED	FT		62.5	62.5
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	2	3
⊠	203	EMBANKMENT, AS PER PLAN	CU YD		16	16
Ⓤ	209	RESHAPING UNDER GUARDRAIL	FT	25	150	175
Ⓒ	606	GUARDRAIL, TYPE 5	FT	12.5		12.5
Ⓝ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH		2	2
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
Ⓞ	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	2	2	4
Ⓡ	606	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL	FT	137.5	125	262.5
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	3	6	9

TYPICAL SECTION "E-98"



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

DATE
REVIEWED
STRUCTURAL FILE NUMBER

DRAWN
JPF
REVISOR

DESIGNED
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CHECKED

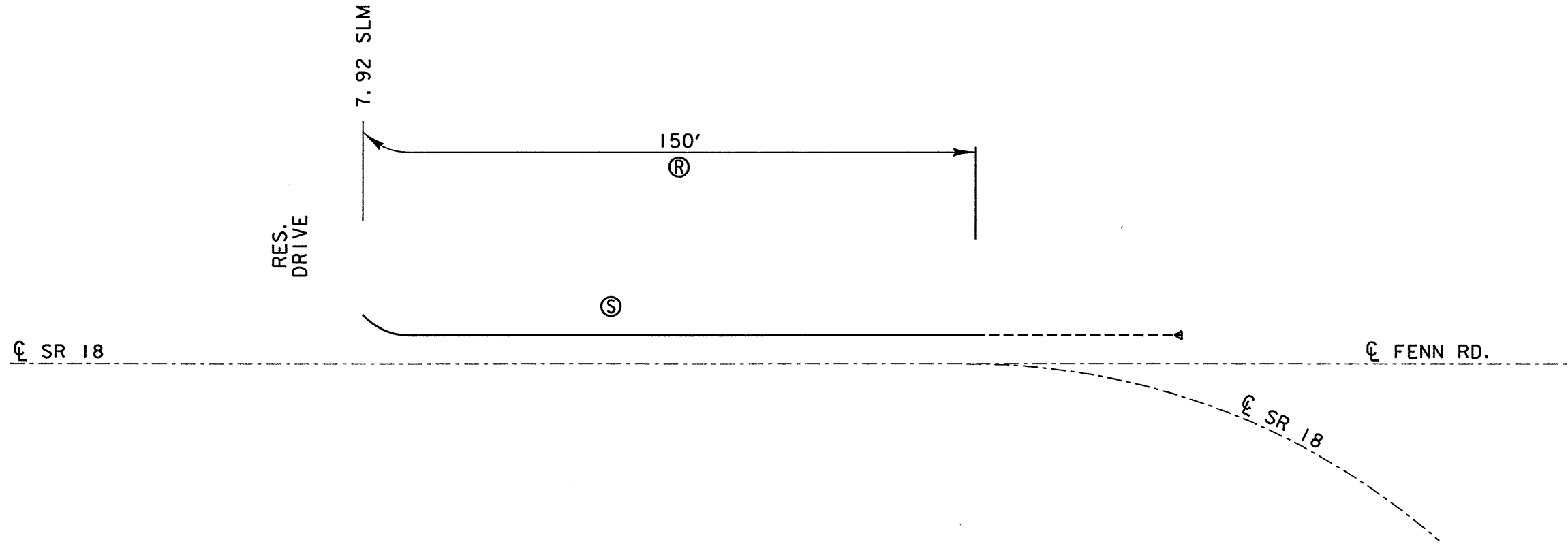
GUARDRAIL DETAIL
MED-18-0657 S.L.M.

MED-18-0.00

DATE: 11/03/03

WORKSTATION: jfinch

DESIGN FILE: i:\projects\1831\@grdrail.dgn



NOTES:

- ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEET 39.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓜ	606	GUARDRAIL, MISC.: ADJUST HEIGHT, EXISTING TYPE 5 GUARDRAIL	FT	150		150
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	3		3

DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

REVIEWED
DATE
STRUCTURAL FILE NUMBER

DRAWN
JPF
REVIS

DESIGNED
BAD
CHECKED

GUARDRAIL DETAIL
MED-18-7.92 S.L.M.

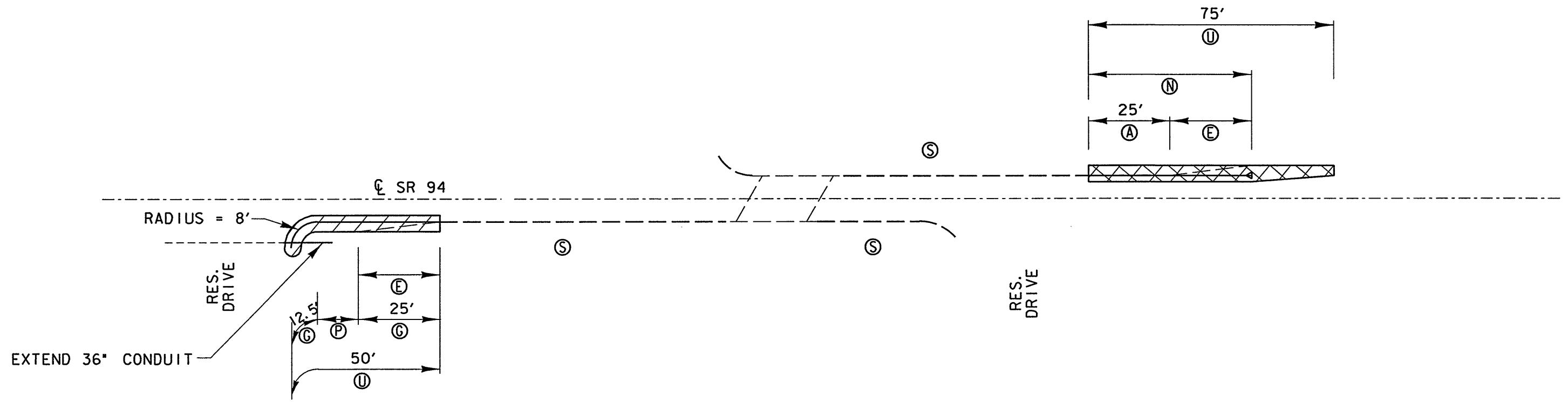
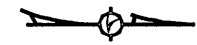
MED-18-0.00

46
118

DATE: 11/03/03

WORKSTATION: jfinch

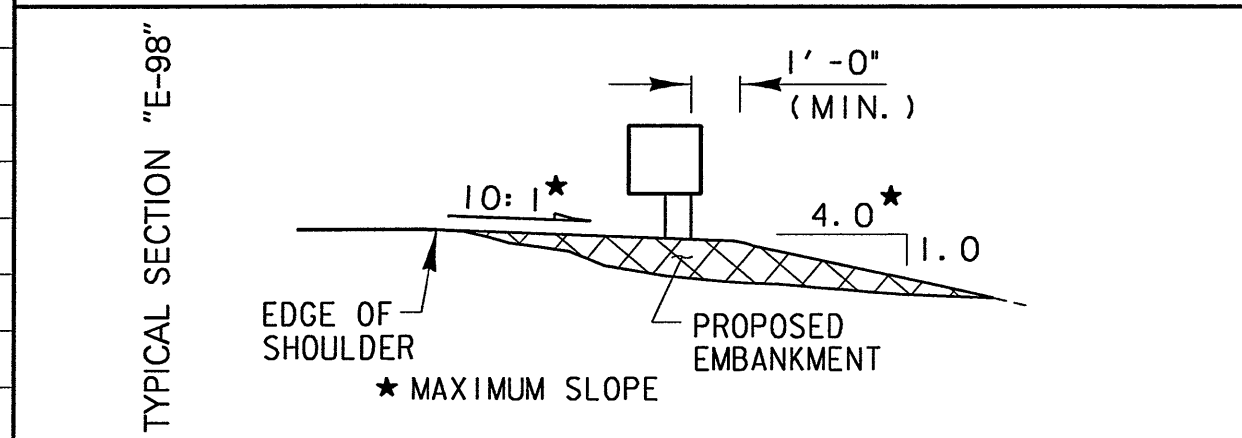
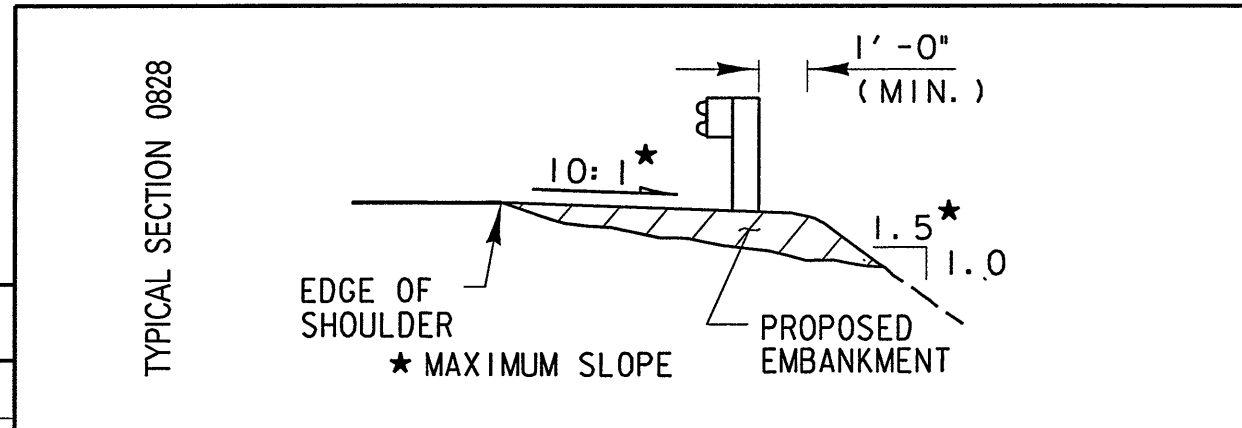
DESIGN FILE: i:\projects\18311\grd\grd.dgn



NOTES:

1. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEET 39.
2. GRADE EMBANKMENT AS PER TYPICAL SECTION "E" FOR THE ENTIRE LENGTH OF THE ANCHOR ASSEMBLY, TYPE E AND THE 25 FT. GRADING BEYOND THE GUARDRAIL RUN.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT	25		25
Ⓔ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	1	2
ⓧ	203	EMBANKMENT, AS PER PLAN	CU YD	5	20	25
⓪	209	RESHAPING UNDER GUARDRAIL	FT	75	50	125
	603	36" CONDUIT, TYPE D	FT		15	15
Ⓒ	606	GUARDRAIL, TYPE 5	FT		37.5	37.5
Ⓝ	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1		1
Ⓟ	606	ANCHOR ASSEMBLY, TYPE T	EACH		1	1
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	3	4	7



DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

DATE
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STRUCTURAL FILE NUMBER

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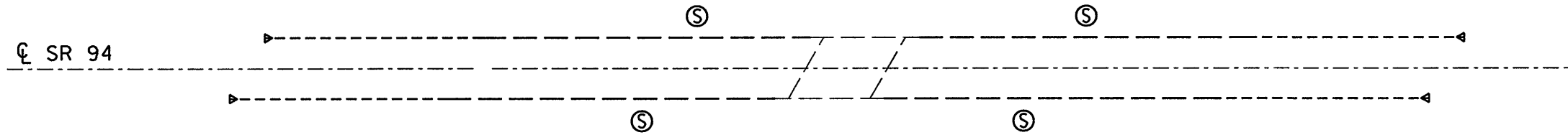
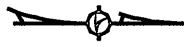
GUARDRAIL DETAIL
MED-94-0828 S.L.M.

MED-18-0.00

DATE: 11/03/03

WORKSTATION: jfinch

DESIGN FILE: i:\projects\18311\grdrail.dgn



NOTES:

- I. ALL QUANTITIES CARRIED TO ESTIMATED QUANTITIES, SHEET 39.

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				LEFT	RIGHT	
Ⓢ	626	BARRIER REFLECTOR, TYPE A	EACH	6	6	12

DESIGN AGENCY
DISTRICT THREE
PRODUCTION DEPARTMENT

REVIEWED
DATE
STRUCTURAL FILE NUMBER

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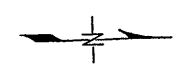
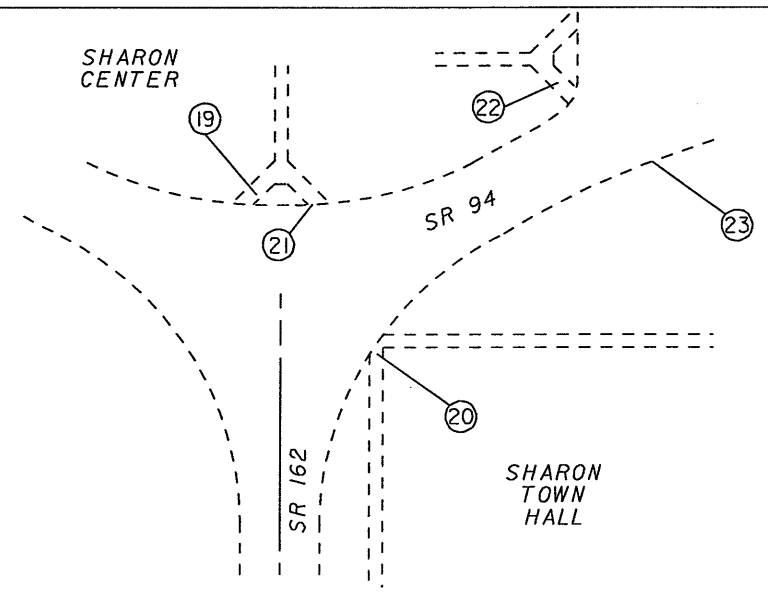
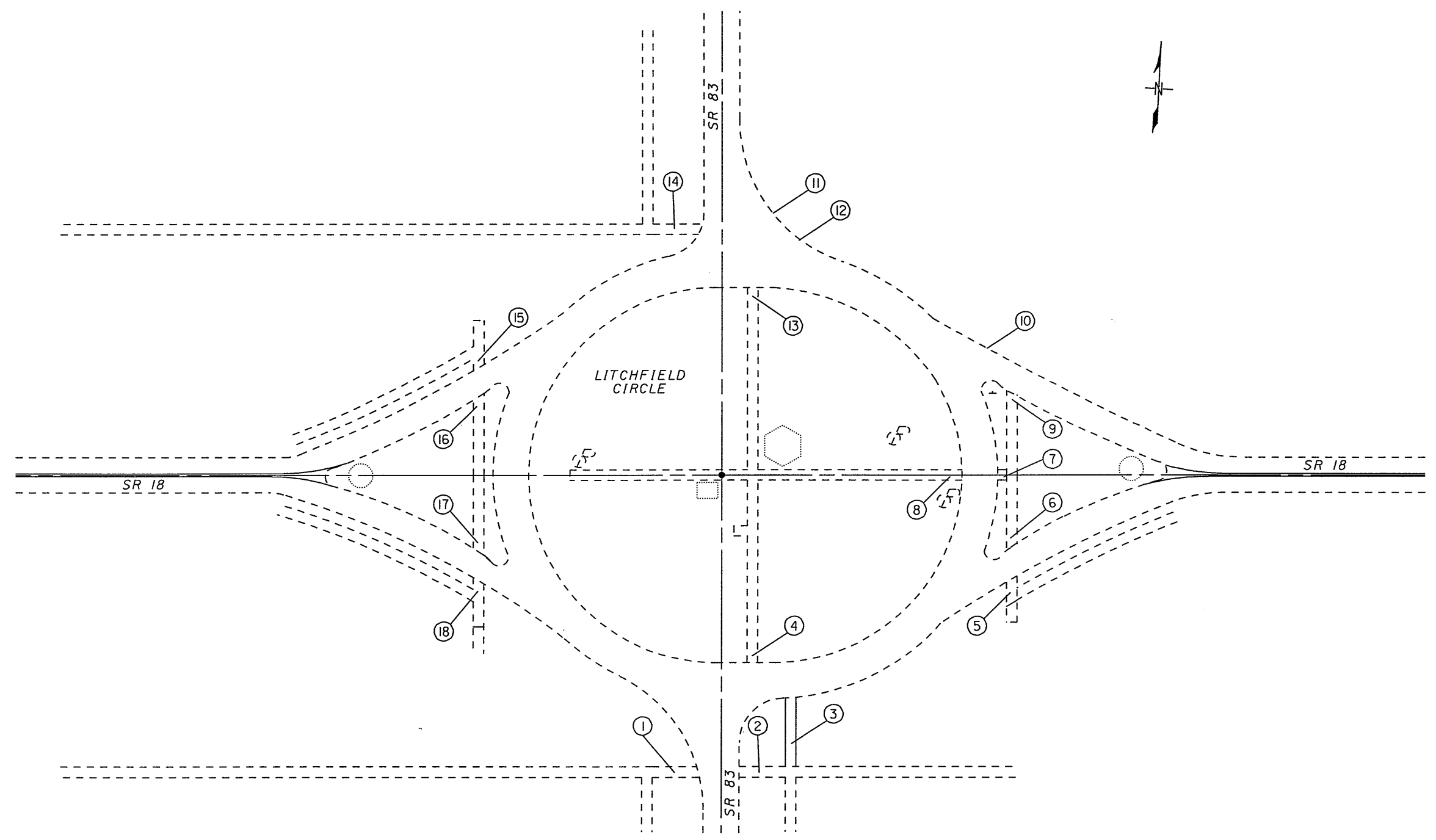
GUARDRAIL DETAIL
MED-94-0968 S.L.M.

MED-18-0.00

48
118

CURB RAMP LOCATIONS

MED - 18 - 0.00



NOTE: NOT DRAWN TO SCALE.
SEE SHEET 51 FOR ALL QUANTITIES.

DESIGN FILE: i:\projects\1831\1818&83.dgn
WORKSTATION: jfinch DATE: 11/03/03

ITEM 202 WALK REMOVED

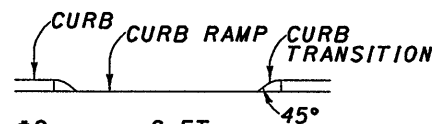
AT THE FOLLOWING LOCATIONS, WALK SHALL BE REMOVED IN ORDER TO INSTALL CURB RAMPS.

*1	11' X 4' -	44 SQ FT
*2	15.5' X 4' -	62 SQ FT
*4	8' X 4' -	32 SQ FT
*5	17' X 8' -	136 SQ FT
*6	6' X 4' -	24 SQ FT
*8	5.5' X 4' -	22 SQ FT
*9	5.5' X 4' -	22 SQ FT
*13	5' X 4' -	20 SQ FT
*14	4.5' X 4' -	18 SQ FT
*15	16.5' X 4' -	66 SQ FT
*16	4.5' X 4' -	18 SQ FT
*17	6' X 4' -	24 SQ FT
*18	14.5' X 4' -	58 SQ FT
*19	5' X 6' -	30 SQ FT
*20	5.5' X 4.5' -	25 SQ FT
TOTAL		601 SQ FT

THE REMOVAL OF THE EXISTING WALK SHALL BE PAID FOR UNDER THE UNIT BID PRICE PER SQ FT OF ITEM 202 WALK REMOVED.

ITEM 202 CURB REMOVED, AS PER PLAN

AT THE FOLLOWING LOCATIONS, EXISTING CURB SHALL BE GROUND DOWN FLUSH WITH THE NEW ASPHALT IN ORDER TO INSTALL CURB RAMPS. THE CURB TRANSITION SHALL BE GROUND TO A 45° ANGLE, TRANSITION LENGTH TO DEPEND ON CURB HEIGHT.



*2 -	8 FT	
*3 -	10 FT	
*4 -	8 FT	
*6 -	8 FT	
*7 -	8 FT	
*8 -	8 FT	
*9 -	8 FT	
*11 -	6 FT	
*12 -	6 FT	
*13 -	8 FT	
*14 -	8 FT	
*15 -	8 FT	
*16 -	8 FT	
*17 -	8 FT	
*18 -	8 FT	
*19 -	6 FT	
*20 -	8 FT	
TOTAL		132 FT

THE REMOVAL OF THE EXISTING CURB SHALL BE PAID FOR UNDER THE UNIT BID PRICE PER FT OF ITEM 202 CURB REMOVED, AS PER PLAN.

ITEM 608 4" CONCRETE WALK

AT THE FOLLOWING LOCATIONS, THE CONCRETE WALK SHALL BE PLACED UP TO THE NEW CURB RAMP.

*1	5' X 4' -	20 SQ FT
*2	9.5' X 4' -	38 SQ FT
*3	9' X 4' -	36 SQ FT
*15	10' X 4' -	40 SQ FT
*18	8.5' X 4' -	34 SQ FT
TOTAL		168 SQ FT

ALL MATERIAL, EQUIPMENT, AND LABOR AT THE FOLLOWING LOCATIONS SHALL BE PAID FOR UNDER THE UNIT SQ FT OF ITEM 608 4" CONCRETE WALK.

ITEM 608 CURB RAMP, AS PER PLAN

AT THE FOLLOWING LOCATIONS, THE CURB RAMPS SHALL BE INSTALLED:

*1	6' X (4.5' + 4') / 2 -	25.5 SQ FT
*2	6' X (4.5' + 4') / 2 -	25.5 SQ FT
*3	6' X (4.5' + 4') / 2 -	25.5 SQ FT
*4	8' X (4.5' + 4') / 2 -	34 SQ FT
*5	8' X 17' -	136 SQ FT
*6	6' X (4.5' + 4') / 2 -	25.5 SQ FT
*7	6' X 5' -	30 SQ FT
*8	5.5' X (4.5' + 4') / 2 -	23.5 SQ FT
*9	5.5' X (4.5' + 4') / 2 -	23.5 SQ FT
*11	5' DEEP -	45 SQ FT
*12	5' DEEP -	45 SQ FT
*13	5' X 4' -	20 SQ FT
*14	4.5' X 4' -	18 SQ FT
*15	6' X (4.5' + 4') / 2 -	25.5 SQ FT
*16	4.5' X 4' -	18 SQ FT
*17	6' X (4.5' + 4') / 2 -	25.5 SQ FT
*18	6' X (4.5' + 4') / 2 -	25.5 SQ FT
*19	6' X 5' -	30 SQ FT
*20	5.5' X 4.5' -	25 SQ FT
TOTAL		626.5 SQ FT

SEE PLAN INSERT SHEETS FOR "CURB RAMPS WITH TRUNCATED DOMES" DETAILS, SHEETS 52-54.

ALL MATERIAL, EQUIPMENT, SEEDING, AND LABOR REQUIRED FOR THE INSTALLATION OF THESE CURB RAMPS WITH TRUNCATED DOMES SHALL BE PAID FOR UNDER THE UNIT SQ FT OF ITEM 608 CURB RAMP, AS PER PLAN.

ITEM 644 CROSSWALK LINE

AT THE FOLLOWING LOCATIONS, THE CROSSWALK LINE SHALL BE PLACED FROM CURB RAMP TO CURB RAMP.

*1 TO *2 -	64 FT	
*3 TO *4 -	78 FT	
*5 TO *6 -	50 FT	
*7 TO *8 -	56 FT	
*9 TO *10 -	50 FT	
*12 TO *13 -	76 FT	
*11 TO *14 -	58 FT	
*15 TO *16 -	48 FT	
*17 TO *18 -	50 FT	
*20 TO *21 -	100 FT	
*20 TO *21 -	116 FT	
TOTAL		746 FT

THE FOLLOWING LOCATIONS SHALL BE PAID FOR UNDER THE UNIT FT OF ITEM 644 CROSSWALK LINE AND PAID FOR ON SHEET 49, PAVEMENT MARKING INFORMATION.

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WORKSTATION: jfinch
DATE: 11/03/03

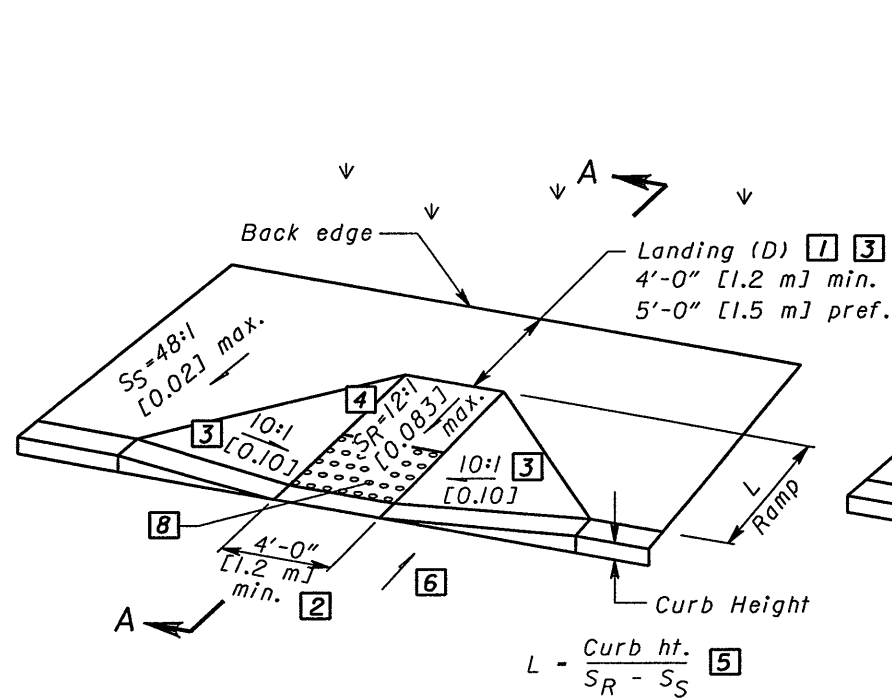
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CURB RAMP QUANTITY SHEET

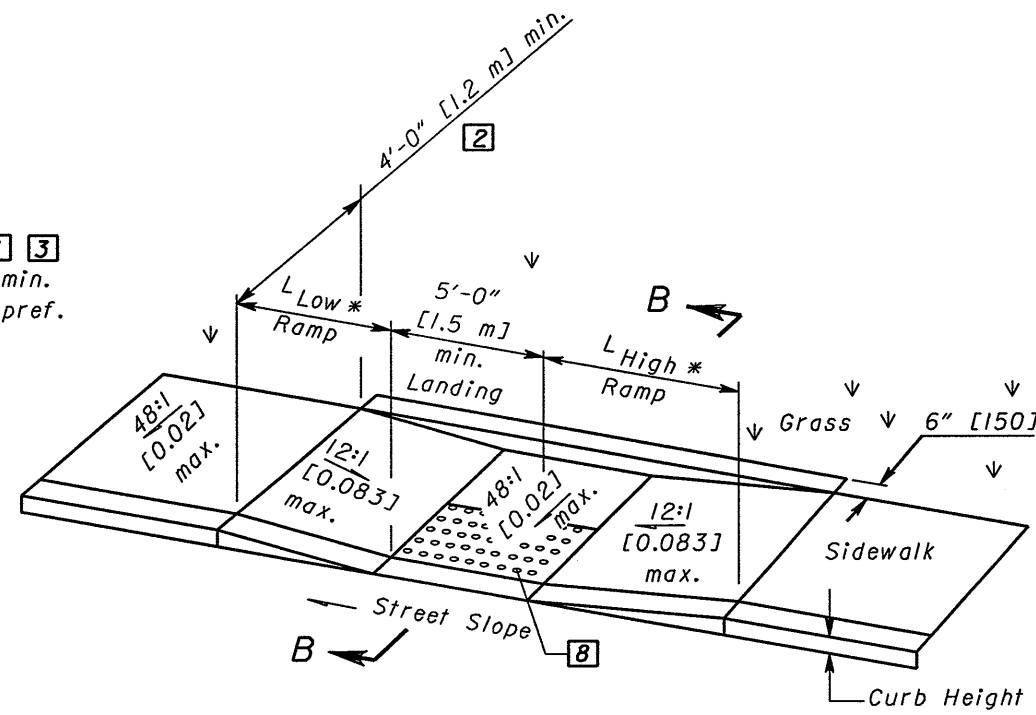
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118

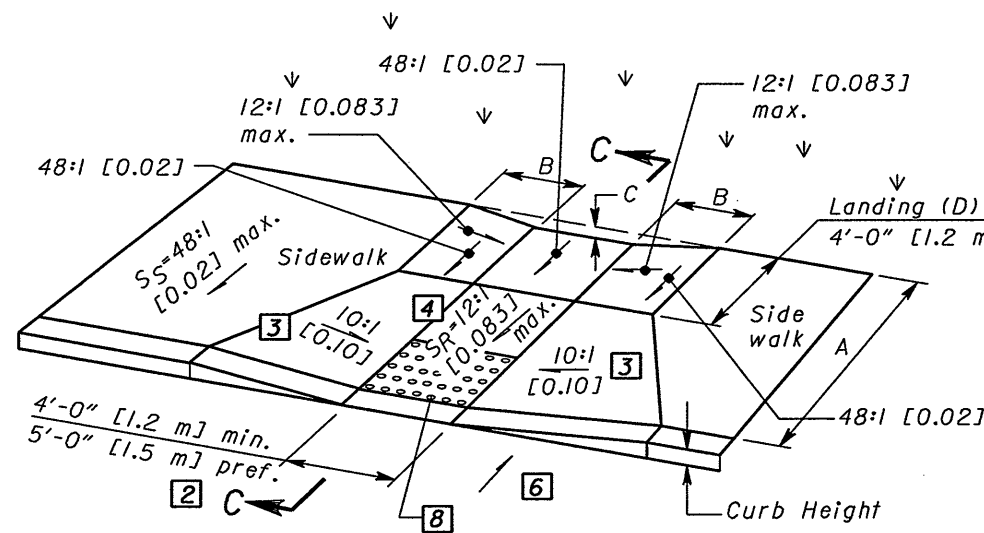
NOTE: FOR THE NUMBER LOCATIONS SHOWN ABOVE, SEE SHEET 50. *1 TO *18 ARE ALL IN PART A, ON SR 18 IN LITCHFIELD CIRCLE. *19 TO *21 ARE IN PART B, ON SR 94 IN SHARON CENTER.



See Sht. 3/3 for SECTION A-A
PERPENDICULAR CURB RAMP DETAIL

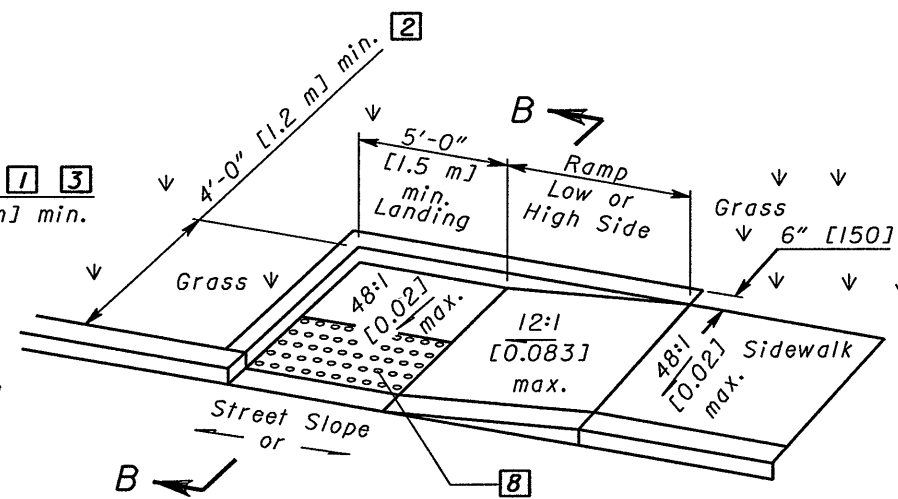


See Sht. 3/3 for SECTION B-B
PARALLEL CURB RAMP DETAIL (DOUBLE)



See Sht. 3/3 for SECTION C-C
COMBINED CURB RAMP DETAIL

$B = C / 0.083$
 $C = [Curb\ ht. + A(S_S)] - [(A-D)S_R + D(0.02)]$



See Sht. 3/3 for SECTION B-B
PARALLEL CURB RAMP DETAIL (SINGLE)

Street Slope	Ramp Length @ 1"/ft [0.083]	
	L LOW SIDE*	L HIGH SIDE*
0.01	5'-5" [1.6 m]	6'-10" [2.1 m]
0.02	4'-10" [1.5 m]	7'-11" [2.4 m]
0.03	4'-5" [1.3 m]	9'-5" [2.9 m]
0.04	4'-1" [1.2 m]	11'-8" [3.6 m]
0.05	3'-9" [1.1 m]	15'-2" [4.6 m]

* Measured along the back of a 6" [150] high curb.

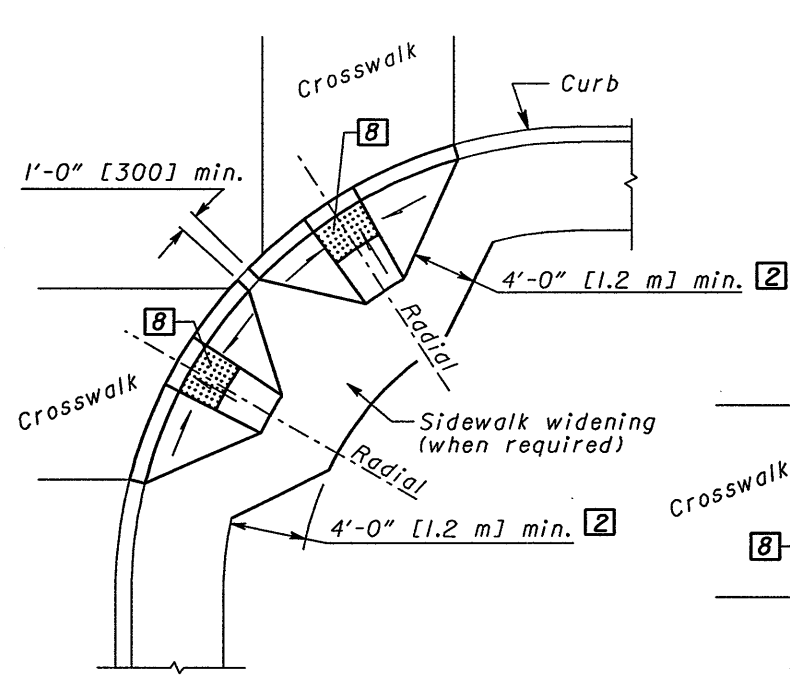
$L_{HIGH} = \frac{Curb\ ht.}{0.083 - Street\ Slope}$ [7]
 $L_{LOW} = \frac{Curb\ ht.}{0.083 + Street\ Slope}$ [7]

LEGEND

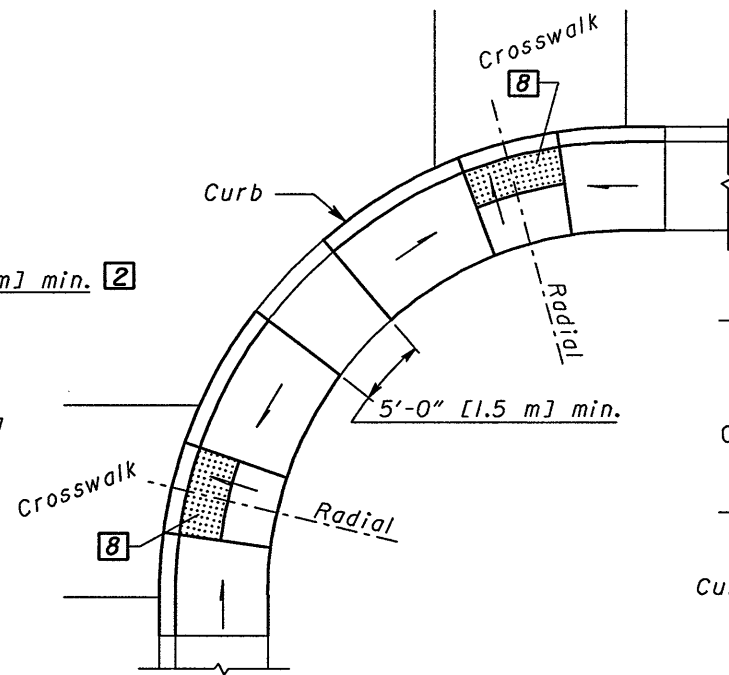
- [1] May be reduced to 3'-0" [915] in existing sidewalks if the landing is unconstrained along the back edge.
- [2] May be reduced to 3'-4" [1.02 m] in existing sidewalks to better fit the walk configuration or where site conditions are restricted by narrow walks, pole foundations, drainage inlets, etc. The width may be tapered.
- [3] Where landing width (D) has been reduced to 3'-0" [915] the flared sides shall have a maximum slope of 12:1 [0.083].

Flared sides are not required where the edges of a curb ramp are protected by landscaping or other barriers to travel by wheel chair users or pedestrians across the edge of the curb ramp. However, if the flared sides are used in these areas, they may be of any slope.
- [4] The slope of the ramp toward the curb is preferred to be 12:1 [0.083] or flatter related to the horizontal, but the maximum slope shall be 12:1 [0.083] relative to the existing or proposed walk slope.

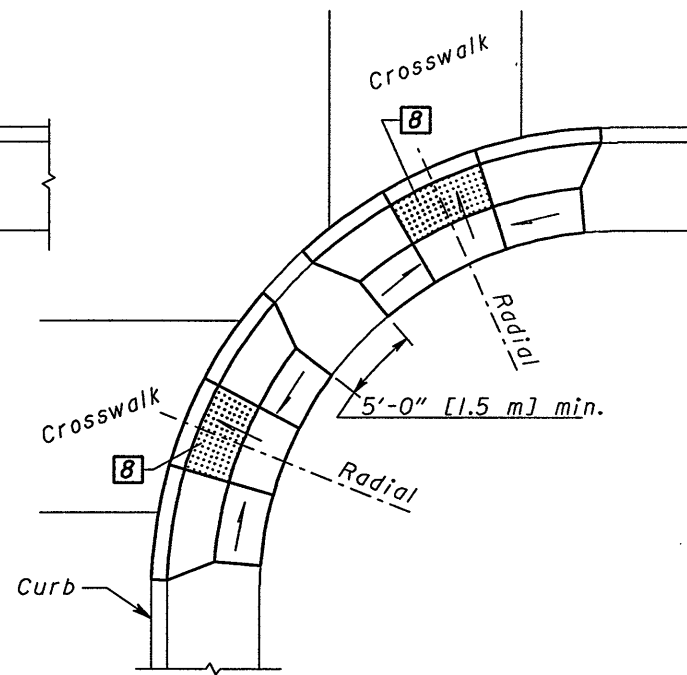
In existing sidewalks, where the maximum ramp slope (S_R) is not feasible, it may be reduced as follows:
A) 10:1 [0.10] for a max. rise of 6" [150],
B) 8:1 [0.125] for a max. rise of 3" [75],
C) 6:1 [0.167] over a max. run of 2'-0" [610] for historic areas where a flatter slope is not feasible.
- [5] The minimum length of a perpendicular ramp is 6' [2.0 m] from the back of a 6" [150] curb and may be increased where feasible to obtain a flatter ramp slope or to better blend with the walk configuration.
- [6] Gutter counter slopes at the foot of perpendicular curb ramps should not exceed 20:1 [0.05] over a distance of 2'-0" [610] from the curb.
- [7] Dimensions derived by equation are nominal. Construct ramps to meet required slopes and existing conditions.
- [8] Detectable Warnings (truncated domes) are to be installed in the location shown. Dimensions of the domes are 24" [610] from the back of the curb by the width of the ramp. See NOTES on sheet 3.



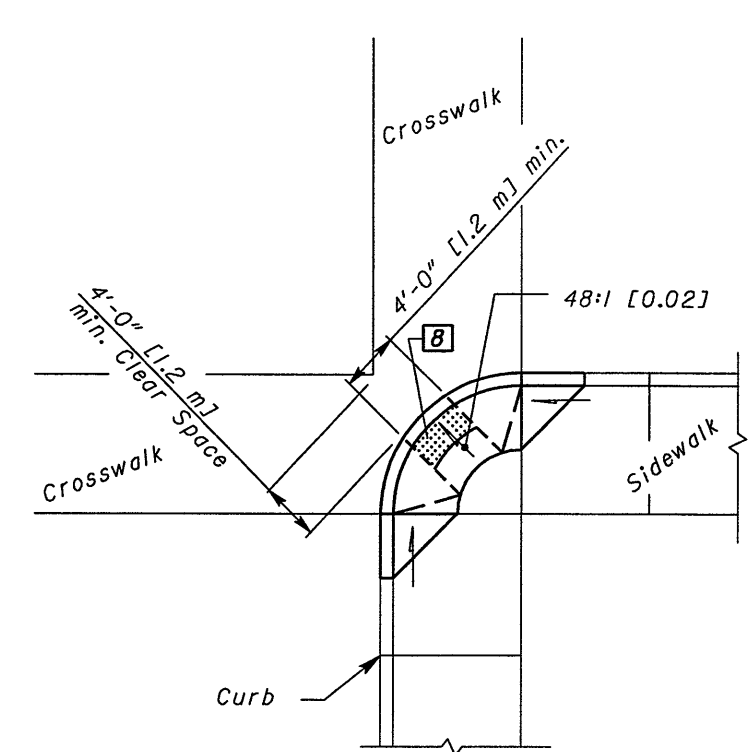
DESIGN A
PERPENDICULAR RAMP



DESIGN B
PARALLEL RAMP



DESIGN C
COMBINATION RAMP



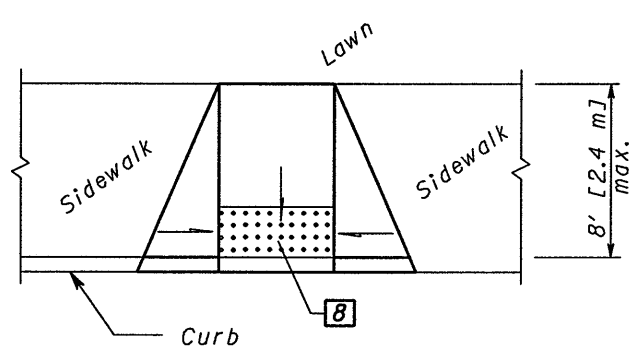
DESIGN D
DIAGONAL RAMP

CORNER CURB RAMP DESIGNS

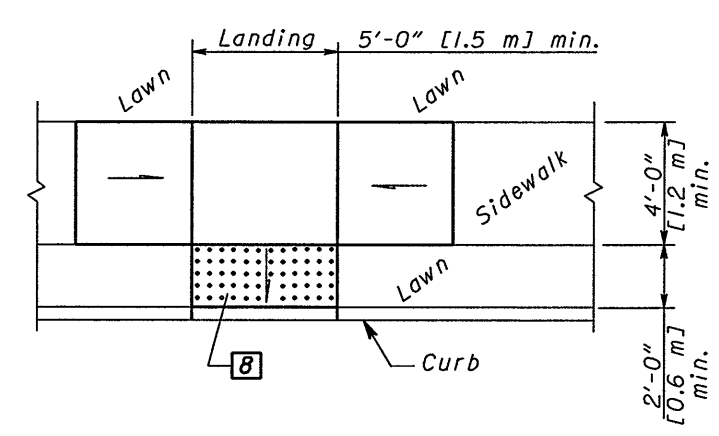
(See Curb Ramp Details on Sht. 1/3 for additional requirements.)

Use in existing walks only and when site constraints prohibit other designs. The diagonal ramp may be perpendicular, parallel or combination. Avoid using where curb radii are less than 20'-0" [6.0 m].

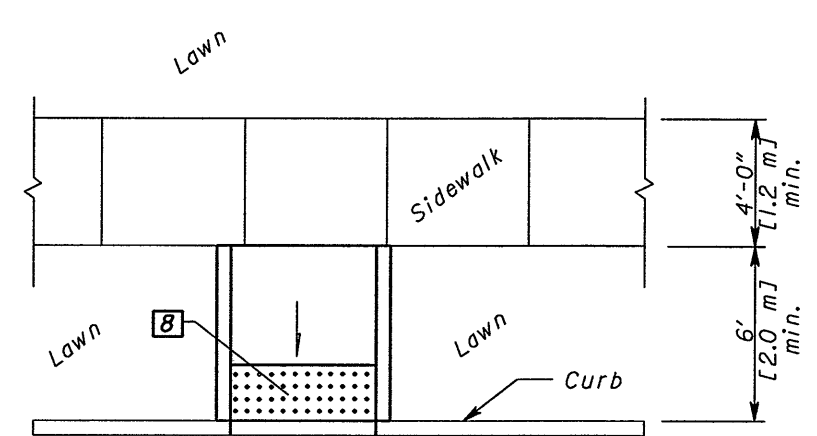
For LEGEND, See sheet 1.



DESIGN E
PERPENDICULAR RAMP



DESIGN F
PARALLEL RAMP



DESIGN G
PERPENDICULAR RAMPS
w/o FLARES

MID BLOCK CURB RAMP DESIGNS

(See Curb Ramp Details on Sht. 1/3 for additional requirements.)

NOTES

SURFACE TEXTURE: Texture of concrete surfaces shall be obtained by coarse brooming transverse to the ramp slopes and shall be rougher than adjacent walk.

TRUNCATED DOMES: Install detectable warnings (truncated domes) for a distance of 24" [610] from the back of the curb for the entire width of the ramp opening as shown on details on Sheet 1.

Pavers will meet ASTM C 902 Class SX, Type I, or C 936, or C 1272 Type R.

Acceptable manufacturers and products are:

- Whitacre-Greer Fireproofing Company, 1400 S. Mahoning Ave, Alliance, OH, 44601, (800) WG PAVER ADA Paver, 4"x8"x2-1/4", Clear Red (Rustic) #30.

- Hanover Architectural Products, 240 Bender Rd., Hanover, PA, 17331, (717) 637-0500 Detectable Warning Paver, 12"x12"x2", or 24"x24"x2", Red or Quarry Red.

- Endicott Clay Products, PO Box 17, Fairbury, NE, 68352, (402) 729-5804 Handicap Detectable Warning Paver, 4"x8"x2-1/4", Red Blend.

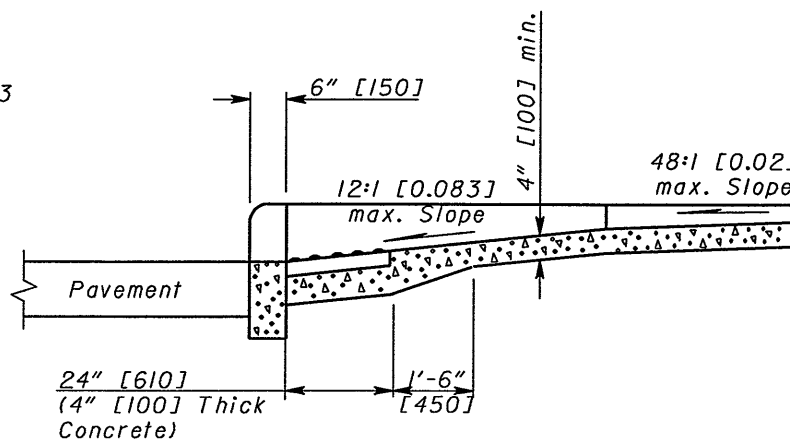
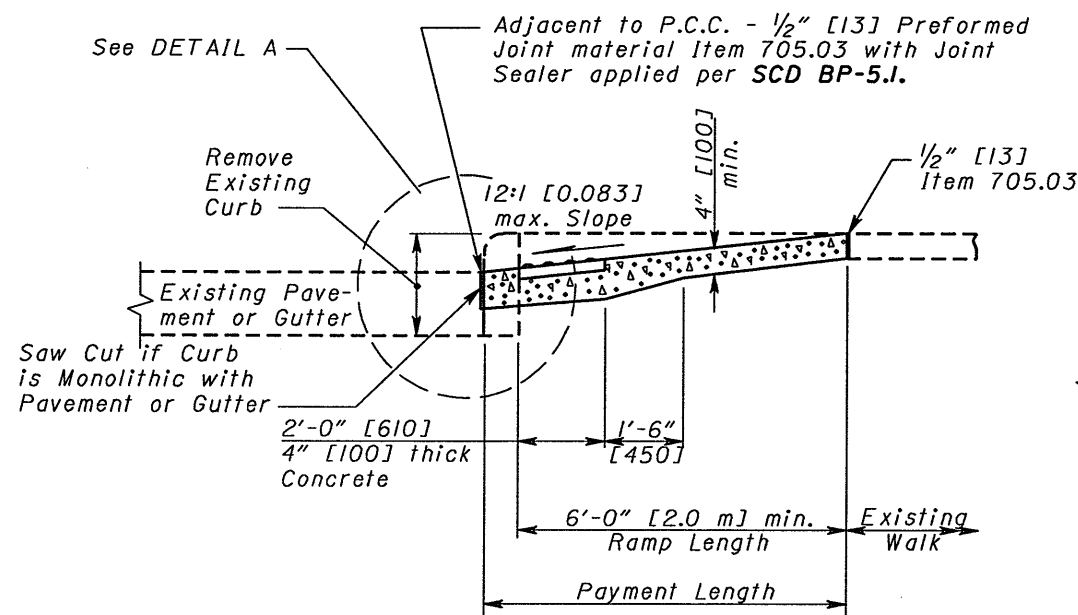
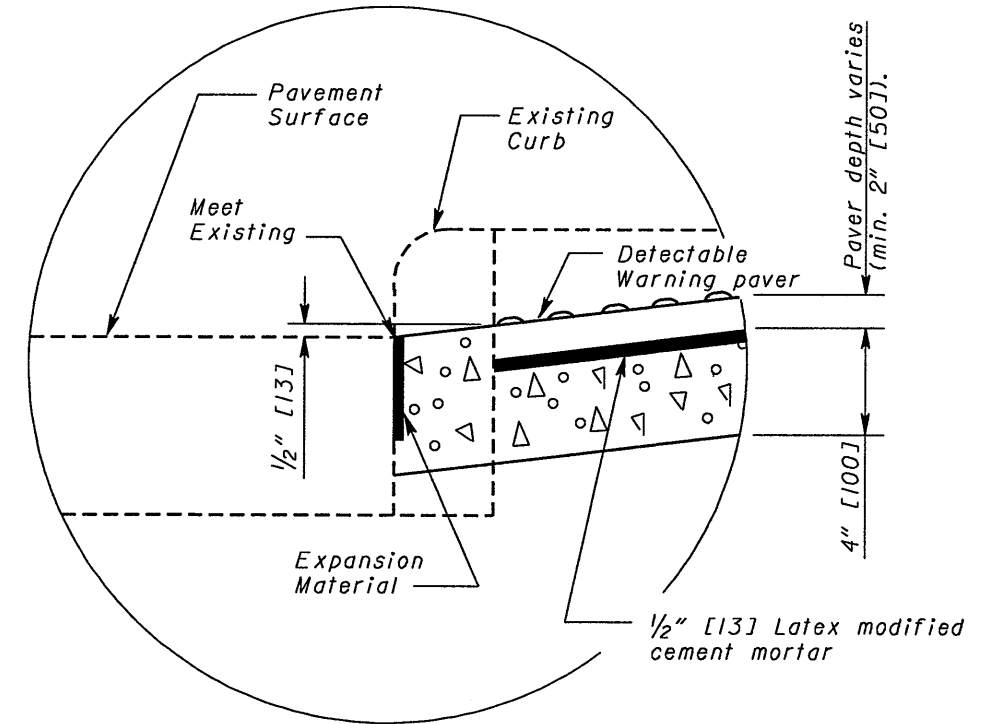
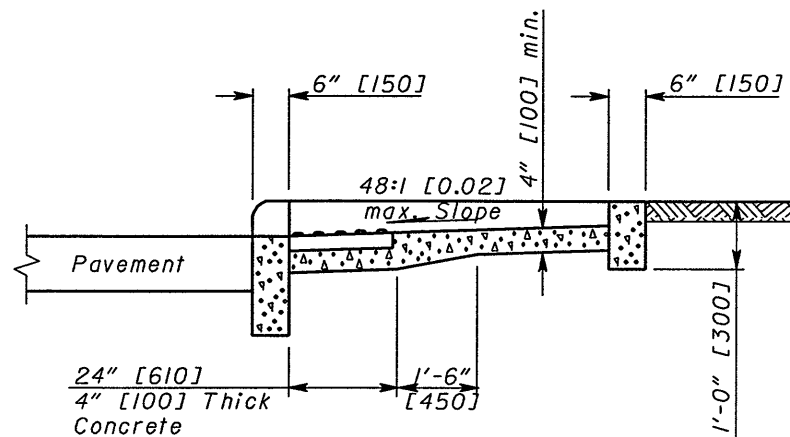
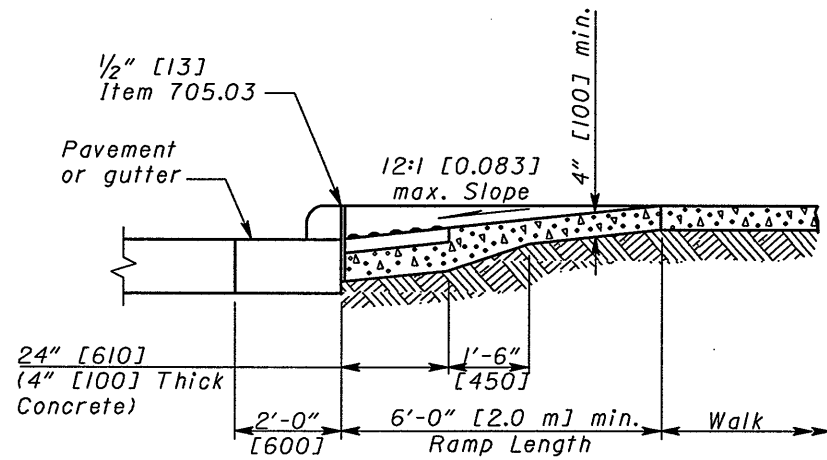
Pavers will be laid on top of a 4" [100] unreinforced concrete base. Setting bed and joints to be mortared in accordance with manufacturer's instruction, or with a maximum 1/2" [13] thick bed of latex modified cement mortar. Mortar joints to a width not greater than 5/32" [4] and not less than 1/16" [1.5]. Pavers shall not be directly touching each other unless they have spacing bars.

Mortared joints are to be flush with top surface and struck so as to give a smooth surface. Pavers shall be laid such that joints are level with adjoining joints so as to provide a smooth transition from brick to brick and brick to concrete surface.

The surface of any two adjacent units should not differ by more than 1/8" [3] in height. Bricks shall be placed in a running bond pattern. Face of all brick shall be clean of cement and protected so as to avoid chipping during construction.

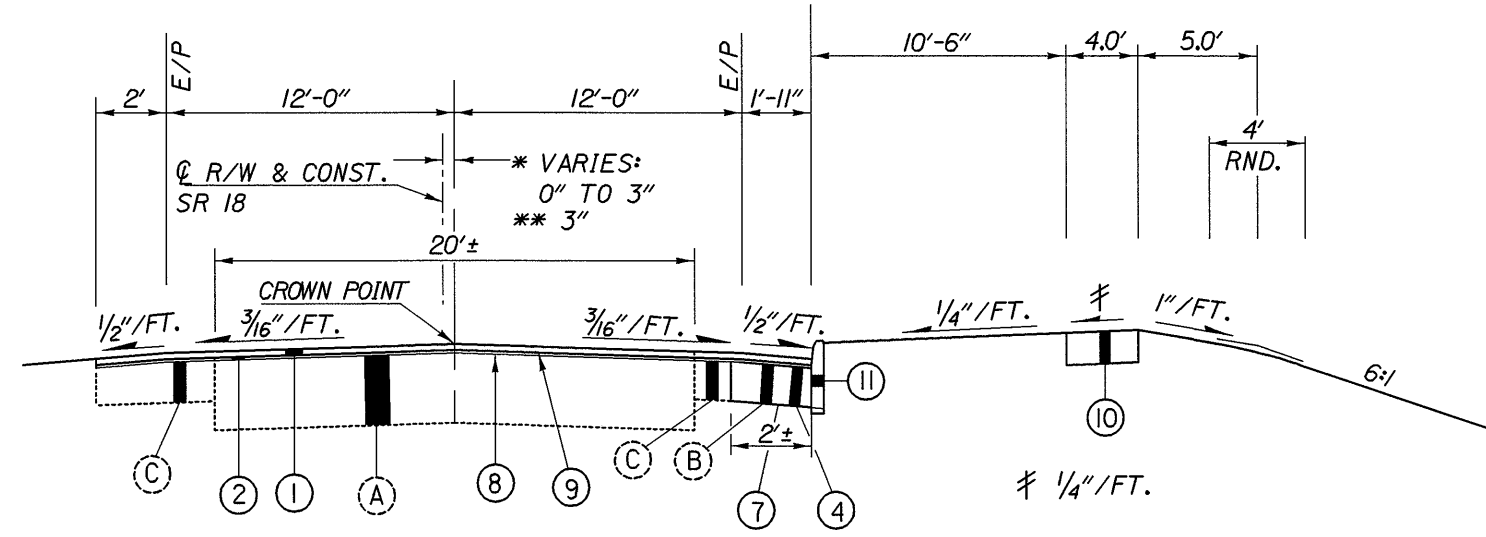
EXPANSION JOINTS: shall be provided in the curb ramp as extensions of walk joints and consistent with Item 608.03 requirements for a new concrete walk. A 1/2" [13] Item 705.03 expansion joint filler shall be provided around the edge of ramps built in existing concrete walk. Lines shown on this drawing indicate the ramp edge and slope changes and are not necessarily joint lines.

PAYMENT: Walk and curb, Items 608 and 609, shall be measured through the curb ramp area paid for under their respective items. **Item 608 - Curb Ramp, As Per Plan, Each** constructed in new curb and walk shall include the cost of any additional materials and installation (including truncated domes), grading, forming and finishing. **Item 608 - Curb Ramp, As Per Plan, Square Foot [Meter],** constructed in existing curb and walk shall include the cost of furnishing and installing all materials (including truncated domes), grading, forming, and finishing of the curb and walk of the curb ramp. Removal of existing curb and walk shall be paid for under Item 202.

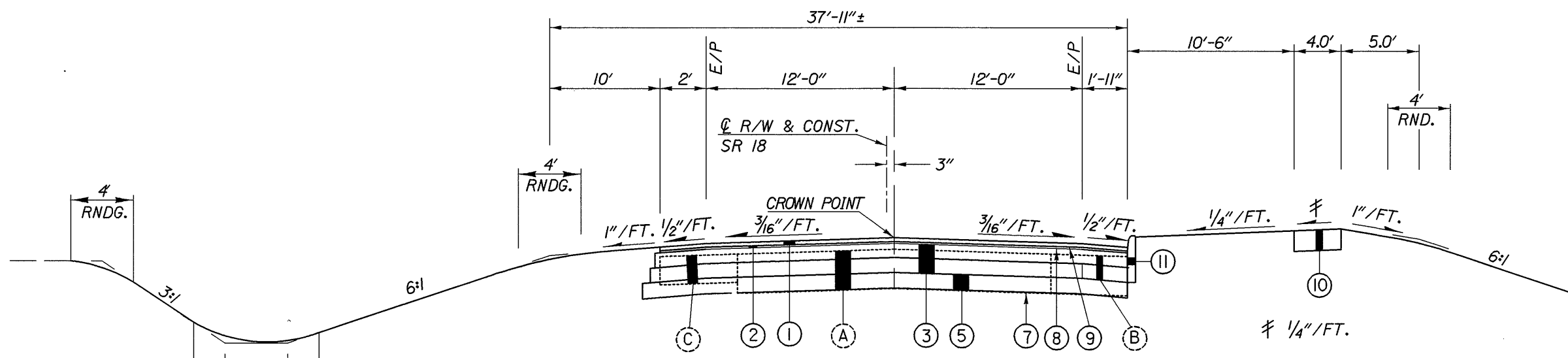


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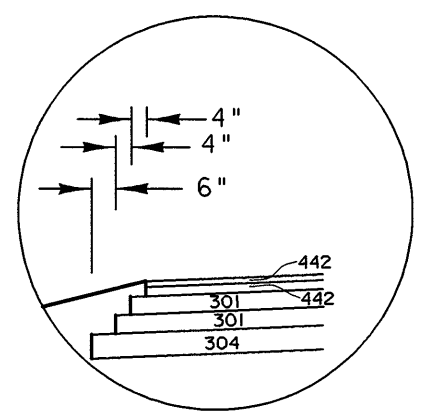
AT STATION 148+45 AND 153+00, THE TOP AND FACE OF THE PROPOSED CURB SHALL MATCH THE EXISTING CURB. THE CURB SHALL TAPER TO FULL HEIGHT IN 10'.



* STA. 148+45.00 TO STA. 150+25.00 = 180.00'
 ** STA. 151+00.00 TO STA. 153+00.00 = 200.00'



STA. 150+25.00 TO STA. 151+00.00 = 75.00'

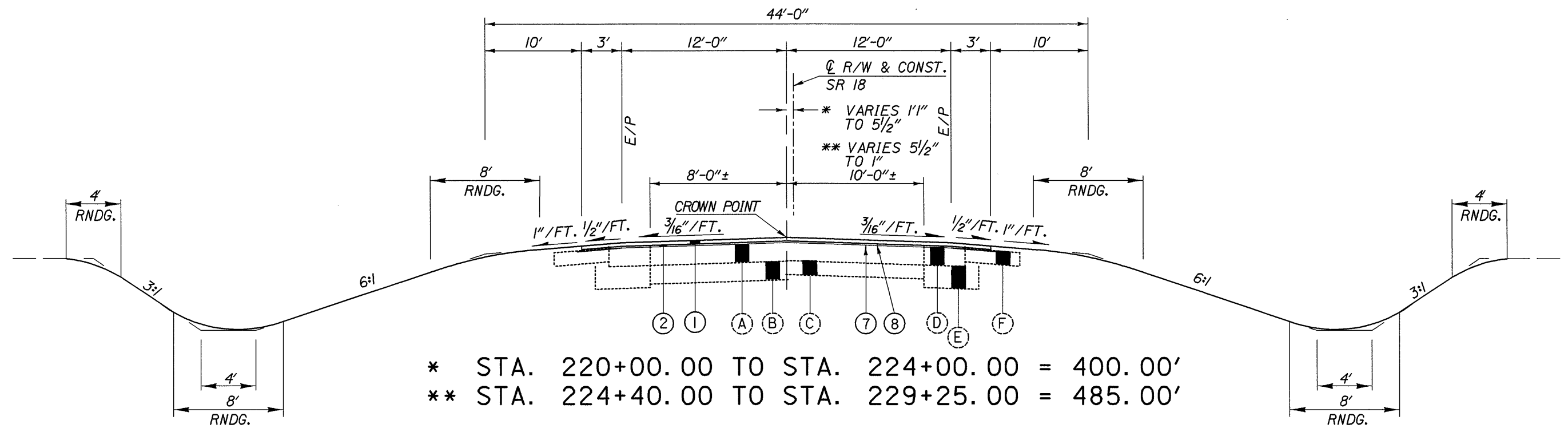


PAVEMENT EDGE STEP DETAIL

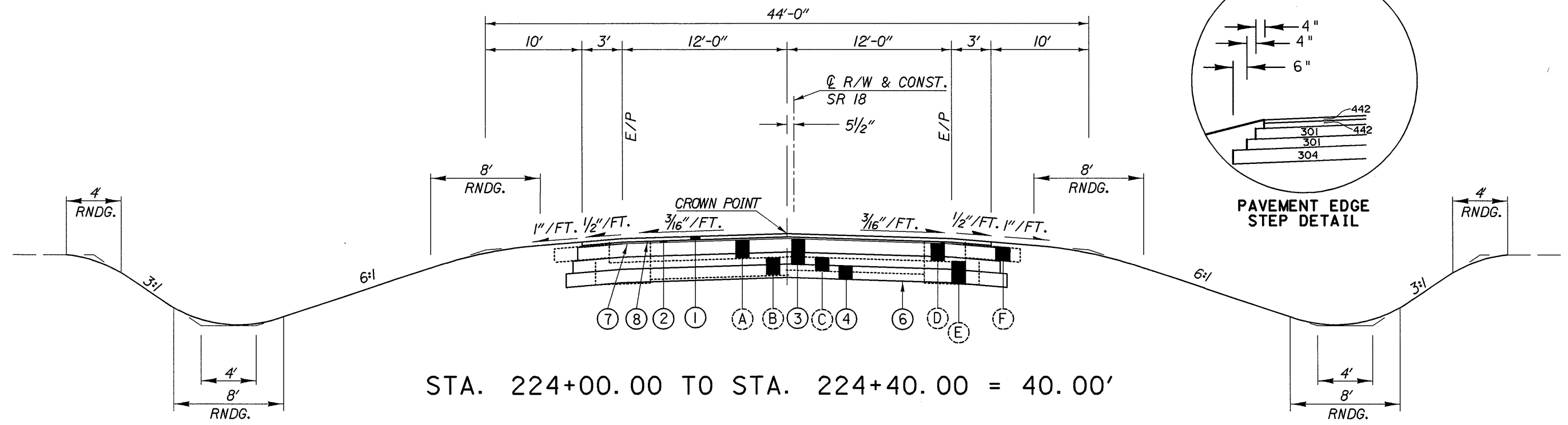
- (A) EXISTING 6" ASPHALT CONCRETE ON 9" CONCRETE BASE
- (B) EXISTING CURB AND GUTTER
- (C) EXISTING 9" ± ASPHALT CONCRETE
- (1) ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 mm, TYPE A (446)
- (2) ITEM 442 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 mm, TYPE A (448)
- (3) ITEM 301 - 9" BITUMINOUS AGGREGATE BASE, PG64-22
- (4) ITEM 302 - 12" ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN

- (5) ITEM 304 - 6" AGGREGATE BASE
- (6) NOT USED
- (7) ITEM 204 - SUBGRADE COMPACTION
- (8) ITEM 407 - TACK COAT (SEE GENERAL NOTE)
- (9) ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (SEE GENERAL NOTE)
- (10) ITEM 608 - 4" OR 8" CONCRETE WALK
- (11) ITEM 609 - CURB, TYPE 6

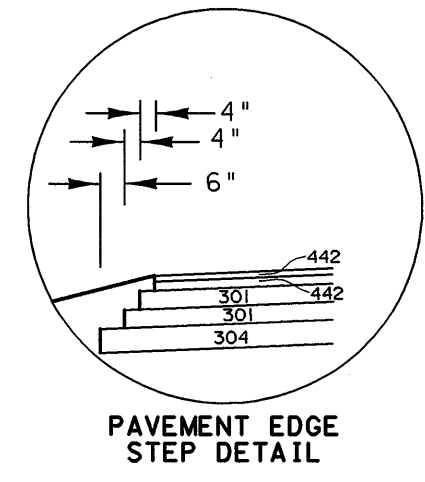
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 WORKSTATION: claughe DATE: 11/04/03



* STA. 220+00.00 TO STA. 224+00.00 = 400.00'
 ** STA. 224+40.00 TO STA. 229+25.00 = 485.00'



STA. 224+00.00 TO STA. 224+40.00 = 40.00'



- | | | |
|------------------------------------|--|---|
| (A) EXISTING 8" ± ASPHALT CONCRETE | (1) ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 mm, TYPE A (446) | (5) NOT USED |
| (B) EXISTING 8" CONCRETE BASE | (2) ITEM 442 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 mm, TYPE A (448) | (6) ITEM 204 - SUBGRADE COMPACTION |
| (C) EXISTING 6" CONCRETE BASE | (3) ITEM 301 - 9" BITUMINOUS AGGREGATE BASE, PG64-22 | (7) ITEM 407 - TACK COAT (SEE GENERAL NOTE) |
| (D) EXISTING 8" ASPHALT CONCRETE | (4) ITEM 304 - 6" AGGREGATE BASE | (8) ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (SEE GENERAL NOTE) |
| (E) EXISTING 10" AGGREGATE | | |
| (F) EXISTING 6" AGGREGATE | | |

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 WORKSTATION: dmol/lens DATE: 11/05/03

CULVERT GENERAL NOTES

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

WORK LIMITS

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

UNDERGROUND UTILITIES

THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC.

UTILITIES OWNERSHIP

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

MED-18-0285	MED-18-4.25
ELECTRIC:	ELECTRIC:
LORAIN-MEDINA RURAL ELECTRIC P.O. BOX 158 RD. WELLINGTON, OHIO 44090 1-800-222-5673	LORAIN-MEDINA RURAL ELECTRIC P.O. BOX 158 RD. WELLINGTON, OHIO 44090 1-800-222-5673
TELEPHONE:	TELEPHONE:
VERIZON 6223 NORWALK ROAD MEDINA, OHIO 44256 330-723-9580	VERIZON 6223 NORWALK ROAD MEDINA, OHIO 44256 330-723-9580
WATER:	WATER:
RURAL LORAIN COUNTY WATER AUTHORITY 4240 S.R. 303, BOX 567 LAGRANGE, OHIO 44050 440-355-6060	RURAL LORAIN COUNTY WATER AUTHORITY 4240 S.R. 303, BOX 567 LAGRANGE, OHIO 44050 440-355-6060
GAS:	GAS:
COLUMBIA GAS OF OHIO 7080 FRY ROAD MIDDLEBURG HEIGHTS, OHIO 44130 440-891-2428	COLUMBIA GAS OF OHIO 7080 FRY ROAD MIDDLEBURG HEIGHTS, OHIO 44130 440-891-2428
CABLE:	CABLE:
ARMSTRONG UTILITIES 1141 LAFAYELLE ROAD MEDINA, OHIO 44256 330-722-3141	ARMSTRONG UTILITIES 1141 LAFAYELLE ROAD MEDINA, OHIO 44256 330-722-3141

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.

EROSION CONTROL

ITEMS 601 IS PROVIDED IN THE PLAN FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE THIS ITEM. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THIS ITEM WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THIS ITEM SHALL MEET THE REQUIREMENT OF 108.04.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

CLEARING AND GRUBBING

MED-18-0285

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	1	0	1
30"	0	0	0
48"	0	0	0
60"	0	0	0

CLEARING AND GRUBBING

MED-18-4.25

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

ITEM 659, SEEDING AND MULCHING

MED-18-0285

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

659, SEEDING AND MULCHING	1488 SQ. YD.	(QUANTITY ON SHEET 75)
659, TOPSOIL	165 CU. YD.	
659, COMMERCIAL FERTILIZER	20 TON	
659, LIME	.31 ACRE	
659, WATER	8 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 659, SEEDING AND MULCHING

MED-18-4.25

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

659, SEEDING AND MULCHING	5453 SQ. YD.	(QUANTITY ON SHEET 91)
659, TOPSOIL	605 CU. YD.	
659, COMMERCIAL FERTILIZER	74 TON	
659, LIME	1.13 ACRE	
659, WATER	30 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.

CALCULATED
DCM

CHECKED
RDN

CULVERT GENERAL NOTES SHEET

MED-18-0.00

57
118

CULVERT GENERAL NOTES

ENVIRONMENTAL COMMITMENTS

- 1) BANK STABILIZATION WILL BE LIMITED TO WITHIN 25 FEET UPSTREAM AND DOWNSTREAM OF THE EXISTING STRUCTURE. BANK STABILIZATION WILL BE LIMITED TO REGRADING OF THE BANKS FOR THE TOE-OF-SLOPE (IN-STREAM) TO THE TOP OF BANK AND WILL INCLUDE PLACEMENT OF ROCK CHANNEL PROTECTION WHERE REQUIRED. THIS WILL EXCLUDE WORK SUCH AS WIDENING, DEEPENING OR RELOCATION. THIS STABILIZATION WILL BE KEPT TO A MINIMUM.
- 2) IN-STREAM WORK WILL BE LIMITED WHERE PRACTICABLE AND ONLY CLEAN NON-ERODIBLE MATERIAL WILL BE USED FOR FORDS AND COFFERDAMS. THIS TEMPORARILY PLACED MATERIAL WILL BE REMOVED AND THE STREAM BOTTOM RESTORED TO NEAR NATURAL CONDITIONS WHEN THE WORK IS COMPLETED.
- 3) THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.
- 4) AREAS THAT WILL BE CLEARED FOR CONSTRUCTION ARE TO BE SEEDED AND MULCHED AS PER ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATION MANUAL.

TREE REMOVAL RESTRICTIONS

THIS PROJECT IS WITHIN THE KNOWN SUMMER BREEDING RANGE OF THE FEDERAL ENDANGERED INDIANA BROWN BAT AND MAY IMPACT THAT SPECIES HABITAT. THE SUMMER ROOSTING AND BROOD REARING HABITAT OF THIS SPECIES IS IN LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING, OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES, OR CAVITIES. TREE REMOVAL WILL ONLY BE DONE BETWEEN SEPTEMBER 16 AND APRIL 14 WHEN THIS SPECIES IS NOT USING SUCH HABITAT.

SURVEY DISC ON STRUCTURE

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE (1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE ABUTMENT. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE HEADWALL AND ON A FLAT, HORIZONTAL SURFACE. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO ITEM 511 BID ITEM.

703.05 AGGREGATE FOR ASPHALT CONCRETE (SOUNDNESS REQUIREMENTS)

IN ADDITION TO THE COARSE AGGREGATE REQUIREMENTS OF 703.05, EACH INDIVIDUAL SIEVE FRACTION SOUNDNESS LOSS WILL BE CALCULATED AND NO FRACTIONAL SIZE SHALL EXCEED THE FOLLOWING:

- a. 13.0 PERCENT FOR ALL SURFACE COURSES AND ANY ASPHALT CONCRETE COURSE DIRECTLY BELOW AN OPEN GRADED FRICTION COURSE.
- b. 13.0 PERCENT FOR NO. 8 AGGREGATE FRACTIONS USED IN INTERMEDIATE COURSES.
- c. 15.0 PERCENT FOR ALL OTHER COARSE AGGREGATE USED IN INTERMEDIATE COURSES.

STATISTICAL EVALUATION OF DATA WILL BE PER GROUP LIST PROCEDURES.

ITEM 407, TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. FOR ESTIMATING PURPOSES ONLY, THE PLAN QUANTITIES INDICATE AN AVERAGE RATE OF:

407, TACK COAT	.08	GAL./SY.
407, TACK COAT FOR INTERMEDIATE COURSE	.03	GAL./SY.

FARM DRAINS

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEM.

ASBESTOS CERTIFICATION

DUE TO THE SIZE OF THE EXISTING STRUCTURES, THE CONTRACTOR AND THE STATE ARE NOT REQUIRED TO COMPLETE AN ASBESTOS CERTIFICATION FORM FOR THIS PROJECT.

PROJECT DETOUR LIMITATIONS

THE ROADWAY SHALL NOT BE CLOSED TO TRAFFIC FOR THE REMOVAL OR MODIFICATION OF THE EXISTING STRUCTURE OR CONDUIT UNTIL ALL PRECAST CULVERT MATERIAL, NECESSARY TO PLACE THE ROADWAY BACK INTO SERVICE HAVE BEEN TESTED, APPROVED AND ARE READY FOR DELIVERY TO THE PROJECT SITE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH 108.07 OF THE CMS.

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 111.

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WORKSTATION: claughre DATE: 11/06/03

SEQUENCE OF CONSTRUCTION

SEE TIME LIMITS, SEQUENCING WORK & LIQUIDATED DAMAGES ON SR 18 NOTE ON SHEET 12 FOR DETAILS.

MAINTAINING TRAFFIC AT MED-18-0285

THE DRIVEWAY AT STA. 149+92.5 SHALL NOT BE TAKEN OUT OF SERVICE UNTIL THE TEMPORARY DRIVE HAS BEEN CONSTRUCTED. ALL DRIVEWAY ACCESSES (PERMANENT OR TEMPORARY) SHALL BE MAINTAINED DURING CONSTRUCTION OF THIS PROJECT. ALL COSTS INVOLVED IN MAINTAINING DRIVEWAY ACCESS SHALL BE INCLUDED IN ITEM 614 MAINTAINING TRAFFIC.

ROADS FOR MAINTAINING TRAFFIC EARTHWORK AT MED-18-0285

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY.

TEMPORARY EARTHWORK EXCAVATION	272.0 CU. YD.
TEMPORARY EARTHWORK EMBANKMENT	0.0 CU. YD.

ROADS FOR MAINTAINING TRAFFIC EARTHWORK AT MED-18-4.25

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY.

TEMPORARY EARTHWORK EXCAVATION	90.0 CU. YD.
TEMPORARY EARTHWORK EMBANKMENT	33.0 CU. YD.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 1/2" INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

THE COST OF BACKFILLING AND AT THE DIRECTION OF THE ENGINEER SHALL BE INCLUDED WITH ITEM 614, MAINTAINING TRAFFIC.

CALCULATED
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MAINTENANCE OF TRAFFIC GENERAL NOTES
FOR CULVERTS MED-18-0285 AND MED-18-4.25

MED-18-0.00

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ITEM 614. WORK ZONE IMPACT ATTENUATOR. (UNIDIRECTIONAL):

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

- 1) THE QUADGUARD CZ, (24" [610 MM] WIDE 6-BAY) WORK ZONE IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312.467.6750).

THE LENGTH OF THE 6-BAY QUADGUARD CZ IS 20'-9" [6.33 M]. 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
QSCZCVR-T4	QUADGUARD CZ SYSTEM FOR CONSTRUCTION ZONES	5/13/99 Rev. J	8/27/99
35-40-10	QUADGUARD SYSTEM CONCRETE PAD, CZ, QG	11/19/97 Rev. D	8/27/99
35-40-16	QUADGUARD SYSTEM BACKUP ASSEMBLY, CZ, QG	7/30/99 Rev. F	8/27/99
354051Z	QUADGUARD CZ SYSTEM NOSE ASSEMBLY, CZ, QG, 24, 30, 36	5/17/99	8/27/99
35-40-18	TRANSITION ASSEMBLY, 4 OFFSET, QG	6/25/99 Rev. F	8/27/99
3540260	QUADGUARD SYSTEM PCMB ANCHOR ASSEMBLY	11/19/97 Rev. C	8/27/99

- 2) THE TRACC (TRINITY ATTENUATING CRASH CUSHION) MANUFACTURED BY SYRO INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330.545.4373).

THE TRACC IS 21'-0" [6.4 M] LONG AND 2'-7" [0.8 M] WIDE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
SS450	CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS	3/12/99 Rev. I	8/27/99
SS455	TRACC TRANSITION TO W-BEAM MEDIAN BARRIER PLAN, ELEVATION & SECTIONS	2/18/99	8/27/99
SS461	TRACC TRANSITION TO CONCRETE SAFETY SHAPE BARRIER PLAN, ELEVATION & SECTIONS	6/30/99 Rev. I	8/27/99
SS462	TRACC TRANSITION TO CONCRETE BARRIER SINGLE SLOPE PLAN, ELEVATION & SECTIONS	6/30/99	8/27/99

THE CONTRACTOR SHALL PROVIDE A REPLACEMENT UNIT WHEN AN IMPACT IS SEVERE ENOUGH TO REQUIRE COMPLETE REPLACEMENT OF THE ATTENUATOR. THE CONTRACTOR SHALL HAVE A SPARE PARTS PACKAGE AVAILABLE ON THE PROJECT SITE AT ALL TIMES WHEN AN ATTENUATOR IS IN PLACE. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE COMPLETE SPARE PARTS PACKAGE FOR EVERY 1 TO 6 UNITS INSTALLED ON THE PROJECT SITE. FOR EXAMPLE, 5 INSTALLED UNITS REQUIRE 1 SPARE PARTS PACKAGE AND 7 INSTALLED UNITS REQUIRE 2 SPARE PARTS PACKAGES.

SIGNAL TIMING

THE FOLLOWING TIMING SHALL BE USED AT BOTH MED-18-0285 AND MED-18-4.25 CULVERT LOCATIONS.

SIGNAL TIMING

A TWO PHASE CONTROLLER WITH CABINET CAPABLE OF BEING SET WITH THE FOLLOWING SPLITS SHALL BE FURNISHED

CYCLE LENGTH: 120 SECONDS

	GREEN	AMBER	RED
PHASE A	35	5	20
PHASE B	35	5	20

THE ABOVE TIMING MAY BE CHANGED WITH THE APPROVAL OF THE ENGINEER

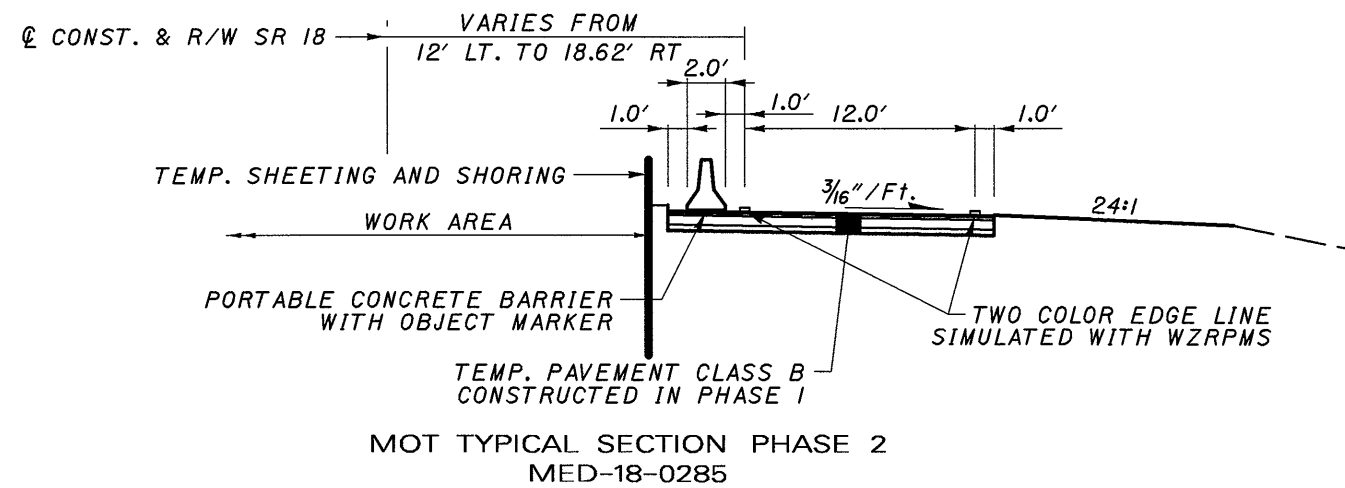
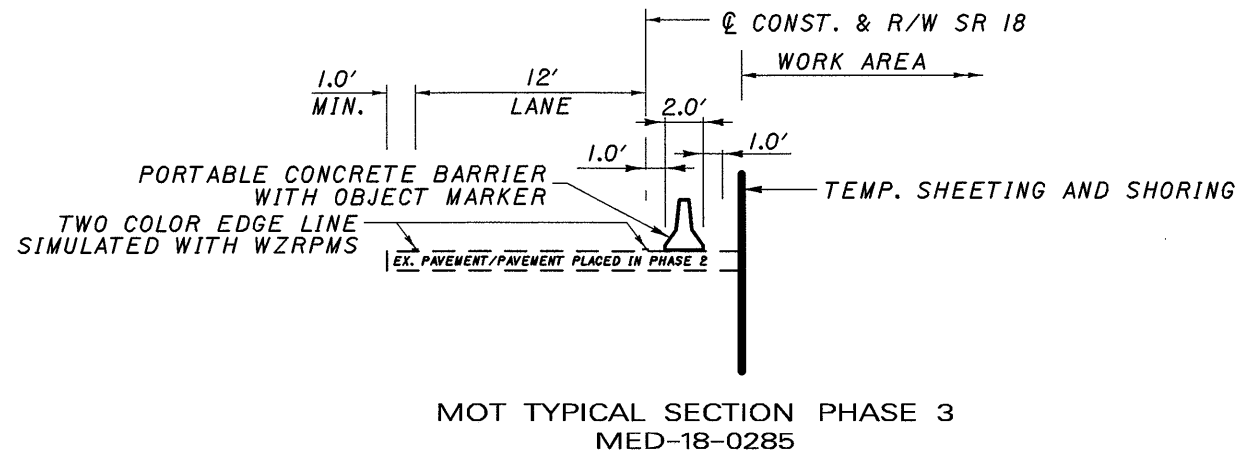
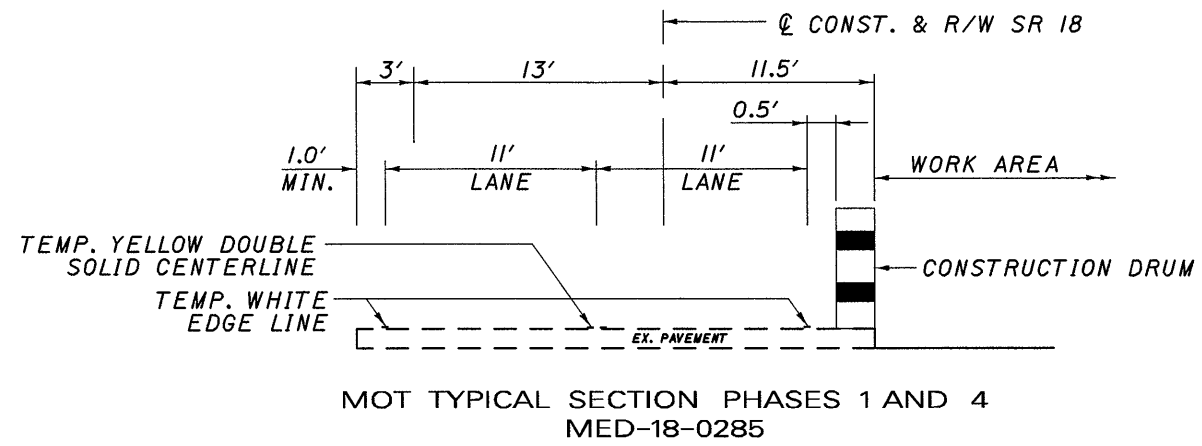
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MAINTENANCE OF TRAFFIC GENERAL NOTES
FOR CULVERTS MED-18-0285 AND MED-18-4.25

MED-18-0.00

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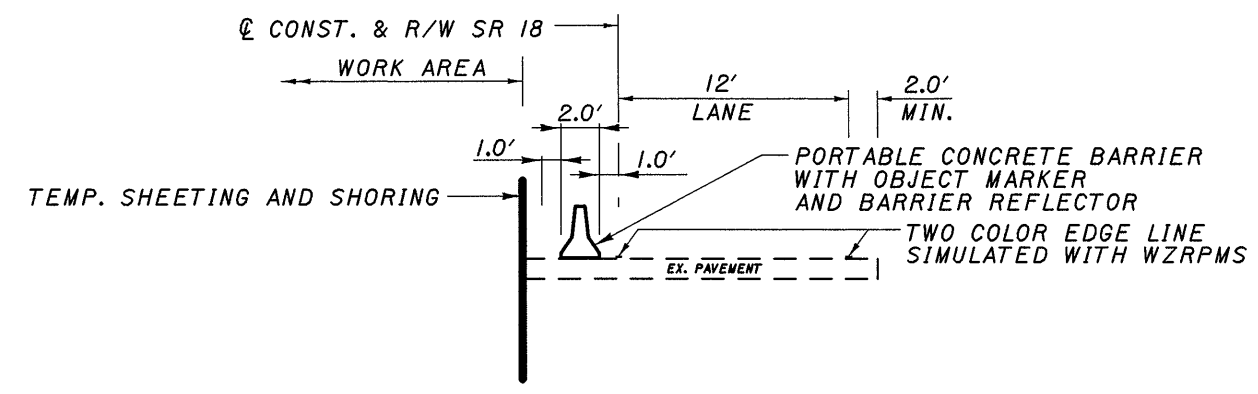


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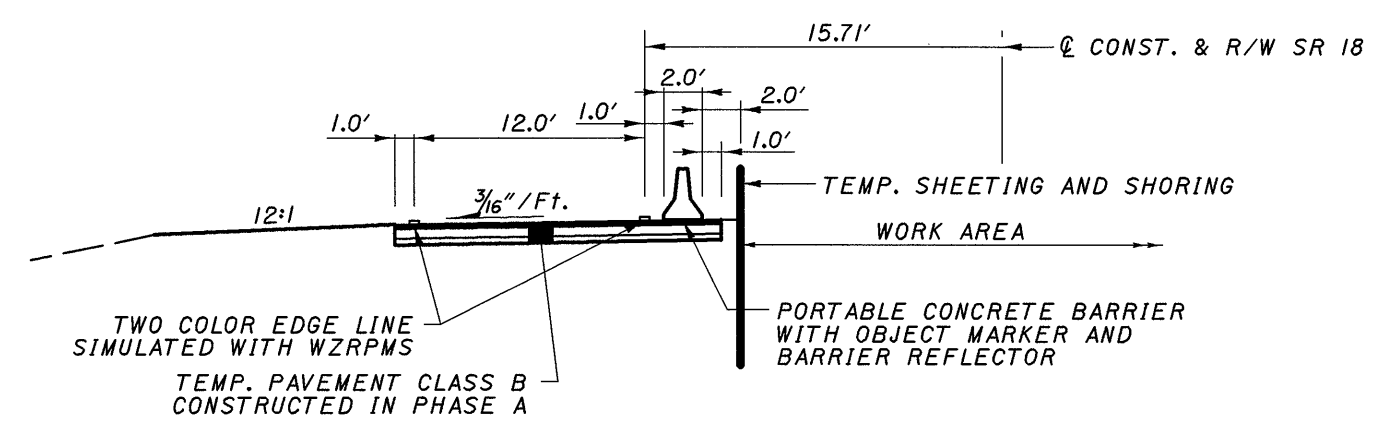
MED-18-0285 MOT TYPICAL SECTIONS

MED-18-0.00

61
118

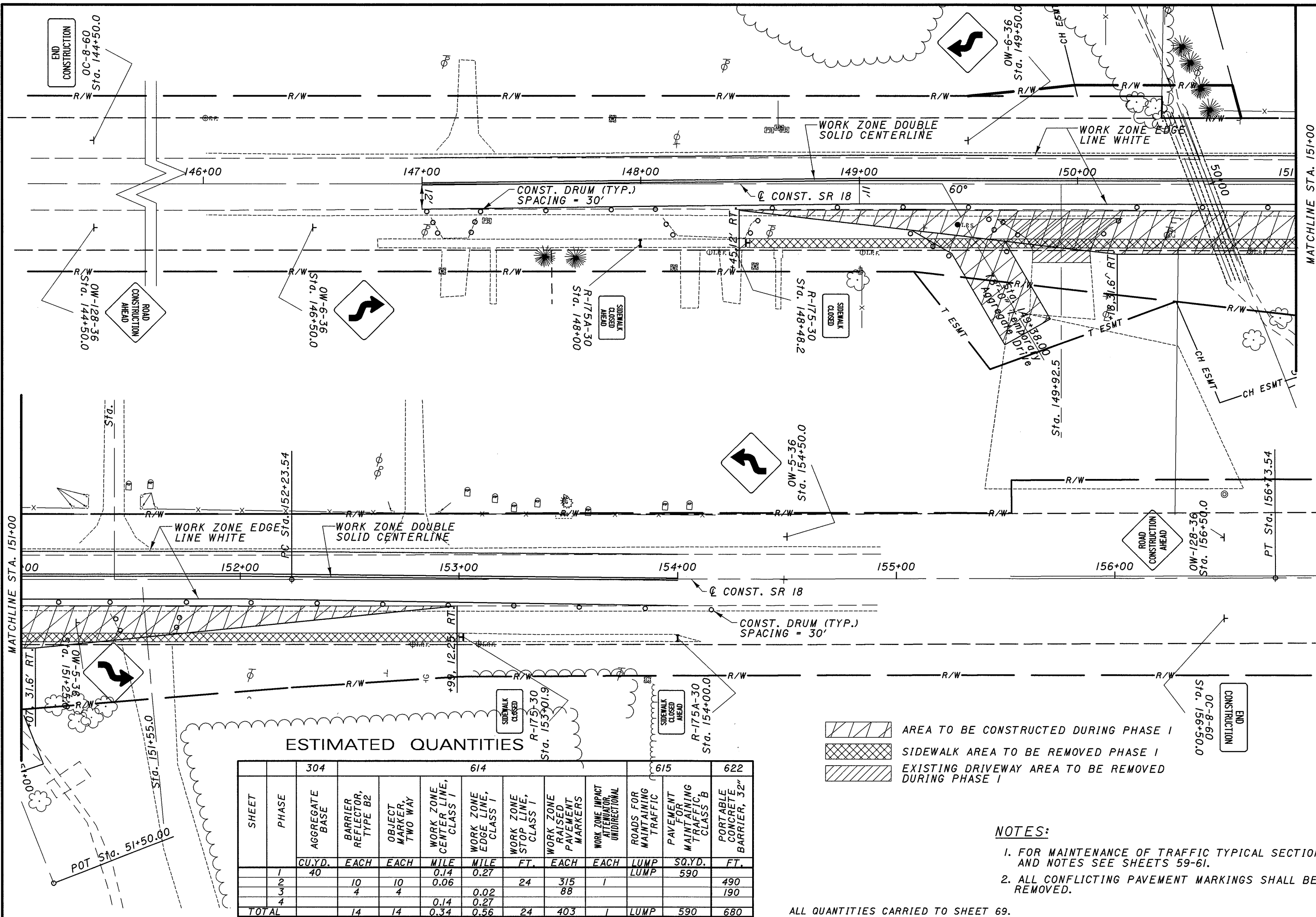


MOT TYPICAL SECTION PHASE A
MED-18-4.25



MOT TYPICAL SECTION PHASE B
MED-18-4.25

DESIGN FILE: I:\projects\18311\Struct\culmotnot.dgn
 WORKSTATION: claughre DATE: 11/04/03



ESTIMATED QUANTITIES

SHEET	PHASE	304		614				615		622		
		CU.YD.	EACH	EACH	MILE	MILE	FT.	EACH	EACH	LUMP	SQ.YD.	FT.
1	2	40			0.14	0.27				LUMP	590	
3	5		10	10	0.06		24	315	1			490
4	4		4	4		0.02		88				190
	4				0.14	0.27						
TOTAL			14	14	0.34	0.56	24	403	1	LUMP	590	680

- AREA TO BE CONSTRUCTED DURING PHASE I
- SIDEWALK AREA TO BE REMOVED PHASE I
- EXISTING DRIVEWAY AREA TO BE REMOVED DURING PHASE I

NOTES:

1. FOR MAINTENANCE OF TRAFFIC TYPICAL SECTION AND NOTES SEE SHEETS 59-61.
2. ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED.

ALL QUANTITIES CARRIED TO SHEET 69.

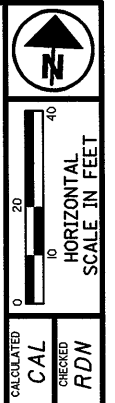
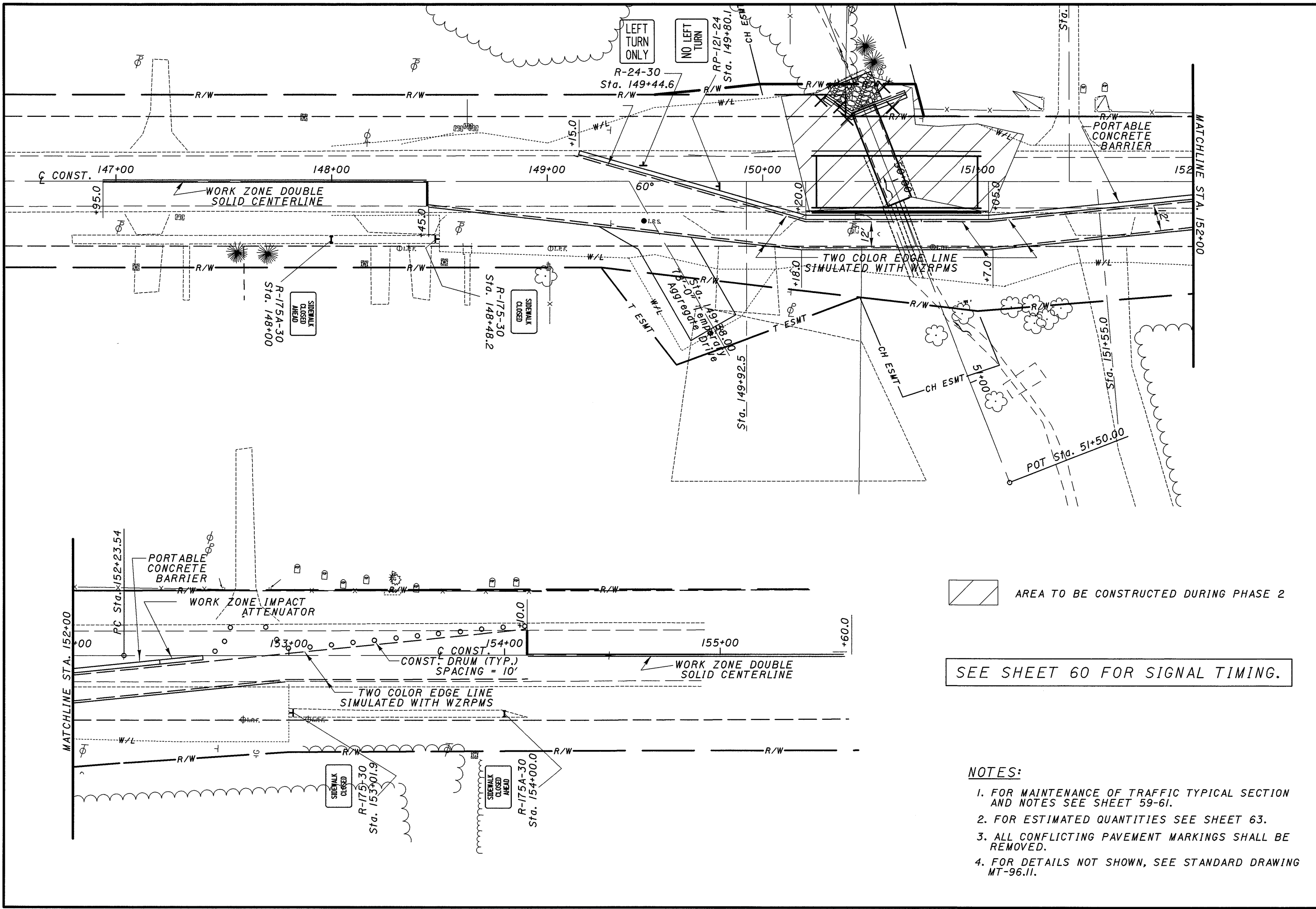
MATCHLINE STA. 151+00

MAINTENANCE OF TRAFFIC
 PHASE 1 - MED-18-0285

MED-18-0.00

CALCULATED
 CHECKED
 RDW

20
 10
 0
 HORIZONTAL
 SCALE IN FEET



CALCULATED
 CHECKED
 RDN

**MAINTENANCE OF TRAFFIC
 PHASE 2 - MED-18-0285**

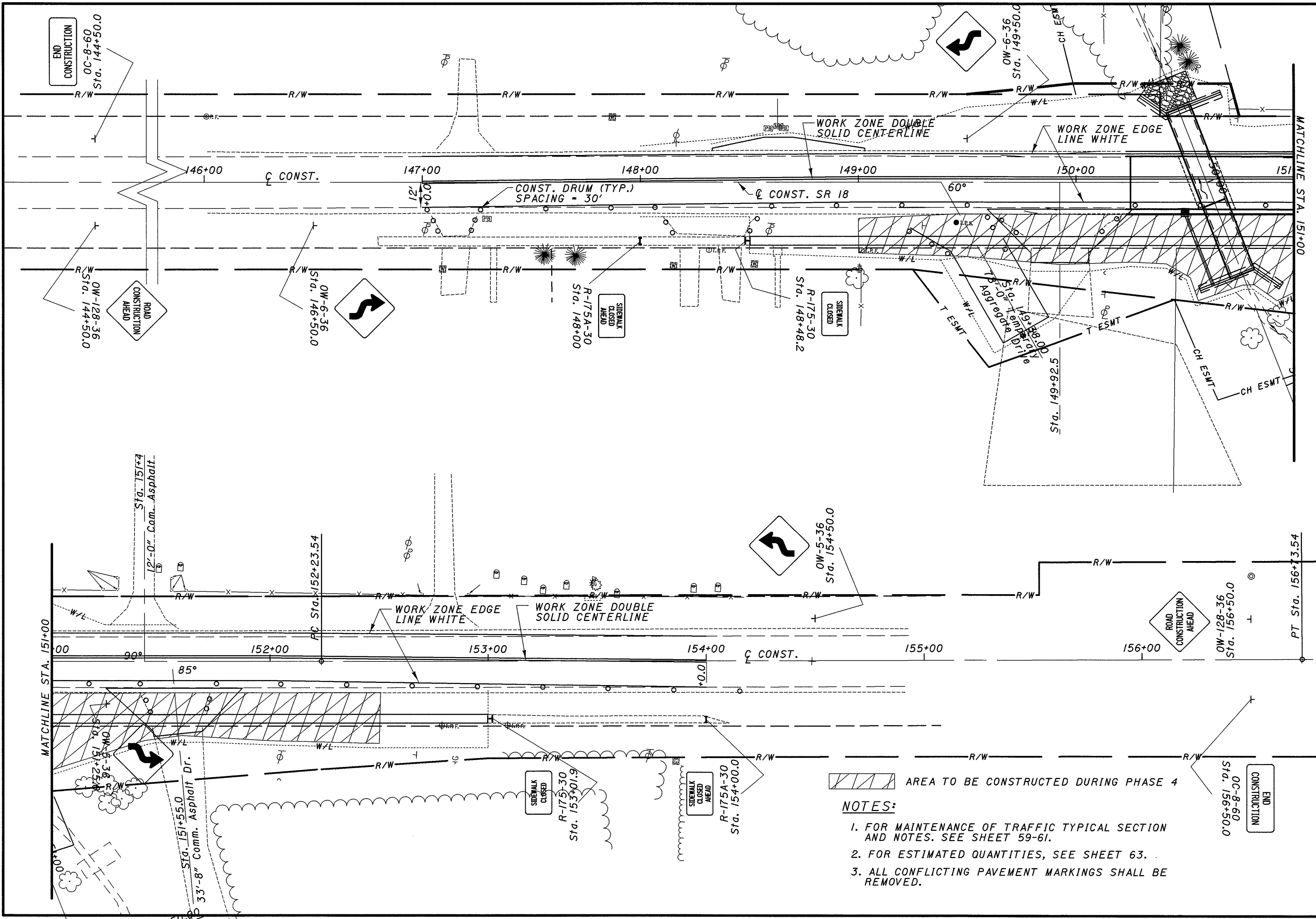
MED-18-0.00

64
 118

AREA TO BE CONSTRUCTED DURING PHASE 2

SEE SHEET 60 FOR SIGNAL TIMING.

- NOTES:**
1. FOR MAINTENANCE OF TRAFFIC TYPICAL SECTION AND NOTES SEE SHEET 59-61.
 2. FOR ESTIMATED QUANTITIES SEE SHEET 63.
 3. ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED.
 4. FOR DETAILS NOT SHOWN, SEE STANDARD DRAWING MT-96.11.



NOTES:

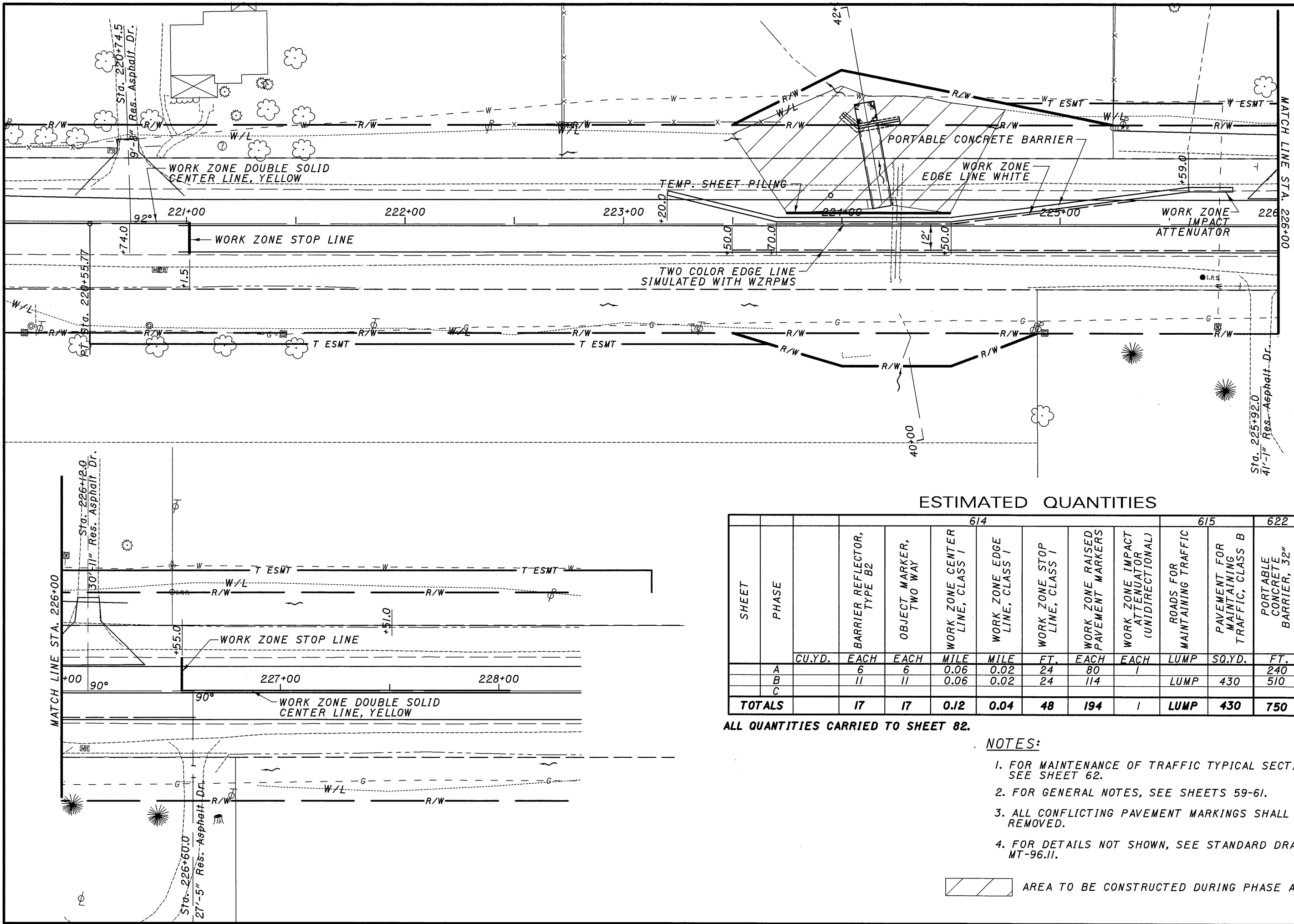
1. FOR MAINTENANCE OF TRAFFIC TYPICAL SECTION AND NOTES. SEE SHEET 59-61.
2. FOR ESTIMATED QUANTITIES, SEE SHEET 63.
3. ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED.

CALCULATED RPT CHECKED CAL

0 10 20
 HORIZONTAL SCALE IN FEET

0 40
 NORTH

**MAINTENANCE OF TRAFFIC
 PHASE 4 - MED-18-0285**



ESTIMATED QUANTITIES

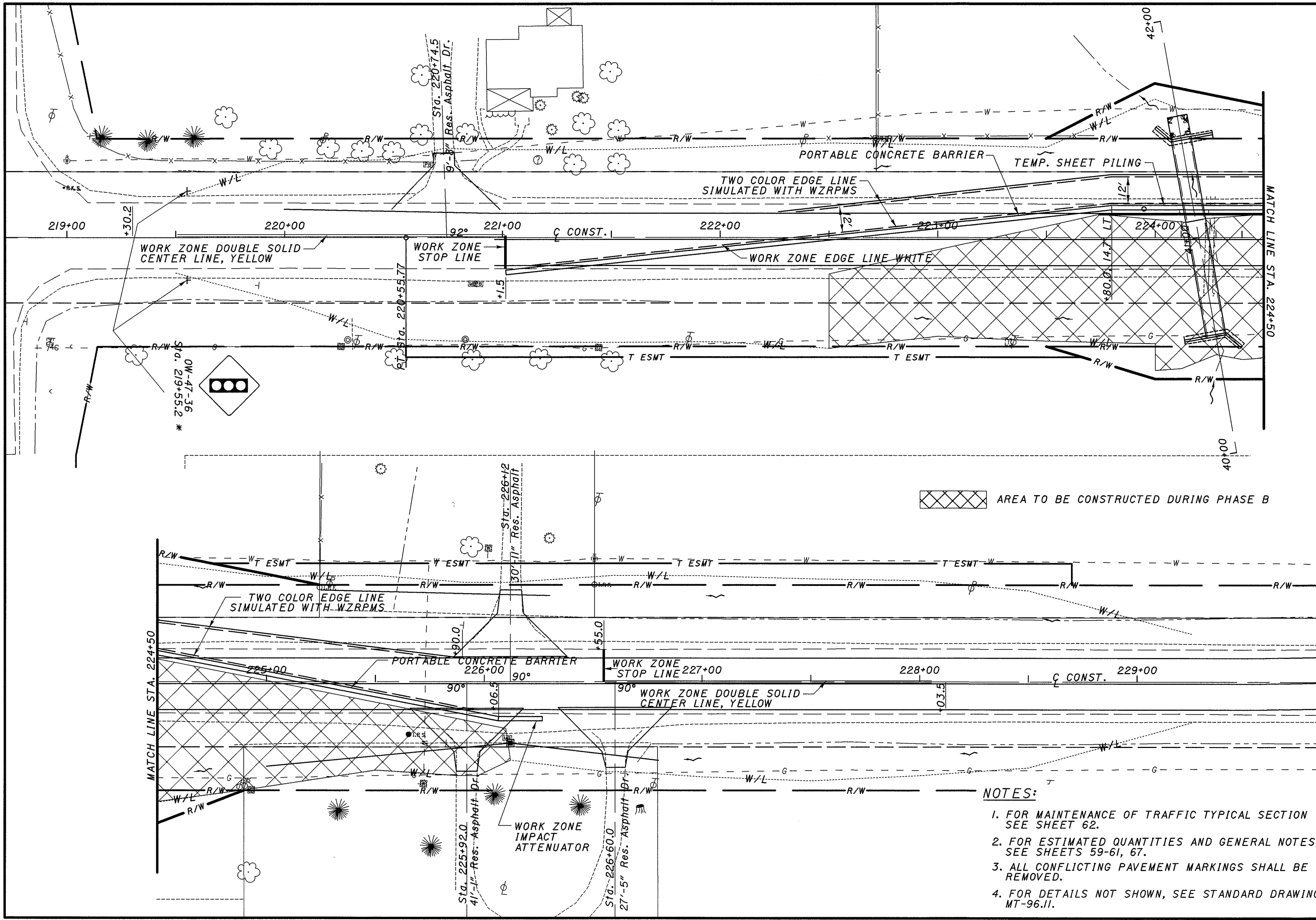
SHEET	PHASE	614					615		622		
		CU.YD.	EACH	EACH	MILE	MILE	FT.	EACH	EACH	LUMP	SQ.YD.
A		6	6	0.06	0.02	24	80	1			240
B		11	11	0.06	0.02	24	114		LUMP	430	510
C											
TOTALS		17	17	0.12	0.04	48	194	1	LUMP	430	750

ALL QUANTITIES CARRIED TO SHEET 82.

NOTES:

1. FOR MAINTENANCE OF TRAFFIC TYPICAL SECTION SEE SHEET 62.
2. FOR GENERAL NOTES, SEE SHEETS 59-61.
3. ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED.
4. FOR DETAILS NOT SHOWN, SEE STANDARD DRAWING MT-96.11.

AREA TO BE CONSTRUCTED DURING PHASE A



 AREA TO BE CONSTRUCTED DURING PHASE B

NOTES:

1. FOR MAINTENANCE OF TRAFFIC TYPICAL SECTION SEE SHEET 62.
2. FOR ESTIMATED QUANTITIES AND GENERAL NOTES, SEE SHEETS 59-61, 67.
3. ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED.
4. FOR DETAILS NOT SHOWN, SEE STANDARD DRAWING MT-96.11.

CALCULATED RPT CHECKED CAL

0 10 20 40
 HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC
 PHASE B - MED-18-4.25**

MED-18-0.00

CALCULATIONS

LINE	ITEM	QUANTITY
1	202 CONCRETE BASE REMOVED 75' X 20'± / 9 = 166.66 YD ²	
	TOTAL = 166.66 YD ²	167 YD ²
2	202 PAVEMENT REMOVED 75' X 20'± / 9 = 166.66 YD ²	
	TOTAL = 166.66 YD ²	167 YD ²
3	204 SUBGRADE COMPACTION 29.92' X 75' / 9 = 249.33 YD ² 2.5' X 380' / 9 = 105.56 YD ²	
	TOTAL = 354.89 YD ²	355 YD ²
4	301 9" ASPHALT CONCRETE BASE, PG 64-22 28.25' X 75' X 0.375 / 27 = 29.43 YD ³ 28.59' X 75' X 0.375 / 27 = 29.78 YD ³	
	TOTAL = 59.21 YD ³	60 YD ³
5	301 4 1/2" ASPHALT CONCRETE BASE, PG 64-22 (DRIVEWAYS) STA 149+92.5 (CADD=1049.3 S.F. X .39583)/27 = 15.38 YD ³ STA 151+55 (CADD=872.7 S.F. X .39583)/27 = 12.79 YD ³	
	TOTAL = 28.17 YD ³	29 YD ³
6	302 12" ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN 2.0' X 380' X 1.0 / 27 = 28.15 YD ³	
	TOTAL = 28.15 YD ³	29 YD ³
7	304 6" AGGREGATE BASE 29.08 X 75' X 0.5 / 27 = 40.39 YD ³	
	TOTAL = 40.39 YD ³	41 YD ³
8	304 10" AGGREGATE BASE TEMP. DRIVE @ STA. 149+38 (CADD=1263.78 S.F. X .83)/27= 39.01 YD ³	
	TOTAL = 39.01 YD ³	39 YD ³
9	442 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 mm, TYPE A (446) 27.92' X 75' X 0.125 / 27 = 9.69 YD ³	
	TOTAL = 9.69 YD ³	10 YD ³
10	442 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 mm, TYPE A (448) 27.92' X 75' X 0.0625 / 27 = 4.85 YD ³	
	TOTAL = 4.85 YD ³	5 YD ³
11	448 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE L PG 64-22 (DRIVEWAYS) STA 149+92.5 (CADD=1049.3 S.F. X .1042)/27 = 4.05 YD ³ STA 151+55 (CADD=872.7 S.F. X .1042)/27 = 3.37 YD ³	
	TOTAL = 7.42 YD ³	8 YD ³
12	407 TACK COAT (27.92' X 75') / 9 X 0.08 GAL/SY = 18.6 GAL	
	TOTAL = 18.6 GAL	19 GAL
13	407 TACK COAT FOR INTERMEDIATE COURSE (27.92' X 75') / 9 X 0.03 GAL/SY = 6.98 GAL	
	TOTAL = 6.98 GAL	7 GAL
14	601 ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER (CADD=268 S.F. X 2'-6")/27 = 24.81 YD ³	
	TOTAL = 24.81 YD ³	25 YD ³

GENERAL SUMMARY

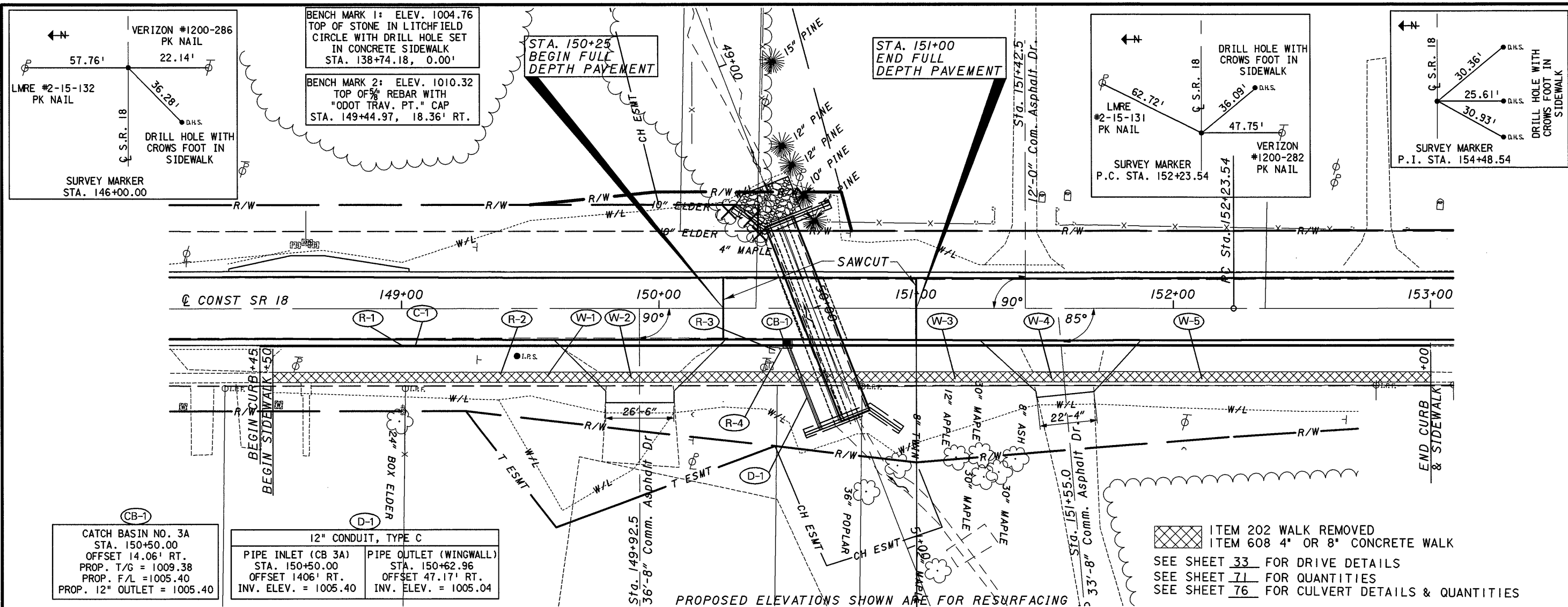
SHEET NUMBER								ITEM	ITEM EXT.	QUANT.	UNIT	DESCRIPTION	REFERENCE SHEET NO.	
57	63	67	69	71	75	76	111							
ROADWAY														
LUMP								201	11000	LUMP		CLEARING AND GRUBBING		
								202	11000	LUMP		STRUCTURE REMOVED		
			167					202	23000	167	SQ.YD.	PAVEMENT REMOVED		
			167					202	23900	167	SQ.YD.	CONCRETE BASE REMOVED		
				1800				202	30000	1800	SQ.FT.	WALK REMOVED		
				455				202	32500	455	FT.	CURB AND GUTTER REMOVED		
				10				202	35100	10	FT.	PIPE REMOVED, 24" AND UNDER		
				1				202	58100	1	EACH	CATCH BASIN REMOVED		
					132			203	10000	132	CU.YD.	EXCAVATION		
					81			203	20000	81	CU.YD.	EMBANKMENT		
			355					204	10000	355	SQ.YD.	SUBGRADE COMPACTION		
							2	604	38500	2	EACH	MONUMENT ASSEMBLY		
				1400				608	10000	1400	SQ.FT.	4' CONCRETE WALK		
				400				608	15000	400	SQ.FT.	8' CONCRETE WALK		
				455				609	26000	455	FT.	CURB, TYPE 6		
EROSION CONTROL														
			25					601	32104	25	CU.YD.	ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER		
165								659	00300	165	CU.YD.	TOPSOIL		
								659	10000	1488	SQ.YD.	SEEDING AND MULCHING		
.20								659	20000	.20	TON	COMMERCIAL FERTILIZER		
.31								659	31000	.31	ACRE	LIME		
8								659	35000	8	M GAL.	WATER		
DRAINAGE														
								LUMP	503	11100	LUMP	COFFERDAMS, CRIBS AND SHEETING		
								LUMP	503	21300	LUMP	UNCLASSIFIED EXCAVATION		
								3692	509	10000	3692	POUND	EPOXY COATED REINFORCING STEEL	
								54	511	46201	54	CU.YD.	CLASS C CONCRETE, AS PER PLAN (RET WALL/WINGWALL-INCL. FTG.)	77
								225	512	33000	225	SQ.YD.	TYPE 2 WATERPROOFING	
								29	516	13600	29	SQ.FT.	1" PREFORMED EXPANSION JOINT FILLER	
								LUMP	518	21230	LUMP	POROUS BACKFILL WITH FILTER FABRIC		
				35				603	04600	35	FT.	12" CONDUIT, TYPE C		
								603	94981	81	FT.	10' X 4' CONDUIT, TYPE A, 706.05, AS PER PLAN (1'-6" COVER)	77	
								604	00800	1	EACH	CATCH BASIN, NO. 3A		
								29	864	10100	29	SQ.YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
PAVEMENT														
								60	301	46000	60	CU.YD.	ASPHALT CONCRETE BASE, PG 64-22	
								29	301	48000	29	CU.YD.	ASPHALT CONCRETE BASE, PG 64-22 (DRIVEWAYS)	
								29	302	46001	29	CU.YD.	ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN	8
								40	304	20000	120	CU.YD.	AGGREGATE BASE	
								19	407	10000	19	GAL.	TACK COAT	
								7	407	14000	7	GAL.	TACK COAT FOR INTERMEDIATE COURSE	
								10	442	10000	10	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
								5	442	20100	5	CU.YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448)	
								8	448	48020	8	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE L, PG 64-22 (DRIVEWAYS)	
MAINTENANCE OF TRAFFIC														
								1	614	12336	1	EACH	WORK ZONE IMPACT ATTENUATOR, (UNIDIRECTIONAL)	
								403	614	12800	403	EACH	WORK ZONE RAISED PAVEMENT MARKER	
								14	614	13302	14	EACH	BARRIER REFLECTOR, TYPE B2	
								14	614	13360	14	EACH	OBJECT MARKER, TWO WAY	
								.34	614	21000	.34	MILE	WORK ZONE CENTER LINE, CLASS I (SOLID DOUBLE)	
								.56	614	22000	.56	MILE	WORK ZONE EDGE LINE, CLASS I (WHITE)	
								24	614	26000	24	FT.	WORK ZONE STOP LINE, CLASS I	
								LUMP	615	10000	LUMP	ROADS FOR MAINTAINING TRAFFIC		
								590	615	25000	590	SQ.YD.	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
								680	622	40020	680	FT.	PORTABLE CONCRETE BARRIER, 32"	

DESIGN FILE: I:\projects\1831\3\Struct\M0180285\culsum.dgn
 WORKSTATION: jfinch
 DATE: 11/20/03

CALCULATED DCM CHECKED RDN
 MED 18-0285 CULVERT SUMMARY & CALCULATIONS

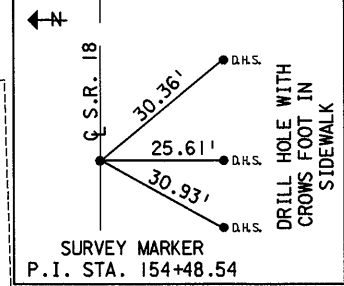
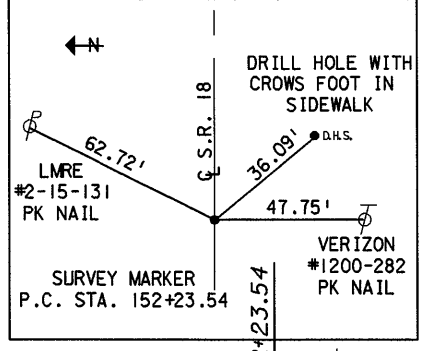
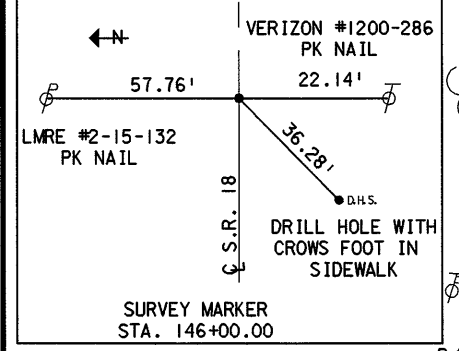
MED-18-0.00

DESIGN FILE: I:\projects\18311\struct\M0180285\pnp0285.dgn
 WORKSTATION: gsch/eff DATE: 11/04/03



BENCH MARK 1: ELEV. 1004.76
 TOP OF STONE IN LITCHFIELD
 CIRCLE WITH DRILL HOLE SET
 IN CONCRETE SIDEWALK
 STA. 138+74.18, 0.00'

BENCH MARK 2: ELEV. 1010.32
 TOP OF 5/8" REBAR WITH
 "ODOT TRAV. PT." CAP
 STA. 149+44.97, 18.36' RT.

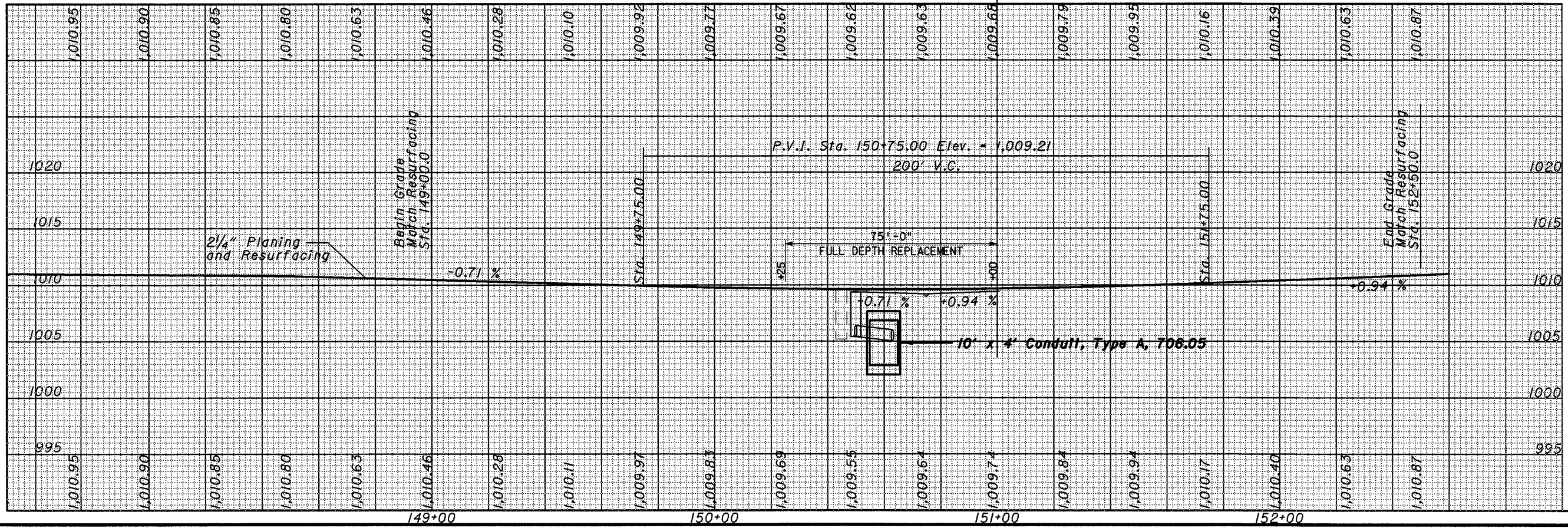


CB-1
 CATCH BASIN NO. 3A
 STA. 150+50.00
 OFFSET 14.06' RT.
 PROP. T/G = 1009.38
 PROP. F/L = 1005.40
 PROP. 12" OUTLET = 1005.40

12" CONDUIT, TYPE C
 PIPE INLET (CB 3A) STA. 150+50.00
 OFFSET 1406' RT.
 INV. ELEV. = 1005.40
 PIPE OUTLET (WINGWALL) STA. 150+62.96
 OFFSET 47.17' RT.
 INV. ELEV. = 1005.04

ITEM 202 WALK REMOVED
 ITEM 608 4' OR 8" CONCRETE WALK
 SEE SHEET 33 FOR DRIVE DETAILS
 SEE SHEET 71 FOR QUANTITIES
 SEE SHEET 76 FOR CULVERT DETAILS & QUANTITIES

PROPOSED ELEVATIONS SHOWN ARE FOR RESURFACING



DESIGN FILE: i:\projects\1831\Struct\M0180285\estqty.dgn
 WORKSTATION: gsch/eff DATE: 11/05/03

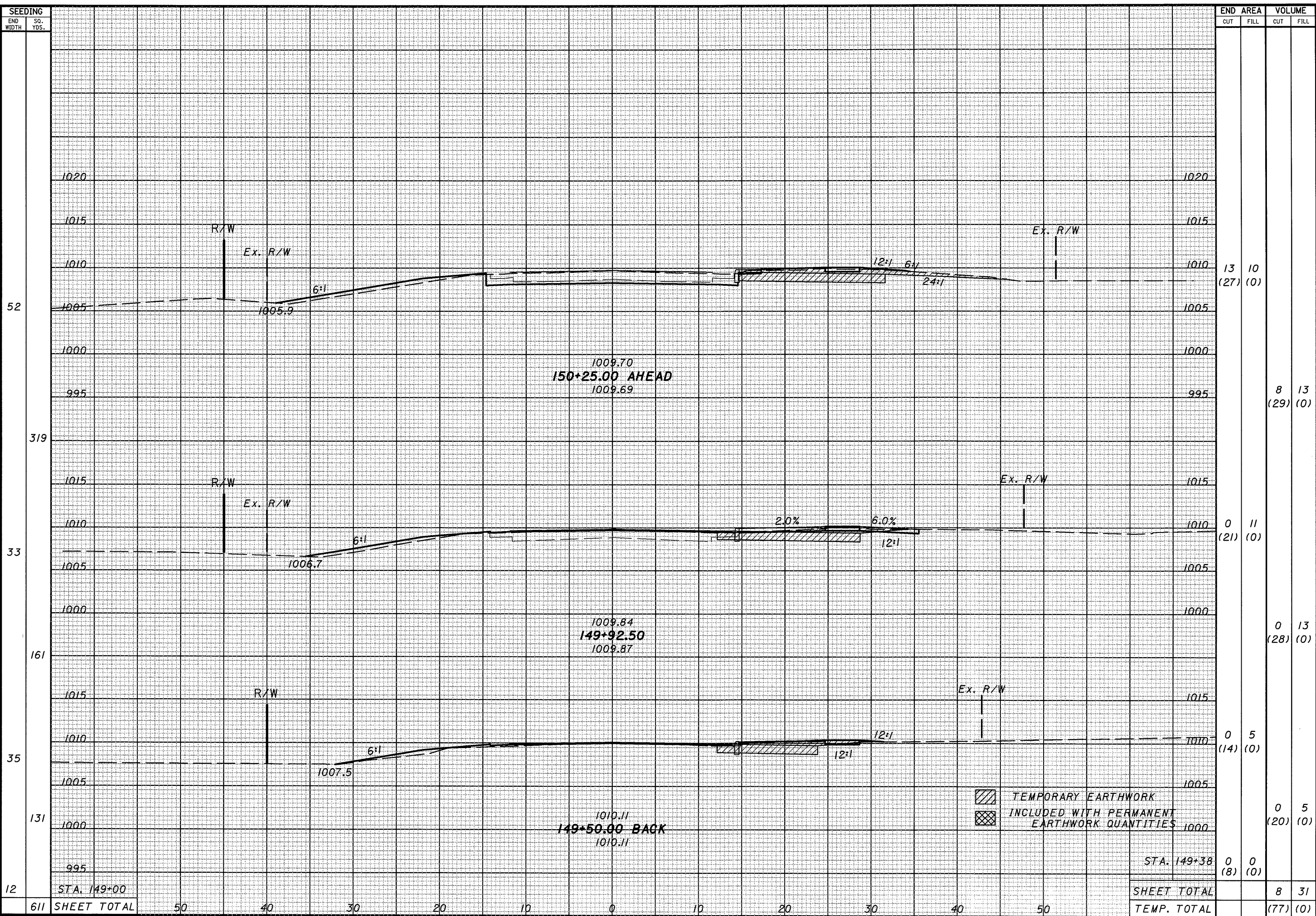
REF NO.	STATION		SIDE	202				603	604	608		609
	FROM	TO		WALK REMOVED SQ. FT.	CURB AND GUTTER REMOVED FT.	PIPE REMOVED, 24" AND UNDER FT.	CATCH BASIN REMOVED EACH			12" CONDUIT, TYPE C FT.	CATCH BASIN, NO. 3A EACH	
C-1	148+45	153+00	RT									455
CB-1	150+50		RT						1			
D-1	150+50	150+62.96	RT					35				
W-1	148+50	149+67.5	RT							470		
W-2	149+67.5	150+17.5	RT								200	
W-3	150+17.5	151+31	RT							454		
W-4	151+31	151+81	RT								200	
W-5	151+81	153+00	RT							476		
R-1	148+45	153+00	RT		455							
R-2	148+50	153+00	RT	1800								
R-3	150+44		RT				1					
R-4	150+44	150+54	RT			10						
ALL QUANTITIES FROM PLAN AND PROFILE SHEET NOS. 70												
TOTALS CARRIED TO CULVERT SUMMARY SHEET 69				1800	455	10	1	35	1	1400	400	455

QUANTIFIED
DCM
CHECKED
RDN

MED - 18 - 0285 ESTIMATED QUANTITIES

MED - 18 - 0.00

DESIGN FILE: i:\projects\8311\Struct\M0180285\xs_w_brdr.dgn
 DATE: 11/04/03



SEEDING		END WIDTH	SQ. YDS.
END WIDTH	SQ. YDS.		
52			
319			
33			
161			
35			
131			
12			
611	SHEET TOTAL	50	40

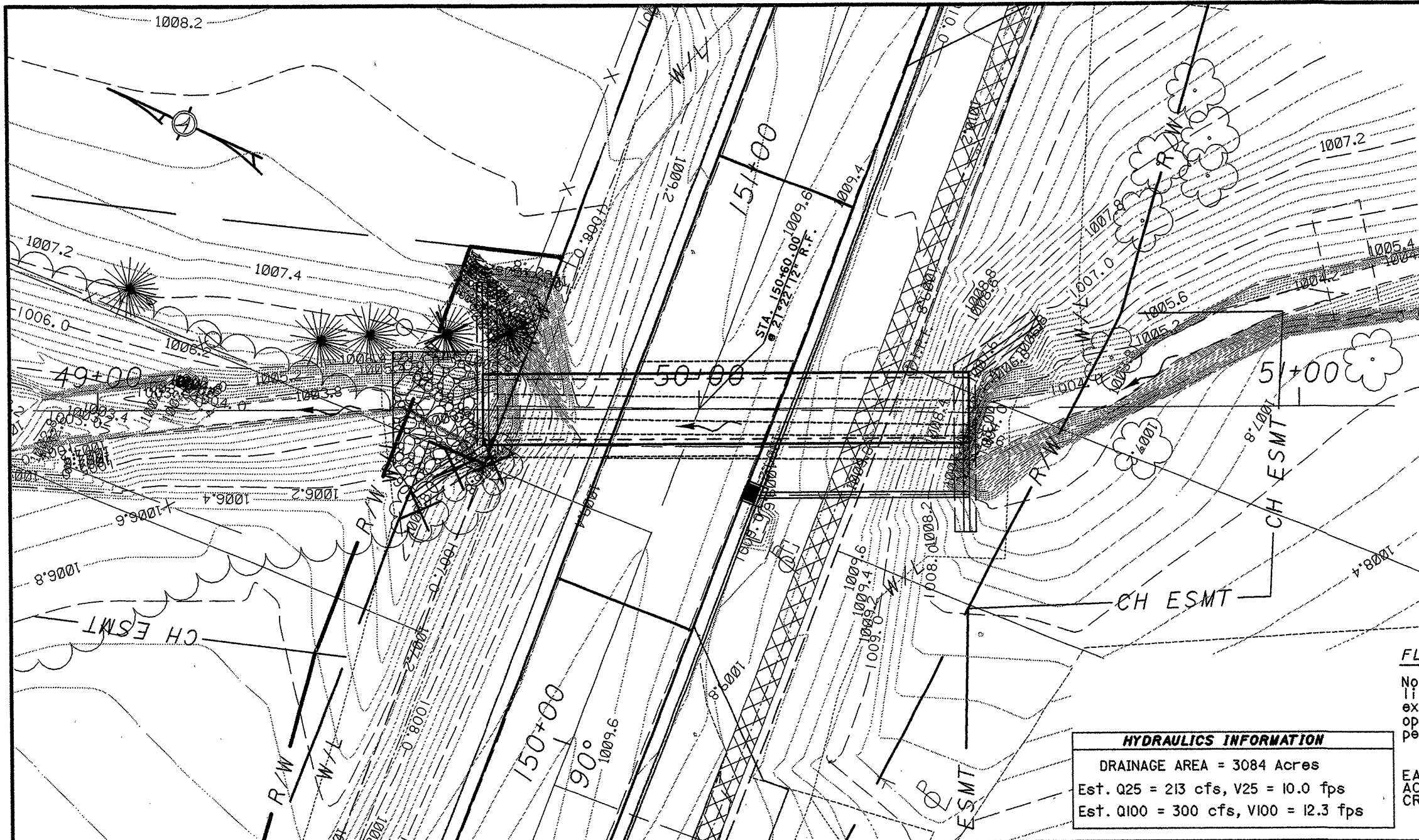
END AREA		VOLUME		CALCULATED GTS	CHECKED CAL
CUT	FILL	CUT	FILL		
13	10	8	13		
(27)	(0)	(29)	(0)		
0	11	0	13		
(21)	(0)	(28)	(0)		
0	5	0	5		
(14)	(0)	(20)	(0)		
0	0	0	0		
(8)	(0)				
SHEET TOTAL		8	31		
TEMP. TOTAL		(77)	(0)		

CROSS SECTIONS MED-18-0285
 STA. 149+50.00 TO STA. 149+92.50

MED-18-0.00

73
118

DESIGN FILE: i:\projects\1831\Struct\M0180285\copp0285.dgn
 WORKSTATION: dmollens DATE: 11/17/03

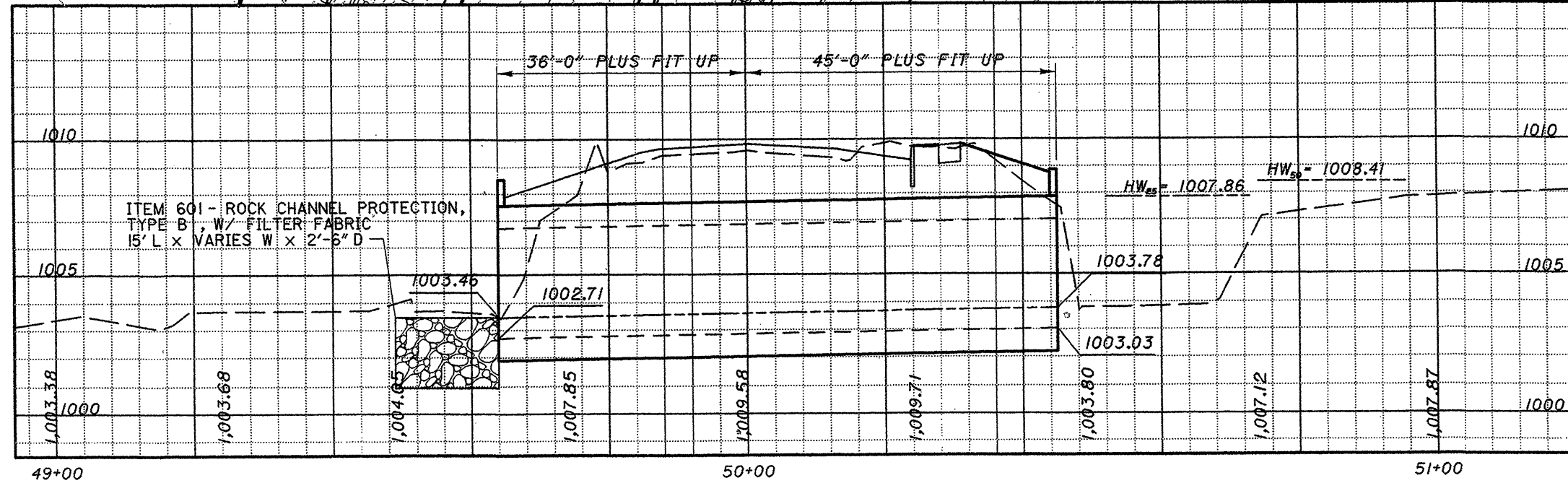


EXISTING STRUCTURE	
TYPE:	TWIN CMP CULVERTS
SPAN:	4'-0" DIAMETER EACH
ROADWAY:	2 - 12FT. LANES, 3FT± TREATED SHOULDERS AND A 4'± SIDEWALK
SKEW:	20° R.F.
WEARING SURFACE:	ASPHALT
APPROACH SLABS:	NONE
ALIGNMENT:	TANGENT
CONDITION:	POOR
DATE BUILT:	1956
SFN:	5200555
PROPOSED STRUCTURE	
TYPE:	PRECAST CONCRETE BOX CULVERT WITH REINFORCED CONCRETE WINGWALLS ON SPREAD FOOTINGS
SIZE:	10'-0" SPAN X 4'-0" RISE
LENGTH:	81'-0"
ROADWAY:	SEE TYPICAL SECTIONS
SKEW:	21° 22' 12" R.F.
LOADING:	HS20-44 AND THE ALTERNATE MILITARY LOADING
WEARING SURFACE:	ASPHALT
CROWN:	3/16" /ft.
ALIGNMENT:	TANGENT
HYDRAULIC DESIGN YEAR FREQUENCY:	25 YR.
SFN:	5200563

HYDRAULICS INFORMATION	
DRAINAGE AREA	= 3084 Acres
Est. Q25	= 213 cfs, V25 = 10.0 fps
Est. Q100	= 300 cfs, V100 = 12.3 fps

FLOOD HAZARD EVALUATION
 No buildings, residences or business establishments lie in the base flood plain, and no flood hazard exists. Existing structure to be removed. Road to be open during construction. Traffic to be maintained as per the details in the plan.

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS-SECTIONS



ITEM	TOTAL	UNIT	DESCRIPTION
202	LUMP		STRUCTURE REMOVED
503	LUMP		COFFERDAMS, CRIBS, AND SHEETING
503	LUMP		UNCLASSIFIED EXCAVATION
509	3692	POUND	EPOXY COATED REINFORCING STEEL
511	54	CU.YD.	CLASS C CONCRETE, AS PER PLAN (RETAINING WALL, WINGWALL, INCLUDING FOOTING)
512	225	SQ.YD.	TYPE 2 WATERPROOFING
516	29	SQ.FT.	1" PREFORMED EXPANSION JOINT FILLER
518	LUMP		POROUS BACKFILL WITH FILTER FABRIC
603	81'-0"	FT.	10'-0" SPAN X 4'-0" RISE CONDUIT, TYPE A, 706.05, AS PER PLAN (1-6" COVER)
864	29	SQ.YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

QUANTITIES CARRIED TO SHEET 69

DESIGN AGENCY: DATE: 11/03
 REVIEWED: DCM
 STRUCTURE FILE NUMBER: 5200563
 DRAWN: RPT
 CHECKED: RPT
 CAL
CULVERT DETAIL
 MED-18-0285
MED-18-0-00
 1/6
 76
 118

STRUCTURE GENERAL NOTES

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HS20-44 AND THE ALTERNATE MILITARY LOADING.

DESIGN STRESSES:

CAST-IN-PLACE STRUCTURES
 CONCRETE CLASS C - $f'c = 4,000$ psi SUBSTRUCTURE
 REINFORCING STEEL - ASTM A615 OR A996, GRADE 60,
 $F_y = 60,000$ psi.

PRECAST STRUCTURES: FOR BOX AND PIPE CULVERTS SEE CMS SECTION 603.

REMOVAL OF EXISTING STRUCTURE:

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER.

ITEM 503-UNCLASSIFIED EXCAVATION:

THIS ITEM INCLUDES ALL EXCAVATION NOT INCLUDED WITH ITEM 202 STRUCTURE REMOVED OR ITEM 603-10'X4' CONDUIT, TYPE A, 706.05.

ITEM 603- 10'X4' CONDUIT, TYPE A, 706.05, AS PER PLAN

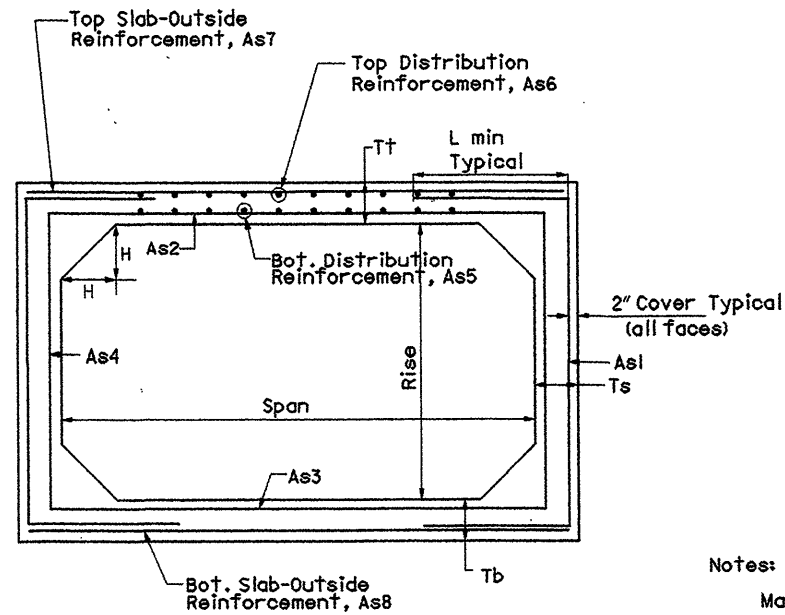
ALL REQUIREMENTS OF CMS 706.05 AND ASTM C1433 SHALL BE MET EXCEPT AS DETAILED BELOW.

ITEM 511- CLASS C CONCRETE, AS PER PLAN (RET WALL/ WINGWALL, INCL. FOOTING.)

THE COARSE AGGREGATE SHALL BE LIMESTONE.

ITEM 518, POROUS BACKFILL WITH FILTER FABRIC:

THE POROUS BACKFILL SHALL BE 1'-6" THICK AND BE PLACED BEHIND THE WINGWALLS ONLY. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6". GEOTEXTILE FABRIC SHALL CONFORM WITH 712.09, TYPE A.

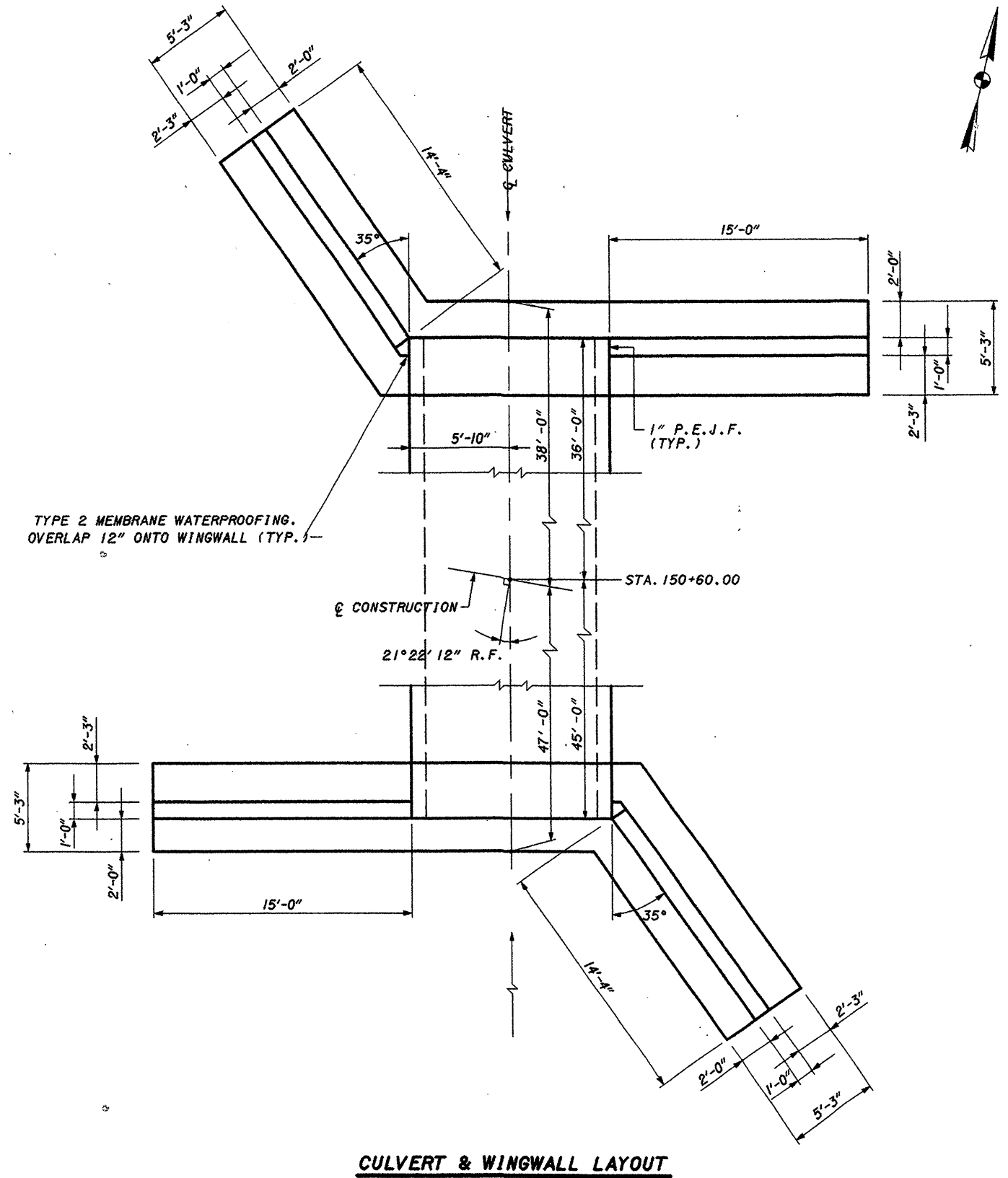


Loadings: HS20 & ALT. MILITARY
 FWS = 60 psf

Span	10'
Rise	4'
T†	10"
Tb	10"
Ts	10"
H	10"
As1	0.52
As2	0.59
As3	0.48
As4	0.29
As5	0.29
As6	0.29
As7	0.29
As8	0.29
L min	43"

Notes:

Maximum spacing of the circumferential reinforcing shall be 4".
 Minimum yield strength for reinforcing shall be 60 ksi.
 Minimum concrete compressive strength shall be 5000 psi.
 $As \text{ min} = 0.002 \times \text{Gross Section Area}$



CULVERT & WINGWALL LAYOUT

DESIGN AGENCY

REVIEWED DATE 11/03
 DCM STRUCTURE FILE NUMBER 5200563

DRAWN CAL
 CHECKED CAL

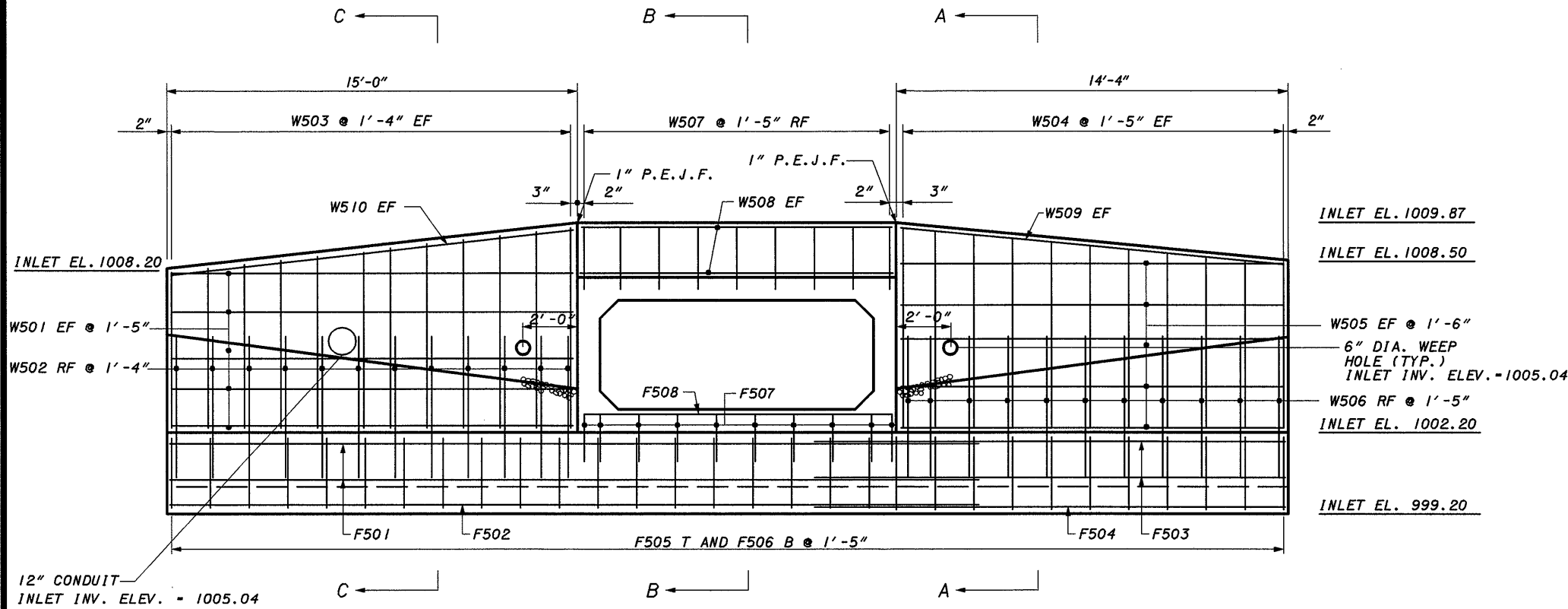
HEADWALL DETAIL
 MED-18-0285

MED-18-0-00

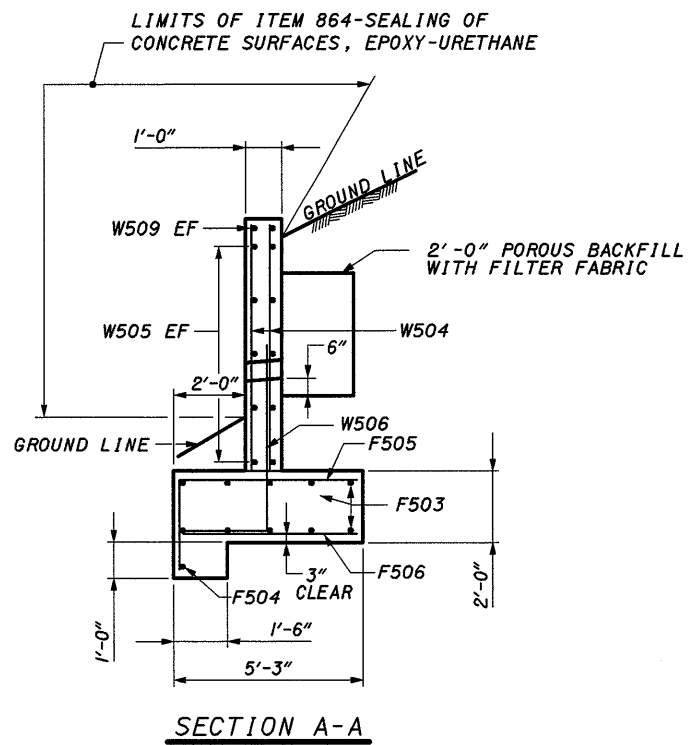
LEGEND

FF - FRONT FACE
 RF - REAR FACE
 EF - EACH FACE
 T - TOP
 B - BOTTOM
 1" P.E.J.F. - 1" PREFORMED EXPANSION JOINT FILLER

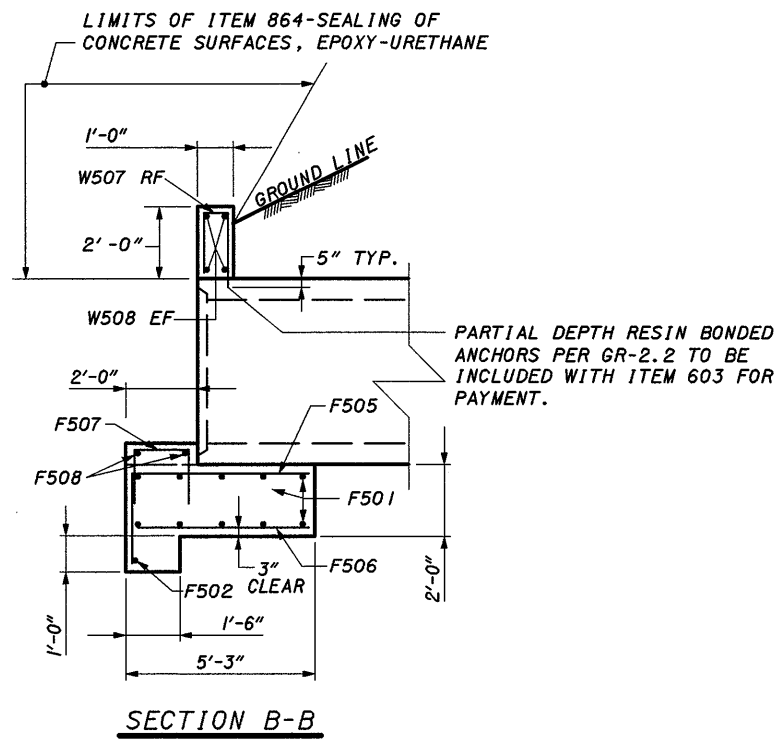
NOTES:
 FOR ADDITIONAL NOTES, DETAILS AND
 REINFORCING STEEL SCHEDULE
 SEE SHEET 81



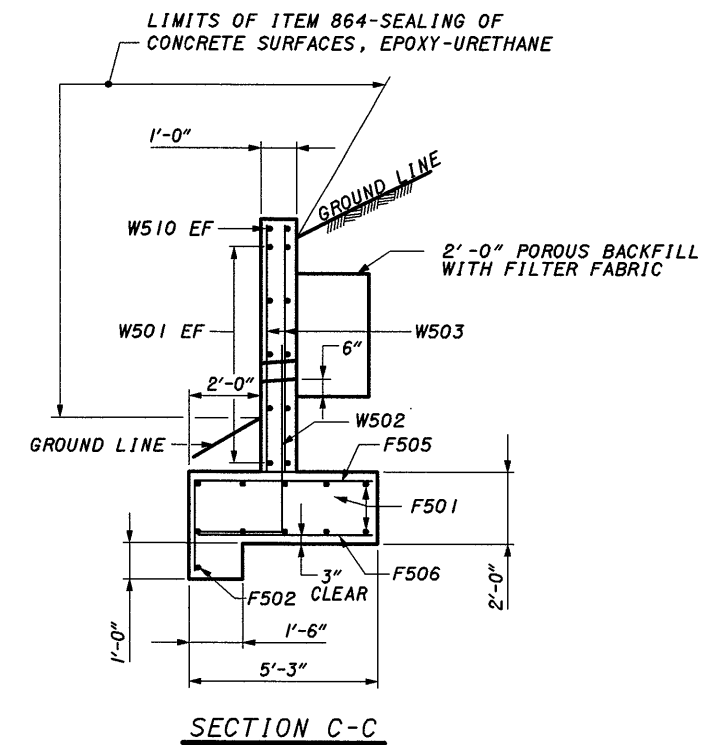
INLET ELEVATION PLAN



SECTION A-A



SECTION B-B



SECTION C-C

DESIGN AGENCY

DATE 11/03
 REVIEWED DCM
 STRUCTURE FILE NUMBER 5200569

DRAWN CAL
 CHECKED CAL

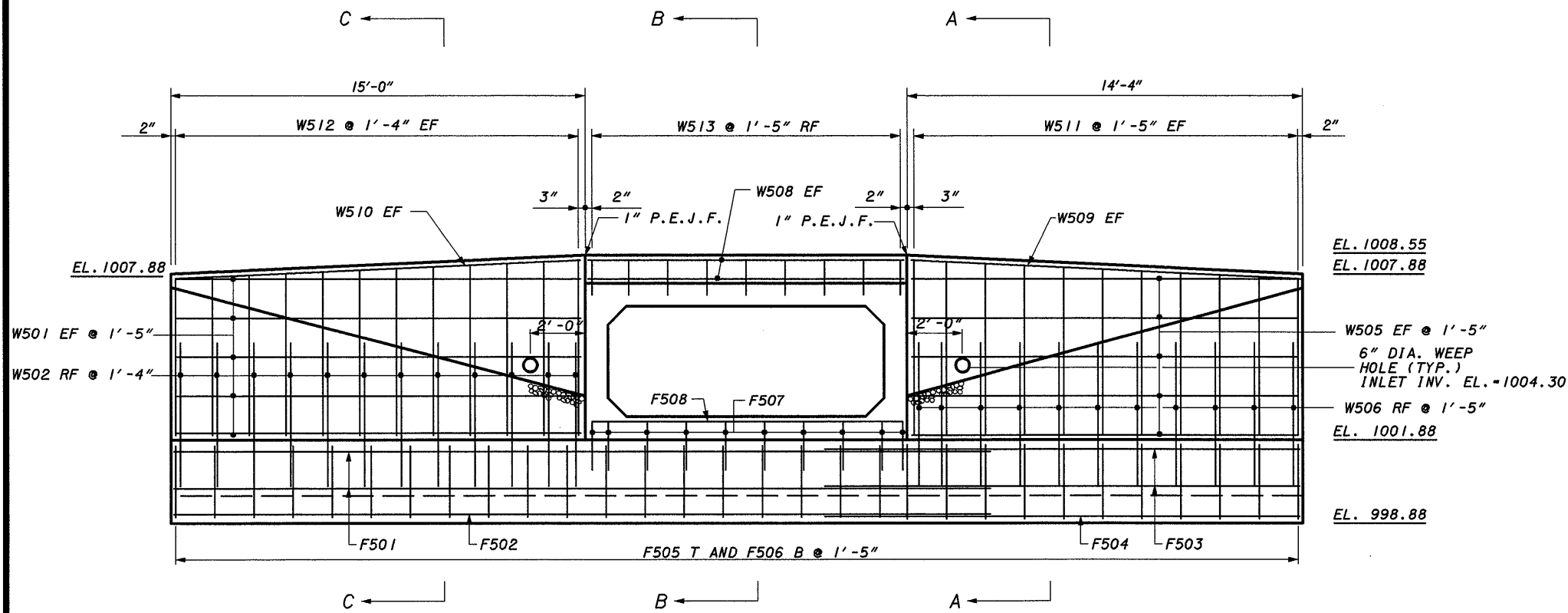
HEADWALL DETAIL
 MED-18-0285

MED-18-0.00

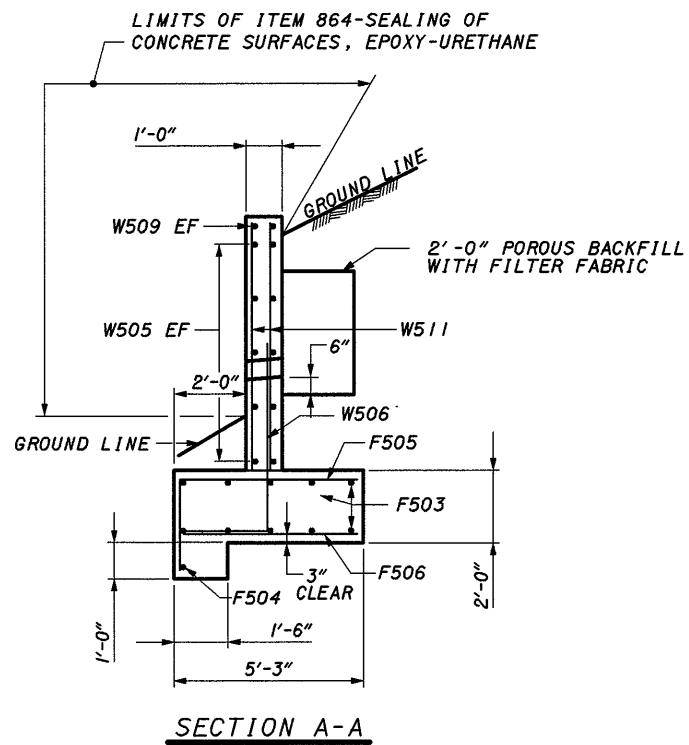
LEGEND

FF - FRONT FACE
 RF - REAR FACE
 EF - EACH FACE
 T - TOP
 B - BOTTOM
 1" P.E.J.F. - 1" PREFORMED EXPANSION JOINT FILLER

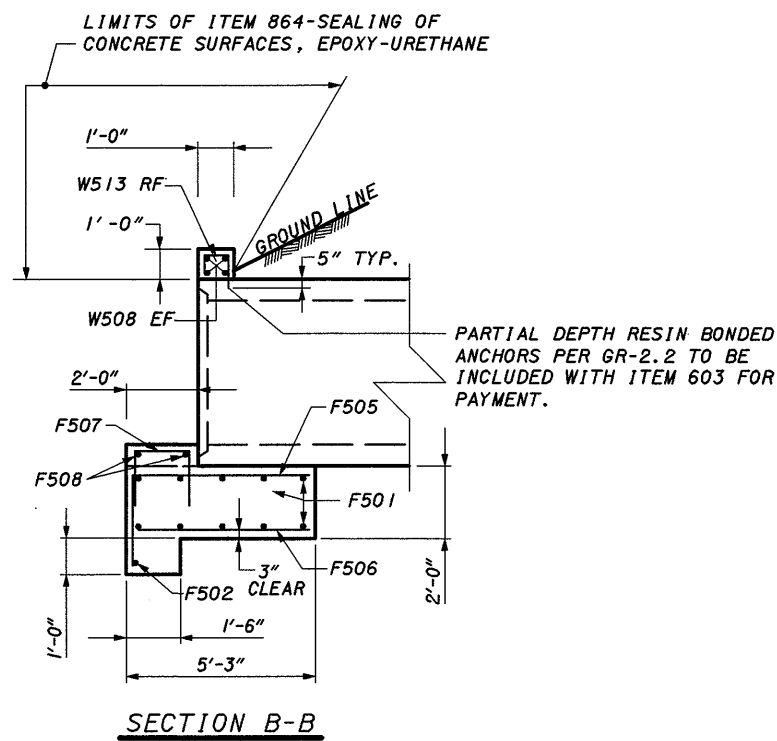
NOTES:
 FOR ADDITIONAL NOTES, DETAILS AND
 REINFORCING STEEL SCHEDULE
 SEE SHEETS 81



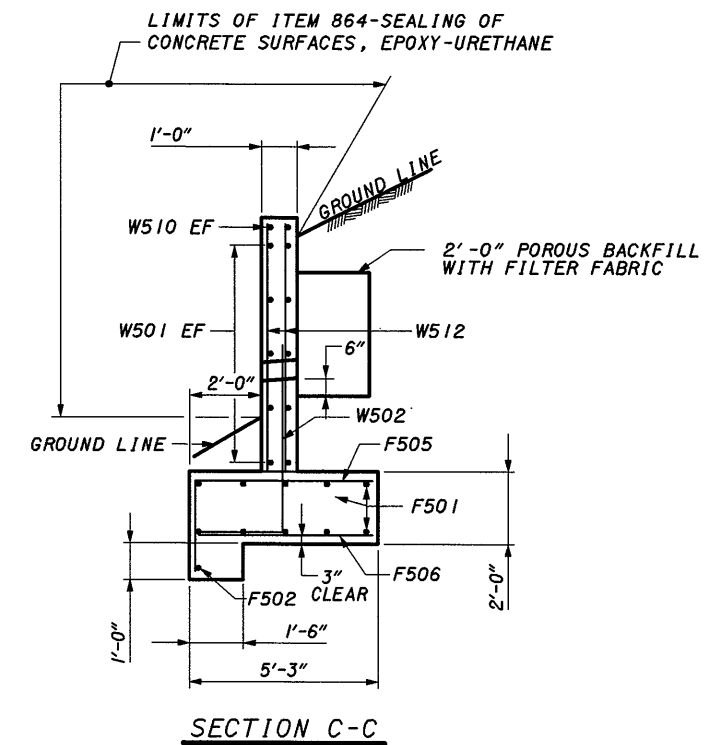
OUTLET ELEVATION PLAN



SECTION A-A



SECTION B-B



SECTION C-C

DESIGN AGENCY

DATE 11/03
 REVIEWED DCM
 STRUCTURE FILE NUMBER 5200563

DRAWN CAL
 CHECKED CAL

HEADWALL DETAIL
 MED-18-0285

MED-18-0.00

CALCULATIONS

GENERAL SUMMARY

LINE	ITEM	QUANTITY
1	202 CONCRETE BASE REMOVED 40' X 18'± / 9 =	80.0 YD ²
	TOTAL =	80.0 YD ² 80 YD ²
2	202 PAVEMENT REMOVED 40' X 18'± / 9 =	80.0 YD ²
	TOTAL =	80.0 YD ² 80 YD ²
3	204 SUBGRADE COMPACTION 33.0' X 40' / 9 =	146.67 YD ²
	TOTAL =	146.67 YD ² 147 YD ²
4	301 9" ASPHALT CONCRETE BASE, PG 64-22 30.67' X 40' X 0.375 / 27 = 31.33' X 40' X 0.375 / 27 =	17.04 YD ³ 17.41 YD ³
	TOTAL =	34.45 YD ³ 35 YD ³
5	301 3/4" ASPHALT CONCRETE BASE, PG 64-22 (DRIVEWAYS) STA 225+92.0 (CADD=731.9 S.F. X .39583')/27 = 10.73 YD ³ STA 226+12 (CADD=757.7 S.F. X .39583')/27 = 11.11 YD ³ STA 226+60 (CADD=717.4 S.F. X .39583')/27 = 10.52 YD ³	32.36 YD ³
	TOTAL =	32.36 YD ³ 33 YD ³
6	304 6" AGGREGATE BASE 32.33' X 40' X 0.5 / 27 =	23.95 YD ³
	TOTAL =	23.95 YD ³ 24 YD ³
7	442 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 mm, TYPE A (446) 30.0' X 40' X 0.125' / 27 =	5.56 YD ³
	TOTAL =	5.56 YD ³ 6 YD ³
8	442 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 mm, TYPE A (448) 27.92' X 75' X 0.0625' / 27 =	4.85 YD ³
	TOTAL =	4.85 YD ³ 5 YD ³
9	448 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG 64-22 (DRIVEWAYS) STA 225+92.0 (CADD=731.9 S.F. X .125')/27 = 3.39 YD ³ STA 226+12 (CADD=757.7 S.F. X .125')/27 = 3.51 YD ³ STA 226+60 (CADD=717.4 S.F. X .125')/27 = 3.32 YD ³	10.22 YD ³
	TOTAL =	10.22 YD ³ 11 YD ³
10	407 TACK COAT (30.0' X 40') / 9 X 0.08 GAL/SY =	10.67 GAL
	TOTAL =	10.67 GAL 11 GAL
11	407 TACK COAT FOR INTERMEDIATE COURSE (30.0' X 40') / 9 X 0.03 GAL/SY =	4.0 GAL
	TOTAL =	4.0 GAL 4 GAL
12	601 ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER (10' X 9.17' X 2'-6")/27 =	8.49 YD ³
	TOTAL =	8.49 YD ³ 9 YD ³

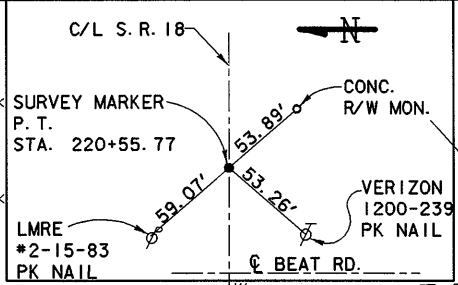
SHEET NUMBER								ITEM	ITEM EXT.	QUANT.	UNIT	DESCRIPTION	REFERENCE SHEET NO.
57	67	82	84	91	92		III						
ROADWAY													
LUMP								201	11000	LUMP		CLEARING AND GRUBBING	
								202	11000	LUMP		STRUCTURE REMOVED	
		80						202	23000	80	SQ.YD.	PAVEMENT REMOVED	
		80						202	23900	80	SQ.YD.	CONCRETE BASE REMOVED	
			308					202	35100	308	FT.	PIPE REMOVED, 24" AND UNDER	
								203	10000	520	CU.YD.	EXCAVATION	
								203	20000	675	CU.YD.	EMBANKMENT	
		147						204	10000	147	SQ.YD.	SUBGRADE COMPACTION	
							4	604	38500	4	EACH	MONUMENT ASSEMBLY	
EROSION CONTROL													
		9						601	32104	9	CU.YD.	ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER	
605								659	00300	605	CU.YD.	TOPSOIL	
					5453			659	10000	5453	SQ.YD.	SEEDING AND MULCHING	
.74								659	20000	.74	TON	COMMERCIAL FERTILIZER	
1.13								659	31000	1.13	ACRE	LIME	
30								659	35000	30	M GAL.	WATER	
DRAINAGE													
								503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING	
								503	21300	LUMP		UNCLASSIFIED EXCAVATION	
								509	10000	2552	POUND	EPOXY COATED REINFORCING STEEL	
								511	46201	35	CU.YD.	CLASS C CONCRETE, AS PER PLAN (RET WALL/WINGWALL-INCL. FTG.)	93
								512	33000	220	SQ.YD.	TYPE 2 WATERPROOFING	
								516	13600	24	SQ.FT.	1" PREFORMED EXPANSION JOINT FILLER	
								518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC	
			286					603	04900	286	FT.	12" CONDUIT, TYPE D	
								603	94800	92	FT.	8" X 4" CONDUIT, TYPE A, 706.05, (1'-6" COVER)	
								604	04500	1	EACH	CATCH BASIN, NO. 2-28	
								864	10100	28	SQ.YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
PAVEMENT													
								301	46000	35	CU.YD.	ASPHALT CONCRETE BASE, PG 64-22	
								301	48000	33	CU.YD.	ASPHALT CONCRETE BASE, PG 64-22 (DRIVEWAYS)	
								304	20000	24	CU.YD.	AGGREGATE BASE	
								407	10000	11	GAL.	TACK COAT	
								407	14000	4	GAL.	TACK COAT FOR INTERMEDIATE COURSE	
								442	10000	6	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
								442	20100	5	CU.YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448)	
								448	48020	11	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG 64-22 (DRIVEWAYS)	
MAINTENANCE OF TRAFFIC													
								614	12336	1	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
		194						614	12800	194	EACH	WORK ZONE RAISED PAVEMENT MARKER	
		17						614	13302	17	EACH	BARRIER REFLECTOR, TYPE B2	
		17						614	13360	17	EACH	OBJECT MARKER, TWO WAY	
								614	21000	.12	MILE	WORK ZONE CENTER LINE, CLASS I (SOLID DOUBLE)	
								614	22000	.04	MILE	WORK ZONE EDGE LINE, CLASS I (WHITE)	
								614	26000	48	FT.	WORK ZONE STOP LINE, CLASS I	
								615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC	
								615	25000	430	SQ.YD.	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
								622	40020	750	FT.	PORTABLE CONCRETE BARRIER, 32"	

DESIGN FILE: I:\projects\18311\Structure\M0180425\culsum.dgn
 WORKSTATION: claughe DATE: 11/06/03

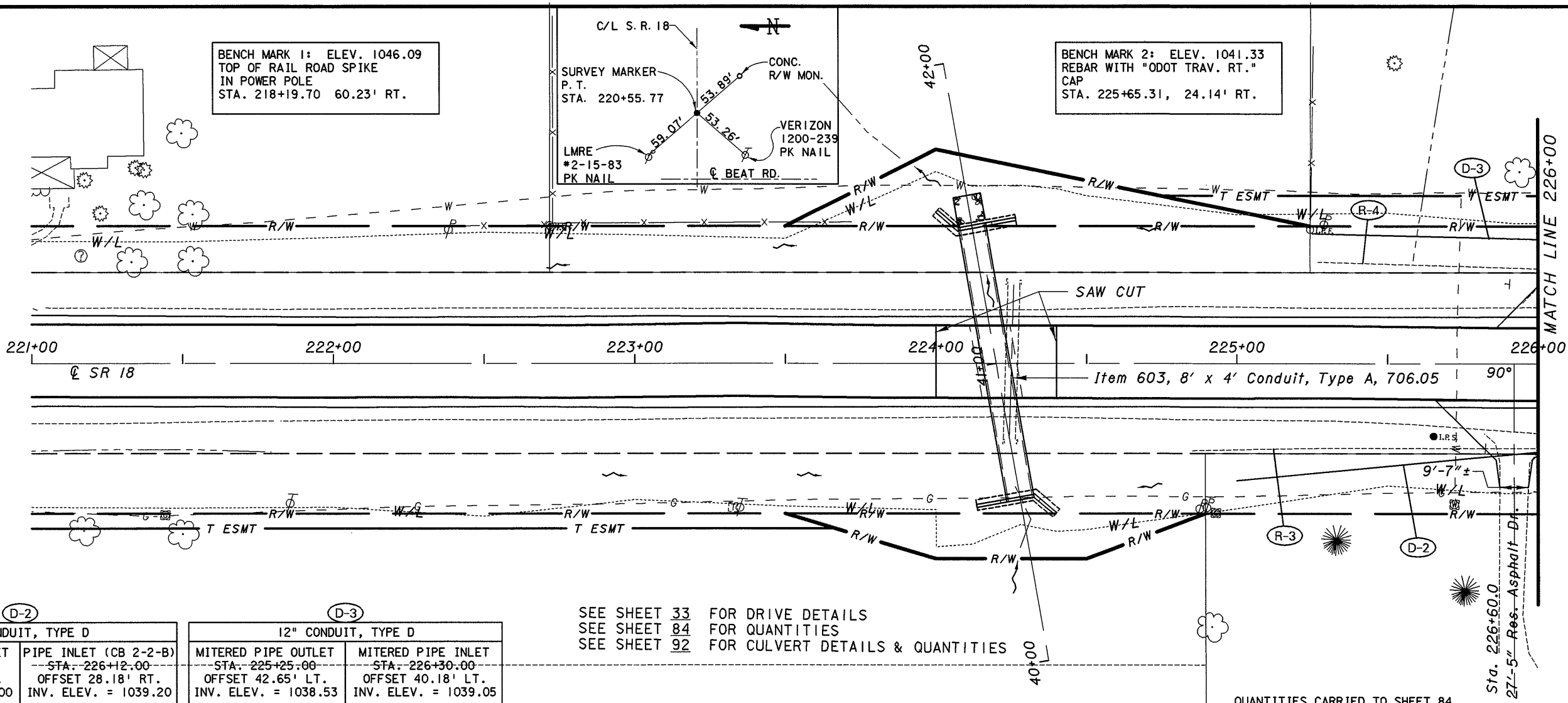
MED-18-4.25 CULVERT SUMMARY & CALCULATIONS

MED-18-0.00

BENCH MARK 1: ELEV. 1046.09
TOP OF RAIL ROAD SPIKE
IN POWER POLE
STA. 218+19.70 60.23' RT.



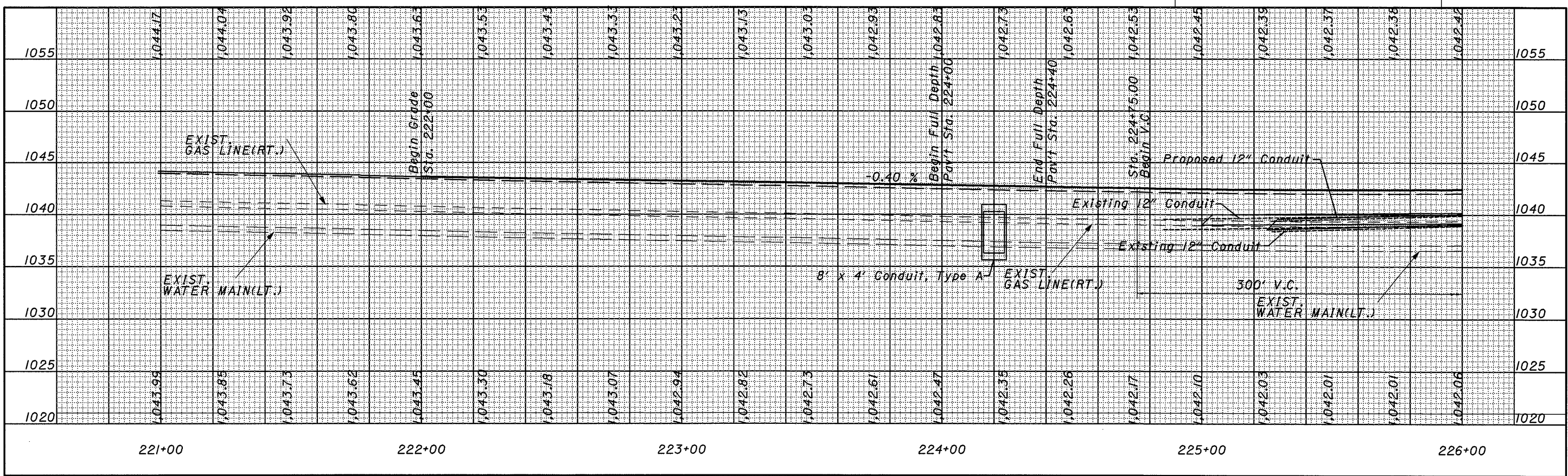
BENCH MARK 2: ELEV. 1041.33
REBAR WITH "ODOT TRAV. RT."
CAP
STA. 225+65.31, 24.14' RT.



D-2 12" CONDUIT, TYPE D		D-3 12" CONDUIT, TYPE D	
MITERED PIPE OUTLET STA. 225+00.00 OFFSET 38.94' RT. INV. ELEV. = 1039.00	PIPE INLET (CB 2-2-B) STA. 226+12.00 OFFSET 28.18' RT. INV. ELEV. = 1039.20	MITERED PIPE OUTLET STA. 225+25.00 OFFSET 42.65' LT. INV. ELEV. = 1038.53	MITERED PIPE INLET STA. 226+30.00 OFFSET 40.18' LT. INV. ELEV. = 1039.05

SEE SHEET 33 FOR DRIVE DETAILS
SEE SHEET 84 FOR QUANTITIES
SEE SHEET 92 FOR CULVERT DETAILS & QUANTITIES

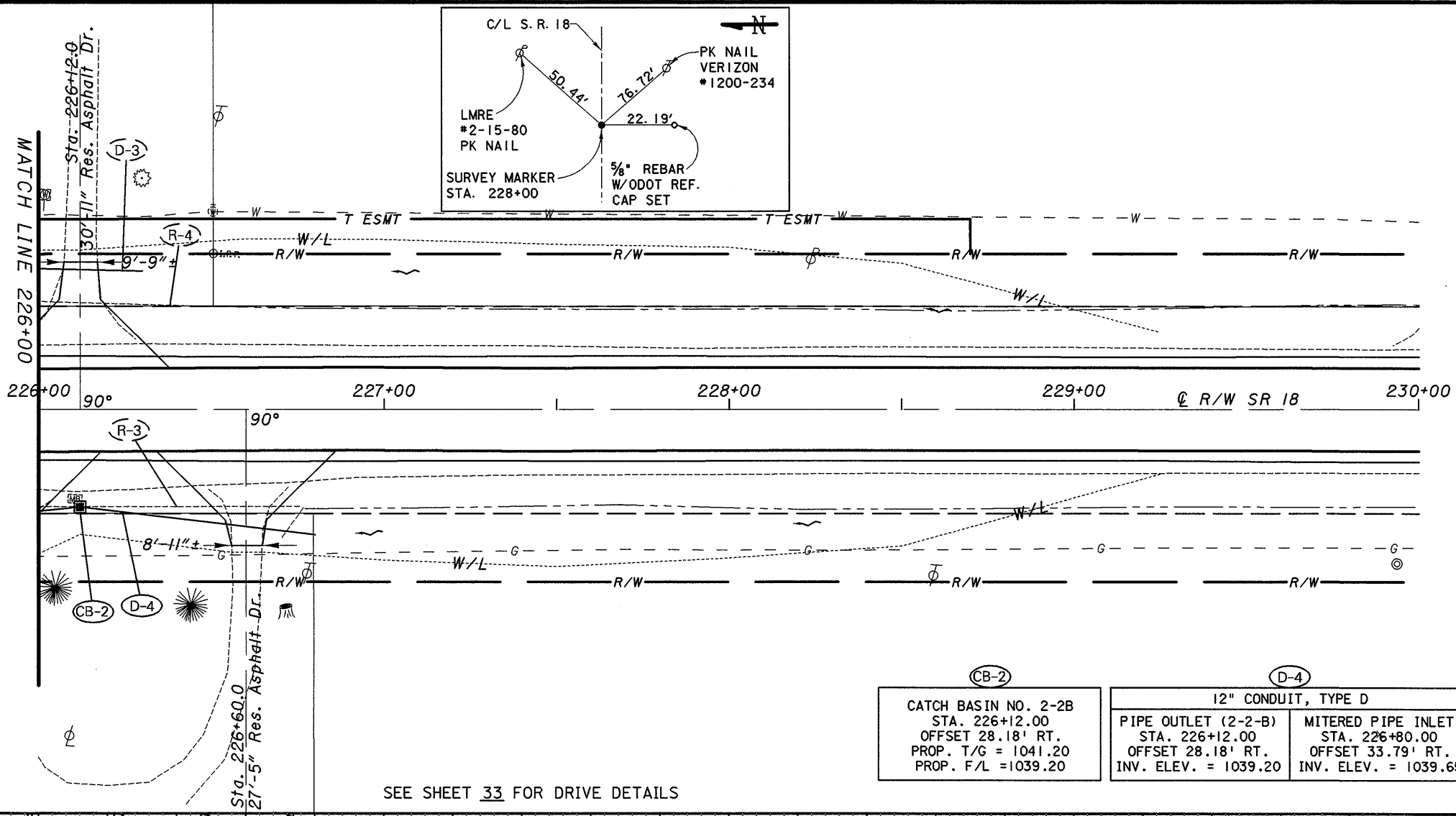
QUANTITIES CARRIED TO SHEET 84.



PLAN AND PROFILE MED-18-4.25
STA. 221+00 TO STA. 226+00

MED-18-0.00

DESIGN FILE: i:\projects\18311\Struct\M0180425\pp0425-1.dgn
WORKSTATION: dmollens
DATE: 11/05/03



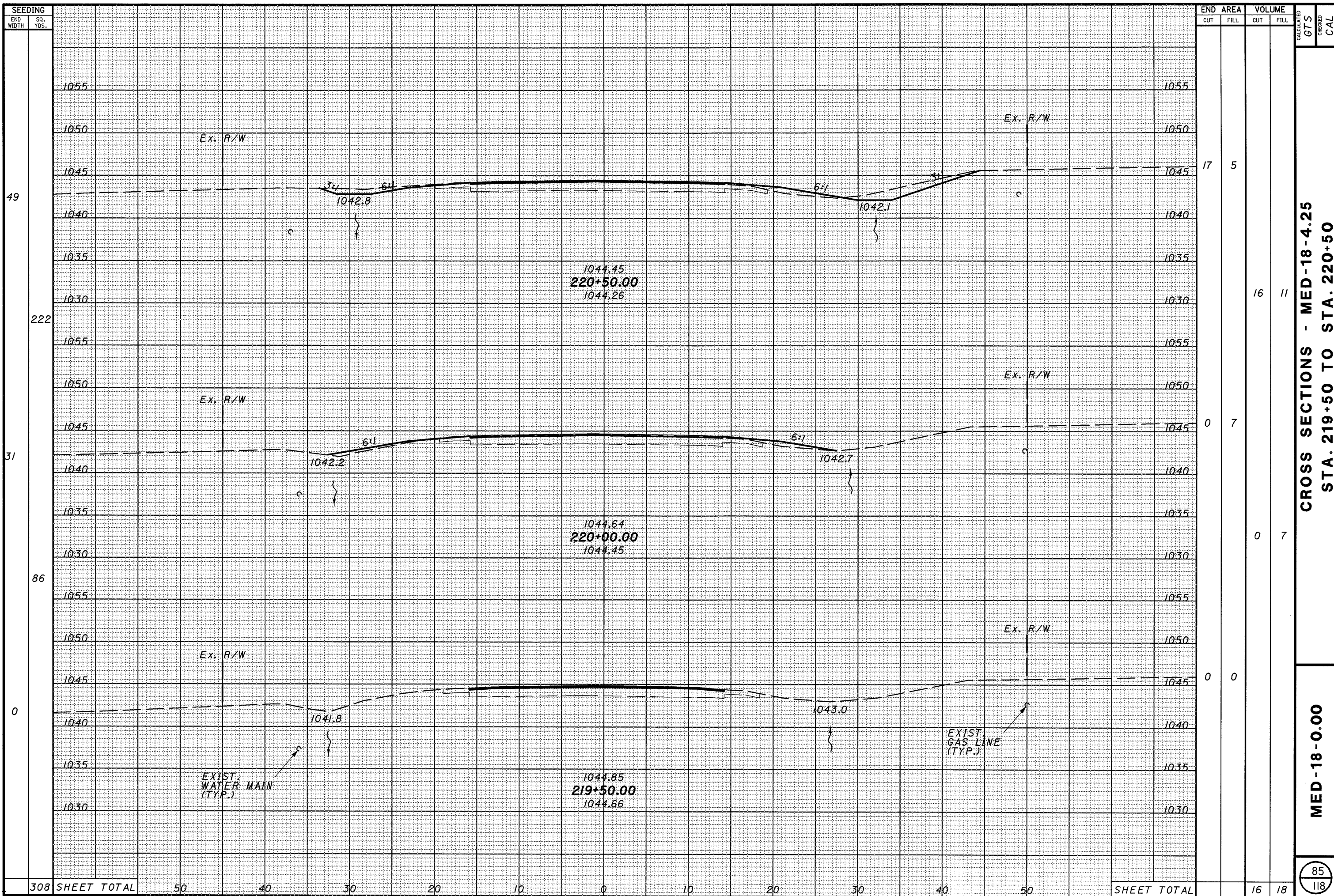
SEE SHEET 33 FOR DRIVE DETAILS

(CB-2)	(D-4)
CATCH BASIN NO. 2-2B STA. 226+12.00 OFFSET 28.18' RT. PROP. T/G = 1041.20 PROP. F/L = 1039.20	12" CONDUIT, TYPE D PIPE OUTLET (2-2-B) STA. 226+12.00 OFFSET 28.18' RT. INV. ELEV. = 1039.20 MITERED PIPE INLET STA. 226+80.00 OFFSET 33.79' RT. INV. ELEV. = 1039.65

1055	1042.42	1042.50	1042.60	1042.74	1042.91	1043.11	1043.33	1043.61	1043.81	1044.17	1044.41	1044.7	1045.0	1045.2	1045.6	1045.9	1055	
1050																	1050	
1045																	1045	
1040																	1040	
1035																	1035	
1030																	1030	
1025																	1025	
1020	1042.08	1042.15	1042.24	1042.36	1042.51	1042.74	1042.97	1043.22	1043.53	1043.81	1044.10	1044.44	1044.78	1045.10	1045.41	1045.71	1046.01	1020
	226+00				227+00				228+00				229+00				230+00	

REF NO.	STATION		SIDE	PIPE REMOVED, 24" AND UNDER	12" CONDUIT, TYPE D	CATCH BASIN, NO. 2-2B
	FROM	TO				
R-3	STA. 224+85	STA. 226+76	R	191		
R-4	STA. 225+27	STA. 226+44	L	117		
D-2	STA. 225+00	STA. 226+12	R		113	
D-3	STA. 225+25	STA. 226+30	L		105	
D-4	STA. 226+12	STA. 226+80	R		68	
CB-2	STA. 226+12		R			
TOTALS CARRIED TO SHEET 82				308	286	

DESIGN FILE: i:\projects\18311\Struct\M0180425\xs_w_brdr.dgn
 DATE: 11/04/03

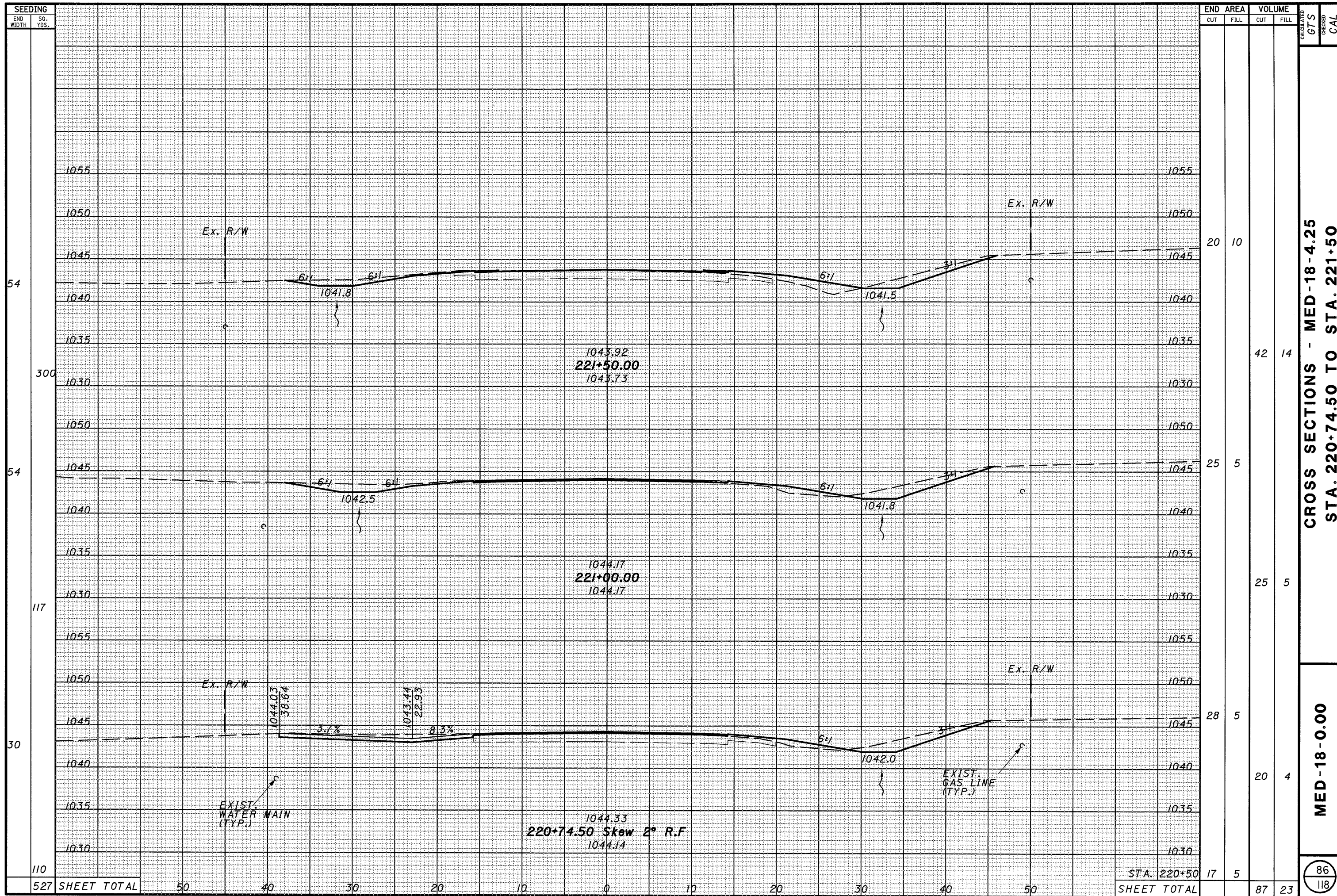


CROSS SECTIONS - MED-18-4.25
 STA. 219+50 TO STA. 220+50

MED-18-0.00

85
118

DESIGN FILE: I:\projects\18311\Struct\M0180425\xs_w_brdr.dgn
 DATE: 11/04/03

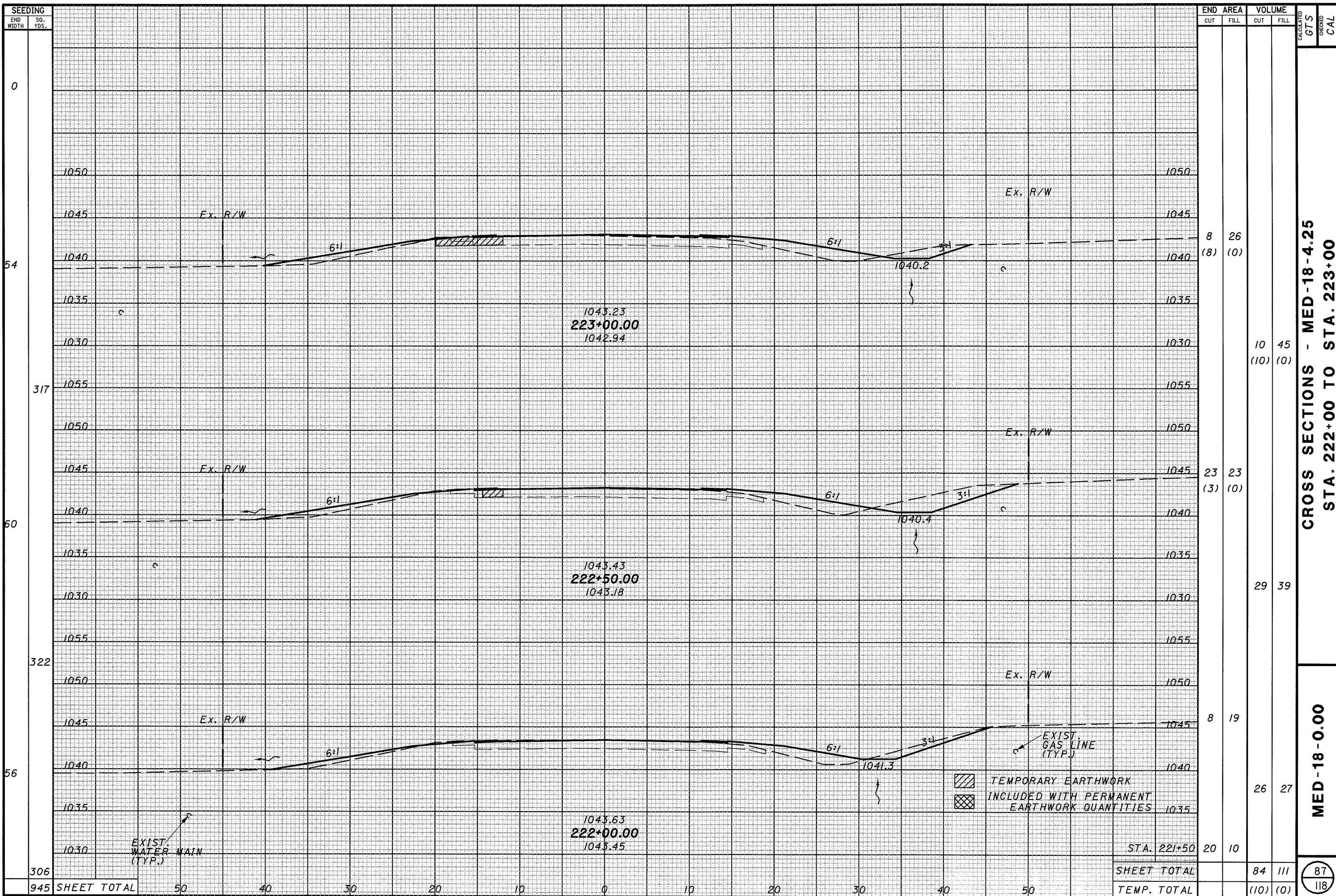


CROSS SECTIONS - MED-18-4.25
 STA. 220+74.50 TO STA. 221+50

MED-18-0.00

86
118

DESIGN FILE: I:\projects\1831\Struct\M0180425\ss_w_brd.dgn
 DATE: 11/04/03



SEEDING	
END WIDTH	SO. YDS.
0	
54	
60	
322	
56	
306	
945	SHEET TOTAL

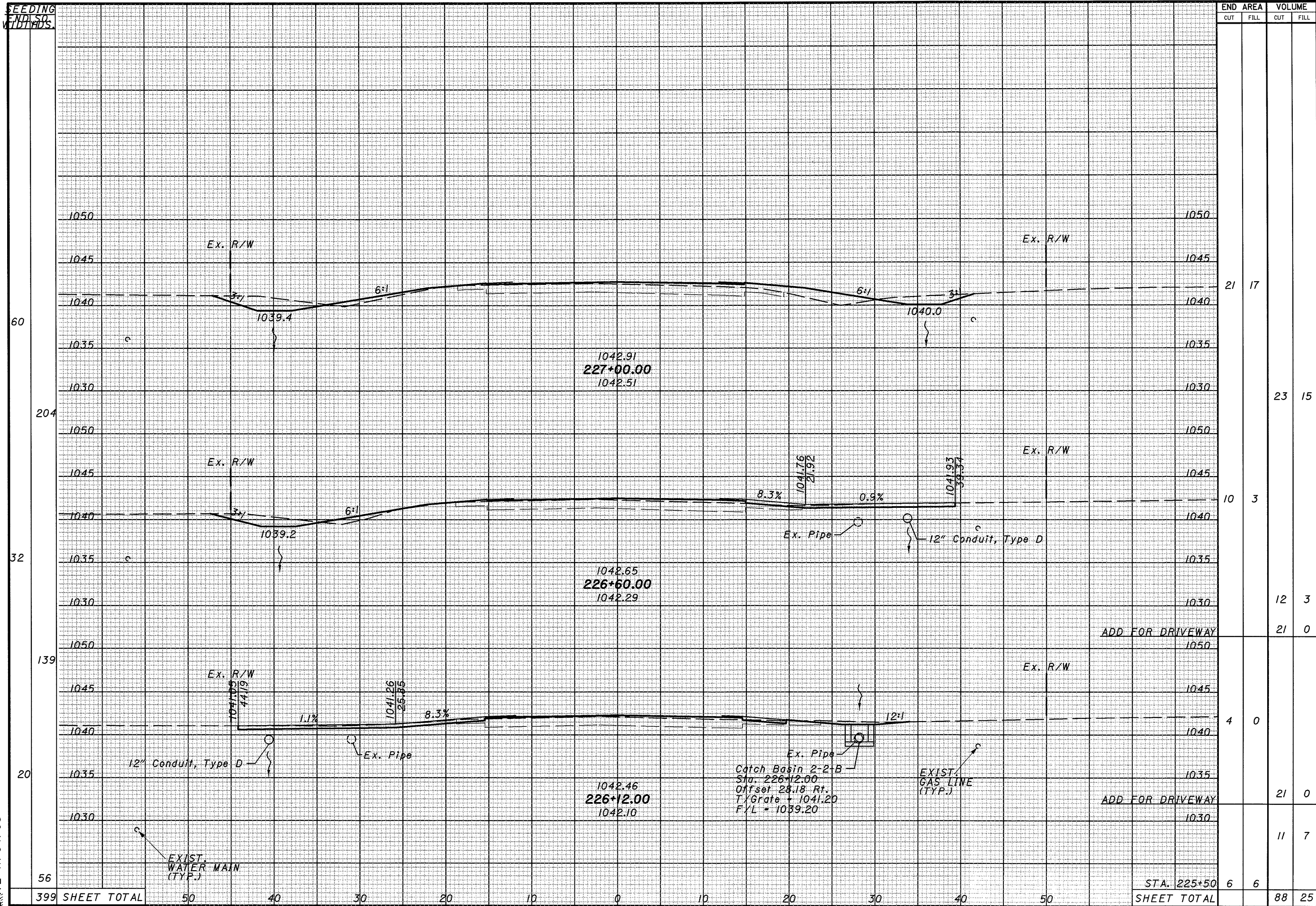
END AREA		VOLUME	
CUT	FILL	CUT	FILL
8	26		
(8)	(0)		
		10	45
		(10)	(0)
23	23		
(3)	(0)		
		29	39
8	19		
		26	27
20	10		
SHEET TOTAL		84	111
TEMP. TOTAL		(10)	(0)

CROSS SECTIONS - MED-18-4.25
 STA. 222+00 TO STA. 223+00

MED-18-0.00

CALCULATED GTS
 CHECKED CAL
 87
 118

DESIGN FILE: I:\projects\1831\Struct\MO180425\xs_w_brdr.dgn
 DATE: 11/04/03



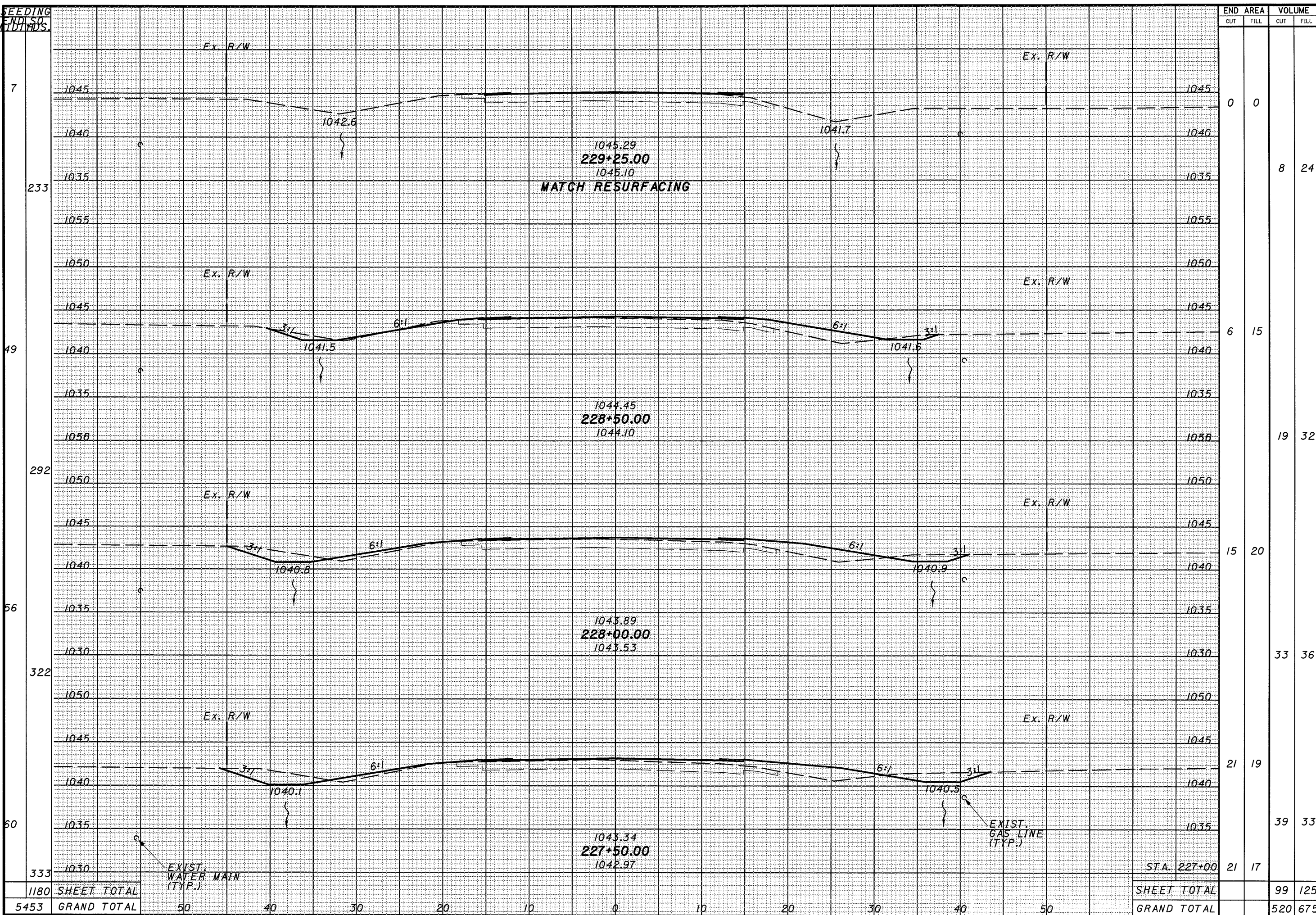
END STA.	AREA		VOLUME		CALCULATED GTS	CHECKED CAL
	CUT	FILL	CUT	FILL		
227+00	21	17				
226+12			23	15		
226+00	10	3				
226+12			12	3		
225+50			21	0		
226+12	4	0				
225+50			21	0		
225+50			11	7		
225+50	6	6				
SHEET TOTAL			88	25		

CROSS SECTIONS - MED-18-4.25
 STA. 226+12 TO STA. 227+00

MED-18-0.00

90
118

DESIGN FILE: I:\projects\831\Struct\M0180425\xs_w_brdr.dgn
 DATE: 11/04/03



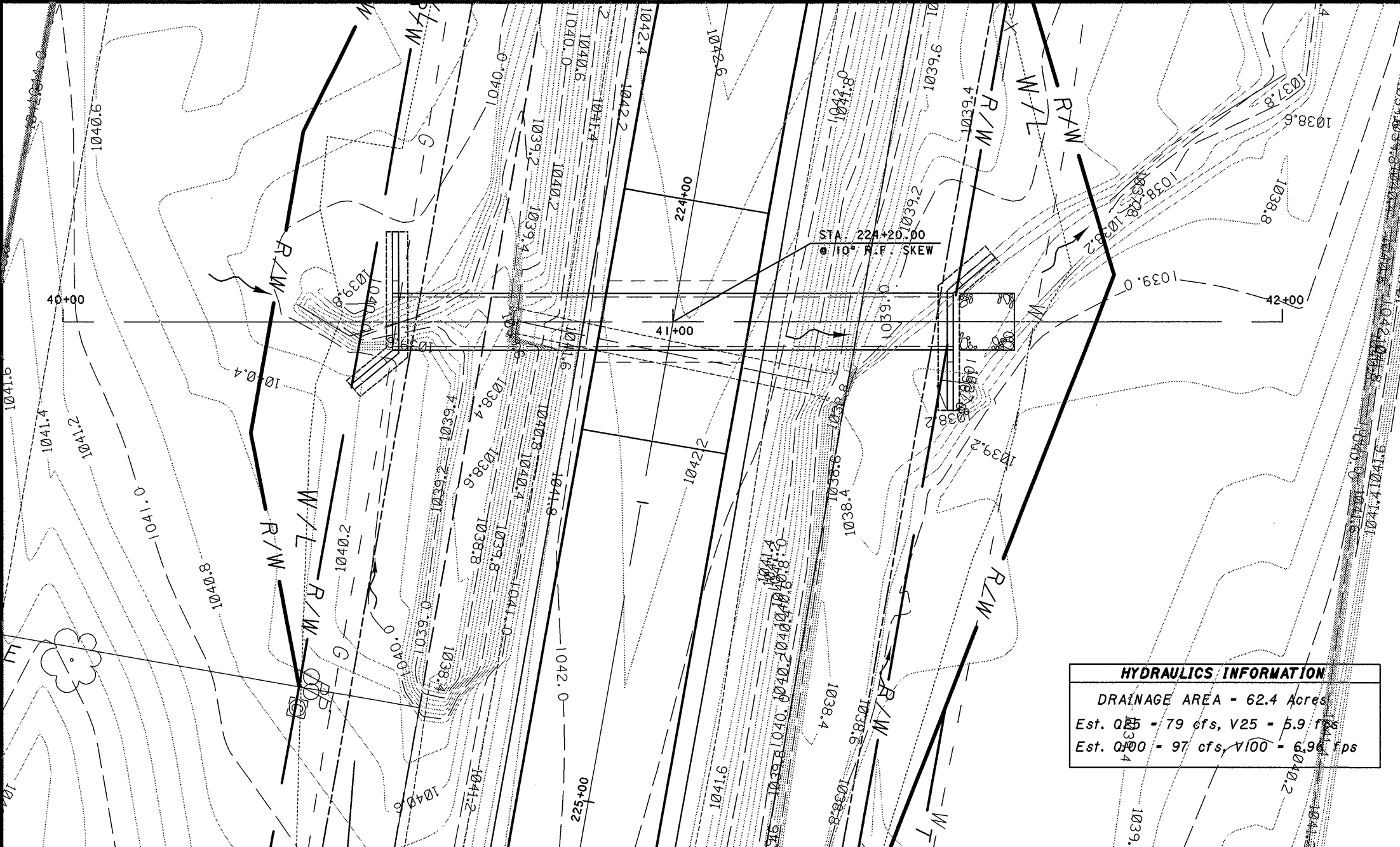
STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
229+25.00	0	0	8	24
228+50.00	6	15	19	32
228+00.00	15	20	33	36
227+50.00	21	19	39	33
STA. 227+00	21	17		
SHEET TOTAL			99	125
GRAND TOTAL			520	675

CROSS SECTIONS - MED-18-4.25
 STA. 227+50 TO STA. 229+25

MED-18-0.00

91
118

DESIGN FILE: i:\projects\18311\Struct\M0180425\copp0425.dgn
 WORKSTATION: gsch/eff DATE: 11/04/03



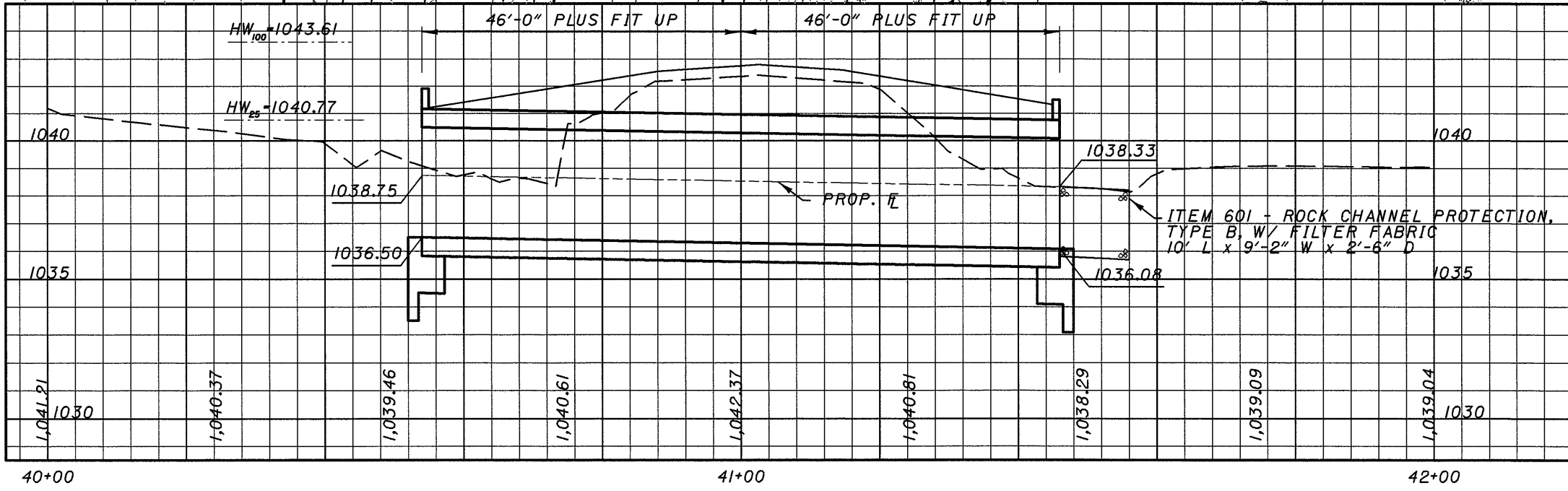
EXISTING STRUCTURE
 TYPE: REINFORCED CONCRETE BOX CULVERT
 SPAN: 4'-0" SPAN x 2'-0" RISE
 ROADWAY: 2 - 12FT. LANES, 3FT± PAVED SHOULDERS AND 3FT± AGGREGATE SHOULDERS
 SKEW: NONE
 WEARING SURFACE: ASPHALT
 APPROACH SLABS: NONE
 ALIGNMENT: TANGENT
 CONDITION: POOR
 DATE BUILT: 1942

PROPOSED STRUCTURE
 TYPE: PRECAST CONCRETE BOX CULVERT WITH REINFORCED CONCRETE WINGWALLS ON SPREAD FOOTINGS
 SIZE: 8'-0" SPAN x 4'-0" RISE
 LENGTH: 92'-0"
 ROADWAY: 2 - 12FT. LANES, 10FT. GRADED SHOULDERS
 SKEW: 10° R.F.
 LOADING: HS20-44 AND THE ALTERNATE MILITARY LOADING
 WEARING SURFACE: ASPHALT
 CROWN: 3/16" /ft.
 ALIGNMENT: TANGENT
 HYDRAULIC DESIGN YEAR FREQUENCY: 25 YR.

HYDRAULICS INFORMATION
 DRAINAGE AREA - 62.4 Acres
 Est. Q₂₅ - 79 cfs, V₂₅ - 5.9 fps
 Est. Q₁₀₀ - 97 cfs, V₁₀₀ - 6.96 fps

FLOOD HAZARD EVALUATION
 No buildings, residences or business establishments lie in the base flood plain and no flood hazard exists. Existing structure to be removed. Road to be open during construction. Traffic to be maintained as per the details in the plan.

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS-SECTIONS



ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION
202	LUMP		STRUCTURE REMOVED
503	LUMP		COFFERDAMS, CRIBS, AND SHEETING
503	LUMP		UNCLASSIFIED EXCAVATION
509	2552	POUND	EPOXY COATED REINFORCING STEEL
511	35	CU. YD.	CLASS C CONCRETE, AS PER PLAN (RETAINING WALL, WINGWALL, INCLUDING FOOTING)
512	220	SQ. YD.	TYPE 2 WATERPROOFING
516	24	SQ. FT.	1" PREFORMED EXPANSION JOINT FILLER
603	92'-0"	FT.	8'-0" SPAN X 4'-0" RISE CONDUIT, TYPE A, 706.05
864	28	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

QUANTITIES ARE CARRIED TO SHEET 82.

CULVERT DETAIL
MED-18-4.25

MED-18-0.00

1 / 6

92 / 118

STRUCTURE GENERAL NOTES

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HS20-44 AND THE ALTERNATE MILITARY LOADING.

DESIGN STRESSES:

CAST-IN-PLACE STRUCTURES
 CONCRETE CLASS C - $f'_c = 4,000$ psi SUBSTRUCTURE
 REINFORCING STEEL - ASTM A615 OR A996, GRADE 60,
 $F_y = 60,000$ psi.

PRECAST STRUCTURES: FOR BOX AND PIPE CULVERTS SEE CMS SECTION 603.

REMOVAL OF EXISTING STRUCTURE:

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER.

ITEM 503-UNCLASSIFIED EXCAVATION:

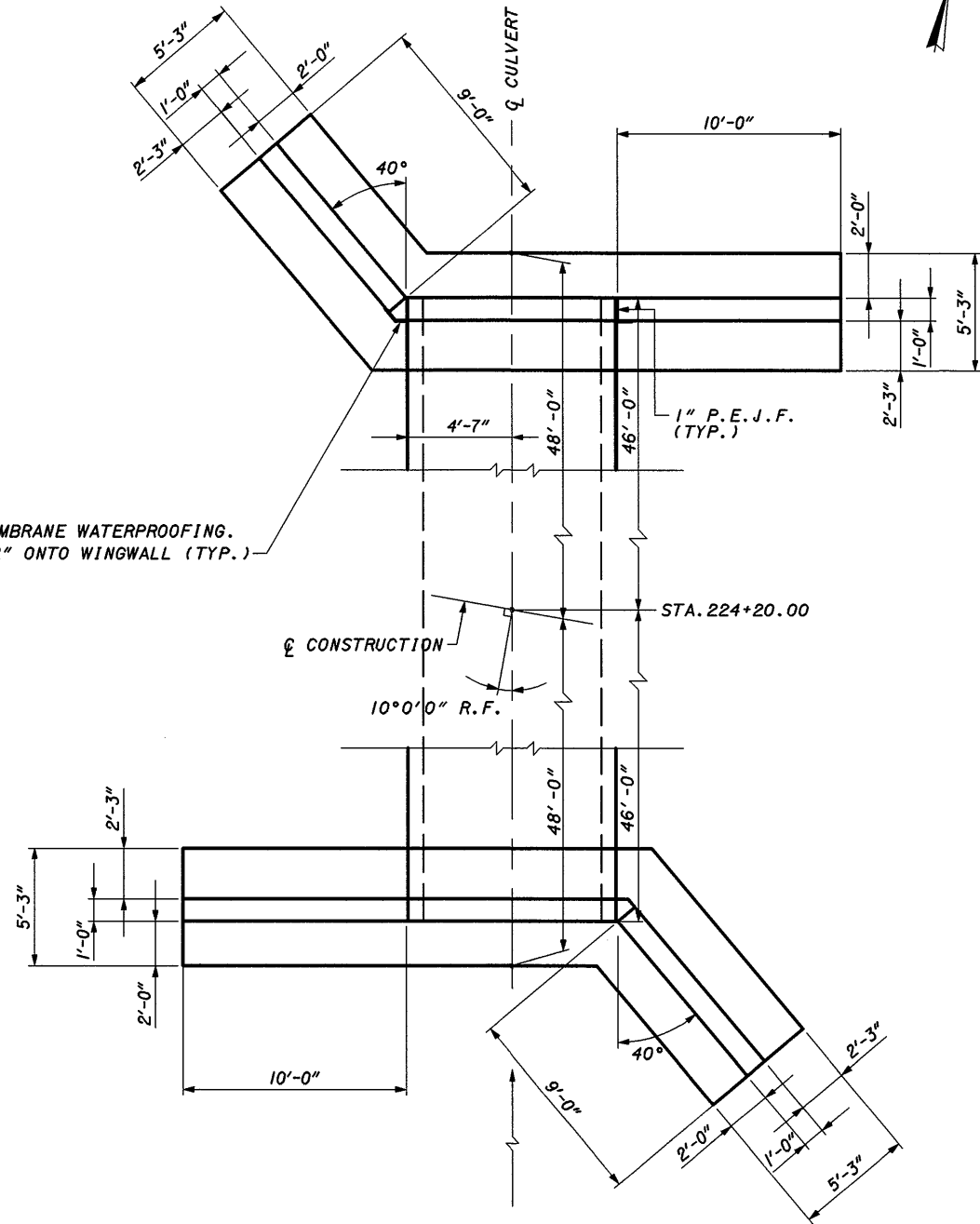
THIS ITEM INCLUDES ALL EXCAVATION NOT INCLUDED WITH ITEM 202 STRUCTURE REMOVED OR ITEM 603-8' X4' CONDUIT, TYPE A, 706.05, AS PER PLAN.

ITEM 603- 8' X4' CONDUIT, TYPE A, 706.05, AS PER PLAN

THE PRECAST REINFORCED CONCRETE BOX SECTIONS SHALL MEET ALL REQUIREMENTS OF CMS 706.05 AND ASTM C1433 WITH AN INTERSTATE LIVE LOAD

ITEM 511- CLASS C CONCRETE, AS PER PLAN (RET WALL/ WINGWALL, INCL. FOOTING.)

THE COARSE AGGREGATE SHALL BE LIMESTONE.

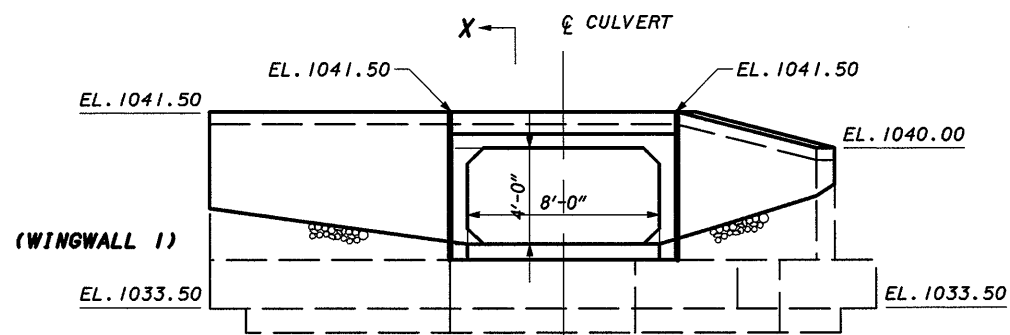


TYPE 2 MEMBRANE WATERPROOFING.
 OVERLAP 12" ONTO WINGWALL (TYP.)

CONSTRUCTION
 10°0'0" R.F.
 STA. 224+20.00

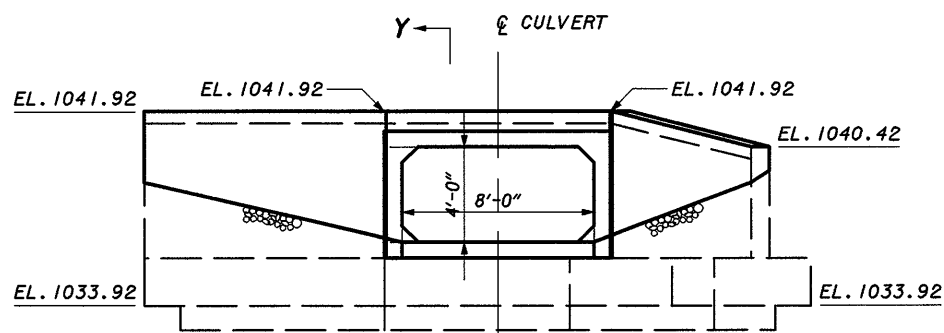
CULVERT & WINGWALL LAYOUT

DESIGN AGENCY		DATE	11/03
REVIEWED	DCM	DRAWN	CAL
CHECKED	CAL	DESIGNED	RDW
REVISIONS		CHECKED	CAL
HEADWALL DETAILS MED-18-4.25 DITCH			
MED-18-0.00			
2		6	
93		118	



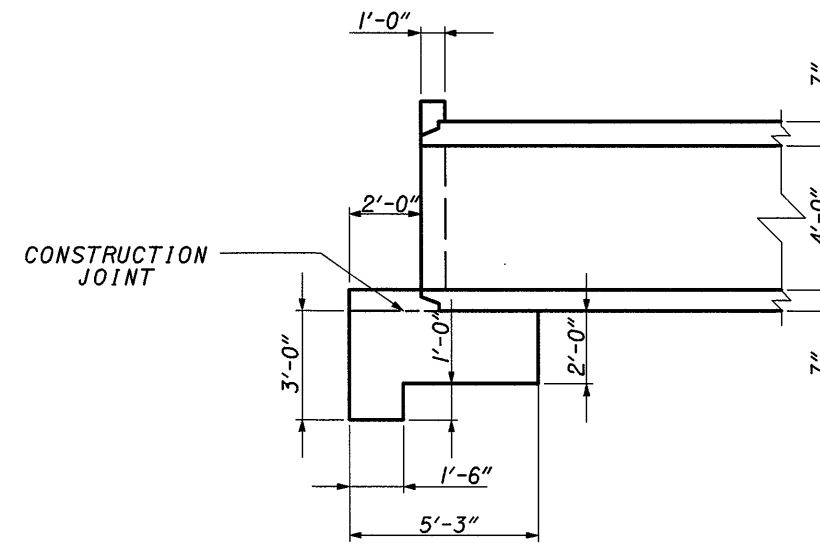
OUTLET ELEVATION

FLOWLINE ELEVATION: EL. 1036.08

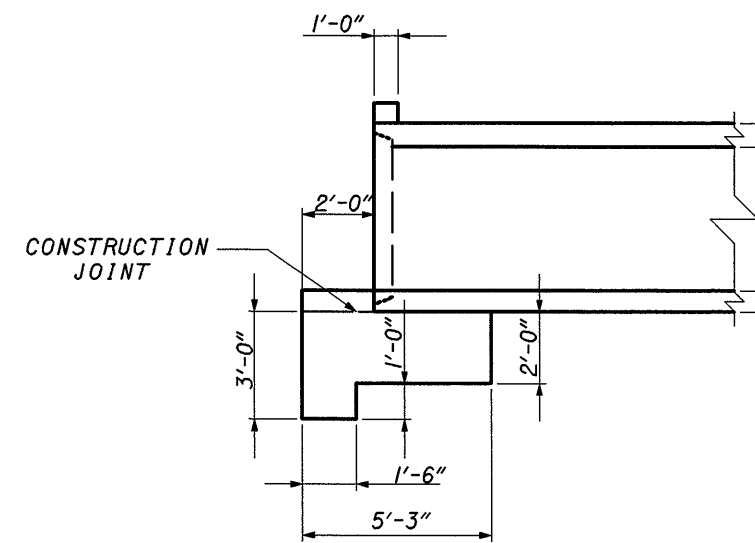


INLET ELEVATION

FLOWLINE ELEVATION: EL. 1036.50



SECTION X-X



SECTION Y-Y

DESIGN AGENCY

DATE 11/03

REVIEWED DCM

DRAWN CAL

DESIGNED RDN

CHECKED CAL

HEADWALL DETAILS
MED-18-4.25

MED-18-0.00

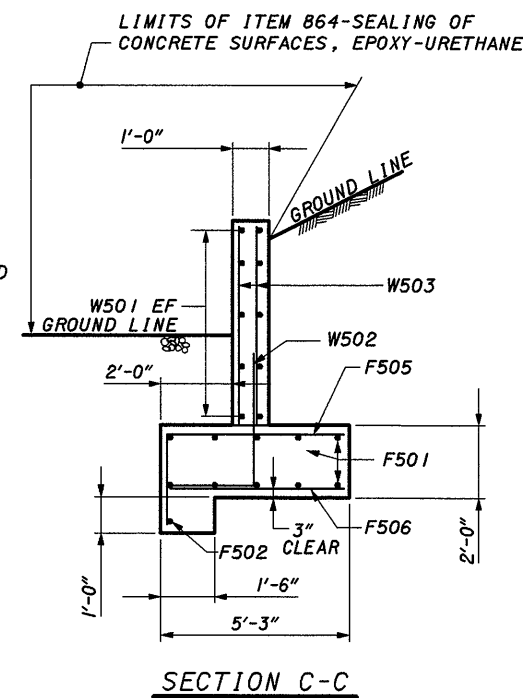
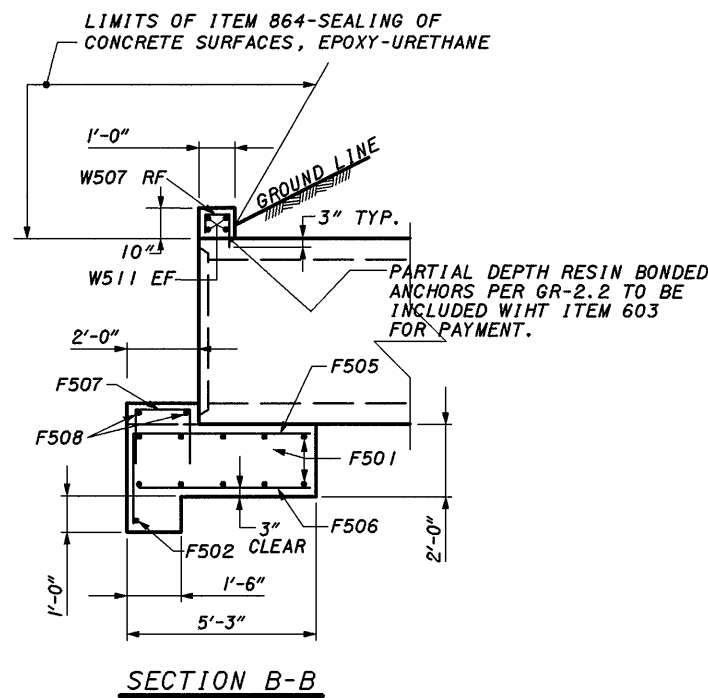
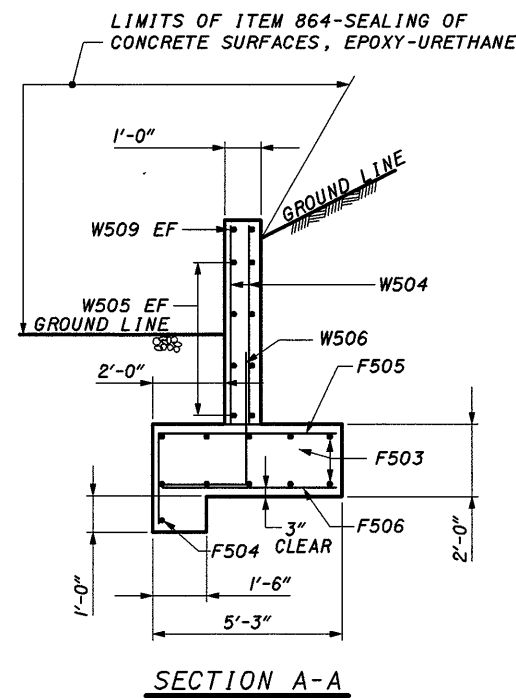
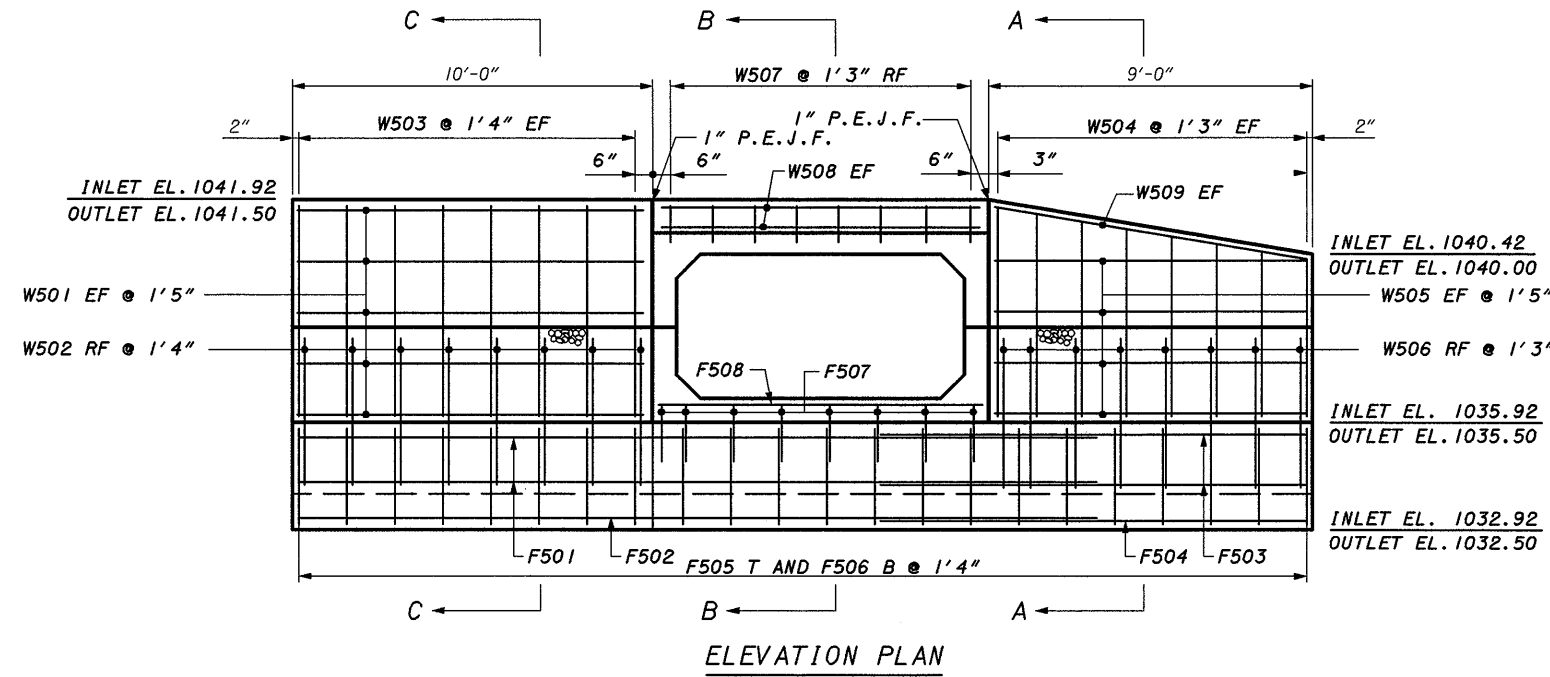
3/6

94
118

LEGEND

FF - FRONT FACE
 RF - REAR FACE
 EF - EACH FACE
 T - TOP
 B - BOTTOM
 1" P.E.J.F. - 1" PREFORMED EXPANSION JOINT FILLER

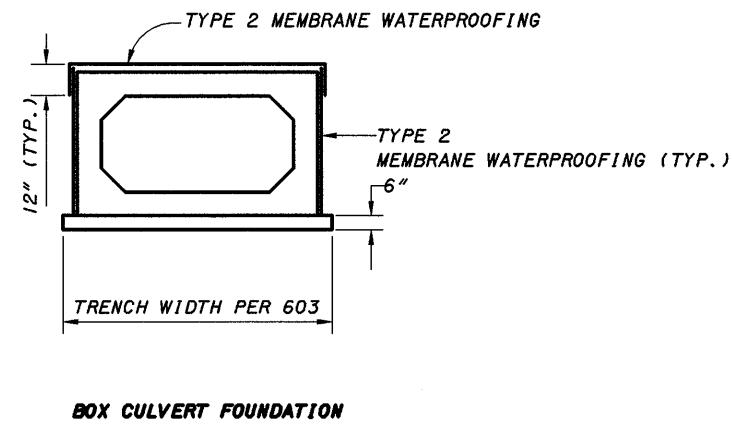
NOTES:
 FOR ADDITIONAL NOTES, DETAILS AND
 REINFORCING STEEL SCHEDULE
 SEE SHEETS 93 AND 97.



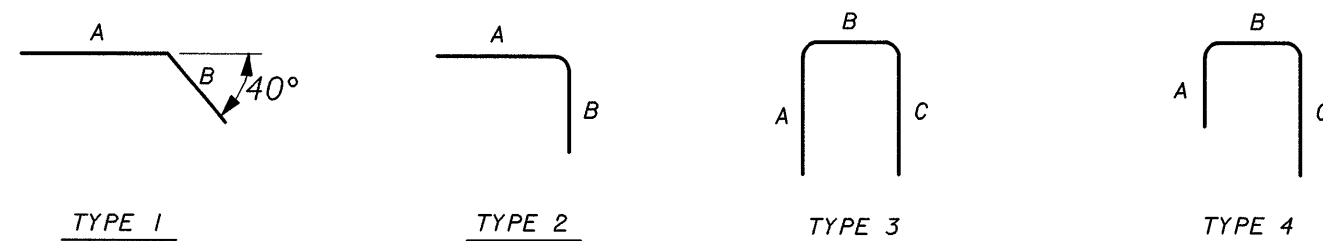
DESIGN AGENCY: _____
 DATE: 11/03
 REVIEWED: DCM
 DRAWN: CAL
 DESIGNED: RDN
 CHECKED: CAL
HEADWALL DETAILS
MED-18-4.25
MED-18-0.00
 5 / 6
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EPOXY COATED REINFORCING STEEL LIST

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC.
F501			20	*	462	1	**	3'-0"					
F502			2	21'-0"	44	1	18'-1"	3'-0"					
F503			20	***	250	1	****	3'-0"					
F504			2	10'-10"	23	1	7'-11"	3'-0"					
F505			48	7'-4"	367	2	4'-11"	2'-7"					
F506			48	4'-11"	236	STR							
F507			16	3'-11"	65	3	1'-6"	1'-2"	1'-6"				
F508			4	8'-10"	37	STR							
W501			20	9'-8"	202	STR							
W502			16	6'-9"	113	2	4'-3"	2'-8"					
W503			32	5'-8"	189	STR							
W504			32	*****	164	STR							
W505			16	8'-8"	145	STR							
W506			16	6'-9"	113	2	4'-3"	2'-8"					
W507			16	1'-10"	31	4	6"	8"	11"				
W508			8	8'-10"	74	STR							
W509			4	8'-9"	37	STR							
				TOTAL	+2552								



+ QUANTITY CARRIED TO SHEET 92



BENDING DIAGRAMS

THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, W601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

ALL REINFORCING STEEL TO BE EPOXY COATED.

* VARIES FROM 21'-0" TO 23'-4" AT 7" INCREMENTS
 ** VARIES FROM 18'-1" TO 20'-5" AT 7" INCREMENTS
 *** VARIES FROM 10'-10" TO 13'-2" AT 7" INCREMENTS
 **** VARIES FROM 7'-11" TO 10'-3" AT 7" INCREMENTS
 ***** VARIES FROM 4'-2" TO 5'-8" AT 2 1/2" INCREMENTS

DESIGN AGENCY
 DATE 11/03
 REVIEWED DCM
 DRAWN CAL
 DESIGNED RDN
 CHECKED CAL
 HEADWALL DETAILS
 MED-18-4.25
 MED-18-0.00
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BRIDGE NUMBER MED-18-0172 SFN 5200482

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
202	98500	4	CU. YD.	REMOVAL MISC.: PORTION OF APPROACH SLAB
509	10000	225	POUND	EPOXY COATED REINFORCING STEEL
511	71100	4	CU. YD.	CONCRETE MISC.: APPROACH SLAB REPAIR
SPECIAL	51822300	59	FT.	STEEL DRIP STRIP
614	12800	300	EACH	WORK ZONE RAISED PAVEMENT MARKER
614	13202	16	EACH	BARRIER REFLECTOR, TYPE A2
614	13302	14	EACH	BARRIER REFLECTOR, TYPE B2
614	13360	12	EACH	OBJECT MARKER, TWO WAY
614	21000	.06	MILE	WORK ZONE CENTER LINE, CLASS I (SOLID DOUBLE)
614	22000	.04	MILE	WORK ZONE EDGE LINE, CLASS I (WHITE)
614	26000	24	FT.	WORK ZONE STOP LINE, CLASS I
615	25001	367	SQ. YD.	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN
622	40020	300	FT.	PORTABLE CONCRETE BARRIER, 32"
622	40040	140	FT.	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED (UNANCHORED)
848	10001	132	SQ. YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/4 INCH THICK)
848	20000	132	SQ. YD.	SURFACE PREPARATION USING HYDRODEMOLITION
848	30001	3	CU. YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	50000	4	SQ. YD.	HAND CHIPPING
848	50100	LUMP		TEST SLAB
848	50200	1	CU. YD.	FULL - DEPTH REPAIR
848	50320	132	SQ. YD.	EXISTING CONCRETE OVERLAY REMOVED (1 1/4 INCH NOMINAL THICKNESS)
848	50340	7	SQ. YD.	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY

DESIGN FILE: I:\projects\1831\Structure\STRSUM.DGN
WORKSTATION: dno/lens DATE: 11/04/03

DESIGN AGENCY
DISTRICT THREE

DATE
10/03
REVIEWED
RDN
STRUCTURAL FILE NUMBER

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STRUCTURE SUMMARY

MED-18-0.00

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BRIDGE NUMBER MED-18-0657 SFN 5200636

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
SPECIAL	51822300	185	FT.	STEEL DRIP STRIP
614	12800	380	EACH	WORK ZONE RAISED PAVEMENT MARKER
614	13202	15	EACH	BARRIER REFLECTOR, TYPE A2
614	21000	.06	MILE	WORK ZONE CENTER LINE, CLASS I (SOLID DOUBLE)
614	22000	.04	MILE	WORK ZONE EDGE LINE, CLASS I (WHITE)
614	26000	24	FT.	WORK ZONE STOP LINE, CLASS I
615	25001	249	SQ. YD.	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN
848	10001	389	SQ. YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/4 INCH THICK)
848	20000	389	SQ. YD.	SURFACE PREPARATION USING HYDRODEMOLITION
848	30001	7	CU. YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	50000	12	SQ. YD.	HAND CHIPPING
848	50100	LUMP		TEST SLAB
848	50200	1	CU. YD.	FULL - DEPTH REPAIR
848	50320	389	SQ. YD.	EXISTING CONCRETE OVERLAY REMOVED (1 1/4 INCH NOMINAL THICKNESS)
848	50340	19	SQ. YD.	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY

DESIGN FILE: I:\projects\1831\Struct\STRSUM.DGN
 WORKSTATION: dmo/lens DATE: 11/04/03

DESIGN AGENCY: DISTRICT THREE
 DATE: 10/03
 REVIEWED: RDN
 DRAWN: dcm
 DESIGNED: dcm
 CHECKED: CAL
 STRUCTURE SUMMARY
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BRIDGE NUMBER MED-18-0685 SFN 5200660

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
202	98400	69	SQ. FT.	REMOVAL MISC.: APPROACH SLAB PARTIAL DEPTH
511	71100	1	CU. YD.	CONCRETE MISC.: APPROACH SLAB PARTIAL DEPTH REPAIR
841	10000	680	SQ. YD.	TREATING OF CONCRETE SURFACES WITH SRS
864	10100	165	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

DESIGN FILE: i:\projects\18311\Struct\STRSUM.DGN
 WORKSTATION: dmollens DATE: 11/04/03

DESIGN AGENCY	DISTRICT THREE
DATE	10/03
REVIEWED	RON
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DESIGNED	dcm
CHECKED	CAL
REVISED	
STRUCTURAL FILE NUMBER	
STRUCTURE SUMMARY	
MED-18-0.00	
100	
118	

REFERENCES SHALL BE MADE TO STANDARD DRAWINGS:

BP-3.1	DATED	7/28/00
DS-1-92	DATED	7/18/03
PCB-91	DATED	7/19/02
RM-4.2	DATED	4/18/03
MT-96.10	DATED	4/19/02
MT-96.11	DATED	4/19/02
MT-96.20	DATED	4/19/02
MT-96.25	DATED	4/20/01
MT-101.20	DATED	10/18/02
MT-101.70	DATED	10/18/02

REFERENCES SHALL BE MADE TO SUPPLEMENTAL SPECIFICATIONS:

841	DATED	4/19/02
848	DATED	2/08/02
864	DATED	7/11/00

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATION AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02. THE ORIGINAL CONSTRUCTION PLANS OF THE EXISTING BRIDGE ARE AVAILABLE UPON REQUEST AT THE DISTRICT 3 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, ASHLAND, OHIO.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED ON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

DESIGN DATA:

CONCRETE CLASS FS - COMPRESSIVE STRENGTH 4500 PSI
 REINFORCING STEEL - ASTM A615 OR A996, GRADE 60
 $F_y = 60,000$ psi.

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, AND THE ODOT BRIDGE DESIGN MANUAL.

PLACING ASPHALT CONCRETE FEATHERING ON APPROACHES TO BRIDGES:

SPECIAL CARE SHALL BE TAKEN, WHEN PLACING THE ASPHALT CONCRETE FEATHERING TO EFFECT A SMOOTH TRANSITION FROM THE EXISTING APPROACH PAVEMENT TO THE BRIDGE DECK OR APPROACH SLAB. THE CONTRACTOR'S ATTENTION IS CALLED TO SECTION 401.19 OF THE CMS AND TO STANDARD DRAWING BP-3.1 FOR REQUIRED TOLERANCES.

STRUCTURE PROTECTION:

THE EXPANSION JOINT SEAL AT THE ENDS OF BRIDGES SHALL BE PROTECTED FROM ALL SEALERS. NO SEALERS SHALL BE ALLOWED TO COME INTO CONTACT WITH THE EXPANSION JOINT SEAL. IF ANY SEALER COMES INTO CONTACT WITH THE EXPANSION JOINT SEAL THE CONTRACTOR SHALL REPLACE THE EXPANSION JOINT TO THE SATISFACTION OF THE ENGINEER AT NO COST TO THE STATE.

ITEM 202 - REMOVAL MISC.: PORTION OF APPROACH SLAB:

THIS ITEM SHALL BE USED TO REMOVE THE EXISTING UNSOUND PORTION OF THE APPROACH SLAB AT THE LOCATIONS INDICATED IN THE PLAN.
 THE END OF THE REMOVAL AREA SHALL BE SAW CUT 1" DEEP.
 CARE SHALL BE TAKEN NOT TO DAMAGE THE PORTION OF THE APPROACH SLAB TO REMAIN.
 PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR ITEM 202 - REMOVAL MISC.: PORTION OF APPROACH SLAB WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 202 - REMOVAL MISC.: APPROACH SLAB PARTIAL DEPTH:

THIS ITEM SHALL BE USED TO REMOVE THE EXISTING UNSOUND PORTION OF THE APPROACH SLAB FOR PARTIAL DEPTH REPAIR AT THE LOCATIONS INDICATED IN THE PLAN.
 THE PERIMETER OF THE REMOVAL AREA SHALL BE SAW CUT 1" DEEP.
 THE EXISTING REINFORCING STEEL SHALL BE PRESERVED.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 202 - REMOVAL MISC.: APPROACH SLAB PARTIAL DEPTH WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

DESIGN FILE: I:\projects\18311\Struct\strgntg.dgn
 WORKSTATION: dmollens DATE: 11/04/03

DESIGN AGENCY
 DISTRICT THREE

DATE
 10/03

REVIEWED
 RDN

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STRUCTURE GENERAL NOTES

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ITEM 511 - CONCRETE MISC.: APPROACH SLAB REPAIR:

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.
THE CONCRETE SHALL BE CLASS FS AND MEET THE REQUIREMENTS OF CMS 499 EXCEPT THAT A NON CALCIUM CHLORIDE ACCELERATING ADMIXTURE AND LIMESTONE FOR THE COARSE AGGREGATE SHALL BE USED.
ALL EXISTING SURFACES TO WHICH THE CONCRETE IS TO BOND INCLUDING REINFORCING STEEL SHALL BE CLEANED BY ABRASIVE BLASTING. THESE SURFACES SHALL BE MADE FREE OF SPALLS, LAITANCE, AND OTHER CONTAMINANTS DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND.

TYPE A WATERPROOFING (CMS 512) SHALL BE APPLIED BETWEEN THE PROPOSED CONCRETE AND THE EXISTING APPROACH SLAB.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR ITEM 511- CONCRETE MISC.: APPROACH SLAB REPAIR WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 511 - CONCRETE MISC.: APPROACH SLAB PARTIAL DEPTH REPAIR:

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.
THE CONCRETE SHALL BE CLASS FS AND MEET THE REQUIREMENTS OF CMS 499 EXCEPT THAT A NON CALCIUM CHLORIDE ACCELERATING ADMIXTURE AND LIMESTONE FOR THE COARSE AGGREGATE SHALL BE USED.

ALL EXISTING SURFACES TO WHICH THE CONCRETE IS TO BOND INCLUDING REINFORCING STEEL SHALL BE CLEANED BY ABRASIVE BLASTING. THESE SURFACES SHALL BE MADE FREE OF SPALLS, LAITANCE, AND OTHER CONTAMINANTS DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND.

A BONDING GROUT SHALL BE APPLIED IMMEDIATELY PRIOR TO CONCRETE PLACEMENT. THE BONDING GROUT SHALL CONSIST OF EQUAL PARTS BY VOLUME OF PORTLAND CEMENT AND SAND, MIXED WITH SUFFICIENT WATER TO FORM A STIFF SLURRY. THE CONSISTENCY OF THIS SLURRY SHALL BE SUCH THAT IT CAN BE APPLIED WITH A STIFF BRUSH OR BROOM TO THE EXISTING SURFACE IN A THIN, UNIFORM COATING. THE COATING OF GROUT, 1/16 INCH TO 1/8 INCH THICK, SHALL BE SCRUBBED ONTO THE DRY SURFACE IMMEDIATELY BEFORE PLACING THE CONCRETE.

CARE SHALL BE EXERCISED TO ENSURE THAT NO EXCESS GROUT IS PERMITTED TO COLLECT IN LOW SPOTS. IN NO CASE SHALL THE GROUT BE PERMITTED TO DRY BEFORE PLACING THE NEW CONCRETE.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR ITEM 511- CONCRETE MISC.: APPROACH SLAB PARTIAL DEPTH REPAIR WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 615-PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN:

THIS ITEM SHALL BE AS CMS 615, EXCEPT THAT THE PAVEMENT SHALL BE LEFT IN PLACE.

2'-0" OF THE EXISTING PAVED BERM SHALL BE REMOVED FOR THE LENGTH OF THE PROPOSED PAVEMENT. THE REMOVAL LINE SHALL BE SAW CUT.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 841 - TREATING OF CONCRETE SURFACES WITH SRS:

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

SEE THE SUPPLEMENTAL SPECIFICATIONS FOR APPLICATION RATES, MATERIALS REQUIRED, AND APPLICATION PROCEDURES.

THIS TREATMENT CONSISTS OF TWO (2) SEPARATE APPLICATIONS.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 841 - TREATING OF CONCRETE SURFACES WITH SRS, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE TWO SEPARATE APPLICATION WORK.

ITEM 848 - MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/4 INCH THICK):

THESE ITEMS SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.

THE COARSE AGGREGATE SHALL BE LIMESTONE.

THE SURFACE FINISH REQUIREMENTS BE AS PER CMS 511.19 AND 511.20 IN LIEU OF THAT WHICH IS SPECIFIED IN SUPPLEMENTAL SPECIFICATION 848.

SEE THE SUPPLEMENTAL SPECIFICATION FOR DETAILS.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE YARD FOR THE ABOVE ITEMS WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

DESIGN FILE: I:\projects\1831\Structure\strngntg.dgn
WORKSTATION: dmo/lens
DATE: 11/04/03

DESIGN AGENCY
DISTRICT THREE

DATE
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STRUCTURE GENERAL NOTES

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DESIGN FILE: I:\projects\1831\Struct\strgnt\strgnt.dgn
WORKSTATION: dmollens DATE: 11/04/03

**ITEM 848 - MICRO SILICA MODIFIED CONCRETE OVERLAY
(VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN:**

THESE ITEMS SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.

THE COARSE AGGREGATE SHALL BE LIMESTONE.

SEE THE SUPPLEMENTAL SPECIFICATION FOR DETAILS.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR THE ABOVE ITEM WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

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STRUCTURE GENERAL NOTES

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RDN

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DESIGN AGENCY
DISTRICT THREE

BRIDGE DECK DATA								ROADWAY DATA		
PART	COUNTY, ROUTE, BRIDGE NO.	STRUCTURE TYPE	LENGTH (BRIDGE LIMITS)	WIDTH	BRIDGE DECK AREA	SKEW	EXISTING WEARING SURFACE	EXISTING PAVEMENT WIDTH	EXISTING APPROACH SLAB WIDTH	EXISTING APPROACH SLAB LENGTH
			FT.	FT.	SQ.YD.			FT.	FT.	FT.
A	* MED-18-0172	SINGLE-SPAN CONCRETE SLAB	26.88	44.0	131.4	30° L.F.	CONCRETE	30	24	15
A	** MED-18-0193	SINGLE-SPAN CONCRETE SLAB	22.88	44.0	111.9	30° R.F.	ASPHALT	30	24	15
A	*** MED-18-0242	SINGLE-SPAN CONCRETE SLAB	22.88	39.7	100.9	30° L.F.	ASPHALT	30	41	15
A	**** MED-18-0285	TWIN CORR. METAL PIPES				20° R.F.	ASPHALT	28		
A	+ MED-18-0330	TWIN CORR. METAL PIPES				40° R.F.	ASPHALT	30		
A	+ MED-18-0570	TRIPLE CORR. METAL PIPES				45° R.F.	ASPHALT	30		
A	++ MED-18-0657	3- SPAN CONCRETE SLAB	79.5	44.0	388.7	0°	CONCRETE	30	24	15
A	+++ MED-18-0685	3- SPAN STEEL BEAM	132.0	34.0	498.7	0°	CONCRETE	30	35	25

* PLANE APPROACH SLABS. OMIT RESURFACING ON THE BRIDGE DECK.
(SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK
AND PLANING QUANTITIES)

** PLANE BRIDGE DECK AND APPROACH SLABS. PLANE AND PAVE EXISTING WIDTH ONLY.
(NO STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK AND PLANING QUANTITIES)

*** PLANE BRIDGE DECK AND APPROACH SLABS 3 1/4" DEEP. ONLY PLACE THE STANDARD
2 1/4" OF ASPHALT BACK ON . (NO STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK
AND PLANING QUANTITIES)

**** THE EXISTING STRUCTURE WILL BE REPLACED IN THIS PLAN.
(SEE DETAILS ON SHEETS 70 - 81. SEE ROADWAY PLANS FOR PLANING QUANTITIES)

+ NO STRUCTURE WORK. (SEE ROADWAY PLANS FOR PLANING QUANTITIES)

++ PLANE APPROACH SLABS. OMIT RESURFACING ON THE BRIDGE DECK, BUTT JOINT AT THE DECK.
(SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK AND PLANING QUANTITIES)

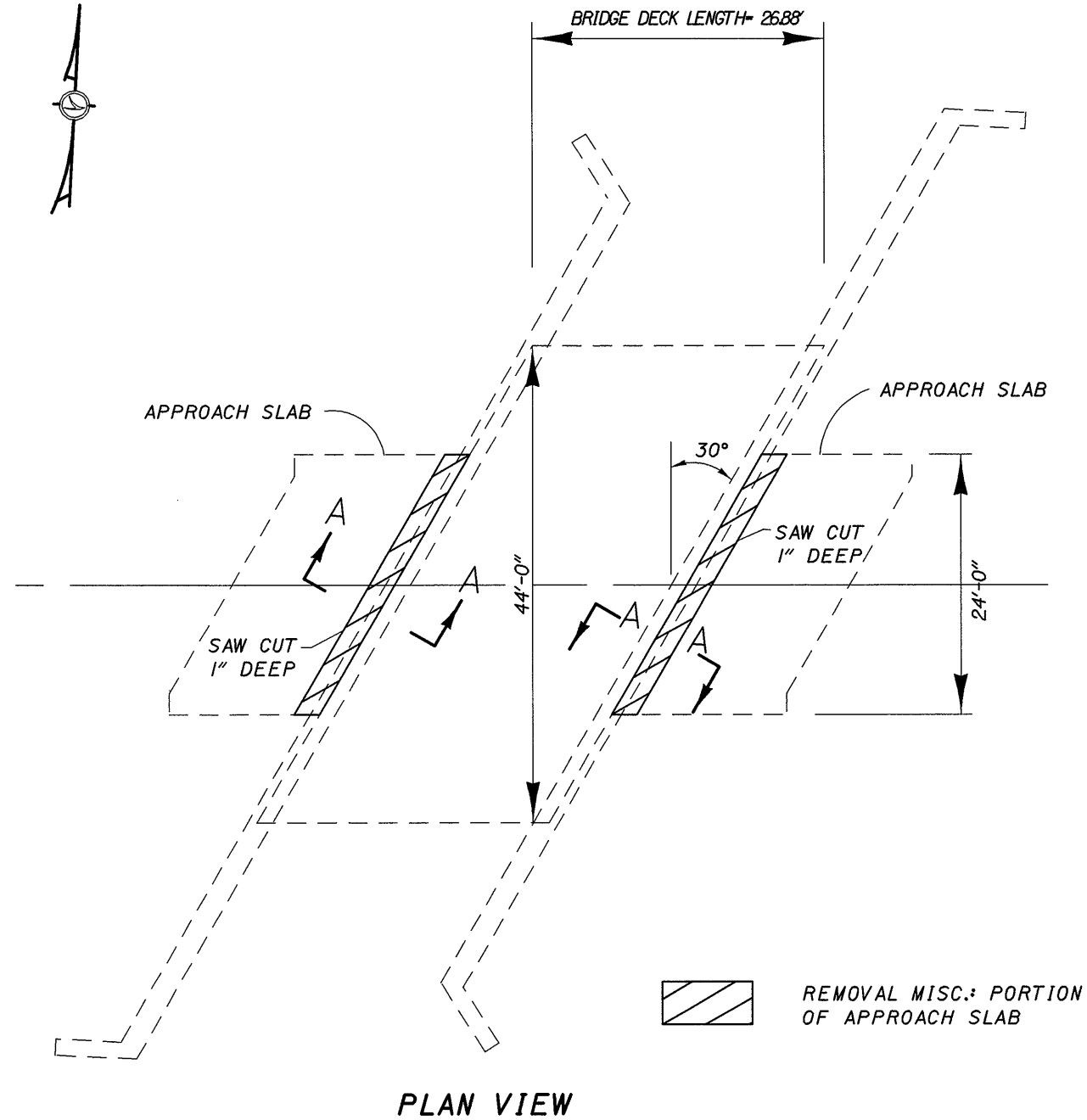
+++ WHEN PLANING BOTH APPROACHES TO THIS STRUCTURE, FOR 300 FT. EACH APPROACH PLANE 3" DEEP IN THE MIDDLE.
BUTT JOINT AT THE APPROACH SLABS. ONLY PLACE THE STANDARD 2 1/4" BACK ON. OMIT RESURFACING ON THE BRIDGE
DECK AND APPROACH SLABS. (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK. SEE ROADWAY PLANS FOR
GUARDRAIL WORK AND PLANING QUANTITIES)

BRIDGE DECK DATA								ROADWAY DATA		
PART	COUNTY, ROUTE, BRIDGE NO.	STRUCTURE TYPE	LENGTH (BRIDGE LIMITS)	WIDTH	BRIDGE DECK AREA	SKEW	EXISTING WEARING SURFACE	EXISTING PAVEMENT WIDTH	EXISTING APPROACH SLAB WIDTH	EXISTING APPROACH SLAB LENGTH
			FT.	FT.	SQ.YD.			FT.	FT.	FT.
B	* MED-94-0751	SINGLE-SPAN CONCRETE SLAB	16	31.5	56.0	0°	CONCRETE	25		
B	* MED-94-0789	RAILROAD OVERPASS				8° L.F.	ASPHALT	25		
B	* MED-94-0810	SINGLE- SPAN CONCRETE BEAM	31.5	27.9	97.7	0°	CONCRETE	25		
B	** MED-94-0828	SINGLE-SPAN CONCRETE SLAB	21.67	32	77.0	30° L.F.	CONCRETE	25		
B	*** MED-94-0968	CONCRETE CULVERT	12	40	53.3	25° L.F.	ASPHALT	24		

- * WORK SUSPENDED IN THIS AREA. (NO STRUCTURE OR GUARDRAIL WORK)
- ** BUTT JOINT AT THE BRIDGE DECK. OMIT RESURFACING ON THE BRIDGE DECK.
(NO STRUCTURE WORK. SEE ROADWAY PLANS FOR GUARDRAIL WORK AND PLANING QUANTITIES)
- *** PLANE AND PAVE TOP 2 COURSES ONLY. NO STRUCTURE WORK. (SEE ROADWAY PLANS FOR GUARDRAIL WORK AND PLANING QUANTITIES)

DESIGN FILE: i:\projects\18311\Struct\br+tr+eat.dgn
 WORKSTATION: dmollens DATE: 11/04/03

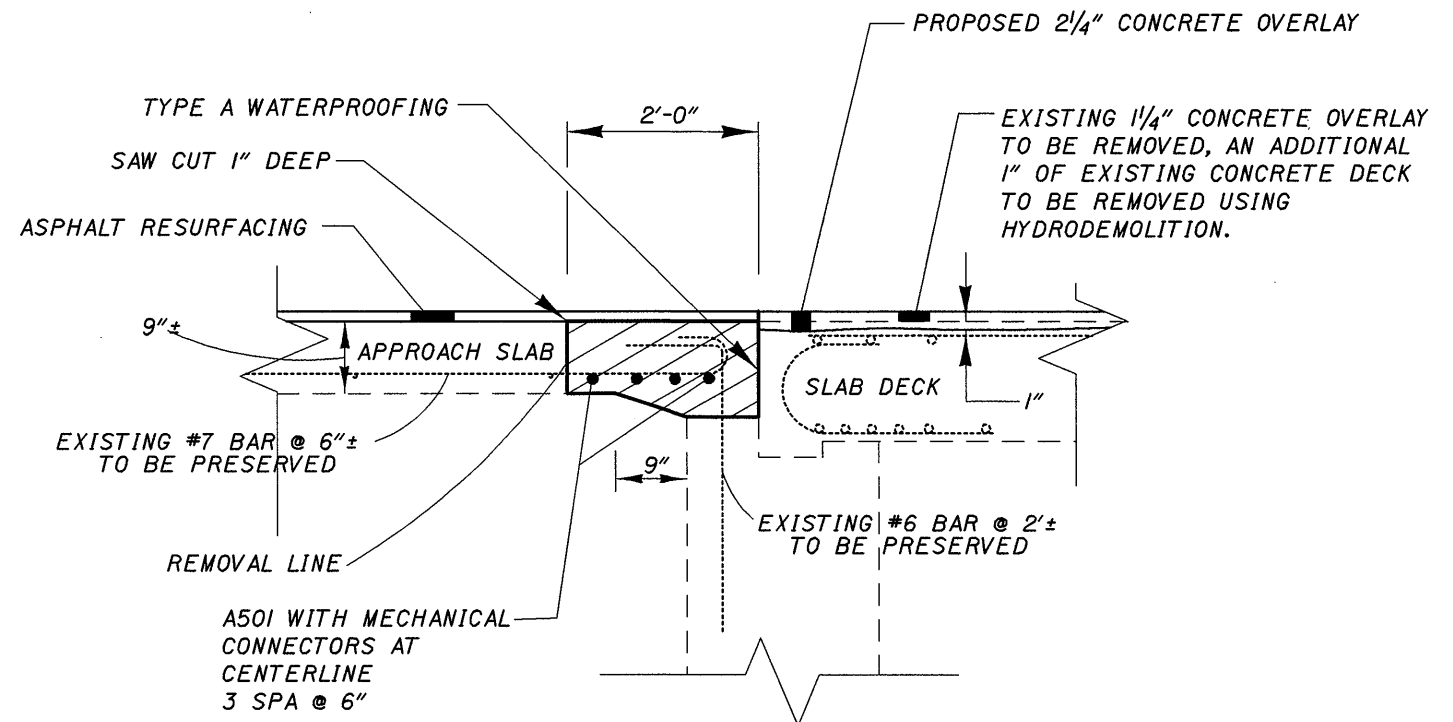
DESIGN AGENCY DISTRICT THREE
DATE 10/03
REVIEWED RDN
DRAWN JPF
DESIGNED JPF
CHECKED CAL
STRUCTURAL FILE NUMBER
REVISED
BRIDGE TREATMENT - MED-94
MED-18-0.00
105 118



PLAN VIEW

REINFORCING TABLE

MARK	NUMBER	LENGTH	TYPE	WEIGHT (LBS)
A501	16	13'-6"	STR	225
TOTAL				225



SECTION A-A

ITEM	QUANTITY	UNIT	DESCRIPTION
202	4	CU.YD.	REMOVAL MISC.: PORTION OF APPROACH SLAB
509	225	POUND	EPOXY COATED REINFORCING STEEL
511	4	CU.YD.	CONCRETE MISC.: APPROACH SLAB REPAIR
SPECIAL	59	FT.	STEEL DRIP STRIP
848	132	SQ.YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/4 INCH THICK)
848	132	SQ.YD.	SURFACE PREPARATION USING HYDRODEMOLITION
848	3	CU.YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	4	SQ.YD.	HAND CHIPPING
848	1ump		TEST SLAB
848	1	CU.YD.	FULL-DEPTH REPAIR
848	132	SQ.YD.	EXISTING CONCRETE OVERLAY REMOVED (1 1/4 INCH NOMINAL THICKNESS)
848	7	SQ.YD.	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY

NOTES:

- 1) REMOVE 2' WIDE, BY FULL WIDTH OF BOTH APPR. SLABS, FOR FULL DEPTH REPLACEMENT.
- 2) THE EXISTING CONCRETE OVERLAY ON THE ENTIRE BRIDGE DECK SHALL BE REMOVED USING ITEM 848- EXISTING CONCRETE OVERLAY REMOVED (1 1/4" NOMINAL THICKNESS)
- 3) THE ENTIRE BRIDGE DECK SHALL BE OVERLAYED USING ITEM 848- MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (2 1/4" THICKNESS)
- 4) A STEEL DRIP STRIP SHALL BE INSTALLED ON BOTH SIDES OF THE DECK AS PER STANDARD DRAWING DS-1-92.

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 98

DESIGN FILE: i:\projects\1831\Struct\MO180172.dgn
 WORKSTATION: dmollens DATE: 11/04/03

DESIGN AGENCY
 DISTRICT THREE

DATE 10/03
 REVIEWED RDN
 STRUCTURE FILE NUMBER 5200482

DRAWN dcm
 CHECKED CAL

PLAN VIEW
 MED-18-0172
 OVER BRANCH OF EAST BRANCH OF BLACK RIVER

MED-18-0.00

106
 118

SIGNAL TIMING

A TWO PHASE CONTROLLER WITH CABINET CAPABLE OF BEING SET WITH THE FOLLOWING SPLITS SHALL BE FURNISHED

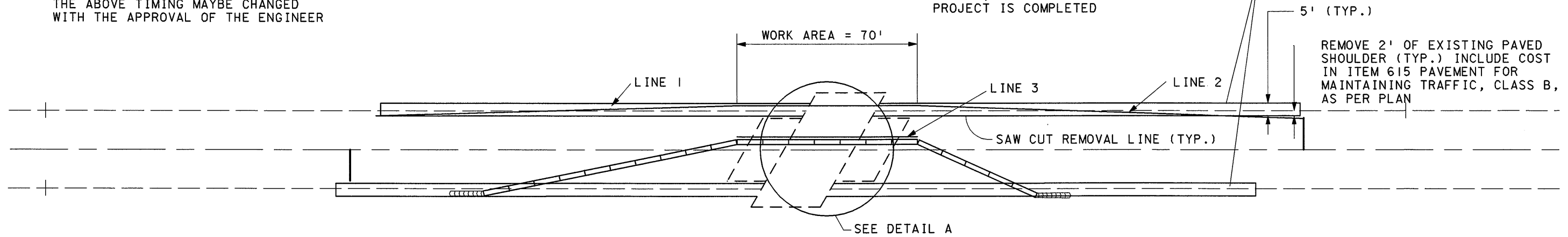
CYCLE LENGTH: 70 SECONDS

	GREEN	AMBER	RED
PHASE A	20	5	10
PHASE B	20	5	10

THE ABOVE TIMING MAYBE CHANGED WITH THE APPROVAL OF THE ENGINEER

FOR DETAILS NOT SHOWN SEE STANDARD DRAWINGS
MT-96.11, MT-96.20, MT-96.25, MT-101.20

PROPOSED PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN 165' LONG (TYPICAL ALL CORNERS), DO NOT REMOVE, PAVEMENT IS TO REMAIN AFTER PROJECT IS COMPLETED

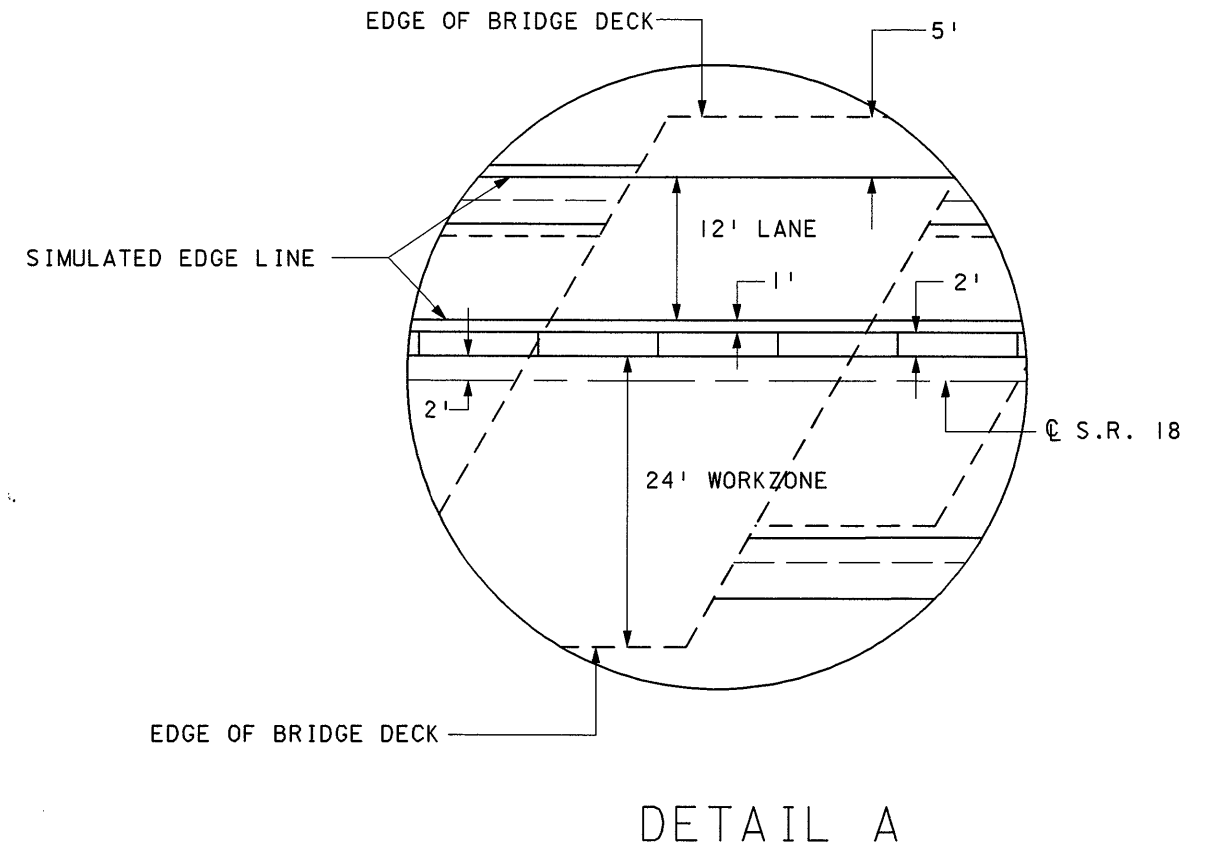


PHASE A SHOWN
PHASE B SIMILAR

WORK ZONE RAISED PAVEMENT MARKERS (TYPE A)				
	SPACING	QTY. (WHITE)	QTY. (YELLOW)	
PHASE A	LINE 1 = 220'	5'-0"	45	45
	LINE 2 = 150'	5'-0"	30	
	LINE 3 = 70'	5'-0"	15	15
PHASE B	LINE 1 = 220'	5'-0"	45	45
	LINE 2 = 150'	5'-0"	30	
	LINE 3 = 70'	5'-0"	15	15
TOTAL			180	120

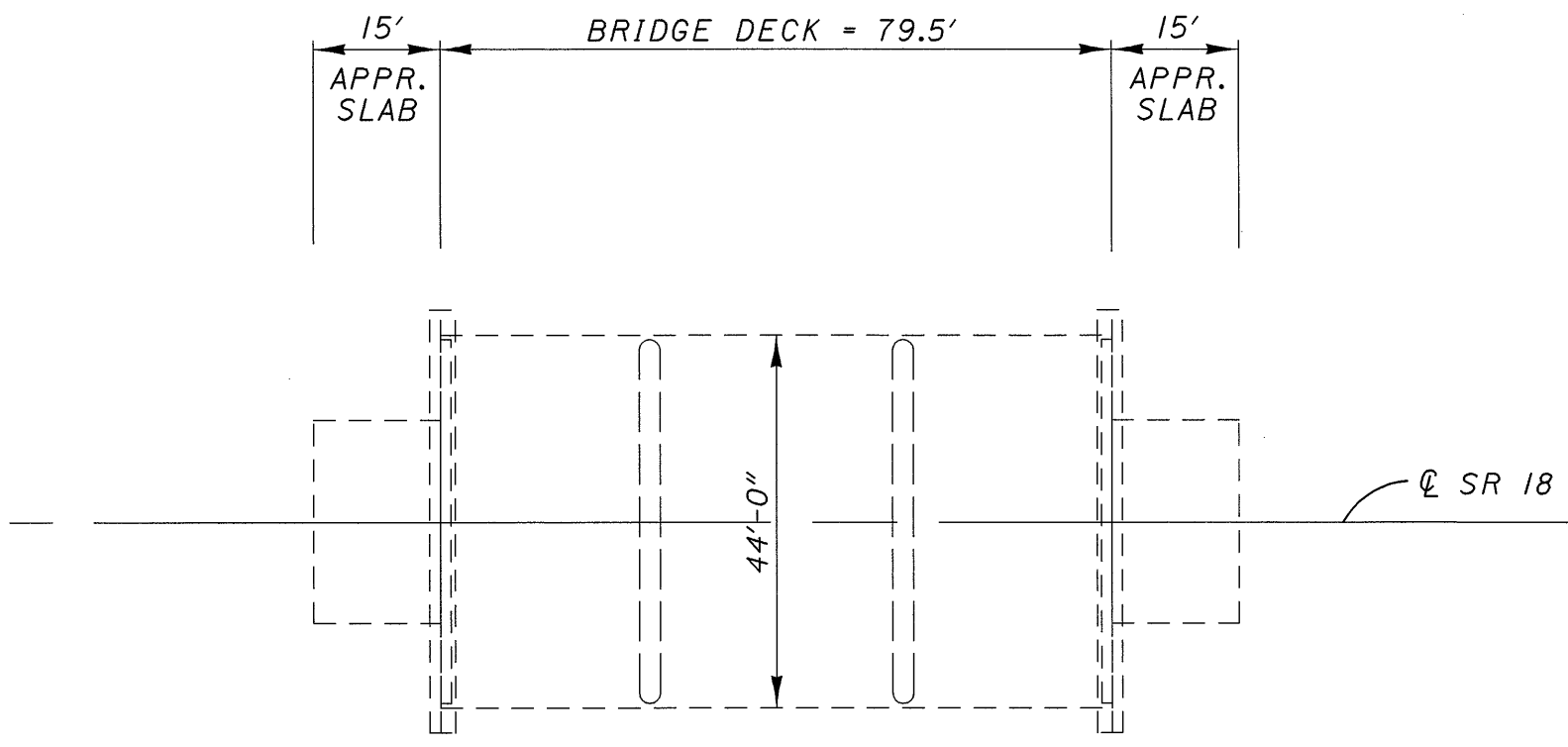
ITEM	QUANTITY	UNIT	DESCRIPTION
614	300	EACH	WORK ZONE RAISED PAVEMENT MARKER
614	16	EACH	BARRIER REFLECTOR, TYPE A2
614	14	EACH	BARRIER REFLECTOR, TYPE B2
614	12	EACH	OBJECT MARKER, TWO WAY
614	.06	MILE	WORK ZONE CENTER LINE, CLASS I (SOLID DOUBLE)
614	.04	MILE	WORK ZONE EDGE LINE, CLASS I (WHITE)
614	24	FT.	WORK ZONE STOP LINE, CLASS I
615	367	SQ.YD.	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN
622	300	FT.	PORTABLE CONCRETE BARRIER, 32"
622	140	FT.	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED (UNANCHORED)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET NO. 98



NOTES:

- THE EXISTING BRIDGE RAILING AND GUARDRAIL ARE NOT SHOWN IN THE PLAN VIEW



PLAN VIEW

NOTES:

- 1) THE EXISTING CONCRETE OVERLAY ON THE ENTIRE BRIDGE DECK SHALL BE REMOVED USING ITEM 848- EXISTING CONCRETE OVERLAY REMOVED (1/4" NOMINAL THICKNESS), AN ADDITIONAL 1" OF EXISTING CONCRETE DECK TO BE REMOVED USING HYDRODEMOLITION.
- 2) THE ENTIRE BRIDGE DECK SHALL BE OVERLAYED USING ITEM 848- MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (2 1/4" THICKNESS)
- 3) A STEEL DRIP STRIP SHALL BE INSTALLED ON BOTH SIDES OF THE DECK AS PER STANDARD DRAWING DS-1-92.

ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	185	FT.	STEEL DRIP STRIP
848	389	SQ.YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/4 INCH THICK)
848	389	SQ.YD.	SURFACE PREPARATION USING HYDRODEMOLITION
848	7	CU.YD.	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
848	12	SQ.YD.	HAND CHIPPING
848	1ump		TEST SLAB
848	1	CU.YD.	FULL-DEPTH REPAIR
848	389	SQ.YD.	EXISTING CONCRETE OVERLAY REMOVED (1/4 INCH NOMINAL THICKNESS)
848	19	SQ.YD.	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 99

DESIGN FILE: I:\projects\1831\Struct\MO180657\details.dgn
 WORKSTATION: dml/ens DATE: 11/04/03

DESIGN AGENCY DISTRICT THREE				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">REVIEWED RDN</td> <td style="text-align: center;">DATE 10/03</td> </tr> <tr> <td style="text-align: center;">DRAWN JPF</td> <td style="text-align: center;">STRUCTURE FILE NUMBER 5200636</td> </tr> </table>	REVIEWED RDN	DATE 10/03	DRAWN JPF	STRUCTURE FILE NUMBER 5200636
REVIEWED RDN	DATE 10/03			
DRAWN JPF	STRUCTURE FILE NUMBER 5200636			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">DESIGNED JPF</td> <td style="text-align: center;">CHECKED CAL</td> </tr> </table>	DESIGNED JPF	CHECKED CAL		
DESIGNED JPF	CHECKED CAL			
PLAN VIEW MED-18-0657 OVER MALLET CREEK				
MED-18-0.00				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">108</td> </tr> <tr> <td style="text-align: center;">118</td> </tr> </table>	108	118		
108				
118				

SIGNAL TIMING

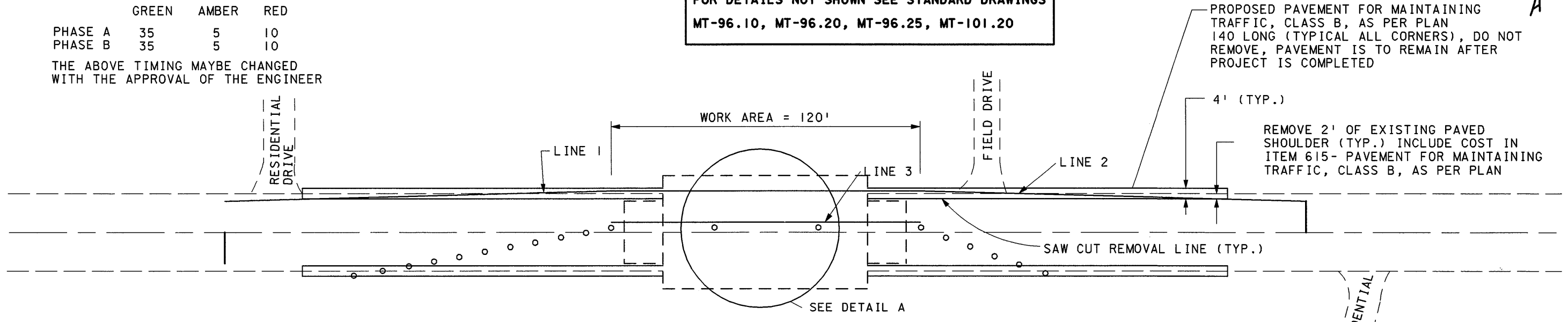
A TWO PHASE CONTROLLER WITH CABINET
CAPABLE OF BEING SET WITH THE
FOLLOWING SPLITS SHALL BE FURNISHED

CYCLE LENGTH: 100 SECONDS

	GREEN	AMBER	RED
PHASE A	35	5	10
PHASE B	35	5	10

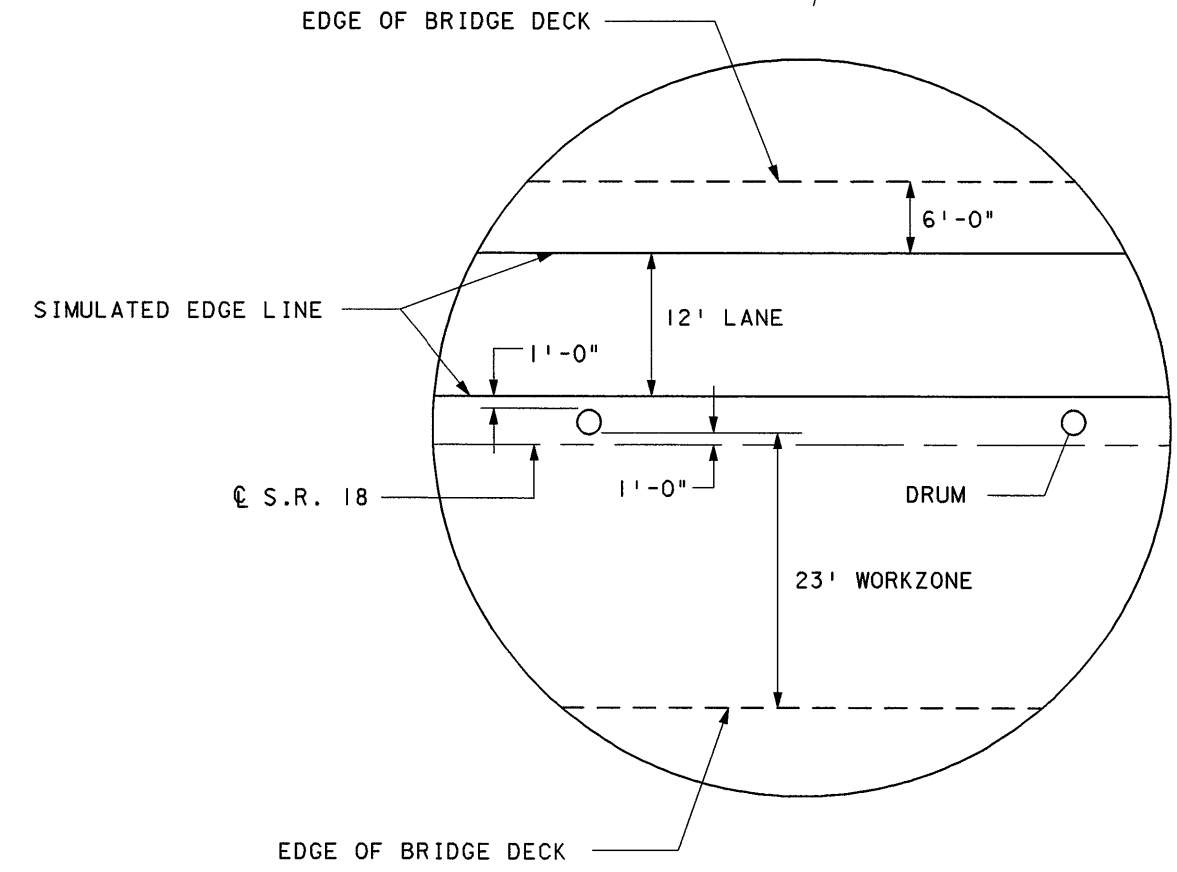
THE ABOVE TIMING MAYBE CHANGED
WITH THE APPROVAL OF THE ENGINEER

FOR DETAILS NOT SHOWN SEE STANDARD DRAWINGS
MT-96.10, MT-96.20, MT-96.25, MT-101.20



PHASE A SHOWN
PHASE B SIMILAR

WORK ZONE RAISED PAVEMENT MARKERS (TYPE A)				
		SPACING	QTY. (WHITE)	QTY. (YELLOW)
PHASE A	LINE 1 = 270'	5'-0"	55	55
	LINE 2 = 150'	5'-0"	30	
	LINE 3 = 120'	5'-0"	25	25
PHASE B	LINE 1 = 270'	5'-0"	55	55
	LINE 2 = 150'	5'-0"	30	
	LINE 3 = 120'	5'-0"	25	25
	TOTAL		220	160



DETAIL A

ITEM	QUANTITY	UNIT	DESCRIPTION
614	380	EACH	WORK ZONE RAISED PAVEMENT MARKER
614	15	EACH	BARRIER REFLECTOR, TYPE A2
614	.06	MILE	WORK ZONE CENTER LINE, CLASS I (SOLID DOUBLE)
614	.04	MILE	WORK ZONE EDGE LINE, CLASS I (WHITE)
614	24	FT.	WORK ZONE STOP LINE, CLASS I
615	249	SQ.YD.	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN

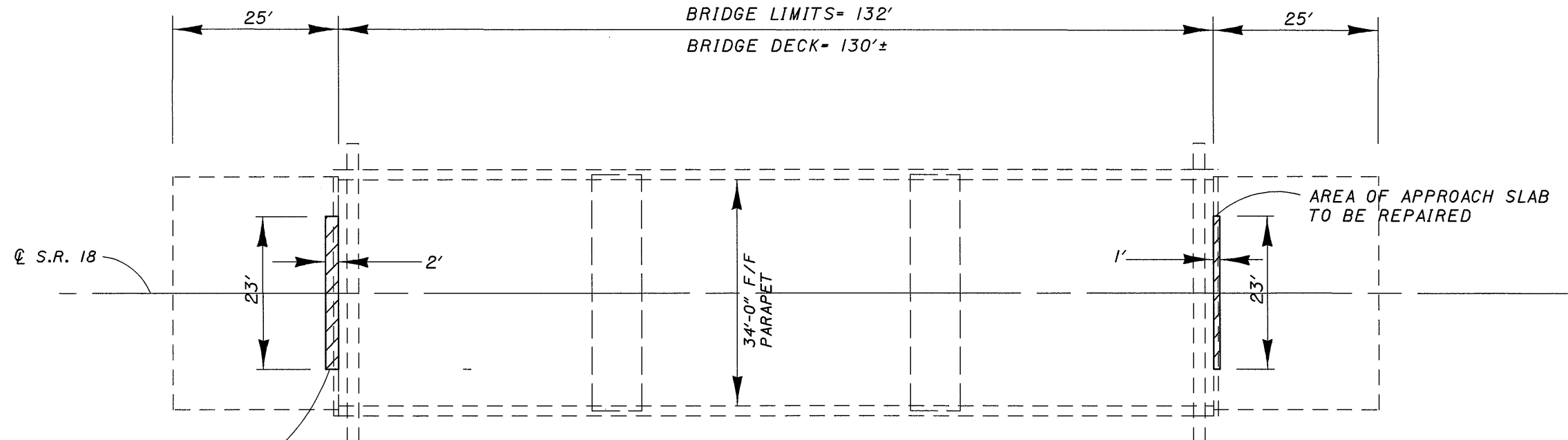
ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET NO. 99

NOTES:

- THE EXISTING BRIDGE RAILING AND GUARDRAIL ARE NOT SHOWN IN THE PLAN VIEW

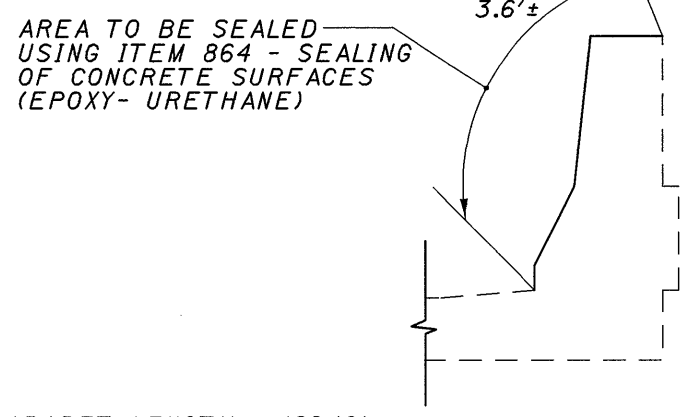
DESIGN FILE: I:\projects\18311\Struct\STRMOT.DGN
WORKSTATION: dmollens DATE: 11/04/03

DESIGN AGENCY: DISTRICT THREE
DATE: 10/03
REVIEWED: RDN
DRAWN: dcm
DESIGNED: dcm
CHECKED: CAL
STRUCTURAL FILE NUMBER: 5200636
MAINTENANCE OF TRAFFIC: MED-18-0657 OVER MALLETT CREEK
MED-18-0.00



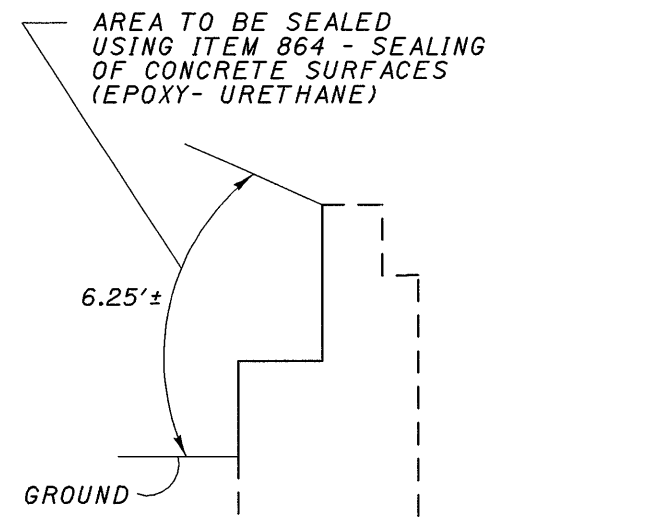
PLAN VIEW

AREA OF APPROACH SLAB TO BE REPAIRED



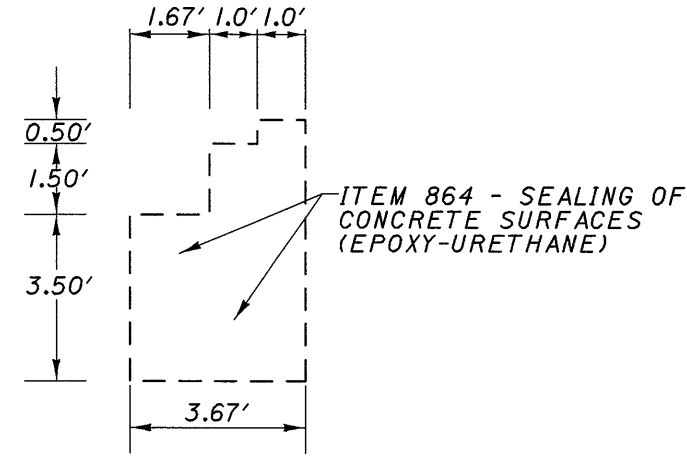
TYPICAL PARAPET VIEW

PARAPET LENGTH = 129.16'



TYPICAL BACKWALL VIEW

BACKWALL LENGTH = 33'



TYPICAL WINGWALL VIEW

WINGWALL IS 1'-9" THICK

NOTES:

- 1) THE DECK AND APPROACH SLABS SHALL BE SEALED USING ITEM 841 - TREATING OF CONCRETE SURFACES WITH SRS.
- 2) THE WINGWALLS, PARAPETS, ABUT. SEATS, AND BACKWALLS SHALL BE SEALED USING ITEM 864 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
- 3) THE APPROACH SLAB SHALL BE REPAIRED USING ITEM 202 AND ITEM 511. THE EXISTING REINFORCING STEEL SHALL BE SALVAGED.

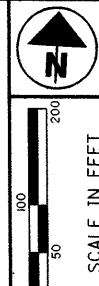
ITEM	QUANTITY	UNIT	DESCRIPTION
202	69	SQ.FT.	REMOVAL MISC.: APPROACH SLAB PARTIAL DEPTH
511	1	CU.YD.	CONCRETE MISC.: APPROACH SLAB PARTIAL DEPTH REPAIR
841	680	SQ.YD.	TREATING OF CONCRETE SURFACES WITH SRS
864	165	SQ.YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET, SHEET NO. 100.

DESIGN FILE: i:\projects\1831\Structure\M0180685.dgn
WORKSTATION: dmollens DATE: 11/04/03

DESIGN AGENCY: DISTRICT THREE
 DATE: 10/03
 RDN: 10/03
 STRUCTURE FILE NUMBER: 5200660
 DRAWN: JPF
 REVISED: CAL
 DESIGNED: JPF
 CHECKED: CAL
 PLAN VIEW
 MED-18-0685
 OVER RAILROAD
 MED-18-0.00
 110
 118

MED-18-2.85
MEDINA COUNTY
LITCHFIELD TOWNSHIP
T-3-N, R-16-W



PID NO. **18311**

R/W DESIGNER
 PWS
 R/W REVIEWER

CENTERLINE PLAT

MED-18-0-00

ORIGINAL LOT 36

CURVE DATA
 @ R/W S.R. 18

P.I. Sta = 154+48.54
 D = 0° 18' 00" (LT)
 Dc = 0° 04' 00"
 R = 85,943.47'
 T = 225.00'
 L = 450.00'
 E = 0.29'

BASIS FOR BEARINGS:

ALL BEARINGS SHOWN ARE TO AN ASSUMED MERIDIAN AND ARE FOR THE PURPOSE OF DEFINING ANGULAR MEASUREMENTS ONLY.

NOTES:

1. THE CENTERLINE OF RIGHT OF WAY FOR S.R. 18 WAS DETERMINED USING: MEDINA COUNTY TAX MAPS AND VARIOUS SURVEY PLATS FOR LITCHFIELD TOWNSHIP AND ODOT RIGHT OF WAY PLANS: MED-18-(2.44-6.70)
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF S.R. 18.

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE BY THE OHIO DEPARTMENT OF TRANSPORTATION IN 1999.

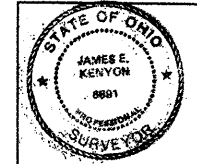
THE ESTABLISHMENT OF THE PROPERTY LINES AND EXISTING RIGHT OF WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

BY James E. Kenyon
 JAMES E. KENYON
 SURVEYOR NO. 6891 DATE 3-29-02

MONUMENT LEGEND

- ☐ EXISTING R/W MONUMENT BOX
- ▣ PROPOSED R/W MONUMENT BOX
- ⊙ EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- ⊗ RAILROAD SPIKE FOUND
- ⊛ RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- ⊙ I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. IRON PIN SET W/ ID CAP
- ⊙ I.P.F. IRON PIPE FOUND
- ⊛ I.P.F. IRON PIPE SET
- ⊙ R.K.F. P.K. NAIL FOUND
- ⊛ R.K.S. P.K. NAIL SET

RECEIVED _____, 20____
 RECORDED _____, 20____
 BOOK _____ PAGE _____
 COUNTY RECORDER



1 / 8
 111
 118

ORIGINAL LOT 39

ORIGINAL LOT 38

ORIGINAL LOT 37

ORIGINAL LOT 35

ORIGINAL LOT 33

ORIGINAL LOT 34

STONE FD. W/
 DRILLED HOLE
 138+74.14
 0.00' RT.

BEGIN PROJECT
 STA. 0+00.00
 S. L. M. 0.00

MONUMENTS TO BE SET DURING CONSTRUCTION

STATION	DIST. FROM @ OF SURVEY		@ MONUMENTS	REFERENCE MONUMENTS
	LEFT	RIGHT		
P.C. 152+23.54			/	
P.T. 156+73.54			/	
P.C. 216+72.43			/	
P.T. 220+55.77			/	
P.C. 230+19.74			/	
P.T. 235+03.08			/	
TOTAL			6	

DESIGN FILE: h:\projects\18311\18311.dwg, plot: 18311.dwg
 DATE: 04/04/02

MONUMENT LEGEND

- ▣ EXISTING R/W MONUMENT BOX
- ▣ PROPOSED R/W MONUMENT BOX
- ⊙ EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- ⚡ RAILROAD SPIKE FOUND
- ⚡ RAILROAD SPIKE SET
- I.P.F. IRON PIN FOUND
- ⊙ I.P.F. IRON PIN FOUND W/ ID CAP
- I.P.S. IRON PIN SET W/ ID CAP
- ⊙ I.P.F. IRON PIPE FOUND
- ⊙ I.P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET

MED-18-4.25
MEDINA COUNTY
LITCHFIELD TOWNSHIP
T-3-N, R-16-W

ORIGINAL LOT 53

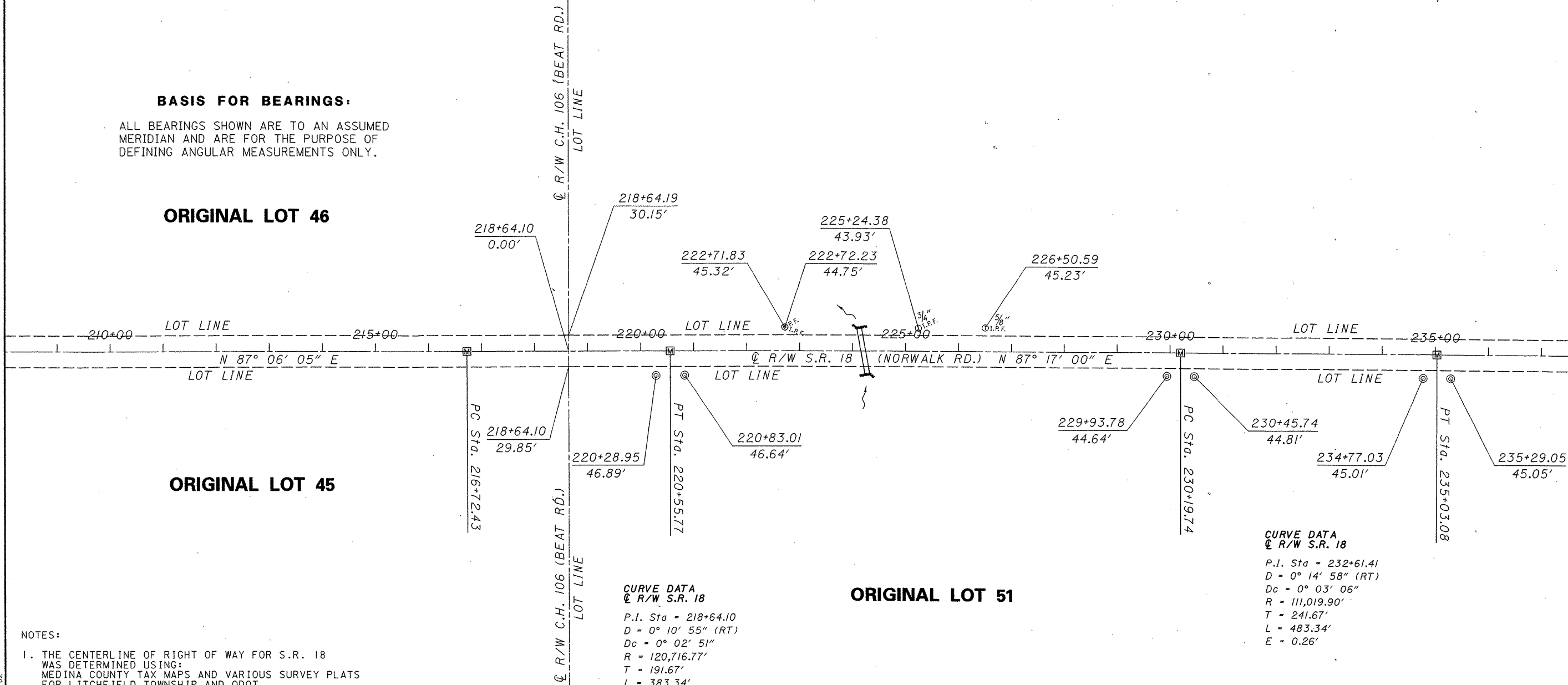
BASIS FOR BEARINGS:

ALL BEARINGS SHOWN ARE TO AN ASSUMED MERIDIAN AND ARE FOR THE PURPOSE OF DEFINING ANGULAR MEASUREMENTS ONLY.

ORIGINAL LOT 46

ORIGINAL LOT 45

ORIGINAL LOT 51



CURVE DATA
 @ R/W S.R. 18
 P.I. Sta = 218+64.10
 D = 0° 10' 55" (RT)
 Dc = 0° 02' 51"
 R = 120,716.77'
 T = 191.67'
 L = 383.34'
 E = 0.15'

CURVE DATA
 @ R/W S.R. 18
 P.I. Sta = 232+61.41
 D = 0° 14' 58" (RT)
 Dc = 0° 03' 06"
 R = 111,019.90'
 T = 241.67'
 L = 483.34'
 E = 0.26'

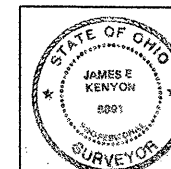
NOTES:

1. THE CENTERLINE OF RIGHT OF WAY FOR S.R. 18 WAS DETERMINED USING: MEDINA COUNTY TAX MAPS AND VARIOUS SURVEY PLATS FOR LITCHFIELD TOWNSHIP AND ODOT RIGHT OF WAY PLANS: MED-18-(2.44-6.70)
2. REFER TO SHEET 1 OF 8 FOR MONUMENT LOCATIONS, TABLE AND NOTE.
3. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF S.R. 18.

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE BY THE OHIO DEPARTMENT OF TRANSPORTATION IN 1999. THE ESTABLISHMENT OF THE PROPERTY LINES AND EXISTING RIGHT OF WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

BY James E. Kenyon
 JAMES E. KENYON
 SURVEYOR NO. 6891 DATE 3-29-02

RECEIVED _____, 20____
 RECORDED _____, 20____
 BOOK _____ PAGE _____
 COUNTY RECORDER



CENTERLINE PLAT

MED-18-0.00

2 / 8

112 / 118

R/W DESIGNER PWS R/W REVIEWER

PID NO. 18311

SCALE IN FEET

DESIGN FILE: h:\p\01\p\18311\18311\18311\18311.dgn WORKSTATION: p28/m/6/8 DATE: 04/04/02

TOTAL NUMBER OF :

6 OWNERSHIPS 0 OWNERSHIPS WITH STRUCTURES INVOLVED
 10 PARCELS 0 OWNERSHIPS WITH "P" ITEMS
 0 TOTAL TAKES

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE STATE OF OHIO UNLESS OTHERWISE SHOWN.

ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNERS VOLUME	RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED	
												LEFT	RIGHT			BOOK	PAGE
1-9	NOT USED																
10SH	PAUL M. STRATTON & JOYCE O. STRATTON	3, 6	482	473	024-04B-31-016	3.8500	0.0805	0.0039	0.0000	0.0039	NONE	3.7656	----	STATE	INCLUDES 0.0011 AC. EXIST. CHANNEL EASE.		
11SH	THE BOARD OF TRUSTEES, LITCHFIELD TOWNSHIP	3, 6	OR 1264	953	024-04B-31-027	7.5386	0.0069	0.0034	0.0000	0.0034	NONE	7.5283	----		INCLUDES 0.0034 AC. EXIST. CHANNEL EASE.		
12SH	THE TOWNSHIP OF LITCHFIELD, IN MEDINA COUNTY, OHIO	3, 6	161	525	024-04B-31-018	2.0000	0.1364	0.0119	0.0000	0.0119	NONE	1.8517	----		INCLUDES 0.0118 AC. EXIST. CHANNEL EASE.		
13T	LITCHFIELD H & M STORAGE	3, 6	OR 515 OR 484	925 685	024-04D-01-011	4.7400	0.0710	0.0565	0.0000	0.0565	NONE	----	4.6690		TO CONSTRUCT TEMPORARY DRIVE		
14	ELMER S. HINES, JR. & SARAH L. MARLOW	3, 6	OR 648	515	024-04D-01-033	5.0000	0.1088	----	----	----	NONE	----	4.8912		NO R/W REQUIRED		
15-19	NOT USED																
20	CECIL L. KINNEY & MARCIA S. KINNEY	4, 7	OR 175	314	024-04B-33-007	4.9127	0.5179	----	----	----	NONE	4.3948	----		NO R/W REQUIRED		
21WD	MICHAEL J. ROTH, A MARRIED MAN TO GINGER ROTH,	4, 7, 8	OR 789	662	024-04D-03-022	2.8247	0.0000	0.0326	0.0000	0.0326	NONE	----	2.7921				
21T	GINGER ROTH, A MARRIED WOMAN TO MICHAEL J. ROTH	3, 6	OR 471	649				0.0347	----	0.0347					FOR GRADING PURPOSES ONLY		
22WD	THEODORE A. JOHNSON AND ELEANOR JOHNSON, TRUSTEES	4, 7, 8	OR 1239	562	024-04B-33-008	3.0873	0.0870	0.1370	0.0870	0.0500	NONE	2.9503	----				
22T	OR THEIR SUCCESSORS IN TRUST UNDER THE JOHNSON							0.0057	----	0.0057					FOR GRADING PURPOSES ONLY		
22T-1	LIVING TRUST, DATED SEPTEMBER 25, 1996,	4, 8	OR 1260	86	024-04B-34-002	80.9240	1.4566	0.0504	----	0.0504	NONE	79.4674	----		FOR GRADING PURPOSES ONLY		
	TOTAL					84.0113	1.5436	0.1370	0.0870	0.0500		82.4177	----				
23	EMMA JEAN KINNEY	4, 8	OR 484 475	625 764	024-04D-03-023	1.0000	0.0875	----	----	----	NONE	----	0.9125		NO R/W REQUIRED		
24T	DEBORA A. SARGENT	4, 8	OR 1284	354	024-04B-34-001	1.0760	0.0435	0.0290	----	0.0290	NONE	1.0325	----	STATE	FOR GRADING PURPOSES ONLY		
25	JOHN R. MOLNAR & JULIA A. MOLNAR	4, 8	1108 769 475	327 236 764	024-04D-04-013	93.7700	1.388	----	----	----	NONE	----	92.382		NO R/W REQUIRED		

FEDERAL PROJECT NO.

PID NO. 18311

STATE JOB NO.

R/W DESTROYER
R/W RELEASER

SUMMARY OF ADDITIONAL RIGHT OF WAY

MED-18-0.00

5 / 8

115 / 118

NOTE: ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION.

REV. BY	DATE	DESCRIPTION
DATE COMPLETED:		3-31-02

DESIGN FILE: h:\projects\18311\18311\18311.dgn
 WORKSTATION: ps256r DATE: 04/02/02

