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RECORD PLANS

CONTRACTOR: WINTERSET, LYNDONVILLE, VT.

RESIDENT ENGINEER: ROSS CLARK

CONSTRUCTION BEGAN: June 9, 1997
CONSTRUCTION COMPLETED: Oct. 16, 1998

RECORD PLANS BY: Jacques Couture

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY for R. Clark RESIDENT ENGINEER

DATE 02-24-03

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found on microfilm in Central Files.

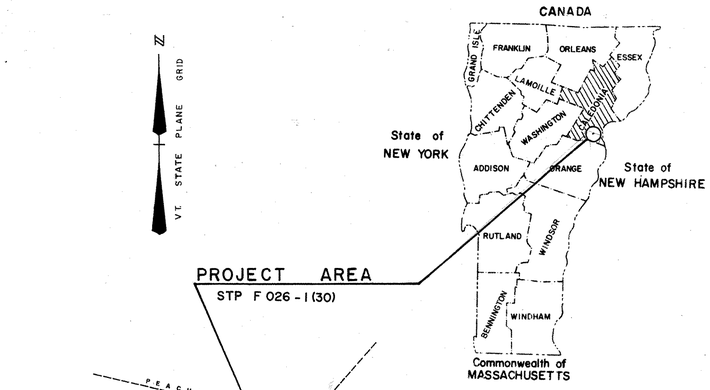
STATE OF VERMONT
AGENCY OF TRANSPORTATION

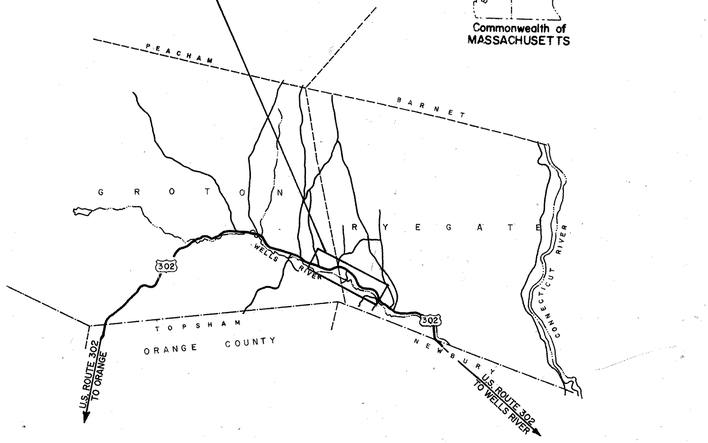
PROPOSED IMPROVEMENT
TOWNS OF GROTON AND RYEGATE
COUNTY OF CALEDONIA
U.S. ROUTE 302 (MINOR ARTERIAL)

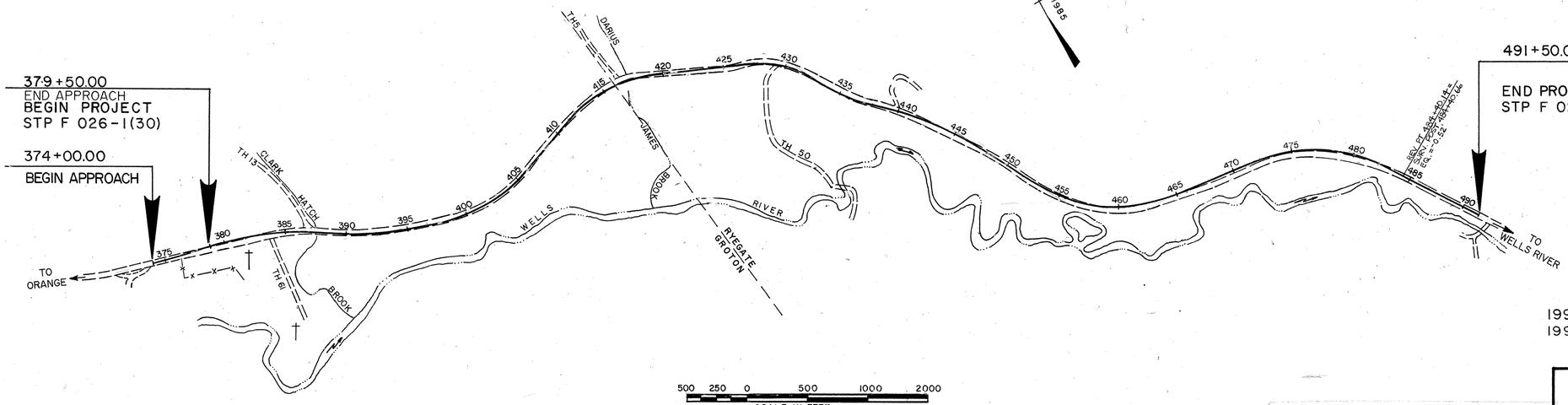
BEGINNING AT A POINT ON U.S. ROUTE 302 APPROXIMATELY 7.091 MILES EASTERLY OF THE TOPSHAM-GROTON TOWN LINE AND EXTENDING EASTERLY 2.121 MILES.

LENGTH OF ROADWAY	11199.48 FEET = 2.121	MILES
LENGTH OF BRIDGE	0.00 FEET = 0.000	MILES
LENGTH OF PROJECT	11199.48 FEET = 2.121	MILES

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES GRADING, DRAINAGE, SUBBASE, AND PAVEMENT FOR A U.S. HIGHWAY RELOCATION.







TRAFFIC DATA

1998 ADT	2850
2018 ADT	3880
2018 DHV	535
2018 ADTT	220
T	4%
D	53%
V	50 MPH
1998-2018 ESAL'S	1,870,000
1998-2038 ESAL'S	4,709,000

CONVENTIONAL SIGNS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS X
FENCE LINE
STONE WALL
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
CONTROL OF ACCESS
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS SR
TOP OF CUT
TOE OF SLOPE

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

DuBois & King inc.
engineering planning management development

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE CHIEF ENGINEER.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON MARCH 15, 1990 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

APPROVED [signature] DATE 3/7/97
DIRECTOR OF ENGINEERING

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ DATE _____
DIVISION ADMINISTRATOR

GROTON-RYEGATE
PROJECT STP F 026-1(30)

SHEET 1 OF 152 SHEETS

BRUNING 44-131 40592-1

D-10

S.R.S. 12/17/70

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14-17.	GRADE AND EARTHWORK SHEET
18.	BLANK
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52.	TEMP. EROSION CONTROL TYPICAL SHEET
53-61.	TEMP. EROSION CONTROL LAYOUT SHEETS
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	VERTICAL GRANITE CURB	
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	TWISTED END TERMINAL	
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DATUM
VERTICAL _____
HORIZONTAL _____

REV. 3-31-97

SURVEYED BY _____ DATE _____
DRAWN BY B. MCAVOY DATE 7/7/92
SQUAD LEADER S. MENARD
DESIGN FILE NO. /sqdc/78d073/dd073.dgn
IPARM FILE dd073ind.i DATE PLOTTED 1-APR-1997
PROJ. NAME GROTON - RYEGATE
PROJ. NO. F 026 - 1(30)
SHEET 2 OF 152 SHEETS

TYPICAL SECTIONS

3-1/2" BITUMINOUS CONCRETE PAVEMENT (1-1/2" TYPE III OVER 2" TYPE II)

3" BITUMINOUS CONCRETE PAVEMENT TYPE I (1 LIFT)

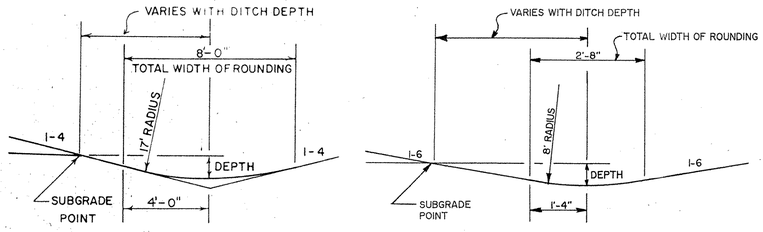
24" SUBBASE OF DENSE GRADED CRUSHED STONE

18" SAND BORROW (3" IN ROCK CUTS)

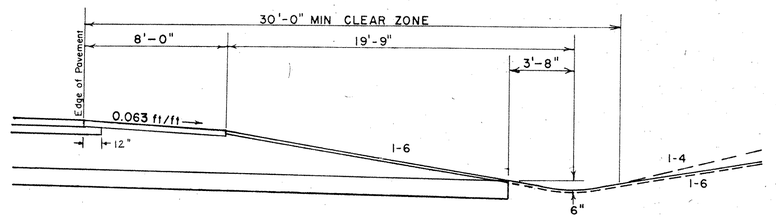
SHOULDERS: 3-1/2" BITUMINOUS CONCRETE PAVEMENT (1-1/2" TYPE III OVER 2" TYPE II)

NOTE: ALL BITUMINOUS CONCRETE PAVEMENT TO BE PG 58-34

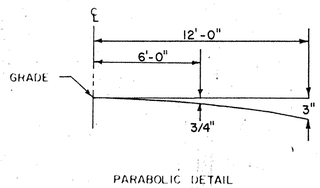
NOTE: FOR T.H. TYPICALS SEE APPLICABLE CROSS SECTION SHEETS



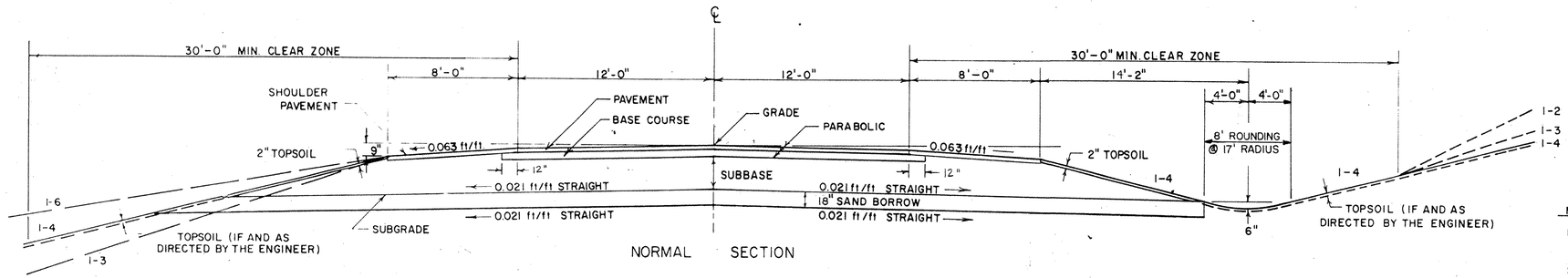
TYPICAL DITCH DETAILS



NORMAL SECTION IN CUT WITH 1-6 SLOPES

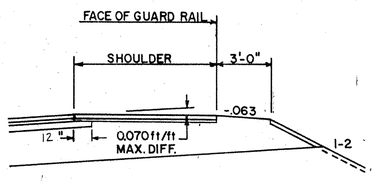


PARABOLIC DETAIL

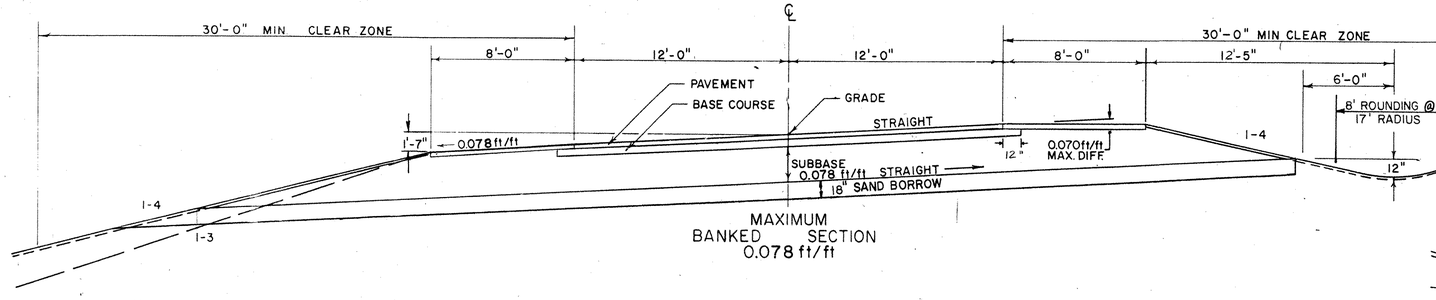


NORMAL SECTION

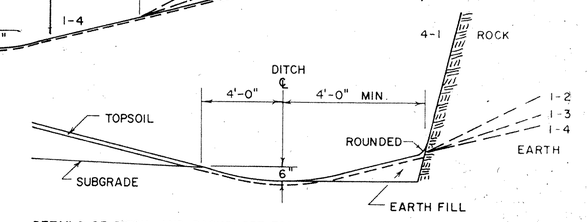
MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH)	± 1/4"
SUBBASE	± 1"
SAND BORROW	± 1"



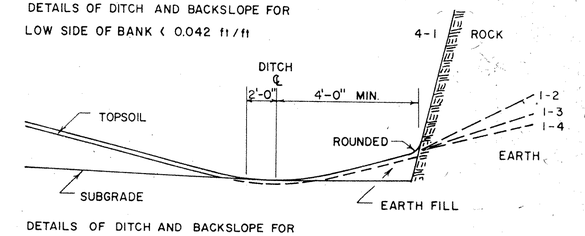
DETAIL OF GUARD RAIL ON HIGH SIDE OF BANKED SECTION



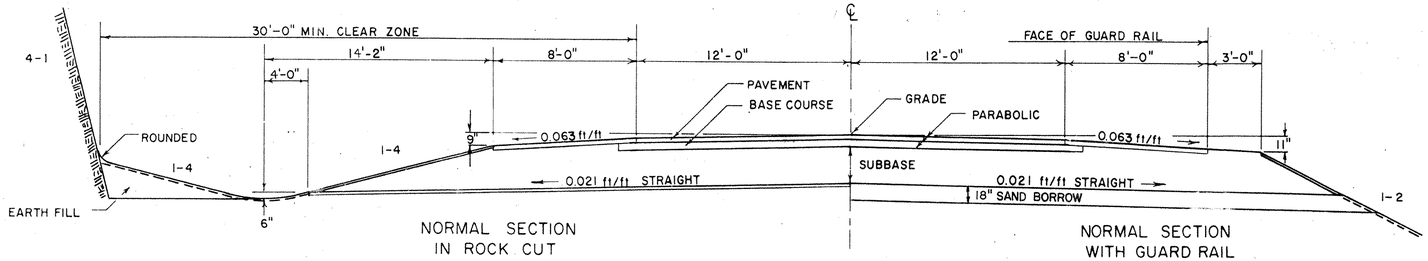
MAXIMUM BANKED SECTION 0.078 ft/ft



DETAILS OF DITCH AND BACKSLOPE FOR LOW SIDE OF BANK ⟨ 0.042 ft/ft



DETAILS OF DITCH AND BACKSLOPE FOR LOW SIDE OF BANK ≥ 0.042 ft/ft.



NORMAL SECTION IN ROCK CUT

NORMAL SECTION WITH GUARD RAIL

FOR SLOPES IN SOLID ROCK EXCAVATION AND DRILLING AND BLASTING OF SOLID ROCK SUBGRADE, SEE STANDARD SHEET A-60.

SEEDING FORMULA

RURAL AREAS CONSERVATION MIX

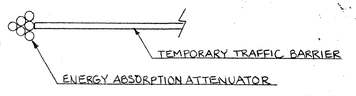
% WT.	LBS/A	NAME	PUR %	GERM %
37.5	22.5	CREEPING RED FESCUE	98	85
37.5	22.5	TALL FESCUE	95	90
5.0	3.0	RED TOP	95	90
15.0	9.0	BIRDSFOOT TREFOIL	98	85
5.0	3.0	ANNUAL RYEGRASS	95	85
100.0	60.0			

THE SEED MIXTURE SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE FROM ALL NOXIOUS WEED SEED.

GENERAL NOTES

1. SEED - To be applied per Seeding Formula as directed by the Engineer
2. FERTILIZER - Formula 19-19-19 to be used with seed, applied at the rate of 500 lbs /Acre.
3. AGRICULTURAL LIMESTONE - To be applied at the rate of 2 tons /Acre or as directed by the Engineer.
4. HAY MULCH - To be placed on earth slopes at the rate of 2 tons /Acre.
5. TOPSOIL - To be used with seed as indicated on the plans or as directed by the Engineer.
6. MARKER POSTS - (Wood or Steel, as specified) - To be placed as directed by the Engineer.
7. SLOPE ROUNDING - All cut slopes to be rounded in accordance with Standard Sheet B-5.
8. PAY LIMITS OF SAND BORROW WHEN USED IN CONJUNCTION WITH UNDERDRAIN - See, Standard Sheet D-2.
9. TACK COAT - Emulsified asphalt is to be applied at the rate of 0.015 gal/sy between successive courses of pavement as directed by the Engineer.

ENERGY ABSORPTION ATTENUATOR DETAIL



NOTE: SAND OR WATER FILLED BARRELS TO BE PLACED AS DIRECTED BY THE RESIDENT ENGINEER.

TYPICAL SECTIONS FOR

REV. 3-31-97

PROJECT GROTON/RYEGATE RTE 302

NO. F 026-1(30)

SHEET 3 OF 152 SHEETS

BRUNING 44 131 40592

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	NON-FED. PARTIC.	EROSION CONTROL	TRAINING	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
					1	1	LS	CLEARING AND GRUBBING (PLUS INDIVIDUAL TREES AND STUMPS)	201.10	-
					131000	131000	CY	COMMON EXCAVATION	203.15	701
					32000	32000	CY	SOLID ROCK EXCAVATION	203.16	398
				1750		1750	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	-
					34500	34500	CY	SAND BORROW	203.31	427
				1880		1880	CY	GRANULAR BORROW	203.32	-
					84600	84600	SY	FINE GRADING-SUBGRADE	203.40	47
		300			7800	8100	CY	TRENCH EXCAVATION OF EARTH	204.20	84
					1300	1300	CY	TRENCH EXCAVATION OF ROCK	204.21	8
				1110		1110	CY	STRUCTURE EXCAVATION	204.25	-
				116	204	320	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	4
					250	250	LF	DRILLING AND BLASTING OF SOLID ROCK	205.10	EST.
					5950	5950	SY	DRILLING AND BLASTING OF SOLID ROCK SUBGRADE	205.20	26
					160	160	SY	COLD PLANING - BIT. PAVEMENT	210.10	4
					7270	7270	SY	SCARIFYING PAVEMENT	212.20	3
					44300	44300	CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	40
					1200	1200	CY	AGGREGATE SURFACE COURSE	401.10	43
					105	105	CWT	EMULSIFIED ASPHALT	404.65	-
					16700	16700	TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25	190
					1	1	LS	PRICE ADJUSTMENT ASPHALT CEMENT	406.50	-
				62	73	135	CY	CONCRETE, CLASS B	501.25	2.5
				4080	5620	9700	LB	REINFORCING STEEL	507.15	76
				1		1	EA	84'' CORRUGATED ALUM. ALLOY PLATE PIPE (120 LF, 7356 LBS)	511.25	-
				1		1	EA	14'-0'' X 8'-7'' CORRUGATED ALUM. ALLOY PLATE PIPE ARCH (90 LF, 9306 LBS)	511.30	-
				1		1	LS	TWO-WAY TEMPORARY BRIDGE - STA 388+25	528.11	-
				1		1	LS	TWO-WAY TEMPORARY BRIDGE - STA 418+36	528.11	-
				1		1	EA	REMOVAL OF STRUCTURE - STA 388+25	529.15	-
				1		1	EA	REMOVAL OF STRUCTURE - STA 418+36	529.15	-
								** BEGIN OPTION ITEMS **		
					56	56	LF	12'' CSP .064	601.0005	
					56	56	LF	12'' CAAP .060	601.0205	
					56	56	LF	12'' CPEP	601.0905	
					644	644	LF	15'' CSP .064	601.0010	
					644	644	LF	15'' RCP CL III	601.0810	
					644	644	LF	15'' CPEP	601.0910	
					44	44	LF	18'' CSP .064	601.0015	
					44	44	LF	18'' CPEP	601.0915	
					842	842	LF	18'' RCP CL III	601.0815	
					842	842	LF	18'' CPEP	601.0915	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION
128763	CY	MAINLINE
1162	CY	DRIVES AND APPROACHES
374	CY	DESIGNED DRAINAGE
701	CY	ROUNDING
131000	CY	TOTAL
		TRENCH EXCAVATION OF EARTH
3248	CY	DRAINAGE
4408	CY	UNDERDRAIN
60	CY	TEST TRENCH
84	CY	ROUNDING
7800	CY	TOTAL
		TRENCH EXCAVATION OF ROCK
126	CY	DRAINAGE
1166	CY	UNDERDRAIN
8	CY	ROUNDING
1300	CY	TOTAL
		SOLID ROCK EXCAVATION
30113	CY	ROCK CUT
1489	CY	OVERBREAKAGE
398	CY	ROUNDING
32000	CY	TOTAL
		CONCRETE, CLASS B
71.6	CY	DRAINAGE STRUCTURES
7.5	CY	DRIVE AT STA. 393+10.8
3.9	CY	ROUNDING
83.0	CY	TOTAL

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		SUBBASE OF DENSE GRADED CRUSHED STONE
43462	CY	MAINLINE
148	CY	TOWN HIGHWAY #5
306	CY	TOWN HIGHWAY #13
344	CY	TOWN HIGHWAY #61
40	CY	ROUNDING
44300	CY	TOTAL
		AGGREGATE SURFACE COURSE
966	CY	DRIVES AND APPROACHES
191	CY	TURNOUT (STA 487+00 - 489+50 RT)
43	CY	ROUNDING
1200	CY	TOTAL
		BITUMINOUS CONCRETE PAVEMENT (PG 58-34)
15803	TON	MAINLINE
373	TON	DRIVES AND APPROACHES
184	TON	DETOUR AT CLARK HATCH BROOK
143	TON	DETOUR AT DARIUS JAMES BROOK
7	TON	TURNOUT (STA 404+50 - 405+30 RT)
190	TON	ROUNDING
16700	TON	TOTAL
		TEMPORARY EROSION CONTROL (INCLUDED IN EROSION CONTROL TOTALS)
300	CY	TRENCH EXCAVATION OF EARTH
150	CY	STONE FILL, TYPE I
4300	SY	GEOTEXTILE FOR SILT FENCE
250	LB	SEED-WINTER RYE
4	TON	HAY MULCH
3300	EA	HAY BALES
500	SY	EROSION MATTING

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS -	FEET	MILES	REMARKS
TOTALS									

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - I(30)

REV. 3-31-97

dd073ql.1 1-APR-1997

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	NON-FED. PARTIC.	EROSION CONTROL	TRAINING	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
					164	164	LF	18'' CAAP .060	601.0215	
					164	164	LF	18'' PCCSP .064	601.0415	
					164	164	LF	18'' RCP CL III	601.0815	
					164	164	LF	18'' CPEP	601.0915	
					738	738	LF	18'' CAAP .060	601.0215	
					738	738	LF	18'' PCCSP .064	601.0415	
					738	738	LF	18'' CPEP	601.0915	
					78	78	LF	24'' CSP .064	601.0025	
					78	78	LF	24'' CPEP	601.0920	
					694	694	LF	24'' CAAP .060	601.0225	
					694	694	LF	24'' PCCSP .064	601.0425	
					694	694	LF	24'' CPEP	601.0920	
					96	96	LF	24'' CAAP .060	601.0225	
					96	96	LF	24'' PCCSP .064	601.0425	
					96	96	LF	24'' RCP CL III	601.0825	
					96	96	LF	24'' CPEP	601.0920	
					576	576	LF	24'' RCP CL III	601.0825	
					576	576	LF	24'' CPEP	601.0920	
					184	184	LF	30'' CAAP .075	601.0236	
					184	184	LF	30'' PCCSP .079	601.0436	
					184	184	LF	30'' CPEP	601.0925	
					68	68	LF	30'' RCP CL III	601.0835	
					68	68	LF	30'' CPEP	601.0925	
					86	86	LF	42'' CAAP .105	601.0252	
					86	86	LF	42'' PCCSP .109	601.0452	
					132	132	LF	48'' CAAP .105	601.0257	
					132	132	LF	48'' PCCSP .109	601.0457	
					4	4	EA	12'' CSP .064 ELBOW	601.5005	
					4	4	EA	12'' CAAP .060 ELBOW	601.5205	
					4	4	EA	12'' CPEP ELBOW	601.5802	
					4	4	EA	18'' CAAP .060 ELBOW	601.5215	
					4	4	EA	18'' PCCSP .064 ELBOW	601.5415	
					4	4	EA	18'' CPEP ELBOW	601.5814	
					5	5	EA	18'' CSPES .064	601.6015	
					5	5	EA	18'' CAAPES .060	601.6215	
					5	5	EA	18'' CPEPES	601.7015	
					1	1	EA	18'' CSPES .064	601.6015	
					1	1	EA	18'' CPEPES	601.7015	
					4	4	EA	24'' CSPES .064	601.6025	
					4	4	EA	24'' CAAPES .060	601.6225	
					4	4	EA	24'' CPEPES	601.7020	
								** END OPTION ITEMS **		
					2	2	EA	PRCCDI W/CAST IRON GRATE	604.30	-
					17	17	EA	CAST IRON GRATE W/FRAME TYPE A	604.45	-
					6	6	EA	CAST IRON GRATE W/FRAME TYPE B	604.46	-
					1	1	EA	CAST IRON GRATE W/FRAME TYPE D	604.51	-
					11500	11500	LF	6'' UNDERDRAIN	605.10	28
					700	700	LF	6'' UNDERDRAIN CARRIER PIPE	605.20	58
					32	32	EA	UNDERDRAIN FLUSHING BASIN	605.95	-
					170	170	HR	ROADWAY PATROL MAINTENANCE	607.10	EST.
					1	1	HR	BULLDOZER RENTAL, TYPE I (NOT A BID ITEM)	608.10	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS -	FEET	MILES	REMARKS
TOTALS									

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - 1(30)

REV. 3-31-97 dd073q2.i 1-APR-1997

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	NON-FED. PARTIC.	EROSION CONTROL	TRAINING	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
					1	1	HR	BULLDOZER RENTAL, TYPE II (NABI)	608.11	
					1	1	HR	ALL PURP. EXCAVATOR RENTAL, TYPE I(NABI)	608.25	
					1	1	HR	ALL PURP. EXCAVATOR RENTAL, TYPE II(NABI)	608.26	
					1	1	HR	TRUCK RENTAL (NABI)	608.37	
					1	1	HR	LOADER RENTAL TYPE I (NABI)	608.40	
					3000	3000	M. GAL	DUST CONTROL W/WATER	609.10	EST.
					10	10	TON	DUST AND ICE CONTROL W/CALC. CHLORIDE	609.15	EST.
		850				850	CY	STONE FILL, TYPE I	613.10	45
				360	590	950	CY	STONE FILL, TYPE II	613.11	13
				370		370	CY	STONE FILL, TYPE III	613.12	-
				900	100	1000	CY	STONE FILL, TYPE IV	613.13	-
					700	700	LF	GRANITE SLOPE EDGING	616.20	-
					625	625	LF	TREATED TIMBER CURB	616.35	-
					10	10	EA	RELOCATE MAILBOXES, SINGLE SUPPORT	617.10	-
					55	55	EA	BOUNDARY MARKERS	619.10	2
					95	95	EA	YEILDING MARKER POSTS	619.17	-
					20	20	EA	REMOVING AND RESETTING PROP. MARKER	619.20	EST.
					200	200	LF	CHAIN-LINK FENCE, 4 FEET	620.11	-
					2	2	EA	BRACING ASSEM. FOR CHAIN-LINK FENCE, 4'	620.20	-
					790	790	LF	REMOVING AND RESETTING FENCE	620.50	-
					150	150	LF	PLANK RAIL	621.15	-
					5100	5100	LF	STEEL BEAM GUARD RAIL	621.20	-
					20	20	EA	MODIFIED ECCENTRIC LOADER TERMINAL	621.52	-
					3	3	EA	ENERGY ABSORPTION ATTENUATOR	621.57	-
					1	1	EA	ANCHOR FOR STEEL BEAM GUARD RAIL	621.60	-
					162.5	162.5	LF	REMOVE AND RESET GUARD RAIL	621.75	-
					3416.5	3416.5	LF	REMOVAL AND DISPOSAL OF GUARD RAIL	621.80	-
					1000	1000	LF	TEMPORARY TRAFFIC BARRIER	621.90	EST.
					220	220	LF	SLEEVES FOR UTILITIES	625.10	-
					60	60	LF	SEAMLESS COPPER WATER TUBE - 3/ 4''	629.23	-
					90	90	LF	SEAMLESS COPPER WATER TUBE - 1''	629.23	-
					2	2	EA	EXTENSION SERVICE BOX & CURB STOP	629.25	EST.
					170	170	LF	PLASTIC WATER PIPE, FLEXIBLE -3/ 4''	629.32	-
					1400	1400	HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.
					12100	12100	HR	FLAGGERS	630.15	EST.
					1	1	LS	FIELD OFFICE - ENGINEERS	631.10	-
					1	1	LS	TESTING EQUIPMENT - CONCRETE	631.16	-

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

STATIONS		PAVEMENT WIDTHS			EQUATIONS		FEET	MILES	REMARKS
FROM	TO				+	-			
TOTALS									

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - 1(30)

REV. 3-31-97

dd073q3.1 1-APR-1997

SHEET 8 OF 152 SHEETS

QUANTITY SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	NON-FED. PARTIC.	EROSION CONTROL	TRAINING	BRIDGE	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
					1	1	LS	TESTING EQUIPMENT - BITUMINOUS	631.17	-
					1	1	LS	FIELD OFFICE - TELEPHONE (NABI)	631.25	-
			2600			2600	HR	EMPLOYEE TRAINEESHIP	634.10	EST.
					1	1	LS	MOBILIZATION	635.10	
					1	1	LS	TRAFFIC CONTROL	641.10	
					4	4	EA	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-
					24000	24000	LF	DURABLE 4'' WHITE LINE	646.40	265
					24000	24000	LF	DURABLE 4'' YELLOW LINE	646.41	350
					75	75	LF	DURABLE 24'' STOP BAR	646.46	5
					8	8	EA	DURABLE LETTER OR SYMBOL	646.50	-
					47000	47000	LF	TEMPORARY 4'' WHITE LINE	646.60	748
					47000	47000	LF	TEMPORARY 4'' YELLOW LINE	646.61	680
					75	75	LF	TEMPORARY 24'' STOP BAR	646.66	5
					300	300	EA	LINE STRIPING TARGETS	646.73	5
					2000	2000	SY	GEOTEXTILE FOR ROADBED SUBGR. SEPARATOR	649.11	EST.
				1660		1660	SY	GEOTEXTILE UNDER STONE FILL	649.31	-
		4300				4300	SY	GEOTEXTILE FOR SILT FENCE	649.51	EST.
		1560				1560	LB	SEED	651.15	-
		250				250	LB	SEED-WINTER RYE	651.17	-
		13000				13000	LB	FERTILIZER	651.18	-
		52				52	TON	AGRICULTURAL LIMESTONE	651.20	-
		56				56	TON	HAY MULCH	651.25	-
		3300				3300	EA	HAY BALES FOR EROSION CONTROL	651.26	EST.
					2400	2400	CY	TOPSOIL	651.35	-
				300	3200	3500	SY	GRUBBING MATERIAL	651.40	-
		6150				6150	SY	EROSION MATTING	654.10	4
					10	10	EA	EVERGREEN TREES (RED PINE, PINUS RESINOSA), B&B, 10' HEIGHT	656.20	-
					2	2	EA	DECIDUOUS TREES (FLOWERING CRABAPPLE, MALUS SPP. - HARVEST GOLD CRABAPPLE), 1''- 2'' CAL, 10' HEIGHT	656.30	-
					2	2	EA	TRANSPLANTING SHRUBS	656.50	-
					130	130	SF	TRAFFIC SIGNS, TYPE A	675.20	2.805
								** BEGIN OPTION ITEMS **		
					1050	1050	LB	FLANGED CHANNEL SIGN POST	675.30	18
					1050	1050	LB	SQUARE TUBE STEEL POSTS AND ANCHORS	675.34	18
								** END OPTION ITEMS **		
					23	23	EA	REMOVING SIGNS	675.50	-
					4	4	EA	ERECTING SALVAGED SIGNS	675.60	-
	17					17	SF	TRAVEL INFORMATION SIGNS (MOD.)	680.20	.4

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS			EQUATIONS +	EQUATIONS -	FEET	MILES	REMARKS
TOTALS									

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - 1(30)

dd073q4.i 12-MAR-1997
SHEET 9 OF 152 SHEETS

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP	SEAMLESS COPPER WATER TUBE FT	PIPE ELBOW NO-DEG	ES EA	CB	PRCD	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV	CRM	TR EXCAV EARTH CY	TR EXCAV ROCK CY	COMM EXC CY	UNC CHAN EXC CY	STRUC EXCAV CY	GRAN BKF STRUC CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	PLASTIC WATER PIPE LF	SLEEVE FOR UTIL. LF	REMARKS
374+00		CL								18	50	.064	.060			X						3.5	1.9	158	B		38								1	I	1	1				
375+91.9		CL	80-16 LT							18	84	.064	.060			X			1								56								1	I	1	1			REMOVE EXISTING 12'' RCP
376+00	377+50	LT-LT																									44								44	I					STONE FILL TYPE I
377+50	377+80	LT-LT																															13								EROSION MATTING
378+11		LT								15	58			III	.064	X																										DRIVE CULVERT, REMOVE EXISTING 12'' RCP
378+40	379+50	LT-LT																															49								EROSION MATTING
381+85	382+75	RT-LT																									19	55											170	90	3/4'' FLEXIBLE PLASTIC WATER PIPE W/ 6'' SLEEVE FOR UTIL.
381+99		RT								15	50			III	.064	X																										DRIVE CULVERT
382+00	384+00	LT																															89								EROSION MATTING
382+25	384+00	RT-RT																															78								EROSION MATTING
384+00	387+00	LT-LT																									89								89	I					STONE FILL TYPE I
386+08.2		CL	89-13 LT							18	114	.064	.060			X			1								42								2	II	1	1			REMOVE EXIST 18'' RCP
388+00		LT-RT	84-00 LT	NEW 84'' X 120' CAAPP SEE SHEET 77 OF 153 FOR SECTIONS AND SHEET 76 OF 153 FOR DETAILS AND QUANTITIES																																						
388+25		LT-RT	78-43 RT	SEE SHEET 77 OF 153 FOR SECTIONS AND SHEET 76 OF 153 FOR DETAILS AND QUANTITIES																																					REMOVE EXISTING BOX CULVERT
388+75	391+00	RT-RT																															100								EROSION MATTING
388+75	391+00	LT-LT																															100								EROSION MATTING
392+80	393+50	RT-LT								18	96			III		X						3.5	1.9	158	A		51															
393+50	394+35	LT								18	84			III		X						4.0	2.1	193	A		58															
394+35	397+00	LT-LT								24	264			III		X						6.5	3.2	278	A		231															
394+50		LT																									10														REMOVE EXIST 12'' GMP
395+50	397+00	LT-LT																															80								EROSION MATTING
395+50	397+30	RT-RT																															80								EROSION MATTING
396+00		RT								15	30			III	.064	X																										DRIVE CULVERT
397+00		RT-LT								18	68			III		X						4.0	2.1	193	A		39											1	1			
397+00	399+50	LT-LT								24	248			III		X						5.0	2.6	231	A		180															
397+40	399+50	LT-LT																												65					65	I					STONE FILL TYPE I DITCH LININGS
397+30	399+50	RT-RT																												65					65	I					STONE FILL TYPE I DITCH LINING
399+50		LT-RT								30	68			III		X						5.5	3.6	288	B		91											1	1			4' X 6' DI AT INLET
399+50	400+00	RT-RT								30	78	.079	.075			X						10.0	6.7	471	B		218								2	II		1			4' X 6' DI AT INLET
399+50	401+50	LT-LT																															89								EROSION MATTING DITCH LINING
399+50	400+75	RT-RT																															56								EROSION MATTING
401+65		LT								15	62			III	.064	X																										DRIVE CULVERT
402+86.2		LT-RT	72-04' RT							24	84	.064	.060			X			1								47								1	I	1	1			REMOVE EXISTING 18'' RCP
				TOTALS						15	200			III	.064	X						24.1	1970	5-A			1213	55	130					734	266	I	6	7	170	90		
				SHEET 1 OF 4						18	248	.064	.060			X			2						3-B										4	II						
										18	248			III		X																										
		TOTALS								24	512			III		X																										
										24	84	.064	.060			X			1																								
										30	68			III		X																										
										30	78	.079	.075			X																										

GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT MELT	END TREATMENT ANCHOR
373+87.5	377+00		312.5	2	
TH 61					
3+50	388+64		737.5	1	1
TH 13					
1+12.5	389+50.5	287.5		2	
400+02.5	403+15		312.5	2	
417+33.5	418+46		112.5	2	
418+13.5	418+63.5	50		2	
422+37.5	431+00		862.5	2	
433+37.5	442+00		862.5	2	
446+77.5	458+52.5		1175	2	
482+65	486+52.5		387.5	2	
489+50	489+87.5			1	
		337.5	4762.5		
TOTALS =		5100		20	1
TOTALS					

UNDERDRAIN

STA.	STA.	TYPE	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB	STN FILL	MKR PST
377+00	378+00	C	LT	6	100	12					
377+00	379+45	U	RT	6	246	82			1		1
378+00	381+50	U	LT	6	350	53	127		1		1
379+50	383+50	U	RT	6	400	324			1		1
381+55	385+00	U	LT	6	346	70	135		1		1
383+50	384+00	C	RT-RT	6	58	6			1	1	2
385+00	385+50	C	LT	6	50	6					
389+00	393+50	U	LT	6	450	153			1		1
393+50	397+00	U	LT	6	350	134			1		1
398+00	399+50	U	LT	6	150	53			1		1
399+60	401+50	U	LT	6	190	66			1		1
401+50	402+75	C	LT	6	126	18					
402+75	403+00	C	LT	6	26	4					
403+00	404+50	U	LT	6	150	51			1		1
404+56	406+90	U	LT	6	234	59			1		1
407+10	411+50	U	LT	6	440	149			1		1
415+50	418+00	U	RT	6	250	76			1		1
418+00	418+00	C	RT	6	16	2					1
422+50	423+50	C	LT	6	100	25					
423+50	425+95	U	LT	6	246	108			1		1
426+00	428+00	U	LT	6	200	67			1		1
431+00	433+50	U	RT	6	250	86			1		1
433+50	433+50	C	RT	6	28	3				1	1
435+00	437+00	U	LT	6	200	52	37		1		1
437+00	440+50	U	LT	6	350	100	40		1		1
441+23	443+97	U	LT	6	274	44	84		1		1
442+50	445+00	U	RT	6	250	123	42		1		1
444+00	448+00	U	LT	6	400	92	151		1		1
TOTALS		U				5726	2018	616		21	2 24
		C				504					

PROJECT NAME: GROTON - RYEGATE
PROJECT NUMBER: F 026 - 1(30)

dd073dl.1 12-MAR-1997

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP	SEAMLESS COPPER WATER TUBE FT	PIPE ELBOW NO-DEG	ES EA	CB	PROJ	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV	CRM CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	COMM EXC CY	UNC CHAN EXC CY	STRUC EXCAV CY	GRAN BKF STRUC CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	PLASTIC WATER PIPE LF	SLEEVE FOR UTIL. LF	REMARKS
403+45	404+50	LT-LT																																	47								EROSION MATTING DITCH LINING
404+42.3		CL	63-24' LT							18	96			III		X						4.0	2.1	193	A			103	4									1	1			REMOVE EXISTING 15'' RCP AND DI RIGHT
404+42.3		RT								24	78				.064	X						8.5	4.1	354	A			68								1	I		1			REMOVE 15'' CMP
405+20		RT-LT															90											18													70	1'' SEAMLESS COPPER WATER TUBE W/ 6'' SLEEVE FOR UTIL.
406+50	409+25	LT-LT																																	122								EROSION MATTING DITCH LINING
407+00		LT-RT	74-00' LT							24	88	.064	.060			X						4.0	2.1	193	B			55								1	I	1	1			REMOVE EXIST 18'' RCP
411+75	416+25	LT-LT																																	200								EROSION MATTING DITCH LINING
414+20.6		CL	88-39' RT							18	90	.064	.060			X			1									34								1.5	I	1	1			REMOVE EXIST 18'' RCP
415+50	418+00	RT-RT																												74						74	I					TYPE I STONE FILL
416+25	417+00	LT-LT																												22						22	I					TYPE I STONE FILL
417+91		LT																										3														REMOVE 12'' GMP
418+20		LT-RT	83-30' LT						NEW	14'-0''		X 8'-7'' X 90' CAAPPA SEE SHEET 79 OF 153																															
418+36		LT															SEE SHEET 79 OF 153																										REMOVE EXIST 12'-10'' X 8'-4'' X 68' CGMPPA & CRADLE H.W.
422+50		RT								12	30		.060		.064	X		2-15		1								10								.5	I		1			
422+56.44		LT-RT	79-08' RT							24	124	.064	.060			X			1									31								3	I	1	1			REMOVE EXIST 18'' GMP
423+50	428+50	LT-LT																												148						148	I					STONE FILL TYPE I DITCH LINING
426+00		LT-RT								18	86	.064	.060	III		X						4.0	2.1	193	B			63								1	I	1	1			
428+50	429+50	LT-LT																																	44								EROSION MATTING DITCH LINING
429+78.7		CL	69-33 LT							24	108	.064	.060			X			1									113								3	I	1	1			REMOVE EXIST. 18'' RCP
431+50	433+00	RT-RT																																	67								EROSION MATTING
433+02.77		LT-RT	65-51 RT							24	108	.064	.060			X			1									59								1	I	1	1			REMOVE EXIST 18'' RCP
435+50		RT								12	26		.060		.064	X		1-15		1								2								.5	I		1			
437+05.5		LT-RT	87-17 RT							30	106	.079	.075			X		1-25				4.5	3.1	252	A			133								4	II	1	1			REMOVE EXIST. 18'' RCP
437+50	442+75	LT-LT																																	233								EROSION MATTING
441+05		LT																																									EXISTING 18'' DRIVE CULVERT - RETAIN
441+27.9		LT-RT	74-07 RT							24	82	.064	.060			X						5.0	2.6	231	A			78								8	I	1	1			REMOVE EXIST 24'' RCP
																																				3	II					
441+98		LT								15	74			III	.064	X																											DRIVE CULVERT
445+30	448+50	LT-LT																																	142								EROSION MATTING
445+87.5		RT	80 RT																									7	2													REMOVE EXIST 12'' RCP AND D.I.
448+00		LT-RT								18	78	.064	.060	III		X						4.0	2.1	193	B			39	7							1	I	1	1			
448+50	452+00	LT-LT																										104								104	I					STONE FILL TYPE I
				TOTALS						12	56		.060		.064	X	90	3-15		2		18.2	1609	4-A			920	13	244					855	369.5	1	10	13	70			
				SHEET 2 OF 4						15	74			III	.064	X		1-25						3-B			7	II													
										18	90	.064	.060			X			1																								
										18	96			III		X																											
										18	164	.064	.060	III		X																											
										24	510	.064	.060			X			3																								
										24	78				.064	X																											
		TOTALS								30	106	.079	.075			X																											

GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT MELT	END TREATMENT ANCHOR
TOTALS					

UNDERDRAIN

STA.	STA.	TYPE	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB	STN FILL	MKR PST
445+00	445+00	C	RT	6	30	14				1	1
452+01	454+75	U	LT	6	274	76	18		1		1
454+75	457+93	U	LT	6	318	40	96		1		1
458+00	461+50	U	LT	6	350	7	136		1		1
461+57	464+70	U	LT	6	314	101			1		1
464+80	468+50	U	LT	6	370	120			1		1
468+54	473+00	U	LT	6	446	271			1		1
468+54	473+38	U	RT	6	484	248			1		1
REV	REV										
474+40	476+48	U	RT	6	208	111			1		1
REV											
476+48		C	RT	6	22	0				1	1
REV	REV										
480+49	483+49	U	LT	6	300	121			1		1
REV											
483+55	487+00	U	LT	6	346	173			1		1
487+00	487+40	C	LT	6	46	4				1	1
487+15	489+50	U	RT	6	236	96			1		1
489+50	489+50	C	RT	6	40	8				1	1
SHEET #2 SUB TOTAL		U			3646	1390	250		11	4	15
		C			138						
SHEET #1 SUB TOTAL		U			5726	2018	616		21	2	24
		C			504						
EST. UNDERDRAIN					2100	1000	300				
GRAND TOTALS		U			11472	4408	1166		32	6	39
TOTALS		C			642						

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - 1(30)

dd073d2.1 12-MAR-1997
SHEET 11 OF 152 SHEETS

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP	SEAMLESS COPPER WATER TUBE FT	PIPE ELBOW NO-DEG	ES EA	CB	PRCD	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV	CRM CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	COMM EXC CY	UNC CHAN EXC CY	STRUC EXCAV CY	GRAN BKF STRUC CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	PLASTIC WATER PIPE LF	SLEEVE FOR UTIL. LF	REMARKS
450+68.9		LT-RT	87-28 RT							48	132	.109	.105									3.4	21				196	28							10	II	1	1			REMOVE EXIST 36" BOX CULVERT
																																		100	IV					
452+00	453+50	LT-LT																																67							EROSION MATTING
453+75	458+25	RT-RT																																2528	508	II					EROSION MATTING & STONE FILL FOR SLOPE PROTECTION
454+75.3		LT-RT	85-10 RT							18	94	.064	.060			X		1-35				3.5	1.9	158	A			72	10							2	I	1	1			REMOVE EXIST 18'' RCP AND DI
455+25	459+25	LT																1-25																178							EROSION MATTING
458+00		LT-RT								18	104	.064	.060			X		2-35				4.0	2.1	193	A			45	20							1	I	1	1			
462+00	467+50	LT-LT																																244							EROSION MATTING
462+11		RT	87-07 LT																									33													REMOVE 18'' RCP
464+70	467+02	LT								18	232			III		X						4.0	2.1	193	A			117														
REV																																										
464+72.9		LT-RT	84-41 RT																									34													REMOVE EXIST 18'' RCP
467+02	468+50	LT								18	148			III		X						4.0	2.1	193	A			75														
467+25		RT								15	38			III	.064	X																									DRIVE PIPE
468+50		LT-RT								24	64			III		X						4.5	2.3	200	A			40										1				
468+50		RT								24	100	.064	.060			X						5.5	2.8	239	A			162								6	II		1			
469+16		LT																																							REMOVE EXISTING 18'' GMP
471+00		LT								15	46			III	.064	X																									DRIVE PIPE
REV																																									
473+09		LT-RT	71 RT							18	50			III		X		•				4.0	2.1	193	A			29										1	1			REMOVE EXIST 18'' RCP
REV																																									
473+09		LT-RT	71 RT							24	96	.064	.060	III		X						8.5	4.1	354	A			61								4	I		1			
473+18	473+85	RT-RT								18	68			III		X						4.5	2.3	200	D			48											1			
474+60		LT-RT																60										22												60	3/ 4'' SEAMLESS COPPER WATER TUBE W/6''
REV																																									SLEEVE FOR UTILITIES
476+39.8		LT-RT	83-20 RT							42	86	.109	.105									3.0	21				101								33	II	1	1			REMOVE EXIST BOX CULVERT
478+50		LT								15	72			III	.064	X																									DRIVE PIPE
480+00		RT								15	44			III	.064	X																									DRIVE PIPE
480+50	481+50	RT-RT																																78							EROSION MATTING
481+50	486+30	LT-LT																																213							EROSION MATTING
483+75	485+25	RT-RT																																689							EROSION MATTING FOR SLOPE PROTECTION
486+50		LT								15	56			III	.064	X																									DRIVE PIPE
487+26			67-57 LT							18	96	.064	.060			X			1									33								1	I	1	1			REMOVE EXIST 18'' GMP
489+00		LT								15	40			III	.064	X																									DRIVE PIPE
489+50	490+85	LT-LT																																60							EROSION MATTING
491+32		LT								15	48			III	.064	X																									DRIVE PIPE
				TOTAL$						15	344			III	.064	X	60	1-25				28.2	1965	8-A			1068	58						4057	8	I	7	9		60	
				SHEET	3	OF 4				18	294	.064	.060			X		3-35	1					1-D											557	II					
										18	498			III		X																				100	IV					
										24	96	.064	.060	III		X																									
										24	100	.064	.060			X																									
										24	64			III		X																									
										42	86	.109	.105																													
										48	132	.109	.105																													
		TOTALS																																							

GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT MELT	END TREATMENT ANCHOR
TOTALS					

UNDERDRAIN

STA.	STA.	TYPE	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB	STN FILL	MKR PST
TOTALS											

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - 1(30)

dd073d3.1 12-MAR-1997
SHEET 12 OF 152 SHEETS

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TYPE	DITCH		PIPE ARCH			PIPE		ALLOWABLE OPTIONS					SEAMLESS COPPER WATER TUBE	PIPE ELBOW	E S	CB	P R C D	DEPTH DI	CONC CL B	REIN STEEL	DI GRATE	CHAN ELEV	CRM	TR EXCAV		COMM EXC	UNC CHAN EXC	STRUC EXCAV	GRAN BKF STRUC	GRAN BORR	EROS MATT	STONE FILL		MRKR POSTS		PLASTIC WATER PIPE	SLEEVE FOR UTIL.	REMARKS
				IN/OUT	IN	OUT	S	R	L	D	L	PCCSP	CAAP	RCP	CSP	CPEP												EARTH	ROCK													
							IN	IN	FT	IN	FT	TH	TH	CL	TH		FT	NO-DEG	EA				CY	LBS	TYPE		CY	CY	CY	CY	CY	CY	CY	CY	CY	SY	CY	TYPE	LT	RT	LF	LF	
TH #61	3+50	RT-LT								18	44				.064	X			1								13								1	I	1	1			
TH #13	1+00	LT-RT								18	42	.064	.060			X			1								11								1	I	1	1			
TH #5	0+38.23	LT-RT	79-21 LT							18	64	.064	.060			X											13														
TH #5	0+55	LT-RT	82 LT																								10														REMOVE 18'' RCP
TH #5	0+60	RT								15	26			III	.064	X																			3.5	I					REMOVE 12'' CGMP
				TOTALS						15	26			III	.064	X											47								5.5	I	2	2			
				SHEET	4	OF 4				18	106	.064	.060			X			1																						
										18	44				.064	X			1																						
			TOTALS							12	56		.060		.064	X	150	3-15		2		70.5	5544	17-A			3248	126	374					5646	649	I	25	31	170	220	
			SHEETS 1	THRU 4						15	644			III	.064	X		2-25						6-B											568	II					
										18	44				.064	X		3-35	1					1-D											100	IV					
										18	842			III		X																								
										18	164	.064	.060	III		X																								
										18	738	.064	.060			X			5																						
										24	78				.064	X																									
										24	694	.064	.060			X		°	4																						
										24	96	.064	.060	III		X																								
										24	576			III		X																								
										30	68			III		X																								
										30	184	.079	.075			X																								
										42	86	.109	.105																											
										48	132	.109	.105																											
			TOTALS																																					

GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT	
				MELT	ANCHOR
TOTALS					

UNDERDRAIN

STA.	STA.	TYPE	POS.	D	L	TRENCH		GRAN BKF	FB	STN FILL	MKR PST
						E	R				
TOTALS											

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F 026 - 1(30)

dd073d4.i 12-MAR-1997

EARTHWORKS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

V. C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
		373					0				0			
												82		
		+50	803.20				0				89		C	661
						50		106				110	F	363
		374	804.85				115				30		F FAC	1.15
						50		273				72	EX C	244
		+50	806.50				180				48			
						50		282				99		
		375	808.15				125				59			
						50		214				147		
		+50	809.80				107				100			
						50		99				244		
		376	811.45				0				164			
						50		0				247		
X		+50	813.10	813.10	0.00		0				103			
	+3.3013%					50		66				127		
		377	814.75	814.66	-0.09		72				34		C	4397
						50		254				31	R	507
		+50	816.41	816.01	-0.40		202				0		R FAC	1.30
						50		349				0	F	816
		378	818.06	817.18	-0.88		175						F FAC	1.15
						50		343					EX C	3710
		+50	819.71	818.14	-1.57		195							
						50		473						
		379	821.36	818.92	-2.44		316		0		0			
						50		956		121		0		
		+50	823.01	819.48	-3.53		716		131		11			
						50		1643		386		20		
		380	824.66	819.87	-4.79		1058		286		11			
						50		2165		832		20		
		+50	826.31	820.06	-6.25		1280		613		11			
						50		2415		1040		20		
900' VC		X 381	827.96	820.05	-7.91		1328		510		11			
						50		2753		1081		20		
		+50	826.10	819.85	-6.25		1645		658		11			
						50		2828		1048		20		
		382	824.23	819.45	-4.78		1409		474		11		C	16715
						50		2170		692		20	R	5586
		+50	822.37	818.85	-3.52		935		273		11		R FAC	1.30
						50		1512		440		20	F	1727
		383	820.50	818.06	-2.44		698		202		11		F FAC	1.15
						50		1150		320		41	EX C	17494
		+50	818.64	817.08	-1.56		544		144		33			
						50		894		133		139		
		384	816.78	815.90	-0.88		422		0		117			
						50		594				493		
		+50	814.91	814.52	-0.39		219				415			
						50		234				934		
		385	813.05	812.95	-0.10		34				594			
	-3.7280%					50		37				1308		
X		+50	811.18	811.18	0.00		6				819			
						50		6				1544		
		386	809.32				0				848			
						50						1392		
		+50	807.46								655			
						50						1052		
		387	805.59	805.59	0.00						481			
						50						1222	C	3215
X		+50	803.73	803.84	+0.11						839		F	9015
						50						1374	F FAC	1.15
		388	801.86	802.32	+0.46		0				645		EX F	7152
300' VC						50		2				860		
X		+50	800.00	801.02	+1.02		2				284			
						50		429				263		
		389	799.50	799.96	+0.46		461				0			
						50		1185						
		+50	799.00	799.11	+0.11		819							
						50		1556						
X		390	798.50	798.50	0.00		862							
	-1.0000%					50		1208						
		+50	798.00				443							
						50		736						
		391	797.50				352							
						50		625						
		+50	797.00				323							
					CARRIED FORWARD			2569						
					COLUMN FOOTINGS			27557		6093		11921		

V. C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
		391+50	797.00				323							
						50		506						
		392	796.50				223							
						50		361						
		+50	796.00				167							
						50		296					C	5482
		393	795.50				153						F	0
						50		301					F FAC	1.15
		+50	795.00				148						EX C	5482
						50		371						
		394	794.50				253							
						50		538						
		+50	794.00				328							
						50		540						
	-1.0000%	395	793.50				255							
						50		434						
X		+50	793.00	793.00	0.00		214							
						50		350						
		396	792.50	792.40	-0.10		164							
						50		375						
		+50	792.00	791.58	-0.42		241							
						50		469						
X		397	791.50	790.56	-0.94		265							
						50		597					C	7129
		+50	789.75	789.33	-0.42		380						F	98
						50		648					F FAC	1.15
		398	788.00	787.90	-0.10		320						EX C	7016
						50		794						
		+50	786.25	786.25	0.00		538							
						50		1208						
		399	784.50	784.61	+0.11		767							
						50		1423						
		+50	782.75	783.20	+0.45		770				0			
						50		831				98		
		400	781.00	782.02	+1.02		127				106			
						50		471				98		
		+50	779.25	781.07	+1.82		382				0			
						50		480				252		
		401	777.50	780.34	+2.84		136				272			
						50		177				1113		
	600' VC	X +50	775.75	779.84	+4.09		55				930			
						50		90				1260		
		402	776.73	779.56	+2.83		42				431			
						50		60				456	C	2183
		+50	777.70	779.52	+1.82		23				61		F	4008
						50		68				216	F FAC	1.15
		403	778.68	779.70	+1.02		50				172		EX F	2426
						50		156				386		
		+50	779.65	780.10	+0.45		119				245			
						50		218				227		
		404	780.63	780.74	+0.11		116				0			
						50		223						
X		+50	781.60	781.60	0.00		125							
						50		240						
		405	782.58				134							
						50		252						
		+50	783.55				138							
						50		264						
	+1.9500%	406	784.53				147				0			
						50		256				21		
		+50	785.50				130				23			
						50		287				53		
		407	786.48				180				34			
						50		303				56	C	3426
		+50	787.45				147				27		F	1228
						50		264				149	F FAC	1.15
		408	788.43	788.43	0.00		138				134		EX C	2014
						50		256				271		
		+50	789.40	789.30	-0.10		138				159			
						50		313				315		
		409	790.38	789.99	-0.39		200				181			
						50		444				265		
		+50	791.35	790.47	-0.88		280				106			
						50		787				98		
		410	792.33	790.77	-1.56		570				0			
					CARRIED FORWARD			15651				5334		
					COLUMN FOOTINGS									

V. C.	% GRADE	STATION	ELEVATION ON TANGENT	ELEVATION ON CURVES	CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
		410	792.33	790.77	-1.56		570					0		
						50		1009						
		+50	793.30	790.87	-2.43		520							
						50		811						
		411	794.28	790.77	-3.51		356					0		
						50		596						
		X +50	795.25	790.48	-4.77		288					25		
						50		498						
		412	793.50	790.00	-3.50		250					8		
						50		551						
		+50	791.75	789.32	-2.43		345					0		
						50		641						
		413	790.00	788.44	-1.56		347					34		
						50		519						
		+50	788.25	787.37	-0.88		214					94		
						50		240						
		414	786.50	786.11	-0.39		45					131		
						50		86						
		+50	784.75	784.65	-0.10		48					53		
						50		117						
		X 415	783.00	783.00	0.00		78					10		
						50		286						
		+50	781.25				231					0		
						50		497						
		416	779.50				306							
						50		581						
		+50	777.75				322							
						50		620						
		417	776.00				348							
						50		675					C	3188
		+50	774.25	774.25	0.00		381						F	553
						50		441					F FAC	1.15
		418	772.50	772.61	+0.11		95					0	EX C	2552
						50		88						
		+50	770.75	771.18	+0.43		0					86		
						50		0						
		419	769.00	769.96	+0.96							48		
						50								
		+50	767.25	768.95	+1.70							86		
						50								
		420	765.50	768.16	+2.66							147		
						50								
		+50	763.75	767.58	+3.83							322		
						50								
		421	762.00	767.21	+5.21							450		
						50								
		X +50	760.25	767.05	+6.80							597		
						50								
		422	761.90	767.11	+5.21							561		
						50		0						
		+50	763.55	767.38	+3.83		0					490		
						50		13						
		423	765.20	767.86	+2.66		14					422		
						50		52						
		+50	766.85	768.55	+1.70		42					450		
						50		373						
		424	768.50	769.46	+0.96		361					463		
						50		1039						
		+50	770.15	770.58	+0.43		761					269		
						50		1362						
		425	771.80	771.91	+0.11		710					122		
						50		1472						
		X +50	773.45	773.45	0.00		1080					0		
						50		2166						
		426	775.10	775.01	-0.09		1459							
						50		2640						
		+50	776.75	776.39	-0.36		1392							
						50		2171						
		427	778.40	777.59	-0.81		953							
						50		1294						
		+50	780.05	778.62	-1.43		445					0		
					CARRIED FORWARD			9743						
					COLUMN FOOTINGS			20838						

PROJECT NAME GROTON - RYGATE
PROJECT NUMBER F 026-1(30)

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SHEET 14 OF 152 SHEETS

EARTHWORKS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	GRADES CORR V. C.	GRADES DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
600' VC		427+50	780.05	778.62	-1.43		445				0			
						50		545				29		
		428	781.70	779.46	-2.24		144				31			
						50		217				159		
		+50	783.35	780.13	-3.22		90				141		C	10818
						50		139				323	F	1613
		429	782.85	780.61	-2.24		60				208		F FAC	1.15
						50		94				473	EX C	8963
		+50	782.35	780.92	-1.43		41				303			
						50		80				516		
		430	781.85	781.04	-0.81		45				254			
						50		98				349		
		+50	781.35	780.99	-0.36		61				123			
						50		146				114		
		431	780.85	780.76	-0.09		97				0			
						50		395				0		
	-1.0000%	+50	780.35	780.35	0.00		330							
						50		586						
		432	779.85				303						C	4909
						50		497					R	219
		+50	779.35				234						R FAC	1.30
						50		392					F	985
		433	778.85	778.85	0.00		189				0		F FAC	1.15
						50		259				66	EX C	3885
		+50	778.35	778.40	+0.05		91				71			
						50		530				130		
		434	777.85	778.07	+0.22		481				69			
						50		988				145		
		+50	777.35	777.84	+0.49		586		0		88			
						50		1018		219		181		
500' VC		435	776.85	777.72	+0.87		513		237		107			
						50		904		416		216		
		+50	776.35	777.71	+1.36		463		212		126			
						50		677		239		268		
		436	776.94	777.81	+0.87		268		46		163			
						50		285		43		387		
		+50	777.53	778.02	+0.49		40		0		255			
						50		75		0		627		
		437	778.12	778.33	+0.21		41				422		C	11015
						50		133				647	R	2670
		+50	778.70	778.76	+0.06		103				277		R FAC	1.30
						50		489				331	F	2673
		438	779.29	779.29	0.00		425				80		F FAC	1.15
						50		1132				74	EX C	9263
		+50	779.88				798		0		0			
						50		1929		483		11		
		439	780.47				1285		522		12			
						50		2815		986		56		
		+50	781.06				1755		543		48			
						50		2576		503		56		
		440	781.65				1027		0		13			
						50		1578				30		
		+50	782.23				677				19			
						50		1019				36		
	+1.1767%	441	782.82				423				20			
						50		759				57		
		+50	783.41				397				42			
						50		931				47		
		442	784.00				609		0		9		C	14468
						50		1108		199		19	R	6248
		+50	784.59	784.59	0.00		588		215		11		R FAC	1.30
						50		1309		590		20	F	289
		443	785.18	785.08	-0.10		826		422		11		F FAC	1.15
						50		1657		1019		20	EX C	17228
		+50	785.76	785.38	-0.38		964		678		11			
						50		1915		1535		20		
750' VC		444	786.35	785.49	-0.86		1104		980		11			
						50		2086		1795		20		
		+50	786.94	785.40	-1.54		1149		959		11			
						50		2106		1110		20		
		445	787.53	785.12	-2.41		1126		240		11			
						50		2095		893		20		
		+50	788.12	784.65	-3.47		1137		724		11			
						50		1739		814		20		
		446	788.71	783.99	-4.72		741		155		11			
		CARRIED FORWARD						3834		1707		40		
		COLUMN FOOTINGS						35301		10844		5487		

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	GRADES CORR V. C.	GRADES DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
750' VC		446	788.71	783.99	-4.72		741		155		11			
		+25	789.00	783.58	-5.42	50		1417		175		45		
		+50	787.85	783.13	-4.72		789		34		38			
						50		1271		192		75		
		447	785.55	782.08	-3.47		584		173		43		C	9290
						50		883		212		118	R	2522
		+50	783.25	780.84	-2.41		370		56		84		R FAC	1.30
						50		584		116		252	F	3323
		448	780.95	779.41	-1.54		261		69		188		F FAC	1.15
						50		531		92		434	EX C	6717
		+50	778.65	777.78	-0.87		313		30		281			
						50		481		28		581		
	-4.6000%	449	776.35	775.97	-0.38		206		0		347			
						50		240		0		769		
		+50	774.05	773.95	-0.10		53				484			
						50		49				1009		
		450	771.75	771.75	0.00		0				606			
						50						1423		
		+50	769.45	769.58	+0.13						931			
						50						1471		
		451	767.15	767.69	+0.54		0				658			
						50		23				1116		
		+50	764.85	766.05	+1.20		25				547			
						50		262				846		
		452	762.55	764.69	+2.14		258				367			
						50		531				607		
		+50	760.25	763.60	+3.35		316				289			
						50		731				538		
		453	757.95	762.77	+4.82		475		0		270		C	4610
						49.99		838		19		577	R	728
		+49.99	758.86	762.21	+3.35		430		20		353		R FAC	1.30
													F	8723
		+50	758.86	762.21	+3.35	49.98		784		19		637	F FAC	1.15
													EX F	5061
		+99.97	759.77	761.91	+2.14		417		0		335			
600' VC		454	759.77	761.91	+2.14	49.97		732		218		680		
		+49.94	760.69	761.90	+1.21		374		236		400			
		+50	760.69	761.89	+1.20	49.97		709		472		828		
		+99.91	761.60	762.14	+0.54		392		274		495			
		455	761.60	762.14	+0.54	49.96		711		477		1014		
		+49.87	762.51	762.64	+0.13		376		242		601			
		+50	762.51	762.64	+0.13	49.95		468		233		1021		
		+99.82	763.42	763.42	0.00		130		10		503			
	+1.8250%	456	763.43	763.43	0.00	49.94		545		84		830		
		+49.76	764.33				459		81		395			
													C	11968
		+50	764.34			49.94		1399		818		646	R	7906
													R FAC	1.30
		+99.70	765.24				1054		804		303		F	4049
													F FAC	1.15
		457	765.25			49.93		1339		989		364	EX C	11225
		+49.63	766.16				394		266		91			
		457+50	766.16			49.92		770		406		94		
		+99.55	767.07				439		173		11			
		458	767.08	767.08	0.00	49.91		1050		637		20		
		+49.46	767.98	767.89	-0.09		697		516		11			
		CARRIED FORWARD						6282		3644		3989		
		COLUMN FOOTINGS						16348		5187		15995		

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	GRADES CORR V. C.	GRADES DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
600' VC		458+49.46	767.98	767.89	-0.09		697		516		11			
		458+50	767.99	767.90	-0.09	49.90		1527		1109		20		
		+99.36	768.89	768.54	-0.35		955		684		11			
		459	768.90	768.55	-0.35	49.90		1822		1424		20		
		+49.26	769.80	769.02	-0.78		1017		857		11			
		+50	769.81	769.02	-0.79	49.89		2337		1729		20		
		+99.15	770.71	769.31	-1.40		1513		1014		11			
	+1.8250%	460	770.73	769.32	-1.41	49.89		2592		1745		20		
		+49.04	771.62	769.44	-2.18		1292		875		11			
		+50	771.64	769.44	-2.20	49.87		2138		1395		20		
		+98.91	772.53	769.38	-3.15		1023		636		11			
		461	772.55	769.38	-3.17	49.87		1493		587		13		
		+48.78	771.38	769.16	-2.22		594		0		3			
		+50	771.35	769.15	-2.20	49.87		1002				21		
		+98.65	770.18	768.75	-1.43		491				20			
		462	770.15	768.74	-1.41	49.86		1176				31		
													C	11342
		+48.51	768.99	768.18	-0.81		783				14		R	3727
													R FAC	1.30
		+50	768.95	768.16	-0.79	49.85		1317				42	F	812
													F FAC	1.15
		+98.36	767.79	767.43	-0.36		644				32		EX C	12253
		463	767.75	767.40	-0.35	49.84		885				80		
		+48.20	766.59	766.50	-0.09		315				55			
		+50	766.55	766.46	-0.09	49.84		369				114		
		+98.04	765.40	765.40	0.00		85				69			
	-2.4000%	464	765.35	765.35	0.00	49.83		147				234		
		+47.87	764.20				74				185			
		+50	764.15			49.83		223				237		
		+97.70	763.01				168				72			
		465	762.95			49.82		192				116		
		+47.52	761.81				40				54			
		+50	761.75	761.75	0.00	49.82		57				84		
		+97.34	760.61	760.67	+0.06		22				37			
		466	760.55	760.62	+0.07	49.81		171				38		
		+47.15	759.42	759.67	+0.25		163				4			
		+50	759.35	759.62	+0.27	49.81		220				6		
	300' VC	+96.96	758.22	758.80	+0.58		76				3			
		CARRIED FORWARD						640				244		
		COLUMN FOOTINGS						17668		7989		1116		

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EARTHWORKS

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AGENCY OF TRANSPORTATION

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	GRADES CORR V. C.	GRADES DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
300' VC		466+96.96	758.22	758.80	+0.58		76				3			
		467	758.15	758.75	+0.60	49.80		172				3		
		+46.76	757.78	758.07	+0.29		111				0			
		+50	757.75	758.02	+0.27	49.98		299						
		+96.74	757.38	757.46	+0.08		212							
		468	757.36	757.43	+0.07	50.00		433					C	3384
													F	247
		+46.74	756.98	756.98	0.00		256						F FAC	1.15
													EX C	3100
		+50	756.96	756.96	0.00	50.00		487						
		+96.74	756.59				270							
		469	756.56			50.00		600						
		+46.74	756.19				378							
		+50	756.16			50.00		753						
		+96.74	755.79				435							
		470	755.77			50.00		758						
		+46.74	755.40				384							
		+50	755.37			50.00		781						
		+96.74	755.00				460							
	-0.7941 %	471	754.97			50.20		788						
		+46.94	754.60				391							
		+50	754.58			50.00		728						
		+96.94	754.20				395							
		472	754.18			49.80		937						
													C	7175
		+46.74	753.81				621						EX C	7175
		+50	753.78			50.00		1075						
		+96.74	753.41				540							
		473	753.39			50.00		894						
		+46.74	753.01				425							
		+50	752.99	752.99	0.00	50.00		601						
		+96.74	752.62	752.69	+0.07		224							
400' VC		474	752.49	752.67	+0.08	50.17		364						
		+46.91	752.22	752.52	+0.30		168							
		+50	752.19	752.52	+0.70	50.24		249						
		+97.15	751.82	752.52	+0.70		100				0			
		475	751.80	752.53	+0.73	50.22		194				6		
		+47.37	751.42	752.68	+1.26		109				6			
		+50	751.40	752.69	+1.29	50.22		125				80		
		+97.59	752.25	753.00	+0.75		25				80			
		CARRIED FORWARD						319				86		
		COLUMN FOOTINGS						10238				89		

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	GRADES CORR V. C.	GRADES DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
400' VC		475+97.59	752.25	753.00	+0.75		25				80			
		476	752.29	753.02	+0.73	50.21		81				87		
		+47.80	758.15	753.49	+0.34		62				14			
		+50	753.19	753.51	+0.32	50.20		293				22		
		+98.00	754.05	754.14	+0.09		253				10			
		477	754.08	754.16	+0.08	50.18		388				33		
		+48.18	754.95	754.95	0.00		164				26		C	1303
													F	1266
		+50	754.98	754.98	0.00	50.18		180				152	F FAC	1.15
													EX F	153
		+98.36	755.84				30				138			
		478	755.87			50.16		28				265		
		+48.52	756.74				0				147			
		+50	756.77			50.15		7				245		
		+98.67	757.64				8				117			
		479	757.66			50.14		7				188		
		+48.81	758.54				0				86			
		+50	758.56			50.12						188		
		+98.93	759.43				0				117			
+1.7894 %		480	759.45			50.12		34				154		
		+49.05	760.33				37				49			
		+50	760.35			50.10		109				50		
		+99.15	761.23				80				5			
		481	761.24			50.08		349				5		
		+49.23	762.12				296				0			
		+50	762.14	762.14	0.00	50.08		535						
		+99.31	763.02	762.92	-0.10		281							
		482	763.03	762.93	-0.10	50.06		596					C	7269
													F	293
		+49.37	763.91	763.51	-0.40		362						F FAC	1.15
													EX C	6932
		+50	763.93	763.52	-0.41	50.05		857						
		+99.42	764.81	763.90	-0.91		563							
500' VC		483	764.82	763.90	-0.92	50.03		1116						
		+49.45	765.71	764.09	-1.62		642							
		+50	765.72	764.09	-1.63	50.02		1127						
		+99.47	766.60	764.07	-2.53		575				0			
		484	766.61	764.06	-2.55	50.53		1231				31		
EQ.-0.52		+40.14	765.69	763.90	-1.79		740				33			
		=+40.66												
		+50	765.48	763.84	-1.62	59.34		1315				53		
		485	764.34	763.43	-0.91		457				15			
		CARRIED FORWARD						8253				1473		
		COLUMN FOOTINGS												

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	GRADES CORR V. C.	GRADES DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
		485	764.34	763.43	-0.91		457				15			
						50		687				31		
		+50	763.19	762.79	-0.40		285				18			
						50		449				30		
		486	762.05	761.95	-0.10		200				14			
						49.48		290				31		
		+49.48	760.92	760.92	0.00		116				20			
		486+50	760.91			50.52		195				19		
		487	759.77				92				0		C	4744
						50		160				78	F	283
-2.2829 %		+50	758.63				81				84		F FAC	1.15
						50		260				86	EX C	4419
		488	757.49				200				9			
						50		440				8		
		+50	756.35				275				0			
						50		489				0		
		489	755.20				253							
						50		630						
		+50	754.06				427							
						50		1144						
		490	752.92				808							
						50		1217						
		+50	751.78				506							
						50		685					C	2278
		491	750.64				234						EX C	2278
						50		376						
		+50	749.50				172							
		CARRIED FORWARD												
		COLUMN FOOTINGS					7022					283		

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
					TOWN	HIGHWAY #61								
		0+20	814.17	814.17	0.00						0			
						30						163		
		+50	812.37	812.26	-0.11						293		C	282
						50						804	F	2685
		1+00	806.37	806.37	0.00						575		F FAC	1.15
						50						856	EX F	2806
		+50	800.37								350			
						50		0				478		
		2+00	794.37				29				123			
						50		45				182		
		+50	788.37				20				74			
						50		28				103		
		3+00	782.37	782.37	0.00		10				37			
						50		109				67		
		+50	776.37	777.15	+0.78		108				35			
						50		100				32		
		4+00	773.50	773.50	0.00		0				0			
					TOWN	HIGHWAY #13								
		0+20	803.45	803.45	0.00						0			
						30						45		
		+50	802.76	803.07	+0.31		0				51			
						50		17				69	C	119
		1+00	801.60	803.86	+2.26		18				23		F	137
						50		59				22	F FAC	1.15
		+50	806.10	806.42	+0.32		46				1		EX F	39
						50		43				1		
		2+00	810.60	810.60	0.00		0				0			
						50		0						
		+50	815.10											
					TOWN	HIGHWAY #5								
		0+20	776.04	776.04	0.00		0							
						30		79					C	242
		+50	776.50	776.52	+0.02		142						EX C	242
						50		147						
		1+00	782.00	782.00	0.00		17							
						50		16						
		+50					0							
		CARRIED FORWARD												
		COLUMN FOOTINGS						643				2822		

V. C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON CURVES	CORR V. C.	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	EMBANKMENT AREA	EMBANKMENT CU. YDS.		
		CARRIED FORWARD												
		COLUMN FOOTINGS												

SUMMARY AND BALANCES

STATION TO STATION		TOTAL EXCAV EARTH & ROCK	ROCK EXCAV CUBIC YARDS	EMBANKMENT CUBIC YARDS	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL
373+00	375+00	661	0	363	244		244	
375+00	380+00	4397	507	816	3710		3954	
380+00	385+00	16715	5586	1727	17494		21448	
385+00	390+00	3215	0	9015		7152	14296	
390+00	395+00	5482	0	0	5482		19778	
395+00	400+00	7129	0	98	7016		26794	
400+00	405+00	2183	0	4008		2426	24368	
405+00	410+00	3426	0	1228	2014		26382	
410+00	415+00	5068	0	648	4323		30705	
415+00	420+00	3188	0	553	2552		33257	
420+00	425+00	2839	0	7699		6015	27242	
425+00	430+00	10818	0	1613	8963		36205	
430+00	435+00	4909	219	985	3885		40090	
435+00	440+00	11015	2670	2673	9263		49353	
440+00	445+00	14468	6248	289	17228		66581	
445+00	450+00	9290	2522	3323	6717		73298	
450+00	455+00	4610	728	8723		5061	68237	
455+00	460+00	11968	7906	4049	11225		79462	
460+00	465+00	11342	3727	812	12253		91715	
465+00	470+00	3384	0	247	3100		94815	
470+00	475+00	7175	0	0	7175		101990	
475+00	480+00	1303	0	1266		153	101837	
480+00	485+00	7269	0	293	6932		108769	
485+00	490+00	4744	0	283	4419		113188	
490+00	491+50	2278	0	0	2278		115466	
SUB TOTALS		158876	30113	50711				
TOWN HIGHWAY #61		282	0	2685		2806	112660	
TOWN HIGHWAY #13		119	0	137		39	112621	
TOWN HIGHWAY #5		242	0	0	242		112863	
DRIVES		519	0	1943		1715	111148	
SUB TOTALS		1162	0	4765				
TOTALS		160038	30113	55476			111148	

SHEET NO.	COL. NO.	SUMMARY BY COLUMNS EXCAVATION TOTAL CY	EXCAVATION ROCK CY	EMBANKMENT CY

REMARKS

EARTH AND ROCK EXCAVATION	160038
SOLID ROCK EXCAVATION	30113
EARTH EXCAVATION	129925
PLANIMETERED FILL	55476
LESS FACTORED SOLID ROCK (1.3)	39147
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	-
NET PLANIMETERED FILL	16329
FACTOR	0.15
PLANIMETERED FILL INCLUDING FACTOR	18778
MATERIALS AVAILABLE FOR FILLS	-
EARTH EXCAVATION	129925
CHANNEL EXCAVATION (60% X 1710)	1026
UNDERDRAIN EXCAVATION (60% X 4266)	2560
STRUCTURE EXCAVATION (60% X 1110)	666
TOTAL MATERIAL AVAILABLE FOR FILL	134177
TOTAL FILL INCLUDING FACTOR	18778
TOTAL MATERIAL FOR FILL	134177
BORROW	-
EXCESS EXCAVATION	115399

PROJECT NAME GROTON - RYEGATE
PROJECT NUMBER F026 -1(30)

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SHEET 17 OF 152 SHEETS

: Sheet Number: 17

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
ALPHABETICAL INDEX

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X		
Y		
Z		
*		

REVISED 08-23-95

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DATE PLOTTED: 12-MAR-1997

GROTON-RYEGATE

F 026-1(30)

R.O.W. SHEET 6 OF 24 SHEETS
SHEET 19 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1	MORSE, GERALD I., TRUSTEE OF GERALD I. MORSE TRUST. & MORSE, GERALD I. & MORSE, NORMAN B., TRUSTEES OF THE HAZEL G. MORSE TRUST.	16	372+89 CL. 372+89 RT. 372+89 RT. 374+00 RT. 375+90 RT.	376+43 RT. 376+43 RT. 376+43 RT.	0.20A±		ALL R. T. & I. SLOPE (P) 0.12A± CONST. (T) 0.08A± CUL., DIT. & DR. (P) CUL., DIT. & DR. (P)	WD	09-12-95	GROTON	45	307-309	U.S. RTE. 302 3550 S.F.±
2	SANVILLE, FRANCIS & CHARLOTTE SANVILLE, ARNOLD F. BRUNELL, KELLEY L.	16	372+89 CL. 373+50 LT. 373+60 LT.	374+20 LT. 374+20 LT. 374+20 LT.	0.07A±		ALL R. T. & I. CONST. (T) 0.01A± SLOPE (P) 0.02A±	WD	11-16-95	GROTON	45	384-386	U.S. RTE. 302 3250 S.F.± 650 S.F.± 1000 S.F.±
3A	MURRAY, JAMES D. & EILEEN V.	16,17	376+27 LT. 374+20 LT. 374+20 LT. 376+00 LT. 377+00 LT. 377+00 LT. 377+75 LT. 378+00 LT. 378+11 LT.	379+62 LT. 379+70 LT. 377+00 LT. 377+75 LT. 379+72 LT.	0.25A±		SLOPE (P) 0.25A± CONST. (T) 0.06A± CULVERT & DITCH (P) PLANT (T) PLANT (T) PLANT (T) CONST. (T) 0.04A± DRIVE (T)	WD		GROTON			 2500 S.F.± CRAB APPLE TREES 10 RED PINES CRAB APPLE TREES 1600 S.F.± 12' GRAVEL M.P. 0718
3B		16,17	374+20 LT.	379+50 RT.	0.30A±		ALL R. T. & I.						U.S. RTE. 302
4A	TOWN OF GROTON	16,17	380+08 RT. 381+99 RT. 383+88 RT.	380+63 LT. 384+00 RT.	0.04A±		 DRIVE (T) SLOPE (T) 0.01A±	WD	11-17-95	GROTON	45	389-390	1630 S.F.± 14' GRAVEL M.P. 0725 50 S.F.±
4B		16,17	380+05 RT. 376+43 RT.	380+59 RT. 384+00 RT.	0.03A±		ALL R. T. & I. EXCEPT & RESERVE						U.S. RTE 302 CEMETERY MONUMENTS & MARKERS
4C		17	383+90 RT. 384+17 RT. T.H. 61 1+55 RT. T.H. 61 1+85 RT.	384+48 RT. T.H. 61 4+00 CL. T.H. 61 3+95 RT. T.H. 61 3+78 RT.	0.03A±		ALL R. T. & I. APPROACH (T) CONST. (T) 0.05A± SLOPE (P) 0.03A±						T.H. 61 1250 S.F.± 2350 S.F.± 1375 S.F.±
4D		17	387+05 LT. 387+50 LT.	387+75 LT.	0.03A±		ALL R. T. & I. APPROACH (T)						T.H. 13 1250 S.F.±

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	6,7 16	PARCEL NO. 1 MORSE. CHANGE NAME TO MORSE, GERALD I., TRUSTEE OF GERALD I. MORSE TRUST. & MORSE, GERALD I. & MORSE, NORMAN B., TRUSTEES OF THE HAZEL G. MORSE TRUST. PER C.O. 8580.	07-19-94	C.C.P.	L.W.B.
2	11	PARCEL NO. 12B CLOUGH. CHANGE TH 50 3+60 RT. TO TH 50 3+60 LT. ON CONST. (T). PER C.O. 8581.	07-19-94	C.C.P.	L.W.B.
3	9,18	PARCEL NO. 7C PAGE. TO DETAIL SHEET, ADD 'DRIVE (T)' AT STA. 404+25 RT. TO LAYOUT, ADD 'DRIVE (T)' AT STA. 404+25 RT. ALSO ADD 'SLEEVE' NOTE AND 'CONSTRUCT PAVED TURNOUT' NOTE. PER C.O. 8586.	07-19-94	C.C.P.	L.W.B.
4	6,8, 17	PARCEL NO. 5 MURRAY. REMOVE MARION H. MURRAY FROM TITLE. PER C.O. 8603.	09-27-94	M.J.R.	L.W.B.
5	12	PARCEL NO. 13 WETHERBEE. ADD ENDING STATION AND ALL R. T. & I. TO WATERLINE. BY OPTION ONLY. PER C.O. 8613.	12-12-94	M.J.R.	L.W.B.
6	13	PARCEL NO. 16 DOE. ADD EASEMENT (T) TO STOCKPILE TOPSOIL BY OPTION ONLY AT TWO LOCATIONS: 16B; REV. 369+22 LT. ~ 485+17 LT. 16C; REV. 459+74 RT. ~ 492+40 RT. PER C.O. 8616.	12-12-94	M.J.R.	L.W.B.
7	13,24	PARCEL NO. 16 DOE. DELETE CONST. (T) AT REV. STA. 482+85 RT. ~ 485+10 RT. REDUCE SLOPE (P) AT REV. 483+00 RT. ~ 485+00 RT., 0.16A± TO REV. 483+55 RT. ~ 485+00 RT., 0.06A±, 2615 S.F.±. ADD SLOPE (P) FROM REV. 483+00 RT. ~ REV. 483+37 RT., 0.01A±, 175 S.F.±. ADD NOTE ABOUT NO ACTIVITY OUTSIDE CONSTRUCTION LIMITS. CHANGE DESIGN TO 20' PULLOUT. PER C.O. 8628.	12-15-94	M.J.R.	L.W.B.

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DR.(P)- DRAINAGE RIGHT
DIT.(P)- DITCHING RIGHT
CH.(P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL.(P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

LEGEND
CZ (P) CLEAR ZONE
CONST.(T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P PROPERTY LINE
L
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D. PLANS & TITLES

R. O. W. PLANS

GROTON-RYEGATE
F 026-1(30)
R. O. W. SHEET 7 OF 24 SHEETS
SHEET 20 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
5A	MURRAY, NORMAN W.	17	379+50 RT.	387+05 LT.	1.08A±			WD		GROTON			
			379+70 LT.	382+50 LT.			CONST. (T) 0.07A±						3050 S.F.±
			379+70 LT.	382+65 LT.			SLOPE (P) 0.33A±						
			TH 13 1+45 LT.	TH 13 1+65 LT.			SLOPE (P) 0.01A±						125 S.F.±
			TH 13 1+37 LT.	TH 13 1+90 LT.			CONST. (T) 0.01A±						340 S.F.±
			382+75 LT.				EASEMENT (T)						RELOCATE WATER LINE
			383+20 LT.	386+00 LT.			SLOPE (P) 0.08A±						3500 S.F.±
			384+00 LT.	386+10 LT.			CONST. (T) 0.08A±						2000 S.F.±
5B		17	379+48 RT.	380+08 RT.	0.03A±		ALL R. T. & I.						US 302 1425 S.F.±
5C		17	380+55 RT.	387+50 LT.	0.44A±		ALL R. T. & I.						US 302 & TH 13
6A	BROWN, JANICE A.	17,18	390+07 LT.	398+47 LT.	0.21A±			WD	11-28-95	GROTON	45	436-438	
			TH 13 0+30 RT.	TH 13 1+50 RT.			SLOPE (P) 0.02A±						750 S.F.±
			TH 13 1+00 RT.				DRAINAGE (P)						
			387+78 LT.	391+50 LT.			CONST. (T) 0.11A±						
			387+78 LT.	388+50 LT.			CHANNEL (P) 0.05A±						2250 S.F.±
			388+00 LT.	388+08 LT.			CULVERT (P)						
			388+50 LT.	390+85 LT.			SLOPE (P) 0.09A±						3875 S.F.±
			393+75 LT.				DRIVE (T)						12' GRAVEL M.P. 0747
			393+81 LT.	399+00 LT.			CONST. (T) 0.09A±						4000 S.F.±
			393+81 LT.	394+55 LT.			SLOPE (T) 0.02A±						700 S.F.±
			394+61 LT.				DRIVE (T)						12' GRAVEL M.P. 0749
			395+85 LT.	396+10 LT.			SLOPE (T) 0.01A±						25 S.F.±
			397+67 LT.	399+10 LT.			SLOPE (T) 0.03A±						1250 S.F.±
6B		17,18	384+48 RT.	395+45 RT.	0.73A±			WD	11-28-95	GROTON	45	436-438	
			TH 61 4+00 LT.	386+62 RT.			CONST. (T) 0.08A±						3500 S.F.±
			TH 61 1+30 LT.	TH 61 3+65 LT.			SLOPE (P) 0.06A±						2500 S.F.±
			TH 61 3+50 LT.				CUL. & DR. (P)						
			385+63 RT.	387+50 RT.			SLOPE (P) 0.08A±						3650 S.F.±
			386+10 RT.				CUL., DIT. & DR. (P)						
			386+32 RT.	390+53 RT.			DETOUR (T) 0.13A±						
			387+35 RT.	388+70 RT.			CONST. (T) 0.07A±						3000 S.F.±
			387+50 RT.	388+50 RT.			CHANNEL (P) 0.19A±						
			387+65 RT.				DRAINAGE (P)						
			387+90 RT.	388+00 RT.			CULVERT (P)						
			388+50 RT.	389+75 RT.			SLOPE (P) 0.02A±						850 S.F.±
			390+45 RT.	392+25 RT.			CONST. (T) 0.04A±						1600 S.F.±
			390+70 RT.	391+78 RT.			SLOPE (T) 0.01A±						475 S.F.±
			393+10.8 RT.				DRIVE (T)						12' CONCRETE M.P. 0746
			393+76 RT.	395+45 RT.			CONST. (T) 0.03A±						1310 S.F.±
			394+12 RT.	394+65 RT.			SLOPE (T) 0.01A±						250 S.F.±
6C		17,18	384+40 RT.	399+11 RT.	1.37A±		ALL R. T. & I.	WD	11-28-95	GROTON	45	436-438	US 302 & TH 13

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
8	11	PARCEL NO. 11 PLUMMER. ADD DRIVE (T) TO DETAIL SHEET. STA. 434+04 LT., 15' GRAVEL M.P. 0029. PER C.O. 8625.	12-20-94	M.J.R.	L.W.B.
9	15,17	PARCEL NO. 22 GOULD. ADD NEW PARCEL & ASSOCIATED RIGHTS. PER C.O. 8623.	12-20-94	M.J.R.	L.W.B.
10	8,17	PARCEL NO. 5 MURRAY. CHANGE TAKING & RIGHTS DUE TO THE CREATION OF PARCEL NO. 22. PER C.O. 8624.	12-20-94	M.J.R.	L.W.B.
11		DISREGARD - ACTUALLY REVISION 12			
12	11,20 21	PARCEL NO. 11 PLUMMER. CHANGE TITLE TO JOSEPH E. WALTERS. PER C.O. 8646.	02-14-95	M.J.R.	L.W.B.
13	9,18	PARCEL NO. 7 PAGE EXTEND CULVERT AT STA. 403+52 RT. CHANGE BEG. STA. OF CUL. (P) FROM 403+52 RT. TO 403+42 RT. MOVE DRIVE AT STA. 405+75 RT. TO STA. 405+40 RT. PARCEL 7D. ADD EASE. (T) TO RESET FENCE AT STA. 399+10 LT. ~ 404+50 LT. PER C.O. 8645.	02-14-95	M.J.R.	L.W.B.
14	12,21	PARCEL NO. 14 CASSIDY. ADD INSTALL (T) FOR FENCE AT STA. 443+00 LT.± ~ 445+00 LT.±. BY OPTION ONLY. PER C.O. 8661.	03-28-95	M.J.R.	L.W.B.
15	13,15 22,23 24	PARCEL NO. 23 SPOONER. ADD NEW PARCEL 23A AND 23B. SELL OFF FROM PARCEL NO. 16. PER C.O. 8661.	03-28-95	M.J.R.	L.W.B.
16	13,15 22,23 24	PARCEL NO. 16 DOE. CHANGE TAKING AND RIGHTS DUE TO SELL-OFF TO SPOONER PARCEL NO. 23 PER C.O. 8678.	03-28-95	M.J.R.	L.W.B.
17	13,23	PARCEL NO 16 DOE. ON PARCEL 16B, DELETE "REMOVE (T)", BARN, AT STA. REV. 473+30 RT. ~ REV. 473+92 LT. FROM DETAIL SHEET AND LAYOUT. PER C.O. 8687.	05-16-95	C.C.P.	L.W.B.
18	6,7 16	PARCEL NO. 2 SANVILLE & BRUNELL. CHANGE SPELLING OF "KELLEY" ON ALL SHEETS. PER C.O. 8709.	07-05-95	M.J.R.	L.W.B.
19	8,17	PARCEL NO. 6A BROWN. ADD DRAINAGE (P) AT STA. TH 13 1+00 RT. ADD CULVERT (P) AT STA. 388+00 LT. ~ 388+08 LT. PER C.O. 8710.	07-05-95	M.J.R.	L.W.B.

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DR.(P)- DRAINAGE RIGHT
DIT.(P)- DITCHING RIGHT
CH.(P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL.(P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

LEGEND
CZ (P) CLEAR ZONE
CONST.(T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D, PLANS & TITLES

R.O.W. PLANS

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 8 OF 24 SHEETS
SHEET 21 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS			TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
7A	PAGE, LOUISE M.	18,19 20	403+80 LT. 399+03 LT. 399+07 LT. 401+65 LT. 402+00 LT. 402+23 LT. 404+72 LT. 406+25 LT.	406+20 LT. 399+50 LT. 399+23 LT. 404+85 LT. 404+70 LT. 405+15 LT.	0.04A±		CONST. SLOPE DRIVE CONST. SLOPE REMOVE	(T) (T) (T) (T) (T) (T)	0.01A± 0.01A± 0.03A± 0.06A±	WD		GROTON			1530 S.F.± 125 S.F.± 15 S.F.± 12' GRAVEL M.P. 0762 1375 S.F.± 2750 S.F.± CULVERT DRIVE 24' ASPHALT M.P. 0771
7B		19	408+50 LT. 409+00 LT.	410+00 LT. 410+05 LT.	0.01A±		SLOPE	(P)	0.02A±						650 S.F.± 750 S.F.±
7C		18,19	399+15 RT. 399+30 RT. 399+55 RT. 399+22 RT. 400+03 RT. 403+00 RT. 403+42 RT. 404+00 RT. 404+25 RT. 405+20 CL. 405+40 RT. 406+15 RT. 406+90 RT. 406+50 RT. 412+05 RT. 414+20 RT.	417+35 RT. 403+35 RT. 400+00 RT. 403+65 RT. 404+08 RT. 417+20 RT. 411+70 RT. 416+82 RT.	1.08A±		CONST. CULVERT SLOPE DITCH & DRAINAGE CUL., DIT. & DR. CUL., DIT. & DR. DRIVE DRIVE DRIVE CONST. CULVERT & DRAINAGE SLOPE SLOPE CUL., DIT. & DR.	(T) (P) (P) (P) (P) (P) (T) (T) (T) (T) (P) (T) (T) (P)	0.10A± 0.24A± 0.25A± 0.20A± 0.10A±				12' GRAVEL M.P. 0767 50' GRAVEL M.P. 0767 WATERLINE 20' GRAVEL M.P. 0769
7D		18,19	399+10 LT. 399+10 LT.	417+15 RT. 404+50 LT.	1.77A±		ALL R. T. & I. EASE.	 (T)							US RTE 302 RESET FENCE
7E		19,20	417+15 RT. 417+68 RT. 419+50 RT. 422+60 RT. 422+70 RT.	425+46 RT. 418+45 RT.	1.37A±		CHANNEL DRIVE DRAINAGE DRAINAGE	(P) (T) (P) (P)	0.11A±	WD		RYEGATE			20' GRAVEL M.P. 0796 ALSO ROW FOR GMP & VELCO
7F		19,20	417+03 LT.	425+10 RT.	0.47A±		ALL R. T. & I.								US RTE 302

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
20	6,8 17,18	PARCEL NO. 6 BROWN. CHANGE TITLE TO JANICE A. BROWN. PER C.O. 8721.	07-05-95	M.J.R.	L.W.B.
21	9	PARCEL NO. 7C PAGE. REMOVE DITCH & DRAINAGE (P) AT STA. 403+47 RT. FROM DETAIL SHEET. PER C.O. 8711.	07-05-95	M.J.R.	L.W.B.
22	10	PARCEL NO. 9 BECK. CHANGE ENDING STATION OF CHANNEL (P) FROM 418+30 LT. TO 418+41 LT. PER C.O. 8712.	07-05-95	M.J.R.	L.W.B.
23	21	PARCEL NO. 14 CASSIDY. CORRECT SPELLING OF "MARJORY." PER C.O. 8713.	07-05-95	M.J.R.	L.W.B.
24	13	PARCEL NO. 16 DOE. DELETE PARCEL 16A. COMBINE ALL RIGHTS THAT WERE IN 16A WITH 16C AND CALL IT 16C. CHANGE BEGINNING STA. OF EASE. (T) AT STA. REV. 459+74 TO REV. 469+22 RT. PER C.O. 8714.	07-05-95	M.J.R.	L.W.B.
25	7,16 17	PARCEL NO. 4B GROTON VILLAGE CEMETERY. CHANGE ALL R.T. & I. TO READ 380+05 RT. ~ 380+59 RT.; 0.03A±. PER C.O. 8719.	07-05-95	M.J.R.	L.W.B.
26	15,20 21,22	PARCEL NO. 12 & 24 CLOUGH. ADD NEW PARCEL 24A, 24B, AND 24C AND RIGHTS AS SHOWN TO RELEASE CONSERVATION RESTRICTIONS IMPOSED BY; VT LAND TRUST, VT DEPT. OF AGRICULTURE AND VT HOUSING & CONSERVATION BOARD ON PARCELS 12A, 12B & 12C. PER C.O. 8704.	07-10-95	C.C.P.	L.W.B.
27	7,16 17	PARCEL NO. 4 TOWN OF GROTON. REMOVE "GROTON VILLAGE CEMETERY" FROM DETAIL AND PLAN SHEET. PARCEL SHOULD READ "TOWN OF GROTON. PER C.O. 8728.	08-23-95	C.C.P.	L.W.B.
28	16 11,21	PARCEL NO. 1 MORSE TRUST. ADD NOTE TO PLAN SHEET TO BEGIN COLD PLANING & PAVING AT STATION 373+50 CL. PER C.O. 8734. PARCEL NO. 12 CLOUGH. ON PARCEL 12C, REMOVE DRIVE (T) AT STA. 446+20 RT. AND ADD SLOPE (T) AT STA. 446+12 RT. ~ 446+95 RT., 0.01A±, 650 S.F.±. PER C.O. 8735.	08-23-95 08-23-95	C.C.P. C.C.P.	L.W.B. L.W.B.
29	13,23 24	PARCEL NO. 16 DOE. MOVE ALL RIGHTS FROM PARCEL 16C TO NEW PARCEL 25 ON NEW SHEET 15A. ADD "ALL R. T. & I.", US RTE. 302, REV. 469+22 CL. ~ 485+00 LT., 1.05A± TO TO PARCEL 16C. ADD NEW 1558' PROPERTY LINE TO CENTER OF ROADWAY ON LAYOUTS. PER C.O. 8736.	08-23-95	C.C.P.	L.W.B.

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DR.(P)- DRAINAGE RIGHT
DIT.(P)- DITCHING RIGHT
CH.(P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL.(P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
PERMANENT EASEMENT (P)
TEMPORARY EASEMENT (T)

LEGEND
CLEAR ZONE CZ (P)
CONSTRUCTION EASEMENT CONST.(T)
SLOPE RIGHTS SR SR
PROPERTY LINE P L
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D, PLANS & TITLES

R.O.W. PLANS

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 9 OF 24 SHEETS
SHEET 22 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

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8A	DARLING, COLLEEN C.	19	409+95 LT. 410+00 LT. 410+98 LT. 411+10 LT. 415+67 LT. TH 5 0+55 LT.	416+85 LT. 411+00 LT. 413+85 LT. 416+25 LT. TH 5 0+75 LT.	0.36A±		SLOPE (P) 0.03A± DRIVE (T) SLOPE (T) 0.08A± SLOPE (T) 0.01A± SLOPE (T) 0.01A±	WD		GROTON			1140 S.F.± 12' GRAVEL M.P. 0780 3625 S.F.± 150 S.F.± 65 S.F.±
8B		19	409+88 LT.	417+03 LT.	0.49A±		ALL R. T. & I.						US RTE 302
9	BECK, KENDALL J., SR. & MYRTIE L.	19	417+00 LT. 417+30 LT. 417+35 LT. 418+05 LT. TH 5 0+43 RT. TH 5 0+60 RT.	418+41 LT. 418+45 LT. 418+15 LT. 418+41 LT. TH 5 0+63 RT.	0.09A±		ALL R. T. & I. CONST. (T) 0.05A± SLOPE (P) 0.03A± CHANNEL (P) 0.04A± CULVERT & DITCH (P) DRIVE (T)	WD		RYEGATE			TH 5 & US 302 3850 S.F.± 2000 S.F.± 1125 S.F.± 1875 S.F.± 12' GRAVEL
10A	RESTELLI, STEPHEN C. & TERRY L.	19,20	423+33 LT. 418+40 LT. 418+40 LT. 418+40 LT. 418+45 LT. 418+55 LT. 419+00 LT. 419+60 LT. 419+95 LT. 420+00 LT. 420+23 LT. 422+00 LT.± 422+50 LT. 423+00 LT.	424+75 LT. 418+50 LT. 424+63 LT. 424+63 LT. 418+60 LT. 419+00 LT. 420+25 LT. 423+00 LT. 424+10 LT. 423+00 LT.± 424+63 LT.	0.03A±		CHANNEL (P) 0.02A± CONST. (T) 0.01A± DETOUR (T) 0.01A± DRIVE (T) SLOPE (T) 0.12A± CONST. (T) 0.06A± CULVERT & DITCH (P) SLOPE (P) 0.12A±	WD		RYEGATE			1250 S.F.± 875 S.F.± RESET-ROSE BUSH RESET-CURRANT BUSH 125 S.F.± 150 S.F.± WOOD FENCE 12' GRAVEL & PARKING AREA M.P. 0005 SIGN - PERSONAL 2775 S.F.± STOCKPILE-GARDEN TOPSOIL
10B		19,20	418+40 LT.	424+93 LT.	0.37A±		ALL R. T. & I.						US RTE 302

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
30	15A 23,24	PARCEL NO. 25 HOBBS. ADD NEW PARCEL 25 TO NEW DETAIL SHEET 15A AND LAYOUT. TRANSFER ALL RIGHTS FROM PARCEL 16C TO PARCEL 25, AND CHANGE AREA OF "ALL R. T. & I." FROM 3.42A± TO 2.37A±. PER C.O. 8737.	08-23-95	C.C.P.	L.W.B.
31	14	PARCEL NO. 17 CRAIGE. ON PARCEL 17B, CHANGE TAKE AREA FROM 0.26A± TO 0.86A±. PER C.O. 8738.	08-23-95	C.C.P.	L.W.B.
32	10,19 20	PARCEL NO. 10 RESTELLI. ADD FOLLOWING TOPO: 1) CEDAR CLUMP AT 418+76 LT.± & MARK "SAVE" 2) ROSE BUSH AT 419+75 LT.± AND ON DETAIL SHEET ADD "RESET - ROSE BUSH" AT STA. 418+40 LT. ~ 424+63 LT. 3) CURRANT BUSH AT 421+56 LT.± AND ON DETAIL SHEET ADD "RESET - CURRANT BUSH" AT STA. 418+40 LT. ~ 424+63 LT. 4) GARDEN AREA AT 422+05 LT.± AND ON DETAIL SHEET ADD "STOCKPILE GARDEN TOPSOIL" AT STA. 422+00 LT.± ~ 423+00 LT.±. PER C.O. 8741.	10-04-95	C.C.P.	L.W.B.
33	10,19	PARCEL NO. 9 BECK. CONSTRUCT DRIVE OFF T.H. 5 AND ADD "DRIVE (T)" TO DETAIL SHEET AND LAYOUT AT T.H. 5 STA. 0+60 RT. PER C.O. 8743.	10-04-95	C.C.P.	L.W.B.
34	21	PARCEL NO. 14 CASSIDY. ADD T.V. CABLE TO LAYOUT AT 444+00 LT. AND ADD 18" X 40' DRIVE CULVERT AT STA. 441+05 LT. PER C.O. 8751.	10-04-95	C.C.P.	L.W.B.
35	18	PARCEL NO. 26 KRIES. (FORMERLY PART OF PARCEL NO. 6 BROWN). ADD DRIVE APRON TO LAYOUT AT STA. 396+00 RT. PER C.O. 8753.	10-04-95	C.C.P.	L.W.B.
36	9,18 19	PARCEL NO. 7 PAGE. MOVE WESTERLY PROPERTY LINE ON SOUTHERLY SIDE OF RTE. 302 TO THE WEST PER SURVEY OF KRIES' LAND. ALSO DUE TO IRON PIPE AND FENCE FOUND. PER C.O. 8755.	10-04-95	C.C.P.	L.W.B.
37	6,8 15A 17,18	PARCEL NO. 6 BROWN AND 26 KRIES. CREATE NEW PARCEL NO. 26 KRIES DUE TO SELL-OFF OF PORTION OF PARCEL NO. 6 BROWN. PER C.O. 8756.	10-04-95	C.C.P.	L.W.B.
38	15A 24	PARCEL NO. 25 HOBBS. ADD DRAINAGE (P) AT STA. 487+00 RT. TO DETAIL & LAYOUT. PER C.O. 8759.	10-04-95	C.C.P.	L.W.B.

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DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
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PRESENT R.O.W.
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TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

LEGEND
CZ (P) CLEAR ZONE
CONST. (T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D. PLANS & TITLES

R. O. W. PLANS

GROTON-RYEGATE
F 026-1(30)
R. O. W. SHEET 10 OF 24 SHEETS
SHEET 23 OF 152

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11A	WALTERS, JOSEPH E.	20, 21	424+63 LT. 424+03 LT. 424+12 LT. 429+95 LT. 430+50 LT. 431+ 85 LT.	430+00 LT. 432+40 LT. 428+00 LT. 432+20 LT.	0.53A±		CONST. SLOPE CULVERT & DITCH SLOPE DRIVE	(T) (P) (P) (T) (T)	0.16A± 0.41A± 0.01A±	WD		RYEGATE			 600 S.F.± 16' PAVED M.P. 0025
11B		20, 21	435+90 LT. 432+50 LT. 432+82 LT. 433+55 LT. 434+04 LT. 436+95 LT.	439+56 LT. 438+25 LT. 436+37 LT. 439+17 LT.	0.11A±		CONST. CULVERT & DITCH SLOPE DRIVE SLOPE	(T) (P) (P) (T) (P)	0.15A± 0.17A± 0.07A±						 15' GRAVEL M.P. 0029
11C		20, 21	424+75 LT.	439+56 LT.	1.25A±		ALL R. T. & I.								U.S. RTE. 302
12A	CLOUGH, RICKY & KELLY A.	20, 21 22	425+10 RT. 426+00 RT. 428+60 RT. 429+46 RT. 429+46 RT.	430+42 RT. TH 50 3+00 RT. TH 50 2+43 RT.	0.30A±		 DRAINAGE CONST. DRAINAGE SLOPE	 (P) (T) (P) (P)	 0.05A± 0.04A±	WD	09-22-95	RYEGATE	53	396-399	 2375 S.F.± 1875 S.F.±
12B		20, 21	430+76 RT. TH 50 1+00 LT. 431+15 RT. 431+17 RT. 432+00 RT. 433+35 RT. 433+50 RT. 435+50 RT. 437+10 RT.	440+15 RT. TH 50 3+60 LT. 434+00 RT. 432+30 RT. 444+00 RT.	0.82A±		 CONST. CONST. ALL R. T. & I. DRAINAGE DRAINAGE DRAINAGE DRAINAGE	 (T) (T) (P) (P) (P) (P)	 0.05A± 0.04A±						 2000 S.F.± 1875 S.F.± BARN WATERLINE
12C		21, 22	447+40 RT. 443+50 RT. 443+50 RT. 445+00 RT. 446+12 RT. 448+00 RT. 450+68 RT. REV. 454+80 RT. REV. 458+00 RT.	REV. 459+74 RT. 444+60 RT. 444+40 RT. 446+95 RT.	1.18A±		 REMOVE ALL R. T. & I. DITCH & DRAINAGE SLOPE DRAINAGE DITCH & DRAINAGE DRAINAGE DRAINAGE	 (T) (P) (T) (P) (P) (P) (P)	 0.11A± 0.01A±						 BARN BARN & H2O LINE 650 S.F.±
12D		20	430+10 RT.	431+05 RT.	0.07A±		ALL R. T. & I.								TH 50 2875 S.F.±
12E		20, 21	424+93 LT.	440+15 CL.	1.29A±		ALL R. T. & I.								US RTE. 302 & TH 50
12F		21, 22	443+53 RT.	REV. 459+74 RT.	1.24A±		ALL R. T. & I.								US RTE. 302

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
39	14, 24	PARCEL NO. 17 CRAIGE. PULL SLOPES IN TO AVOID DRY WELL. ADD CLEAR ZONE (P) AT 486+72 LT. ~ 487+50 LT.; 0.02A±, 780 S.F.±. REDUCE TAKING OF 7A TO 0.15A±. PER C.O. 8763.	10-17-95	M.J.R.	L.W.B.
40	10, 19	PARCEL NO. 9 BECK. ADD 'CULVERT & DITCH (P)' AT STA. TH 5 0+43 RT. ~ TH 5 0+63 RT. TO DETAIL SHEET AND LAYOUT. PER C.O. 8773.	11-22-95	C.C.P.	L.W.B.
41	12, 21	PARCEL NO. 14 CASSIDY. DESIGNATE 'INSTALL (T), 4' CHAIN LINK FENCE' ON PARCEL 14A AS A SEPARATE PARCEL 14C. ALSO DELETE 'BY OPTION ONLY' NOTATION FROM REMARKS COLUMN. PER C.O. 8774.	11-22-95	C.C.P.	L.W.B.
42	15, 22 23	PARCEL NO. 23 SPOONER. TO LAYOUT, ADD A LONGITUDINAL PIPE TO CONNECT PROPOSED CULVERT PIPES AT STATIONS REV. 464+70.69 AND REV. 468+50 RT. ALSO TO LAYOUT, ADD NOTE: 'EXCAVATION FOR INSTALLATION OF CULVERT AT STA. REV. 468+50 RT. BE KEPT TO A MINIMUM NOT TO EXCEED 30 FEET IN WIDTH. ALSO, REMOVE DRAINAGE (P) AT STA. REV. 464+77 RT. FROM DETAIL SHEET & LAYOUT. PER C.O. 8772. REPRODUCIBLES TO DESIGN 02-07-96	11-29-95	C.C.P.	L.W.B.
43	15A 17, 18	ADD PARCEL 27 'BROWN LIVING TRUST, N. DALE BROWN & JANICE A. BROWN, TRUSTEES. NEW RIGHTS INCLUDE CONST.(T), SLOPE(P) & DRIVE (T). PER C.O. 8863. REPRODUCIBLES TO DESIGN 03-11-97	03-03-97	C.C.P.	L.W.B.

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TAKING WITHOUT ACCESS ALONG PROPERTY LINE
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PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

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AGENT D, PLANS & TITLES

R. O. W. PLANS

GROTON-RYEGATE
F 026-1(30)
R. O. W. SHEET 11 OF 24 SHEETS
SHEET 24 OF 152

STATE OF VERMONT
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13A	WETHERBEE, BERNARD O. & EARLENE J.	21	440+12 RT. 440+50 RT. 441+20 RT. 441+30 RT. 443+00 CL.± 443+37 RT.	442+87 RT. 442+27 RT. 442+00 RT. 441+41 RT. 445+00 LT.±	0.07A±		CONST. SLOPE CUL., DIT. & DR. ALL R.T. & I. DRIVE	(T) (T) (P) (T)	0.02A± 0.01A±	WD		RYEGATE			3250 S.F.± 875 S.F.± 250 S.F.± WATER LINE & APPURTENANCES 12' GRAVEL M.P. 0050
13B		21	440+15 RT.	443+56 RT.	0.20A±		ALL R. T. & I.								US RTE. 302
13C		21	440+05 RT. 443+00 LT.	443+53 RT.	0.59A±	0.00A±	 ALL R. T. & I.			WD	01-07-98	RYEGATE	57	159-160	TOTAL TAKE SPRING
14A	CASSIDY, WILLIAM A. & MARJORY F.	21,22	439+17 LT. 438+15 LT. 438+25 LT. 441+60 LT. 442+00 LT. 444+53 LT. 448+13 LT. 450+62 LT. 451+80 LT. 452+00 LT.	REV. 458+32 LT. 449+00 LT. 441+32 LT. 443+50 LT. 447+50 LT. 448+85 LT. REV. 455+20 LT. REV. 456+97 LT.	2.33A±		CONST. SLOPE DRIVE SLOPE SLOPE SLOPE DITCH CONST. SLOPE	(T) (P) (T) (P) (P) (P) (P) (T) (P)	0.26A± 0.29A± 0.03A± 0.10A± 0.02A± 0.07A± 0.46A±	WD		RYEGATE			 16' PAVED M.P. 0047 1125 S.F.± 925 S.F.± 3000 S.F.±
14B		21,22	439+50 LT.	REV. 458+32 LT.	1.78A±		ALL R. T. & I.								US RTE. 302
14C		21	443+00 LT.±	445+00 LT.±			INSTALL	(T)							4' CHAIN LINK FENCE
15A	WELCH, WILBER M. & SYLVIA J.	22,23	REV. 456+97 LT. REV. 455+00 LT. REV. 455+20 LT. REV. 464+00 LT. REV. 464+50 LT. REV. 466+40 LT. REV. 467+25 LT. REV. 468+60 LT.	REV. 469+22 LT. REV. 461+50 LT. REV. 461+43 LT. REV. 469+22 LT. REV. 465+40 LT. REV. 468+30 LT. REV. 469+22 LT.	1.71A±		CONST. SLOPE CONST. SLOPE SLOPE DRIVE SLOPE	(T) (P) (T) (P) (P) (T) (P)	0.14A± 0.54A± 0.11A± 0.01A± 0.02A± 0.01A±	WD		RYEGATE			 500 S.F.± 750 S.F.± 12' GRAVEL M.P. 0095 500 S.F.±
15B		22,23	REV. 458+20 LT.	REV. 469+22 RT.	0.78A±		ALL R. T. & I.								US RTE. 302

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46	11, 21	PARCEL NO. 12 CLOUGH. ADD PARCELS 12G & 12H TO LAYOUT AND DETAIL SHEET. VALUE ENGINEERING INDICATES A SAVINGS IF THESE PARCELS ARE PURCHASED. PER C.O. 8918.	09-18-97	W. L. G.	L. W. B.
47	12, 21	PARCEL NO. 13 WETHERBEE. ADD PARCEL 13C TO PLANS MAKING THIS PARCEL A TOTAL TAKE. VALUE ENGINEERING INDICATES A SAVINGS IF THESE PARCELS ARE PURCHASED. PER C.O. 8919.	09-18-97	W. L. G.	L. W. B.
48	15, 21	PARCEL NO. 24 VERMONT LAND TRUST. ADD PARCELS 24D & 24E TO LAYOUT AND DETAIL SHEET. RESULT OF VALUE ENGINEERING STUDY. PER C.O. 8920.	09-18-97	W. L. G.	L. W. B.

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TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
16A	DELETED												N/F SPOONER
16B	DOE, BERNARD W. & CYNTHIA T.	23, 24	REV. 469+22 LT.	485+17 LT.	1.58A±			WD		RYEGATE			
			REV. 469+22 LT.	485+17 LT.			EASE. (T)						STOCKPILE TOPSOIL (BY OPTION ONLY)
			REV. 469+22 LT.	REV. 471+05 LT.			CONST. (T) 0.04A±						1780 S.F.±
			REV. 469+22 LT.	REV. 471+00 LT.			SLOPE (P) 0.06A±						2500 S.F.±
			REV. 471+00 LT.				DRIVE (T)						12' GRAVEL M.P. 0102
			REV. 471+32 LT.	REV. 474+45 LT.			CONST. (T) 0.07A±						3000 S.F.±
			REV. 471+32 LT.	REV. 474+00 LT.			SLOPE (P) 0.15A±						6500 S.F.±
			REV. 476+00 LT.	REV. 478+00 LT.			CONST. (T) 0.06A±						2750 S.F.±
			REV. 474+00 LT.±										WATER LINE TO BARN
			REV. 474+50 LT.										DRIVE 12' GRAVEL M.P. 0109
			REV. 474+60 CL.±										WATER LINE TO HOUSE
			REV. 476+32 LT.				DITCH (P)						
			REV. 476+60 LT.	REV. 477+67 LT.			SLOPE (P) 0.02A±						750 S.F.±
			REV. 478+50 LT.				DRIVE (T)						12' GRAVEL M.P. 0116
			REV. 480+75 LT.	485+50 LT.			CONST. (T) 0.14A±						
			REV. 481+50 LT.	485+42 LT.			SLOPE (P) 0.45A±						
16C		23, 24	REV. 469+22 CL.	485+00 LT.	1.05A±		ALL R. T. & I.						US RTE. 302

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY

0261030 1805 78D073 H.P.

ACCT.root
/prop/78d073/rd073cd.dgn
DATE PLOTTED 12-MAR-1997
rd073cd7.i

DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
CH. (P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL. (P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

LEGEND
CZ (P) CLEAR ZONE
CONST. (T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D. PLANS & TITLES

R. O. W. PLANS

GROTON-RYEGATE
F 026-1(30)
R. O. W. SHEET 13 OF 24 SHEETS
SHEET 26 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
17A	CRAIGE, KELMAN D., JR.	24	485+00 LT. 485+17 LT. 485+40 LT. 486+50 LT. 486+72 LT. 489+26 LT. 489+26 LT. 491+32 LT.	488+44 LT. 486+65 LT. 486+00 LT. 487+50 LT. 490+94 LT. 490+94 LT.	0.15A±		SLOPE (P) 0.07A± CONST. (T) 0.01A± DRIVE (T) CLEAR ZONE (P) 0.02A± CONST. (T) 0.04A± SLOPE (P) 0.09A± DRIVE (T)	WD	11-28-95	RYEGATE	54	6-8	3125 S.F.± 500 S.F.± 12' GRAVEL M.P. 0131 780 S.F.± 1875 S.F.± 3625 S.F.± 12' GRAVEL M.P. 0141 3750 S.F.±
17B		24	485+00 LT.	492+40 CL.	0.86A±		ALL R. T. & I.	WD	11-28-95	RYEGATE	54	6-8	US RTE. 302
18A	TOWN OF RYEGATE	19	417+00 LT. 417+30 LT.	417+54 LT.	0.03A±		ALL R. T. & I. APPROACH (T)	QCD	10-18-95	RYEGATE	53	453-454	US RTE. 302 1350 S.F.± TH 5 PAVED
18B		20	430+00 RT.				APPROACH (T)	AGREE.					TH 50 "CLOUGH ROAD" PAVED
	MAINTENANCE AGREEMENT AREA #1	17	384+05 RT.	384+30 RT.				AGREE.		GROTON			TH 61 LENGTH 25' "NEW CEMETERY ROAD"
	MAINTENANCE AGREEMENT AREA #2	17	387+47 LT.	387+35 LT.				AGREE.		GROTON			TH 13 LENGTH 23'
	MAINTENANCE AGREEMENT AREA #3	19	417+25 LT.	417+16 LT.				AGREE.		RYEGATE			TH 5 LENGTH 32'
	MAINTENANCE AGREEMENT AREA #4	20	430+00 RT.	430+00 RT.				AGREE.		RYEGATE			TH 50 LENGTH 42' "CLOUGH ROAD"
	RELINQUISHMENT NO. I	20	429+73 RT.	430+10 RT.						RYEGATE			TH 50

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0261030 1805 78D073 H.P.

ACCT.root
/prop/78d073/rd073cd.dgn
DATE PLOTTED 12-MAR-1997
rd073cd8.i

DR.(P)- DRAINAGE RIGHT
DIT.(P)- DITCHING RIGHT
CH.(P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL.(P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
PERMANENT EASEMENT
TEMPORARY EASEMENT

LEGEND
CLEAR ZONE
CONSTRUCTION EASEMENT
SLOPE RIGHTS
PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D. PLANS & TITLES

R. O. W. PLANS

GROTON-RYEGATE
F 026-1(30)
R. O. W. SHEET 14 OF 24 SHEETS
SHEET 27 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
19	GREEN MOUNTAIN POWER CORPORATION												UTILITY
20	VERMONT ELECTRIC POWER CORPORATION												UTILITY
21	NORTHLAND TELEPHONE COMPANY OF VERMONT												UTILITY
22	GOULD, BRYANT P. & MARSHA J.	17	382+65 LT.	383+20 LT.	0.01A±			WD	10-10-95	GROTON	45	359-360	430 S.F.±
			382+45 LT.	384+30 LT.			CONST. (T) 0.04A±						1800 S.F.±
			382+50 LT.	384+00 LT.			SLOPE (P) 0.04A±						1930 S.F.±
			382+65 LT.±				EASEMENT (T)						RELOCATE WATER LINE
23A	SPOONER, RAYMOND W. & SUSAN P.	22,23	REV. 459+74 RT.	REV. 462+06 RT.	0.10A±			WD		RYEGATE			
			REV. 462+40 RT.	REV. 463+35 RT.			CONST. (T) 0.02A±						1000 S.F.±
			REV. 462+65 RT.	REV. 463+07 RT.			SLOPE (P) 0.01A±						100 S.F.±
			REV. 467+25 RT.				DRIVE (T)						16' GRAVEL M.P. 0095
			REV. 468+00 RT.	REV. 469+22 RT.			CONST. (T) 0.02A±						900 S.F.±
			REV. 468+50 RT.				CUL., DIT. & DR. (P)						
			REV. 468+75 RT.	REV. 469+22 RT.			SLOPE (T) 0.01A±						45 S.F.±
23B			REV. 459+74 RT.	REV. 469+22 RT.	0.80A±		ALL R.T. & I.						U.S. RTE. 302
24A	VERMONT LAND TRUST, INC.	20,21	425+10 RT.	430+42 RT.	0.30A±			QCD		RYEGATE			
	VERMONT DEPARTMENT OF AGRICULTURE,	22	426+00 RT.				DRAINAGE (P)						
	VERMONT HOUSING & CONSERVATION BOARD		429+46 RT.				DRAINAGE (P)						
			429+46 RT.	TH 50 2+43 RT.			SLOPE (P) 0.04A±						1875 S.F.±
24B		20,21	430+76 RT.	440+15 RT.	0.82A±								
			433+35 RT.				DRAINAGE (P)						
			433+50 RT.				DRAINAGE (P)						
			435+50 RT.				DRAINAGE (P)						
			437+10 RT.				DRAINAGE (P)						
24C		21,22	447+40 RT.	REV. 459+74 RT.	1.18A±								
			445+00 RT.				DITCH & DRAINAGE (P)						
			448+00 RT.				DRAINAGE (P)						
			450+68 RT.				DITCH & DRAINAGE (P)						
			REV. 454+80 RT.				DRAINAGE (P)						
			REV. 458+00 RT.				DRAINAGE (P)						

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0261030 1805 78D073 H.P.

ACCT.root
/prop/78d073/rd073cd.dgn
DATE PLOTTED 12-MAR-1997
rd073cd9.i

DR.(P)- DRAINAGE RIGHT
DIT.(P)- DITCHING RIGHT
CH.(P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL.(P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

LEGEND
CZ (P) CLEAR ZONE
CONST.(T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P PROPERTY LINE
L
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D, PLANS & TITLES

R.O.W. PLANS

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 15 OF 24 SHEETS
SHEET 28 OF 152

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
25	HOBBS, MICHAEL F. & SARAH A. O.	23,24	REV. 469+22 RT.	492+40 CL.	2.37A±		ALL R. T. & I.	WD		RYEGATE			US RTE. 302
			REV. 469+22 RT.	REV. 473+97 RT.			CONST. (T) 0.12A±						
			REV. 469+22 RT.	REV. 473+20 RT.			SLOPE (T) 0.04A±						1655 S.F.±
			REV. 469+22 RT.	492+40 RT.			EASE. (T)						STOCKPILE TOPSOIL
													BY OPTION ONLY
			REV. 473+30 RT.	REV. 473+50 RT.			CULVERT (P)						
			REV. 473+47 RT.	REV. 473+52 RT.			DITCH & DRAINAGE (P)						
			REV. 473+48 RT.	REV. 473+86 RT.			ALL R. T. & I.						GARAGE
			REV. 473+48 RT.	REV. 473+86 RT.			REMOVE (T)						GARAGE
			REV. 474+00 RT.				DRIVE (T)						12' PAVED M.P. 0108
			REV. 474+60 CL.										H20 LINE
			REV. 476+15 RT.	REV. 476+90 RT.			CONST. (T) 0.02A±						700 S.F.±
			REV. 476+32 RT.	REV. 476+71 RT.			SLOPE (T) 0.01A±						250 S.F.±
			REV. 476+46 RT.				DRAINAGE (P)						
			REV. 477+92 RT.	REV. 479+94 RT.			SLOPE (T) 0.03A±						1250 S.F.±
			REV. 480+00 RT.				DRIVE (T)						12' GRAVEL M.P. 0119
			REV. 480+00 RT.				CULVERT (T)						DRIVE
			REV. 480+06 RT.	REV. 481+00 RT.			SLOPE (T) 0.02A±						1000 S.F.±
			REV. 481+00 RT.	REV. 482+00 RT.			CONST. (T) 0.05A±						2375 S.F.±
			REV. 481+00 RT.	REV. 482+00 RT.			SLOPE (P) 0.04A±						1875 S.F.±
			REV. 481+50 RT.				CUL., DIT. & DR. (P)						
			REV. 482+00 RT.	REV. 483+00 RT.			SLOPE (T) 0.02A±						1000 S.F.±
			REV. 483+00 RT.	REV. 483+37 RT.			SLOPE (P) 0.01A±						175 S.F.±
			REV. 483+55 RT.	485+00 RT.			SLOPE (P) 0.06A±						2615 S.F.±
			487+00 RT.				DRAINAGE (P)						
			487+67 RT.	490+50 RT.			CONST. (T) 0.05A±						2375 S.F.±
			487+90 RT.	488+20 RT.			SLOPE (T) 0.01A±						125 S.F.±
			489+50 RT.				DRAINAGE (P)						
26A	KRIES, G. RICHARD & DIANE H.	18	395+45 RT.	399+22 RT.	0.27A±			WD		GROTON			
			395+45 RT.	399+35 RT.			CONST. (T) 0.08A±						3410 S.F.±
			396+00 RT.										12' DRIVE M.P. 0751
			396+30 RT.	399+30 RT.			SLOPE (T) 0.15A±						
26B		18	395+45 RT.	399+11 LT.	0.22A±		ALL R. T. & I.						U.S. RTE 302

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY

0261030 1805 78D073 H.P.

ACCT.root
/prop/78d073/rd073cd.dgn
DATE PLOTTED 12-MAR-1997
rd073cl0.1

DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
CH. (P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL. (P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
PERMANENT EASEMENT (P)
TEMPORARY EASEMENT (T)

LEGEND
CZ (P) CLEAR ZONE
CONST. (T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P PROPERTY LINE
L
TOP OF CUT
TOE OF SLOPE

REVISED 11-29-95

APPROVED: LAWRENCE W. BLISS DATE: 05-10-94
AGENT D, PLANS & TITLES

R. O. W. PLANS

GROTON-RYEGATE
F 026-1(30)
R. O. W. SHEET 15A OF 24 SHEETS
SHEET 29 OF 152

SANVILLE, ARNOLD F.
BRUNELL, KELLEY L.
SANVILLE, FRANCIS & CHARLOTTE

MURRAY, JAMES D. & EILEEN V.

MORSE, GERALD I., TRUSTEE OF GERALD I. MORSE TRUST & MORSE, GERALD I. & MORSE, NORMAN B., TRUSTEES OF THE HAZEL G. MORSE TRUST

TOWN OF GROTON

373+50 BEGIN COLD PLANING BEGIN PAVING

PC STA. 373+68.39

BEGIN APPROACH STA. 374+00

PI STA. 374+97.88 BK
STA. 374+97.75 AHD

REMOVAL AND DISPOSAL OF GUARDRAIL
RT 373+95 ~ 376+45

374+00 NEW 18"X50' PC-CSP(.064) OR CAAP(.060) OR CPEP(SL) W/ TYPE I STONE FILL AT OUTLET

375+91.5 REMOVE EXIST. 30" CMP & INSTALL NEW 30"X64' PC-CSP(.064) OR CAAP(.060) OR CPEP(SL) W/ TYPE I STONE FILL AT OUTLET

STEEL BEAM GUARDRAIL
RT 373.75-377.00

BREAK AWAY CABLE TERMINAL
RT 373.50-373.75

STONE FILL TYPE I
LT 376+00-377+00
RT

SCARIFY EXISTING PAVEMENT
376.00 ~ 377.00

MATCH LINE TO SHEET 17

MAG. 1986

CURVE 2
Δ 4° 31' 48"
D 1° 45' 00"
R 3274.05'
L 258.85'
T 129.49'
E 2.56 FT/FT
B 0.21 FT/FT

PLAN
SCALE: 1" = 50'
50 25 0 50
SCALE IN FEET

BEGIN R.O.W. PROJECT
F 026-1(30) STA. 372+89 ℄

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SURVEYED DEC. MAR. 1986
PLOTTED DSC
NOTE BOOK ALIGNMENT CHECKED
NO. 96 RIGHT OF WAY STAKED

07-14-94 REVISION 1

PROFILE
SURVEYED ECS, DSC
PLOTTED CAP
NOTE BOOK GRADES CHECKED ECS, DSC
NO. 96 RIGHT OF WAY STAKED PSL
STRUCTURE NOTATIONS (NEW)

TIES TO PC STA. 373+68.39
BEGIN APPROACH STA. 374+00
TIES TO PT STA. 376+27.24
9.30L3 %
EXISTING GROUND
MATCH LINE
PC STA. 373+68.39
PT STA. 376+27.24
PI STA. 374+97.88 BK
5" ASH
SIGNPOST
1" G.R. POST
POINT POINT

HORIZONTAL
50 25 0 50
SCALES IN FEET
VERTICAL
20 10 0

THIS SHEET FOR R.O.W. USE ONLY

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 16 OF 24 SHEETS

30 OF 152

PLATE I SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-131-5342B

EVERGREEN TREES
LT.
377+00~377+75, 55'+- LT, 5 RED PINE, 10' HEIGHT@15' C-C
377+00~377+75, 65'+- LT, 5 RED PINE, 10' HEIGHT@15' C-C

NOTE: NEW TREES @ STA. 377+00 ~ 377+75 ARE TO BE PLANTED AS DETERMINED BY THE ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER.

DECIDUOUS TREES
LT.
377+00 & 377+75
76'+- LT, 2 FLOWERING CRABAPPLES, 10' HEIGHT

BEGIN MAINT. AGREE. AREA NO. 1
STA. 384+05 20' RT.

BEGIN MAINT. AGREE. AREA NO. 2
STA. 387+47 20' LT.

END MAINT AGREE. AREA NO. 2
STA. 387+35 41' LT. (LENGTH 23')

END MAINT. AGREE. AREA NO. 1
STA. 384+30 43' RT. (LENGTH 25')

MURRAY, JAMES D & EILEEN V.

MURRAY, NORMAN W.

GOULD, BRYANT P. & MARSHA J.

BROWN LIVING TRUST, N. DALE BROWN & JANICE A. BROWN, TRUSTEES

BROWN, JANICE A.

TOWN OF GROTON (FORMER VAULT LOCATION)

TOWN OF GROTON CEMETERY

EXCEPT & RESERVE

STONE MONUMENT DO NOT DISTURB

CEMETERY

STONE WALLS AND STEPS

STEPS

CONCRETE & STONE WALLS

DRIVE (T)

PLANT (T)

HSE.

LEGEND
- CEMETERY LOT CORNER
- GRAVE MARKER OR MONUMENT

CONSTRUCT SIDEROAD
LT 377+50 PAVED RT 384+17.69 GRAVEL

CONSTRUCT DRIVE
LT 378+11 GRAVEL (12' WIDE) RT 381+99 GRAVEL (14' WIDE)

GRANITE SLOPE EDGING
377+25 - 380+87 RT.

EROSION MATTING
LT 377+50-377+80, 378+40-379+50, 382+00-384+00, 388+75-391+00
RT 382+25-384+00, 386+75-391+00

SIDEROAD CURVE 1
PC 1+97.25
PI 2+00
PT 2+02.75
Δ 3° 00' 19"
D 57° 01' 34"
R 100.74'
T 2.75'
L 5.27'
E 0.036'

SIDEROAD CURVE J
Δ 19° 20' 04"
D 4° 00' 00"
R 1432.40'
T 244.00'
L 483.36'
E 20.63'
B .063 FT/FT

PLAN
SCALE: 1"=50'

PROFILE
SCALE: 1"=50' HORIZONTAL, 1"=10' VERTICAL

PV1
STA 381+00
ELV 827.96
LVC 100
E 7.91
K 12.8
SSD 413'

PV1
STA 386+50
ELV 800.00
LVC 900.00
E 1.02
K 110

NOTE:
SEE SHEET 10C FOR PROFILE TH #6
SEE SHEET 10D FOR PROFILE TH #13

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SURVEYED 10/14/64 DRK, JJC, CLE
PLOTTED 10/14/64 DRK
ALIGNMENT CHECKED 10/14/64 JJC
ALL OF WHICH CHECKED
NOTE BOOK
NO.

PROFILE
SURVEYED 10/14/64 JJC
PLOTTED 12/8/64 CLE
GRADES CHECKED 12/8/64 CLE
ALL OF WHICH CHECKED 12/8/64 DRK
NOTE BOOK 2510 CO. NO. 1 PAGE 41
STRUCTURE NO'S & NAMES (CHKD)

THIS SHEET FOR R.O.W. USE ONLY

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 17 OF 24 SHEETS

BRUNING 44-131-5362B

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

TYPE I STONE FILL
LT 397+30-399+50
RT 397+30-399+50

EROSION MATTING
LT 396+50-397+30, 399+50-401+50, 403+45-404+50
RT 395+50-397+30, 399+50-400+75

REMOVE AND RESET FENCE
LT 399+10-402+00 (RESET TO NEW R.O.W. LINE)
402+00-404+50 (RESET BEYOND CONSTRUCTION LIMITS, THEN TO NEW R.O.W. LINE)

STEEL BEAM GUARDRAIL
LT
RT 399+90-403+27.5

BREAK AWAY CABLE TERMINAL
LT 399+65-399+90, 403+27.5-403+52.5

GRANITE SLOPE EDGING
LT 405+00-406+00

BROWN LIVING TRUST
N. DALE BROWN &
JANICE A. BROWN
TRUSTEES

REMOVAL AND DISPOSAL OF GUARD RAIL
RT
402+75 ~ 403+60

PAGE, LOUISE M.

KREIS, G. RICHARD & DIANE H.

PAGE, LOUISE M.

BROWN, JANICE A.

BROWN, JANICE A.

BROWN LIVING TRUST
N. DALE BROWN &
JANICE A. BROWN
TRUSTEES

MATCH LINE TO SHEET 17

MATCH LINE TO SHEET 19

PI STA. 392+72.44 BK
STA. 392+70.57 AHD

PI STA. 403+00.66 BK
STA. 402+64.85 AHD

PT STA. 395+16.30

PC STA. 398+46.56

CURVE 4
Δ 12° 14' 23"
D 2° 30'
R 2291.83'
L 489.59'
T 245.73'
E 13.14'
B 0.046'

CURVE 5
Δ 39° 15' 31"
D 4° 30' 00"
R 1273.24'
L 872.41'
T 454.11'
E 78.56'
B 0.067 FT/FT

CONSTRUCT DRIVE
LT 394+61 GRAVEL (12' WIDE); 401+65 GRAVEL (12' WIDE); 403+75 GRAVEL (12' WIDE)
RT 393+10.8 CONCRETE (12' WIDE); 404+00 GRAVEL (12' WIDE); 405+40 GRAVEL (20' WIDE); 404+25 GRAVEL (50' WIDE); 396+00 GRAVEL (12' WIDE)

CONSTRUCT PAVED TURNOUT
404+50 – 405+15 RT. (4' WIDE)

TBM #3
SPIKE IN ROOT
12" SCOTCH PINE
ELEV. 790.17

PLAN 42' RT.
SCALE: 1" = 50'

50 25 0 50
SCALE IN FEET

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SURVEYED 05-25-94 EJC, EJL
PLOTTED 06-24-94 JCK
ALIGNMENT CHECKED
NOTE BOOK
R/W CHECKED
NO.

BY	DATE
EJC, DSK	05-25-94
SPF	06-24-94
EJC, DSK	07-14-94
SGS, DSK	07-14-94
RWJ	11-22-94

07-14-94 REVISION 3

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
R/W CHECKED
NOTE BOOK
NO.
STRUCTURE NOTATING (MMO)

BY	DATE
EQ, DSK	DEC. 95
SPF	OCT. 96
EJC, DSK	DEC. 96
SGS, DSK	DEC. 96
RWJ	FEB. 97

PVI
STA. 397+00
EL. 791.50
L.V.C. 300'
E 0.99'
K 120
5.90 4.16

PVI
STA. 401+50
L 775.75'
L.V.C. 600'
E 4.09'
K 109

TIES TO PT STA. 395+16.30

TIES TO PC STA. 398+46.55

TIES TO POC STA. 403+00

-1.000 %

+5.900 %

+.950 %

EXISTING GROUND

MATCH LINE

HORIZONTAL
50 25 0 50
SCALES IN FEET
VERTICAL
20 10 0

THIS SHEET FOR R.O.W. USE ONLY

GROTON-RYEGATE
F 026 (30)
R.O.W. SHEET 18 OF 24 SHEETS

391+00 392+00 393+00 394+00 395+00 396+00 397+00 398+00 399+00 400+00 401+00 402+00 403+00 404+00 405+00 406+00

810 800 790 780 770 760 750 740

SBRUNING 44-131-53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

TYPE I STONE FILL
LT 416+25-417+00 RT 415+50-418+00

TYPE II STONE FILL
LT 418+20 RT 418+00.

EROSION MATTING
LT 406+50-409+25 411+75-416+25 RT

CONSTRUCT DRIVE
LT RT
406+25 ASPHALT (24) 419+50 GRAVEL (20')
410+98 GRAVEL (12') TH 5 - 0+60 (12')
419+60 GRAVEL (12')

CONSTRUCT T.H. APPROACH
LT TH 5 417+30.23 RT

STEEL BEAM GUARDRAIL
LT 418+01 - 418+76 RT 417+21 - 418+58.5

BREAKAWAY CABLE TERMINAL
LT 417+76 - 418+01 418+76 - 419+01 RT 416+96 - 417+21 418+58.5 - 418+83.5

DARLING, COLLEEN C.

PAGE, LOUISE M.

PAGE, LOUISE M.

PAGE, LOUISE M.

PAGE, LOUISE M.

RESTELLI, STEPHEN C. & TERRY L.

BECK, KENDALL J., SR. & MYRTLE L.

TOWN LINE GROTON RYEGATE

MATCH EXISTING PAVEMENT AT STA. 1+00

APPROACH (T)

CUL. & DIT. (P)

CUL., DIT. & DR. (P)

CHANNEL (P)

DRIVE (T)

DRIVE (P)

CEDAR CLUMP (TO REMOVE *)

ROSE BUSH ±3

PAVED ENTRANCE

406+20 42' LT.

409+95 41' LT.

408+50 50' LT.

410+00 50' LT.

416+85 50' LT.

417+00 50' LT.

417+03 24' LT.

417+45 50' LT.

417+15 8' RT.

416+50 42' RT.

417+35 65' RT.

418+41 53' LT.

418+40 27' LT.

417+04 26' LT.

7A 7B 7C 7D 7E 8A 8B 9 10A 10B

(1794') (1735') (1794') (790') (745') (500')

703' 700' 715' 414+00 412+00 413+00 415+00 416+00 417+00 418+00 419+00

PC STA. 412+45.23

PI STA. 416+63.97
STA. 416+22.80

S 83°44'54" E

SR(T) SR(P) CONST.(T) SCARIFY EXISTING PAVEMENT 419+00-421+00

CTC 1/40

406+00-406+50 NEW 6"x30' UNDERDRAIN W/ F.E. AT 406+50

407+10-411+50 NEW 6"x440' UNDERDRAIN W/ F.E. AT 411+50

406+50-408+00 NEW 6"x150' UNDERDRAIN W/ F.E. AT 408+00

415+00-416+00 NEW 6"x200' UNDERDRAIN W/ F.E. AT 415+50

416+00-418+00 NEW 6"x15' UNDERDRAIN W/ CARRIER PIPE

STA. 407+00 BASKEW 74°-00'-00"LT REMOVE EXISTING 18" RCP REPLACE WITH NEW 24"-48" FICSP (16GA.) / (10GA.) CSAP REPLACE WITH TYPE I STONE PAD AT OUTLET (DEEP (SL))

STA. 414+20.5 ASKEW 88°-39'-01"RT REMOVE EXISTING 18" RCP REPLACE W/ NEW 18"x50' FICSP (16GA.) / (10GA.) CSAP (TYPE I STONE FILL AT INLET AND OUTLET, END SECTION AT INLET) W. 5'-7" L. (DEEP (SL))

STA. 416+20.5 ASKEW 88°-30' LT NEW 12"-10'-8"-4"x30" CMPPA

STA. 417+30.23+STA. 0+00 SIDE ROAD ASKEW 79°-32'-39" RT

STA. 0+35.5 ASKEW 79°-22' LT REMOVE 82' RCP NEW 18"x50' FICSP (16GA.) / (10GA.) CSAP

STA. 1+15 - 0+50 ASKEW 82° LT NEW 18"x26' CSP (16GA.) / (10GA.) CSAP (TO BE REMOVED BY CONTRACTOR) STA. 417+31 EXIST. 6" RCP TO BE REMOVED BY CONTRACTOR

STA. 418+35.5 REMOVE EXIST. CULVERT SEE SHEET 33 OF 140

TBM #5 CHISLED "X" ON TOP PLATE BOLT EL. 768.09

MAG. 1986

TRANSPLANTING SHRUBS
419+75 LT - ROSE BUSH
*(PLACEMENT OF SHRUB TO BE DETERMINED BY ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER)

END MAINT. AGREE. AREA NO. 3
STA. 417+16 51' LT.
(LENGTH 32')

BEGIN MAINT. AGREE. AREA NO. 3
STA. 417+25 20' LT.

DETOUR LIMITS

CONST. 15" CSP (TP)

CONST. 12" CSP (TP)

PT STA. 420+41.54

TO SHEET 18

TO SHEET 20

MATCH LINE

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SCALE: 1" = 50'
50 25 0 50
SCALE IN FEET

CURVE 6
Δ 43° 47' 49"
D 5° 30'
R 104.74'
L 796.31'
T 418.74'
E 81.01'
B .074 FT/FT

© TRANS POLF

PLAN
SURVEYED
PLOTTED
PLANS CHECKED
R/W NOTED
STRUCTURE NOTATNS CKD
NOTE BOOK
NO.

BY: KCS DEL. / DAK WAS GLF / DBC
DATE: DEC. 82 / FEB. 83 / DEC. 82 / FEB. 83

CULVERT POST
PT STA 407+18.96
+2.90
0.76
ELECT. FENCE

ASPHALT DRIVE

TIES TO PT STA 407+18.96

+1.950 %
EXISTING GROUND

MATCH LINE

PC STA. 412+45.23
12.18
14.24
POST
ELECT. FENCE

TIES TO PC STA 412+45.23

PVI
STA 411+50
EL 795.25
LVC 700'
E 4.77'
K 128
SSD 415'

NOTE: SEE SHEET "10A" FOR TH. 5 PROFILE

2' OFF ROAD
POC STA 416+50
2.91
4.10
0.35

TIES TO POC STA 416+50

-3.500 %

EXISTING GROUND

STA 417+35 H.Y. CUP

TIES TO PT STA 420+41.54

STUMP
10.23
14.24
PT STA 420+91.58
PT END OF STONE WALL

ASPHALT DRIVE

MATCH LINE

HORIZONTAL
50 25 0 50
SCALES IN FEET

VERTICAL
20
10
0

PROFILE
SURVEYED
PLOTTED
PLANS CHECKED
R/W NOTED
STRUCTURE NOTATNS CKD
NOTE BOOK
NO.

BY: KCS DEL. / DAK / KCS DRL. / RMJ
DATE: DEC. 82 / FEB. 83 / DEC. 82 / FEB. 83

THIS SHEET FOR R.O.W. USE ONLY

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 19 OF 24 SHEETS

406+00 407+00 408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00 416+00 417+00 418+00 419+00 420+00 421+00

800 790 780 770 760 750 740 730

BRUNING 44-131-53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

NOTE: 422+05 ± ~ 422+92 ± LT. STOCKPILE TOPSOIL FOR GRADING OF GARDEN AREA (COST TO BE INCLUDED IN COMMON EXCAVATION)

EROSION MATTING

LT	RT
428+50 ~ 429+50	431+50 ~ 433+00

TYPE I STONE FILL

LT	RT
423+50 ~ 428+50	

TRANSPLANTING SHRUBS
421+56 LT - CURRANT BUSH
*(PLACEMENT OF SHRUB TO BE DETERMINED BY ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER)

RESTELLI, STEPHEN C. & TERRY L.

CUL & DIT. (P)

APPROX GARDEN LOC. AREA

CURRANT BUSH

MATCH LINE TO SHEET 19

422+50 RT. NEW 12"x36" CSP (.064") OR CAAP (.060") OR CPEP (SL) W/ PRCD 2-15° ELBOW AND TYPE 2 STONE AT OUTLET

DR.(P)

TREATED TIMBER CURB

LT	RT
422+50 ~ 426+25	433+00 ~ 435+50

PAGE, LOUISE M.

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

STA 422+50 - 423+50 ASKEW 78° 08' LT. - RT. NEW 6'x4' 100' CAMPBELL PIPE UNDERDRAIN

STA 422+50 - 423+50 ASKEW 78° 08' LT. - RT. REMOVE EXIST. 18" CMP NEW 24"x24" 100' CSP (.064") OR CAAP (.060") OR CPEP (SL) W/ TYPE I STONE FILL AT OUTLET AND END SECTION AT INLET 4:1 SLOPE

423+50 - 425+95 NEW 6'x4' 245' UNDERDRAIN W/ F&B AT 425+95

STA 425+46 - 426+00 RCCP (.064") OR CAAP (.060") OR CPEP (SL) W/ 4'-0" AT INLET W/ TYPE I STONE FILL AT OUTLET 4:1 SLOPE

BEGIN MAINT. AGREE. AREA NO. 4
STA. 430+00 20' RT.

STEEL BEAM GUARDRAIL

LT	RT
MAINLINE 422+25 TH#50 2+00	
TH#50 1+50 MAINLINE 433+08.5	
MAINLINE 433+25 MAINLINE 436+00	

PC STA. 428+98.42

423+33 42' LT. 10A
423+63 45' LT.
424+75 28' LT.
426+95 55' LT.
424+93 1' LT.
425+10 23' RT.
425+46 75' RT.
430+00 53' LT.
430+42 16' RT. DRIVE (T)
431+05 10' RT.
435+90 50' LT.
429+70 148' RT.
430+76 64' RT.

11A 11C 12E 12A 24A 12D 12B 24B 7E 7F 10B 88

CONSTRUCT DRIVE

LT	RT
431+85 PAVED (16' WIDE)	
434+04 GRAVEL (15' WIDE)	

CONSTRUCT TH. 50

LT	RT
430+00 PAVED	

BEGIN RELINQUISHMENT NO. I
STA. 429+73 64' RT.

STA. 430+00 = SIDEROAD STA. 0+00

PLAN
SCALE: 1"=50'

CLOUGH, RICKY & KELLY A.

50 25 0 50
SCALE IN FEET

BREAKAWAY CABLE TERMINAL

LT	RT
TH#50 1+75-1+50	422+00-422+25 TH#50 2+00-2+25 431+08.5-431+33.5 433+00-433+25

STA 430+00 - 430+50 ASKEW 65°-32'-28" LT. - RT. REMOVE EXISTING 18" RCP NEW 24" 100' RCCP (.064") OR CAAP (.060") W/ TYPE I STONE FILL AT OUTLET AND CPEP (SL) W/ END SECTION AT INLET

WALTERS, JOSEPH F.

PI STA. 431+50.26 BK
STA. 431+36.89 AHD

TBM #6
SPIKE IN ROOT
16" POPLAR
EL. 783.52

CURVE 7
Δ 32° 07' 49"
D 6° 30' 00"
R 881.47
L 494.31
T 253.84
E 35.82

REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL

LT	RT
428+40 - 430+60	423+10 - 426+00
432+40 - 433+45	427+58 - 430+50
	432+78 - 433+54

MAG. 1986

DEMOLITION AND DISPOSAL OF BUILDING
1, 431+50 RT

PT 443+90.73

(T TEL CO #8 POLE)

CUL & DIT.(P)

DRIVE (T)

CONST(T)

SR(P)

653'

29°R

435+00 - 436+00 NEW 6'x100' UNDERDRAIN W/ F&B AT 435+00

TO SHEET 21

(316')

436+00

STA 430+00 - 430+50 ASKEW 65°-32'-28" LT. - RT. REMOVE EXISTING 18" RCP NEW 24" 108' RCCP (.064") OR CAAP (.060") W/ TYPE I STONE FILL AT OUTLET AND CPEP (SL) W/ END SECTION AT INLET 4:1 SLOPE

S 39°57'05" E 408.71'

(1573')

S 07°49'10" E

HSE

HARD

DR. (P)

CONST. (T)

(908')

(927')

CONST(T)

STA 430+00 - 430+50 ASKEW 65°-51'-06" RT. - LT. REMOVE EXIST. 18" RCP NEW 24"x108' RCCP (.064") OR CAAP (.060") W/ TYPE I STONE FILL AT OUTLET AND END SECTION

STA 433+00 - 433+50 ASKEW 65°-51'-06" RT. - LT. NEW 6'x4'x50' UNDERDRAIN W/ F&B AT 433+00

433+50 RT. NEW 6'x78" UNDERDRAIN CARRIER PIPE W/ TYPE I STONE AT OUTLET

CLOUGH, RICKY & KELLY A.

435+50 RT. NEW 12"x24" CSP (.064") CPEP (SL) W/ PRCD 1-25° ELBOW W/ TYPE 1 STONE AT OUTLET

END RELINQUISHMENT NO. I
STA. 430+10 64' RT.
DRILLING & BLASTING SOLID ROCK SUBGRADE
STA. 430+10 TO 431+35

END MAINT. AGREE. AREA NO. 4
STA. 430+00 64' RT. (LENGTH 42')

SCARIFY EXISTING PAVEMENT
421+00 ~ 423+50

CENTERLINE BASELINE

CURRANT BUSH

END NEW PAVEMENT MATCH TO EXISTING GRAVEL 4:1 SLOPE

END POST

PI STA 431+50.56 BK

PI STA 433+90.73

TIES TO PI STA 431+50.56 BK

TH 50 SEE SHT 104 OF 130

GUARDRAILS 368' POST 3 @ 3'-1" POST

TIES TO PI STA 428+96.78

APPROACH (T)

TIES TO PT STA 443+90.73

PVI
STA 421+50
EL 760.25
LVC 800'
E 6.80'
K 118

PVI
STA 428+50
EL 783.35
LVC 600'
E 3.23'
K 190
SSD 491.00

PVI
STA 435+50
EL 776.35
LVC 500'
E 1.36'
K 230

+3.300%

-1.000%

EXISTING GROUND

MATCH LINE

HORIZONTAL
50 25 0 50
SCALES IN FEET
20
10
0
VERTICAL

THIS SHEET FOR R.O.W. USE ONLY

GROTON-RYEGATE
F 026-1(30)
R.O.W. SHEET 20 OF 24 SHEETS

421+00 422+00 423+00 424+00 425+00 426+00 427+00 428+00 429+00 430+00 431+00 432+00 433+00 434+00 435+00 436+00

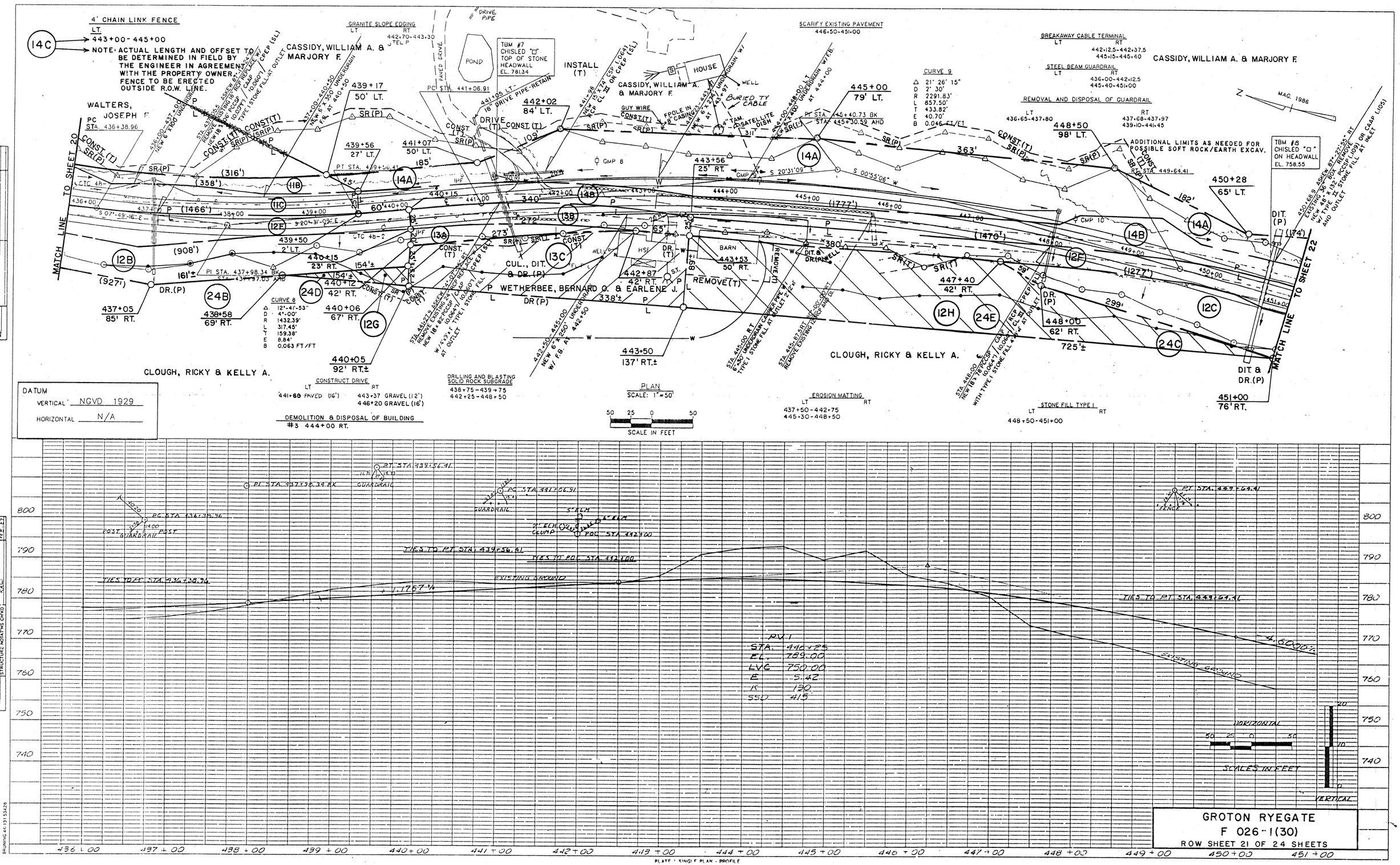
790 780 770 760 750 740

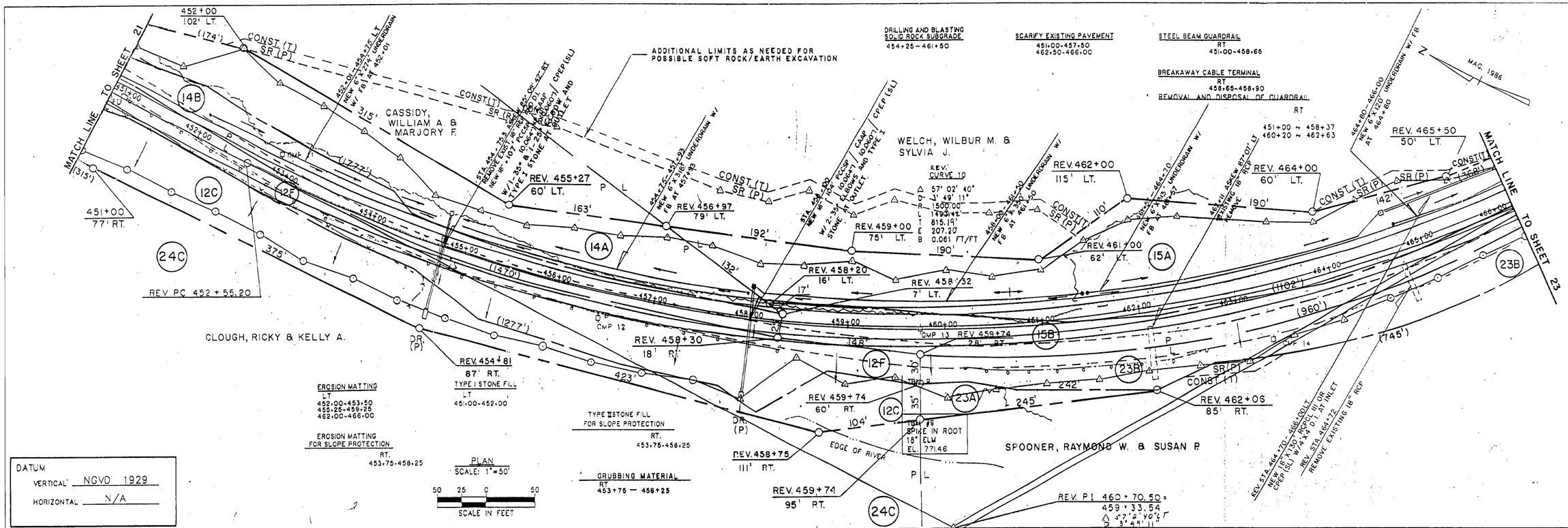
PLAN
SURVEYED
PLOTTED
QUANTITIES CHECKED
R.M.= NOTED.
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY: E.C.S. DEC. | E.M.F. FEB. | E.C.S. DEC. | E.C.S. DEC. | E.A.K. FEB.
DATE: DEC. 87 | FEB. 88 | DEC. 87 | DEC. 87 | FEB. 88

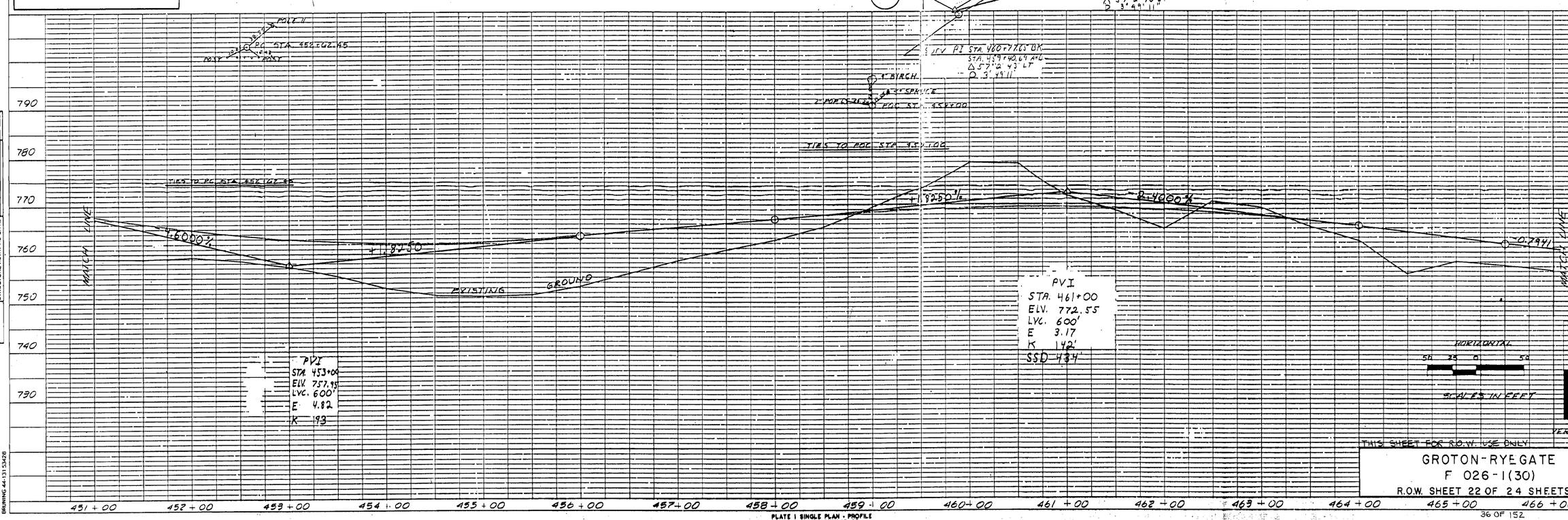
PROFILE
SURVEYED
PLOTTED
QUANTITIES CHECKED
R.M.= NOTED.
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY: E.C.S. DEC. | E.M.F. FEB. | E.C.S. DEC. | E.A.K.
DATE: DEC. 87 | FEB. 88 | DEC. 87 | FEB. 88

BRUNING 44-131-53426

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.


4' CHAIN LINK FENCE
LT
443+00 - 445+00
NOTE: ACTUAL LENGTH AND OFFSET TO BE DETERMINED IN FIELD BY THE ENGINEER IN AGREEMENT WITH THE PROPERTY OWNER. FENCE TO BE ERECTED OUTSIDE R.O.W. LINE.
14C
CASSIDY, WILLIAM A. & MARJORY F.
WALTERS, JOSEPH F.
PC STA. 436+38.96
MATCH LINE TO SHEET 20
MATCH LINE TO SHEET 22
GRANITE SLOPE EDGING
LT
442+70-443+30
RT
TEL P
POND
DRIVE PIPE
PAVED DRIVE
TBM #7
CHISLED "□"
TOP OF STONE HEADWALL
EL. 781.34
INSTALL (T)
HOUSE
WELL
BURIED TV CABLE
SATELLITE DISH
GUY WIRE
FROJE IN 8" CASING
PT STA. 441+06.91
PT STA. 445+40.73 BK
STA. 445+30.59 AHD
SCARIFY EXISTING PAVEMENT
446+50-451+00
BREAKAWAY CABLE TERMINAL
LT
RT
442+12.5-442+37.5
445+15-445+40
STEEL BEAM GUARDRAIL
LT
RT
436+00-442+12.5
445+40-451+00
REMOVAL AND DISPOSAL OF GUARDRAIL
LT
436+65-437+80
RT
437+68-437+97
439+10-441+45
CURVE 9
Δ 21° 26' 15"
D 2° 30'
R 2291.83'
L 857.50'
T 433.82'
E 40.70'
B 0.046 FT/FT
MAG. 1986
ADDITIONAL LIMITS AS NEEDED FOR POSSIBLE SOFT ROCK/EARTH EXCAV.
TBM #8
CHISLED "□" ON HEADWALL
EL. 758.55
439+17
50' LT.
439+56
27' LT.
441+07
50' LT.
442+02
84' LT.
445+00
79' LT.
448+50
98' LT.
450+28
65' LT.
437+05
85' RT.
438+58
69' RT.
440+06
67' RT.
440+05
92' RT.±
440+12
42' RT.
440+15
23' RT.
439+50
2' LT.
443+56
25' RT.
443+53
50' RT.
442+87
42' RT.
443+50
137' RT.±
447+40
42' RT.
448+00
62' RT.
451+00
76' RT.
CMP 8
CMP 9
CMP 10
CMP 11
CMP 12
CMP 13
CMP 14
CMP 15
CMP 16
CMP 17
CMP 18
CMP 19
CMP 20
CMP 21
CMP 22
CMP 23
CMP 24
CMP 25
CMP 26
CMP 27
CMP





BRUNING 44-131-53428

PLATE I SINGLE PLAN + PROFILE
CHARLES BRUNING CO.

PLAN

BY	DATE
SMC, DAC, GLB	6-6-74
DAC	7-24-74

SURVEYED
PLOTTED
GRADES CHECKED
R.O.W. MONUMENTS SET
NOTE BOOK
NO.
STRUCTURE (ATTATHS CHKD)
RT. OF WAY CHECKED

WELCH, WILLIAM M. & SYLVIA J.

EROSION MATTING
LT 466+00-467+50
RT 480+50-481+00

DOE, BERNARD W. & CYNTHIA

STA 466+00-467+02 LT NEW 18" X 302' RCP CL III OR CPEP(SL)

STA 466+00-466+50 6' X 250' UNDERDRAIN

467+25 LT NEW 30" X 46' CSP .064 OR RCP CL III OR CPEP (SL)

REV PT 467+48.74

REV. 469+22 50' LT.

REV. 469+22 2' RT.

REV 469+22 26' RT.

REV 469+22 53' RT

467+25 RT NEW 15" X 34' CSP .064 OR RCP CL III OR CPEP(SL)

STA 466+50 NEW 24'-58" RCP CL III / CPEP (SL)

468+50 RT NEW 24" X 100' PCSP (.064) OR CSAP (.060) W/ TYPE I STONE OR CPEP(SL) AT OUTLET W/ TYPE I STONE

SPOONER, RAYMOND W. & SUSAN P.

CUL., DIT. & DR.(P)

466+54 - 472+23 LT NEW 6' X 44' UNDERDRAIN W/ F.B. AT 466+54

HOBBS, MICHAEL F & SARAH A.O.

471+00 - 476+00 NEW 15" X 46' CSP .064 OR RCP CL III OR CPEP (SL)

468+54 - 472+00 NEW 6" X 46' UNDERDRAIN W/ F.B. AT 468+54

REV. STA 473+00.7 ASKEW 7°-06'-00" RT NEW 24'-99" PCSP (.064) OR CSAP (.060) RCP CPEP (SL) W/ 3 X 2 CONCRETE STONE FILL AT OUTLET

STA 473+16-475+66 NEW 18" 64' RCP CL III / CPEP (SL)

REV. 472+50 - 473+46 NEW 6" X 100' UNDERDRAIN W/ F.B. AT 474+40 LT

TO SPRING

APPROX W/L

DEMOLITION AND DISPOSAL OF BUILDING @ 473+50 LT

REV. PC 474+07.37

REMOVE EXISTING 18" RCP CL III / CPEP (SL)

NEW 24" RCP CL III / CPEP (SL)

474+60 NEW 3/4" X 60' SEAMLESS COPPER WATER TUBE IN NEW 6" X 60' SLEEVE FOR UTILITIES

"TBM #1C CHISLED "O" ON HEADWALL EL. 748.57

DIT. (P)

DOE, BERNARD W. & CYNTHIA

STA 476+16 - 476+83 REMOVE EXIST. 22" X 36" CSP & 18" X 40' RCP NEW 42" X 76' PCSP (.064) / CAMP (.060) / CPEP (SL)

SCARIFY EXISTING PAVEMENT 475+50-480+50

MAG 1996

N 49° 3' 23" E 1620.23'

REV. P.I. STA 479+66.37 BK. STA 478+98.12 AHD. EL 749.37 D 4° 45'

REV. P.I. STA 479+89.03 478+89.71

DRIVE (T)

WOODS

HOBBS, MICHAEL F. & SARAH A.O.

REV. STA 476+48 RT NEW 6" X 44' CARRIER PIPE UNDERDRAIN

GRANITE SLOPE EDGING RT 473+30-473+90

REV. CURVE 11
Δ 49° 3' 23"
D 4° 45'
R 1206.23'
L 1032.77'
T 550.43'
E 119.65'
B 0.069 FT/FT

480+00 RT NEW 15" X 44' OR RCP CL III CSP (.064) OR CPEP (SL)

CONSTRUCT DRIVE

LT	RT
471+00 GRAVEL (12')	467+25 GRAVEL (16')
478+50 GRAVEL (12')	474+00 PAVED (12')
474+50 GRAVEL (12')	480+00 GRAVEL (12')
467+25 GRAVEL (12')	

MATCH LINE TO SHEET 24

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SCALE: 1" = 50'
50 25 0 50
SCALE IN FEET

PROFILE

BY	DATE
CG, DAC	6-6-74
GLB	7-24-74
RAU	8-5-74
ZOM, DAC	8-5-74
K.A.U.	8-8-74

SURVEYED
PLOTTED
GRADES CHECKED
R.O.W. MONUMENTS SET
NOTE BOOK
NO.
STRUCTURE (ATTATHS CHKD)

MATCH LINE

EXISTING GROUND

PVI
STA 467+00
EL. 758.15'
LVC 300'
E 0.60'
K 1.87

PVI
STA 475+50
EL = 751.40'
LVC = 400'
E = 1.20
K = 1.55

PI STA 479+66.37 BK

DRIVE

GATE POST

BARN

PI STA 479+15.84

PI STA 478+98.12 AHD

+1.78 94

0.79 41

HORIZONTAL
50 25 0 50
SCALES IN FEET
20
10
0
VERTICAL

THIS SHEET FOR R.O.W. USE ONLY

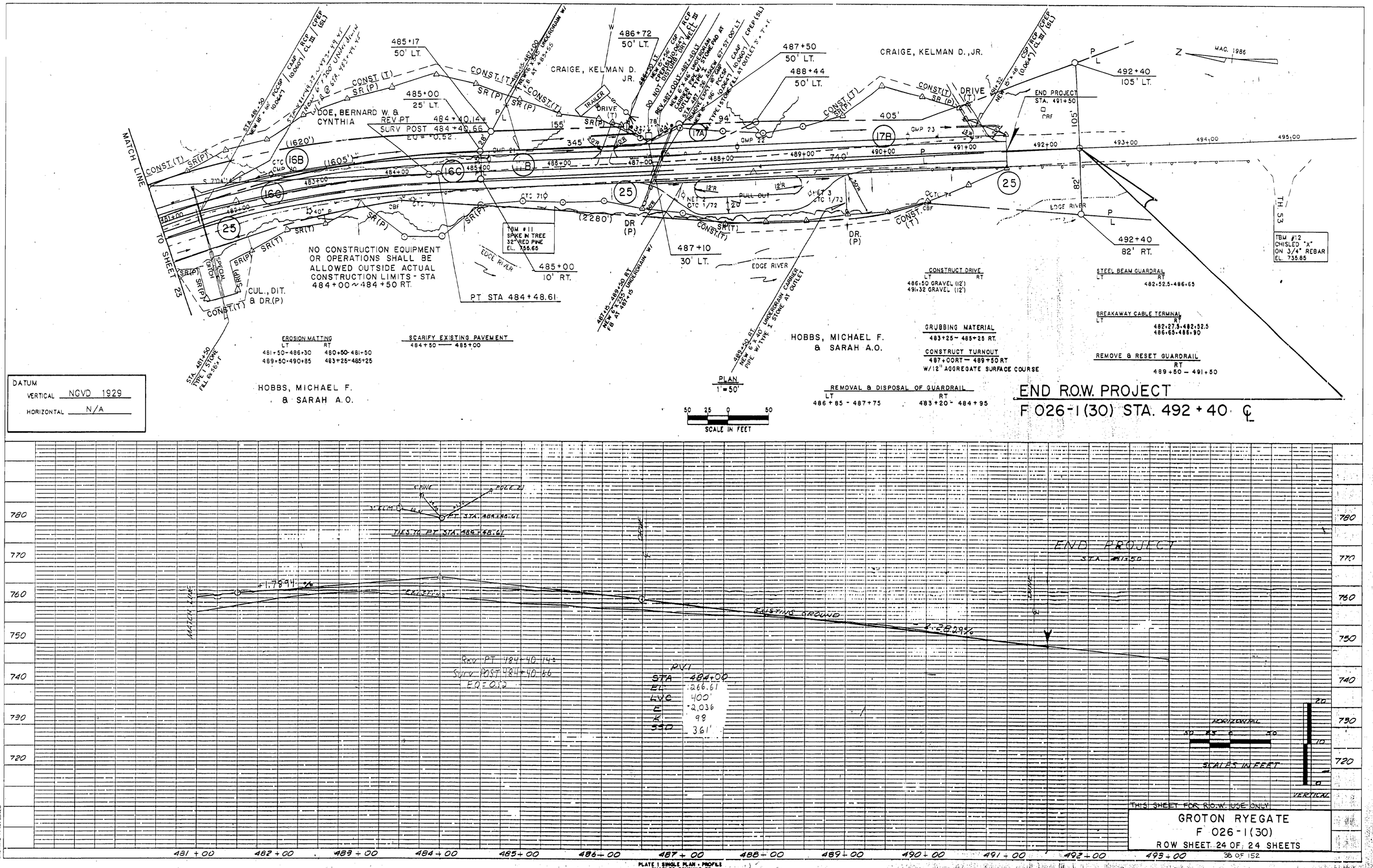
GROTON RYEGATE
F 026-1(30)
ROW SHEET 23 OF 24 SHEETS

790 780 770 760 750 740 730 720 710

466+00 467+00 468+00 469+00 470+00 471+00 472+00 473+00 474+00 475+00 476+00 477+00 478+00 479+00 480+00 481+00

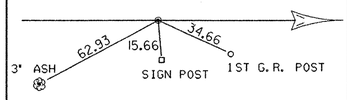
BRUNING 44-131 5428

PLATE I SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

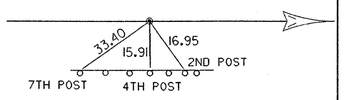

MATCH LINE
TO SHEET 23
CONST.(T) SR(P)
SR(T)
SR(P)
CUL., DIT. & DR.(P)
SPECIAL DITCH
STA 481+50 TYPE I STONE FILL 63.5± C.Y.
DOE, BERNARD W. & CYNTHIA
REV.PT 484+40.14±
SURV POST 484+40.66
EQ = +0.52
CRAIGE, KELMAN D. JR.
HOBBS, MICHAEL F. & SARAH A.O.
485+17 50' LT.
485+00 25' LT.
485+00 10' RT.
486+72 50' LT.
487+50 50' LT.
488+44 50' LT.
487+10 30' LT.
TRAILER
DRIVE (T)
PT STA 484+48.61
TBM #11 SPIKE IN TREE 32" RED PINE EL. 735.65
EDGE RIVER
NO CONSTRUCTION EQUIPMENT OR OPERATIONS SHALL BE ALLOWED OUTSIDE ACTUAL CONSTRUCTION LIMITS - STA 484+00 ~ 484+50 RT.
EROSION MATTING
LT: 481+50-486+30; 489+50-490+85
RT: 480+50-481+50; 483+25-485+25
SCARIFY EXISTING PAVEMENT
484+50 — 485+00
PLAN
1"=50'
50 25 0 50
SCALE IN FEET
DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A
CONSTRUCT DRIVE
LT: 486+50 GRAVEL (12')
RT: 491+32 GRAVEL (12')
GRUBBING MATERIAL
483+25 - 485+25 RT.
CONSTRUCT TURNOUT
487+00RT — 489+50 RT
W/12" AGGREGATE SURFACE COURSE
REMOVAL & DISPOSAL OF GUARDRAIL
LT: 486+85 - 487+75
RT: 483+20 - 484+95
STEEL BEAM GUARDRAIL
LT: 482+52.5-486+65
RT: 482+52.5-486+65
BREAKAWAY CABLE TERMINAL
LT: 482+27.5-482+52.5; 486+65-486+90
RT: 482+27.5-482+52.5; 486+65-486+90
REMOVE & RESET GUARDRAIL
RT: 489+50 — 491+50
END PROJECT STA. 491+50
492+40 105' LT.
492+40 82' RT.
TBM #12 CHISLED "X" ON 3/4" REBAR EL. 735.85
TH 53
EDGE RIVER
END R.O.W. PROJECT
F 026-1(30) STA. 492+40 ℄
PROFILE
Rev. PT 484+40.143
Surv POST 484+40.66
EQ = 0.52
PVI
STA 484+00
EL 766.61
LVC 400'
E 2.036
K 98
SSD 361'
-1.78%
+1.78%
-1.28%
EXISTING GROUND
MATCH LINE
END PROJECT STA. 492+50
SCALES IN FEET
HORIZONTAL
VERTICAL
THIS SHEET FOR R.O.W. USE ONLY
GROTON RYEGATE
F 026-1(30)
ROW SHEET 24 OF 24 SHEETS
431+00 482+00 483+00 484+00 485+00 486+00 487+00 488+00 489+00 490+00 491+00 492+00 493+00
780 770 760 750 740 730 720
PLAN
DATE: SURVEYED DEC. 80; PLOTTED FEB. 84; QUANTITIES CHECKED FEB. 85; R.W. NOTED FEB. 85; STRUCTURE NOTATIONS ADDED FEB. 85
BY: SURVEYED EJS, DEC.; PLOTTED KEC; QUANTITIES CHECKED EJS, DEC.; R.W. NOTED RJW
NOTE BOOK NO.
BRUNING 44-131-53428
PLATE 1 SINGLE PLAN - PROFILE CHARLES BRUNING CO.
38 OF 152

Sheet Number: 40

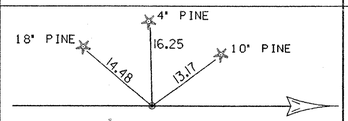
PC STA. 373+68.39



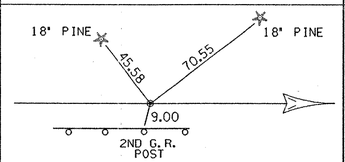
PT STA. 376+27.24



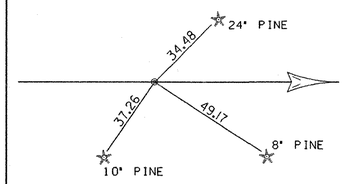
PC STA. 381+26.64



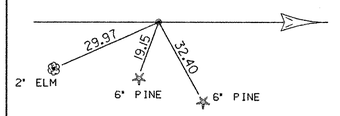
PT STA. 386+10.00



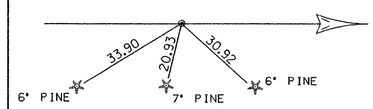
PC STA. 390+26.71



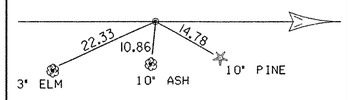
PI STA. 392+72.44



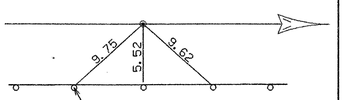
PT STA. 395+16.30



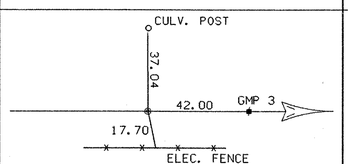
PC STA. 398+46.55



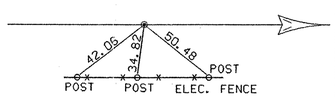
POC STA. 403+00.00



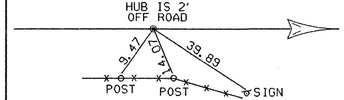
PT STA. 407+18.96



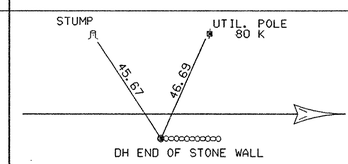
PC STA. 412+45.23



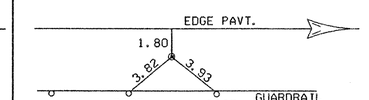
POC STA. 416+50.00



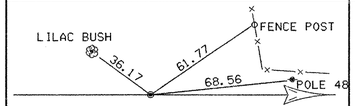
PT STA. 420+41.54



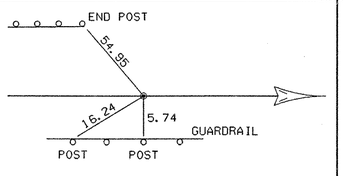
PC STA. 428+96.72



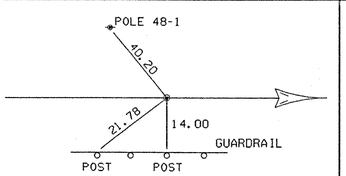
PI STA. 431+50.56 BK



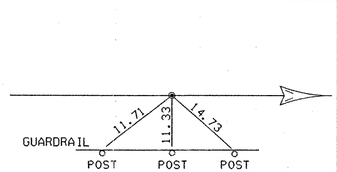
PT STA. 433+90.73



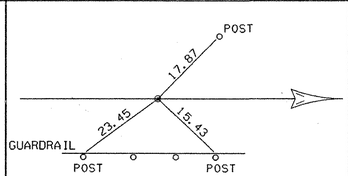
PC STA. 436+38.96



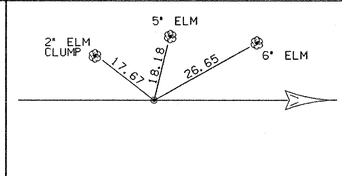
PT STA. 439+56.41



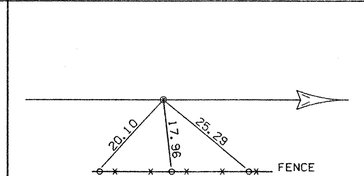
PC STA. 441+06.91



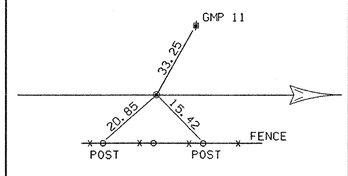
POC STA. 442+00.00



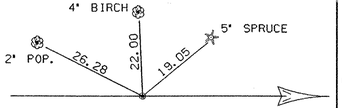
PT STA. 449+64.41



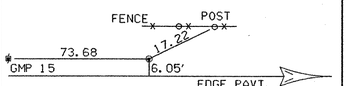
PC STA. 452+62.45



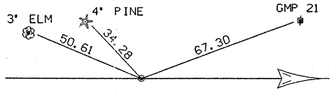
POC STA. 459+00.00



PT STA. 467+55.89



PT STA. 484+48.61



TIES NOT TO SCALE

SURVEYED BY D & K DATE DEC 85
DRAWN BY B. MCAVOY DATE DEC 96
SQUAD LEADER S. MENARD
DESIGN FILE NO. /sqdc/78d073/dd073.dgn
IPARM FILE dd073tie.i DATE PLOTTED 12-MAR-1997
PROJ. NAME GROTON - RYEGATE
PROJ. NO. F 026 - 1(30)
SHEET 40 OF 152 SHEETS

EVERGREEN TREES
LT.
377+00 ~ 377+75, 55'+- LT, 5 RED PINE, 10' HEIGHT @ 15' C-C
377+00 ~ 377+75, 65'+- LT, 5 RED PINE, 10' HEIGHT @ 15' C-C

NOTE: NEW TREES @ STA. 377+00 ~ 377+75 ARE TO BE PLANTED AS DETERMINED BY THE ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER.

DECIDUOUS TREES
LT.
377+00 & 377+75
75'+- LT. 2 FLOWERING CRABAPPLES, 10' HEIGHT

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

MATCH LINE TO SHEET 12

STEPS
CONCRETE & STONE WALLS
CEMETERY
STONE MONUMENT
CEMETERY LOT CORNER
GRAVE MARKER OR MONUMENT
TBM (R SPIKE IN POLE GMP #18 ELEV. 824.30
BM-SPOT ON H-STEEL PIN TOP CONC. POST EL. 813.93
CEMETERY STONE WALLS AND STEPS
WOODS
BASELINE
CENTERLINE
END NEW PAVEMENT MATCH TO EXISTING PAVEMENT 2+00
SIDE DRIVE
POST
GMP 12
GMP 13
GMP 14
GMP 15
GMP 10
GMP 11
FB
PI STA. 381+28.64
PI STA. 383+70.64 BK
STA. 383+66.00 AHD
END APPROACH BEGIN PROJECT STA. 379+50
SIDEROAD STA 0+00
PI STA. 386+10.00
STA. 387+50 ~ SIDEROAD STA. 0+00
ANGLE 120° 53'
ANGLE 91° 43' 47" @ 73° 36' 28" @
PC STA. 390+26.71
CHANNEL LINE STA. 5+55 DEFLECT 46°-02'-10"RT
TEMPORARY DETOUR LIMITS
MATCH LINE TO SHEET 14
TOP OF BERM (TYP)
TYPE I STONE FILL
TYPE II STONE FILL
TYPE IV STONE FILL
TYPE II STONE FILL
NOTE: BOUNDARY MARKERS PLACED ALONG PROPERTY OF JANICE A. BRUNN ARE TO BE SET 6" HIGH AS PER STD. 3-1
MAG. 1955
SCALE IN FEET
50 25 0 50
PLAN
SCALE: 1"=50'

EROSION MATTING
LT RT
377+50-377+80 382+25-384+00
382+00-384+00 386+75-391+00
1-1½ TO 1-2 SLOPE

CURVE 3
Δ 19° 20' 04"RT
D 4° 00' 00"
R 1432.40'
L 483.36'
T 244.00'
E 20.63'
B .083 FT/FT

SIDEROAD CURVE 1
PC 1+97.25
PI 2+00
PT 2+02.75
Δ 3° 00' 18" RT
D 57° 01' 34"
R 104.74'
L 5.27'
T 2.75'
E 0.036'

CONSTRUCT SIDEROAD
LT 387+50 PAVED RT 384+17.69 PAVED

CONSTRUCT DRIVE
LT 378+11 GRAVEL (12' WIDE) RT 381+99 GRAVEL (14' WIDE)

GRANITE SLOPE EDGING
377+375 - 381+87 RT
52 78

TYPE I STONE FILL
LT RT
377+00-377+50 384+00-387+00
(EXCAV. TO BE PAID AS TRENCH)

STEEL BEAM GUARDRAIL
LT RT
THRIE 1+50 RT TO 389+89 377+00 TO 377+48 382+52 TO 389+00

ANCHOR FOR STEEL BEAM GUARD RAIL
LT RT
TH #61 3+43.75 70

REMOVAL AND DISPOSAL OF GUARD RAIL
LT RT
387+95 - 388+55 384+70 - 386+12 387+40 - 386+60

SCARIFY EXISTING PAVEMENT
384+00-388+50
383+0

DRILLING & BLASTING SOLID ROCK SUBGRADE
379+25-384+00
379+50 TO 382+60

PROFILE
SURVEYED: E.S. DEC.
PLOTTED: 6-78
DRAWN: 6-78
CHECKED: C.J. DEC.
BL. NO. NOTED: Proj.
STRUCTURE NO'S/MTHS CHKD:
NOTE BOOK NO. 568

PV1
STA 381+00
ELV 827.16
LVC 70.0'
E 7.71
K 12.8
SSD 413'

NOTE: SEE SHEET 15D FOR PROFILE TH #16
SEE SHEET 15I FOR PROFILE TH #13

PV1
STA 388+50
ELV 800.00
LVC 900.00
E 1.02
K 110

STA 388+75.5 CONCRETE BOX CULVERT 4.5' x 5.9' H INSIDE

EL. 789.16 ℄ ROADWAY

ARCHIVED IN DPR

HORIZONTAL 50 25 0 50
VERTICAL 10 0
SCALES IN FEET

PLAN AND PROFILE
STA. 377+05 TO STA. 391+00
STATION - RYEGATE FORM 5-(1-30)

42 of 152

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-131 68428

TYPE I STONE FILL
LT 397+40 – 399+50 RT 397+30 – 399+50

EROSION MATTING
LT 395+50 – 397+00, 399+50 – 401+50, 403+45 – 404+50
RT 395+50 – 397+30, 399+80 – 400+75

REMOVE AND RESET FENCE
LT
399+10 ~ 402+00 (RESET TO NEW R.O.W. LINE)
402+00 ~ 404+30 (RESET BEYOND CONSTRUCTION LIMITS, THEN TO NEW R.O.W. LINE)

STEEL BEAM GUARDRAIL
LT 400+02.5 – 403+15 RT

MELT
LT 399+65 – 400+02.5, 403+15 – 403+52.5 RT

GRANITE SLOPE EDGING
LT 405+00 – 406+00 (404+94, 05) RT

NOTE: BOUNDARY MARKERS PLACED ALONG PROPERTY OF JANICE A. BROWN ARE TO BE SET 6" HIGH AS PER STD. J-1

MATCH LINE TO SHEET 13

PI STA. 392+72.44 BK
STA. 392+70.67 AHD

391+00 S 36°13'00" E

392+00

393+00

394+00

395+00

S 44° 29' 23" E

396+00

397+00

398+00

399+00

400+00

401+00

402+00

S 14°28'23" E

S 83°44'52" E

393+50 – 394+35 LT
NEW 18" x 24" RCP CL III
OR CPEP x 24" RCP CL III

394+90 LT
EXISTING 12" CMP REMOVE

393+50–397+00
NEW 6" x 240' UNDERDRAIN W/
FB AT 393+50
355

STA 394+88 LT 35' – 397+00 LT 35'
NEW 8" x 224' RCP CL III / CPEP
240

STA 397+00 ℄
NEW 24" x 60' RCP CL III / CPEP

CTC 32

CTC 32 1/2

CTC 33

CTC 34

STA 397+00 LT 38' – 399+50 LT 145'
NEW 24" x 240' RCP CL III
240

399+00–399+50
NEW 6" x 50' UNDERDRAIN W/
FB AT 399+00
154

STA 399+50 ℄
NEW 30" x 58' RCP CL III / CPEP
W/ 4'x4'ln B INLET

399+50–404+50
NEW 6" x 1904' UNDERDRAIN W/
FB AT 399+50
305

REMOVAL AND DISPOSAL OF GUARD RAIL
RT
402+75 ~ 403+80

ASPEN-PERMANENT MESH UTILITY EXCAVATION (TYP.) ON 6" MIN. CL. 'A' CONC. CRADLE W/ CURB & GUTTER

401+65 LT (4-WAY) – CPEP
NEW 24" x 32' RCP CL III
401+50 – 402+75
NEW 6" x 126' UNDERDRAIN CARRIER PIPE
175

STA 402+85.2 (SKEW 72.0) LT
REMOVE EXISTING 18" RCP
WITH TYPE I STONE FILL
REPLACE WITH
NEW 24" x 44' RCP CL III / CPEP
402+75 – 403+50
NEW 6" x 76' UNDERDRAIN CARRIER PIPE
175

STA 402+85.2 (SKEW 72.0) LT
REMOVE EXISTING 18" RCP
WITH TYPE I STONE FILL
REPLACE WITH
NEW 24" x 44' RCP CL III / CPEP
W/ 4'x4' ln OUTLET
24"@88° CPEP

403+50–404+50
NEW 6" x 100' UNDERDRAIN W/
FB AT 404+50
175

MAG. 1936

STA. 404+42.2 (SKEW 58.2) 24"@15°
REMOVE EXISTING 18" RCP
TO OUTLET, RELACE WITH
97' – 24" RCP / CPEP CL III
TO NEW DI AT AND NEW 24"@88° CPEP
W/ 4'x4' TYPE I STONE FILL AT OUTLET

404+94 05

405+00–406+00
NEW 6" x 144' UNDERDRAIN
150

MATCH LINE TO SHEET 15

TYPICAL TRENCH CROSS-SECTION
U.G. CABLE IN CONDUIT

FINISHED GRADE
ELECTRICAL CABLE MARKING TAPE SHALL BE PLACED 1'-0" BELOW FINISHED GRADE
sand shall be considered as bedding by item 632.10
Concrete Encasement extends to a point 10" each side of the limit of shoulder Concrete. Class B shall be placed 4" below & 4" above the 3" PVC conduits.
The sides of the trench shall provide forming for concrete.
location if required
36" MIN.
12" MIN.
SEE NOTE
NORMAL 24" ELECTRIC SERVICE

LEGEND
Ⓒ CONDUIT(S) FOR ELECTRICAL CABLE
Ⓣ TELEPHONE CABLE
Ⓒ TELEVISION CABLE
++ UNDERGROUND ELECTRICAL CABLE MARKING TAPE

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

ASPEN-PERMANENT MESH UTILITY EXCAVATION (TYP.) BY GRAD./NORTHLAND TELEPHONE AND HELI-COM CATV

CURVE 4
Δ 12° 14' 23" LT
D 2° 30'
R 2291.83'
L 489.59'
T 245.73'
E 13.14'
B 0.046'

PT STA. 395+16.30

396+00 LT
NEW 15" x 30' RCP CL III / CPEP
33

CONSTRUCT DRIVE
LT
394+61 GRAVEL (12' WIDE) 393+10.8 CONCRETE (12' WIDE)
401+66 GRAVEL (12' WIDE) 404+00 GRAVEL (12' WIDE)
393+76 GRAVEL (12' WIDE) 405+40 GRAVEL (20' WIDE)
397+15 GRAVEL (2' WIDE) 404+28 GRAVEL (50' WIDE)
396+00 GRAVEL (12' WIDE)
RT
394+15 109' 4" Wood Stake Marking Conduits To Be Laid In as Per Detail Sheet
Stakes for Guardrail
Stakes for Fence Detail
Tables on this Sheet

CONSTRUCT PAVED TURNOUT
404+50 – 405+30 RT (4' WIDE)

PC STA. 398+46.55

TBM #3
SPIKE IN ROOT
12" SCOTCH PINE
ELEV. 790.17

PLAN
SCALE: 1" = 50'
50 25 0 50
SCALE IN FEET

DECIDUOUS TREES
CRAB APPLE
1" – 2" CAL. 10' HEIGHT
397± RT – 2 EACH

398+50 RT 55' – 400+00 RT 95'
NEW 18" x 76' RCP CL III / CPEP
W/ 4'x4' STONE FILL 6' ln AT OUTLET
W/ 4'x4' ln AT INLET

PI STA. 403+00.66 BK
STA. 402+84.85 AHD

CURVE 6
Δ 39° 15' 31" LT
D 4° 30' 00"
R 1273.24'
L 872.41'
T 454.11'
E 78.56'
B 0.067 FT/FT

STA. 405+20 – 406+00
NEW 6" x 80' SEWER TUBE
FOR UTILITIES
9

CURB STOP

BM-NW COR. CONC. STEP EL. 781.11

PROFILE
SURVEYED
PLOTTED
DRAWN, CHECKED
SUBMITTED
STRUCTURE NO. KATHS-0140(00)
BY: R.D. FOSK, R.F. FOSK, CHK. FOSK, CHK.
DATE: DEC. 96, FEB. 97, FEB. 97

PLAN AND PROFILE
STA. 391+00 TO STA. 406+00
GROTON – RYEGATE F 027N-1(10)

PVI
STA. 397+00
EL. 791.50
L/C 300'
E 0.94'
K 120
550 416'

PVI
STA. 401+50
EL. 776.75
L/C 600'
E 4.09'
K 109

TIES TO PI STA. 392+72.44
TIES TO PI STA. 395+16.30
TIES TO PI STA. 398+46.55
TIES TO PVC STA. 403+00

-1.000 %
EXISTING GROUND
-3.500 %
+1.950 %
EXISTING GROUND

HORIZONTAL
50 25 0 50
SCALES IN FEET
20 10 0
VERTICAL

810 800 790 780 770 760 750 740

391+00 392+00 393+00 394+00 395+00 396+00 397+00 398+00 399+00 400+00 401+00 402+00 403+00 404+00 405+00 406+00

BRUNING 44-131 5X26

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

REV. 3-31-97

TYPE I STONE FILL
LT 418+25-417+00 RT 415+50-418+00
TH S-0+30-0+46

TYPE II STONE FILL
LT 418+20 RT 418+00

EROSION MATTING
LT 406+50-409+25 RT 411+75-416+25

CONSTRUCT DRIVE
406+25 ASPHALT (24) 419+50 GRAVEL (20')
410+98 GRAVEL (12') TH S-0+60(12)
419+60 GRAVEL (12')

CONSTRUCT SIDE ROAD
LT 417+30.23

STEEL BEAM GUARDRAIL
LT 418+13.5-418+63.5 RT 417+33.5-418+46

MELT
LT 417+76-418+13.5, 418+63.5-419+01
RT 416+96-417+33.5, 418+46-418+83.5

PI STA. 418+63.97 BK
STA. 418+22.30 AHD

MATCH EXISTING PAVEMENT STA.1+00

BURIED CABLE

TBM #5
CHISLED "X" ON TOP PLATE BOLT
EL. 768.09

REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL
LT 418+25-418+70 RT 417+94-418+44

TRANSPLANTING SHRUBS
419+75 LT - ROSE BUSH
*(PLACEMENT OF SHRUB TO BE DETERMINED BY ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER)

TEMPORARY DETOUR LIMITS

PT STA. 420+41.54

PC STA. 412+45.23

MATCH LINE TO SHEET 14

MATCH LINE TO SHEET 16

PT STA. 407+18.96

STA. 407+00 ASKEW 74°-00'-00" LT
REMOVE EXISTING 18" RCP
NEW 24" EXISTING 18" RCP REPLACE WITH CPEP
TYPE I STONE PAD AT OUTLET

STA. 415+00.6 ASKEW 89°-39'-00" RT
REMOVE EXISTING 18" RCP REPLACE WITH NEW 18" x 30" ARCH / CMP / CPEP
W/ 37'-0" TYPE I STONE FILL AT INLET AND OUTLET, END SECTION AT INLET

APPROX. PERMANENT AERIAL UTILITY RELOCATION FOR BY SNE NORTHLAND TELEPHONE, AND HELLICON CATV

SCARIFY EXISTING PAVEMENT
419+00-421+00
423+80

STA. 417+30.23 STA. 0+00 SIDE ROAD
ASKEW 74°32'39" RT

STA. 418+20 ASKEW 83°-30' LT
NEW 8"-0" W.T. x 30'-0" CHAMFER W/ 6"-0" C.I. HEADWALL, GASKET, AND 10'-0" SLOPE TO TOP

STA. 418+36 ASKEW 89°-30' LT
REMOVE EXIST. CORRUGATED METAL PIPE
SEE SHEET 14 FOR INFO

TYPE III STONE FILL (TYP.)

CHANNEL BASELINE STA. 5+00
PI STA. 418+80 ASKEW 89°-30' LT

APPROX. PERMANENT AERIAL UTILITY RELOCATION TO BE BY SNE NORTHLAND TELEPHONE, AND HELLICON CATV

PAVED ENTRANCE

© TRANS POLE

CURVE 6
Δ 43° 47' 48" RT
D 5° 30'
R 1041.74'
L 796.31'
T 418.74'
E 81.01'
B .074 FT/FT

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SURVEYED
PLOTTED
GRADES CHECKED
NOTE BOOK
NO.
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY CBC, KLW, GCP, KAU
DATE DEC. 92, DEC. 94

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
NOTE BOOK
NO.
STRUCTURE ROTATING CHKD
BY KLW, GCP, KAU, KAU
DATE DEC. 92, DEC. 94, FEB. 95, FEB. 95

CULVERT POST
PT STA. 407+18.96
EXIST. FENCE
TIES TO PT STA. 407+18.96
+1.950 %
EXISTING GROUND
MATCH LINE
ASPHALT DRIVE
TIES TO PC STA. 412+45.23
TIES TO POC STA. 416+50
3.5:1.0 %
EXISTING GROUND
STA. 419+23.36
15.1' LEP
GRAVEL DRIVE
GRAVEL DRIVE
MATCH LINE
STUMP
PT STA. 420+91.54
END OF STONE WALL
TIES TO PT STA. 420+91.54

PVI
STA 411+50
EL 795.25
LVC 700'
E 4.77'
K 128
SSD 415

NOTE: SEE SHEET 5 FOR "H" & PROFILE

HORIZONTAL
50 25 0 50
SCALES IN FEET
VERTICAL
20 10 0

PLAN AND PROFILE
STA. 406+00 TO STA. 421+00
GROTON - RYE GATE ERZG-1(39)
44 of 152

800 790 780 770 760 750 740 730
406+00 407+00 408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00 416+00 417+00 418+00 419+00 420+00 421+00

BRUNING 44-131-93428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

NOTE: 422+05± ~ 422+92± LT
STOCKPILE TOPSOIL FOR GRADING OF GARDEN AREA (COST TO BE INCLUDED IN COMMON EXCAVATION)

EROSION MATTING

LT	RT
428+50 ~ 429+50	431+50 ~ 433+00

TYPE I STONE FILL

LT	RT
423+50 ~ 428+50 +20	

TRANSPLANTING SHRUBS
421+56 LT - CURRANT BUSH
*(PLACEMENT OF SHRUB TO BE DETERMINED BY ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER)

HIGH TENSION LINES

APPROX. LOC. GARDEN AREA #44

MATCH LINE TO SHEET 15

CURRANT BUSH

CMP

423+50 RT NEW 12"X36" CSP (.064) OR CAAP (.060) OR CPEP W/ PRCCD, 2:6* ELBOW AND TYPE I STONE AT OUTLET

423+50 - 425+30 LT NEW 12" DIA. UNDERDRAIN CARRIER PIPE

STA. 425+54 ARKEW 79°08'07" LT - RT REMOVE EXIST. 18" CSP NEW 24"X24" RCCSP W/ TYPE I STONE FILL AT INLET AND OUTLET 4'9"H W/END SECTION AT INLET

12"X36" CSP (.064) / CAAP (.060m) / CPEP

APPROX. TEMPORARY AERIAL UTILITY RELOCATION RTE 50, CMP, NORTHLAND TELEPHONE, AND HELICON CATV

425+50 - 426+50 NEW 6"X246' UNDERDRAIN W/ FB AT 425+95

STEEL BEAM GUARDRAIL

LT	RT
	MAINLINE 422+37.5 MAINLINE 431+00
	MAINLINE 433+37.5 MAINLINE 436+00

426+00 - 428+00 NEW 6"X200' UNDERDRAIN W/ FB AT 428+00

PC STA. 428+96.42

CTC 46

CTC 1/46 1/2

1/45

428+00

429+00

426+00

427+00

424+00

425+00

423+00

422+00

421+00

FB

STA. 428+96.72 ARKEW 69°33'26" LT REMOVE EXISTING RIGID RELEASE W/ NEW 24"X58'RCCSP / CAAP (0.060m) / CPEP W/ TYPE I STONE FILL AT OUTLET 4'9"H AT INLET W/ END SECTION

HSE

PI STA. 431+50.26 BK
STA. 431+36.89 AHD

TBM #6
SPIKE IN ROOT
36" POPLAR
EL. 783.52

VT TEL CO 48
GUY POLE

S 39°57'05" E

S 07°49'16" E

PT 443+90.73

REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL

LT	RT
428+40 ~ 430+80	423+10 ~ 426+00
432+40 ~ 433+45	427+58 ~ 430+50
	432+78 ~ 433+54

MAG. 1986

435+00-436+00 NEW 6"X100' UNDERDRAIN W/ FB AT 435+00

430+00

431+00

432+00

433+00

434+00

435+00

436+00

20'R

CONSTRUCT DRIVE

LT	RT
431+85 PAVED (12' WIDE)	
434+04 PAVED (12' WIDE)	

* SEE SPECIAL PROVISIONS CONCERNING T.H. 50 APPROACH

TREATED TIMBER CURB

LT	RT
422+50 ~ 426+25	
433+00 ~ 435+50	

APPROX. TEMPORARY AERIAL UTILITY RELOCATION RTE 50, CMP, NORTHLAND TELEPHONE AND HELICON CATV

STA 426+00 - PCCSP / CAAP / (0.060m) / CPEP W/ 4'-0" DI AT INLET W/ TYPE I STONE FILL AT OUTLET 4'9"H

APPROX. TEMPORARY AERIAL UTILITY RELOCATION RTE 50, CMP, NORTHLAND TELEPHONE, AND HELICON CATV

431+00-433+50 NEW 6"X250' UNDERDRAIN W/ FB AT 433+00

STA 431+09.27 ASKEW 85°51'06" RT. REMOVE EXIST. 18" RCP NEW 24"X108' RCCSP / CAAP (0.060m) / CPEP W/ TYPE I STONE FILL AT OUTLET AT INLET 9'-4", AND END SECTION

433+50 RT. NEW 6"X78' UNDERDRAIN CARRIER PIPE W/ TYPE I STONE AT OUTLET

PLAN
SCALE: 1"=50'

50 25 0 50
SCALE IN FEET

MELT

LT	RT
	422+00-422+37.5
	431+00 - 431+37.5
	433+00-433+37.5

CURVE 7

△	32° 07' 49" RT
D	6° 30' 00"
R	881.47
L	494.31
T	253.84
E	35.82
B	0.078 FT/FT

DRILLING & BLASTING SOLID ROCK SUBGRADE
434+75 — 436+25

SCARIFY EXISTING PAVEMENT
421+00 ~ 423+50

433+50 RT - 434+00 NEW 12"X24' CSP (.064), CPEP / CAAP (.060) W/ PRCCD, 1-25* ELBOW W/ TYPE I STONE AT OUTLET

MATCH LINE TO SHEET 17

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PV I
STA 421+50
EL 760.25
LVC 800'
E 6.80
K 118

LILAC BUSH 68.56 POLE 48
PI STA 431+50.56 BK
TIES TO PI STA 431+50.56 BK

END POST 54.85
PT STA 433+90.73
TIES TO PT STA 433+90.73

PV I
STA. 435+50
EL 776.35
LVC 500'
E 1.36
K 230

GUARDRAIL 382 373 POST POST
1.30 PC STA 428+96.72
TIES TO PC STA 428+96.72

EXISTING GROUND
+3.300%
-1.000%

PV I
STA. 428+50
EL. 783.35
LVC 600'
E 3.23
K 140
SSD 431.00

MATCH LINE
MATCH LINE

790
780
770
760
750
740

HORIZONTAL
50 25 0 50
SCALES IN FEET
20
10
0
VERTICAL

PLAN AND PROFILE
STA. 421+00 TO STA. 436+00
GROTON - KYE GATE FOZA-1(38)
45 of 152

421+00 422+00 423+00 424+00 425+00 426+00 427+00 428+00 429+00 430+00 431+00 432+00 433+00 434+00 435+00 436+00

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-131 53428

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

MATCH LINE TO SHEET 16

Rev P.C. 436+55.97

PC STA. 436+38.96

436+00–437+00 NEW 6"X100' UNDERDRAIN

STA. 437+05 ± ASKEW 87°-17'-24" RT REMOVE EXISTING 36" RCP REPLACE W/ NEW 30"X 106' RCP (0.012") / CMAP (0.024") / CPEP (0.024") TYPE I STONE FILL AT OUTLET W/ 8'X 11'X 2' TYPE I STONE FILL AT OUTLET

Rev 108'+ 441+10

437+00–440+50 NEW 6"X 250' UNDERDRAIN W/ F.B. AT 440+50

GRANITE SLOPE EDGING
LT RT
442+70–443+30

TEL P

FAVED DRIVE

POND

PC STA. 441+06.91

TBM #7
CHISLED "D"
TOP OF STONE
HEADWALL
EL. 781.34

GM - NE. COR.
HEADWALL
ELEV. 778.24

Rev 441+05 LT 18" Dewe Pipe RETAIN

441+98 ± 42" CSP (0.064") W/ 8'X 11'X 2' TYPE I STONE FILL AT OUTLET

Rev 441+98 ± 42" CSP (0.064") W/ 8'X 11'X 2' TYPE I STONE FILL AT OUTLET

Rev 441+98 ± 42" CSP (0.064") W/ 8'X 11'X 2' TYPE I STONE FILL AT OUTLET

Rev 441+98 ± 42" CSP (0.064") W/ 8'X 11'X 2' TYPE I STONE FILL AT OUTLET

441+98 ± 42" CSP (0.064") W/ 8'X 11'X 2' TYPE I STONE FILL AT OUTLET

441+23–442+87 RT NEW 6"X 274' UNDERDRAIN W/ F.B. AT 442+97

Rev 445+10

WELL

APPROX. UNDERGROUND UTILITY REPLACEMENT

SCARIFY EXISTING PAVEMENT
446+50–451+00
Rev 447+70 ~ 449+60

444+00–448+00 LT NEW 6"X 400' UNDERDRAIN W/ F.B. AT 444+00

PI STA. 445+40.73 BK
STA. 445+30.59 AHD

CURVE 9
Δ 21° 26' 15" RT
D 2° 30'
R 2291.83'
L 857.50'
T 433.82'
E 40.70'
B 0.046 FT/FT

Rev CURVE #9
Δ = 15°-08'-22" RT
D = 3°-30'
R = 1637.02
L = 432.58
T = 217.53
E = 14.39
BANK

MELT
LT RT
442+00 442+37.5
446+40 446+77.5

STEEL BEAM GUARDRAIL
LT RT
Rev 436+00–442+00
446+75 451+00

REMOVAL AND DISPOSAL OF GUARDRAIL
LT
436+65–437+80

Rev 436+60 to RT +78
437+68–437+97
439+10–441+45

MAG. 1986

ADDITIONAL LIMITS AS NEEDED FOR POSSIBLE SOFT ROCK/EARTH EXCAV.

TBM #8
CHISLED "D"
ON HEADWALL
EL. 758.55

RT STA. 449+64.41

Rev P.I. 448+38.79 Bk
= 448+36.25 Ah

430+68.9 ± ASKEW 87°-27'-55" RT EXISTING 36" RCP REMOVE OR CMAP (.105) W/ NEW 48" X 132" ± RCP (0.012) W/ 12' STONE FILL AT INLET AND TYPE II STONE FILL AT OUTLET W/ CMAP (.105) W/ CASCADE ENERGY DISSIPATOR AT OUTLET AND OUTLET HEADWALLS AT INLET

MATCH LINE TO SHEET 18

Rev P.C. 450+53.81 =
Surv P.O.T. 450+60.64
EQ = – 6.83

4' CHAIN LINK FENCE
LT
443+00 ~ 445+00

(NOTE: ACTUAL LENGTH AND OFFSET TO BE DETERMINED IN FIELD BY THE ENGINEER IN AGREEMENT WITH THE PROPERTY OWNER, FENCE TO BE ERECTED OUTSIDE R.O.W. LINE)

CURVE 8
Δ 12°-41'-53" LT
D 4°-00'
R 1432.39'
L 317.45'
T 159.38'
E 8.84'
B 0.063 FT/FT

Rev. CURVE #8
Δ 6°-24'-00 LT
D 2°-15'-00"
R 2546.48
L 284.44
T 142.37
E 3.98

Rev PI 437+98.34 Bk =
437+78.09 Ah

Rev PT STA 439+40.41

PI STA. 437+98.34 BK
STA. 437+87.03 AHD

STA 441+27.9 ± ASKEW 74°-07'-35" RT REMOVE EXISTING 24" RCP REPLACE W/ NEW 24" ± RCP (0.012") / CMAP (0.024") / CPEP (0.064") W/ 11'X 12' TYPE I STONE FILL AT OUTLET & 8'X 11'X 2' TYPE I STONE FILL AT INLET

Rev STA 441+27.9 @ 90° NEW 24" X 114' CPEP W/ DI-G INLET TYPE I STONE FILL @ OUTLET

442+50–445+00 NEW 6"X 250' UNDERDRAIN W/ F.B. AT 442+50

TEL P o 48-3

WELL

HSP

STA 445+00 RT 87.00' NEW UNDERDRAIN CARRIER PIPE W/ TYPE I STONE FILL AT OUTLET

STA 445+07.5 RT 80.00' REMOVE EXISTING 12" RCP AND DI

Rev P.C. Sta 446+21.25

APPROX. PERMANENT AERIAL UTILITY RELOCATION (PE, GTE, CMP, NORTHLAND TELEPHONE, AND HELICON CATV)

APPROX. PERMANENT AERIAL UTILITY RELOCATION (PE, GTE, CMP, NORTHLAND TELEPHONE, AND HELICON CATV)

STA 448+00 NEW 18"± RCP(0.012") / CMAP(0.064") / RCP / CPEP (0.064") WITH TYPE I STONE FILL 4'-9" AT OUTLET

CONSTRUCT DRIVE
LT RT
441+98 PAVED (16') (ASKEW 47°-00'-00" RT)
443+37 GRAVEL (12')
446+20 GRAVEL (16')

DRILLING AND BLASTING SOLID ROCK SUBGRADE
438+75–439+75
442+25–448+50
438+40 ~ 440+50

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

EROSION MATTING
LT RT
437+50–442+75
445+30–448+50

STONE FILL TYPE I
LT RT
448+50–451+00 (EXCAV. TO BE PAID AS TRENCH)
441+28

PT STA. 439+56.41
11.71 / 18.73
GUARDRAIL

PI STA. 437+98.34 BK

PC STA. 441+06.91
GUARDRAIL

PC STA 436+38.96
POST GUARDRAIL POST

5" ELM
2" ELM CLUMP
6" ELM
POC STA. 442+00

PT STA. 449+64.41
FENCE

TIES TO PT STA. 439+56.41

TIES TO POC STA. 442+00

TIES TO PC STA. 436+38.96

EXISTING GROUND

+1.1767 %

-4.6000 %

PVI
STA. 446+25
EL. 789.00
LVC 750.00
E 5.42
K 130
SSD 415

800 790 780 770 760 750 740

436+00 437+00 438+00 439+00 440+00 441+00 442+00 443+00 444+00 445+00 446+00 447+00 448+00 449+00 450+00 451+00

HORIZONTAL
50 25 0 50
SCALES IN FEET
20 10 0
VERTICAL

PLAN AND PROFILE
STA. 436+00 TO STA. 451+00
GROTON - RYEGATE F026-1(30)

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-131 53428

MATCH LINE TO SHEET 17

MATCH LINE TO SHEET 19

ADDITIONAL LIMITS AS NEEDED FOR POSSIBLE SOFT ROCK/EARTH EXCAVATION

DRILLING AND BLASTING SOLID ROCK SUBGRADE
454+25 – 461+50
453+50 ~ 461+50
458+80 ~ 459+30
462+75 ~ 463+50

SCARIFY EXISTING PAVEMENT
451+00-457+50 451+30 ~ 453+50
462+50-466+00
457+10 ~ 458+50

STEEL BEAM GUARDRAIL
RT
451+00-458+52.5

MELT
RT
458+52.5-458+90

REMOVAL AND DISPOSAL OF GUARDRAIL
RT
451+00 ~ 458+37
460+20 ~ 462+63

REV.
CURVE 10
Δ 57° 02' 40"LT
D 3° 49' 11"
R 1500.00'
L 1493.42'
T 815.19'
E 207.20'
B 0.061 FT/FT

REV PC 452 + 55.20

REV PI 460 + 70.50 =
459 + 33.54
Δ 57° 2' 40"
D 3° 49' 11"

APPROX. PERMANENT AERIAL UTILITY RELOCATION RTE BY GMP NORTHLAND TELEPHONE, AND HELICON CATV

WOODS

GMP

GMP 12

GMP 13

MF 14

TBM 9
TBM #9
SPIKE IN ROOT
18" ELM
EL 771.46

EDGE OF RIVER

EROSION MATTING
LT
452+00-453+50
455+25-459+25
462+00-466+00

EROSION MATTING FOR SLOPE PROTECTION
RT.
453+75-458+25

TYPE I STONE FILL
LT
451+00-452+00
(EXCAV. TO BE PAID AS TRENCH)

TYPE II STONE FILL FOR SLOPE PROTECTION
RT.
453+75-458+25

GRUBBING MATERIAL
RT
453+75 – 458+25

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

MAG. 1986

STA 459+00 NEW 18" ∅ RCP / CAMP / CPEP W/ 2-35° ELBOWS AND TYPE I ES STONE AT OUTLET

STA 459+00 REMOVE EXIST. 18" RCP AND DI NEW 18"x 14" RCP / CAMP / CPEP W/ 1-35° & 1-28° ELBOW, 4'-4" DI @ INLET & TYPE II STONE @ OUTLET

STA 454+50 @ 8.0° NEW 18" x 70' CSP W/ 2 ELBOWS 4'x4' DI & INLET STONE FILL TYPE II @ OUTLET

STA 452+80 – 454+75 LT REMOVE EXIST. 18" RCP NEW 6'x 274' UNDERDRAIN W/ FB AT 452+01

STA 457+55 – 457+95 NEW 6'x 315' UNDERDRAIN W/ FB AT 457+55

STA 458+00 – 460+50 NEW 6'x 250' UNDERDRAIN W/ FB AT 461+50

STA 461+32 – 464+70 NEW 6'x 338' UNDERDRAIN W/ FB AT 461+57

464+11 ASKEW 87°07' LT EXISTING 18" RCP REMOVE

464+80 – 466+00 NEW 6'x 120' UNDERDRAIN W/ FB AT 464+80

STA 464+70 – 466+00 NEW 18"x 90' RCP W/ 4'x 4' D.I. @ INLET

REV. STA 464+70 – 466+00 REMOVE EXISTING 18" RCP

APPROX. PERMANENT AERIAL UTILITY RELOCATION RTE BY GMP NORTHLAND TELEPHONE, AND HELICON CATV

POLE 11
P.O.C. STA. 452+62.45
POST
POST

SURV. PI STA 460+77.65 P.K.
STA 459+40.61 AHD
Δ 57° 2' 42" LT
D 3° 49' 11"

4" BIRCH
8" SPRUCE
2" POP.
POC STA 459+00

TIES TO POC STA 459+00

TIES TO P.C. STA 452+62.45

MATCH LINE

EXISTING GROUND

-4.6000 %
+1.8250
+1.8250 %
-2.4000 %

PVI
STA 453+00
ELEV 757.95'
LVC 600'
E 4.82
K 93'

PVI
STA 461+00
ELEV 772.55'
LVC 600'
E 3.17
K 142'
SSD 434'

HORIZONTAL
50 25 0 50
SCALES IN FEET
20
10
0
VERTICAL

790 780 770 760 750 740 730

451+00 452+00 453+00 454+00 455+00 456+00 457+00 458+00 459+00 460+00 461+00 462+00 463+00 464+00 465+00 466+00

PLAN AND PROFILE
STA. 451+00 TO STA. 466+00
GROTON – RYEGATE F026-1 (30)
47 of 152

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-1315428

EROSION MATTING
LT RT
466+00-467+50 480+50-481+00

SCARIFY EXISTING PAVEMENT
476+25-480+50
478+00 ~ 480+50

STA 466+00-469+50
6' X 250' UNDERDRAIN

STA 467+02-468+50 LT
NEW 15" X 48" CSP-RPA OR CMP
OR CSP X 48" CMP-RPA OR CMP
W/4:1 E.E.

REV PT 467+48.74

PT STA. 467+55.89

MATCH LINE TO SHEET 18

WOODS

467+25 RT
NEW 15" X 33" CSP OR CMP-RPA
OR RCP CL III OR CPEP

STA 468+50
NEW 24" CPEP

468+50 RT
NEW 24" X 76" PCSP 10641 OR CPEP
OR CMP 10.060 W/ TYPE I STONE
AT OUTLET

NOTE: EXCAVATION FOR INSTALLATION OF CULVERT AT REV. STA 468+50 RT TO BE KEPT TO A MINIMUM NOT TO EXCEED 30' IN WIDTH.

469+16
EXISTING 18" CMP REMOVE

* BUILDING TO BE MOVED BY OTHERS

APPROX. 285' TO WELL

47 +00 LT
NEW 15" X 46" CSP-RPA OR CPEP

468+54 - 472+50
NEW 6' X 446' UNDERDRAIN W/
FB AT 468+54
FB AT 469+54
FB AT 472+50

APPROX. PERMANENT AERIAL UTILITY RELOCATION RTE. BY GMP, NORTHLAND TELEPHONE, AND HELICON CATV

REV. PC 474+07.37

REV. STA 473+09.7 ASKEW 7° LT
REMOVE EXISTING 18" RCP
NEW 18" X [illegible] RCP CL III / CPEP

APPROX. W/L

CURB STOP @ 50' LT OF ℄

FB STA. 474+15.84

BARN

HSE

474+80
NEW 1" COPPER WATER TUBE
COPPER 3/4" 60' SEAMLESS
NEW 6" X 60' SLEEVE FOR UTILITIES

473+32 ~ 476+31 LT
NEW 6" X 275' UNDERDRAIN
W/FB @ 473+52 LT

REV. STA 473+09.7 ASKEW 78°+00
NEW 24" X 36" PCSP / CMP 7.5 X 5.5 OR
0.060 / CMP 7.5 X 5.5 OR 0.060 / RCP CL III / CPEP
W/ 3 X 20 X TYPE I STONE FILL AT OUTLET

REV. STA 472+50-473+50
NEW 18" X 68' RCP CL III / CPEP

REV. STA 474+50-475+48
NEW 6" X 98' UNDERDRAIN W/
FB AT 474+50
FB AT 475+48

TBM #10
CHISLED "□"
ON HEADWALL
EL. 748.57

STA 476+33 SKEW 82° - 20' - 40° RT
REMOVE EXIST. 24" RCP
NEW 42" X 76' PCSP / CMP 24 X 18 OR 804
W/TYPE II (0.105") / (0.135") TRASH RACK
EAGLE HEADWALL & OUTLET
AND SPECIAL DITCH @ OUTLET

APPROX PERMANENT AERIAL RELOCATION TELEPHONE, GMP, HELICON CATV

MAG. 1986

S 56°07'37" E

REV PI 479+57.80 =
478+89.71

SURV. PI STA. 479+66.27 BK
STA. 478+98.18 AHD
Δ 49° 3' 23"
D 4° 45'

478+50
6" X 72" PCSP
0.064 / RCP CL III / CPEP

S 07°04'14" E

REV. STA 480+41 - 481+20 LT
NEW 6" X 79' UNDERDRAIN

MATCH LINE TO SHEET 20

CMP 18

CMP 19

NOTE: SPECIAL DITCH TO FOLLOW EXISTING OUTLET DITCH FOR +/- 175 LF

REV. STA 476+48 RT
NEW 6" X 22' UNDERDRAIN
CARRIER PIPE

GRANITE SLOPE EDGING
RT
473+00-473+90
473+20 ~ 473+95

REV.
CURVE 11
Δ 49° 3' 23" RT
D 4° 45'
R 1206.23'
L 1032.77'
T 550.43'
E 119.65'
B 0.069 FT/FT

WOODS

480+00 RT
NEW 15" X 44' CSP 10641 OR CPEP
OR RCP CL III

CONSTRUCT DRIVE
LT RT
471 +00 GRAVEL (12') 467+25 GRAVEL (16')
478+50 GRAVEL (12') 474+00 PAVED (12')
474+50 GRAVEL (12') 480+00 GRAVEL (12')
467+25 GRAVEL (12)

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

PROFILE

POST
POLE 15/4 73.62' P.I. STA. 467+55.89
6.06 OFF ℄ BAY.
TIES TO P.I. STA. 467+55.89

FIELD DRIVE

MATCH LINE

-3.40
-0.7941
EXISTING GROUND

PVI
STA 467+00
EL. 758.15
LVC 300'
E 0.60
K 187'

-0.7941
+1.7894

PVI
STA 475+50
ELEV 751.40
LVC 400'
E 1.29
K 155'

DRIVE

P.I. STA. 479+66.18 BK

EXISTING GROUND

MATCH LINE

HORIZONTAL
50 25 0 50
SCALES IN FEET

VERTICAL
20
10
0

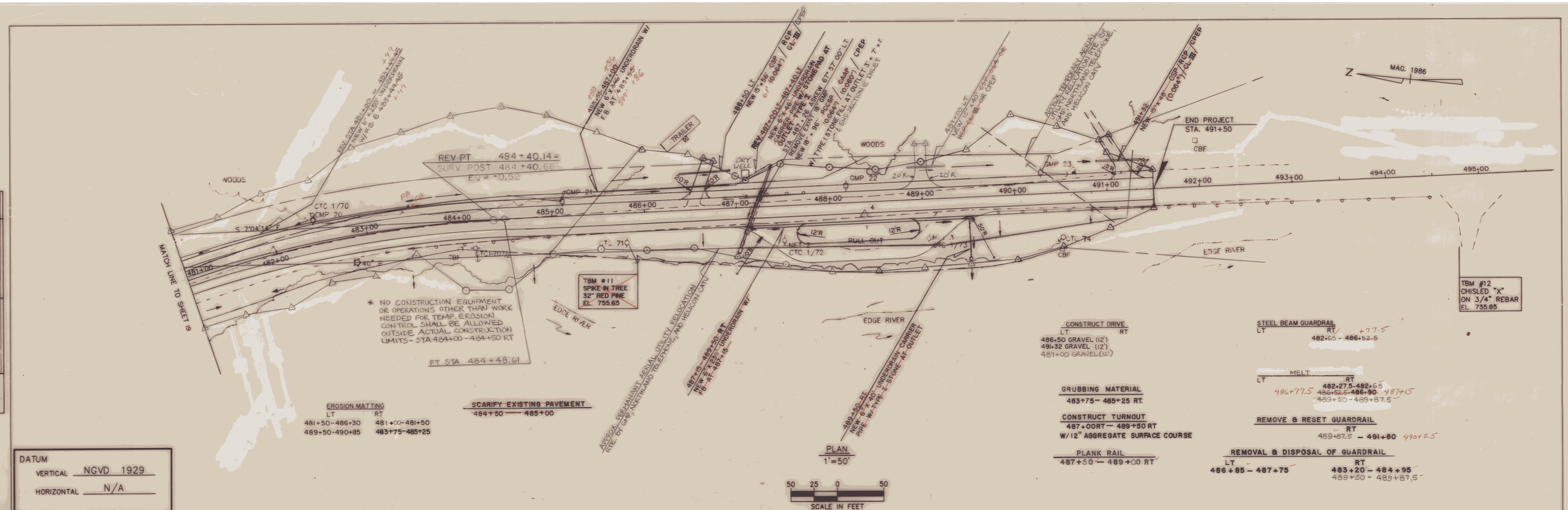
790 780 770 760 750 740 730 720 710

466+00 467+00 468+00 469+00 470+00 471+00 472+00 473+00 474+00 475+00 476+00 477+00 478+00 479+00 480+00 481+00

PLAN AND PROFILE
STA. 466+00 TO STA. 481+00
GROTON - KYEGATE FOAL-1(30)

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-1315428



EROSION MATTING

LT	RT
481+50 - 486+30	481+00 - 481+50
489+50 - 490+85	483+75 - 485+25

SCARIFY EXISTING PAVEMENT
484+50 — 485+00

CONSTRUCT DRIVE

LT	RT
486+50 GRAVEL (12')	
491+32 GRAVEL (12')	
489+00 GRAVEL (12')	

GRUBBING MATERIAL
483+75 - 485+25 RT.

CONSTRUCT TURNOUT
487+00 RT — 489+50 RT
W/12" AGGREGATE SURFACE COURSE

PLANK RAIL
487+50 — 489+00 RT

STEEL BEAM GUARDRAIL

LT	RT
	482+65 - 486+52.5 +77.5

MELT

LT	RT
	482+27.5 - 482+65
486+77.5	486+52.5 - 486+90 487+15
	489+50 - 489+87.5

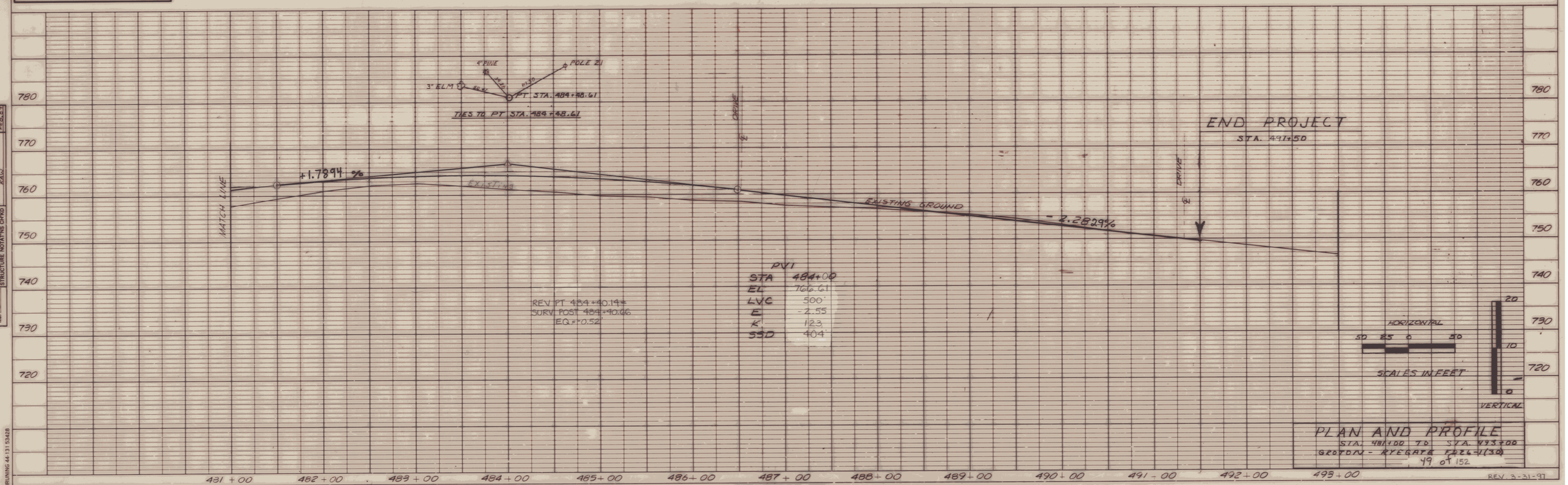
REMOVE & RESET GUARDRAIL

LT	RT
	489+87.5 - 491+50 490+2.5

REMOVAL & DISPOSAL OF GUARDRAIL

LT	RT
486+85 - 487+75	483+20 - 484+95
	489+50 - 489+87.5

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A



PLAN AND PROFILE

STA. 481+00 TO STA. 493+00
GROTON - KYEGATE F022-1(30)
49 OF 152

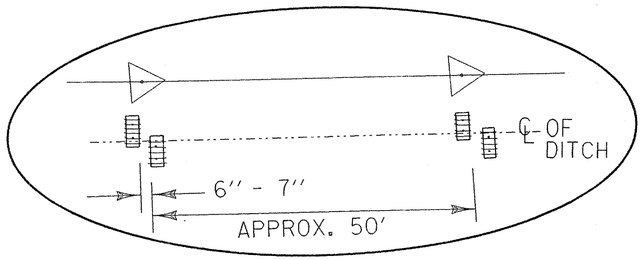
REV. 3-31-97

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

BRUNING 44-131-53428

TEMPORARY EROSION CONTROL PLANS TYPICAL SHEET

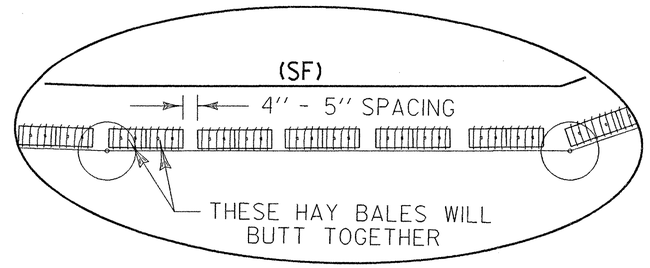
1. HAY BALE DITCH CHECK DAMS



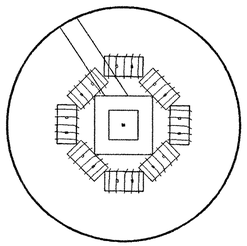
** DOF ← / → DOF DIRECTION OF FLOW

(SF) DENOTES GEOTEXTILE FOR SILT FENCE **

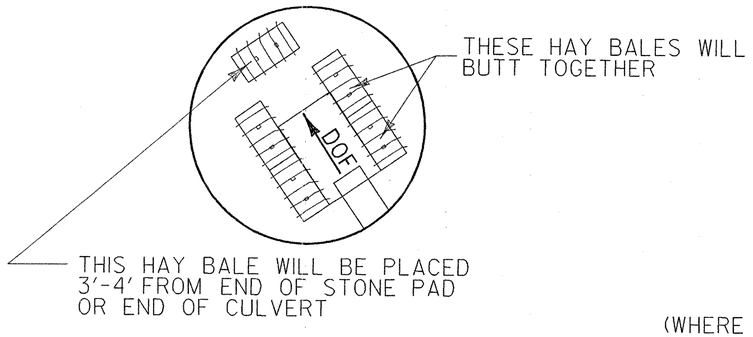
2. SILT FENCE & HAY BALE EROSION CHECK @ FILL TOE / DAYLIGHT SECTION



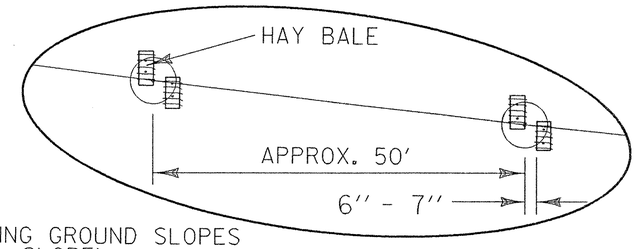
3. HAY BALE PROTECTION @ DROP INLET



4. CULVERT OUTLET PROTECTION BEYOND CONSTRUCTION LIMIT OR IN DITCH

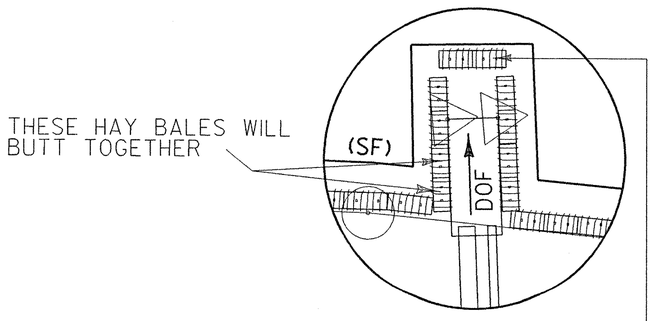


5. TOE OF FILL HAY BALE CHECK DAM

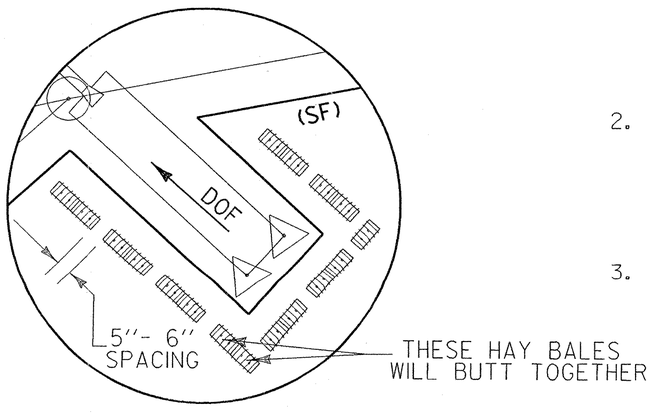


(WHERE EXISTING GROUND SLOPES TOWARDS FILL SLOPE)

6. CULVERT OUTLET PROTECTION @ TOE OF FILL



7. EXPOSED CULVERT INLET PROTECTION



GENERAL NOTES

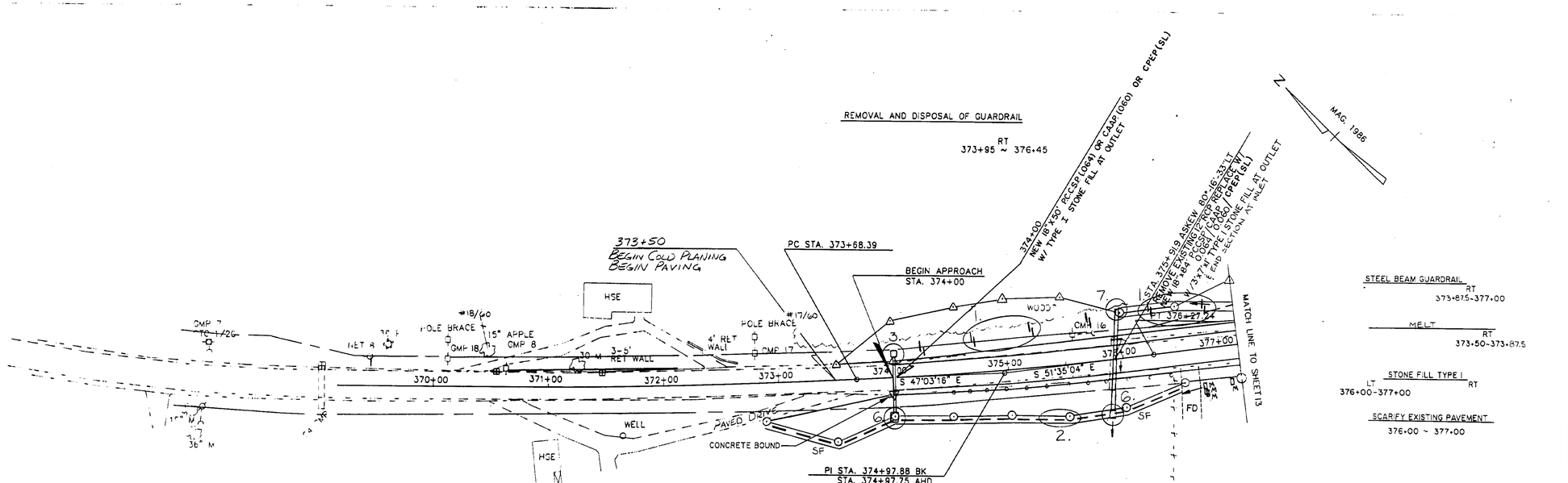
1. EROSION CONTROL MATERIALS WILL BE PLACED AS ILLUSTRATED, OR AS DIRECTED BY THE RESIDENT ENGINEER, ON NEWLY CONSTRUCTED AREAS AS SOON AS POSSIBLE.
2. DURING CONSTRUCTION EVERY EFFORT WILL BE MADE TO KEEP DEBRIS AND SEDIMENT OUT OF THE DITCH. HAY BALES WILL BE USED AS ILLUSTRATED TO INSURE BANK STABILITY.
3. HAY BALES SHALL BE INSPECTED AND CLEANED AS NEEDED.

NOT TO SCALE

DATUM VERTICAL	NGVD 1929
HORIZONTAL	N/A

SURVEYED BY	DATE
DRAWN BY	B.MCAVOY DATE
SQUAD LEADER	S.MENARD
DESIGN FILE NO.	/sqdc/78d073/dd073.dgn
IPARM FILE	dd073ero1 DATE PLOTTED 12-MAR-1997
PROJ. NAME	GROTON - RYEGATE
PROJ. NO.	F 026 - 1(30)
SHEET	52 OF 152 SHEETS

PLAN		BY	DATE
SURVEYED	OCT. 86	DBC, MAR., GJR	OCT. 86
PLOTTED	DEC. 86	DBC	DEC. 86
ALIGNMENT CHECKED			
NOTE BOOK			
RT. OF WAY CHECKED			
NO. 610			



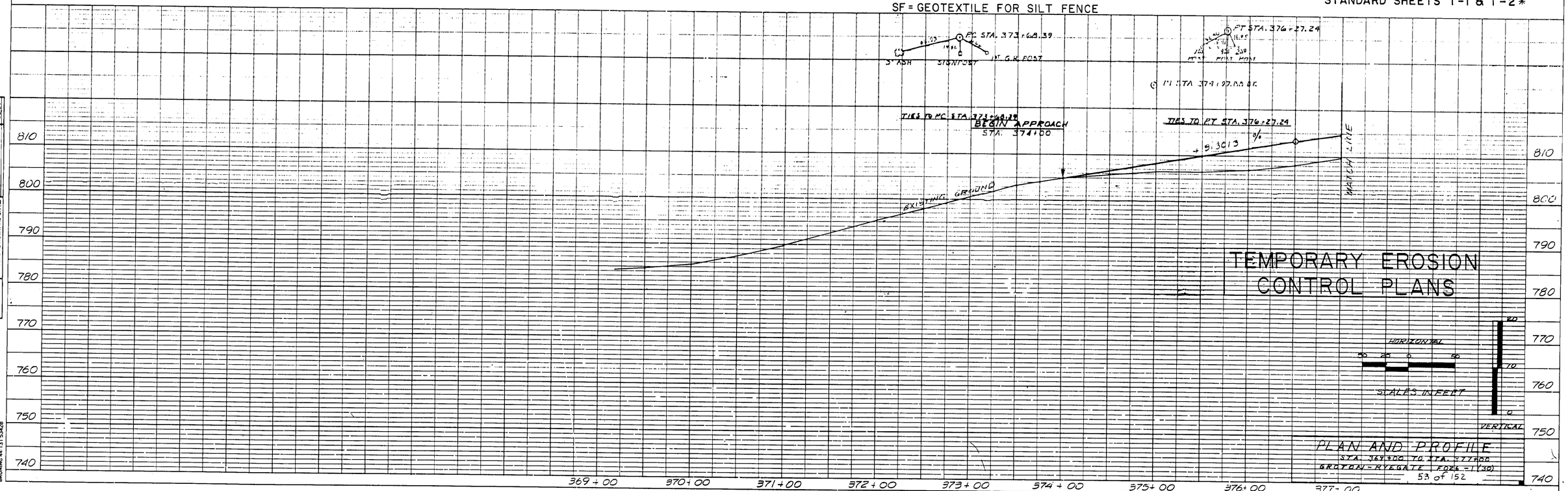
CURVE 2
Δ 4° 31' 48" LT.
D 1° 45' 00"
R 3274.05'
L 258.85'
T 129.49'
E 2.56'
B 0.21 FT/FT

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

* THESE PLANS TO BE USED IN CONJUNCTION WITH SHEET 52 AND STANDARD SHEETS T-1 & T-2 *

SF = GEOTEXTILE FOR SILT FENCE

PROFILE		BY	DATE
SURVEYED	FEB. 83	DBC	FEB. 83
PLOTTED	FEB. 87	GJR	FEB. 87
GRADES CHECKED	FEB. 87	DBC	FEB. 87
BY MARTIN			
NOTE BOOK			
NO. 282			
STRUCTURE NO. 7 & 8			



TEMPORARY EROSION CONTROL PLANS

HORIZONTAL
50 25 0 50
SCALES IN FEET
VERTICAL
20
10
0

PLAN AND PROFILE
STA. 369+00 TO STA. 377+00
GROTON - RYEGATE FOR 6-1(30)
53 of 152

BRUNING 44-131-53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

EVERGREEN TREES
LT.
377+00 ~ 377+75, 55'+- LT, 5 RED PINE, 10' HEIGHT @ 15' C-C
377+00 ~ 377+75, 65'+- LT, 5 RED PINE, 10' HEIGHT @ 15' C-C

NOTE: NEW TREES @ STA. 377+00 ~ 377+75 ARE TO BE PLANTED AS DETERMINED BY THE ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER.

DECIDUOUS TREES
LT.
377+00 & 377+75
75'+- LT, 2 FLOWERING CRABAPPLES, 10' HEIGHT

PLAN	BY	DATE
SURVEYED	ECS, DBC	12/5, 16
PLOTTED	KDF	12/16
GRADES CHECKED	ZAW	FEB. 84
ALIGNMENT CHECKED	DBC	FEB. 84
RT. OF WAY CHECKED		FEB. 85
NOTE BOOK		
NO.		

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

377+00 RT ~ 379+45 RT.
NEW 6" X 24G UNDERDRAIN W/ F.B. AT 379+45 RT (UNDULATION TO BE VARIED THROUGHOUT CEMETARY AS NEEDED)

CONSTRUCT SIDEROAD
LT 387+50 PAVED
RT 384+17.69 PAVED

CONSTRUCT DRIVE
LT 378+11 GRAVEL (12' WIDE)
RT 381+99 GRAVEL (14' WIDE)

GRANITE SLOPE EDGING
377+25 — 381+87 RT

377+00 ~ 378+00 LT NEW 6" X 100' UNDERDRAIN CARRIER PIPE UNDERDRAIN

378+11 NEW 8" X 68' CSP (.064) RCP CL III OR CPEP (SL)

STA. 378+11 REMOVE EXISTING 12" RCP

378+00 ~ 381+50 LT NEW 6" F.B. AT 380+50 UNDERDRAIN

EROSION MATTING
LT: 377+50-377+80; 378+40-379+50; 382+00-384+00; 388+75-391+00
RT: 382+25-384+00; 388+75-391+00

1-1½ TO 1-2 SLOPE

381+65 RT ~ 382+75 LT NEW 8"X4"X170' PLASTIC WATER PIPE, FLEX. SLEEVE FOR UTILITIES

380+56 ~ 385+00 NEW 6" F.B. AT 380+56 UNDERDRAIN /W

PC STA. 381+26.64

END APPROACH BEGIN PROJECT STA. 379+50

PI STA. 383+70.64 BK
STA 383+66.00 AHD

STA. 384+17.69+
SIDEROAD STA. 0+00

CURVE 3
Δ 19° 20' 04" RT
D 4° 00' 00"
R 1432.40'
L 483.36'
T 244.00'
E 20.63'
B .063 FT/FT

TYPE I STONE FILL
LT 377+00 ~ 377+50; 384+00 ~ 387+50
RT

MATCH LINE TO SHEET 12

STEPS

CONCRETE & STONE WALLS

CEMETERY

TBM IR SPIKE IN POLE GMP #19 ELEV. 824.30

STONE MONUMENT

CEMETERY LOT CORNER

GRAVE MARKER OR MONUMENT

STONE WALLS AND STEPS

STA. 383+50 ~ 384+00 CARRIER PIPE W/ 2'x2' TYPE I STONE FILL AT OUTLET W/ FB @ 383+50

379+50 ~ 383+50 NEW 6"X400' UNDERDRAIN /W F.B. AT 379+50

381+98 RT. NEW CL. III RCP OR CPEP (SL)

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

SIDEROAD CURVE 1
PC 1+97.25
PI 2+00
PT 2+02.75
Δ 3° 00' 19" RT
D 57° 01' 34"
R 104.74'
L 5.27'
T 2.75'
E 0.036'

SF = GEOTEXTILE FOR SILT FENCE

386+00 ~ 385+50 LT NEW 6" X 50' UNDERDRAIN CARRIER PIPE

STA. 386+08.2 REMOVE EXISTING 18" RCP

BASELINE

CENTERLINE

END NEW PAVEMENT MATCH TO EXISTING PAVEMENT 2+00

SIDE ROAD STA. 1+00 NEW 18"x42" RCSP (0.064") / CAAP (0.060") W/ TYPE I STONE FILL 3:1/2:1 AT OUTLET & END SECTION & INLET

STA. 386+27.5 SKEW 18°-45 RT. REMOVE EXISTING BOX CULVERT SEE SHEET 77 OF 152

ML STA. 388+25.41 = CHANNEL LINE STA. 5+00 ASKEW 78°-47' RT

STA 388+27 45SKEW 90° RT 14' TEMP 60'x60' COMPT/CAAPP (0.060") (10.060") SEE SHEET 77 OF 152

TYPE IV STONE FILL LT 387+80 RT

TYPE II STONE FILL LT 387+80 RT

MAG. 1986

TOP OF BERM (TYP)
TYPE III STONE FILL
TYPE II STONE FILL

PC STA. 390+26.71

PT STA 386+10.00

STA. 387+50 = SIDEROAD STA. 0+00

ANGLE 71°-43' 47" & 73°-35'-28" &

ANGLE 20° 53'

STA 386+08.2 ASKEW 89° NEW 18"x 44" RCSP (0.064") CAAP (0.060") W/ TYPE I STONE FILL 3:1/2:1 AT OUTLET & END SECTION & INLET

TYPE II STONE FILL
TYPE III STONE FILL
TOP OF BERM (TYP)

TEMPORARY DETOUR LIMITS

CHANNEL LINE STA. 5+55 DEFLECT 48°-02'-10" RT

MATCH LINE TO SHEET 14

385+00 ~ 391+00 NEW 6" X 2100' UNDERDRAIN /W F.B. AT 389+00

SCARIFY EXISTING PAVEMENT
384+00 - 388+50

DRILLING & BLASTING SOLID ROCK SUBGRADE
379+25 - 384+00

STA. 386+00 ~ 386+50 NEW 18"x120' (0.064") CSP W/ TYPE I STONE FILL 3:1/2:1 AT OUTLET & END SECTION & INLET

STA. 386+00 ~ 386+50 W/ 17'-6" REINFORCED CONCRETE CRADLE AT INLET REMOVED AT OUTLET

REMOVED CONCRETE CRADLE

MELT
LT 1+12.5 - 1+50 (TH 13) 389+50.5 - 389+88
RT 377+00 - 377+37.6; 388+64 - 389+01.5

STEEL BEAM GUARDRAIL
LT TH#13 1+12.5 ~ 389+50.5
RT TH#61 3+50 LT ~ 388+64

ANCHOR FOR STEEL BEAM GUARD RAIL
LT TH #61 3+43.75
RT

REMOVAL AND DISPOSAL OF GUARD RAIL
LT 387+95 - 388+55
RT 384+70 - 386+2; 387+40 - 388+60

PROFILE	BY	DATE
SURVEYED	ECS, DBC	12/5, 16
PLOTTED	KDF	12/16
GRADES CHECKED	ZAW	FEB. 84
ALIGNMENT CHECKED	DBC	FEB. 84
STRUCTURE NO(ATHS CKND)		FEB. 85
NOTE BOOK		
NO. 368		

PVI
STA 381+00
ELV 827.96
LVC 900'
E 7.91
K 128
SSD 413'

NOTE:
SEE SHEET 150 FOR PROFILE TH #61
SEE SHEET 151 FOR PROFILE TH #13

PVI
STA 388+50
ELV 800.00'
LVC 900.00'
E 1.02
K 110

TIES TO PC STA. 381+26.69

CUT TO FILL TRANSITION 385+18 = 385+93

TIES TO PT STA. 386+10.00

TIES TO PC STA. 390+26.71

EL. 784.09 ℄ ROADWAY

STA. 388+25.5 CONCRETE BOX CULVERT 8.5'x 5.5' H INSIDE

END APPROACH BEGIN PROJECT

PC STA. 381+26.69

PI STA. 383+70.64 BK

END NEW PAVEMENT - MATCH EXISTING GRADE

STA 386+00 84"x120" COMPT/CAAPP FIN GRADE 802.32

PC STA. 390+26.71

MATCH LINE

EXISTING GROUND

-3.72 SO %

-1.000 %

3.30 %

TEMPORARY EROSION CONTROL PLANS

HORIZONTAL 50 25 0 50
SCALES IN FEET
VERTICAL 20 10 0

PLAN AND PROFILE
STA. 377+00 TO STA. 391+00
GROTON - RYEGATE F 026-1(30)
54 of 152

BRUNING 44-131 53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

TYPE I STONE FILL
LT 397+30-399+50 RT 397+30-399+50

EROSION MATTING
LT 395+50-397+30, 399+50-401+50, 403+45-404+50
RT 395+50-397+30, 399+50-400+75

REMOVE AND RESET FENCE
LT 399+[illegible] ~ 402+00 (RESET TO NEW R.O.W. LINE)
402+00 ~ 404+50 (RESET BEYOND CONSTRUCTION LIMITS, THEN TO NEW ROW. LINE)

STEEL BEAM GUARDRAIL
LT 400+02.5-403+15
RT

MELT
LT 399+65-400+02.5, 403+15-403+52.5
RT

GRANITE SLOPE EDGING
LT 405+00-406+00
RT

REMOVAL AND DISPOSAL OF GUARD RAIL
RT 402+75 ~ 403+60

MATCH LINE TO SHEET 13

391+00 S 32°15'00" E

392+00

393+00

394+00

395+00

396+00

397+00

398+00

399+00

400+00

401+00

402+00

403+00

404+00

405+00

406+00

S 44°29'23" E

391+00 393+50 LT NEW 6 x 250' UNDERDRAIN

393+50-394+35 LT NEW 18"ø RCP CL III OR CPEP (SL) RCP CL III

394+50 LT EXISTING 12" GMP REMOVE

393+50-395+50 NEW 6 x 150' UNDERDRAIN W/ FB AT 393+50

STA. 394.35 LT 33'-397.00 LT 35' NEW 24"x 64' RCP / CPEP (SL) CL III

STA 397.00 ℄ NEW 18"ø RCP CL III / CPEP (SL)

CTC 32

CTC 32 1/2

CTC 33

STA 397.00 LT 38'-398.10 LT 34.5' NEW 24"x 248' RCP CL III / CPEP (SL)

398+00-399+50 NEW 6"x 150' UNDERDRAIN W/ FB AT 398+00

CTC 34

STA. 399+50 ℄ NEW 30"x 68' RCP CL III / CPEP (SL) W/ 4'x 6' DI & INLET

399+60-401+50 NEW 6"x 190' UNDERDRAIN W/ FB AT 399+60

401+65 LT NEW 15"x 62' CSP OR RCP CL III / CPEP (SL)

401+50-402+75 NEW 6"x 126' UNDERDRAIN CARRIER PIPE

STA. 402+86.3 ASKEW 72°-08'-18" RT REMOVE EXISTING 18" RCP AND REPLACE WITH NEW 24"x 84' RCP / CPEP (SL) CL III WITH T-SECT. (10.0564') / CAAP / (10.0651') ONE SIDE STONE FILL 4.9'x 4' AT OUTLET

402.75 ~ 403+00 LT UNDERDRAIN CARRIER PIPE NEW 6"x 25' UNDERDRAIN W/ FB AT 403+00

403+00-404+50 NEW 6"x 150' UNDERDRAIN W/ FB AT 404+50

STA. 404+46.2 ASKEW 83°-23'-56" RT REMOVE EXISTING 15" RCP AND CAP FROM NEW DI. LT TO NEW DI. RT AND NEW 24"x 78' CSP (0.0604') / CPEP (SL) CL III / CPEP (SL) W/ 4'x 9.4' TYPE I STONE FILL AT OUTLET

404+56-406+00 NEW 6"x 144' UNDERDRAIN

MAG 1996

MATCH LINE TO SHEET 15

PI STA. 392+72.44 BK
STA. 392+70.57 AHD

PT STA. 395+16.30

PC STA. 398+46.55

PI STA. 403+00.66 BK
STA. 402+64.85 AHD

392+60 RT-393+50 LT NEW 18"ø x 96' RCP (SL) RCP CL III

396+00 RT NEW 15"x 30' CSP OR RCP (SL) CPEP (SL)

STA 399+50 RT NEW 30"x 78' RCP (0.0779') / CAAP (0.0779') ONE SIDE STONE FILL 6'x 19' AT OUTLET W/ 4'x 6' DI AT INLET

STA 406+20 NEW 6"x 90' SEAMLESS COPPER WATER TUBE FOR UTILITIES

CURVE 4
Δ 12° 14' 23" LT
D 2° 30'
R 2291.83'
L 489.59'
T 245.73'
E 13.14'
B 0.046'

CURVE 5
Δ 39° 15' 31" LT
D 4° 30' 00"
R 1273.24'
L 872.41'
T 454.11'
E 78.56'
B 0.067 FT/FT

CONSTRUCT DRIVE
LT 394+61 GRAVEL (12' WIDE) 393+10.8 CONCRETE (12' WIDE)
401+65 GRAVEL (12' WIDE) 404+00 GRAVEL (12' WIDE)
393+75 GRAVEL (12' WIDE) 405+40 GRAVEL (20' WIDE)
404+25 GRAVEL (6' WIDE)
392+20 GRAVEL (2' WIDE)
RT

CONSTRUCT PAVED TURNOUT
404+50 ~ 405+30 RT (4' WIDE)

TBM #3
SPIKE IN ROOT
12" SCOTCH PINE
ELEV. 790.17

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SCALE: 1" = 50'

50 25 0 50
SCALE IN FEET

SF = GEOTEXTILE FOR SILT FENCE

PLAN

BY	DATE
DRL, CJAK, GLR	OCT. 84
JRK	OCT. 84

SURVEYED.
PLOTTED.
ALIGNMENT CHECKED.
RT. OF WAY CHECKED.
NOTE BOOK
NO.

PROFILE

BY	DATE
ED, DSK	OCT. 84
SPF	DEC. 84
CAU, DSK	DEC. 84
CAU, DSK	JAN. 85
CAU	FEB. 85

SURVEYED.
PLOTTED.
GRADES CHECKED.
R.O.W. & UTILITIES.
STRUCTURE NOTATNS CHKD

PROFILE

MATCH LINE

-1.000 %

EXISTING GROUND

-3.500 %

+1.950 %

EXISTING GROUND

MATCH LINE

PVI
STA. 397+00
EL. 791.50
LVC 300'
E 0.74'
K 120
SSD 4/6

PVI
STA 401+50
EL 776.75
LVC 600'
E 4.09'
K 109

TIES TO PC STA. 398+54.55

TIES TO PT STA. 395+16.30

TIES TO POC STA 403+00

POC STA. 403+00
9.75 LT
9.75 RT
39' POST FROM W-END

2" ELM
6" PINE
8" PINE
DRIVE
6" PINE
TRIPLE
8" PINE
3" ELM
20" ASH
PAVED
PAVED
PAVED
GMP 4
GMP 5
GMP 6
GMP 7
GMP 8
GMP 9
GMP 10
GMP 11
GMP 12
GMP 13
GMP 14
GMP 15
GMP 16
GMP 17
GMP 18
GMP 19
GMP 20
GMP 21
GMP 22
GMP 23
GMP

TYPE I STONE FILL
LT 416+25-417+00 RT 415+50-418+00
TH 5-0130 - 0+90

TYPE II STONE FILL
LT 418+20 RT 418+00

EROSION MATTING
LT 406+50-409+25 RT
411+75-416+25

CONSTRUCT DRIVE
LT RT
406+25 ASPHALT (24) 419+50 GRAVEL (20')
410+98 GRAVEL (12') TH 5-0+60 (12')
419+60 GRAVEL (12')

CONSTRUCT SIDE ROAD
LT 417+30.23

STEEL BEAM GUARDRAIL
LT 418+13.5 - 418+63.5 RT 417+33.5 - 418+96

MELT
LT 417+76-418+13.5, 418+63.5-419+01 RT 416+96-417+33.5, 418+96-418+83.5

PI STA. 416+63.97 BK
STA. 416+22.80 AHD

BURIED CABLE

MATCH EXISTING PAVEMENT STA. 1+00

STA. 0+55 ASKEW 82° LT
REMOVE 18" RCP

STA. 0+38.23 ASKEW 73° 25" LT
NEW 18" x 64' PCCSP (0.060") (0.060") CPEP (SL)
W/ STONE FILL ©

TH 5-0+60 (12") CONST. OFF
NEW 15" x 40' CPEP (SL)
W/ STONE FILL ©
OUTLET

TBM #5
CHISLED "X" ON TOP PLATE BOLT
EL. 768.09

N 1986

STA. 417+94 LT
TO 418+70 LT
REMOVE GUARDRAIL
(TYP.)

DANIELS BROOK

REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL
LT 418+25-418+70 RT 417+94-418+44

TRANSPLANTING SHRUBS
419+75 LT - ROSE BUSH
*(PLACEMENT OF SHRUB TO BE DETERMINED BY ENGINEER, IN AGREEMENT WITH THE PROPERTY OWNER)

TEMPORARY DETOUR LIMITS

PT STA. 420+41.54

MATCH LINE TO SHEET 14

406+00 407+00 408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00 416+00 417+00 418+00 419+00 420+00 421+00

406+00 - 406+80 NEW 6" x 30' UNDERDRAIN W/ F&B AT 406+90

407+10 - 411+50 NEW 6" x 440' UNDERDRAIN W/ F&B AT 411+50

PC STA. 412+45.23

CTC 1/4

S 83°44'54" E

GMP 1 GMP 2 GMP 3

PT STA. 407+18.96

STA. 407+00 ASKEW 74°00'00" LT
REMOVE EXISTING 18" RCP REPLACE WITH
NEW 24" x 80' PCCSP / CAAP / (0.060") / (0.060") CPEP (SL)
TYPE I STONE PAD AT OUTLET

STA. 414+06 ASKEW 88°39'01" RT
REMOVE EXISTING 18" RCP REPLACE W/
NEW 18" x 90' PCCSP / (0.060") / CAAP / (0.060") / CPEP (SL)
W/ 3'x7'x1' TYPE I STONE FILL AT INLET
AND OUTLET, END SECTION AT INLET

STA. 415+50 - 416+00
NEW 6" x 250' UNDERDRAIN W/
F&B AT 415+50

STA. 417+30.23 & STA. 0+00 SIDE ROAD
ASKEW 74°32'39" RT

STA. 418+20 ASKEW 83°30' LT
NEW 14' - 0"x8'-7"x90'
CLAMPA W/ 12" TO 7" REMOVABLE
CONCRETE SADDLE, REMOVABLE
ASPHALT SADDLE, REMOVABLE
STONE FILL AND OUTLET

418+00 RT ASKEW 83°30' LT
NEW 6" x 16' PIPE UNDERDRAIN
CARRIER

TYPE II STONE FILL (TYP.)

STA. 418+36
REMOVE EXIST. CORRUGATED
SEE SHEET 15 OF 152

CHANNEL BASELINE STA.
STA. 418+30 ASKEW 83°30' LT

CURVE 6
Δ 43° 47' 49" RT
D 5° 30'
R 1041.74'
L 796.31'
T 418.74'
E 8.101'
B .074 FT/FT

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

SCARIFY EXISTING PAVEMENT
419+00-421+00

SF = GEOTEXTILE FOR SILT FENCE

PAVED ENTRANCE

© TRANS POLE

GROTON - RYEGATE

PLAN
SURVEYED
PLOTTED
NOTE BOOK
NO.
ALIGNMENT CHECKED
PLAN MAT. CHECKED

BY	DATE
DRL, WAKE, SLB	DEC. 86
DRL	DEC. 86

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
ELM. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.

BY	DATE
ECS & DRL	FEB. 86
ECS	FEB. 87
KAU	FEB. 87
ECS, DRL	DEC. 86
DRL	FEB. 87

CULVERT POST
PT STA. 407+18.96
42.00
17.70
FILET FENCE

TIES TO PT STA. 407+18.96

+1.950 %

EXISTING GROUND

MATCH LINE

ASPHALT DRIVE

PV I
STA 411+50
EL 795.25
LVC 700'
E 4.77'
K 128
SSD 413'

TIES TO PC STA. 412+45.23

-3.500 %

TIES TO PVC STA. 416+50

EXISTING GROUND

STA. 419+36
BY CUP

NOTE: SEE SHEET #152 FOR TH #5 PROFILE

2' OFF ROAD
POC STA. 416+50
5.70
5.00
42.82

PC STA. 412+45.23
42.82
FILET FENCE
POST

STUMP
16.63
PT STA. 420+41.54
PC END OF STONE FILL

TIES TO PT STA. 420+41.54

GRAVEL DRIVE

TH #5

TEMPORARY EROSION CONTROL PLANS

HORIZONTAL
50 25 0 50
SCALES IN FEET
20 10 0
VERTICAL

PLAN AND PROFILE
STA. 406+00 TO STA. 421+00
GROTON - RYEGATE FOOG-1(30)
56 of 152

406+00 407+00 408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00 416+00 417+00 418+00 419+00 420+00 421+00

800 790 780 770 760 750 740 730

BRUNING 44 131 53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

NOTE: 422+05 ± 422+12 LT STOCKPILE TOPSOIL FOR GRADING OF GARDEN AREA (COST TO BE INCLUDED IN COMMON EXCAVATION)

EROSION MATTING

LT	RT
428+50 ~ 429+50	431+50 ~ 433+00

TYPE I STONE FILL

LT	RT
423+50 ~ 428+50	

TRANSPLANTING SHRUBS
421+56 LT - CURRANT BUSH
*(PLACEMENT OF SHRUB TO BE DETERMINED BY ENGINEER IN AGREEMENT WITH THE PROPERTY OWNER)

HIGH TENSION LINES

APPROX. LOC. GARDEN AREA

422+50 RT NEW 12"x30± CSP (.064") OR CAAP (.060") OR CPEP (SL) W/ PRCD1 2-15" ELBOW AND TYPE I STONE AT OUTLET

422+50 - 423+50 LT NEW 6"x30± UNDERDRAIN CARRIER PIPE UNDERDRAIN

STA. 422+56.4, 15"CM, 75° 08' 07" LT. RT. REMOVE EXIST. 18" CMP NEW 24"x24± PCCSP (0.064") / CAAP (0.060") / CPEP (SL) W/ TYPE I STONE FILL AT INLET AND OUTLET 4'-9"± W/ END SECTION AT INLET

423+50 - 425+25 NEW 6"x200' UNDERDRAIN W/ FB AT 425+25

STEEL BEAM GUARDRAIL

LT	RT
MAINLINE 422+37.5	MAINLINE 431+00
MAINLINE 433+37.5	MAINLINE 436+00

425+00 - 428+00 NEW 6"x200' UNDERDRAIN W/ FB AT 428+00

PC STA. 428+96.42

STA. 429+28.7, 45°CM, 69°-33'-28" LT. REMOVE EXIST. 18" RCP REPLACE W/ NEW 24"x30± RCPCCSP (0.064") / CAAP (0.060") / CPEP (SL) W/ TYPE I STONE FILL AT INLET AND OUTLET 4'-9"± W/ END SECTION AT INLET

HSE

PI STA. 431+50.26 BK
STA. 431+36.89 AHD

TBM #6
SPIKE IN ROOT
36" POPLAR
EL. 783.52

REMOVAL AND DISPOSAL OF EXISTING GUARDRAIL

LT	RT
428+40 - 430+80	423+10 - 426+00
432+40 - 433+45	427+58 - 430+50
	432+78 - 433+54

MAG. 1986

PT 443+90.73

435+00 - 436+00 NEW 6"x100' UNDERDRAIN W/ FB AT 435+00

MATCH LINE TO SHEET 15

MATCH LINE TO SHEET 17

CONSTRUCT DRIVE

LT	RT
431+85 PAVED (12' WIDE)	
434+04 GRAVEL (12' WIDE)	

* SEE SPECIAL PROVISIONS CONCERNING T.H. 50 APPROACH

TREATED TIMBER CURB

LT	RT
422+50 ~ 426+25	
433+00 ~ 435+50	

STA 426+00 - PCCSP / CAAP / RCP / CL III / CPEP (SL) NEW 18"x26± (0.064") / (0.060") W/ 4'-4"± DI AT INLET W/ TYPE I STONE FILL AT OUTLET 4'-9"±

MELT

LT	RT
	422+00 - 422+37.5
	431+00 - 431+37.5
	433+00 - 433+37.5

PLAN
SCALE: 1"=50'

50 25 0 50
SCALE IN FEET

431+00 - 433+50 NEW 6"x250' UNDERDRAIN W/ FB AT 431+00

STA 433+00±27 45°CM 69°-51'-06" RT. REMOVE EXIST. 18"RCP NEW 24"x08' RCPCCSP (0.064") / CAAP (0.060") / CPEP (SL) W/ TYPE I STONE FILL AT OUTLET 4'-9"± AND END SECTION AT INLET

433+50 RT NEW 6"x28' UNDERDRAIN CARRIER PIPE W/ TYPE I STONE AT OUTLET

435+50 RT NEW 12"x26± CSP (.064") OR CAAP (.060") W/ PRCD1 1-15" ELBOW W/ TYPE I STONE AT OUTLET 1-25 ANG

CURVE 7

Δ	32° 07' 49" RT
D	6° 30' 00"
R	881.47
L	494.31
T	253.84
E	35.82
B	0.078 FT/FT

DRILLING & BLASTING SOLID ROCK SUBGRADE
434+75 - 436+25

SCARIFY EXISTING PAVEMENT
421+00 ~ 423+50

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

SF = GEOTEXTILE FOR SILT FENCE

PLAN
SURVEYED: BY EAS, JWS, ALR; DATE OCT. 82
PLOTTED: DRC; DEC. 82
ALIGNMENT CHECKED: DRC; FEB. 83
GRADES CHECKED: EAS, DRC; DEC. 82
R.W. OF WAY CHECKED: KAM; FEB. 83
NOTE BOOK
NO.

PROFILE
SURVEYED: BY EAS, DRC; DATE DEC. 82
PLOTTED: DRC; FEB. 83
GRADES CHECKED: EAS, DRC; DEC. 82
R.W. & NOTED STRUCTURE NOTATNS CHKD: KAM; FEB. 83
NOTE BOOK
NO.

PVI
STA 421+50
EL 760.25'
LVC 800'
E 6.80'
K 118

PVI
STA. 428+50
EL. 783.35'
LVC 600'
E 3.23'
K 140
SSD 431.00'

PVI
STA. 435+50
EL. 776.35'
LVC 500'
E 1.36'
K 230

LILAC BUSH 4.1' RT. 1.37' 46.56 POLE 98' PI STA 431+50.56 BK

END POST 54.60 PT STA 433+90.73

TIES TO PI STA 431+50.56 BK

TIES TO PC STA 428+96.72

TIES TO PT STA 433+90.73

+3.300%

-1.000%

EXISTING GROUND

MATCH LINE

MATCH LINE

TEMPORARY EROSION CONTROL PLANS

HORIZONTAL 50 25 0 50
VERTICAL 20 10 0
SCALES IN FEET

PLAN AND PROFILE
STA. 421+00 TO STA. 436+00
GROTON - KYES GATE FOZG-1(30)
57 of 152

421+00 422+00 423+00 424+00 425+00 426+00 427+00 428+00 429+00 430+00 431+00 432+00 433+00 434+00 435+00 436+00

790 780 770 760 750 740

BRUNING 44-131 53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO

PLAN	BY	DATE
SURVEYED	DBC, MAS, GCB	OCT. 96
PLOTTED	DBC	DEC. 96
CROSS CHECKED		
ALIGNMENT CHECKED		
RT. OF WAY CHECKED		
NOTE BOOK NO.		

DATUM
VERTICAL: NGVD 1929
HORIZONTAL: N/A

GRANITE SLOPE EDGING
LT 442+70–443+30 RT

TBM #7
CHISLED "□" TOP OF STONE HEADWALL EL. 781.34

TBM #8
CHISLED "□" ON HEADWALL EL. 758.55

PC STA. 436+38.96

436+00–437+00 NEW 6'X100' UNDERDRAIN

STA. 437+09.5 ASKEW 87°-17'-24" RT
REMOVE EXISTING 18" RCP REPLACE W/ NEW 18" 108 PCCSP / CAAP (0.064") / (0.079") / CPEP (SL) W/ 5'X1'X1' TYPE I STONE FILL AT OUTLET

437+00–440+50 NEW 6'X350' UNDERDRAIN W/ F.B. AT 440+50

PC STA. 441+06.91

441+98 NEW 15"X24" CSP (SL) / RCP CL III OR CPEP (SL)

441+23–445+50 NEW 6"X274' UNDERDRAIN W/ F.B. AT 443+37

444+00–448+00 LT NEW 6'X400' UNDERDRAIN W/ F.B. AT 444+00

PI STA. 445+40.73 BK
STA. 445+30.59 AHD

PT STA. 439+56.41

PI STA. 437+98.34 BK
STA. 437+97.03 AHD

STA. 441+27.9 ASKEW 74°-27'-35" LT
REMOVE EXISTING 24" RCP REPLACE W/ NEW 18" 60 PCCSP / CAAP (0.064") / (0.060") / CPEP (SL) W/ 4'X3'X1' TYPE I STONE FILL AT OUTLET 1'-6"X2'-1" TYPE I STONE FILL AT INLET

442+50–445+00 NEW 6'X250' UNDERDRAIN W/ F.B. AT 442+50

STA. 445+00 RT 6'X30' UNDERDRAIN CARRIER PIPE W/ TYPE I STONE FILL AT OUTLET 2'X2'W

STA. 445+87.5 RT 80°-00'-00" REMOVE EXISTING 12" RCP AND

STA. 445+00 ℄ NEW 18" 78 PCCSP / CAAP / RCP (0.064") / (0.060") / CL III / CPEP (SL) WITH TYPE I STONE FILL 4.5'W AT OUTLET

CURVE 8
Δ 12°-41'-53" LT
D 4°-00'
R 1432.39'
L 317.45'
T 159.38'
E 8.84'
B 0.063 FT/FT

CURVE 9
Δ 21° 26' 15" RT
D 2° 30'
R 2291.83'
L 857.50'
T 433.82'
E 40.70'
B 0.046 FT/FT

SCARIFY EXISTING PAVEMENT
446+50–451+00

MELT
LT 442+00–442+37.5 RT
446+40–446+77.5

STEEL BEAM GUARDRAIL
LT 436+00–442+00 RT
442+77.5–451+00

REMOVAL AND DISPOSAL OF GUARDRAIL
LT 436+65–437+80 RT 437+68–437+97 439+10–441+45

ADDITIONAL LIMITS AS NEEDED FOR POSSIBLE SOFT ROCK/EARTH EXCAV.

RT STA. 449+64.41

MAG. 1986

550+68.5 ASKEW 87°-27'-45" RT
EXISTING 36" BOX REMOVE & NEW 48"X134' BOX PCCSP (109) OR CAAP (.105) W/ TYPE I STONE FILL AT INLET AND OUTLET / SADDLE HEADWALLS AT INLET AND OUTLET

MATCH LINE TO SHEET 16

MATCH LINE TO SHEET 18

CONSTRUCT DRIVE
LT 441+98 PAVED (16') (ASKEW 47°-00'-00" RT)
RT 443+37 GRAVEL (12') 446+20 GRAVEL (16')

DRILLING AND BLASTING SOLID ROCK SUBGRADE
438+75–439+75
442+25–448+50

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

EROSION MATTING
LT 437+50–442+75 RT
445+30–448+50

STONE FILL TYPE I
LT 448+50–451+00 RT
441+28

4' CHAIN LINK FENCE
LT 443+00–449+00
(NOTE: ACTUAL LENGTH AND OFFSET TO BE DETERMINED IN FIELD BY THE ENGINEER IN AGREEMENT WITH THE PROPERTY OWNER, FENCE TO BE CONSTRUCTED OUTSIDE R.O.W. LINE)

SF = GEOTEXTILE FOR SILT FENCE

PROFILE	BY	DATE
SURVEYED	EJS, DBC	DEC. 96
PLOTTED	DBC	FEB. 96
CROSS CHECKED	MAS	DEC. 96
ALIGNMENT CHECKED	ECA, DBC	DEC. 96
NOTE BOOK NO. & "M" NOTED	KAJ	FEB. 97
STRUCTURE NO'S ATTN'S CHKD		

PT STA. 439+56.91
PI STA. 437+98.34 BK
PC STA. 436+38.96
POST GUARDRAIL
PC STA. 441+06.91
PT STA. 439+56.91
5" ASLN
2" ASLN OVERLAY
6" ESLN
PCC STA. 442+00
TIES TO PT STA. 439+56.91
TIES TO PCC STA. 442+00
TIES TO PC STA. 436+38.96
EXISTING GROUND
L=1757.34
PVI
STA. 446+25
EL. 789.00
LVC 750.00
E 5.42
K 130.
SSD 415
PT STA. 449+64.41
FENCE
4.6000%
EXISTING GROUND

TEMPORARY EROSION CONTROL PLANS

HORIZONTAL 50 25 0 50 SCALES IN FEET
VERTICAL 20 10 0

PLAN AND PROFILE
STA. 436+00 TO STA. 451+00
GROTON - RYE GATE FOZ41(50)

436+00 437+00 438+00 439+00 440+00 441+00 442+00 443+00 444+00 445+00 446+00 447+00 448+00 449+00 450+00 451+00

800 790 780 770 760 750 740

BRUNING 44-131-53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

MATCH LINE TO SHEET 17

452+01 – 454+75 LT
NEW 6'X 214' UNDERDRAIN
W/ FB AT 452+01

STA 454+73.3 SKEW 85° DIR 42.5°
REMOVE EXIST. 18" RCP AND D-INLET
NEW 18"-44" 104 PCCSP / CAAP / (OCCC) / CPEP(SL)
W/ 1-35° & 1-35° ELBOW / (OCCC) / 2'-4" DI
@ INLET & TYPE I STONE @ OUTLET

ADDITIONAL LIMITS AS NEEDED FOR POSSIBLE SOFT ROCK/EARTH EXCAVATION

DRILLING AND BLASTING
SOLID ROCK SUBGRADE
454+25 – 461+50

SCARIFY EXISTING PAVEMENT
451+00-457+50
462+50-466+00

STEEL BEAM GUARDRAIL
RT
451+00-458+52.5

MELT
RT
458+52.5-458+90
REMOVAL AND DISPOSAL OF GUARDRAIL
RT
451+00 ~ 458+37
460+20 ~ 462+63

464+80-465+00
NEW 6'X 20' UNDERDRAIN W/ FB
AT 464+80

MAG. 1986

MATCH LINE TO SHEET 19

REV PC 452 + 55.20

REV.
CURVE 10
Δ 57° 02' 40"LT
D 3° 49' 11"
R 1500.00'
L 1493.42'
T 815.19'
E 207.20
B 0.061 FT/FT

454+75-457+93
NEW 6'X 318' UNDERDRAIN W/
FB AT 457+93

STA 457+00
NEW 18" 104 PCCSP / CAAP (OCCC) / CPEP (SL)
W/ 2-35° ELBOWS AND TYPE I
STONE AT OUTLET

458+00 – 461+50
NEW 6'X 350' UNDERDRAIN W/
FB AT 460+50

461+57 – 462+70
NEW 6'X 114' UNDERDRAIN W/
FB AT 462+57

462+11 45°SKEW 87'0" LT
EXISTING 18" RCP
REMOVE

WOODS

SMF

GMF 12

GMF 13

GMF 14

TBM 8

TBM #9
SPIKE IN ROOT
18" ELM
EL. 771.46

EDGE OF RIVER

EROSION MATTING
LT
452+00-453+50
455+25-459+25
462+00-466+00

EROSION MATTING
FOR SLOPE PROTECTION
RT.
453+75-458+25

TYPE I STONE FILL
LT
451+00-452+00

TYPE II STONE FILL
FOR SLOPE PROTECTION
RT.
453+75-458+25

GRUBBING MATERIAL
RT
453+75 – 458+25

PLAN
SCALE: 1"=50'

50 25 0 50
SCALE IN FEET

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

PLAN
SURVEYED
PLOTTED
NOTE BOOK
NO.
ALIGNMENT CHECKED
RT. OF WAY CHECKED

BY	DATE
DBC, LWAF, GLB	OCT. 84
JDL	DEC. 84

SF = GEOTEXTILE FOR SILT FENCE

REV PI 460 + 70.50 =
459 + 33.54
Δ 57° 2' 40"
D 3° 49' 11"

SURV PT STA 460+77.66 PK
STA 459+80.91 AHD
Δ 57° 2' 43" LT
D 3° 49' 11"

4" BIRCH
8" & 4" SPRUCE
2" POP 45° 45°
POC STA 459+00

TIES TO POC STA 459+00

TIES TO PC STA 452+62.45
POLE 11
POST 90° 90° POST
POST 90° 90° POST
PC STA 452+62.45

MATCH LINE
-4.6000%
+1.8750%
EXISTING GROUND

PVI
STA 461+00
ELEV 772.55'
LVC 600'
E 9.17'
K 142'
SSD 434'

PVI
STA 455+00
ELEV 757.95'
LVC 600'
E 4.82'
K 93'

-2.4000%

MATCH LINE

TEMPORARY EROSION CONTROL PLANS

HORIZONTAL
50 25 0 50
SCALES IN FEET
20 10 0
VERTICAL

PLAN AND PROFILE
STA. 451+00 TO STA. 466+00
GROTON - RYEGATE F 021-1 (10)

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
ALIGNMENT CHECKED
STRUCTURE NO'S & MKD
NOTE BOOK
NO.

BY	DATE
KCJ, DBC	OCT. 84
GLB	FEB. 85
LWAF	DEC. 84
JDL, DBC	FEB. 85
RAU	FEB. 85

BRUNING 44-131 53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

PLAN	BY	DATE
SURVEYED	DRC, MAK, KLB	DEC. 84
PLOTTED		DEC. 84
GRADES CHECKED	DRC	
R.O.W. NOTED		
NOTE BOOK		
NO.	STRUCTURE NOTATING CHKD	DRC

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

EROSION MATTING
LT 466+00-467+50 RT 480+50-481+00

STA 466+00-466+50 NEW 24" X 100' RCP CL III OR CMP (.064) W/TYPE I STONE OUTLET

STA 466+00-469+50 6'X 250' UNDERDRAIN

STA 467+00-468+50 LT NEW 24" X 48' RCP CL III OR CMP (.064) W/ TYPE I STONE OUTLET

REV PT 467+48.74

469+16 EXISTING 18" CMP REMOVE

PT STA. 467+55.89

MATCH LINE TO SHEET 18

467+25 RT NEW 15" X 36' CSP .064 OR RCP CL III OR CPEP(SL)
STA 468+50 NEW 24" CMP RCP CL III / CPEP (SL)

468+50 RT NEW 24" X 100' RCSP (.064) OR CAMP (.060) AT OUTLET W/ TYPE I STONE

NOTE: EXCAVATION FOR INSTALLATION OF CULVERT AT REV. STA 468+50 RT TO BE KEPT TO A MINIMUM NOT TO EXCEED 30' IN WIDTH.

468+54 - 471+33.5 RT NEW 6' X 400' UNDERDRAIN W/ F.B. AT 468+54

471+00 LT NEW 15" X 46' CSP .064 OR RCP CL III OR CPEP (SL)

468+54 - 472+00 NEW 6" X 446' UNDERDRAIN W/ F.B. AT 468+54

REV. STA 473+00.7 SKEW 71° LT REMOVE EXISTING 18" RCP NEW 15" X 50' RCP CL III / CPEP (SL)

APPROX. 265' TO W.C.L.

REV. PC 474+07.37

REV. STA 473+00.7 SKEW 71° LT NEW 24" X 50' RCSP (.064) / CAMP (.060) / 0.064 / CL III / CPEP (SL) W/ TYPE II STONE FILL AT OUTLET

REV. STA 473+15.65 NEW 18" X 62' RCP CL III / CPEP (SL)

REV. STA 474+40 ~ 471+48 NEW 6' X 208' UNDERDRAIN W/ F.B. AT 474+40 & 471+48 RT

474+50 NEW 3/4" X 60' COPPER WATER TUBE W/ NEW 6" X 60' SLEEVE FOR UTILITIES

TBM #10
CHISLED "□"
ON HEADWALL
EL 748.57

STA 476+35.5 SKEW 85° - 20' - 40' RT REMOVE EXIST. 24" X 72" RCSP / 10.103' / CAMP 42" X 42" X 40' BOX CPEP (SL) W/TYPE II STONE & END SECT. OUTLET, NEW 42" X 42" RCSP / 10.103' / CAMP BOX CPEP (SL) W/ GRADE HEADWALL & END SECT. OUTLET AND SPECIAL DITCH @ OUTLET

REV. STA 476+46.85 NEW 6" X 208' UNDERDRAIN W/ CORRUGATED PIPE

GRANITE SLOPE EDGING
RT 473+00-473+90

NOTE: SPECIAL DITCH TO FOLLOW EXISTING OUTLET PITCH FOR ± 175 LF

SCARIFY EXISTING PAVEMENT
478+25-480+50

MAG. 1986

SURV PI STA 479+66.27 BK
STA: 478+98.18 AHD
Δ 49° 3' 23"
D 4° 45'

REV PI 479+57.80 = 478+89.71

S 56°07'37" E

S 07°04'14" E

478+50 15" X 72' CSP 0.064 / CL III / CPEP (SL)

480+00 RT NEW 15" X 44' CSP (.064) OR CPEP (SL) OR RCP CL III

CONSTRUCT DRIVE

LT	RT
471+00 GRAVEL (12')	467+25 GRAVEL (16')
478+50 GRAVEL (12')	474+00 PAVED (12')
474+50 GRAVEL (12')	480+00 GRAVEL (12')
467+25 GRAVEL (12)	

REV. CURVE 1
Δ 49° 3' 23" RT
D 4° 45'
R 1206.23'
L 1032.77'
T 550.43'
E 119.65'
B 0.069 FT/FT

BARN
HSE
WOODS
GMP 18
Φ#67
Φ#68
Φ#69

PLAN
SCALE: 1"=50'
50 25 0 50
SCALE IN FEET

SF = GEOTEXTILE FOR SILT FENCE

PROFILE	BY	DATE
SURVEYED	ES + DBL	DEC. 84
PLOTTED	RAU	DEC. 84
GRADES CHECKED	RAU	DEC. 84
R.O.W. NOTED	ES + DBL	DEC. 84
NOTE BOOK	RAU	DEC. 84
NO.	STRUCTURE NOTATING CHKD	DEC. 84

790 780 770 760 750 740 730 720 710

POST
POLE 15V 73.82
PT STA 467+55.89
6.58 OFF ℄ BAV
TIES TO PT STA 467+55.89
℄ FARM LANE
MATCH LINE
-3.40
-0.7941
EXISTING GROUND

PVI
STA 467+00
EL. 756.15
LVC 300'
E 01.60
K 187'

GATE POST
BARN
℄ DRIVE
PC STA 479+15.84
TIES TO PC STA 479+15.84
PI STA 479+66.10 BK
-0.7941
+1.7994
EXISTING GROUND
MATCH LINE

PVI
STA 475+50
ELEV 751.40
LVC 400'
E 1.29
K 155'

TEMPORARY EROSION CONTROL PLANS

HORIZONTAL
50 25 0 50
SCALES IN FEET
20
10
0
VERTICAL

PLAN AND PROFILE
STA 466+00 TO STA 481+00
GROTON - EYEGATE ROAD-1(10)
60 of 152

466+00 467+00 468+00 469+00 470+00 471+00 472+00 473+00 474+00 475+00 476+00 477+00 478+00 479+00 480+00 481+00

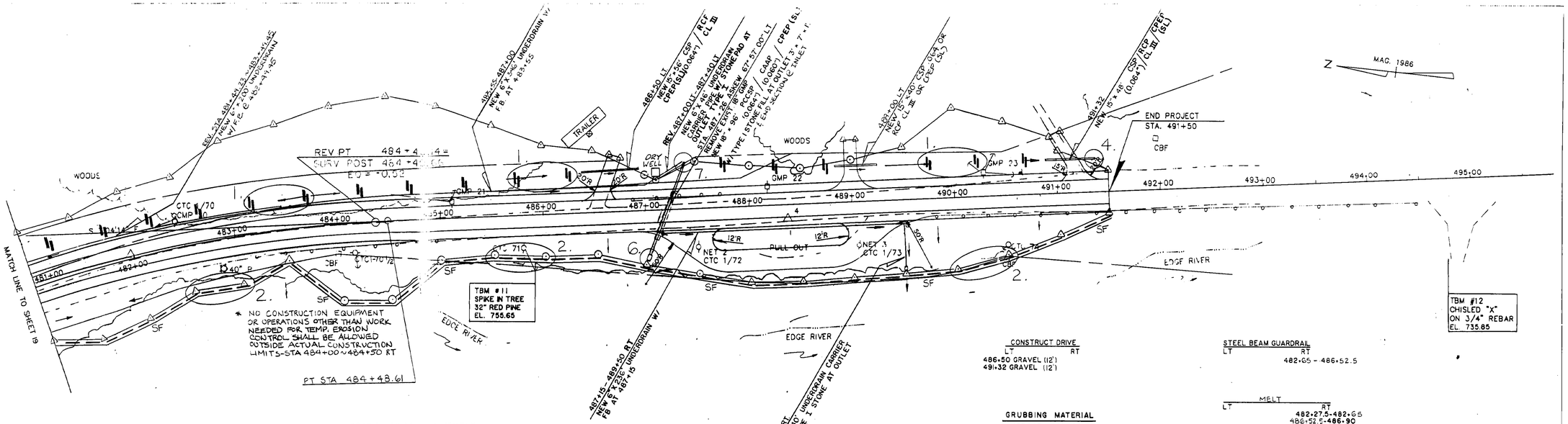
BRUNING 44-131 53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.

PLAN

	BY	DATE
SURVEYED		
PLOTTED		
DRAWN		
CHECKED		
QUANTITIES CHECKED		
AS NOTED		
STRUCTURE NOTATING CHKD		

NOTE BOOK
NO.



EROSION MATTING

LT	RT
481+50-486+30	481+00-481+50
489+50-490+85	483+75-485+25

SCARIFY EXISTING PAVEMENT
484+50 — 48...00

CONSTRUCT DRIVE

LT	RT
486+50 GRAVEL (12')	
491+32 GRAVEL (12')	

GRUBBING MATERIAL
483+75- 485+25 RT.

CONSTRUCT TURNOUT
487+00RT — 489+50 RT
W/12" AGGREGATE SURFACE COURSE

PLANK RAIL
487+50 — 489+00 RT

STEEL BEAM GUARDRAIL

LT	RT
	482+65 - 486+52.5

MELT

LT	RT
	482+27.5-482+65
	486+52.5-486.90
	489+50-489+87.5

REMOVE & RESET GUARDRAIL
RT
489+87.5 — 491+50

REMOVAL & DISPOSAL OF GUARDRAIL

LT	RT
486+85 — 487+75	483+20 — 484+95
	489+50 - 489+87.5

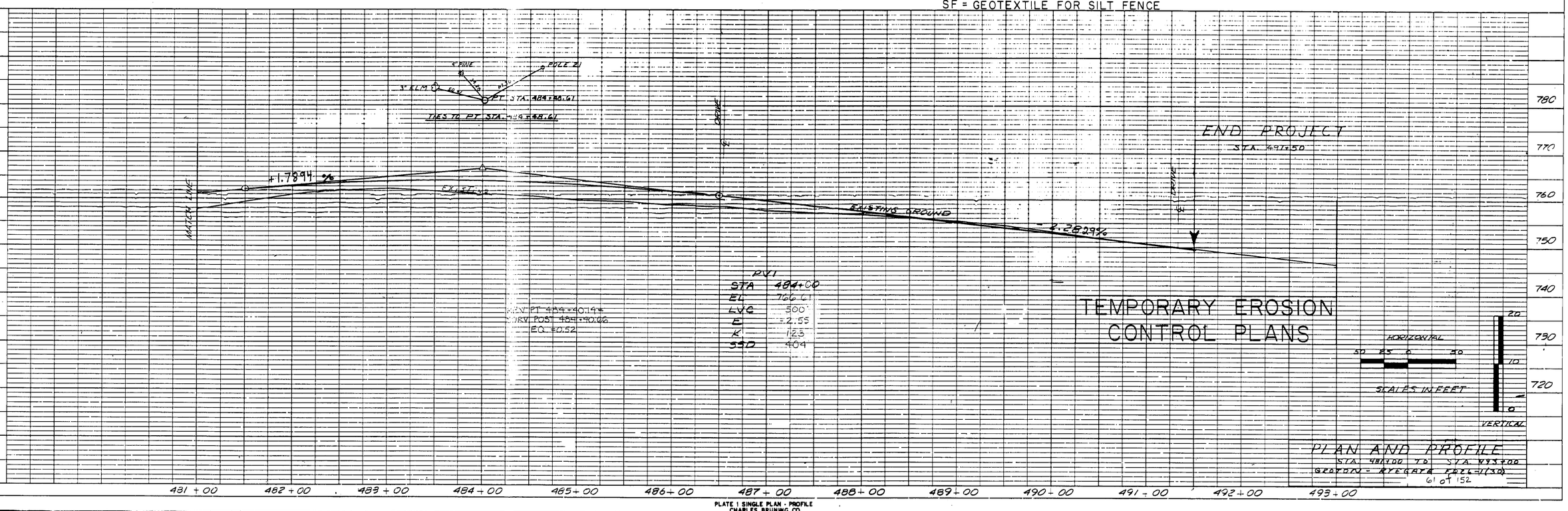
DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

SF = GEOTEXTILE FOR SILT FENCE

PROFILE

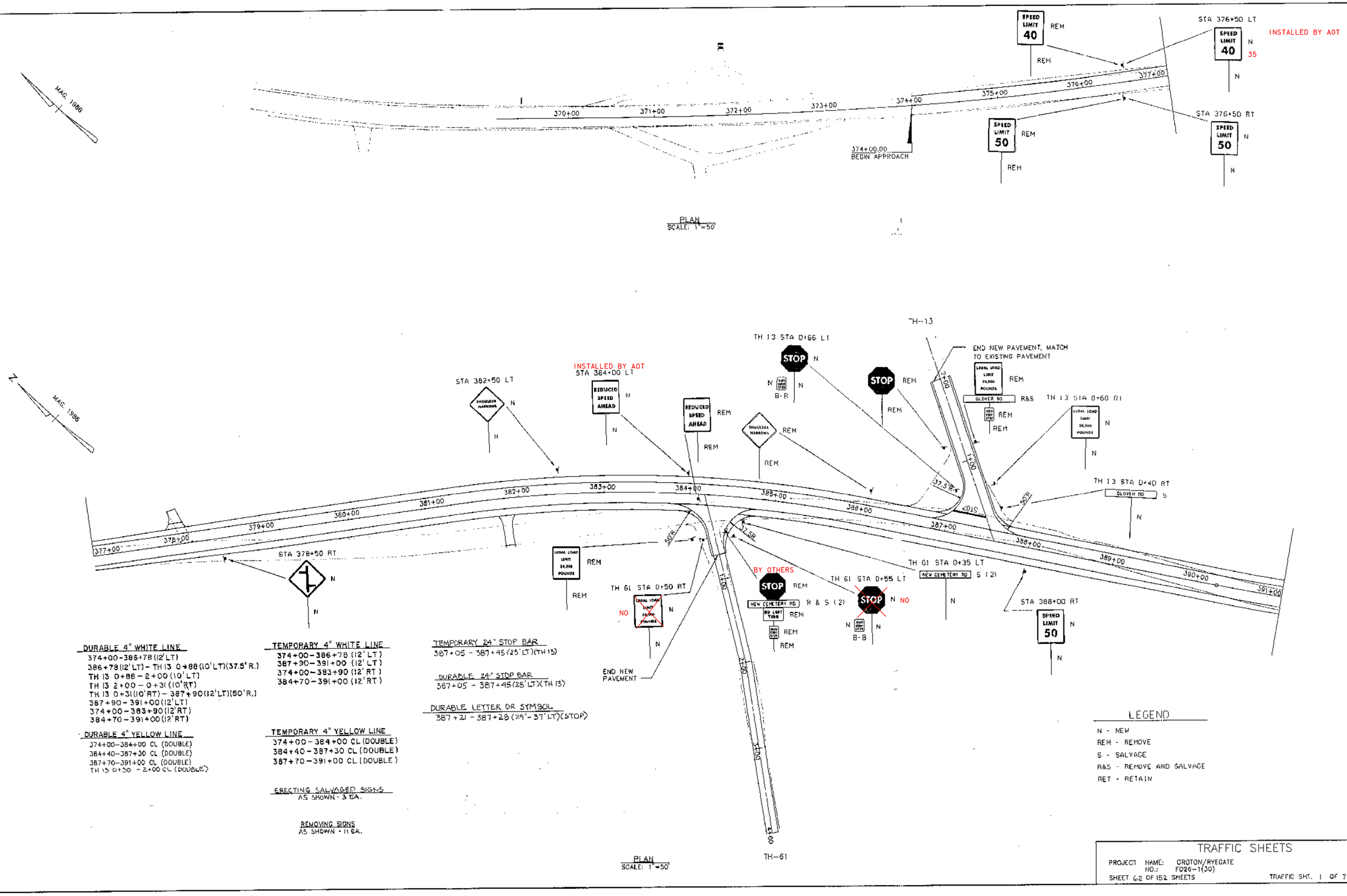
	BY	DATE
SURVEYED	C.S. DBC	DEC. 83
PLOTTED	G.P.C.	FEB. 84
DRAWN	C.S. DBC	DEC. 83
CHECKED	T.S.C. RD	FEB. 84
QUANTITIES CHECKED	C.S. DBC	DEC. 83
AS NOTED		
STRUCTURE NOTATING CHKD	RAW	FEB. 84

NOTE BOOK
NO.



BRUNING 44-131-53428

PLATE 1 SINGLE PLAN - PROFILE
CHARLES BRUNING CO.



DURABLE 4" WHITE LINE
374+00-386+78(12'LT)
386+78(12'LT)-TH 13 0+88(10'LT)(37.5° R.)
TH 13 0+88 - 2+00 (10'LT)
TH 13 2+00 - 0+31(10'RT)
TH 13 0+31(10'RT) - 387+90(12'LT)(50° R.)
387+90 - 391+00(12'LT)
374+00 - 383+90(12'RT)
384+70 - 391+00(12'RT)

DURABLE 4" YELLOW LINE
374+00-384+00 CL (DOUBLE)
384+40-387+30 CL (DOUBLE)
387+70-391+00 CL (DOUBLE)
TH 13 0+30 - 2+00 CL (DOUBLE)

TEMPORARY 4" WHITE LINE
374+00 - 386+78 (12' LT)
387+90 - 391+00 (12' LT)
374+00 - 383+90 (12' RT)
384+70 - 391+00 (12' RT)

TEMPORARY 4" YELLOW LINE
374+00 - 384+00 CL (DOUBLE)
384+40 - 387+30 CL (DOUBLE)
387+70 - 391+00 CL (DOUBLE)

ERECTING SALVAGED SIGNS
AS SHOWN - 3 EA.

REMOVING SIGNS
AS SHOWN - 11 EA.

TEMPORARY 24" STOP BAR
387+05 - 387+45 (25' LT) (TH 13)

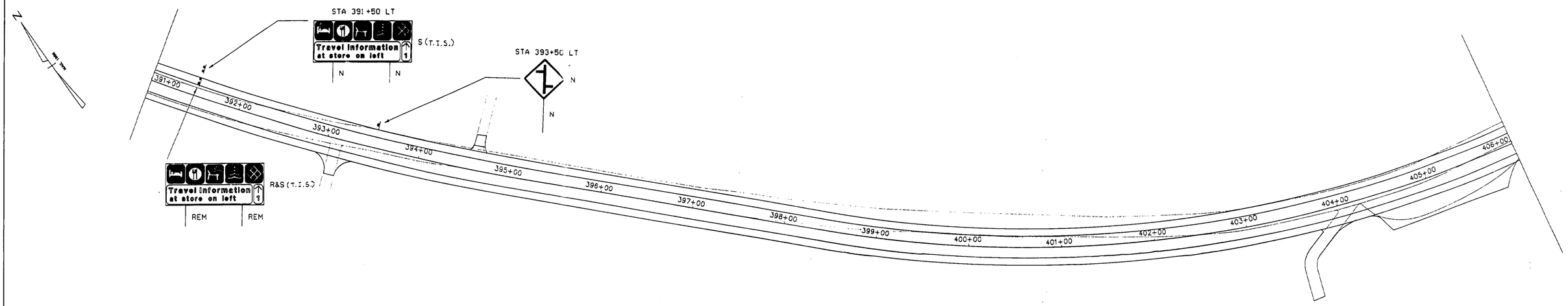
DURABLE 24" STOP BAR
387+05 - 387+45 (25' LT) (TH 13)

DURABLE LETTER OR SYMBOL
387+21 - 387+28 (29' - 37' LT) (STOP)

LEGEND
N - NEW
REM - REMOVE
S - SALVAGE
R&S - REMOVE AND SALVAGE
RET - RETAIN

TRAFFIC SHEETS

PROJECT NAME: CROTON/RYEGATE
NO.: FD26-1(30)
SHEET 62 OF 152 SHEETS
TRAFFIC SHT. 1 OF 7



PLAN
SCALE: 1"=50'

DURABLE 4" WHITE LINE

391+00–416+80 (12'LT)
417+62–421+00 (12'LT)
391+00–421+00 (12'RT)
TH5 0+58(11' LT)–1+00(11' LT)
TH5 0+40(11' RT)1+00(11' RT)

DURABLE 4" YELLOW LINE

391+00–417+10 CL (DOUBLE)
417+50–421+00 CL (DOUBLE)
TH5 0+25 - 1+00 CL (DOUBLE)

TEMPORARY 24" STOP BAR

TH5 0+26 (0'-30' LT)

DURABLE 4" WHITE LINE

416+80(12'LT) - TH5 0+58(11'LT)(37.5 R.)
TH 5 0+40(11 RT) - 417+62(12'LT)(50' R.)

DURABLE 24" STOP BAR

TH5 0+26 (0'-30' LT)

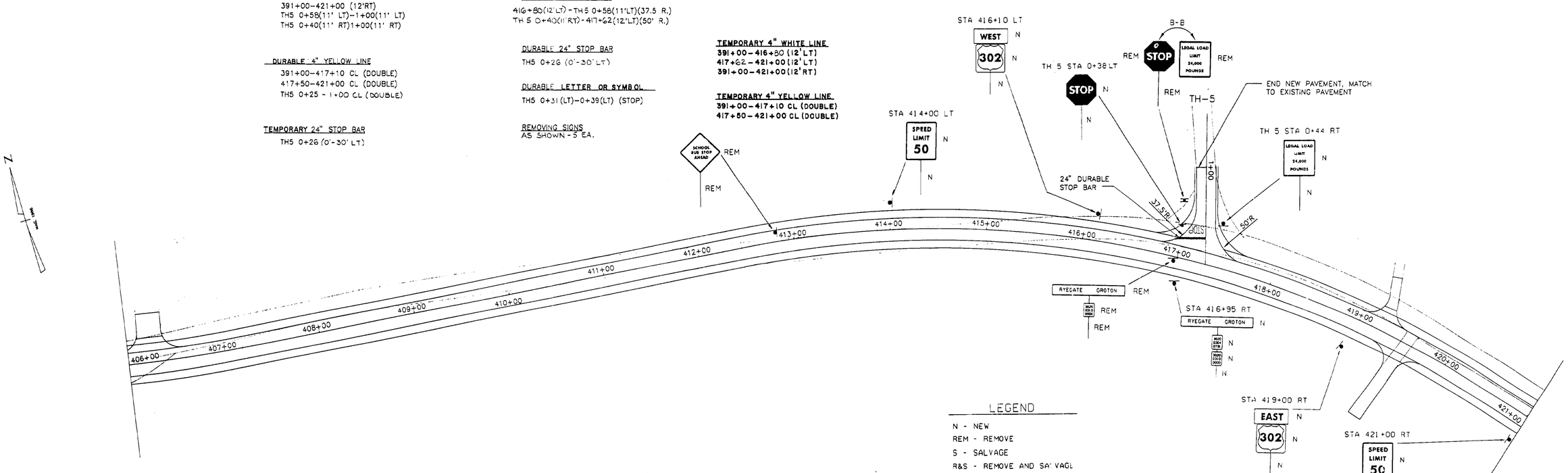
DURABLE LETTER OR SYMBOL

TH5 0+31(LT)–0+39(LT) (STOP)

REMOVING SIGNS
AS SHOWN - 5 EA.

TEMPORARY 4" WHITE LINE
391+00–416+80 (12'LT)
417+62–421+00 (12'LT)
391+00–421+00(12'RT)

TEMPORARY 4" YELLOW LINE
391+00–417+10 CL (DOUBLE)
417+50–421+00 CL (DOUBLE)



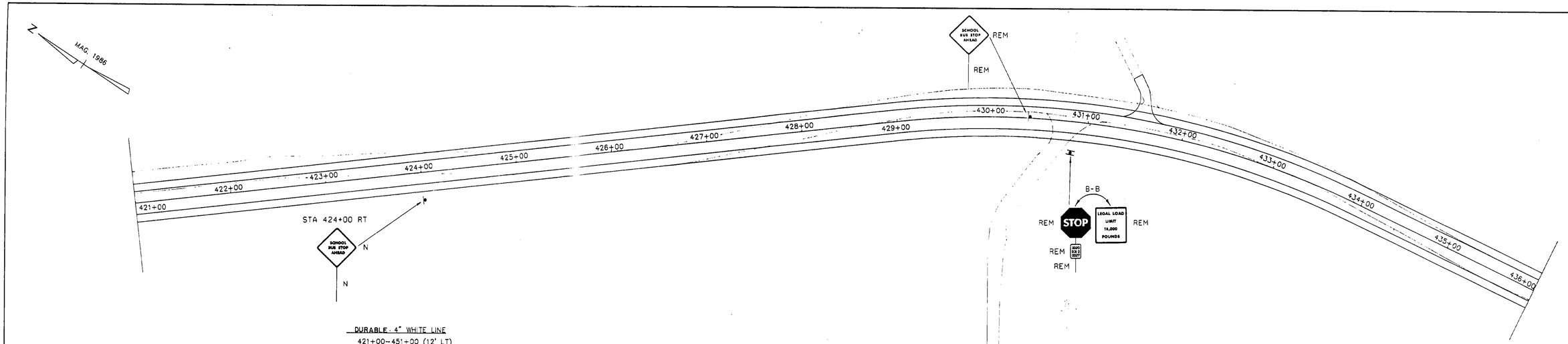
PLAN
SCALE: 1"=50'

LEGEND

N - NEW
REM - REMOVE
S - SALVAGE
R&S - REMOVE AND SALVAGE
RET - RETAIN

TRAFFIC SHEETS

PROJECT NAME: GROTON/RYEGATE
NO.: F026-1(30)
SHEET 63 OF 152 SHEETS
TRAFFIC SHT. 2 OF 7



DURABLE - 4" WHITE LINE
421+00–451+00 (12' LT)
421+00–451+00 (12' RT)

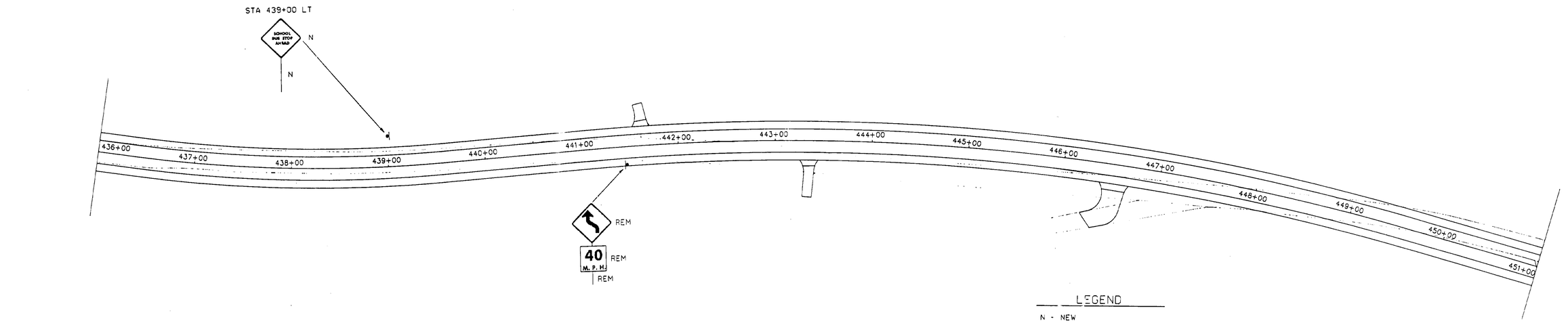
DURABLE 4" YELLOW LINE
421+00–451+00(CL)(DOUBLE)

REMOVING SIGNS
AS SHOWN - 6 EA.

TEMPORARY 4" WHITE LINE
421+00 - 451+00 (12' LT)
421+00 - 451+00 (12' RT)

TEMPORARY 4" YELLOW LINE
421+00 - 451+00(CL)(DOUBLE)

PLAN
SCALE: 1"=50'



PLAN
SCALE: 1"=50'

LEGEND

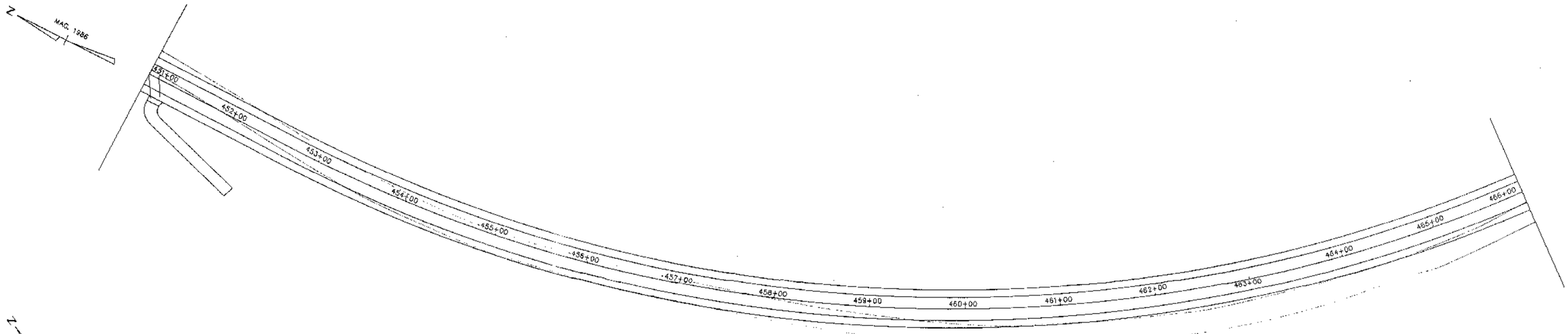
N - NEW
REM - REMOVE
S - SALVAGE
R&S - REMOVE AND SALVAGE
RET - RETAIN

TRAFFIC SHEETS

PROJECT NAME: GROTON/RYEGATE
NO.: FO26-1(30)

SHEET 64 OF 152 SHEETS

TRAFFIC SHT. 3 OF 7



DURABLE 4" WHITE LINE
451+00-491+00, 12'LT
451+00-491+00, 12'RT

DURABLE 4" YELLOW LINE
451+00-491+00, ℄ (DOUBLE)

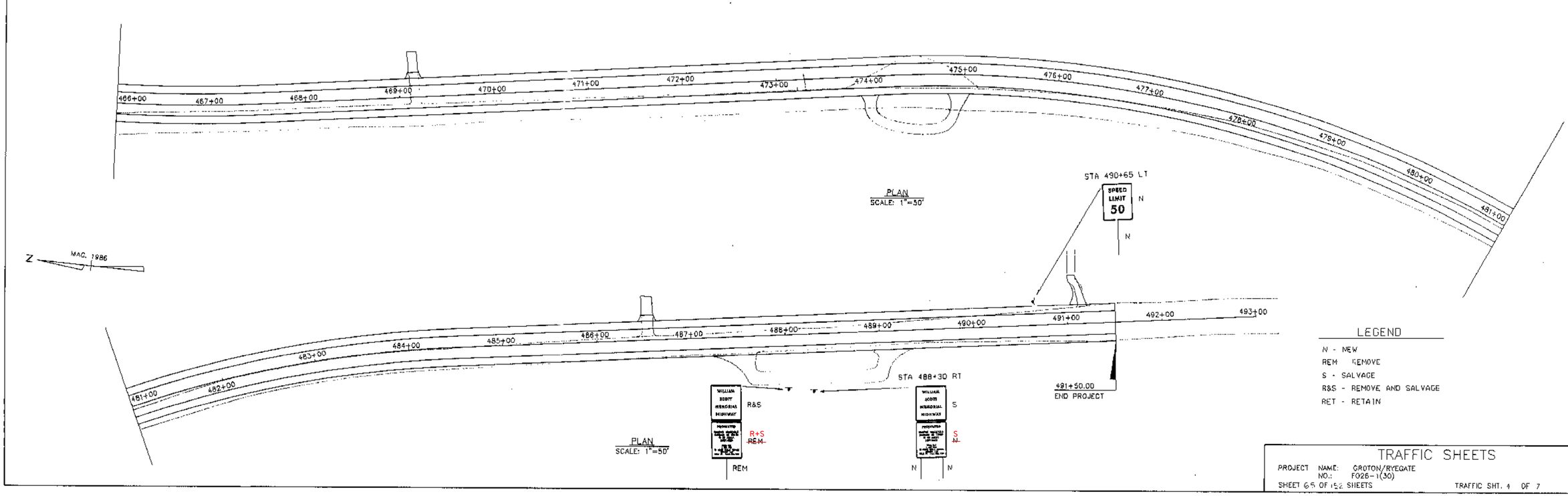
REMOVING SIGNS
AS SHOWN - 1 EA.

ERECTING SALVAGED SIGNS
AS SHOWN - 1 EA.

TEMPORARY 4" WHITE LINE
451+00- 491+00, 12'LT
451+00- 491+00, 12'RT

TEMPORARY 4" YELLOW LINE
451+00- 491+00, ℄ (DOUBLE).

PLAN
SCALE: 1"=50'



PLAN
SCALE: 1"=50'

PLAN
SCALE: 1"=50'

LEGEND

N - NEW
REM - REMOVE
S - SALVAGE
R&S - REMOVE AND SALVAGE
RET - RETAIN

TRAFFIC SHEETS

PROJECT NAME: GROTON/RYEGATE
NO.: F026-1(30)

SHEET 65 OF 152 SHEETS

TRAFFIC SHT. 4 OF 7

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																			REMARKS	SIGN DETAIL	
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft			FOUNDATION	TUBULAR STEEL Ø (in) lb/ft				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN REMAINED REQUIRED		DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												1.12	2.0	3.0	1.75	2.0	2.5			3.0	4.0	4.0 MOD		3.0	3.5	4.0	5.0	24"	30"					
															1.88	2.16	3.35			1.3	1.7	1.7		7.6	9.0	10.8	14.6							
376+50 LT	SPEED LIMIT 50 STOP SL BY VAOT	1	24	30	5.0						~~1~~			~~X~~			~~X~~	~~1~~														NOT ERECTED BY US SL 35 ERECTED BT VAOT R2-1 PAY FOR AS ORDERED BEFORE		E-142
376+50 RT	SPEED LIMIT 50	1	24	30	9/2/98 5.0						1 16			9/2/98 X 48			~~X~~	~~1~~														R2-1		E-142
378+50 RT	STOP L	1	30	30	9/2/98 6.25						1 14			9/2/98 X 42			~~X~~	~~1~~														SEE DETAIL B	69	
382+50 LT	REVERSE CURVE	1	36	36	9/2/98 9.0						1 14			9/2/98 X 42			~~X~~	~~1~~														VW-619		E-151
384+00 LT	REDUCED SPEED AHEAD BY VAOT	1	24	30	5.0						~~1~~			~~X~~			~~X~~	~~1~~														ERECTED BY VAOT R2-5A PAY FOR AS ORDERED BEFORE		E-142
TH 61 0+50 RT	LEGAL LOAD LIMIT 54,000 POUNDS	1	24	30	5.0						~~1~~			~~X~~			~~X~~	~~1~~														TH61 NOT SIGNED VR-017 PAY FOR AS ORDERED BEFORE		E-141
TH 61 0+55 LT	STOP DOUBLE YIELD AHEAD	1 1	30 6	30 8	6.25 0.33						~~1~~			~~X~~			~~X~~	~~1~~														TH61 NOT SIGNED (BACK TO BACK) R1-1 VD-700 PAY FOR AS ORDERED BEFORE		E-143 E-138
TH 61 0+35 LT	NEW CEMETERY RD						9/2/98 2				1 14			9/2/98 X 42			~~X~~	~~1~~														BACK TO BACK		
TOTALS					SF 41.83	SF	EA. 2	SF				LB	LB	LB ~~322~~ 174	LB	LB	LB ~~322~~	LB	LB	LB	LB	LB	EA.	LB	LB	LB	LB	EA.	EA.	LB				

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: GROTON - RYEGATE	PROJECT NO.: STP F 026-1(30)
DESIGN FILE NAME: /sqdc/78d073/dd073.dgn	
IPARM FILE NAME: dd073tsl.i	PLOT DATE: 13-MAR-1997
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: S. MENARD	DRAWN BY: B. MCAVOY
	SHEET: 66 OF 152

: Sheet Number: 66

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
TH 13 0+66 LT	STOP	1	30	30	9/2/98 6.25						1			9/2/98 X			X	1															(BACK TO BACK) R1-1 VD-700		E-143
		1	6	8	0.33						14			42																				E-138
TH 13 0+40 RT	GLOVER RD	2	18	6	9/2/98 0.75		1				1			9/2/98 X			X	1															PAY BOTH SIGNS AS CONTRACTOR WAS TOLD TO IN ORDER 2.		
					0.75						14			42																				
TH 13 0+60 RT	STOP	1	24	30	9/2/98 5.0						1			9/2/98 X			X	1															VR-017		E-141
											14			42																				
388+00 RT	SPEED LIMIT 50	1	24	30	9/2/98 5.0						1			9/2/98 X			X	1															R2-1		E-142
											16			48																				
391+50 LT	Travel Information at store on left							17 L6.6 9/2/98																								POSTS INCLUDED IN ITEM 680.20 (MOD.) (NON-FED. PART IC.)		E-125
393+50 LT		1	30	30	9/2/98 6.25						1			9/2/98 X			X	1															SEE DETAIL B	69	
											14			42																				
414+00 LT	STOP SPEED LIMIT 50	1	24	30	9/2/98 5.0						1			9/2/98 X			X	1															R2-1		E-142
											14			42																				
416+10 LT	WEST	1	24	12	9/2/98 2.0						1			9/2/98 X			X	1															M3-4		E-136
											16			48																				
	302	1	30	24	9/2/98 5.0																											M1-4		E-136
												LB	LB	LB	LB	LB	LB	LB	LB	LB	LB	LB		LB	LB	LB	LB								
TOTALS					SF 34.83 36.33	SF	EA. 1	SF 16.6 17				LB 281 306			LB 281					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

PROJECT: GROTON - RYEGATE	PROJECT NO.: STP F 026-1(30)
DESIGN FILE NAME: /sqdc/78d073/dd073.dgn	
IPARM FILE NAME: dd073ts2.i	PLOT DATE: 13-MAR-1997
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: S. MENARD	DRAWN BY: B. MCAVOY
	SHEET: 67 OF 152

: Sheet Number: 67

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (In)	HEIGHT (In)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (In) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (In) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (In) FOUND-ATION	3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
416+95 RT	~~STOP~~ GROTON	1	60	7.5	3.125 9/2/98						1 14			9/2/98 X 42			~~X~~	~~1~~															VD-024		E-124
	3030 0304 0306	1	6	8	0.33 9/2/98																											VD-700		E-138
	3030 0304 0000	1	6	8	0.33 9/2/98																											VD-700		E-138
TH 5 0+38 LT	STOP	1	30	30	6.25 9/2/98						1 14			9/2/98 X 42			~~X~~	~~1~~															RI-1		E-143
TH 5 0+44 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.0 9/2/98						1 14			9/2/98 X 42			~~X~~	~~1~~															VR-017		E-141
419+00 RT	EAST	1	24	12	2.0 9/2/98						1 14			9/2/98 X 42			~~X~~	~~1~~															M3-2		E-136
	302	1	30	24	5.0 9/2/98																											M1-4		E-136
421+00 RT	SPEED LIMIT 50	1	24	30	5.0 9/2/98						1 14			9/2/98 X 42			~~X~~	~~1~~															R2-1		E-142
	~~STOP~~																																		
424+00 RT	SCHOOL BUS STOP AHEAD	1	30	30	6.25 9/2/98						1 14			9/2/98 X 48			~~X~~	~~1~~															S3-1		E-153
439+00 LT	SCHOOL BUS STOP AHEAD	1	30	30	6.25 9/2/98						1 14			9/2/98 X 42			~~X~~	~~1~~															S3-1		E-153
												LB	LB	LB	LB	LB	LB	LB	LB	LB	LB	LB		LB	LB	LB	LB								
TOTALS					SF 39.535	SF	EA.	SF				LB ~~281~~ 300			LB ~~281~~					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

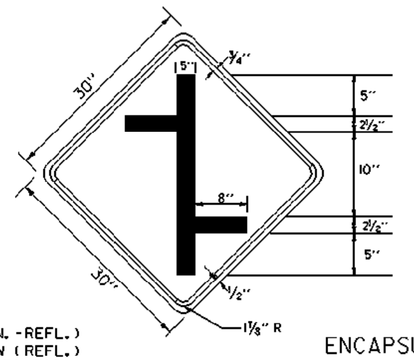
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IPARM FILE NAME: dd073ts3.i	PLOT DATE: 13-MAR-1997
SURVEYED BY:	SURVEY DATE:
SQUAD LEADER: S. MENARD	DRAWN BY: B. MCAVOY
	SHEET: 68 OF 152

Sheet Number: 68

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REFRAMED REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
488+30 RT	WILLIAM SCOTT MEMORIAL HIGHWAY ERECT SALVAGE						9/2/98 L				~~1~~ ~~2~~ 18			9/2/98 X 54			~~X~~	~~I~~																NEW POSTS ONLY		
	PROHIBITED ERECT SALVAGE	~~1~~	~~24~~	~~36~~	~~6.0~~		9/2/98 1																										VR-023		E-144
431+00 RT	STOP		30	30	6.25																												ORDERED FOR TH. TH THROWN UP. PAYED FOR SIGN GAVE TO STATE		
490+65 LT	SPEED LIMIT 50	1	24	30	9/2/98 5.0						1 14			9/2/98 X 42			~~X~~	~~I~~																R2-1		E-142
	SHEET 66 SHEET 67				41.83 36.33		2							174 306																						
	SHEET 68				39.535									300																						
	SHEET 69				11.25		2							96																						
	PROJECT TOTALS				128.945		4							876																						



COLORS

LEGEND - BLACK (NON.-REFL.)
BACKGROUND - YELLOW (REFL.)
REFER TO STD. E-150 FOR MATERIALS AND SPECIFICATIONS

ENCAPSULATED LENS

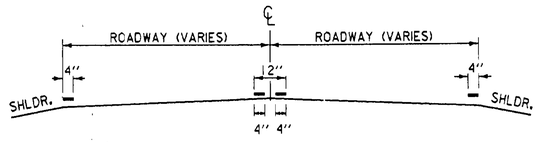
DETAIL B
NOT TO SCALE

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

								LB	LB	LB	LB	LB	LB	LB	LB	LB	LB	LB	LB	LB		LB	LB	LB	LB											
TOTALS	SF ~~11.0~~ 11.25	SF	EA. ~~1~~ 2	SF		LB ~~148~~ 96								LB ~~148~~					LB		EA.	LB					EA.	EA.	LB							

PROJECT:	PROJECT NO.:
GROTON - RYEGATE	STP F 026-1(30)
DESIGN FILE NAME: /sqdc/78d073/dd073.dgn IPARM FILE NAME: dd073ts4.i SURVEYED BY: SQUAD LEADER: S. MENARD	PLOT DATE: 13-MAR-1997 SURVEY DATE: DRAWN BY: B. MCAVOY SHEET: 69 OF 152

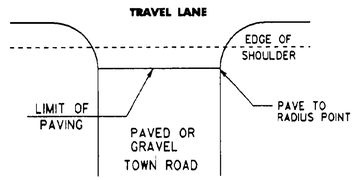
: Sheet Number: 69



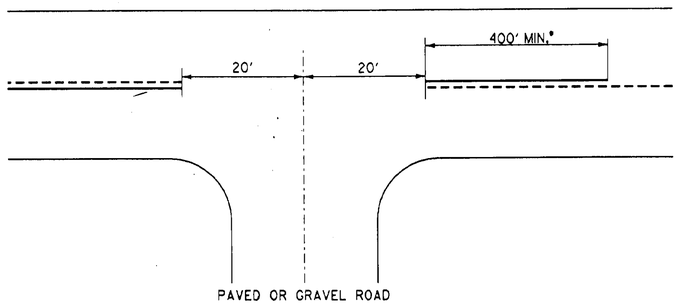
PAVEMENT MARKING PLACEMENT DETAIL

TRAFFIC NOTES

NOT TO SCALE



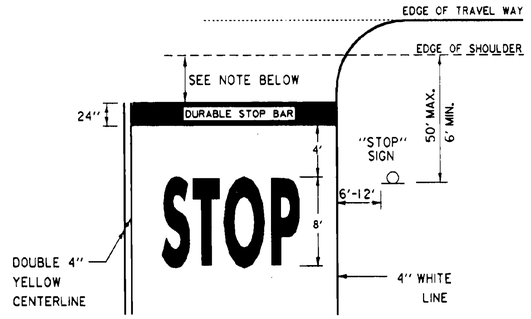
PAVING LIMITS FOR TOWN ROADS



A SOLID LINE IN THE DIRECTION OF TRAVEL IS BEGUN AT A LOCATION 400 FEET IN ADVANCE OF THE INTERSECTION. THE DISTANCE IS MEASURED FROM A POINT 20 FEET IN ADVANCE OF THE CENTERLINE OF THE INTERSECTING ROADWAY.

* CENTERLINE TREATMENT SHALL CONSIST OF A MINIMUM OF 400 FEET OF SOLID LINE IN ADVANCE OF THE INTERSECTION AND SHALL BE PAIRED WITH EITHER A SOLID OR DASHED LINE DEPENDING ON SIGHT DISTANCE AVAILABILITY IN THE OPPOSING LANE.

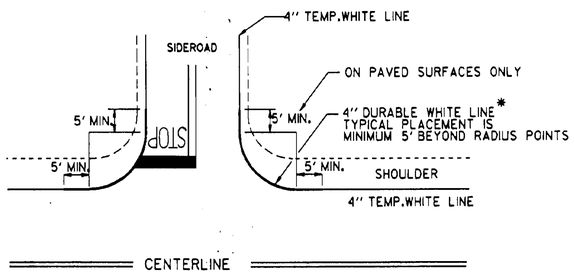
APPROACH TO A SIDE ROAD INTERSECTION



THE "DESIRED STOPPING POINT" IS THE LOCATION BASED ON SITE CONDITIONS THAT BEST ALLOWS THE STOPPED VEHICLE TO VIEW THE APPROACHING TRAFFIC , IN NO CASE MORE THAN 30 FEET OR LESS THAN 4 FEET FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY.

PAVEMENT MARKING DETAILS

(SEE TRAFFIC NOTE "F")



* FOR ALL PAVED CLASS 1 & CLASS 2 TOWN HIGHWAYS AND ANY CLASS 3 TOWN HIGHWAY WIDER THAN 22 FEET.

DURABLE EDGELINE RADIUS LAYOUT TYPICAL

GUIDELINES FOR MINIMUM INTERIM PAVEMENT MARKINGS FOR CONSTRUCTION ZONES

A. DEFINITION - INTERIM MARKINGS ARE MARKINGS THAT ARE PLACED PRIOR TO THE APPLICATION OF FINAL PAVEMENT MARKINGS ON THE WEARING COURSE AS SPECIFIED IN THE PROJECT PLANS. THE COST ASSOCIATED WITH THE INTERIM MARKINGS INCLUDING MATERIAL COST, PLACEMENT COSTS, AND REMOVAL COSTS SHALL BE SUBSIDIARY TO THE SPECIFIED FINAL PAVEMENT MARKINGS.

B. INTERIM MARKINGS SHALL CONSIST OF TAPE, OR, TEMPORARY RAISED PAVEMENT MARKERS (RPM'S).

THE TAPE SHALL BE OF A TYPE EASILY REMOVED IF PLACED ON THE FINAL PAVEMENT SURFACE. INTERIM TAPE MARKINGS OR RPM'S WILL BE OFFSET AND REMOVED IMMEDIATELY UPON APPLICATION OF THE SPECIFIED FINAL MARKINGS AND SHALL BE APPLIED AS DESCRIBED BELOW.

STATEMENTS A OR B PERTAIN TO THE PAVEMENT MARKINGS PLACED ON THE WEARING COURSE. MARKINGS PLACED ON THE BASE COURSE OR VARIOUS LIFTS OF PAVEMENT MAY CONSIST OF TAPE, PAINT OR RPM'S. IF TAPE IS USED, IT SHALL THE TYPE THAT CAN BE PAVED OVER OR A TYPE EASILY REMOVED. IF RPM'S ARE USED, PAYMENT SHALL BE THE LINEAR RATE AS IF A SOLID LINE WAS APPLIED.

C. CENTERLINE AND GORE AREA MARKINGS SHALL BE APPLIED AT THE END OF EACH WORKING DAY. THE FOLLOWING LAYOUT REQUIREMENTS SHALL BE MET:

NO PASSING ZONE
-SOLID STRIPES- DOUBLE YELLOW REMOVABLE PAVEMENT MARKING TAPE LINES SPACED 4" APART.
OR
-RAISED PAVEMENT MARKERS- IN NO CASE SHALL TEMPORARY RAISED PAVEMENT MARKERS BE USED FOR MORE THAN THREE CALENDAR DAYS BEFORE THE APPLICATION OF THE SPECIFIED FINAL MARKINGS.

RAISED PAVEMENT MARKERS (REMOVABLE) WHEN USED, SHALL BE PLACED ON 5'CENTERS WITH EVERY 4TH MARKER BEING REFLECTORIZED. THE RAISED PAVEMENT MARKINGS SHALL BE SUPPLEMENTED WITH BLACK ON ORANGE "DO NOT PASS" SIGNS PLACED AT THE BEGINNING OF THE NO PASSING ZONE AND EVERY 1000' THEREAFTER THROUGHOUT THE NO PASSING ZONE. ALL TEMPORARY RAISED PAVEMENT MARKERS SHALL BE REMOVED IMMEDIATELY UPON PLACEMENT OF THE SPECIFIED FINAL MARKINGS, ALL COSTS ASSOCIATED WITH "DO NOT PASS" SIGNS AND THEIR INSTALLATION SHALL BE SUBSIDIARY TO THE SPECIFIED FINAL PAVEMENT MARKINGS.

DASHED LINE
-10-FOOT SOLID LINE WITH 30-FOOT GAP.
OR
FOR MARKINGS TO BE USED FOR THREE DAYS OR LESS
-4 FOOT SOLID LINE WITH 36 FOOT GAP TO BE REMOVED IMMEDIATELY UPON THE APPLICATION OF THE SPECIFIED FINAL MARKINGS.
OR
-4 RETRO-REFLECTIVE RPM'S ON THREE FOOT CENTERS WITH A 30 FOOT GAP TO BE REMOVED IMMEDIATELY UPON THE APPLICATION OF THE SPECIFIED FINAL MARKINGS.

GORE AREAS
GORE AREAS TO INCLUDE 8" CHANNELIZING LINE AND 4" DASHED LINE.
SEE STANDARD E-191.

D. EDGE LINES
UNLESS SPECIFIED, FINAL EDGE LINES ARE NOT REQUIRED UNTIL COMPLETION OF THE PROJECT. EDGE LINES HOWEVER SHOULD BE APPLIED AT THE END OF THE DAY. WHERE TRAFFIC VOLUMES ARE HIGH AND/OR A DELAY OF SEVERAL DAYS IS ANTICIPATED, IN THESE INSTANCES, TAPE, PAINT OR RPM'S CAN BE USED AS THE MARKING. MATERIAL QUANTITIES ARE TO BE PAID UNDER THE APPROPRIATE BID ITEM FOR TEMPORARY LINES. RPM'S SHOULD BE RETRO-REFLECTIVE TEMPORARY MARKERS ON A 5' SPACING PATTERN AND THE SAME COLOR AS THE LINE THEY ARE SUBSTITUTING FOR.

E. PRIOR TO ACCEPTANCE, THE PAVEMENT MARKINGS SHALL BE COMPLETED FOR THE ENTIRE PROJECT BY THE CONTRACTOR AS DETAILED ON THE PLANS OR DIRECTED BY THE RESIDENT ENGINEER.

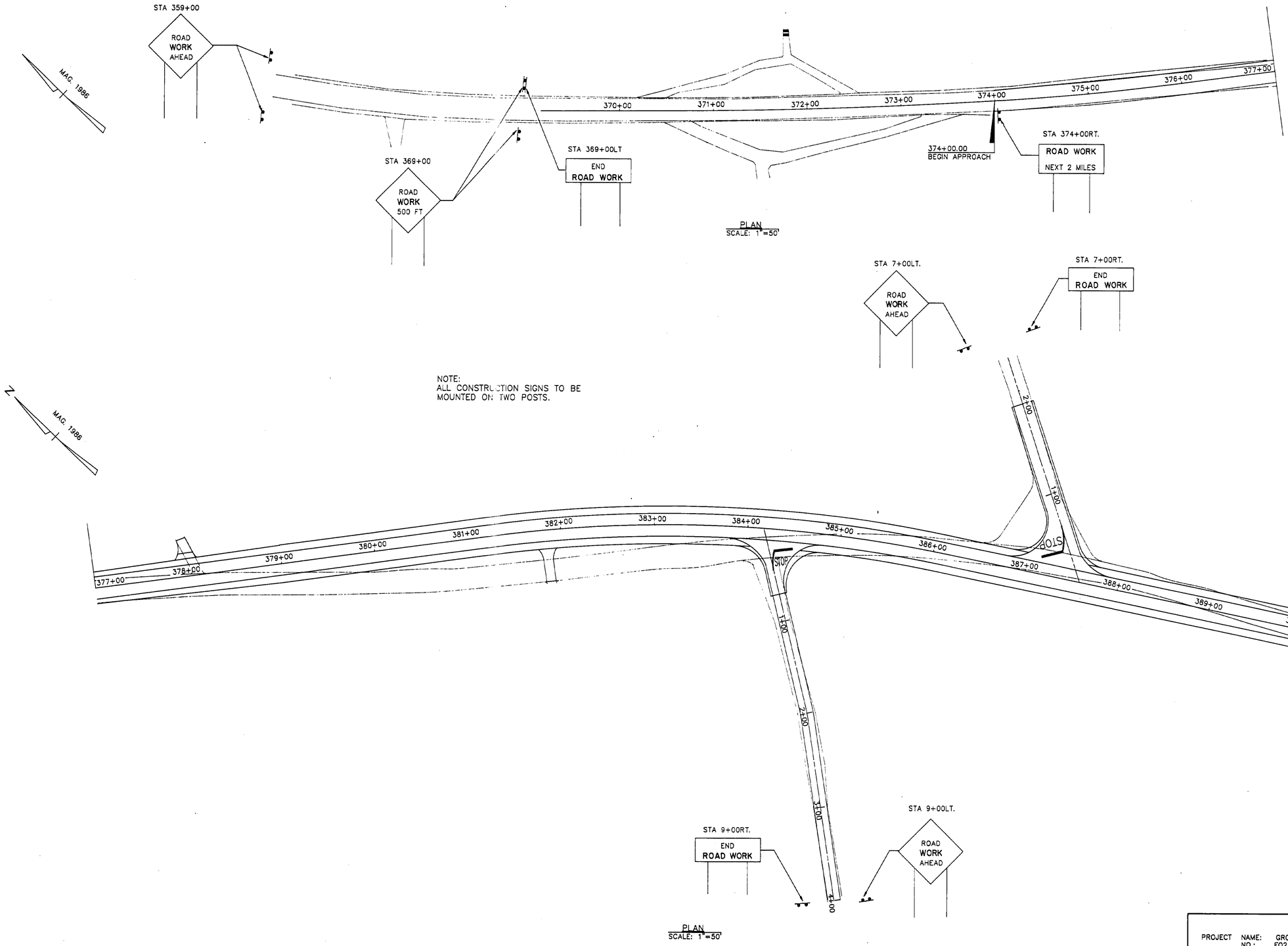
F. THE DURABLE STOP BAR SHALL BE APPLIED AT ALL SIDEROAD LOCATIONS, BUT THE DURABLE "STOP" MARKINGS ARE TO BE APPLIED ONLY ON PAVED SIDEROADS OR AS DIRECTED BY THE RESIDENT ENGINEER.

MASHMA.DGN

REVISIONS

DELETED DRIVE DETAIL
REVISED STOPBAR - CL
07/11/89
NOTES CHANGED, SIGN ADDED
10/03/89 DAR

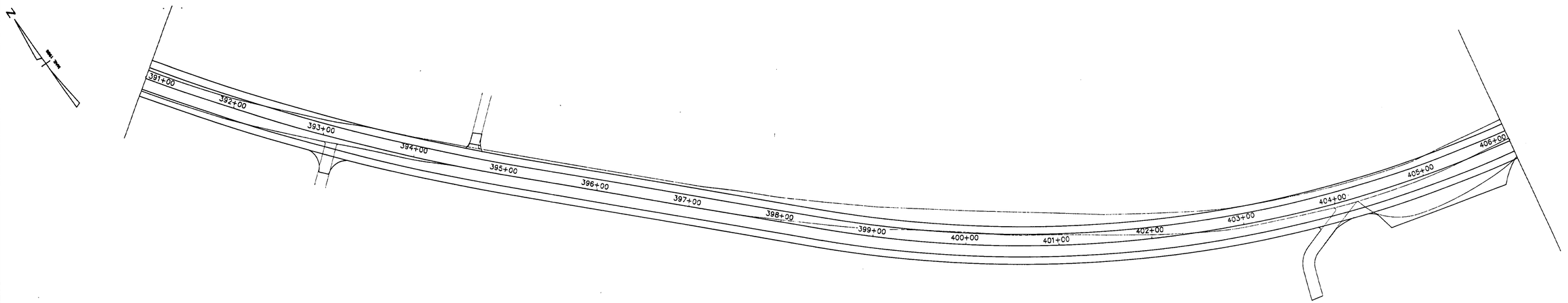
SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
SQUAD LEADER _____
DESIGN FILE NO. _____ DATE PLOTTED _____
PROJ. NAME
PROJ. NO. TRAFFIC SHEET 7 OF 7
SHEET 70 OF 152 SHEETS



NOTE:
ALL CONSTRUCTION SIGNS TO BE MOUNTED ON TWO POSTS.

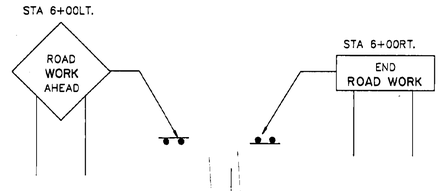
TRAFFIC SHEETS

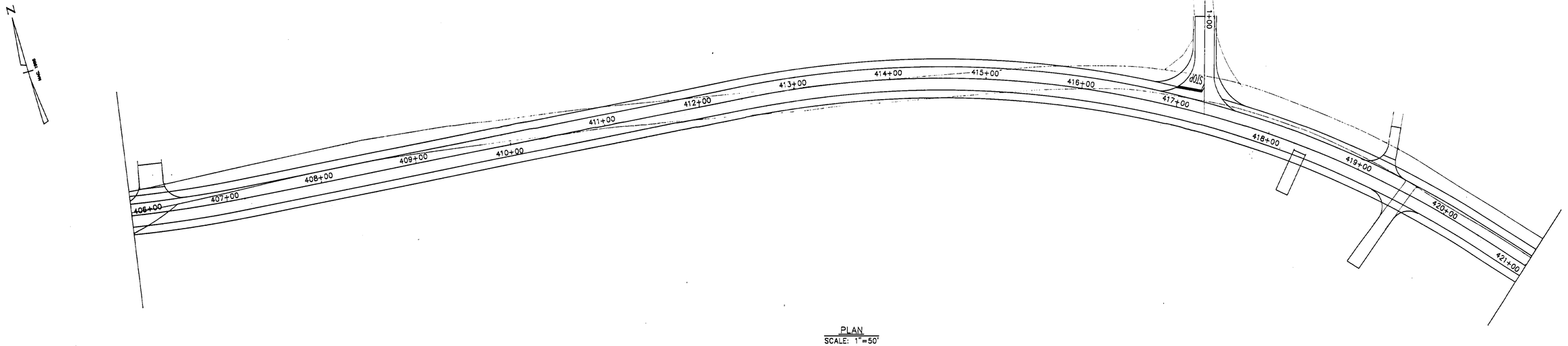
PROJECT NAME: GROTON/RYEGATE
NO.: F026-1(30)
SHEET 71 OF 152 SHEETS
CONSTRUCTION SHT. 1 OF 4



PLAN
SCALE: 1"=50'

NOTE:
ALL CONSTRUCTION SIGNS TO BE MOUNTED ON TWO POSTS.





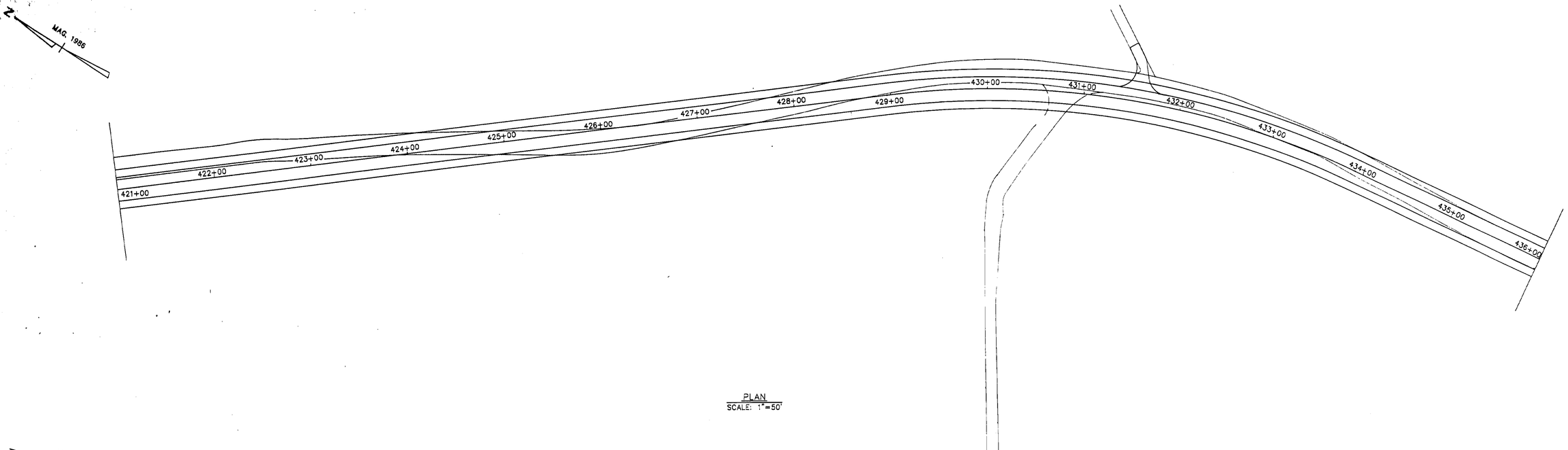
PLAN
SCALE: 1"=50'

TRAFFIC SHEETS

PROJECT NAME: GROTON/RYEGATE
NO.: F026-1(30)

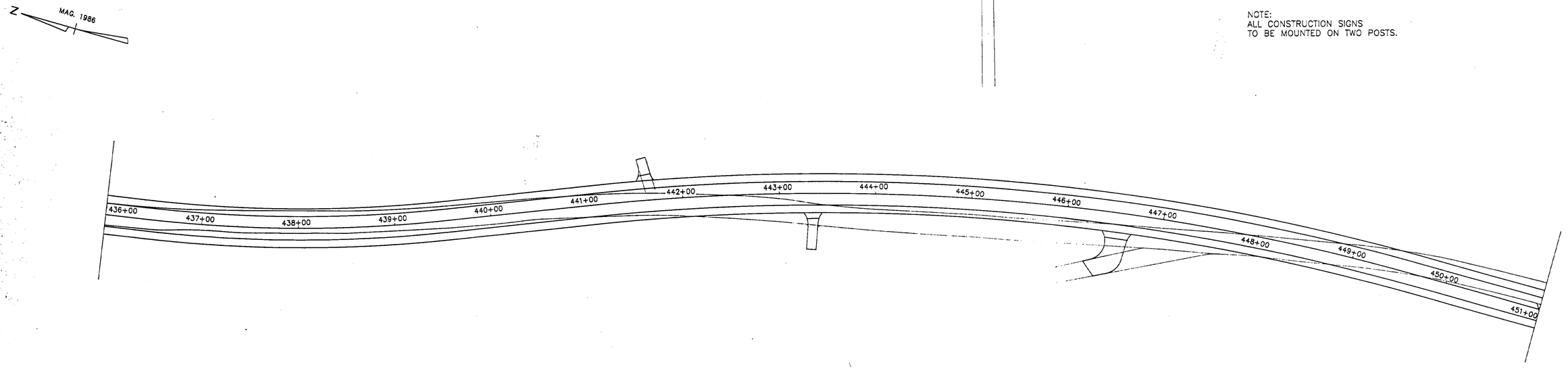
SHEET 72 OF 152 SHEETS

CONSTRUCTION SHT. 2 OF 4



PLAN
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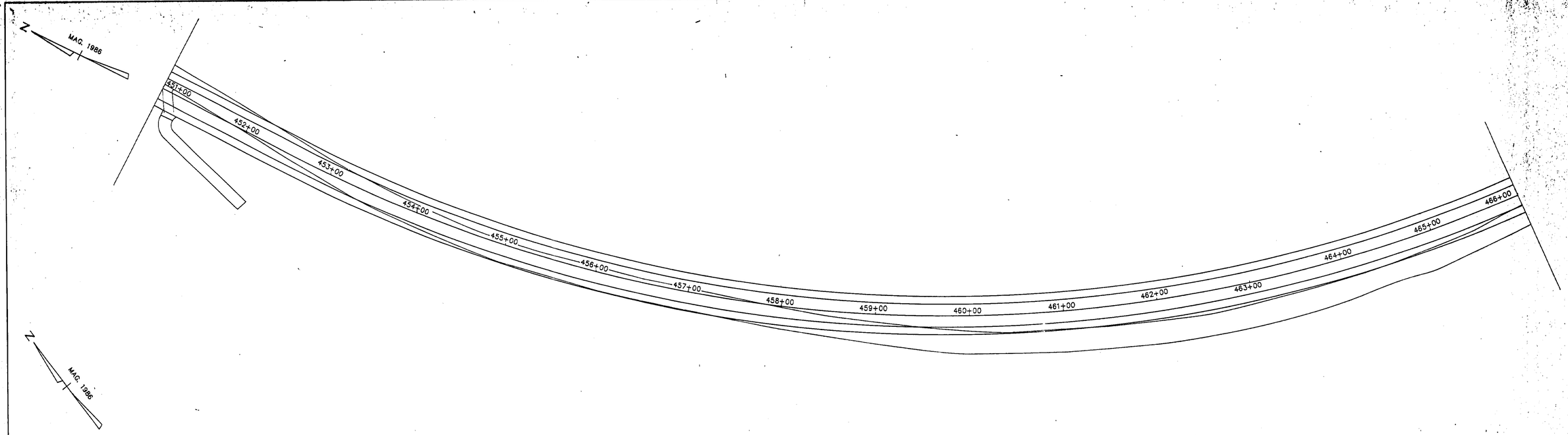
NOTE:
ALL CONSTRUCTION SIGNS
TO BE MOUNTED ON TWO POSTS.



PLAN
SCALE: 1"=50'

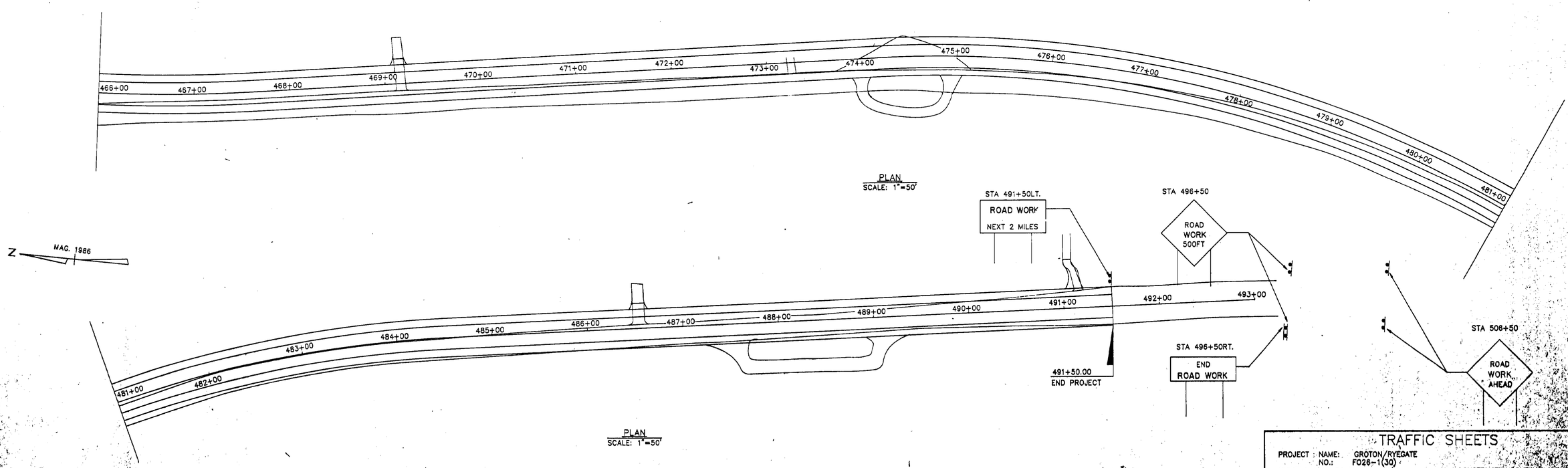
TRAFFIC SHEETS

PROJECT NAME: GROTON/RYEGATE
NO.: F026-1(30)
SHEET 73 OF 152 SHEETS
CONSTRUCTION SHT. 3 OF 4



PLAN
SCALE: 1"=50'

NOTE:
ALL CONSTRUCTION SIGNS TO BE MOUNTED ON TWO POSTS.



PLAN
SCALE: 1"=50'

PLAN
SCALE: 1"=50'

TRAFFIC SHEETS

PROJECT NAME: GROTON/RYEGATE
NO.: FO26-1(30)

SHEET 74 OF 152 SHEETS

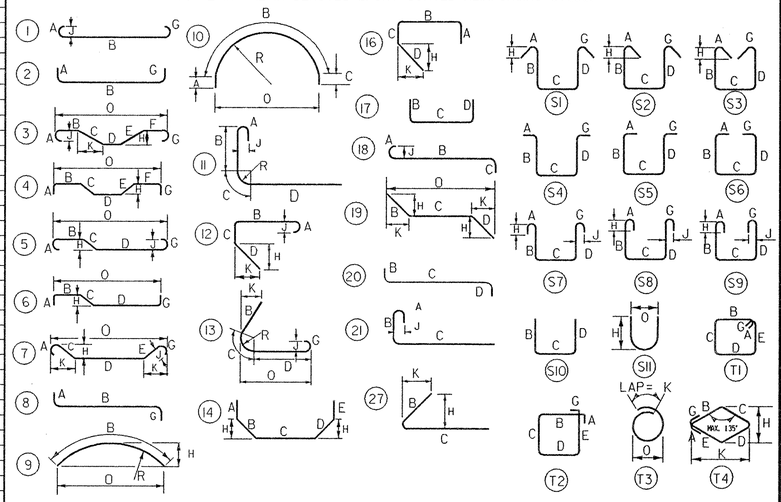
CONSTRUCTION SHT. 4 OF

ITEM NO.	ITEM	UNIT	QUANTITY BREAKDOWN CLARK HATCH BROOK	QUANTITY BREAKDOWN DARIUS JAMES BROOK	TOTAL	FINAL
203.27	UNCLASSIFIED CHANNEL EXCAVATION	CY	670	1080	1750	
203.32	GRANULAR BORROW	CY	1120	760	1880	
204.25	STRUCTURE EXCAVATION	CY	370	740	1110	
204.30	GRANULAR BACKFILL FOR STRUCTURES	CY	56	60	116	
501.25	CONCRETE, CLASS B	CY	29	33	62	
507.15	REINFORCING STEEL	LB	3600	480	4080	
511.25	84" CORRUGATED ALUMINUM ALLOY PLATE PIPE (120 LF X 7356 LBS)	EA	1		1	
511.30	14'-0"x 8'-7" CORR. ALUM. ALLOY PLATE PIPE ARCH (90 LF = 9306 LBS)	EA		1	1	
528.11	TWO-WAY TEMPORARY BRIDGE @ STA. 388+25	LS	1		1	
528.11	TWO-WAY TEMPORARY BRIDGE @ STA. 418+36	LS		1	1	
529.15	REMOVAL OF STRUCTURE @ STA. 388+25	EA	1		1	
529.15	REMOVAL OF STRUCTURE @ STA. 418+36	EA		1	1	
613.11	STONE FILL, TYPE II	CY	40	320	360	
613.12	STONE FILL, TYPE III	CY		370	370	
613.13	STONE FILL, TYPE IV	CY	900		900	
649.31	GEOTEXTILE UNDER STONE FILL	SY	700	960	1660	
651.40	GRUBBING MATERIAL	SY	110	190	300	

ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	G	H	K
				PIPE INLET HEADWALL								
*	40	5	7-9	IHW503	STR							
	14	5	14-3	IHW505	STR							
	18	5	13-3	IHW506	STR							
	14	5	6-3	IHW507	STR							
	18	5	5-1	IHW508	STR							
	20	5	7-11	IHW501	17			4-6	3-5			
	19	5	5-2	IHW502	17		3-5	1-9				
	9	5	2-9	IHW504	S10		1-0	0-9	1-0			
*	40	6	5-6	IHW601	STR							
				PIPE OUTLET HEADWALL								
*	51	5	7-9	OHW503	STR							
	14	5	24-0	OHW505	STR							
	18	5	24-0	OHW506	STR							
	25	5	7-11	OHW501	17			4-6	3-5			
	25	5	5-2	OHW502	17		3-5	1-9				
	10	5	2-9	OHW504	S10		1-0	0-9	1-0			
*	50	6	5-6	OHW601	STR							
				PIPE ARCH HEADWALLS								
△	6	5	25-6	HW501	STR							
△	8	6	25-6	HW601	STR							

NOTES

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-91). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION DIAMETER INCHES	CROSS SECTIONAL AREA SQ. INCHES	PERIMETER INCHES
#3	.376	.375	.11	1.178
#4	.668	.500	.20	1.571
#5	1.043	.625	.31	1.963
#6	1.502	.750	.44	2.356
#7	2.044	.875	.60	2.749
#8	2.670	1.000	.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

STATE OF VERMONT
AGENCY OF TRANSPORTATION

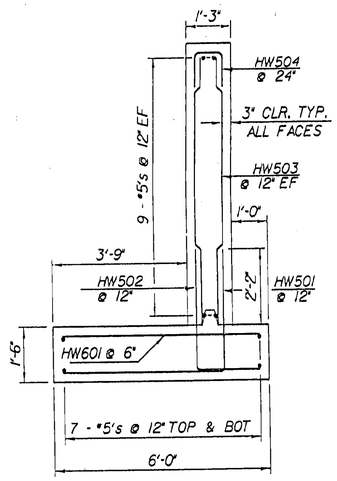
Town Of GROTON-RYEGATE	Bridge No.
	Log Sta.
Highway No. US 302	Surv. Sta. 388+00 & 418+20

US 302 OVER CLARK HATCH & DARIUS JAMES

QUANTITY AND REINFORCING SHEET

Designed By RSD & R WHITCOMB	Drawn By G. ROY
Checked By R. WHITCOMB Date 2/96	Bridge Design Supervisor J. H. WEAVER Date 2/96
PROJECT GROTON- RYEGATE	PROJECT NO. F 026 - 1(30)
I.G.C. Info. /str3/78d073/sd073.dgn	sd073q1
Bridge Sheet No. 1 OF 5	Sheet 75 of 152

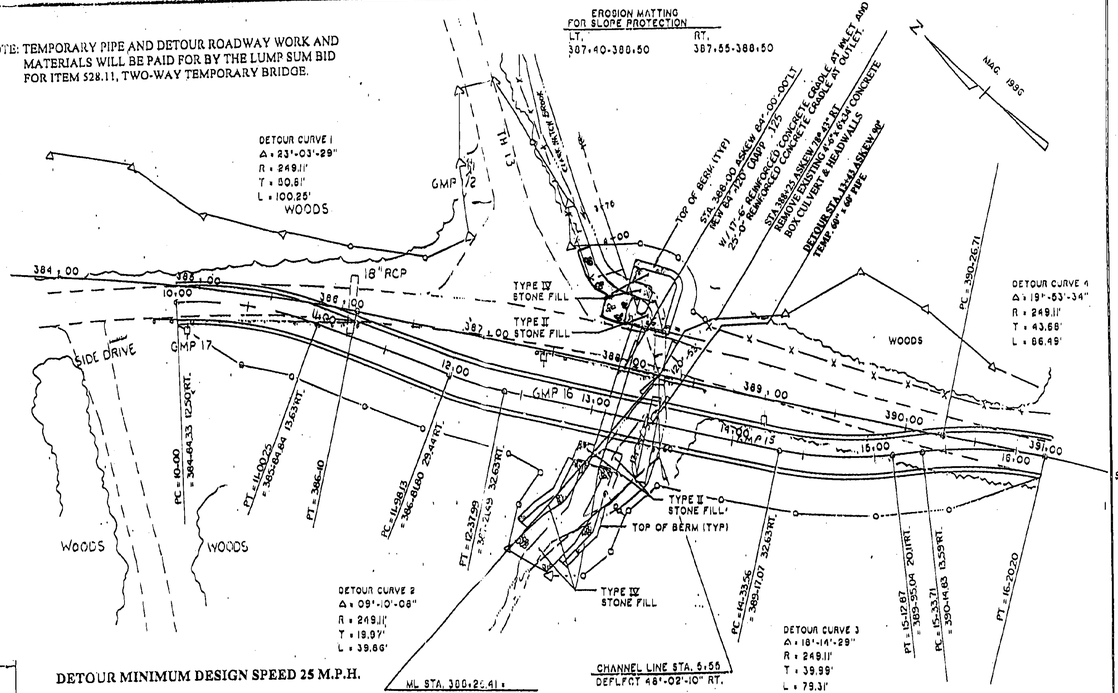
PLOTTED 12-MAR-1997



HEADWALL TYPICAL SECTION

1/2" = 1'-0"

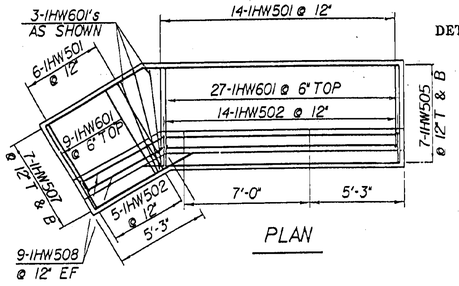
NOTE: TEMPORARY PIPE AND DETOUR ROADWAY WORK AND MATERIALS WILL BE PAID FOR BY THE LUMP SUM BID FOR ITEM 528.11, TWO-WAY TEMPORARY BRIDGE.



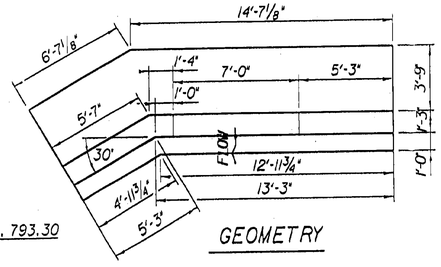
DETOUR PLAN

1" = 50'

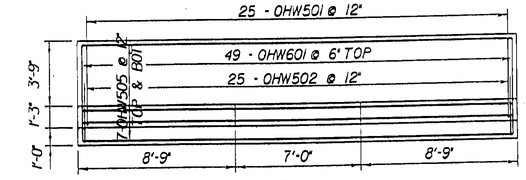
DETOUR MINIMUM DESIGN SPEED 25 M.P.H.



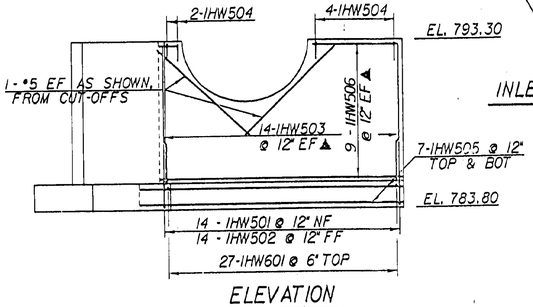
PLAN



GEOMETRY



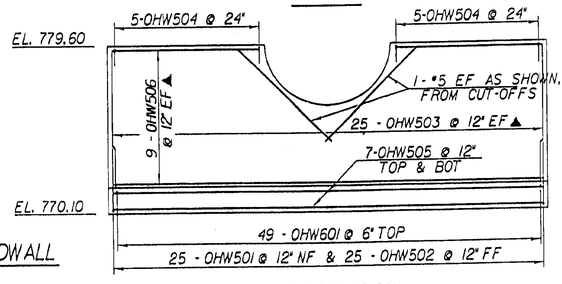
PLAN



ELEVATION

INLET HEADWALL

1/4" = 1'-0"



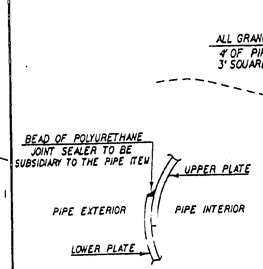
OUTLET HEADWALL

1/4" = 1'-0"

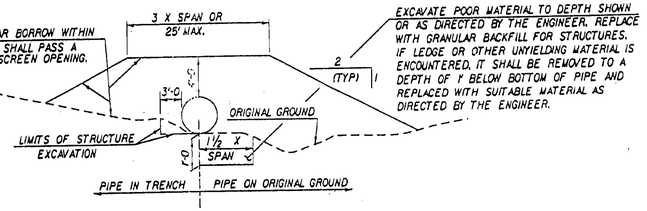
ELEVATION

~ NOTES ~

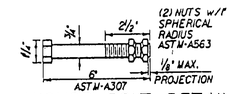
1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, AND THE LATEST A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGWAY BRIDGES. DESIGN IS FOR HS-25 LIVE LOAD.
2. UNLESS OTHERWISE INDICATED, 5 1/3 BOLTS PER LINEAR FOOT FOR ALUMINUM PLATES ARE REQUIRED ALONG THE LONGITUDINAL SEAMS. ALL CONNECTIONS FOR STRUCTURAL PLATE SECTIONS SHALL BE MADE WITH BOLTS MEETING ASTM A-307 (GALVANIZED AFTER FABRICATION).
3. IN LONGITUDINAL JOINTS LOCATED AT THE SPRING LINE OF PLATE PIPE ARCHES OR WITHIN 20° OF HORIZONTAL ON PIPES, THE BOLT NEAREST THE VISIBLE EDGE OF LAPPED JOINTS, AS VIEWED FROM INSIDE THE PIPE, SHALL BE PLACED IN THE VALLEY OF THE CORRUGATIONS.
4. WHEN NORMAL CONSTRUCTION OR REGULAR TRAFFIC IS MAINTAINED OVER THE PIPE THE CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF THREE (3) FEET OF COMPACTED MATERIAL.
5. ALUMINUM PIPE WHICH IS TO BE IN CONTACT WITH CONCRETE SHALL HAVE CONTACT SURFACES THOROUGHLY COATED WITH BITUMINOUS OR ASPHALTIC PAINT.
6. PIPES SHALL BE FACTORY ELONGATED 5% (PIPE ARCHES SHALL NOT BE ELONGATED).
7. THE ENDS OF THE PIPE SHALL BE CUT SQUARE.
8. THE CONTRACTOR SHALL INCLUDE AT THE OUTLET END, A 10 FOOT PIECE OF 6" UNDERDRAIN EACH SIDE ON SAME GRADIENT AS CULVERT CONFORMING TO SUBSECTIONS 711.01. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CULVERT PIPE.



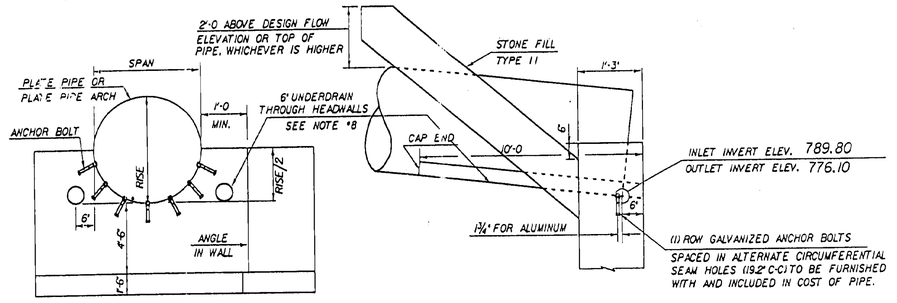
LAP DETAIL



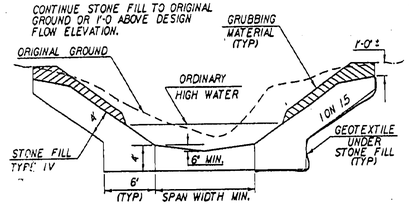
EXCAVATION AND BACKFILL DETAILS



ANCHOR BOLT DETAIL



CRADLE HEADWALL DETAILS



TYPICAL CHANNEL SECTION

~ HYDRAULIC DATA ~

DRAINAGE AREA	1.25 SQ MI	DESIGN FLOW Q 50	DESIGN OUTLET VELOCITY 23.8 FPS
DESIGN TAILWATER DEPTH	2.1 FT	ELEVATION	778.2
ORDINARY HIGH WATER DEPTH	0.5 FT		
Q 10 FLOW	160 CFS	HEADWATER ELEVATION	794.84
Q 25 FLOW	200 CFS	HEADWATER ELEVATION	795.61
Q 50 FLOW	275 CFS	HEADWATER ELEVATION	797.08
Q 100 FLOW	300. CFS	HEADWATER ELEVATION	797.50
COMMENTS			

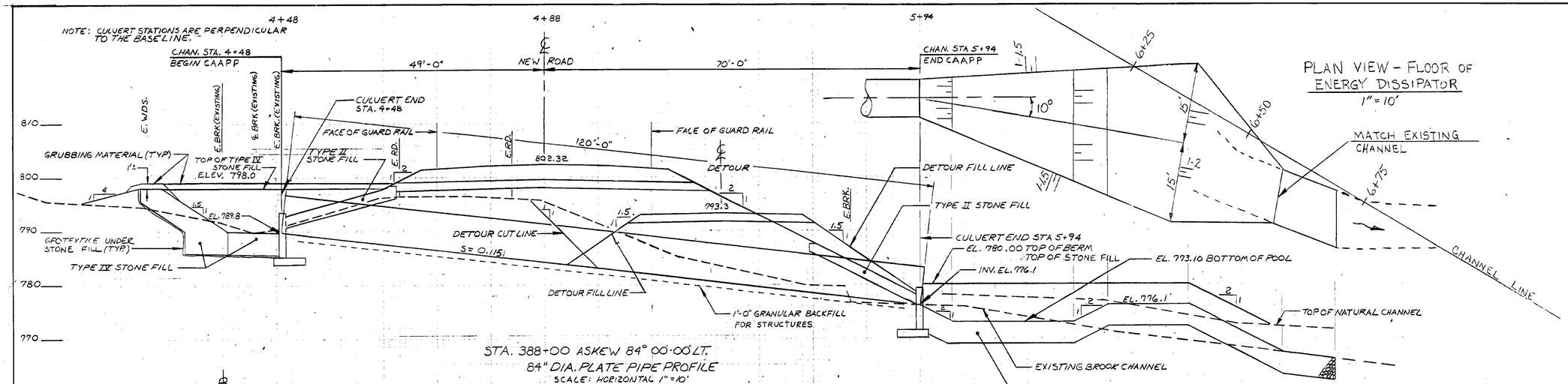
DETAILS OF STRUCTURAL PLATE PIPE CULVERTS

	ALUMINUM
CORRUGATIONS	9" x 2 1/2"
SIZE OF PIPE OR PIPE ARCH	84"
WATERWAY AREA	38.5 SF
PLATE THICKNESS (COATED)	0.125"
BOLT SIZE	3/4"
WEIGHT PER LINEAR FOOT	61.3 LBS.
TOTAL WEIGHT	7356 LBS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of GROTON	Bridge No.
Highway No. US 302	Log Sta. Surv. Sta. 388+00
US 302 OVER CLARK HATCH BROOK	
DETAILS FOR 84" X 120' CAAPP	
Designed By RSD & R WHITCOMB	Drawn By RAW & R WHITCOMB
Checked By G ROY Date	Bridge Design Supervisor J H WEAVER Date
PROJECT GROTON- RYEGATE	PROJECT NO. F026-1(30)
I.G.C. Info. /str3/78d073/sd073.dgn	sd073pd.l
Bridge Sheet No. 2 OF 5	Sheet 76 of 152

NOTE: CULVERT STATIONS ARE PERPENDICULAR TO THE BASE LINE.

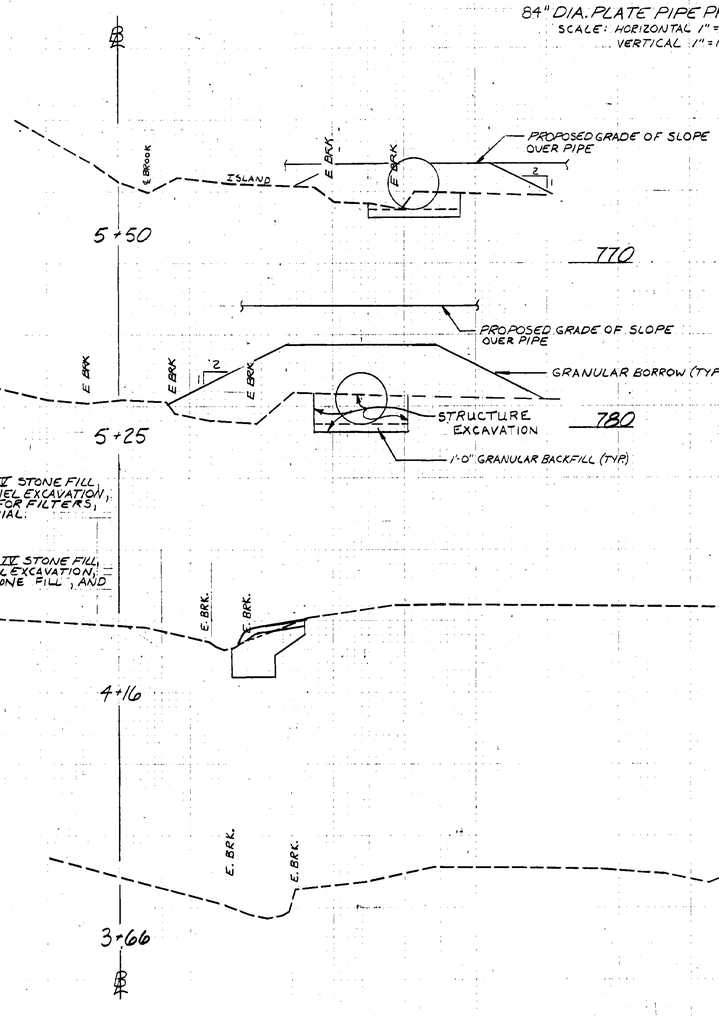


PLAN VIEW - FLOOR OF ENERGY DISSIPATOR

1" = 10'

MATCH EXISTING CHANNEL

STA. 388+00 ASKEW 84° 00·00 LT.
84" DIA. PLATE PIPE PROFILE
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



STA 4+60 LT. END TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE FABRIC FOR FILTERS, AND GRUBBING MATERIAL.

STA 4+20 LT. BEGIN TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE UNDER STONE FILL, AND GRUBBING MATERIAL.

STA 4+70 RT. END TYPE II STONE FILL

STA 4+50 RT. END TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE UNDER STONE FILL, AND GRUBBING MATERIAL.

STA 4+45 RT. BEGIN TYPE II STONE FILL

STA 4+00 RT. BEGIN TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE UNDER STONE FILL, AND GRUBBING MATERIAL.

STA 6+75 LT. END TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE UNDER STONE FILL, AND GRUBBING MATERIAL.

STA 6+75 RT. END TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE UNDER STONE FILL, AND GRUBBING MATERIAL.

STA 6+02 RT. END TYPE II STONE FILL.

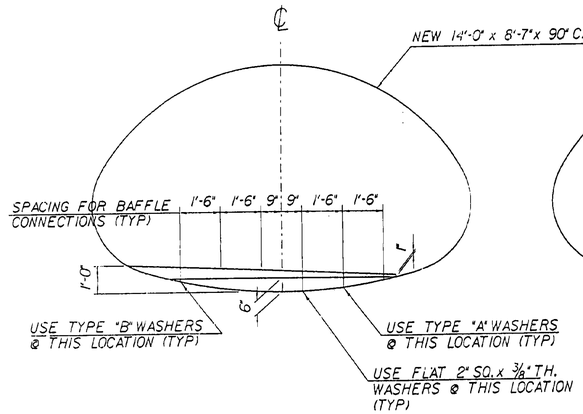
STA 5+85 RT. BEGIN TYPE III STONE FILL, UNCLASSIFIED CHANNEL EXCAVATION, GEOTEXTILE UNDER STONE FILL, AND GRUBBING MATERIAL.

STA 5+75 RT. BEGIN TYPE II STONE FILL.

HORIZONTAL SCALES IN FEET
0 10 20
VERTICAL
0 10 20

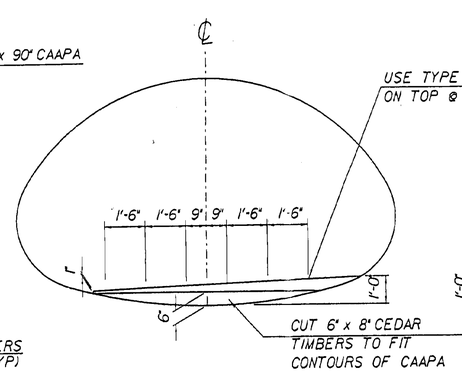
CULVERT PROFILE & CHANNEL SECTIONS
STA. 388+00
CLARK HATCH BROOK

BRIDGE SHEET 3 OF 5 SHEET 77 OF 152.



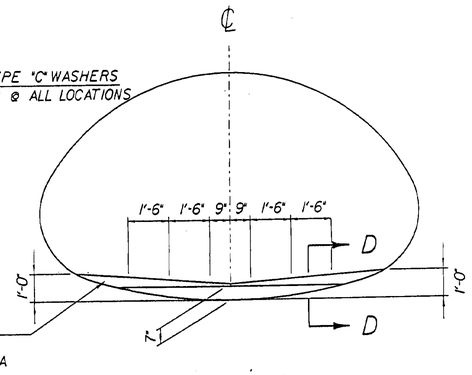
SECTION A - A

3/8" = 1'-0"



SECTION B - B

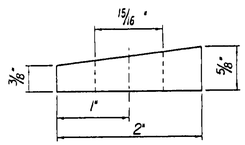
3/8" = 1'-0"



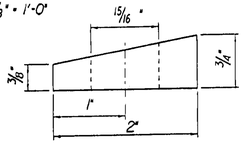
SECTION C - C

3/8" = 1'-0"

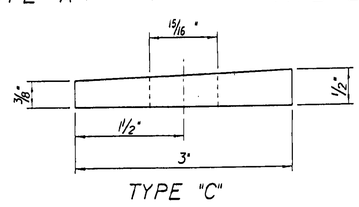
NOTE: ALL ATTACHMENT HARDWARE SHALL BE GALVANIZED AS PER SECTION 506 OF THE STANDARD SPECIFICATIONS.



TYPE "A"



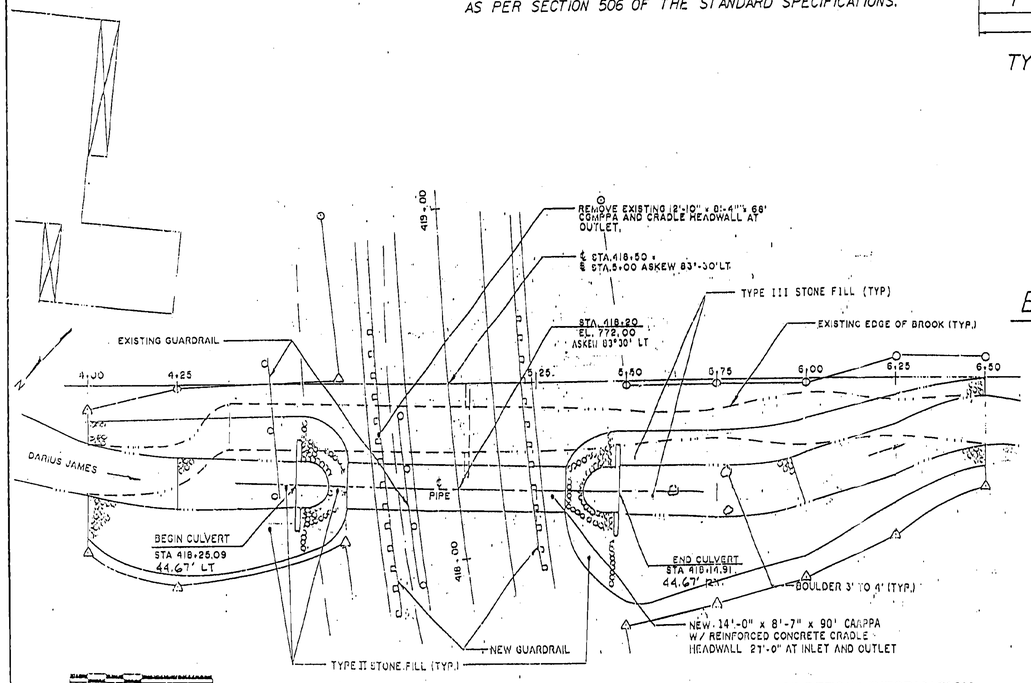
TYPE "B"



TYPE "C"

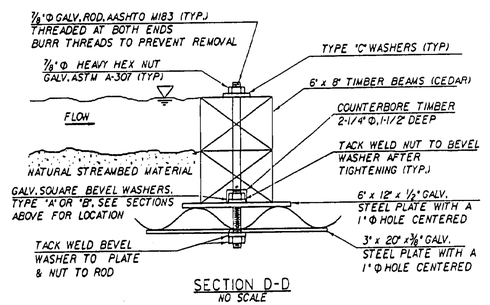
BEVELED PLATE WASHERS

1" = 1"



PLAN

NOTE: SEE SHEET 80 FOR DETOUR INFORMATION



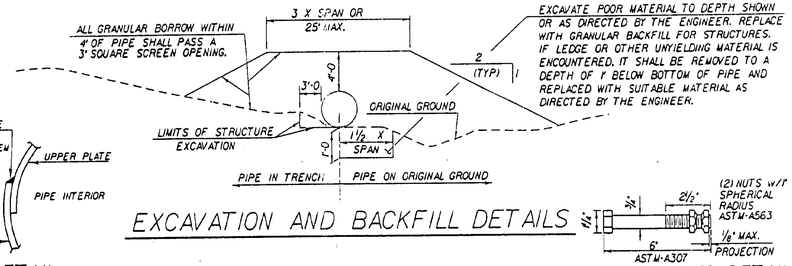
SECTION D-D

NO SCALE

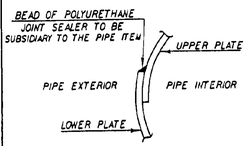
NOTE: ROD LENGTH AND TIMBER CROSS SECTIONS VARY W/LOCATION OF CROSS SECTION.

~ NOTES ~

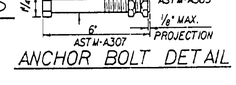
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3. IN LONGITUDINAL JOINTS LOCATED AT THE SPRING LINE OF PLATE PIPE ARCHES OR WITHIN 20° OF HORIZONTAL ON PIPES, THE BOLT NEAREST THE VISIBLE EDGE OF LAPPED JOINTS, AS VIEWED FROM INSIDE THE PIPE, SHALL BE PLACED IN THE VALLEY OF THE CORRUGATIONS.
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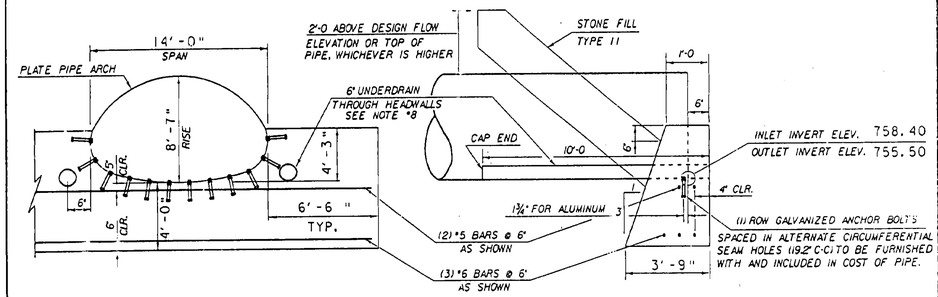
EXCAVATION AND BACKFILL DETAILS



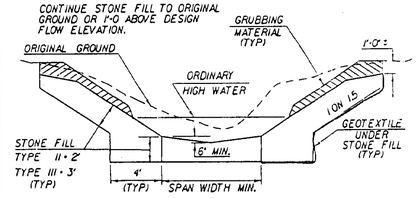
LAP DETAIL



ANCHOR BOLT DETAIL



CRADLE HEADWALL DETAILS



TYPICAL CHANNEL SECTION

REINFORCING STEEL SCHEDULE

NO. PCS.	SIZE	LENGTH	MARK	TYPE
SEE SHEET 1 OF 5				

ESTIMATED QUANTITIES

NO.	ITEM	UNIT	TOTAL	FINAL
SEE SHEET 1 OF 5				

~ HYDRAULIC DATA ~

DRAINAGE AREA 2.8 SQ. MI. DESIGN FLOW Q_{50} DESIGN OUTLET VELOCITY 13.9 FPS

DESIGN TAILWATER DEPTH 2.9 FT ELEVATION 758.9

ORDINARY HIGH WATER DEPTH 2.0 FT

Q 10 FLOW	311 CFS	HEADWATER ELEVATION	764.0
Q 25 FLOW	360 CFS	HEADWATER ELEVATION	764.5
Q 50 FLOW	571 CFS	HEADWATER ELEVATION	766.3
Q 100 FLOW	587 CFS	HEADWATER ELEVATION	766.5

COMMENTS

DETAILS OF STRUCTURAL PLATE PIPE CULVERTS

	ALUMINUM
CORRUGATIONS	9" x 2 1/2"
SIZE OF PIPE OR PIPE ARCH	14'-0" x 8'-7"
WATERWAY AREA	94
PLATE THICKNESS (COATED)	0.125"
BOLT SIZE	3/4"
WEIGHT PER LINEAR FOOT	103.4
TOTAL WEIGHT	9306

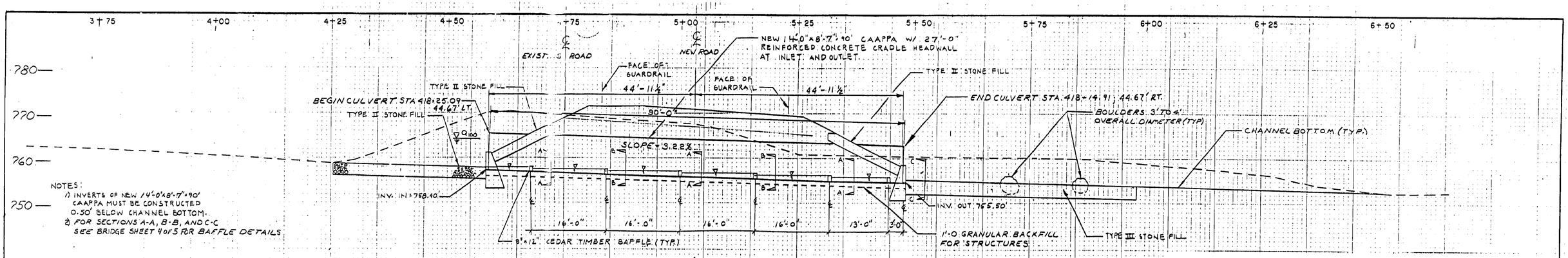
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of RYEGATE	Bridge No.
Highway No. US 302	Log Sta.
	Surv. Sta. 418+20

US 302 OVER DARIUS JAMES BROOK

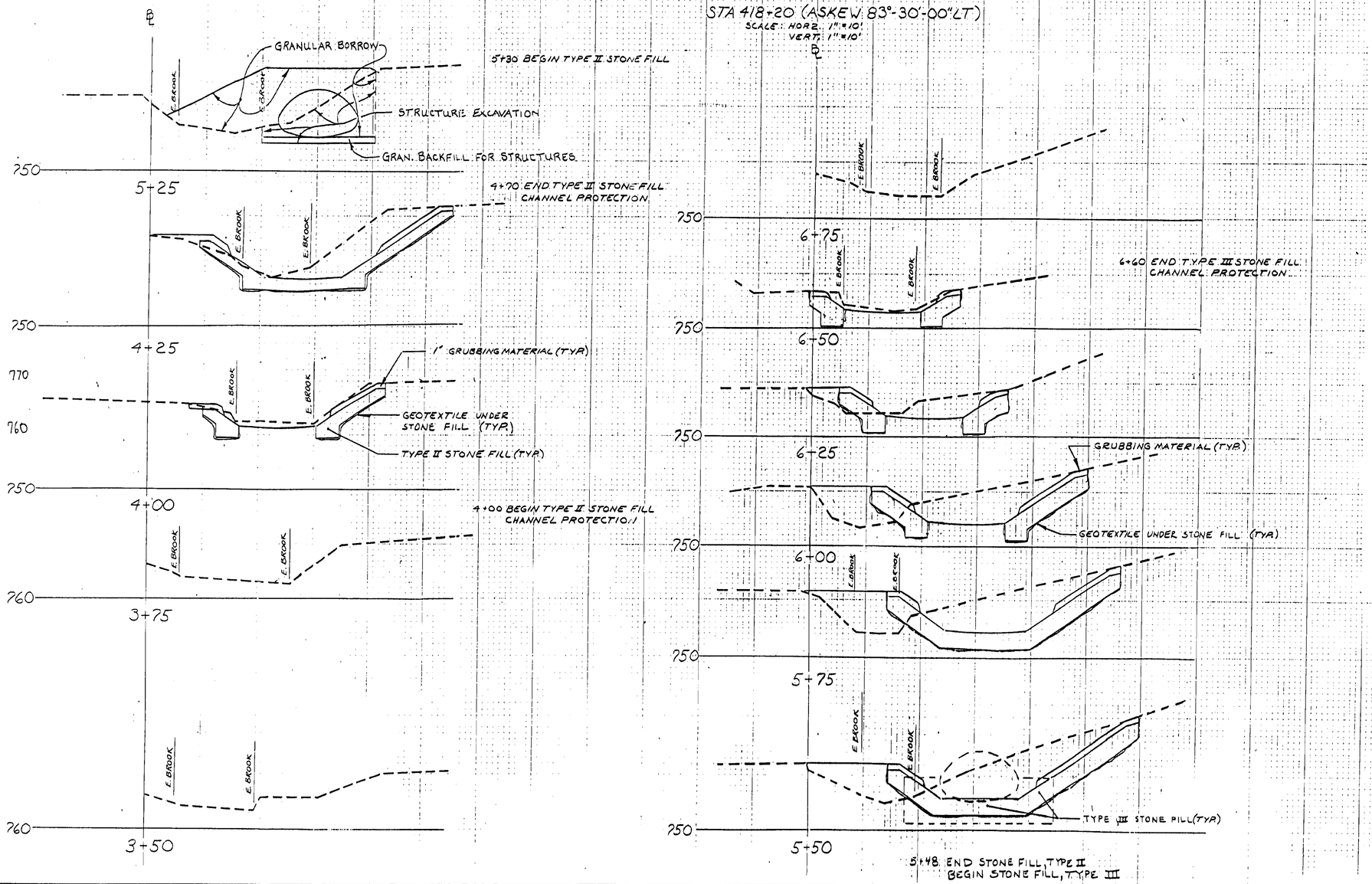
DETAILS FOR 14'-0" X 8'-7" CAAPA

Designed By RSD & R WHITCOMB	Drawn By RAW & R WHITCOMB
Checked By G ROY Date	Bridge Design Supervisor J H WEAVER Date
PROJECT GROTON- RYEGATE	PROJECT NO. F026-1(30)
I.G.C. Info. /str3/78d073/sd073.dgn	sd073a01
Bridge Sheet No. 4 OF 5	Sheet 78 of 152



NOTES:
1) INVERTS OF NEW 14'-0"x8'-7"x40' CAAPPA MUST BE CONSTRUCTED 0.50' BELOW CHANNEL BOTTOM.
2) FOR SECTIONS A-A, B-B, AND C-C SEE BRIDGE SHEET 4 OF 5 FOR BAFFLE DETAILS

STA 418+20 (ASKEW 83°-30'-00"LT)
SCALE: HOR. 1"=10'
VERT. 1"=10'

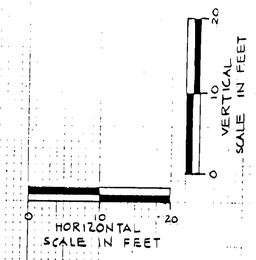


PROPOSED CONSTRUCTION SEQUENCE FOR INSTALLING NEW CAAPPA:

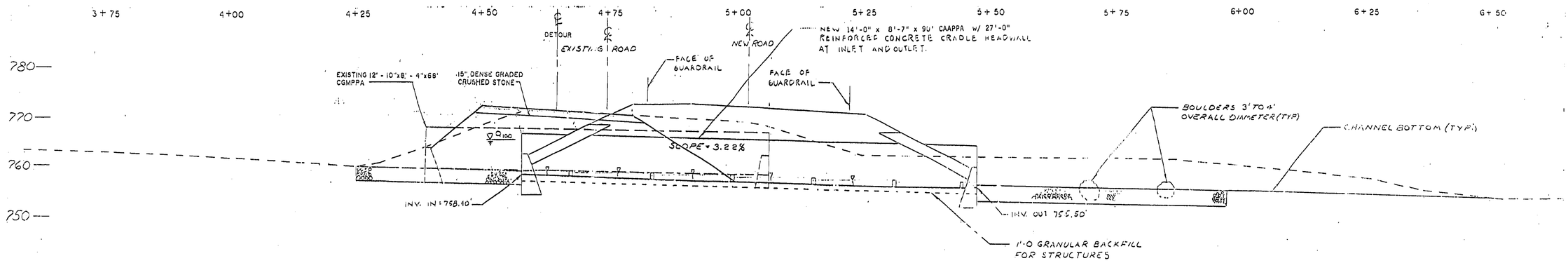
1. CONSTRUCT TWO-WAY DETOUR OVER NORTHERLY END OF EXISTING PIPE.
2. ATTACH PIPE EXTENSION TO THE SOUTHERLY END OF THE EXISTING PIPE. PIPE USED FOR EXTENSION SHALL BE THE SAME SIZE AS EXISTING.
3. INSTALL SOUTHERLY SECTION OF NEW PIPE ARCH.
4. CONSTRUCT NEW ROADWAY EMBANKMENT TO A MINIMUM ELEVATION OF THREE FEET OVER THE NEW PIPE WITH ROADWAY WIDTH AND SUBBASE MATERIAL AS PER SECTION 528 FOR TWO-WAY TRAFFIC.
5. SHIFT TRAFFIC AND INSTALL REMAINDER OF NEW PIPE.
6. DIVERT STREAM FLOW INTO NEW PIPE.
7. REMOVE NORTHERLY END OF EXISTING PIPE TO THE EXTENT POSSIBLE.
8. SHIFT TRAFFIC OVER THE NORTHERLY END OF NEW PIPE AND REMOVE REMAINDER OF EXISTING PIPE AND THE TEMPORARY EXTENSION.
9. CONSTRUCT REMAINDER OF NEW ROADWAY AND FINISH SLOPES.

ADDITIONAL NOTES:

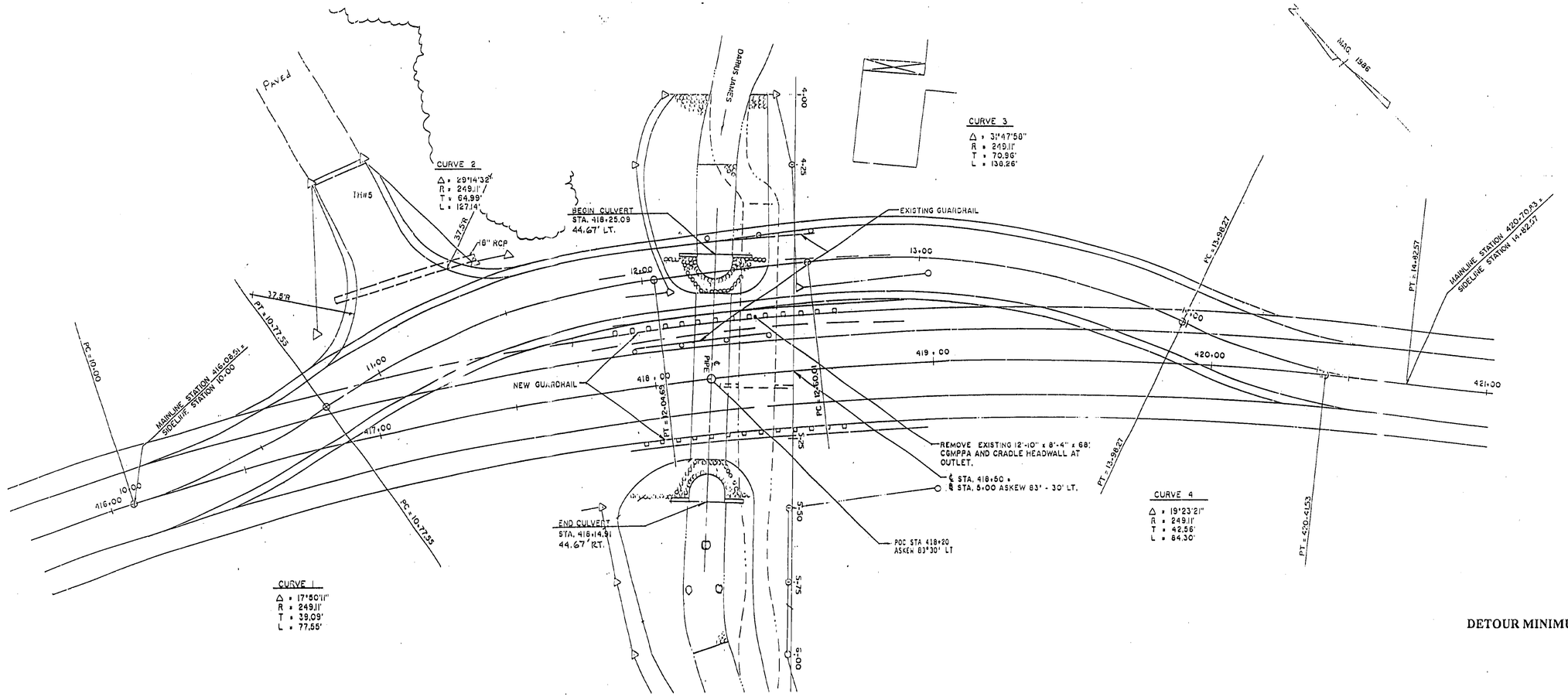
1. THE TEMPORARY SECTION OF PIPE AND ALL DETOUR WORK AND MATERIALS WILL BE PAID FOR UNDER THE LUMP SUM BID FOR ITEM 528.11, TWO-WAY TEMPORARY BRIDGE.
2. THE CONTRACTOR MAY SUBMIT AN ALTERNATE METHOD OF INSTALLING THE NEW PIPE ARCH. THIS ALTERNATE METHOD MUST BE SUBMITTED AND APPROVED AS PER SECTION 528.
3. THE EXISTING PIPE WILL REMAIN THE PROPERTY OF THE STATE OF VERMONT AND WILL BE STORED ON THE PROJECT FOR LATER REMOVAL BY STATE FORCES.



CULVERT PROFILE & CHANNEL SECTIONS
STA. 418+36
DARIUS JAMES BROOK
BRIDGE SHEET 5 OF 5



CROSS SECTION DARIUS JAMES DETOUR
SCALE: HORIZONTAL 1" = 10'
VERTICAL 1" = 10'



DARIUS JAMES BROOK CROSSING DETOUR
PLAN VIEW

SCALE: 1" = 20'

DETOUR MINIMUM DESIGN SPEED 25 M.P.H.

DARIUS JAMES BROOK CROSSING
DETOUR
SHEET 20 OF 152

FINAL SURVEY — NOTE BOOK No. ____ — SURVEYED / PLOTTED / TEMPLATE / AREA / AREAS CHECKED — BY / DATE

ORIGINAL SURVEY — NOTE BOOK No. 286,407 — SURVEYED: ECS, RGA, GPF — PLOTTED: GPF — TEMPLATE: RAN — AREA: SSS — AREAS CHECKED: — BY / DATE: ECS, RGA, GPF 4/22/86; GPF 4/30/87; RAN 7/6/87; SSS 9/29/87

RIGHT EDGE — EXISTING GRADE — -0.109 — 0 — +0.005 — +0.021 — +0.017

LEFT EDGE — MATCH — -0.096 — -0.021 — -0.021 — -0.021 — -0.021

374+00 — 374+50 — 375+00 — 375+50 — 376+00 — 376+50 — PT. 376+23.24

℄ GRADE 0.021 FT/FT MAX.

BEGIN CURVE TRANSITION FROM EXISTING ROAD

SCALE: HORZ. 1" = 50'
VERT. 1" = 0.100 FT/FT

800

E WDS. — E RD — E DR — FACE OF GUARDRAIL

374+50 — 800 — -.063 — -.0195 — -.009 — -.063 — 800+50

1-2

374+00
BEGIN APPROACH

374+00 ℄
New 18"x50' RCCSP -.067 or CAAP .060 or CPEP w/ Type I Stone Pad

800 — -.018 — -.018 — 800+90

373+95 Rt - 376+75 Rt
Remove Existing Guardrail

373+87.5
Begin Steel Beam Guardrail
373+50 - 373+87.5
New Melt

800 — 802.5

373+50
Begin Cold Planning
Begin 1½" Pavement

373+00
℄

GMP9 .21

1½" Cold Planing
1½" Bit. Conc. Pavt.

12" — 24" — DENSE GRADED CRUSHED STONE — 18" — SAND BORROW

PAVEMENT TRANSITION

373+50 — 374+00 — 374+50 — 375+00 — 375+25 — 375+50

½" BCP TYPE II OVER 2" BCP TYPE II
3" BCP TYPE I

NOTE: Unpaved area between drive pavement & guard rail terminal is to be paved w/ 1½" Pavement as close as possible to face of rail.

374+50 — 24' — 4' — 3'

374+00 — 22' — 3' — 3'

373+75

373+50
Begin Cold Planning

℄ lane — ℄ shoulder

31.5' Melt — Parabolic Flare

Existing Roadway — EDGE OF DRIVE PAVT.

Any damage done to drive as a result of construction is to be restored to existing condition w/ Pavt and/or Subbase.

℄
APPROACH TAPER
SCALE: 1"=10'

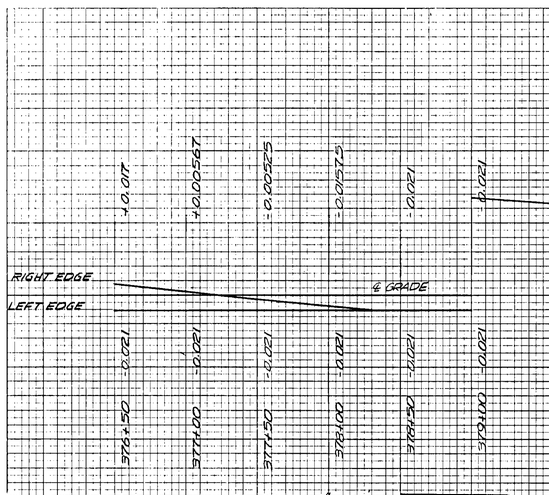
HORIZONTAL 0 10 20
VERTICAL 0 10 20
SCALES IN FEET

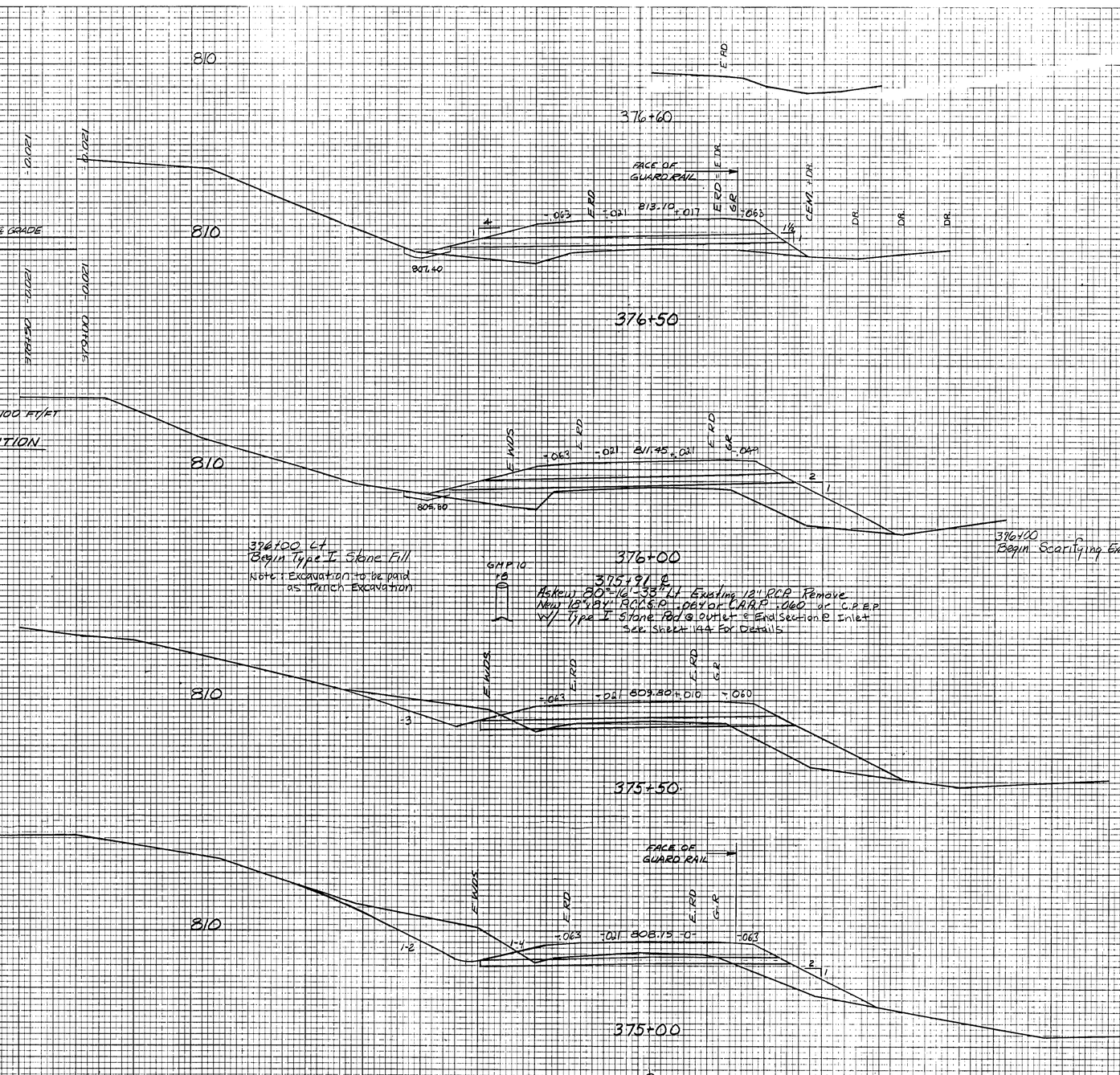
CROSS SECTIONS
STA 373+30 TO STA 376+50
SECTION - RYEGATE FORE(SD)
SHEET 87 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
GIBBONS CORPORATION

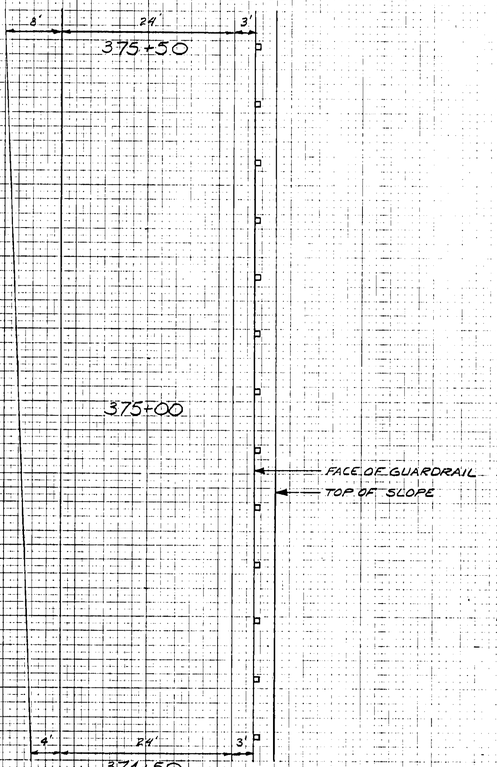
FINAL SURVEY	SURVEYED	DATE
	PLOTTED	
NOTE BOOK	TRAVERSE	
	AREAS	
NO.	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	BY	DATE
	C.S.	RGB	DEC. 86
	C.F.	GDB	JAN. 87
NOTE BOOK	TRAVERSE	GDF	MAR. 87
STA. 410	AREAS	DAD	FINAL 10
No. 464 & 465	AREAS CHECKED	SJS	SHT. No.



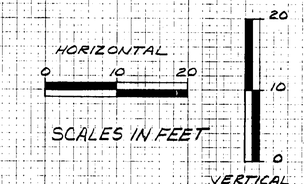


NOTE: 8-12-12-3 PAVEMENT AND SHOULDER WIDTHS FROM STA. 375+50 TO 376+50



℄ APPROACH TAPER

SCALE 1" = 10'



CROSS SECTIONS
STA. 375+00 TO STA. 376+50
GROTON-RYEGATE A026-1(30)
SHEET 38 OF 152

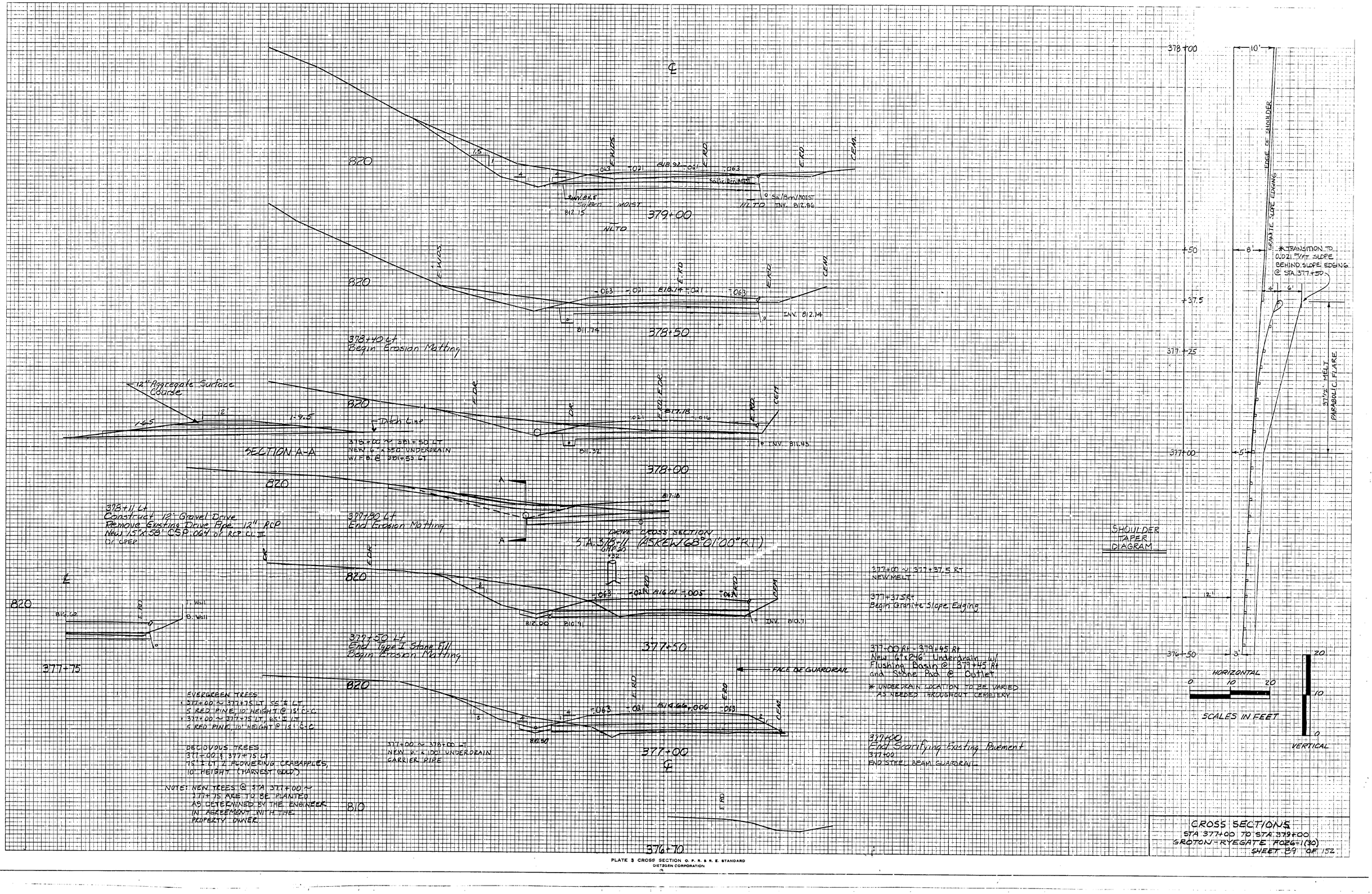
PLATE 3 CROSS SECTION D. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.

DATE	BY	
		SURVEYED
		PLOTTED
		TEMPLATE
		AREAS
		AREAS CHECKED

ORIGINAL SURVEY
NOTE BOOK
No. 54-615-572

DATE	BY	
DEC. 86	ECS, RGR, GPF	SURVEYED
APR. 87	GPF, RWH	PLOTTED
JAN. 90	GPF	TEMPLATE
SEPT. 90	RWH	AREAS
	SDS	AREAS CHECKED



377+00 ~ 377+37.5 RT
NEW MELT

377+37.5 ±
Begin Granite Slope Edging

377+00 Rt - 379+45 Rt
New 6"x96' Underdrain w/ Flushing Basin @ 379+45 Rt and Stone Pad @ Outlet.

* UNDERDRAIN LOCATION TO BE VARIED AS NEEDED THROUGHOUT CEMETERY.

379+80
End Scarifying Existing Pavement

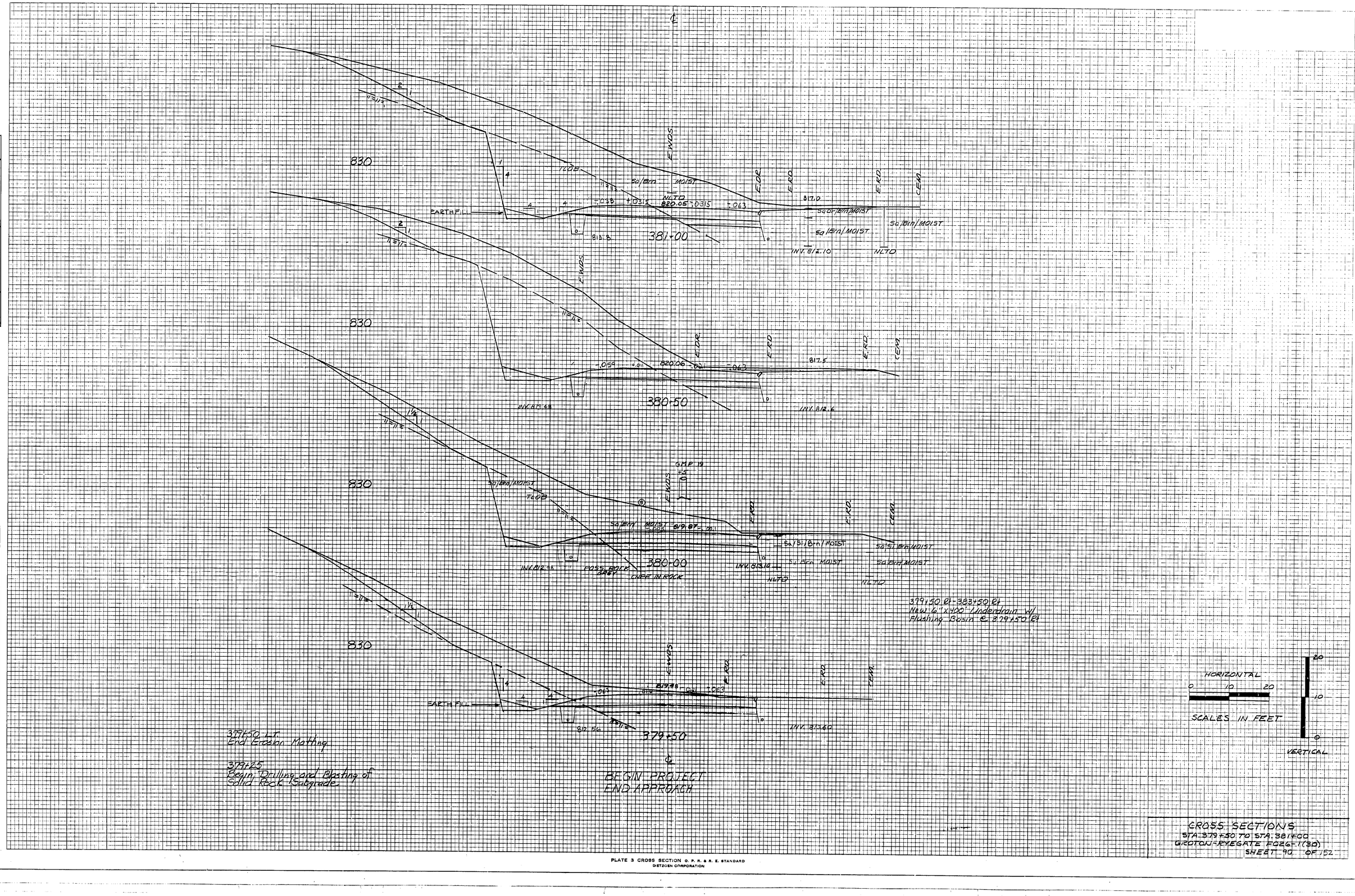
377+00
END STEEL BEAM GUARDRAIL

CROSS SECTIONS
STA 377+00 TO STA 379+00
GROTON-RYEGATE FOBG-1(30)
SHEET B9 OF 152

PLATE 3 CROSS SECTION C. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
No. 44-61268
SURVEYED ECS, RGB, GAF DEC. 86
PLOTTED GAF, RJB MAR. 87
TEMPLATE GAF APR. 90
AREAS BAU JAN. 90
AREAS CHECKED SJS SEPT. 96



CROSS SECTIONS
STA. 379+50.70 | STA. 381+00
GROTON-RYEGATE FOR 6-1(30)
SHEET 90 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.

SURVEYED
PLOTTED
TEMPLAT
AREAS
AREAS CHECKED

BY
DATE

ORIGINAL SURVEY
NOTE BOOK
No. 617 & 623

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

BY: ECS, RAB, GAF / GPF, RJB / GPF / RJB / ECS

DATE: DEC. '56 / MAR. '57 / JAN. '57 / MAY '57 / SEPT. '56

BANKING TRANSITION

SCALE: HORZ. 1"=50'
VERT. 1"=0.0100 FT/FT

LEFT EDGE
℄ GRADE
RIGHT EDGE
LT. SHLD. 0.067
RT. SHLD. 0.067
D = 4°00'
MAX. 0.063 FT/FT
EARTH FILL
INV. 812.6
INV. 813.0
INV. 813.9
INV. 811.10
INV. 811.60
818.06
818.85
816.5
814.5
813.0
383+00
382+50
382+00
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382+00 Lt.
Begin Erosion Matting

382+25 Rt
Begin Erosion Matting

381+55 ~ 385+00 LT
NEW 6" x 346' UNDERDRAIN
W/E.B. @ 381+55 LT

381+85 RT ~ 382+15 LT
NEW 3/4" x 370' PLASTIC WATER PIPE (FLEXIPIPE)
NEW 6" x 90° SLEEVE FOR UTILITIES

381+99 Rt
Construct Drive 14 Wide Gravel
New 18"x 50' CSP .064 or
RCP CL III or CPEP

381+87 RT
END GRANITE SLOPE EDGING
END 10' SHOULDER

DRIVE CROSS SECTION
STA. 381+99.00 (ASKEW 85°43'12" LT)

12" Aggregate Surface Course

SECTION A-A

NOTE: SECTION A-A IS CUT PARALLEL TO MAINLINE

HORIZONTAL 0 10 20

VERTICAL 20 10 0

SCALES IN FEET

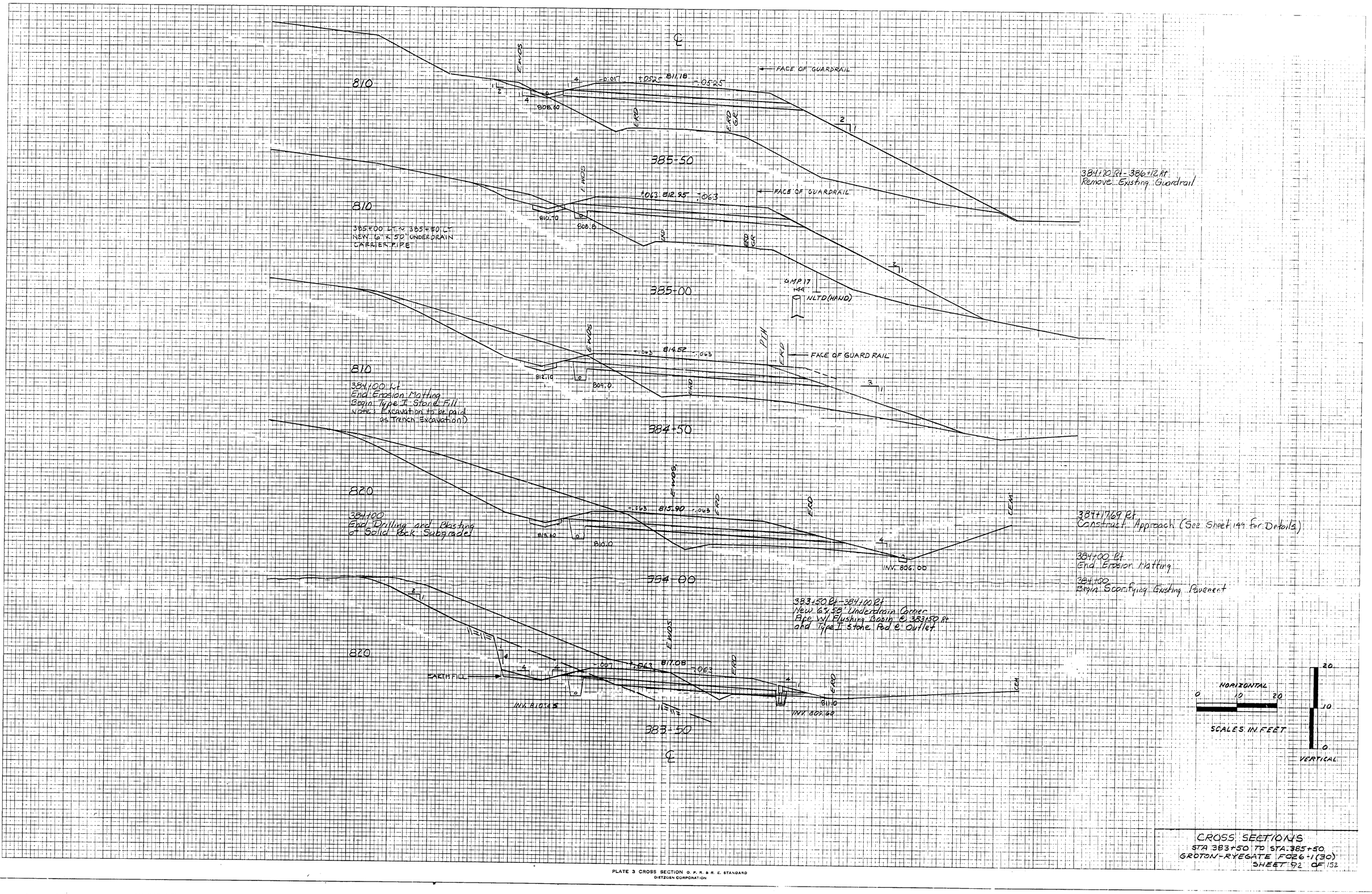
CROSS SECTIONS
STA. 381+50 TO STA. 383+00
GROTON - RYEGATE F026-1(30)
SHEET 91 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREAS COMPUTED
AREAS CHECKED
DATE
BY

DATE	BY
DEC. 86	ECS, EKB, GPF
MAR. 87	GPF, RDB
JAN. 90	RJH
SEPT. 90	SJS

ORIGINAL SURVEY
NOTE BOOK
STR. BOOK
No. 615, 659
SURVEYED
PLOTTED
TEMPLATE
AREAS COMPUTED
AREAS CHECKED



CROSS SECTIONS
STA 383+50 TO STA. 385+50
GROTON-RYEGATE F026-1(30)
SHEET 92 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK 538 &/O
NO 9/6,8/20,28
SURVEYED EGS, RGB, GFF
PLOTTED GFF, RWB
TEMPLATE GFF
AREAS RAU
AREAS CHECKED SJS
BY
DATE DEC. 86
JAN. 87
MAR. 87
JAN. 90
SEPT. 90

388+00
NEW 84" X 120' CAAPP 125
SEE SHEET 76 OF 153 FOR DETAILS AND QUANTITIES
AND SHEET 77 OF 153 FOR SECTIONS

800
E WDS
E BRK
E BRK
E BRK
(MIN)
E RD
-.063
-.021
802.32
-.021
-.063
FACE OF GUARDRAIL
(MIN)
T.O.B.
388+00
(MIN)
T.O.B.
(MIN)
E BRK
E BRK
E BRK

FACE OF GUARDRAIL
800
E BRK
E BRK
E BRK
FW
E RD
E RD
PAVE
-.063
-.016
803.84
-.021
-.063

387+50 Lt
Construct Approach
See Sheet 151 for Details.

387+40 RT - 388+60 RT
Remove Existing Guardrail

387+50
6 M.P. 16
-.44

810
E RD - E T. HWY
MATCH TO SIDE ROAD SECTION 0+50
-.063
-.005
805.59
-.021
-.063
ST WALL
798.70
E RD
387+00
E WDS

387+00 Lt
End Type I Stone Fill

800
E WDS
-.055
1.015
807.46
-.021
-.063
ST WALL
809.70
E RD
E RD
386+50
386+08.2 Existing 18" R.M.P. Remove
New 18"x 114'-PCCSP(Bit)(or CAAP(.060) or CPEP
W/ Tyl or II Stone @ Outlet & End section @ Inlet
See Sheet 144 for Details

820
FACE OF GUARDRAIL
E WDS
-.038
.0315
809.32
-.0315
-.063
809.40
E RD
E RD
(GR)
2
1
386+00
℄

LEFT EDGE
℄ GRADE
RIGHT EDGE
LT. SHLD.
RT. SHLD.
+0.063
+0.063
-.063
-.063
+0.055
-.055
+0.035
-.035
+0.05
-.05
-0.055
-.055
-0.121
-.121
365+00
365+50
366+00
366+10
366+50
367+00
367+50
368+00
368+50
369+00
369+50
370+00
370+50
371+00
371+50
372+00
372+50
373+00
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381+00
381+50
382+00
382+50
383+00
383+50
384+00
384+50
385+00
385+50
386+00

FINAL SURVEY	SURVEYED	BY
	PLOTTED	DATE
NOTE BOOK	TEMPLATE	
No.	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	BY
	PLOTTED	DATE
NOTE BOOK	TEMPLATE	
No. 67, 237	AREAS CHECKED	

810

390+33

6' 4' 8' 12'

37.5' Melt
PARABOLIC FLARE

3'

389+88

389+50

800

389+88 Lt - 389+88 Lt
New Melt

389+88

389+50 Lt
End Steel Beam Guardrail

810

389+00 Lt - 393+50 Lt
New 6"x 9" Underdrain
w/ Flashing Basin @ 389+00

389+50

800

388+75 Lt
Begin Erosion Matting

389+00

790

388+50

387+95 Lt - 388+55 Lt
Remove Existing Guardrail

388+25 Existing Box Culvert - Remove
See Sheet 76 of 153 For Details and Quantities
and Sheet 77 of 153 For Sections

E.W.D.S.
FN
E.R.D.
798.00
-.063
-.038
+.038
-.031
INV. 792.25
390+50
FN
E.W.D.S.
798.50
-.023
-.047
INV. 792.75
390+00
FACE OF GUARD RAIL
799.11
-.081
+.009
-.005
INV. 793.30
389+50
G.M.P. 1.5
799.96
-.063
+.081
-.005
-.063
INV. 794.20
389+00
FACE OF GUARDRAIL
801.02
-.016
-.063
-.081
388+50

388+01.5 - 389+01.5
New Melt

388+64
End Guardrail

388+75 Rt
Begin Erosion Matting

388+50
End Scarifying Existing Pavement

389+50

389+00

388+50

9' 6'

37.5' Melt
Parabolic Flare

HORIZONTAL
0 10 20
SCALES IN FEET

20 10 0
VERTICAL

CROSS SECTIONS

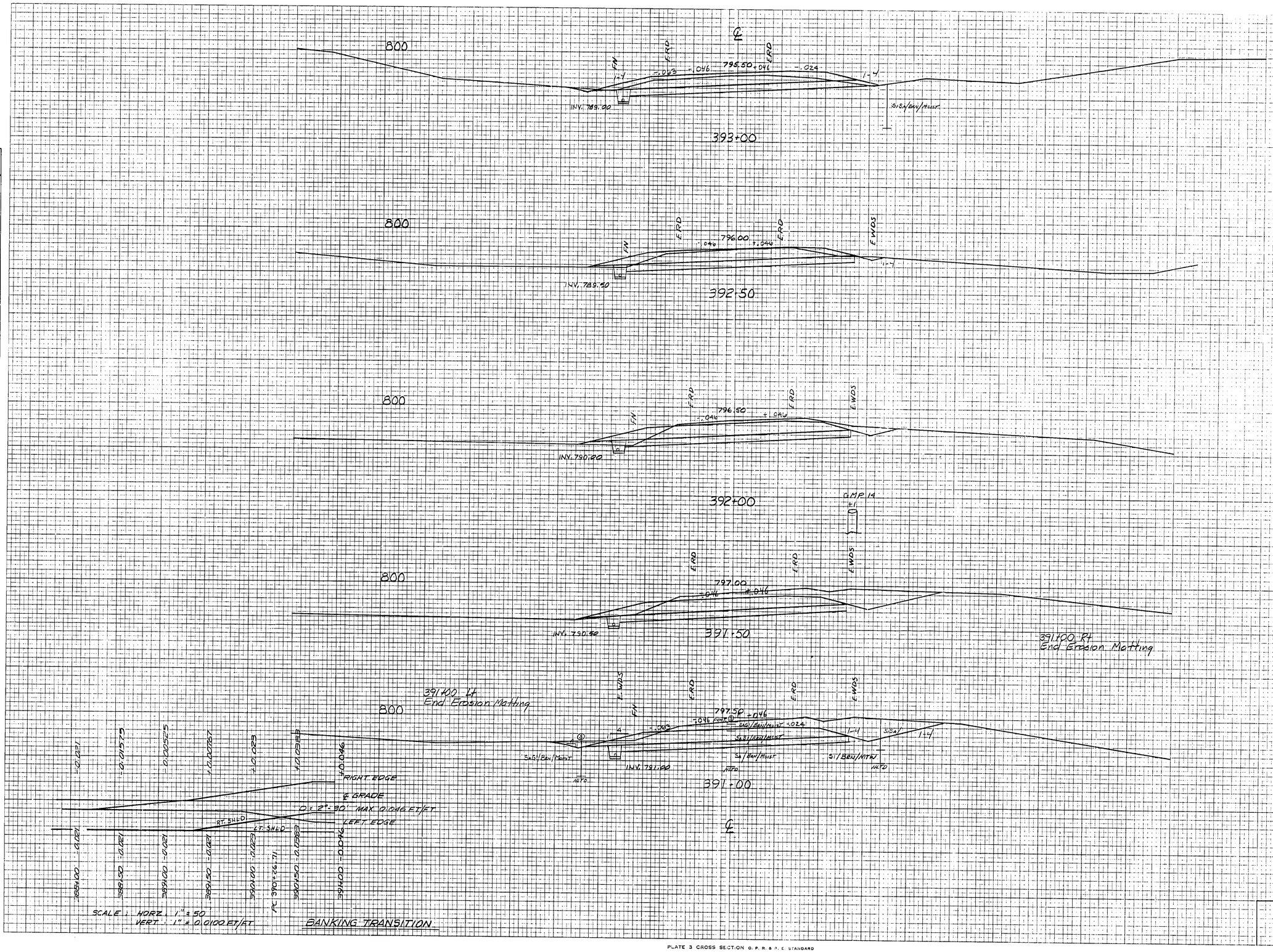
FROM STA. 388+50 TO STA. 390+50
GROTON-RYEGATE F026-1(30)
SHEET 94 OF 152

PLATE 3 CROSS SECTION D. P. R. & H. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLAT
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
No. 6/1,627
SURVEYED
PLOTTED
TEMPLAT
AREAS
AREAS CHECKED

BY	DATE
EGD, JS & DFF	DEC. 84
CFF, DLP	MAR. 85
CFF	APR. 85
RAW	FINAL 90
SJS	SEPT. 90


℄
800
F.RD
F.WDS
F.N
1:4
-.063
-.046
795.50
+.046
-.024
INV. 789.00
S1SA/BEN/MUST
393+00
796.00
INV. 789.50
392+50
796.50
+.046
INV. 790.00
392+00
GMP 14
797.00
INV. 790.50
391+50
391+00 RT
End Erosion Matting
391+00 LT
End Erosion Matting
797.50
SAG/BEN/MUST
S1SA/BEN/MUST
S1/BEN/MUST
INV. 791.00
NATO
391+00
℄
-0.021
-0.0157
-0.0055
+0.0067
-0.029
+0.0258
960.0' RIGHT EDGE
℄ GRADE
D = 2°-30' MAX 0.0146 ET/ET
LEFT EDGE
RT. SHLD
LT. SHLD
-0.029
-0.021
-0.0258
-0.0055
-0.021
-0.029
-0.0146
-0.0146
-0.0146

800

395+50 Lt
Begin Erosion Matting

INV. 793.0

INV. 786.50

395+50

395+50 Rt
Begin Erosion Matting

800

394+61 Lt
Construct Drive (12' Gravel)

INV. 793.67

INV. 787.00

395+00

12" Aggregate Surface Course

DITCH LINE

SECTION B-B

NOTE: SECTION B-B IS CUT PARALLEL TO MAIN LINE.

394+35

790

INV. 784.19

INV. 787.40

DRIVE CROSS SECTION
STA. 394+61 (ASKEW 84°15'15" LT)

394+50

Remove Existing 12" CMP (Drive Pipe) INV. 784.33

INV. 787.90

394+50

395+50 Lt - 397+00 Lt
New 6'x 3'50" Underdrain W/
Flushing Basin @ 393+50

397+35 Lt - 397+00 Lt
New 24"x 24A RCP cl III
or CPEP

194.35

CMP 13

INV. 785.0(18")

INV. 786.5(24")

394+35

790

394.50

INV. 788.0

INV. 786.0

394+00

790

393+75 LT
CONSTRUCT DRIVE (12" GRAVEL)

393+50 TO 394+35 LT
NEW 18"X 84" RCP CL III
OR CPEP

BUSH
+36
+20
+0

795.00

INV. 788.5

INV. 787.0

INV. 788.50

393+50

392+80 RT ~ 393+50 LT
NEW 18"X 96" RCP CL III OR CPEP

790

12" AGGREGATE SURFACE COURSE

393+50

394+00

SECTION C-C

795.34

795.34

MATCH TO EXISTING

CONCRETE DRIVE CROSS SECTION
STA. 393+10.8 (ASKEW 88°36'36" RT)

INV. 789.5 (1:30)

10' E. SHOULDER

RAD. PT.

NOTE: CONCRETE IS TO BE REINFORCED WITH WIRE MESH AT MID-SLAB, WITH MINIMUM 2" CLEARANCE FROM ALL EDGES. COST TO BE INCLUDED IN BID PRICE FOR REINFORCING STEEL.

FORM AND POUR IN 4' SECTIONS AS SHOWN OR AS DIRECTED BY THE ENGINEER.

CONCRETE DRIVE DETAIL @ 393+10.8 RT

6" CONCRETE CLASS B
ON 8" AGGREGATE SURFACE COURSE
CONCRETE IS TO BE REINFORCED WITH WIRE MESH

EXISTING GRADE

SECTION A-A

NOTE: SECTION A-A IS CUT PARALLEL TO MAIN LINE.

393+10.8 Rt
Construct 12' Concrete Drive

HORIZONTAL
0 10 20

SCALES IN FEET

20 10 0
VERTICAL

CROSS SECTIONS
STA. 393+50 TO STA. 395+50
GROTON - RYEGATE F026-1(30)
SHEET 96 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARDS
DIETZGEN CORPORATION

ORIGINAL SURVEY
NOTE BOOK
NO. 2/5, 4/57
SURVEYED
PLOTTED
TEMPLATE
AREAS CHECKED

BY: ECS, RCB, GPF, RJB
DATE: DEC. 86, MAR. 87, MAY 90, JAN. 90, SEPT. 90

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS CHECKED
BY
DATE

FINAL SURVEY
NOTE BOOK
NO.

	BY	DATE
SURVEYED	ECS, RCB, GFF	DEC. 86
PLOTTED	GFF, RCB	MAR. 87
TEMPLATE	GFF	MAR. 87
AREAS CHECKED	RCH	JUNE 90
	SJS	SEPT. 90

ORIGINAL SURVEY
NOTE BOOK
NO. 86-1, 87, 90

	BY	DATE
SURVEYED	ECS, RCB, GFF	DEC. 86
PLOTTED	GFF, RCB	MAR. 87
TEMPLATE	GFF	MAR. 87
AREAS CHECKED	RCH	JUNE 90
	SJS	SEPT. 90

398+00 Lt - 399+50 Lt
New 6"x 150' Underdrain w/
Flushing Basin @ 398+00

790

783.20

INV. 781.80

+.063 +.044 787.90 +.044 +.0216

785.30

398+00

397+40 Lt - 399+50 Lt
New 24"x 248' R.C.P. cl III
or CPEP

C.T.C. 32 1/2
±5

800

397+40 Lt
Begin Stone Fill Type I

784.30

779.20

+.063 +.020 789.33 +.030 .040 1'-0"

786.90

397+50

397+15 Lt
Construct Drive (12' wide)

397+30 Rt
End Erosion Matting
Begin Stone Fill Type I

B

+.063 +.016 790.56 +.016 +.054

INV. 789.0

780

6" UNDERDRAIN INV. 783.0
18" CROSSPIPE INV. 782.0
21" LATERAL INV. IN ± 781.0
24" LATERAL INV. OUT ± 780.5

397+00
New 18"x 68' R.C.P. cl III
or CPEP

397+00 Lt
End Erosion Matting

12" Aggregate Surface Course

10'

1'-3

1'-7

397+0 +15 +40 +50

Section B-B

+.063 -.001 791.38 +.001 +.063

INV. 783.50

396+50

780

INV. 781.66

C.M.P. 50
+12

CTC 32
+18

+.063 +.013 792.40 +.013 +.057

780.3

INV. 786.00

INV. 782.33

780

396+00

396+00 Rt
CONSTRUCT DRIVE (12' WIDE)
NEW 15"x 30' CS/P.064, RCP cl III, CPEP

12" AGGREGATE SURFACE COURSE

12'

1'-4

1'-9

SECTION A-A

HORIZONTAL
0 10 20
SCALES IN FEET

20
10
0
VERTICAL

CROSS SECTIONS
STA. 396+00 TO STA. 398+00
GROTON-RYEGATE A026-1(30)
SHEET 97 OF 152

FINAL SURVEY	SURVEYED	DATE
	PLOTTED	
NOTE BOOK	TEMPLATE	
No.	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	ECS, RLB, GFF	DEC. 86
No. 83, 84	CPF, JLC, RWS	MAY 87
	CPF, JLC	JAN. 90
	EAU	SEPT. 96
	SAS	

RIGHT EDGE
D=2°30'00" LT
0.046 FT/FT MAX.
LEFT EDGE

RIGHT EDGE
D=4°30'00" LT
0.067 FT/FT MAX.
LEFT EDGE

| | | |

FINAL SURVEY | NOTE BOOK | No. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

ORIGINAL SURVEY | NOTE BOOK 338, 410, 411 | No. 6-6-67 | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED

BY	DATE
CCS-RCL-CJF	DEC. 67
CCS-RCL-JS	MAY 70
CJF	APR. 71
RAL	JAN. 90
SSG	MAY 90

770

402+00 - 404+50 Lt.
Remove & reset fence
(to beyond construction limits, then to new R.O.W. line)

E — 12" AGGREGATE SURFACE COURSE

EXISTING GRADE

9.5 | 12' | 1.6

INV. 774.0

INV. 772.5

770

SECTION A-A

NOTE: SECTION A-A IS CUT PARALLEL TO MAINLINE

E RD

E WDS

FACE OF GUARDRAIL

779.52 +.067 +.003

1-4

772.30

402+50

402+75 Rt. 403+60 Rt.
Remove Existing Guardrail

2
1

E RD

E WDS

779.36 +.067

772.88

770

402+00

401+65 Lt.
Construct Drive (12' w. Gravel)
New 15"x62" C.S.P. (.064)
RCP CLASS III (CPEP)

A

A

770

DRIVE CROSS SECTION
STA 401+65 (ASKEW 89°45'15" RT)

E RD

E WDS

779.84 +.067

INV. 773.46

401+50

2
1

401+50 Lt. to 402+75 Lt.
New 6" x 16' Underdrain
Carrier Pipe

401+50 Lt.
End Erosion Matting

E WDS

E RD

FACE OF GUARDRAIL

780.34 +.067 +.003

INV. 779.09

770

401+00

3
1

400+75 Rt.
END EROSION MATTING

HORIZONTAL
0 10 20
SCALES IN FEET

20
10
0
VERTICAL

CROSS SECTIONS
STA 401+00 TO STA. 402+50
GROTON - RYEGATE F026-1(30)
SHEET 99 OF 152

404+56 Lt - 406+90 Lt
New 6"x 234' Underdrain
w/ Flushing Basin @ 406+90 Lt

404+50 Lt
End Erosion Matting

FIELD DRIVE CROSS SECTION
STA. 404+00 (ASKEW 52°33'24" LT)

STA. 404+25 RT
CONSTRUCT GRAVEL DRIVE - 50' WIDE

404+50 - 405+30 RT
CONSTRUCT PAVED TURNOUT (4' WIDE)

STA. 404+00 ASKEW 52°33' RT
CONSTRUCT GRAVEL DRIVE - 12' WIDE

SECTION A-A
(PARALLEL TO ℄ & 33' RIGHT)

403+45 Lt
Begin Erosion Matting

403+00 Lt - 404+50 Lt
New 6"x 150' Underdrain
w/ Flushing Basin @ 404+50

402+75 Lt - 403+00 Lt
New 6" X 26' Underdrain
Carrier Pipe

404+42.3 ℄ Existing 15" RCP Remove
New 18"x 66' R.C.P. cl III or CPEP
404+42.3 Rt Existing 15" CMP Remove
New 24"x 79' CSP (.064) or CPEP
See Sheet 144 for Details

403+15 - 403+52.5
New Melt

403+15
End Steel Beam Guardrail

402+86.2 Existing 18" RCP Remove
New 22"x 54" RCASP (.064) or CAAP (.060)
or CPEP w/ Type I Stone @ Outlet & ES @ Inlet
See Sheet 144 for details

CROSS SECTIONS
STA. 403+00 TO STA. 404+50
GROTON-RYEGATE FO216-1(30)
SHEET 100 OF 152

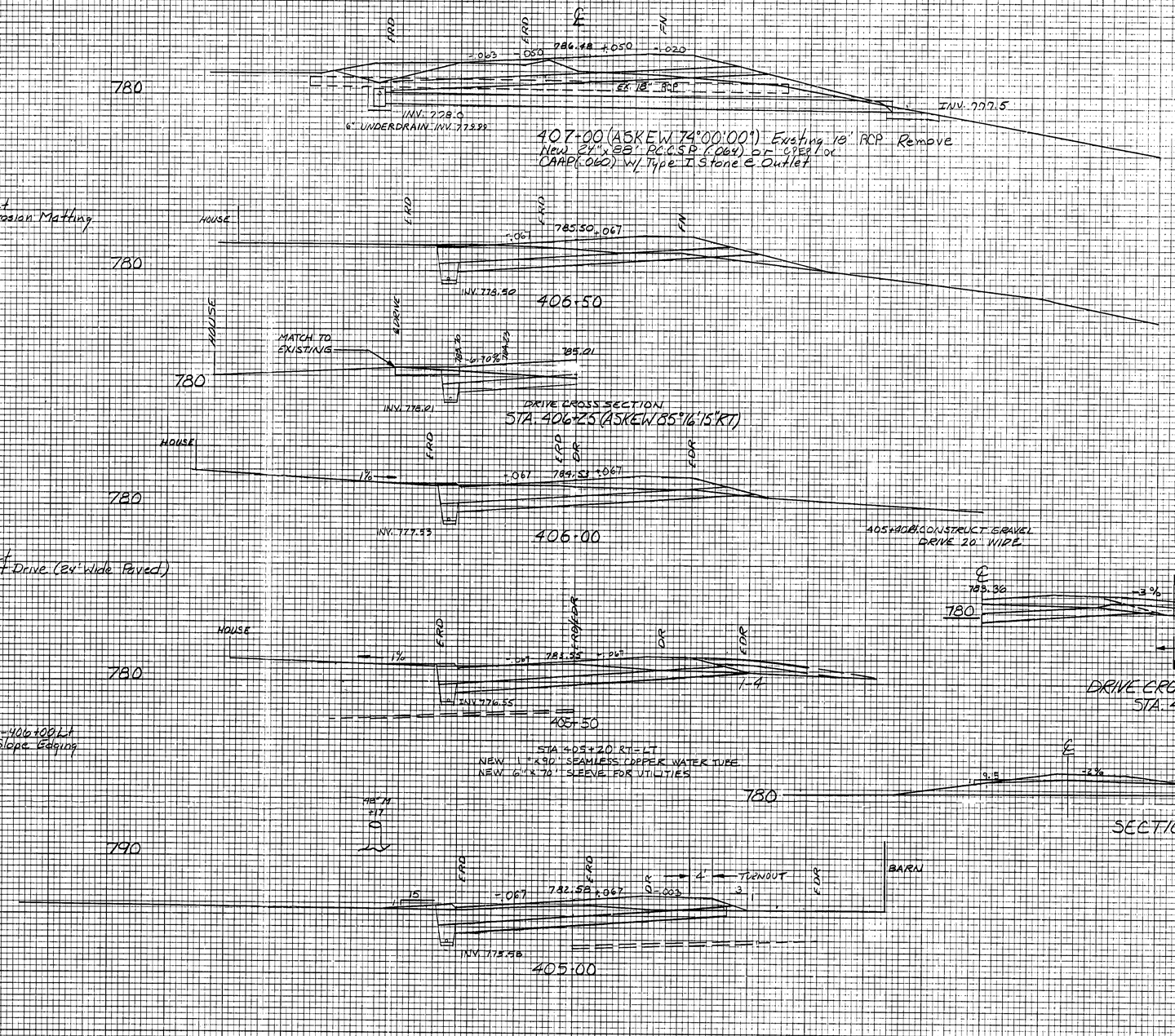
PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY — NOTE BOOK — No. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

406+50 Lt
Begin Erosion Matting

406+25 Lt
Construct Drive (24' Wide Paved)

405+00 Lt - 406+00 Lt
Granite Slope Edging

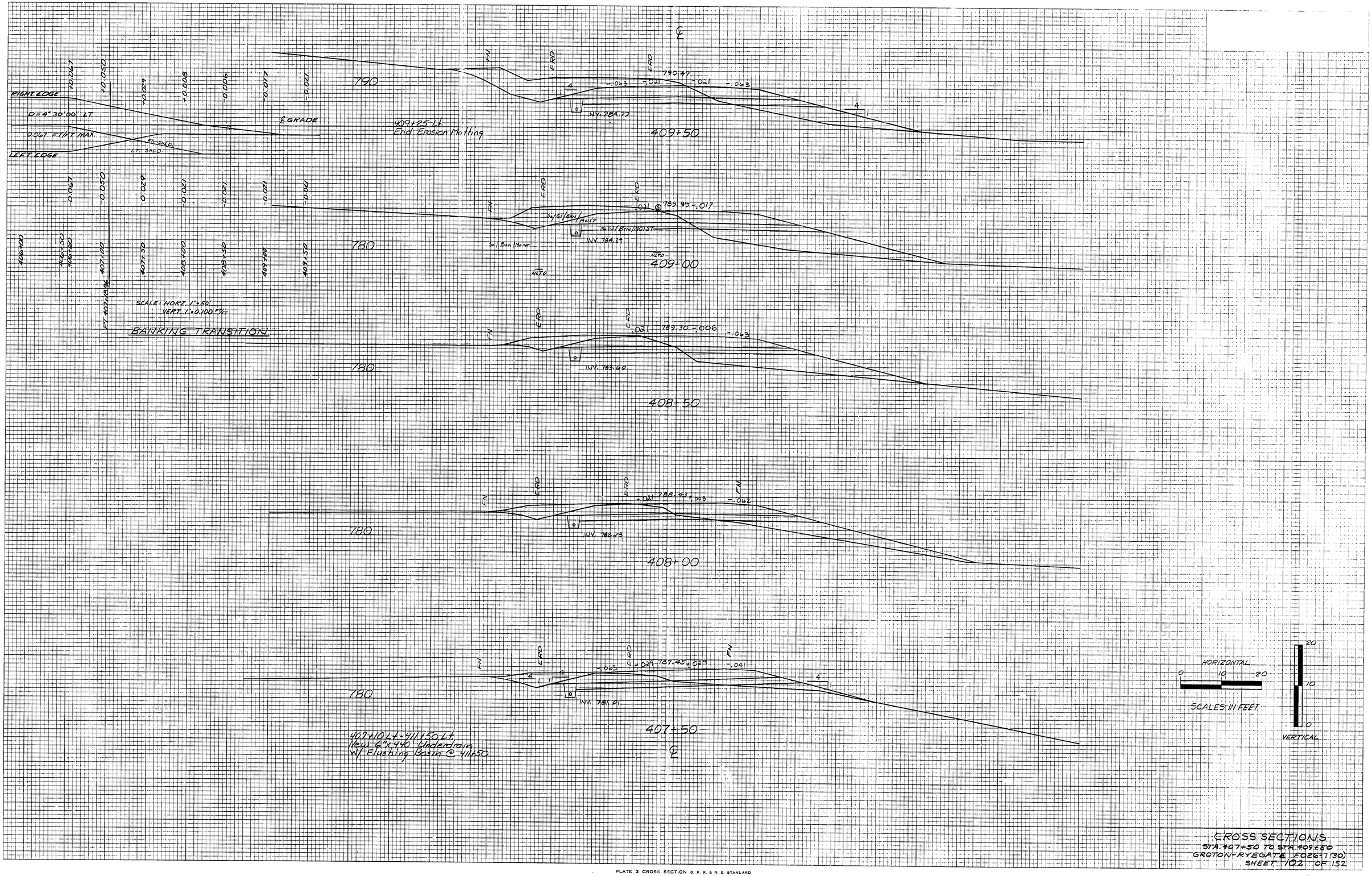


ORIGINAL SURVEY — NOTE BOOK — No. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

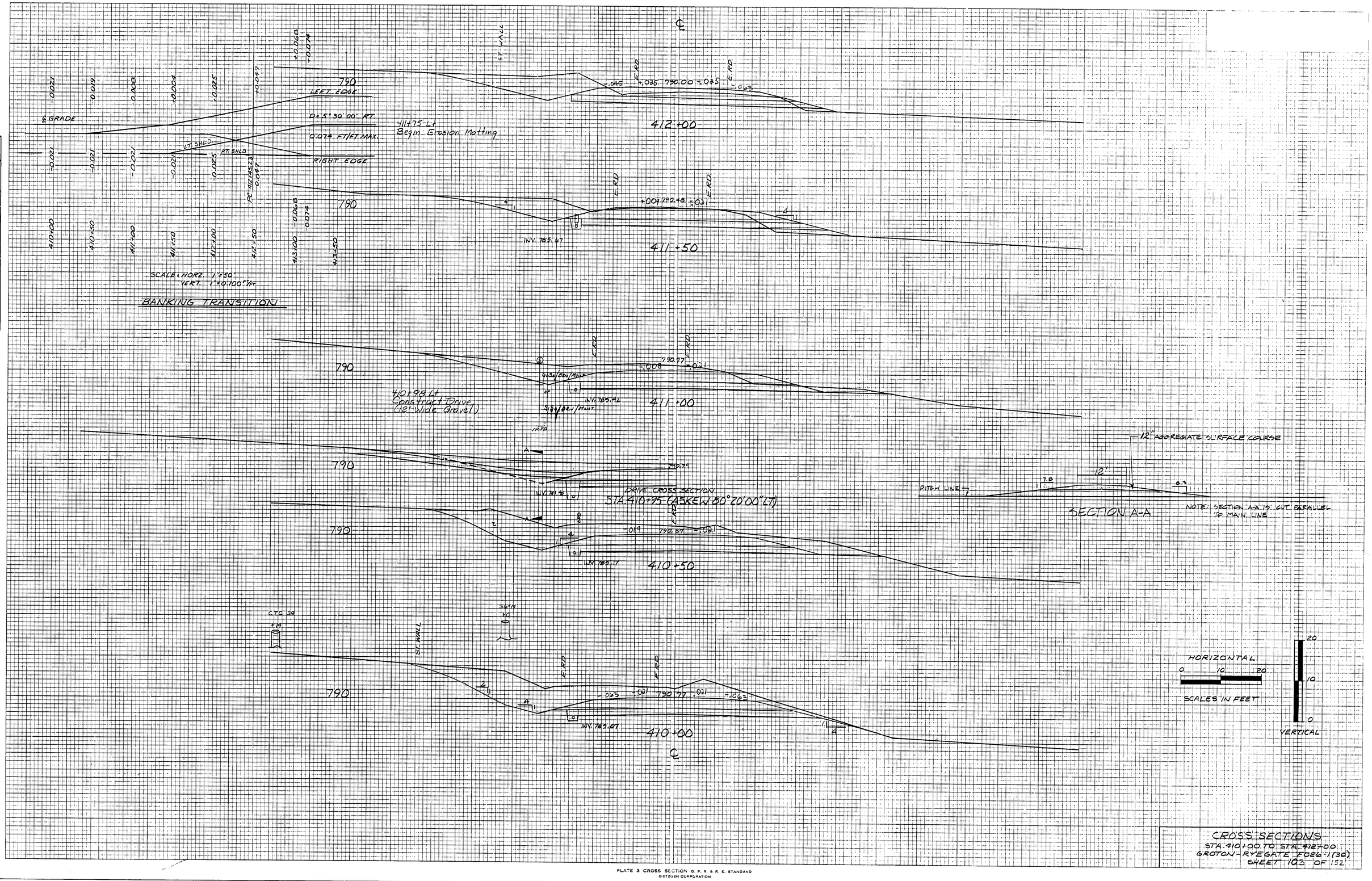
CROSS SECTIONS
STA. 405+00 TO STA. 407+00
GROTON-RYEGATE FO26-1(30)
SHEET 101 OF 152

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
No.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	EGS, KGB, JEFF	DEC. 86
NOTE BOOK	PLOTTED	GPF	MAY 87
No. 611-624	TEMPLATE	GPF	APR. 87
	AREAS	EAU	JAN. 90
	AREAS CHECKED	SJS	SEPT. 90



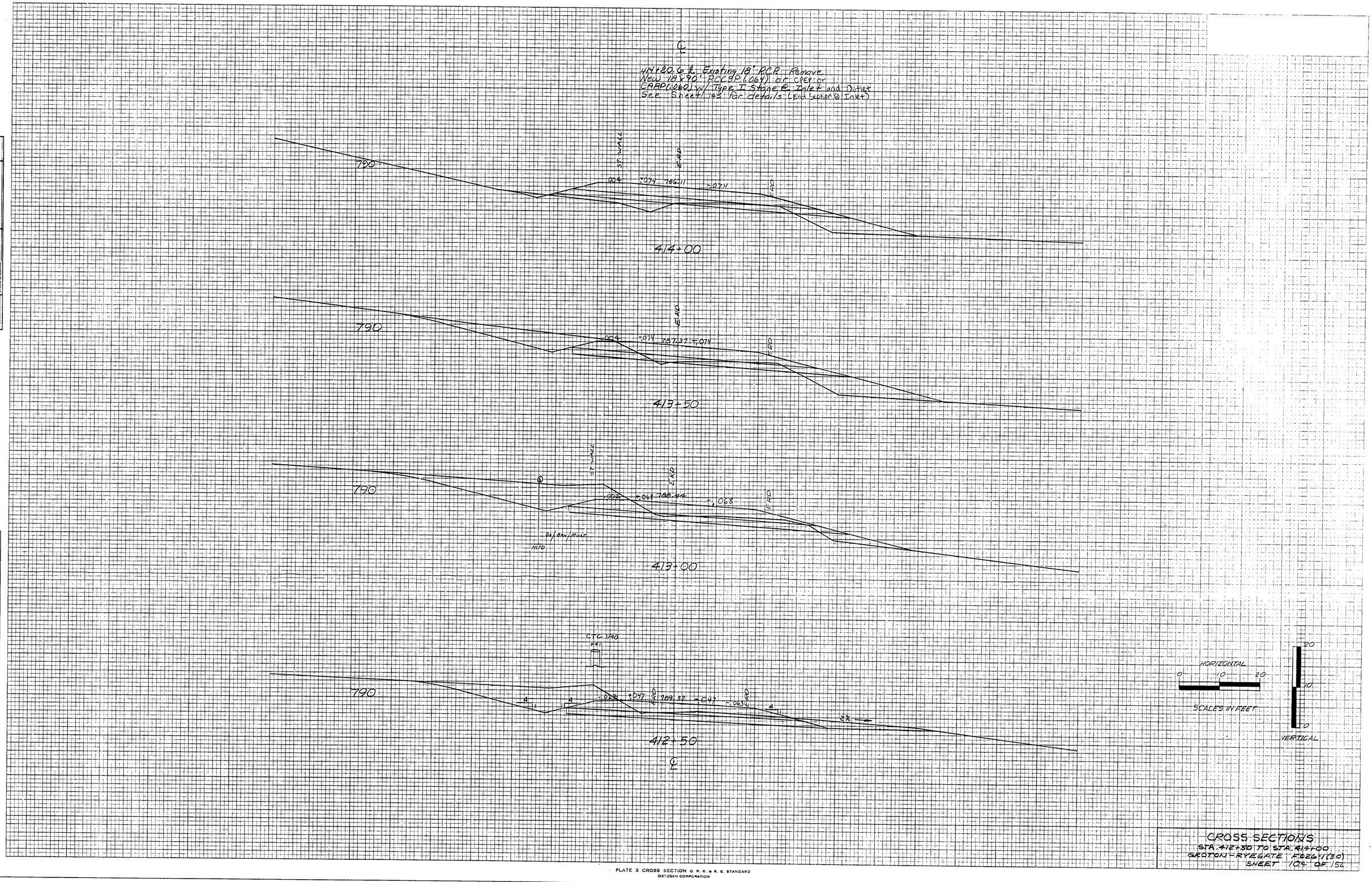
CROSS SECTIONS
STA. 407+50 TO STA. 409+50
GROTON-RYEGATE F026-1(30)
SHEET 102 OF 152



FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
No. 247, 249
SURVEYED ECS, E.B. LEE DEC. 84
PLOTTED GPF, R.W.B. APR. 87
TEMPLATE GPF APR. 87
AREAS R.W.B. JAN. 90
AREAS CHECKED SDS SEPT. 90
DATE
BY

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION



ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
NOTE BOOK	AREAS CHECKED
536, 420-425	
No. 402-405	

BY	DATE
ECS, RGB, GDF	DEC. 86
GDF, RWB	APR. 87
GDF	JAN. 90
RWB	SEPT. 91

FINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
NOTE BOOK	AREAS CHECKED
No.	

CROSS SECTIONS
STA. 412+50 TO STA. 414+00
GROTON-RYEGATE F022411(30)
SHEET 104 OF 152

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
No. NB-427,439
SURVEYED ECS, RES, GPF
PLOTTED GPF, EVR
TEMPLATE 4/6/90
AREAS PAU
AREAS CHECKED SJS
DATE DEC. & JAN. 89
APR. 90
JAN. 90
SEPT. 90

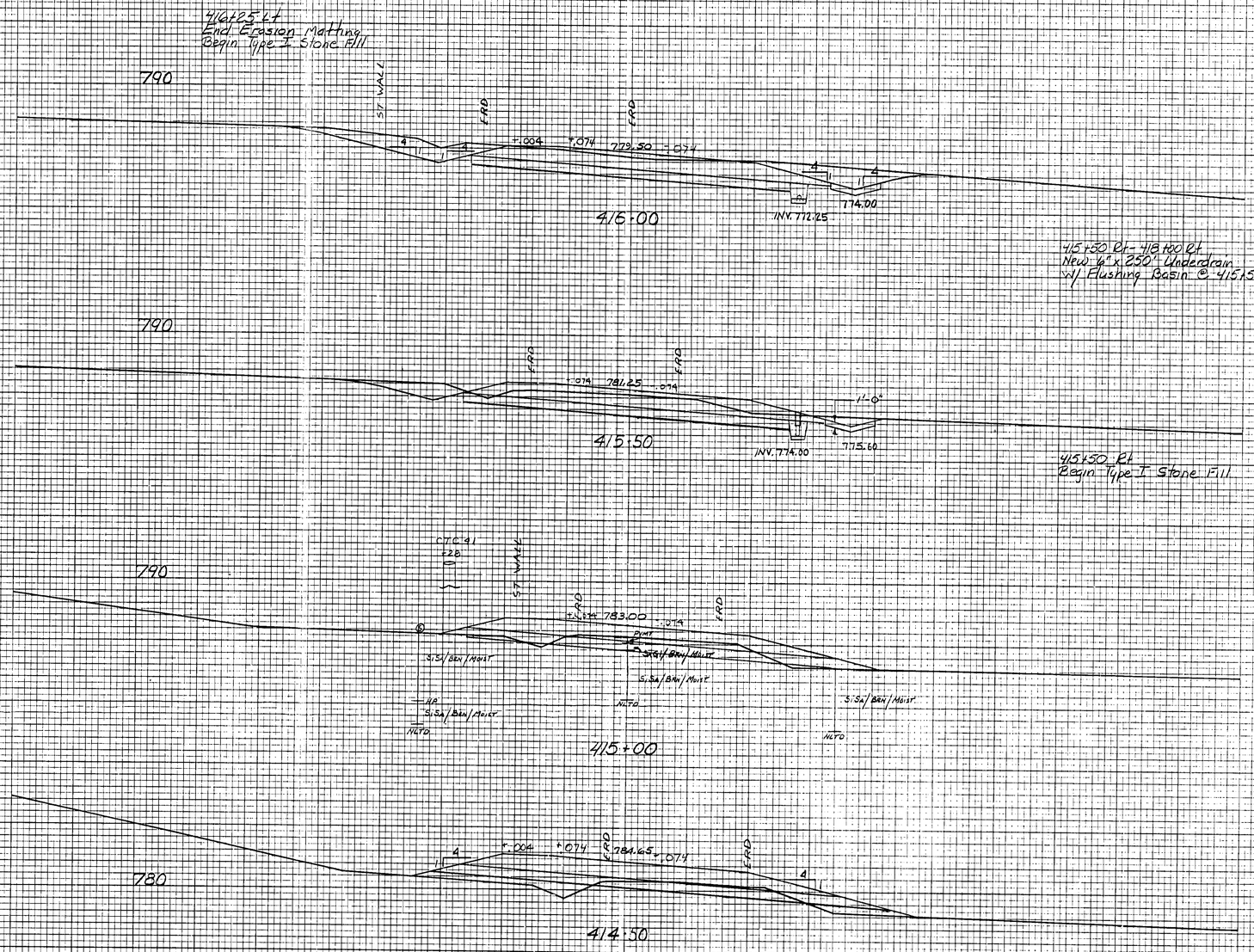


PLATE 3 CROSS SECTION D. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

CROSS SECTIONS
STA. 4+14+50 TO STA. 4+67+00
GROTON - RYEGATE F 026-1(30)
SHEET 105 OF 152

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
PAGE NO.	TEMPLATE	
	AREAS	AREAS CHECKED

ORIGINAL SURVEY	SURVEYED	E.S., R.B., G.B.F.	DEC. 26
	PLOTTED	C.P.F., R.W.R.	AUG. 27
NOTE BOOK	TEMPLATE	B.M.J.	DEC. 27
PAGE NO. 2-64, 2-65	AREAS	J.M.S.	JAN. 28
NO. 417-436	AREAS CHECKED	S.V.S.	SEPT. 28

418+36 LT
REMOVE EXISTING 6'-10" X 8'-4" X 68' CSMPPA AND CRADLE HEADWALL

S.E. CURB FLD

1.5%

760

418+25 LT - 418+70 LT
Remove Existing Guardrail

418+35 LT - 418+63 LT
New Steel Beam Guardrail

760

417+91 LT
Remove Existing 12" CMP

417+76 LT - 418+35 LT
New Melt

418+01

770

417+76

417+30 LT
Construct Approach
See Sheet 112 for Details

417+00 LT
End Type I Stone Fill

770

372' MELT
PARABOLIC FLARE

0 4' 8' 12'

MATCH EXIST. SIDE ROAD DITCH

770

ST WALL

E WDS

FRD

-4 +.004 +.074 771.18 -.074

418+50

418+46 Rt - 418+83.5 RT
New Melt

418+20 NEW 14'-0" X 8'-7" K-90 CMPPA W/ 27'-0" REINFORCED CONCRETE CRADLE HEADWALL AT INLET AND OUTLET
SEE SHEET 77 OF 133 FOR CROSS SECTIONS AND
SEE SHEET 78 OF 133 FOR DETAILS

SAG/BAN/MOIST

+.074 772.61 -.074

767.00
INV. 765.22

418+00

418+00 Rt A SKEW 83°-30' LT
New 6"X16' Underdrain Carrier Pipe

418+00 Rt
End Type I Stone Fill

417+94 Rt - 418+44 Rt
Remove Existing Guardrail

FACE OF GUARDRAIL

+.074 772.85 -.074

769.50
INV. 767.00

417+50

417+33.5 RT - 418+46 Rt
New Steel Beam Guardrail

FACE OF GUARDRAIL

+.074 776.0 -.074

772.50

770.70
INV. 768.75

417+00

418+96 Rt - 419+33.5 RT
New Melt

ST WALL

E WDS

+.004 +.074 777.75 -.074

776.00

1:0

772.40
INV. 770.50

416+50

4' 10' 5'

1.5

1'

418 - 28.5

418 - 83.5

418 - 58.5

Parabolic Flare
375' Melt

3'

12' 8'

417 - 21

416 - 96

416 - 51

Parabolic Flare
375' Melt

NOT TO SCALE

HORIZONTAL
0 10 20

SCALES IN FEET

20 10 0
VERTICAL

CROSS SECTIONS
STA 416+50 TO STA 418+50
GROTON - RYEGATE F026-1(30)
SHEET 106 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY
NOTE BOOK	PLOTTED	DATE
No.	TRACED	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	CCJ, RCB, GDE	DEC. 84
	PLOTTED	GDE, RJB	APR. 87
	TRACED	GDE	JAN. 90
	AREAS	RMJ	SEPT. 90
NOTE BOOK 338, 646, 646	AREAS CHECKED	SSS	
No. 617, 339			

Sta. 419+79 Lt
Transplant Shrub = Rose bush
(Placement of shrub to be determined by Engineer in agreement w/ property owner)

Sta. 419+60 Lt
Construct Drive (12' Wide Gravel)

Sta. 419+65 N 420+75 ± Lt.
Regrade Parking Lot

419+50 Rt
Construct Drive (20' Wide Gravel)

Note: Water to drain both directions from drive

DRIVE CROSS SECTION
STA 419+50 (ASKEW 83°18'02" LT)

419+00 Rt
Begin Scarifying Existing Pavement

SECTION B-B
NOTE: SECTION B-B IS CUT PARALLEL TO MAIN LINE.

SECTION A-A
NOTE: SECTION A-A IS CUT PARALLEL TO MAINLINE.

SCALES IN FEET

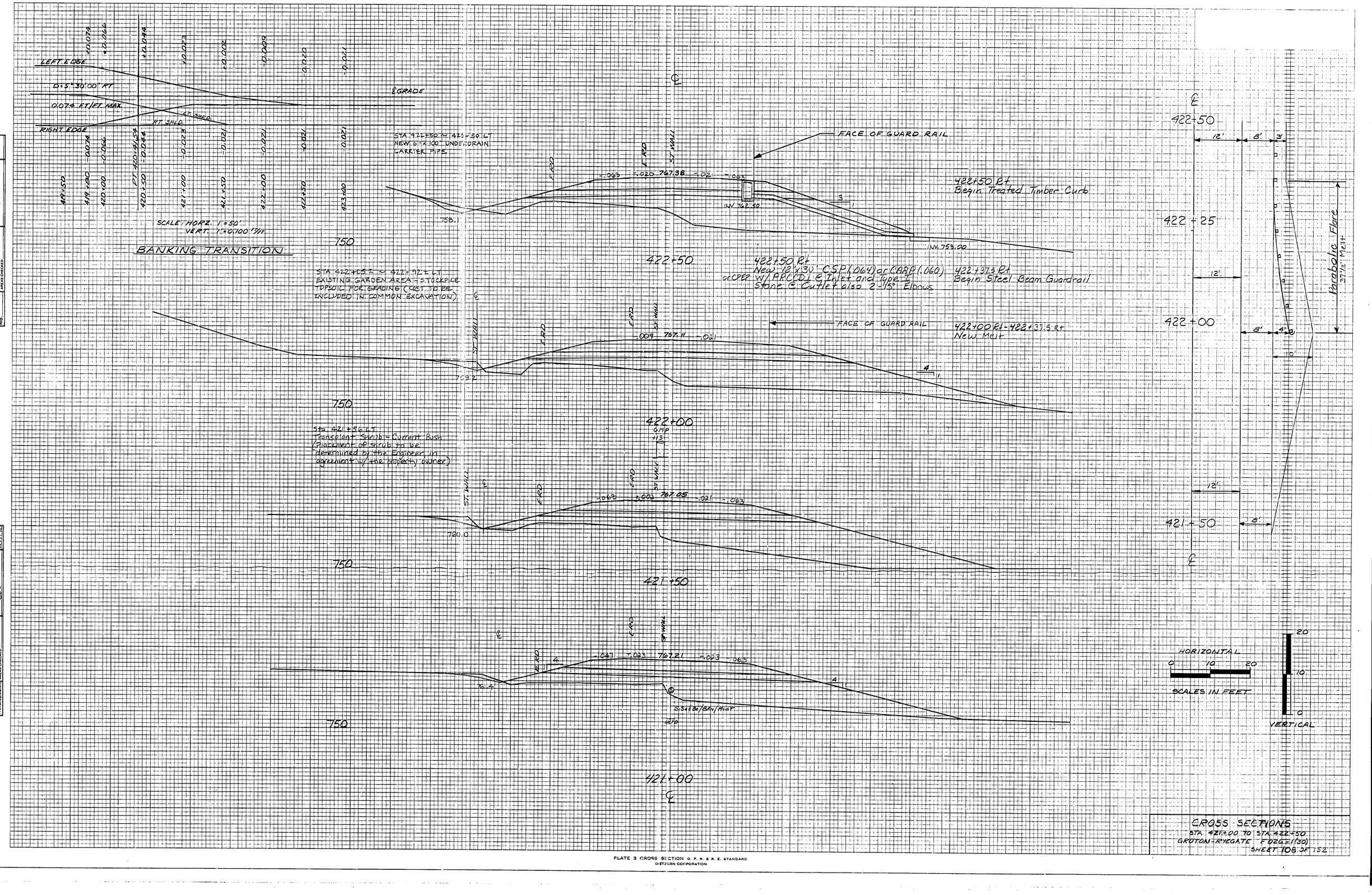
CROSS SECTIONS
STA 419+00 TO STA 420+50
GROTON-RYEGATE E026(7)(80)
SHEET 107 OF 152

PLATE 3 CROSS SECTION D. P. R. & R. L. STANDARD
DETZGEN CORPORATION

FINAL SURVEY	
NOTE BOOK	SURVEYED
No.	PLOTTED
	TEMPLATE
	AREAS
	AREAS CHECKED

ORIGINAL SURVEY	
NOTE BOOK	SURVEYED ECS, R&B, GEF
556, 560&561	PLOTTED GEF, RWB
NO. 560 & 561	TEMPLATE GHC
	AREAS RWL
	AREAS CHECKED SJS

BY	DATE
	DEC. '86
	AUG. '87
	ADD. '87
	JAN. '90
	SEPT. '90



CROSS SECTIONS
STA. 421+00 TO STA. 422+50
GROTON-RIVEGATE F026-1(30)
SHEET 108 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	ELD, RGB, CPF	DEC. 86
NO.	TEMPLATE	CPF, RLP	MAR 87
	AREAS	CPF	JUN 87
	AREAS CHECKED	DAU	JAN. 90
		SJS	SEPT 90

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	ELD, RGB, CPF	DEC. 86
NO. 1044	TEMPLATE	CPF, RLP	MAR 87
NO. 420, 492	AREAS	CPF	JUN 87
	AREAS CHECKED	DAU	JAN. 90
		SJS	SEPT 90

℄

770

423+50 Lt - 425+95 Lt
New 16"x 24" Underdrain
w/ Flushing Basin @ 425+95

ST WALL

ERD

770.58

-.063 -.02 -.02 -.063

776.60

INV. 763.50

FACE OF GUARDRAIL

424+50

770

423+50 Lt
Begin Type I Stone Fill

ST WALL

ERD

769.46

-.02 -.02

765.50

INV. 763.10

SLSA/BAN/MULT

424+00

760

ST WALL

1'-0"

ERD

768.55 -.02 -.02

764.50

INV. 762.80

423+50

423+50
End Scarifying Existing Pavement

760

ST WALL

FACE OF GUARDRAIL

767.86 -.02 -.063 -.063

(MIND)

INV.

ERD

4 2 1 1 2

760.45

SLSA/BD/BAN/MULT

SLSA/BAN/MULT

423+00

℄

422+56.4 Existing 19" CMP, Remove
New 24"x 124" PCCSP .064 or CAAP .060 ac crep
w/ Type I Stone @ Inlet and Outlet, w/ End Section @ Inlet
See Sheet 145 for Details

423+10 Rt - 426+00 Rt
Removal of Existing Guardrail

HORIZONTAL 0 10 20

SCALES IN FEET

VERTICAL 0 10 20

CROSS SECTIONS
STA #23+00 TO STA #24+50
GROTON - RIEGATE F 026-1(30)
SHEET 109 OF 152

FINAL SURVEY
NOTE BOOK
NO.

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO. 1042

SURVEYED: GCS, RCB, GDF
PLOTTED: GPE, RMB
TEMPLATE: GPE, PMJ
AREAS: SCS
AREAS CHECKED: SCS, RCB
DATE: DEC. 86, MAR. 87, MAY 87, SEPT. 90

426+00 Lt - 428+00 Lt
New 6"x 200' Underdrain W/ Flushing Basin @ 428+00

426+50

426+85 Rt
End Treated Timber Curb

426+00
New 18"x 86' RCCP (.064) or CMP (.060) or RCP CL II or CPEP W/ Type I Stone Fill @ Outlet

425+50

425+00

FACE OF GUARDRAIL

ST WALL

HORIZONTAL 0 10 20
SCALES IN FEET
VERTICAL 30 10 0

CROSS SECTIONS
STA. 425+00 TO STA. 426+50
GROTON-RYEGATE F 0226-1(30)
SHEET 110 OF 152

PLATE 3 CROSS SECTION G. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.

	BY	DATE
SURVEYED	ECS, RCB, EPF	DEC. 80
PLOTTED	GPF, RWB	MAR. 81
TEMPLATE	MJF	MAY 81
AREAS	KAU	JAN. 82
AREAS CHECKED	SJS	SEPT. 90

ORIGINAL SURVEY
NOTE BOOK
No. 336, 60, 61
No. 615, 639

SCALE: HORZ. 1"=50'
VERT. 1"=0.100' TH

BANKING TRANSITION

Pc 425+76.42
427+00

LEFT EDGE
D=6°30'00" RT. @ GRADE
RT. SHLD.
0.078 FT/FT MAX
RIGHT EDGE

780

428+30 Lt
End Type-T Stone Fill
Begin Erosion Matting

FACE OF GUARDRAIL

428+40 Lt - 430+80 Lt
Removal of Existing Guardrail

CTC 146 ft

780

775.60
INV. 774.50

428+00

427+50 Rt - 430+50 Rt
Removal of Existing Guardrail

780

775.00
INV. 773.50

427+50

CTC 96 ft

770

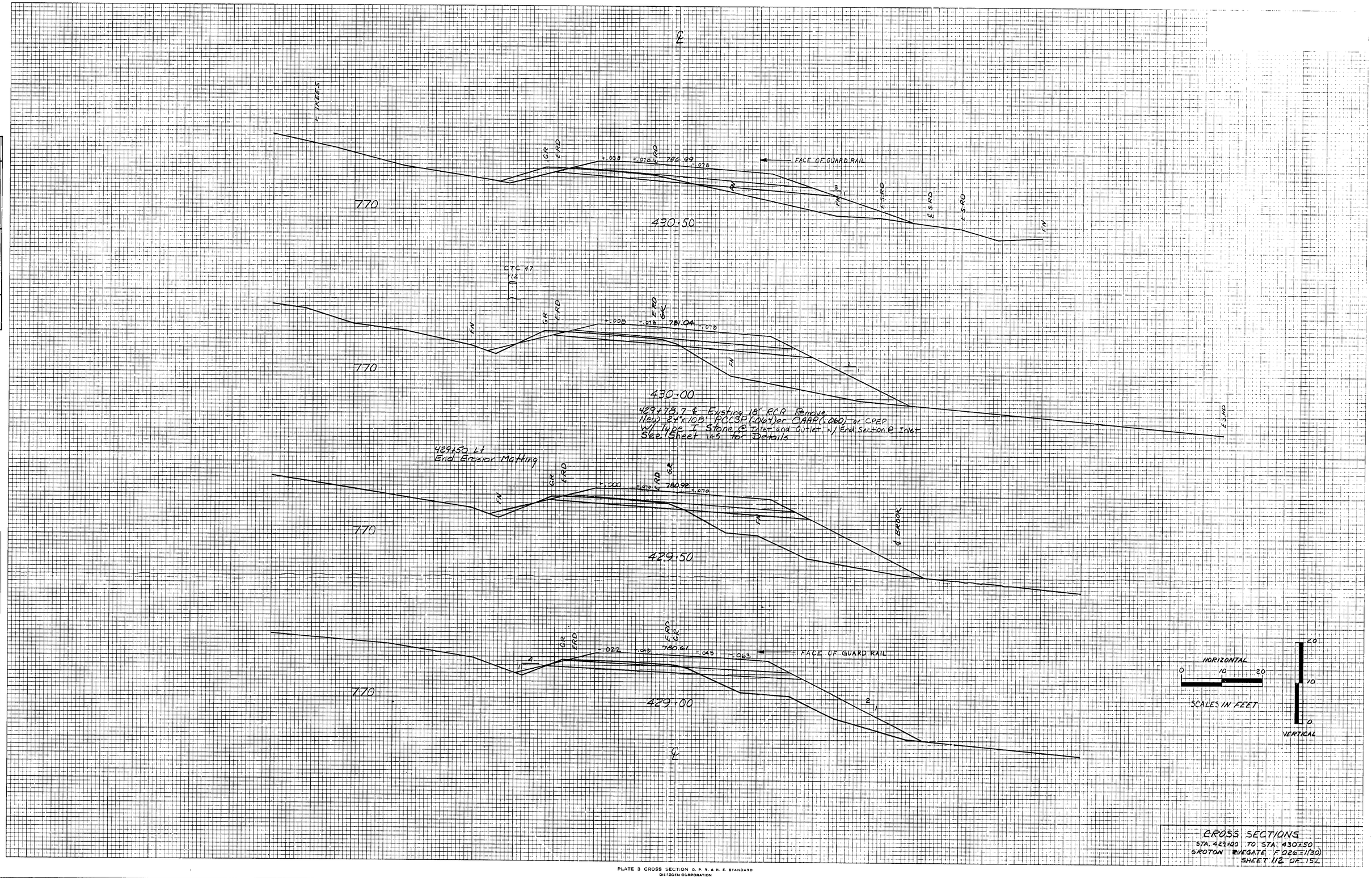
778.70
INV. 772.00

427+00

HORIZONTAL
0 10 20
SCALES IN FEET
20 10 0
VERTICAL

CROSS SECTIONS
STA. 427+00 TO STA. 428+50
GROTON-RIVERGATE C 026-1-00
SHEET 111 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION



FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.

BY	DATE
EGS, RCB, GBF	DEC. 86
GBF, RJB	AUG. 87
GBF	APR. 89
EAU	JAN. 90
SJS	SEPT. 90

ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
336, 470, 496
No. 662, 663

CROSS SECTIONS
STA. 429+00 TO STA. 430+50
GROTON EVEGATE F 026-1(30)
SHEET 112 OF 152

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
NO. 601,437
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

BY	DATE
ESJ, RAB, GPF	DEC. 86
GPF, FWB	MAR. 87
GPF	APR. 87
KMJ	MAY 90
SYS	SEPT. 90

℄

432+76 Rt - 433+54 Rt
Remove Existing Guardrail

432+40 Lt - 433+45 Lt
Remove Existing Guardrail

770

GR
ERD
779.35
+.008
+.076
+.078
FH
4
1
1
2
INV. 777.00

432+50

34" POPLAR
+0

VT TC 46
+9

GUY POLE
721

780

ERD
779.85
+.278
+.070
INV. 777.50

432+00

431+00 Rt - 433+50 Rt
New 6" x 250' Underdrain
w/ Flushing Basin @ 431+00

780

431+85 Lt
Construct Drive (12" Paved)

A
780.0

DRIVE CROSS SECTION
STA. 431+85 (SKEW 48°56'45" RT)

431+50

431+50 Rt
Begin Erosion Matting

EDR
EDR
EDR
780.35
+.078
+.078
INV. 778.00

431+50

431+37.5

12" Aggregate Surface Course
2" Bituminous Concrete 780
12
8%
78

SECTION A-A

NOTE: SECTION AA TO CUT PARALLEL TO MAIN LINE.

431+00 Rt - 431+37.5 Rt
New Melt

431+00 Lt
End Steel Beam Guardrail

EDR
EDR
EGR
EGR
N.E. BARR. HG
EGR
780
778.30
@
4
+.008
+.018
780.76
.078
INV. 778.50
FACE OF GUARDRAIL
1
4
4
SISA/Ben/Moist
NO
SISA/Ben/Moist
MH70
MH71
SISA/Ben/Moist
SISA/Ben/Moist

431+00

℄

431+00

Parabolic Flare
37½' MLH
0
1'
5'
12'
8'

HORIZONTAL
0 10 20
VERTICAL
0 10 20

CROSS SECTIONS
STA 431+00 TO STA 432+50
GROTON-RYEGATE FOZ6-1(10)
SHEET 113 OF 152

FINAL SURVEY
NOTE BOOK
No.
SUBMITTED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
No. 6/1,697
SUBMITTED EC3, RGB, GFF
PLOTTED GFF, RJB
TEMPLATE
AREAS RJW
AREAS CHECKED SJS
DATES: DEC 86, MAR 87, APRIL 90, SEPT 90

℄

7-10

434+50

434+07-LT
Construct Drive
(12' Wide Paved)

434+00

433+50

433+00

FACE OF GUARDRAIL

37½' MELT PARABOLIC FLARE

DRIVE CROSS SECTION
STA. 434+04 (ASKEW 36°58'00" RT)
STA 434+09 CONSTRUCT GRAVEL DRIVE

2" BIT. CONC. PAVT OVER
12" AGGREGATE SURFACE COURSE

SECTION A-A
NOTE: SECTION A-A IS CUT PARALEL TO MAIN LINE.

433+50 Rt
New 6"x25' Underdrain Carrier Pipe
W/ Type I Stone @ Outlet

433+02.77 Existing 10" RCP Remove
New 24"x105' PCP (5PA06Y) or CPAP(060) or CPEP
W/ Type I Stone @ Outlet End Section @ Inlet
See Sheet 145 for Details

433+37.5 Rt.
Begin Steel Beam Guardrail
433+00 Rt - 433+37.5 Rt
New Mat'l

433+00 Rt
Begin Treated Timber Curb

433+00 Rt
End Erosion Matting

Face of Guard Rail

SAS1/BAN/MOIST
SAS1/BAN/WET
SAS1/BAN/Cobbles WET
SAS1/GRA1/MOIST
(RIBA) MuS1/BAN/MTH
(PEAM) SaS1/BAN/Cobbles WET
NATO

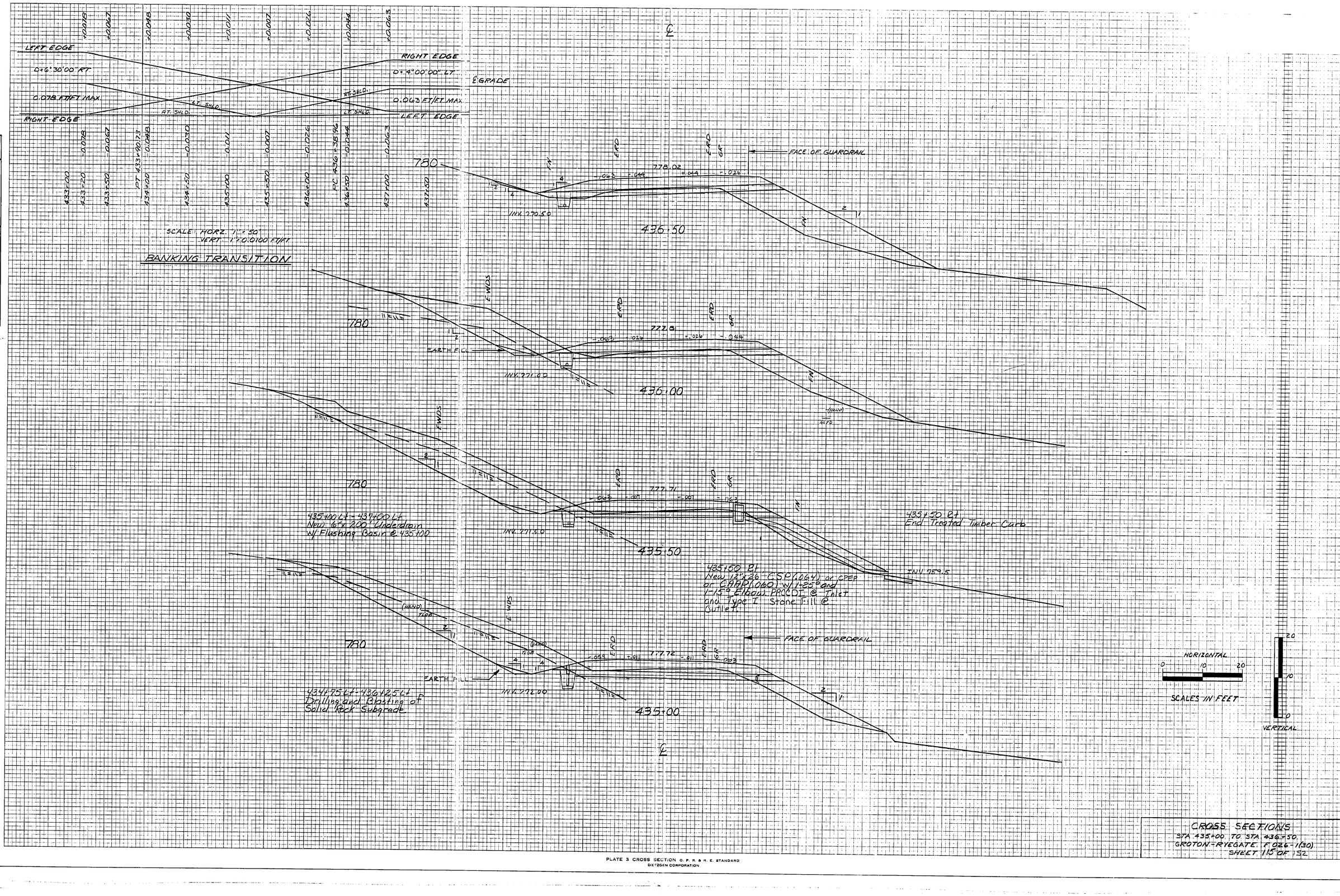
HORIZONTAL 0 10 20
SCALES IN FEET
VERTICAL 20 10 0

CROSS SECTIONS
STA. 433+00 TO STA. 434+50
GROTON-RYEGATE PROJECT (30)
SHEET 144 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
NO. 661-652
SURVEYED ECS, RGB & SPF
PLOTTED GPF, RJB
TEMPLATE GPF
AREAS JWJ
AREAS CHECKED SAS
DATE
CHKD. BY ECS & RGB 8/97
APPD. BY PMC 8/97
PLOTTED JWJ 9/30/98
CHKD. BY SAS 9/30/98

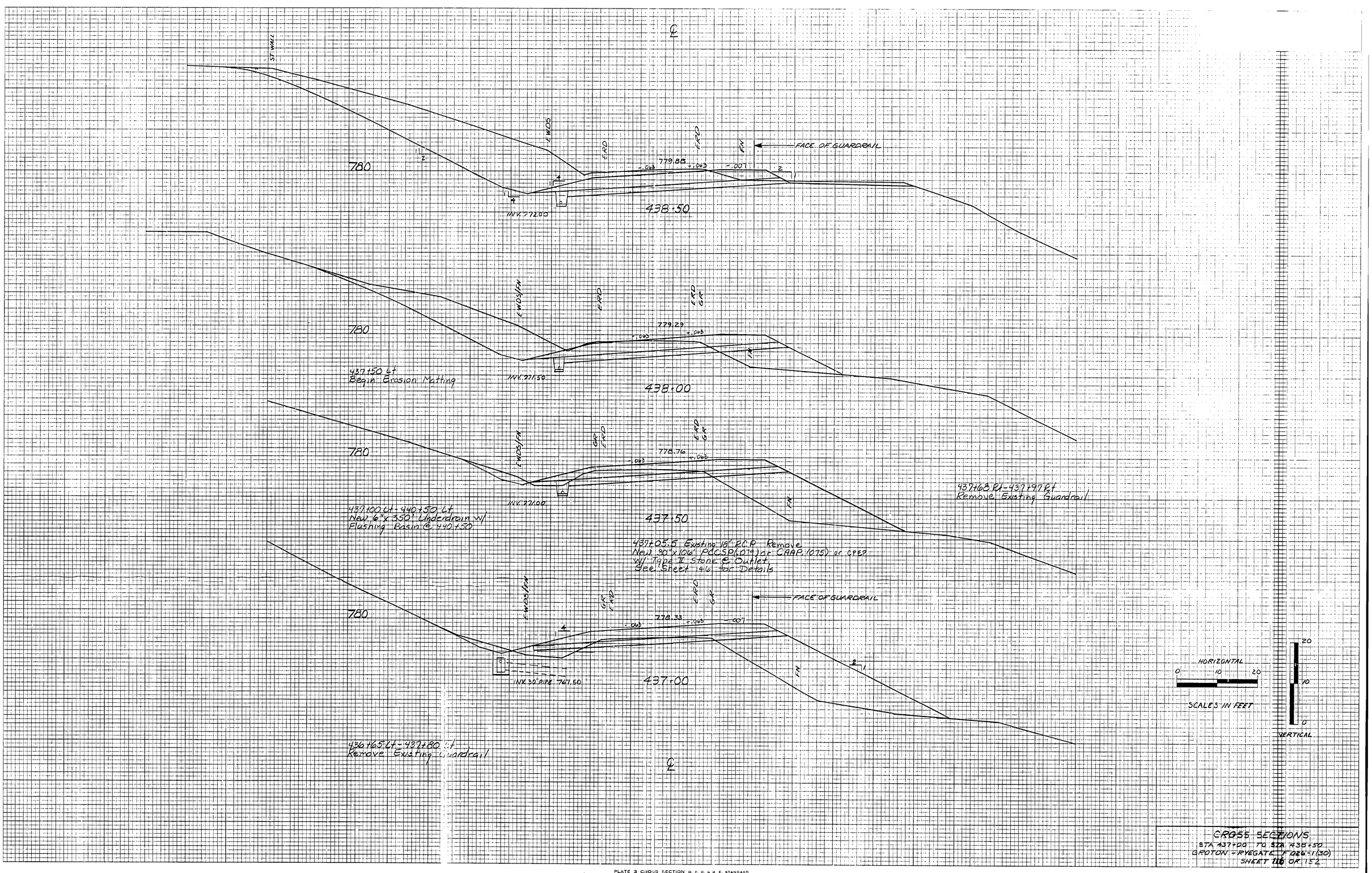


CROSS SECTIONS
STA 435+00 TO STA 436+50
GROTON-RYEGATE F 026-1(30)
SHEET 115 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

ORIGINAL SURVEY		BY	DATE
	SURVEYED	ECS, RGB, GPF	DEC. 86
	PLOTTED	GPF, RMB	AUG. 87
NOTE BOOK	TEMPLATE	JCC	APR. 90
NO. 440, 455	AREAS	RMJ	JAN. 90
	AREAS CHECKED	SJS	SEPT. 90

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK	TEMPLATE	
NO.	AREAS	
	AREAS CHECKED	



CROSS SECTIONS
STA 437+00 TO STA 438+50
GROTON - PLEASANT ST. F 026-1(30)
SHEET 116 OF 152

PLATE 3 CROSS SECTION O. P. R. & H. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
NO.

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

DATE | BY

ORIGINAL SURVEY
NOTE BOOK
NO. 467, 459

SURVEYED — ECS, RGB, GPF — DEC. 86
PLOTTED — GPF, RWB — MAR. 87
TEMPLATE — GPF — APR. 87
AREAS — RWB — JULY 90
AREAS CHECKED — SJS — SEPT. 90

℄

780

ERD

GR

FACE OF GUARDRAIL

782.23

.063 .002 +.002 .063

4 4

2 1

INV. 776.50

440+50

ST WALL

P. POLE #2

SASI/BRH/MGMT

HP

SASI/BRH/MGMT

NATO

780

781.65

℄ PVMT

.063 .013 .047

SUSI/BRH/MGMT

NATO

440+00

INV. 775.00

CTC 48-2 #3

interbedded ledge

781.06

.063 .043 .043 .027

439+50

INV. 774.00

SASI/BRH/MGMT

TOSB

(LAND)

FLOB

LEDGE

780

780.47

.063 .063 .007

FACE OF GUARDRAIL

EARTH FILL

439+00

INV. 773.00

438+75 - 439+75
Drilling and Blasting of Solid Rock Subgrade

439+10 Lt - 441+45 Lt
Remove Existing Guardrail

HORIZONTAL
0 10 20
SCALES IN FEET

20 10 0
VERTICAL

CROSS SECTIONS
STA 439+00 TO STA 440+50
GROTON - RYEGATE F.026-1(30)
SHEET 111 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY — NOTE BOOK — No. — DATE — BY — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK No. 640-654 — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

DATE	BY
DEC. 87	
MAR. 87	
APR. 87	
MAY 87	
SEPT. 90	

RIGHT EDGE
D=4°00'00" LT
0.063 AT FET MAX.
LEFT EDGE
LT. SHLD.
LEFT EDGE
D=2°30'00" RT
EGRADE
0.046 FT/FT MAX.
RT. SHLD.
RIGHT EDGE
790
439+00 -0.063
439+50 -0.063
440+00 -0.023
440+50 -0.002
441+00 -0.018
PI 441+26.97
441+50 -0.038
441+70 -0.046
442+00
SCALE: HORZ. 1"=50'
VERT. 1"=0.100 FT/FT
BANKING TRANSITION

442+75 Lt
End Erosion Matting
ROCK RET. WALL
END WALL
NE CMP MOUSE
442+25
Begin Drilling and Blasting of Solid Rock Subgrade
EARTH FILL
INV. 779.50
INV. 779.90
442+50
442+40
442+50 Rt - 445+00 Rt
New 6"x 250' Underdrain w/ Flushing Basin @ 442+50
TEL +26
442+00 Rt - 442+37.5 Rt
New Melt
442+00 Rt
End Steel Beam Guardrail
FACE OF GUARDRAIL
ST WALL
E WDS
END
784.00
INV. 779.00
442+00
441+99 Lt
Construct Drive (16' Paved)
New 15"x24" CSP(.064) or CPEP or RCP CL III
A
B
INV. 778.98
DRIVE CROSS SECTION
STA. 441+98 (ASKEW 47°00'00" RT.)
783.97
783.12
783.40
-19.75%
-2.56%
441+50
441+22.9 Existing 24" RCP Remove
New 24"x 82' R.C.S.P. .064 or CMAP .060 or CPEP
W/ Type II Stone @ Outlet
See Sheet 140 for Details
782.82
441+00
441+05 Lt
18" Drive Pipe - Retain
12" AGGREGATE SURFACE COURSE
INV. 781.0
INV. 781.9
SECTION A-A
NOTE: SECTION A-A IS CUT PARALLEL TO MAINLINE.
Parabolic Flare
37½' Melt
4'
6'
18'
8'
3'
HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

CROSS SECTIONS
STA 441+00 TO STA 442+50
GROTON-RYEGATE F 026-1(30)
SHEET 118 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.

SURVEYED
PLOTTED
TRACED
AREAS
AREAS CHECKED

DATE
BY

ORIGINAL SURVEY
NOTE BOOK
No. 662,657

SURVEYED ECS, RGR, CFF FEB. 86
PLOTTED CFF, RWB MAR. 87
TRACED RWB APR. 87
AREAS RAV JAN. 90
AREAS CHECKED SJS SEPT. 90

820

LEDGE

444+00 Lt - 448+00 Lt
New 6'x 400' Underdrain
w/ Flushing Basin @ 444+00

EARTH FILL

INV. 779.5

444+50

INV. 779.90

RET. WALL
E.R.D.

ST WALL

+.024 +.046 785.40 -.046 -.063

GMP 9
+39

(HAND)
NTO 785.48

INV. 779.4

444+00

INV. 779.40

SLOPE FROM TOP

SLOPE FROM TOP

* NOTE - CONSTRUCT / VARY SLOPE AS NEEDED TO REMOVE REMAINING FOUNDATION WALL AND MATCH EXISTING GROUND BEHIND.

(HAND)
11.0B

785.38

INV. 780.90

443+50

INV. 779.90

12" AGGREGATE SURFACE COURSE

10'

MAINLINE FILL LINE

SECTION A-A

MATCH TO EXISTING

HOUSE

785.92

784.77

784.93

-6.7000%

INV. 777.03

DRIVE CROSS SECTION
STA 443+37

443+37 Rt
Construct Drive (12' Gravel)

EARTH FILL

INV. 780.00

VARIES

INV. 777.40

443+00

℄

443+00 - 445+00 Lt
New 4' Chain Link Fence
(Actual Length and Offset to be determined in the field by the Engineer in agreement with the Property Owner. Fence to be erected outside I.R.O.W. line.)

441+23 Lt - 443+97 Lt
New 6"x 294' Underdrain
w/ Flushing Basin @ 443+97

442+70 Rt - 443+30 Rt
Granite Slope Edging

HORIZONTAL
0 10 20

SCALES IN FEET

20
10
0
VERTICAL

CROSS SECTIONS
STA. 443+00 TO STA. 444+50
GROTON-RYEGATE F 026-1(30)
SHEET 119 OF 152

PLATE 3 CROSS SECTION O. F. R. & R. E. STANDARD
©ETGGEN CORPORATION

FINAL SURVEY	SURVEYED	BY
	PLOTTED	
NOTE BOOK	TEMPLATE	
No.	AREAS	
	AREAS CHECKED	

DATE	BY
DEC. 66	ECG, REB, CFF
MAR. 67	CPF, DMS
APR. 67	CPF
JAN. 90	RAV
SEPT. 90	SAS

446+20 RT
CONSTRUCT DRIVE (16'-WIDE, GRAVEL)

445+87.5 Existing 12" RCP Remove
See Sheet 1146 for Details

445+30 Lt
Begin Erosion Matting

445+00 Rt
New 6"x 30' Underdrain Carrier Pipe
W/ Type I Stone Pad & Outlet

LEDGE
EARTH FILL
ROCK FILL
(HARD)
(WATER)
(WET)
ERD
INV. 778.0
INV. 773.40
INV. 771.80
INV. 775.40
INV. 775.05
782.99
784.65
783.12
445+00
445+50
446+00
800
1:2.5

DRIVE RADIUS
Pervious Fabric
3½" Melt

HORIZONTAL 0 10 20
SCALES IN FEET
VERTICAL 0 10 20

CROSS SECTIONS
STA 445+00 TO STA 446+00
GROTON - RYEGATE F.026-1(30)
SHEET 120 OF 152

PLATE 3 CROSS SECTION D. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
No. 617, 452
SURVEYED ECS, RGB, GPF
PLOTTED GPF, RWB
TEMPLATE GPF
AREAS AM
AREAS CHECKED SRS
DATE
DES. CK. MAR. 87
APP. BY MAR. 87
SHEET NO. SHEET 10

LEDGE
(HAND) 7.08
800
11=1
EARTH FILL
LEDGE
LEDGE
11=1
800
11=1
LEDGE
800
(HAND)
7.08
11=1
EARTH FILL
(HAND)
7.08
INV. 773.2
INV. 775.0
INV. 775.7
INV. 777.0
INTO
℄
GMP. 10
+22
4
(HAND)
7.08
-.024
+.046
779.41
-.046
-.063
ERD
FACE OF GUARDRAIL
2
1
FN
INV. 765.0
SA1/BRN/MOIST
SI1/SI/GRN/MOIST
SI1/GRN/WET
448+00
New 18"x78" PCCSP .064 or CMP .060 or RCP CL III or CPEP
w/ Type I Stone ⊂ Outlet
+.046
780.84
-.046
1-2
447+50
FACE OF GUARDRAIL
782.08
+.046
-.046
1-3
SA3/BRN/MOIST
SI3A/GRY/MOIST
SA3/SAN/MTH
447+00
FACE OF GUARDRAIL
783.13
-.024
+.046
(HAND)
-.046
-.063
1-3.5+
446+50
Begin Scarifying Existing Pavement
446+40 ~ 446+77.5RT
NEW MELT
446+77.5RT
BEGIN STEEL BEAM GUARDRAIL
446+50

HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

CROSS SECTIONS
STA 446+50 TO STA 448+00
GROTON-RIVEGATE A 026-1(30)
SHEET 121 OF 152

PLATE 3 CROSS SECTION U.P.R. & M.E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
SEE ALSO
No. AND PAGE
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
ECS, RCB, GPF
GPF, KMS
GPF
KMS
SDS
DATE
OCT. 56
MAR. 57
APR. 57
JAN. 60
SEPT. 60

790
LEDGE
LEDGE
E WDS
790
(HARD)
7.08
LEDGE
11-11
790
11-11 LEDGE
E WDS
(HARD)
7.08
790
EARTH FILL

℄

FACE OF GUARDRAIL
-.047 +.023 771.75 -.023 -.063
4
1
FRD
ERD
FN
765.00
2
1
3.5x/Sec/Min
450+00
14.70
-.034 +.036 773.95 -.036 -.063
4
1
774.80
FRD
ERD
FN
449+50
-.046 775.96 -.046
(HARD) 773.10
7.08
FRD
ERD
FN
449+00
FACE OF GUARDRAIL
-.024 -.046 777.78 -.046 -.063
4
FRD
ERD
FN
2
1
448+50

448+50 ± t
End Erosion Matting
Begin Type I Stone Fill
Note: Excavation to be paid as Trench Excavation

℄

448+50
End Drilling and Blasting of Solid Rock Subgrade

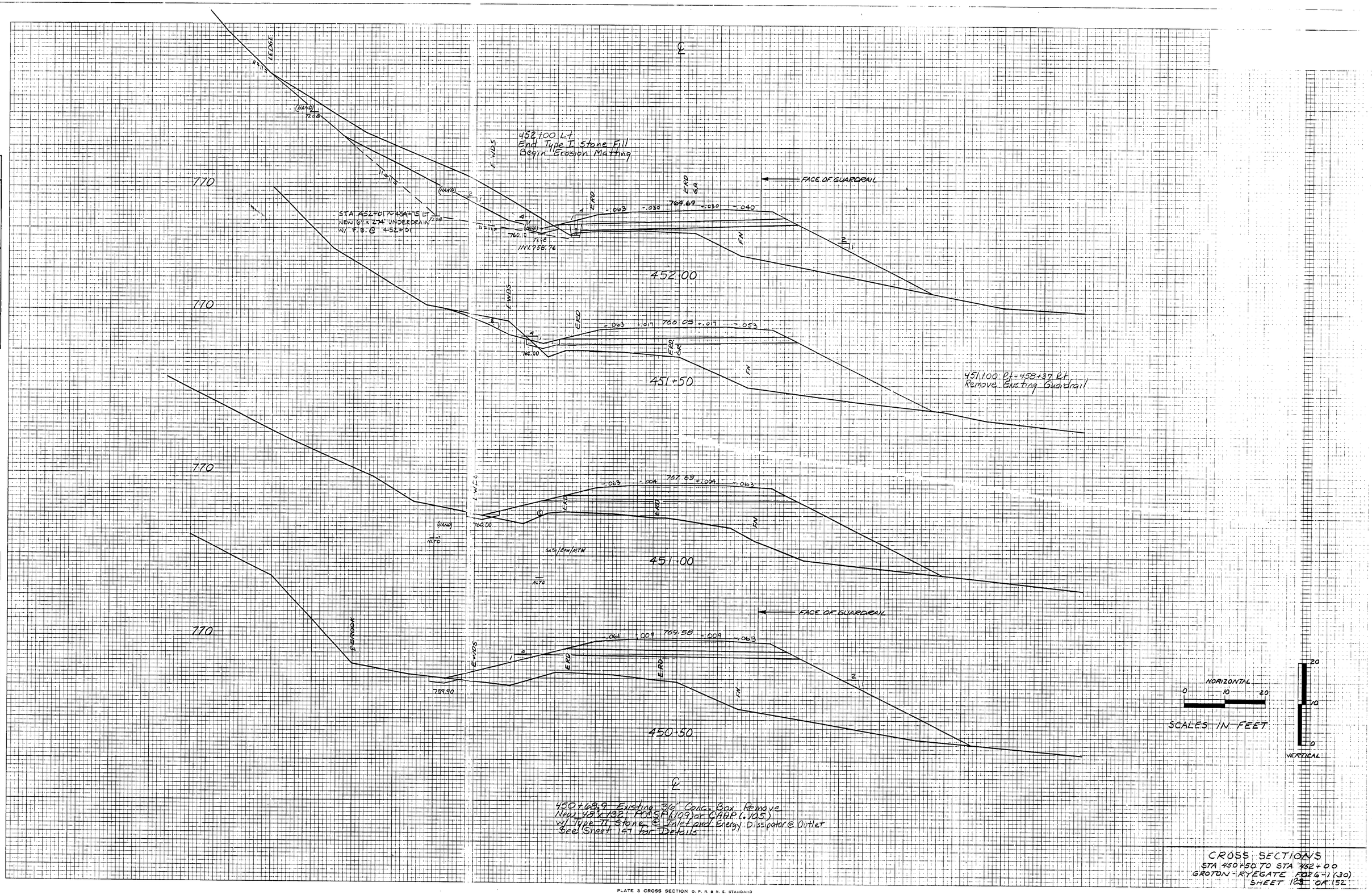
HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

GROSS SECTIONS
STA 448+50 TO STA 450+00
GROTON - RYEGATE F026-1(30)
SHEET 122 OF 152

PLATE 3 CROSS SECTION D. P. R. & R. I. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY: ECS, RGB, GPF	DATE: DEC. 86
NOTE BOOK	PLOTTED	GPF, RJB	MAR. 87
NO. 610, 637	TEMPLATE	GPF	APR. 87
	AREAS	RJB	JUNE 90
	AREAS CHECKED	SJS	SEPT. 90

ORIGINAL SURVEY	SURVEYED	BY:	DATE
NOTE BOOK	PLOTTED		
NO. 610, 637	TEMPLATE		
	AREAS		
	AREAS CHECKED		



℄

450+68.9 Existing 36" Conc. Box Remove
New 48"x 132" Pipe Arch (109 or CMP (.105)
w/ Type II Stone @ Inlet and Energy Dissipator @ Outlet
See Sheet 147 for Details

CROSS SECTIONS
STA 450+50 TO STA 452+00
GROTON - RYEGATE FOPG-1(30)
SHEET 128 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY | NOTE BOOK | No. | DATE | BY | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED

ORIGINAL SURVEY | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | NOTE BOOK | No. 60, 457

ECO, RGB, CPF | DEC. 86
CPF, RMB | MAR. 87
CPF | APR. 87
RMB | MAY 87
RMB | SEPT. 90

FACE OF GUARDRAIL
2'-6" TYPE I STONE FILL
BLASTED ROCK
18' NATIVE GRUB MATERIAL TO BE SEEDED AND MULCHED
2'-6" TYPE II STONE FILL
EARTH FILL
LEDGE
(HAND)
E WDS
ERD
EGR
FN
INV. 254.91
INV. 755.70
INV. 755.39
INV. 756.11
INV. 757.31
REV. PC 452+55.30
Δ = 57°02'43"
D = 3°49'11"
B = 0.061 FT/FT
REV. ℄ 453+99.97
REV. ℄ 453+49.99
453+50 Lt
End Erosion Matting
453+75 Rt
Begin Type II Stone Fill
Begin Grubbing Material
Begin Erosion Matting (for Slope Protection, Place on Seeded Slope)
Note: Blasted Rock meeting Stone Fill specs. may be substituted for Stone Fill Type II

BANKING TRANSITION
SCALE: HORZ. 1"=50'
VERT. 1"=0.100 FT/FT.

LEFT EDGE
D=2°30'00" RT.
0.046 FT/FT MAX.
RIGHT EDGE
RIGHT EDGE
D=3°49'11" LT.
0.061 FT/FT MAX.
LEFT EDGE
RT. SHLD.
LT. SHLD.

| | | |

455+25 Lt.
Begin Erosion Matting

180

180

180

454+75 Lt - 457+93 Lt
New 6"x 3/8" Underdrain w/
Flushing Basin @ 457+93

454+25 Lt
Begin Drilling and Blasting of
Solid Rock Subgrade

℄

REV. ℄
38'
FACE OF GUARDRAIL
762.61
+.061
-.063
-.061
-.009
EARTH FILL
2'-6" TYPE II STONE FILL
1½
INV. 759.93
REV. 455+49.87
455+50
BLASTED ROCK
8" NATIVE GRUB MATERIAL TO BE SEEDED AND MULCHED
LEDGE
ERD
GR
F.W.D.'S
(MIN.) 768
REV. ℄
14'
762.18
+.061
-.009
INV. 759.82
REV. 454+99.91
455+00
REV. ℄
91'
FACE OF GUARDRAIL
767.89
+.061
-.062
-.009
EARTH FILL
2'-6" TYPE II STONE FILL
1½
INV. 759.79
REV. 454+99.94
16" NATIVE GRUB MATERIAL TO BE SEEDED AND MULCHED
454+50

℄

454+75.3 Existing 18" RCP & D.I. Remove
New 18"x 94' (CSP(.064) or CPAH(.060)) or CPEP
W/ Type T Stone @ Outlet w/ 1-35° & 1-25° Elbows
See Sheet 147 for Details

HORIZONTAL
0 10 20
SCALES IN FEET
20 10 0
VERTICAL

CROSS SECTIONS
STA 454+50 TO STA 455+50
GROTON-AYER GATE 5026-1(30)
SHEET 128 OF 152

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
No.	TOTALS	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	ECG, RSG, GPF	DEC. 86
NOTE BOOK	PLOTTED	GPF, KWB	MAR. 87
No. 586, 609, 639	TOTALS	GPF	APR. 90
	AREAS	RAM	JAN. 90
	AREAS CHECKED	SJS	SEPT. 90

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TRACED
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
STA. 450+00 TO STA. 475+00
No. 6/2,6/3
SURVEYED — DEC. 86
PLOTTED — MAR. 87
TRACED — MAY 87
AREAS — JAN. 90
AREAS CHECKED — SEPT. 90

BY: EGS, RGB, CPF / CPF, RJR / CPF / RAW / SJS

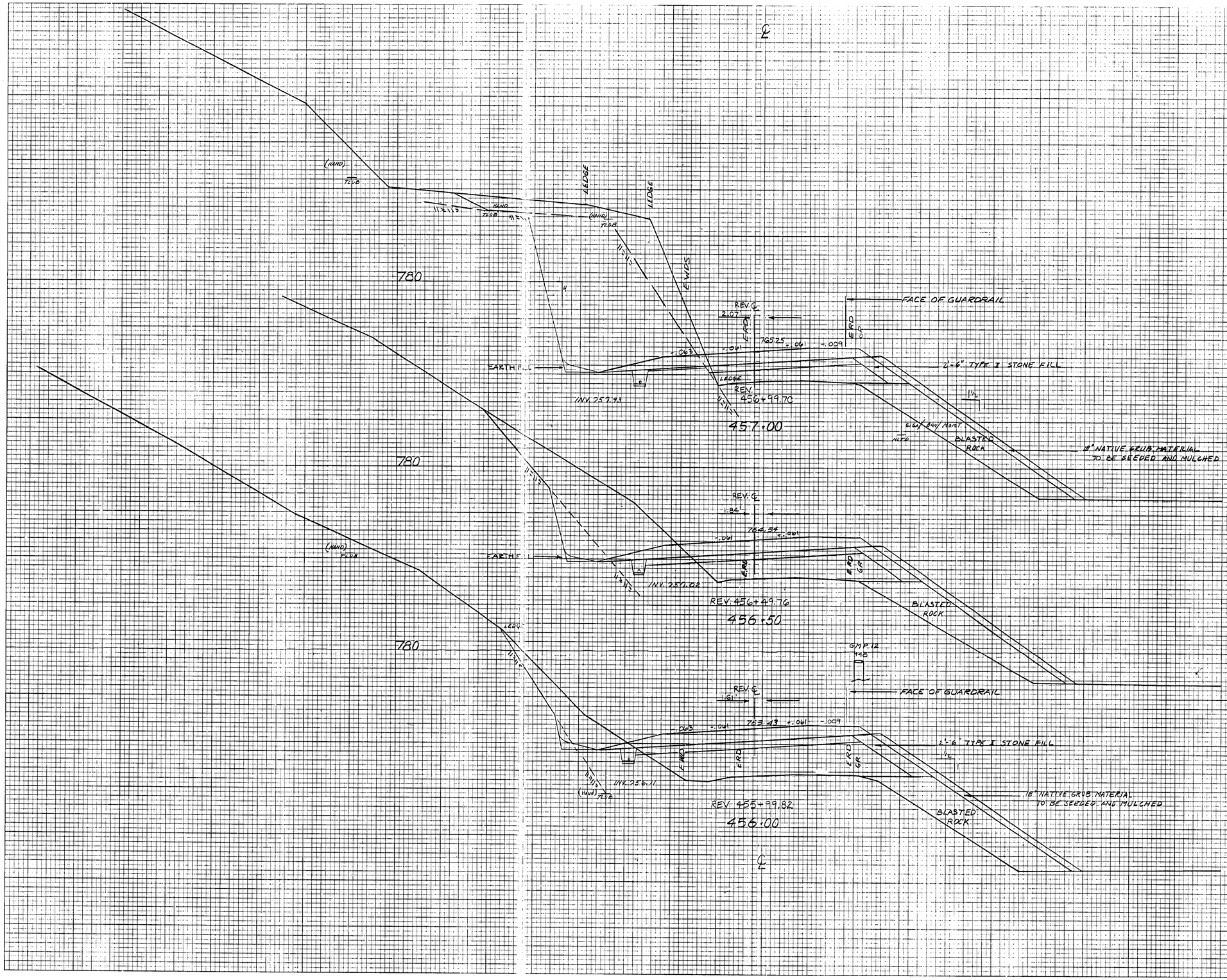


PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

CROSS SECTIONS
STA 456+00 TO STA 457+00
GROTON-RYEGATE 2026-1(30)
SHEET 126 OF 152

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
No. 1, 2, 3, 4, 5
SURVEYED EGS, RC & GPE
PLOTTED GPE, RWB
TEMPLATE GPE
AREAS RWB
AREAS CHECKED SWS
DATE
PLOTTED DEC. 86
TEMPLATE MAR. 87
AREAS MAR. 87
AREAS CHECKED SEPT. 90

458+00 Lt - 461+50 Lt
New 6"x 350' Underdrain w/
Flushing Basin @ 461+50

℄

780

FACE OF GUARD RAIL

EARTH FILL

INV. 760.58

REV. 458+49.46

458-50

REV ℄
2.74
767.89 ± .061
-.009
-.063
-.061
E WDS
E RD
SR

780

FW

(WAVE)
772.08

REV ℄
2.52
767.07 ± .061
-.061
E WDS
E RD
SR
E RIVER

2'-6" TYPE II STONE FILL

STRM/RIVER/WATER
5.53/MAY/MAY
764.53

INV. 758.75

REV. 457+29.55

458-00

New 18"ϕ CA PCCSP(.064) or CAAP(.060) or CPEP
w/ 2-35° Elbows and Type II Stone @ Outlet

458+25 Rt
End Type II Stone Fill
End Grubbing Material
End Erosion Matting

780

REV ℄
2.30
766.18 ± .061
-.061
-.063
E RD
SR

FACE OF GUARDRAIL

EARTH FILL

INV. 759.84

REV.
457+49.63

457-50

2'-6" TYPE II STONE FILL

BLASTED ROCK

1½

1½

18" NATIVE GRUB MATERIAL
TO BE SEEDED AND MULCHED

INV. 733.25

457+50
End Scarifying Existing Pavement

18" NATIVE GRUB MATERIAL
TO BE SEEDED AND MULCHED

HORIZONTAL
0 10 20

SCALES IN FEET

20
10
0
VERTICAL

℄

CROSS SECTIONS
STA 457+50 TO STA 458+50
GROTON-RYEGATE F026-1(20)
SHEET 127 OF 152

PLATE 3 CROSS SECTION U. P. R. & R. E. STANDARD
DETZOEN CORPORATION

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
No.	PLOTTED	
	TRACED	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
NOTE BOOK 286, 40, 46 No. 675, 687	SURVEYED ELS, RGG, GFF	DEC. 86
	PLOTTED GFF, RWB	MAR. 87
	TRACED GFF	MAY 90
	AREAS RAW	JAN 90
	AREAS CHECKED SJS	SEPT. 90

℄

790

2 : 1

E.VNDS.FN

REV ℄

3.39

769.31

.061

.061

.063

E.RD.

E.RD.

EARTH FILL

INV. 761.70

REV. 459+99.15

460+00

1½:1

1½:1

790

GMP. 13

12.5

REV ℄

3.39

769.02

.061

.061

E.RD.

E.RD.

INV. 261.40

REV. 459+49.26

459+50

790

2 : 1

CHANGE

768

459+25 Lt

End Erosion Matting

1½:1

1½:1

1½:1

E.VNDS.FN

REV ℄

2.90

768.54

.063

.061

.063

E.RD.

E.RD.

EARTH FILL

INV. 261.23

459+00

REV. 458+99.36

Sa/Sand/Mulch

Si.St/Sand/Mulch

Sa.Si/Sand/Mulch

VARIES

460+20 Rt - 462+63 Rt

Remove Existing Guardrail

℄

459+20

458+90

458+50

E.RIVER

4'

6'

12'

8'

Parabolic Flare

37½' Melt

E.RIVER

E.RIVER

458+52.5 Rt - 458+90 Rt

New Melt

458+52.5 Rt

End Steel Beam Rail

HORIZONTAL

0 10 20

SCALES IN FEET

20

10

0

VERTICAL

CROSS SECTIONS

STA 459+00 TO STA 460+00

GROTON RYEGATE F026-1(30)

SHEET 188 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD

DIETZGEN CORPORATION

461+57 ~ 464+70 LT
NEW 6" x 314' UNDERDRAIN
W/ F.B. @ 461+57 LT

790

E WDS

E WDS/FW

REV. ℄
4.00
769.16
-.061
-.009
-.063
-.041

4

INV. 763.00

REV 461+48.78
461+50

E RD

E RD

GR

6

1

790

E WDS/FW

REV. ℄
3.00
769.38
-.036
-.006

EARTH FILL

INV. 762.50

461+00

REV 461+98.91

E WDS

790

E WDS/FW

REV ℄
3.00
769.44
-.061
-.003
-.063

EARTH FILL

INV. 762.12

REV 460+49.03
460+50

E RD

E RD

GR

6

W DS

E RIVER

℄

HORIZONTAL
0 10 20
SCALES IN FEET
20 10 0
VERTICAL

CROSS SECTIONS
STA. 460+50 TO STA. 461+50
GROTON - RYEGATE F026-1(30)
SHEET 189 OF 152

PLATE 3 CROSS SECTION D. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY		DATE	BY
NOTE BOOK	SURVEYED		
No.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		DATE	BY
NOTE BOOK	SURVEYED	OCT. 86	GS, RGB, CPF
CP-27, 28	PLOTTED	MAR. 87	CPF + RWB
No. 422, 432	TEMPLATE	APR. 87	CPF
	AREAS	JUNE 90	CPF
	AREAS CHECKED	SEPT 90	SVS

FINAL SURVEY	SURVEYED	
	PLOTTED	
NOTE BOOK	TEMPLATE	
No.	AREAS CHECKED	

BY	DATE
ECS, RGS, GPF	Oct. 86
GPF, RLUB	Mar. 87
GPF	Apr. 87
RLW	May 87
SJS	Sept 90

ORIGINAL SURVEY	SURVEYED	
	PLOTTED	
NOTE BOOK	TEMPLATE	
No. 5,6,&52	AREAS CHECKED	

REV: ℄

4.95

765.40 +.00 -.009

-.061 -.063

FN

E.R.D.

E.R.D.

5 1

760

INV. 758.53

REV 463+98.04

464+00

E.W.D.S.

REV: ℄

4.75

766.50 +.00 -.061

FN

E.R.D.

E.R.D.

6 1

760

INV. 759.50

REV 463+48.20

463+50

E.W.D.S.

REV: ℄

4.57

FN

-.061 767.28 +.00

E.R.D.

E.R.D.

770

INV. 760.50

463+00

REV. 462+98.36

GMP 14

+29

E.W.D.S.

REV: ℄

4.39

-.061 768.78

-.06

FN

E.R.D.

E.R.D.

4 1

770

INV. 761.00

462+50

REV. 462+48.51

462+00 Lt.

Begin Erosion Matting

462+11 Existing 18" R.C.P. Remove.

See Sheet 147 for Details

462+50

Begin Scarifying Existing Pavement

E.W.D.S.

REV: ℄

4.19

-.045 768.75 +.00 -.009

-.06

E.R.D.

E.R.D.

2 1

1.9

770

INV. 761.50

REV 461+98.65

462+00

℄

HORIZONTAL

0 10 20

SCALES IN FEET

20

10

0

VERTICAL

CROSS SECTIONS

STA. 462+00 TO STA. 464+00

GROTON-RYEGATE F026-1(30)

SHEET 130 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD

DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	
	PLOTTED	
NOTE BOOK	TEMPLATE	
NO.	AREAS CHECKED	

BY	DATE

℄

REV. ℄
5.57
FW
761.67 .061 .061 = .008
.063
4
761.8
INV. 755.82
6" UND.
REV 465+97.34
750
456.00
466.100
End Scarifying of Exstng. Pavement
E.R.O.
E.R.O.

REV. ℄
5.62
761.81 .061
FW
.061
INV. 756.93
755.0
REV 465+97.70
750
465.50
E.R.O.
E.R.O.

464+80 LT - 468+50 LT
New 16" x 370' Underdrain w/
Flushing Basin @ 464+80

REV. ℄
5.26
763.01 .061 .061
FW
INV. 756.15
754.2
REV 464+97.70
750
465.00
E.R.O.
E.R.O.

464+10 LT to 467+02 LT
NEW 18" x 232' RCP ☐ ☐
OR CPEP w/ 8x4 D.I. @ INLET

REV. ℄
5.17
763.70
760
464+70
INV. UND. 756.76
754.8
REV. ℄
5.04
764.20 .041 .041 = .009
.063
.061
INV. 757.33
6" UND.
REV 464+47.87
750
464.50
E.R.O.
E.R.O.
FW

STA 464+72.9
REMOVE 18" RCP

℄

HORIZONTAL
0 10 20
SCALES IN FEET
20 10 0
VERTICAL

ORIGINAL SURVEY	SURVEYED	ECS, RGB, GPF
	PLOTTED	GPF, RJB
NOTE BOOK	TEMPLATE	GPF
NO. 470, 471	AREAS CHECKED	RJB

DATE
DEC. 80
MAR. 81
APR. 81
MAY 1990
SEPT. 90

CROSS SECTIONS
STA. 464+50 TO STA. 466+00
GROTON - RYEGATE F026-1(30)
SHEET 13 OF 152

RIGHT EDGE

D=3° 49' 11" LT

0.06 FT/FT MAX

RT SHLD

LT SHLD

LEFT EDGE

℄ EGRADE

1.0% | -0.06 | 467+00 | 1.0% | -0.06 | 467+50 | PT 467+55.89 | -0.02 | 468+00 | -0.02 | 468+50 | -0.02 | 469+00 | -0.02 | 469+50 | -0.02 | 470+00 | -0.02

SCALE: HORZ 1"=50'
VERT. 1"=0.100'/ft

468+54 Lt - REV 473+00
New 6"x 446' Underdrain w/
Flushing Basin @ 468+54

468+54 Rt - 473+38 Rt
New 6"x 484' Underdrain w/
Flushing Basin @ 468+54

760

REV. ℄ 6.00' FH 756.98 +.00D -.063 4 4 INV. 752.20

FERD FERD EWDS

INV UND 751.00
INV 18" PIPE 748.3
INV 24" PIPE 747.8

REV. 468+46.93
468+50

INV 24" PIPE 747.5
INV. 24" PIPE 747.2

468+50
NEW 24" x 64' RCP CL III
OR CPEP

REV. ℄ 6.00' 757.46 +.021 -.063 -.024 -.049

INV 751.50

REV. 467+96.74
468+00

749.0

468+50
New 24" x 100' RCCSP .064 or CAAP .060 or CPEP
W/ Type II Stone Fill @ Outlet

* NOTE: EXCAVATION FOR INSTALLATION OF CULVERT @ REV STA 468+50 RT TO BE KEPT TO A MINIMUM NOT TO EXCEED 30' IN WIDTH.

467+50 Lt
End Erosion Matting

760

REV. ℄ 5.89' FH 758.07 -.063 -.041 -.029 FERD FERD EWDS

INV 752.00

REV. 467+46.76
467+50

749.8

12' AGGREGATE SURFACE COURSE

1:4 | 1:3 | DITCH LINE

467+50 | 467+25 | ℄ | 467+00

SECTION B-B

467+25 Lt
CONSTRUCT GRAVEL DRIVE - 12' WIDE

467+00 ~ 466+50 ±
NEW 18" x 148' RCP CL III
OR CPEP W/ 4'x6' DI @ INLET

760

REV. ℄ 5.82' FERD FERD

-.06 758.80 +.04D

INV = 752.50

REV. 466+96.96
467+00

750.3

B B A A

467+25 Rt
CONSTRUCT GRAVEL DRIVE - 16' WIDE
NEW 15" x 38' CSP .014 OK
RCP CL III OR CPEP

GMP 15"
+30

760

5.71' FERD FERD

-.063 +.04D 759.67 -.006 -.06

INV 752.00

REV. ℄

REV. 466+47.15
466+50

751.3

℄

12' AGGREGATE SURFACE COURSE
1:4 | 1:3 WITHIN CLEAR ZONE

467+50 | +25 | 467+00

SECTION A-A (DRIVE IS SKEWED)

HORIZONTAL 0 10 20

SCALES IN FEET

VERTICAL 20 10 0

CROSS SECTIONS
STA. 466+50 TO STA. 468+50
GROTON-RYEGATE RD26-1(30)
SHEET 152 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

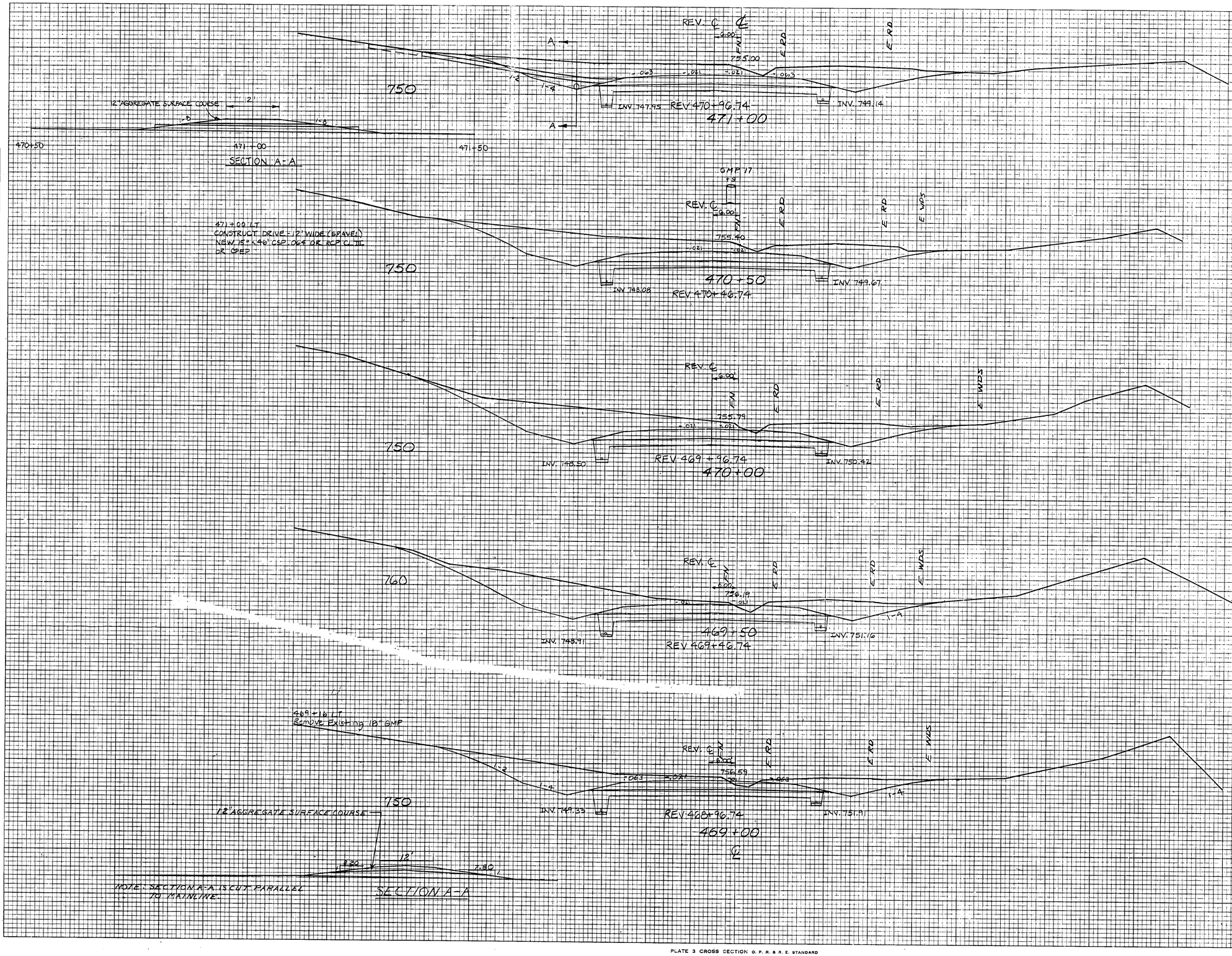
FINAL SURVEY — NOTE BOOK — No. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — No. 1, 2A, 3A, No. 4 and 5 — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

BY	DATE
FCS, RGB, RPF	DEC. 96
GPF, RJB	MAR. 97
GPF	APR. 97
KBM	MAY 97
KBM	SEPT. 98

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	RGB, GPF	DEC. 86
No.	TEMPLATE	GPF, RWB	MAR. 87
	TYPE		APR. 87
	AREAS CHECKED	RWJ	MAY 87
		SVS	SEPT. 90

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	RGB, GPF	DEC. 86
No. 6/6/87	TEMPLATE	GPF, RWB	MAR. 87
	TYPE		APR. 87
	AREAS CHECKED	RWJ	MAY 87
		SVS	SEPT. 90



CROSS SECTIONS
STA. 469+00 TO STA. 471+00
GROTON - RYEGATE F-026-1(8C)
SHEET 139 OF 752

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY — NOTE BOOK No. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK No. 4-10-A97 — SURVEYED CSS, RGB, GPF — PLOTTED GPF, RJR — TEMPLATE GPF — AREAS RJR — AREAS CHECKED SJS

DESIGN	
DEC. 86	
MAR. 87	
APR. 87	
MAY 87	
SEPT. 90	

℄

REV. ℄ 6.00'

BARN TO BE REMOVED BY OTHERS

ERD

4

-0.055 -0.015 753.01 +.021 -.063

473+50

INV. 747.70

REV. 473+96.74

REV. ℄ 6.00' FW

OCEAN CRAVE BARN +.38

NE CRAVE BARN +.98

REV. 473+00 ~ REV. 473+90 RT.
GRANITE SLOPE EDGING

REV. 473+13 ~ REV. 473+85 RT.
NEW 18"x68' RCP CL III OR CPEP

REV. 473+09.7
NEW 24"x96' PCCSP .064 OR CAAP .060
OR RCP CL III OR CPEP w/ TYPE I
STONE ℄ OUTLET

-0.021 -0.021 -0.021 -0.021 -0.036 -0.036 -0.056 -0.069 -0.069

LEFT EDGE

D=4°45'00" RT ℄GRADE

0.069 FT/FT MAX. 750

6' SHLD. RT. SHLD.

RIGHT EDGE

472+00 472+50 473+00 473+50 474+00 474+50 475+00

R=2474+155.84

750

SCALE: HORZ. 1"=50'
VERT. 1"=0.100'/ft

BANKING TRANSITION

063 -.063 753.41 -.021 -.063

INV. 746.90 UND. INV. 746.00

INV. 746.00

473+00

REV. 472+96.74

REV. 473+09.7 ℄ EXISTING 18" RCP - REMOVE
NEW 16'x50' RCP CL III OR CPEP
*SEE SHEET #148

REV. ℄ 6.00'

752.8 -.063 -.04 -.021 -.063 -0.021

INV. 746.92 INV. 746.68

472+50

REV. 472+46.74

REV. ℄ 6.00' FW

754.20 -.021 -.021

INV. 746.83 INV. 747.76

472+00

REV. 471+96.74

REV. ℄ 6.00' FW

754.60 -.063 -.021 -.021 -.063

1:4 1:4

INV. 747.25 INV. 748.18

471+50

REV. 471+46.74

℄

RIVER

HORIZONTAL
0 10 20

SCALES IN FEET

20 10 0
VERTICAL

CROSS SECTIONS

STA. 471+50 TO STA. 477+50
GROTON - EVERGATE EDE-1-08
SHEET 134 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TRACED
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK 598, 600
No. 617, 619
SURVEYED ECS, RGR, GFE 12-C-86
PLOTTED GFE 2-C-87
TRACED RLB 4-86-87
AREAS CHECKED RAW 5-30-87
SJM 5-30-87
SEPT. 30

REV. C
5.12
753.00
-.001 +.041 -.069
E.R.D.
E.R.D.
INV. 744.90
REV 475+97.59
476+00

REV. C
5.27
752.98
+.04 -.069
E.R.D.
E.R.D.
INV. 745.30
REV 475+47.37
475+50

REV. C
5.21
752.52
-.00 +.064 -.069
E.O.R.
E.R.D.
E.R.D.
E.O.R.
INV. 745.70
REV 474+97.15
475+00
756.30

750
750
750
750

474+90
REV. C
5.84
752.32
-.014 +.056 -.063
E.O.R.
E.O.R.
E.R.D.
E.R.D.
E.O.R.
E.O.R.
HOUSE
INV. 746.10
474+50
REV 474+46.91
474+50 LT
CONSTRUCT DRIVE (12' WIDE - GRAVEL)
B
B

REV 474+40 ~ 476+48 RT
NEW 6" x 208" UNDERDRAIN
W/ E.B.'S REV 474+40 RT

474+00 Rt.
Construct Drive (12' Paved)

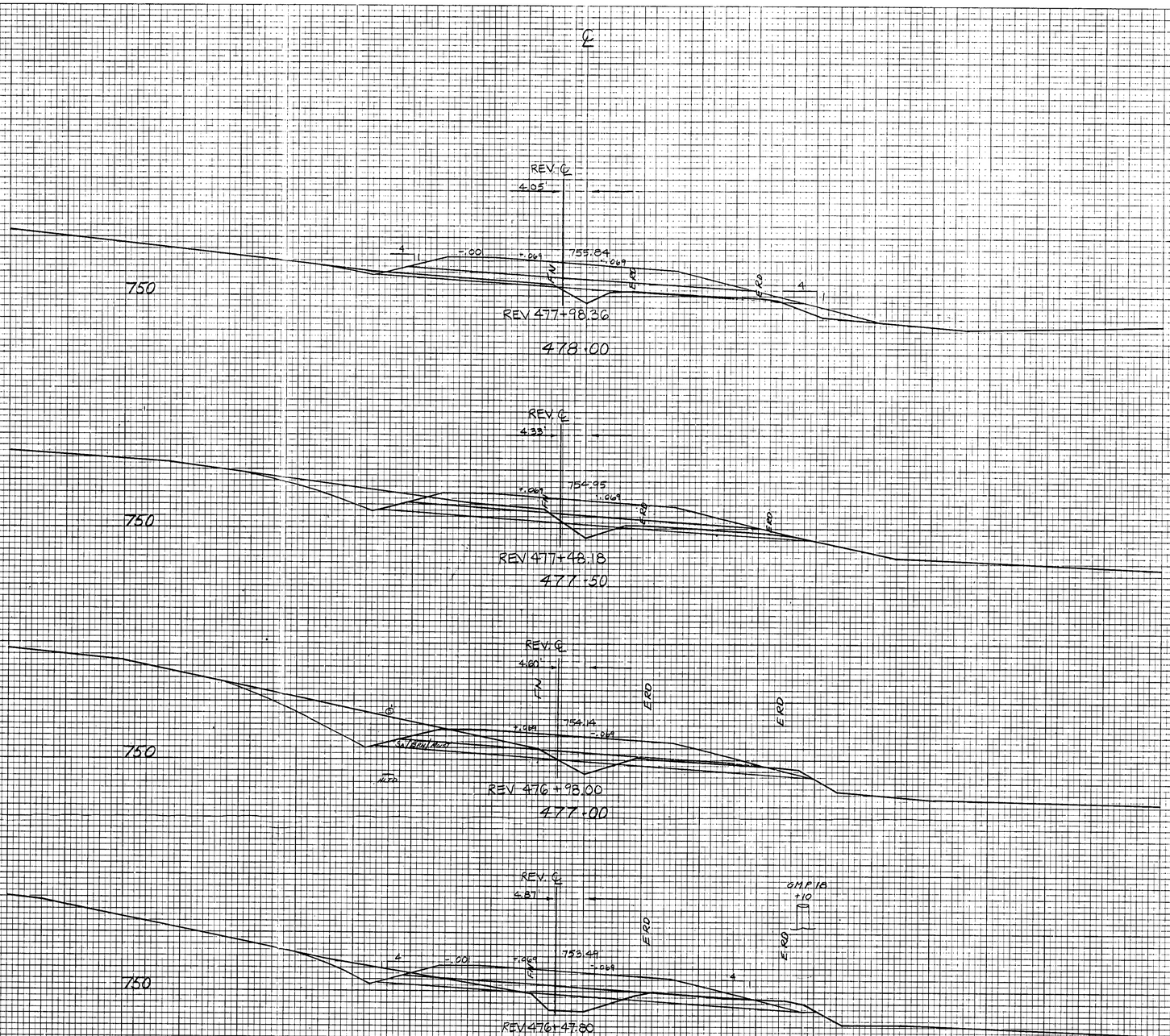
NEW DITCH LINE
12"
12" AGGREGATE SURFACE COURSE
479+00
RVE @ 474+50 LT
474+50
475+00
SECTION B-B

REV. C
6.00
752.69
-.034 +.034 -.043
E.O.R.
E.R.D.
E.R.D.
E.P.D./E.O.R.
D.R.
E.O.R.
MATCH TO EXISTING GRADE
ASPHALT COVER HOUSE
474+00
REV 473+96.74
INV. 746.50
A
A

DRIVE
474+00
2" BITUMINOUS CONCRETE
ON 12" AGGREGATE SURFACE COURSE
EXISTING GROUND
1-8
1-8
EXISTING GROUND
SECTION A-A

HORIZONTAL
0 10 20
SCALES IN FEET
VERTICAL
20
10
0

CROSS SECTIONS
STA. 474+00 TO STA. 476+00
GRDY DIV. - RYE GATE ROAD (30)
SHEET 150 OF 152



Rev. Sta. 476+398 Existing 12"x24" Box - Remove
New 42"x92" PCCSP(109) or CAPP(105)
W/ Type II Stone Inlet and Outlet
See Sheet 148 for Details

STA 476+48 RT
NEW 6" x 22" UNDERDRAIN
CARRIER PIPE
* SEE SHEET 148 FOR DETAILS

HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

CROSS SECTIONS
STA. 476+50 TO STA. 478+00
GROTON - RYE GATE FO26-1 (30)
SHEET 136 OF 152

FINAL SURVEY NOTE BOOK No.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY NOTE BOOK Nos. 640, 645, 646, 652
SURVEYED DEC. 86
PLOTTED MAR. 87
TEMPLATE APR. 87
AREAS JAN. 90
AREAS CHECKED SEPT. 79
BY ESS, SCE, GEF, CSR, GPF, KAU, SSS

PLATE 3 CROSS SECTION O. P. R. S. N. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK	TEMPLATE		
No.	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	ES, RGB, GPE	DEC. 86
	PLOTTED	GPE, ES, WB	MAR. 87
NOTE BOOK	TEMPLATE	GPE	APR. 87
No. 670, 632	AREAS	RAU	MAY 87
	AREAS CHECKED	SJS	SEPT. 88

℄

480+50 Rt
Begin Erosion Matting

480+50 Rt
End Scarifying Existing Pavement

EWDS

REV ℄
2.55

4 : 1

-.001 +.069 760.33 -.069

ERD

750

REV 480+49.05

480+50
REV ℄
2.86'

-.068 759.43 -.069

B

750

REV 479+98.93

480+00

CMP 19
+9 REV ℄
3.17'

-.069 758.54 -.069

750

REV 479+48.81

479+50
REV ℄
2.45

-.069 757.64 -.069

750

478+50 Lt
Construct Drive (12' Gravel)
New 15"x42" CSP .064
or RCP CL III or CPEP

REV 478+98.65

479+00
REV ℄
3.76'

A

-.001 -.069 756.74 -.069

750

REV 478+48.52

478+50

480+00 RT
CONSTRUCT DRIVE (12' GRAVEL)
NEW 15"x44" CSP .064 OR
RCP CL III OR CPEP

℄

12" AGGREGATE SURFACE COURSE

8.7

12"

7.4

SECTION B-B

12" AGGREGATE SURFACE COURSE

℄

12"

7.4

8.7

INV. 754

INV. 754.2

EXISTING GROUND

750

SECTION A-A

478+25
Begin Scarifying Existing Pavement

HORIZONTAL
0 10 20

SCALES IN FEET

20
10
0
VERTICAL

CROSS SECTIONS
STA. 478+50 TO STA. 480+50
GRAYSON - RIVERGATE - FOTSL-1(93)
SHEET 1317 OF 1752

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY:
NOTE BOOK	PLOTTED	DATE
NO.	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	BY: ECS, RMB, GFP	DATE: DEC. 86
NOTE BOOK	PLOTTED	G.P.E. & R.M.B.	MAR. 87
NO. 6/2457	TEMPLATE	GAN	APR. 87
	AREAS CHECKED	CAM	SEPT. 90

℄

REV. ℄
1.27'

E WDS

4

1:4

763.51 +.069 -.069

760

INV. 759.20

REV 482+49.37
482+50

40° P
+.05

E WDS

FACE OF GUARDRAIL

482+65 Rt
Begin Steel Beam Guard Rail

482+50

482+27.5

E WDS

GMP 20
+.45

REV ℄
1.60'

E RD

E RD

E WDS

482+27.5 Rt - 482+65 Rt
New Melt

482+00

762.92 +.069 -.069

760

SA/BRN/MOIST

INV 759.90

NLTO

REV 481+99.31
482+00

E WDS

481+50 Lt
Begin Erosion Matting

REV ℄
1.92'

E RD

E RD

E WDS

762.12 +.069 -.069

760

INV. 758.60

REV 481+49.23
481+50

REV 490+49 ~ REV 483+49 LT
NEW 6" ⌀ 300 UNDERDRAIN W/
F.B. @ 483+49 LT.

E WDS

481+50 Rt
End Erosion Matting

REV ℄
2.24'

E RD

E RD

E WDS

761.23 +.069 -.069

760

INV. 758.30

REV 480+99.15
481+00

℄

482+70

12'

3'

5'

4'

6'

Parabolic Flare
37½' Melt

5
1

20
10
0
VERTICAL

HORIZONTAL
0 10 20
SCALES IN FEET

CROSS SECTIONS

STA. 478+00 TO STA. 486+50
SECTION - EYE GATE PROJECT (90)
SHEET 138 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
GIETZGEN CORPORATION

FINAL SURVEY — NOTE BOOK — NO. — SUBMITTED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — DATE — BY

ORIGINAL SURVEY — NOTE BOOK — NO. — SUBMITTED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — DATE — BY

BY	DATE
ES, RLB	DEC. '87
GPF, RLB	MAR. '87
GPF	APR. '87
RAL	SEPT. '87
WMS	SEPT. '87

℄

780

770

760

770

770

760

1:4

1:2

1½

1½

1:1

1:1½

1:1½

1:1½

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREA
AREAS CHECKED
DATE

ORIGINAL SURVEY
NOTE BOOK
No. 86-0655
SURVEYED
PLOTTED
TEMPLATE
AREA
AREAS CHECKED

BY	DATE
ECG, RG, GFF	DEC. 86
GFF, RJB	APR. 87
GFF	JAN. 90
RAJ	JAN. 90
SSS	SEPT. 90

LEFT EDGE
Δ=4°45'00" RT.
0.069 FT/FT MAX.
RIGHT EDGE
℄ GRADE
RT. SHLD.
RT. SHLD.
TRAVEL
-0.069 -0.065 -0.064 -0.027 -0.021 -0.020 -0.021
+0.069 +0.065 +0.064 +0.023 +0.002 -0.009 -0.020 -0.021
483+50 483+90 484+00 484+50 485+00 485+50 486+00 486+50 487+00
760
760
760
760
1:2
1:4
4
5
INV. 755.24
-.063 -.020 760.91 -.021 -.063
FACE OF GUARD RAIL
3
3
℄ WDS
℄ RRD
℄ RRD
℄ WDS
℄ WDS
℄ RRD
℄ RRD
℄ WDS
℄ WDS
℄ RRD
℄ RRD
℄ WDS
℄ WDS
℄ RRD
℄ RRD
℄ WDS
℄ WDS
℄ RIVER
486+30 Lt
End Erosion Matting
486+52.5 Rt - 486+90 Rt
New Melt
486+52.5 Rt
End Steel Beam Guardrail
486-90
INV. 756.06
-.063 -.009 761.95 -.021 -.063
3
2
486+00
INV. 758.07
-.063 +.002 762.79 -.021 -.063
485+50
CTC 71.730
(RAND)
1:2
1:4
(RAND)
INV. 760.45
-.063 -.023 769.93 -.023 -.063
1½
2
485+00
℄ GMP 21 1/2
℄ RRD GR.
FACE OF GUARD RAIL
BLASTED ROCK
18" NATIVE GRUB MATERIAL TO BE SEED AND MULCHED
485+25 RT
END GRUBBING MATERIAL
END EROSION MATTING
485+00 RT
END SCARIFYING EXISTING PAVEMENT
486-52.5
486-50
9'
6'
Parabolic Flare
37.5' Melt
HORIZONTAL
0 10 20
SCALE IN FEET
20
10
0
VERTICAL

CROSS SECTIONS
STA. 485+00 TO STA. 486+50
SKOTTM - RTE GATE PROJ-1(30)
SHEET 140 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK 128, 60, 145, 146, 152
SURVEYED DEC 86
PLOTTED APR 87
TEMPLATE JAN 88
AREAS SEPT 88
AREAS CHECKED
DATE
BY CC, RC, GF, CF, RW, JE

750
E.W.D.S.
489+00
489+00 LT
CONSTRUCT DRIVE (12' GRAVEL)
NEW 15" RAO" CSP, .064 OR
RCP CL III OR CPEP
E.R.D.
E.O.R.
EDGE SHOULDER
NET 3
+5
755.20
749.48
EDGE GRASS
PAVE BANK RAIL
EDGE TURNOUT
E.R.D.
E.O.R.
E.W.D.S.
E.R.D.
E.O.R.
EDGE GRASS
PAVE BANK RAIL
EDGE TURNOUT
E.RIVER
750
488+50
756.35
750.62
E.R.D.
E.O.R.
EDGE GRASS
PAVE BANK RAIL
EDGE TURNOUT
E.W.D.S.
E.RIVER
488+50
489+00
489+50
12" AGGREGATE SURFACE COURSE
SECTION B-B
GMP 22
+18
757.49
751.76
750
488+00
489+00 RT - 489+50 RT
Construct Turnout w/12" Aggregate Surface Course

486+85 LT - 487+15 LT
Remove Existing Guardrail
EDGE SHOULDER
NET 2
+0
E.R.D.
E.O.R.
E.W.D.S.
PAVE BANK RAIL
EDGE TURNOUT
E.RIVER
758.63
752.90
750
487+50
487+15 RT - 489+50 RT
New 6"x 236' Underdrain w/
Flushing Basin @ 487+15
12" AGGREGATE SURFACE COURSE
INV. 757.40
INV. 755.80
SECTION A-A
NOTE: SECTION A-A IS CUT PARALLEL TO MAIN LINE.
487+00 ~ 487+90 LT
NEW 6"X46' UNDERDRAIN CARRIER PIPE
W/TYPE I STONE 1'-2"x1' @ OUTLET
487+26 Existing 18" GMP Remove
New 18"x 96' RCSP .064 or CMAP .040 or CPEP
W/ Type I Stone @ Outlet, 1/End Section @ Inlet
See Sheet 148 for Details
Vary slope as needed to avoid dry well
752.53
DRY WELL
487+10
752.77
INV. 754.127
752.0
487+00
E.W.D.S.
E.O.R.
E.R.D.
760
760.91
INV. 755.20
DRIVE CROSS SECTION
STA. 486+50 (SKEW 68°53'00" LT)
℄
487+50 - 487+00 RT
PLANK RAIL

HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

CROSS SECTIONS
STA. 487+00 TO STA. 489+00
GROTON - PINE GATE - FOZ-1(30)
SHEET 141 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY
	PLOTTED	DATE
NOTE BOOK	TEMPLATE	
NO.	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	ECS, ZGB, JCPE	DEC.'84
	PLOTTED	GCP, JWB	MAY '85
NOTE BOOK	TEMPLATE	CPE	APR.'87
388,410,418	AREAS	DWJ	JAN.'90
NO. 4216,4231	AREAS CHECKED		SEPT.'95

491+32 Lt
Construct Drive (12' Gravel)
New 15"x48' CSP .064 or RCP CL III A
or CPEP

DRIVE CROSS SECTION
STA. 491+32 (ASKEW 59°56'00" RT)

SECTION A-A

NOTE: SECTION A-A IS CUT PARALLEL TO MAIN LINE.

490+85 Lt
End Erosion Matting

491+50 Lt
Begin Erosion Matting

END CURVE = TRANSITION TO EXISTING ROAD

SCALE: HORZ. 1"=50'
VERT. 1" = 0.0100 FT/FT

491+00 ~ 491+50 RT
REMOVE & RESET GUARDRAIL

489+87.5 ~ 491+50 RT
REMOVE & RESET GUARDRAIL

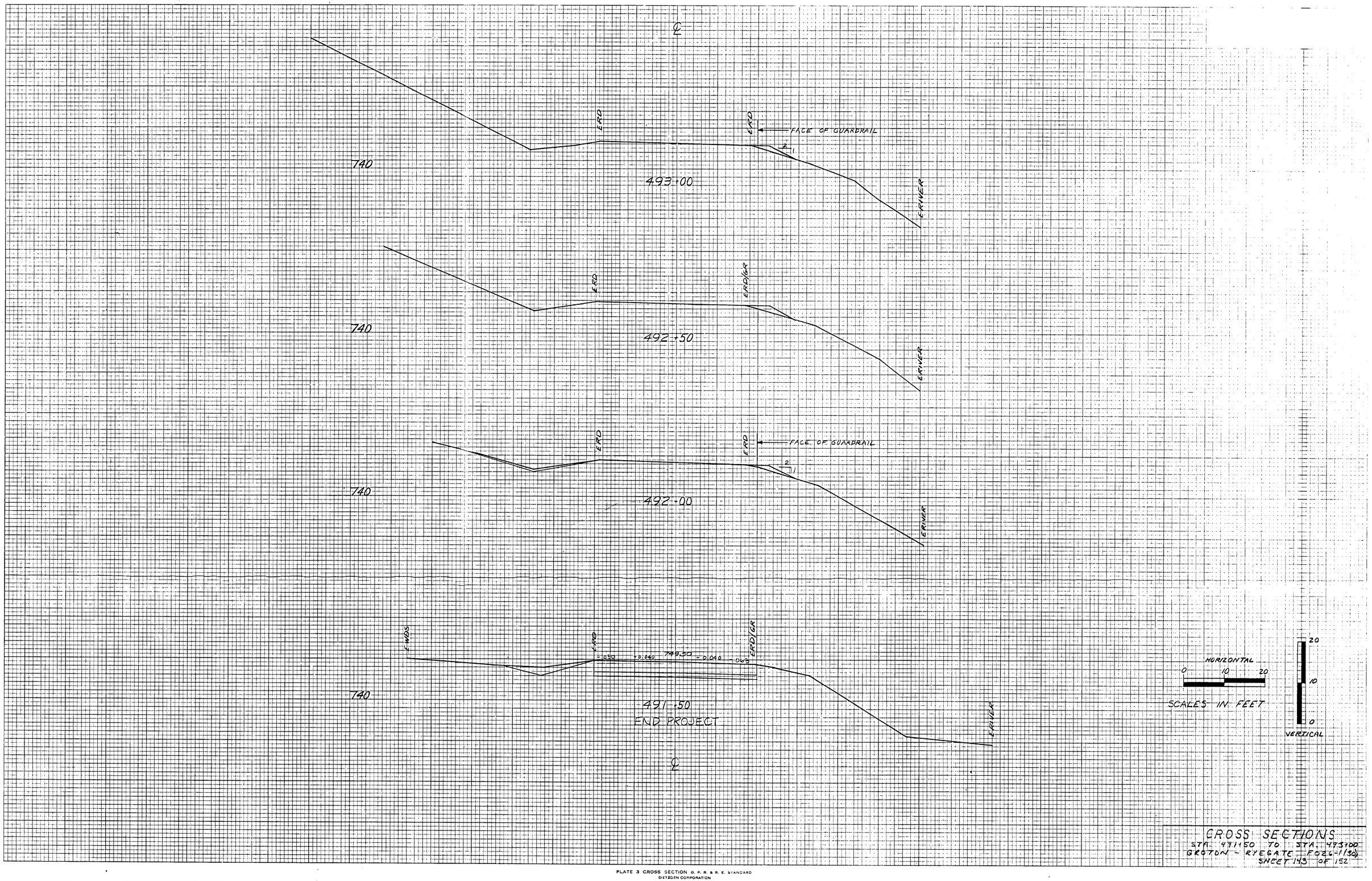
489+50 ~ 489+87.5
NEW MELT
REMOVAL & DISPOSAL OF GUARDRAIL

490+50 Rt
New 6"x10' Underdrain Corner Pipe
W/ Type I Stone @ Outlet
2'x2'x1'

SCALES IN FEET

CROSS SECTIONS
STA. 489+50 TO STA. 491+00
SROTON - RYEGATE 7026-1(30)
SHEET 142 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. C STANDARD
DIETZGEN CORPORATION



FINAL SURVEY
NOTE BOOK
No.

	BY	DATE
SURVEYED	EES, RGB, GPF	DEC. '86
PLOTTED	GPF, EWS	MAR. '87
TEMPLATE	GPF	APR. '87
AREAS	EWS	JUNE '90
AREAS CHECKED	SJS	SEPT. '90

ORIGINAL SURVEY
NOTE BOOK
No. 62-457

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

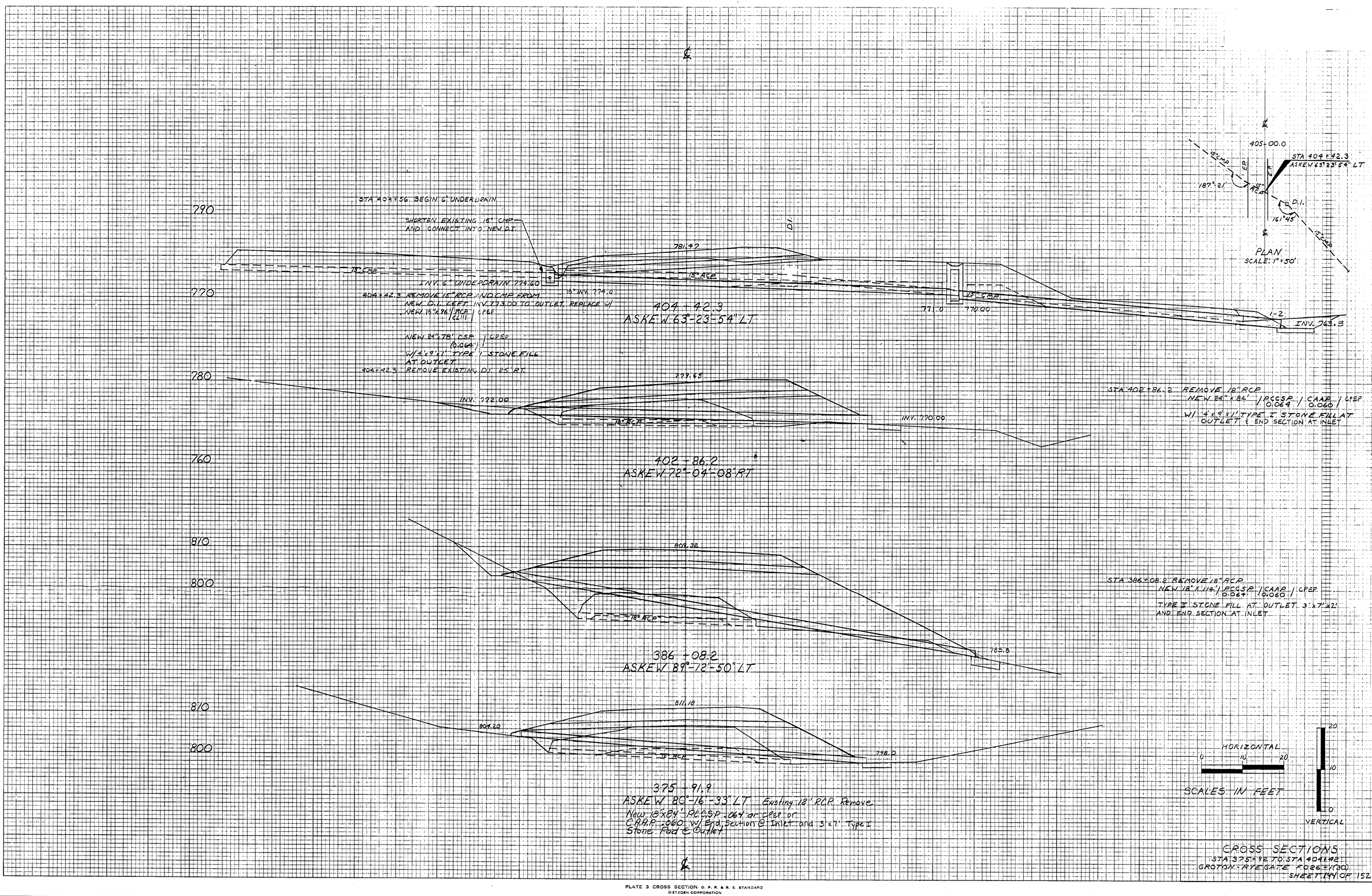
CROSS SECTIONS

STA. 491+50 TO STA. 493+00
GROTON - RYEGATE E 022-1(30)
SHEET 143 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY
NOTE BOOK	PLOTTED	DATE
No.	TRACED	
	AREAS CHECKED	

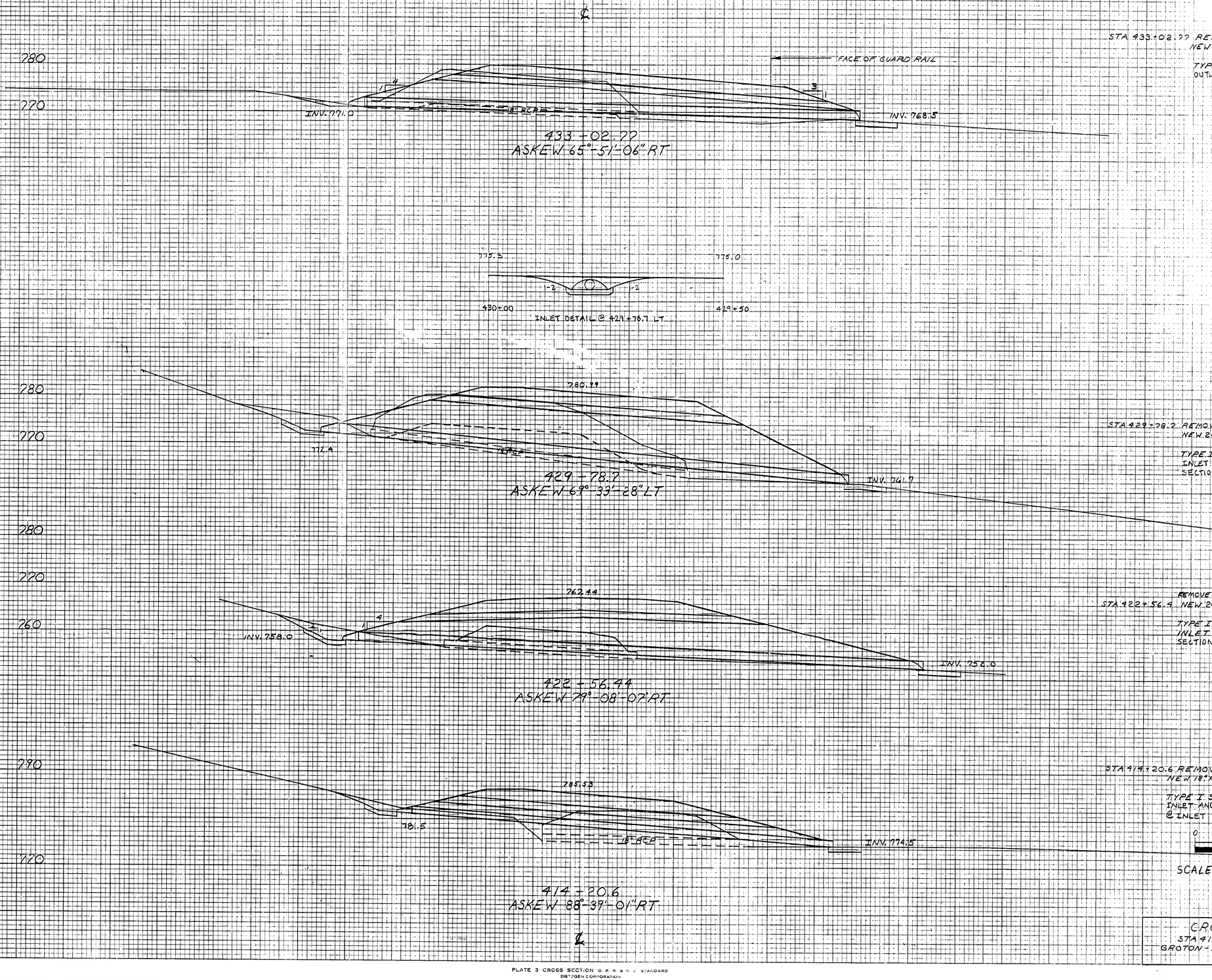
ORIGINAL SURVEY	SURVEYED	REP, ERS	DATE MAR. 85
NOTE BOOK	PLOTTED	RAU	FEB. 88
No. 691	TRACED	RAU	MAY 90
	AREAS	RAU	JAN. 90
	CHECKED	SJS	SEPT. 90



CROSS SECTIONS

STA 375+92 TO STA 404+42
GROTON-RYEGATE FO26-1(30)
SHEET 144 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
© ETZGEN CORPORATION



CROSS SECTIONS
STA 414+20.6 TO STA 433+02.77
GROTON - RYEGATE (F036-1)(30)
SHEET 145 OF 152

FINAL SURVEY	SURVEYED	BY
	PLOTTED	DATE
NOTE BOOK	TEMPLATE	
	AREAS	
No.	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	BY
	PLOTTED	DATE
NOTE BOOK	TEMPLATE	
	AREAS	
No. 651	AREAS CHECKED	

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	KEF, E&S	MAY, 88
No.	TEMPLATE	KAJ	FEB. 88
	AREAS	KAJ	JAN. 90
	AREAS CHECKED	SJS	SEPT. 90

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	KEF, E&S	MAY, 88
No. 637	TEMPLATE	KAJ	FEB. 88
	AREAS	KAJ	JAN. 90
	AREAS CHECKED	SJS	SEPT. 90

780

STA. 445+87.5 REMOVE 12" RCP AND O.I.

12" RCP

445+87.5
ASKEW 80°00' RT

12" RCP

STA 441+28 L.I.
STONE FILL TYPE I (8' WIDE)

STA 441+27.9 REMOVE 24" RCP

780

783.15

STA 441+27.9 NEW 24"x82' | PCCSP | CAAP | CPEP
| 0.064 | 0.060 |

W/ 4'x9'x2' TYPE II STONE FILL @ OUTLET

INV. 6" PIPE 777.50

STA 441+23 BEGIN 6" UNDERDRAIN

INV. 24" PIPE 775.5

24" RCP

441+27.9
ASKEW 74°-07'-35" RT

INV. 767.5

780

228.38

INV. 2-6" UNDERDRAINS 769.5

STA 437+01 BEGIN 6" UNDERDRAIN

STA 436+79 END 6" UNDERDRAIN

INV. 30" PIPE 767.50

EXISTING 18" RCP

437+05.5
ASKEW 82°-17'-24" RT

INV. 757.2

STA 437+05.5 NEW 30"x106' | PCCSP | CAAP | CPEP
0.009 | 0.075 |
REMOVE EXISTING 18" RCP
TYPE II STONE FILL 5'x11'x2' AT OUTLET

HORIZONTAL
0 10 20

SCALES IN FEET

20
10
0
VERTICAL

CROSS SECTIONS

STA. 437+05.5 TO STA. 445+87.5
GROTON-PEGGATE 2026-7(30)
SHEET 146 OF 152

PLATE 3 CROSS SECTION C. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
DATE
BY

ORIGINAL SURVEY
NOTE BOOK
No. 637
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
RCP 283
GPF
EAU
SJS
DATE
MAR. 88
MAR. 89
MAR. 90
JAN. 90
SEPT. 90

770
760
780
760
790
770
750
750

℄

964 + 70.69
ASKEW 84° - 41' - 39" RT

18" RCP

STA 964+72.9 REMOVE 18" RCP

962 + 11.0
ASKEW 82° - 07 - 41" LT

768.82

18" RCP

STA 962+11 REMOVE 18" RCP

454 + 75.3
ASKEW 85° - 09' - 42" RT

REV. C

103

EARTH FILL

STA 454+79 BEGIN 6" UNDERDRAIN INV. 759.65
STA 454+71 END 6' UNDERDRAIN INV. 759.65

INV. 18" PIPE 758.00

18" RCP

770.29

INV. 758.00

36" BOX CULVERT

450 + 68.9
ASKEW 87° - 27' - 55" RT

℄

SECTION C-C

SECTION B-B

SECTION A-A

A
B
C
11.5 (TYP.)
48" PIPE
MATCH EXISTING CHANNEL
4'
7'
4'
16'
18'
18'
4'
14'
22'
1.5
1
4
1½
BERM AS REQ'D TO SUPPORT RIPRAP (TYP.)
STONE FILL TYPE IV (TYP.)

PLAN VIEW
ENERGY DISSIPATOR STA 450+68.9

25'

STA 454+75.3 REMOVE 18" RCP AND DI
NEW 18" X 14" (CCSP (0.064)) / (CAAP (0.060)) / CPEP
W/ 11.25° ELBOW, 7.25° ELBOW
W/ 4R4 DI AT INLET AND
TYPE I STONE FILL 3'x10'x2'
AT OUTLET

STA 450+68.9 REMOVE 36" RC BOX
STA 450+68.9 NEW 48" 1/32" (CCSP (0.109")) / CAAP (0.105")
W/ TA-7 TYPE III STONE FILL 8'16'12' AT
INLETS ENERGY DISSIPATOR AT OUTLET
W/ CRADLE HEADWALLS AT INLET AND OUTLET

INV. 744.00

TOP OF BERM

GRANULAR BACKFILL FOR STRUCTURES

STONE FILL TYPE IV

2

4

10
755
5
750
0
VERTICAL
0 5 10
SCALE IN FEET
FOR SECTION A-A ONLY

20
10
0
VERTICAL
0 10 20
SCALES IN FEET

CROSS SECTIONS
STA 450+68.9 TO STA 964+72.9
GROTON - RIVE GATE F026-1(30)
SHEET 147 OF 152

PLATE 3 CROSS SECTION D. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY
NOTE BOOK	PLOTTED	DATE
NO.	TEMPLATE	
	AREAS	
	AREAS CHECKED	

BY	DATE
REP. E&S	FEB. 88
EWJ	FEB. 88
EWJ	FEB. 88
EWJ	SEPT. 90
RWS	SEPT. 90

ORIGINAL SURVEY	SURVEYED	BY
NOTE BOOK	PLOTTED	
No. 637	TEMPLATE	
	AREAS	
	AREAS CHECKED	

℄

STA 487+26 ASKEW 67°-57'-00" LT
REMOVE EXIST. 18" CMP
NEW 18"x36" PCCSP | CAAP (0.064") | CPEP (0.060") |
W/ TYPE I STONE FILL 3'x7'x1'
AT OUTLET, W/ END SECTION AT INLET

INV. 751.20
4:1
759.18
3:1
18" CMP
INV. 748.29
740
750
1-6
1-2
STONE FILL TYPE II
476-00
+34
+50
SECTION B-B

487-26.0
ASKEW 67°-57'-00" LT

STA. 476+42 ASKEW 83°-20'-40"
REMOVE 24'-1 1/2" x 40' BOX CULVERT
NEW 42"x86" PCCSP | CAAP (0.109") | (0.105")
W/ CRADLE HEADWALLS AT INLET AND OUTLET
W/ TYPE II STONE FILL 7'x 14'x 2' AT OUTLET
CONSTRUCT INLET DITCH W/ TYPE II STONE FILL @ INLET AND SPECIAL DITCH @ OUTLET

1:4
1:4
SECTION A-A

B
B
1 1/2
4
4.90'
753.40
INV. 747.0
INV. 744.56
740
A
A

REV. 476+39.8
ASKEW 83°-20'-40" RT

REV. ℄
6.00'
753.33
4
.063
+.010
-.02
.063
INV. 8" PIPE 746.0
UND. INV. 746.00
PIPE INV. 746.50
UND. INV. 745.6
24" PIPE INV. 745.0
INV. 744.0
750
REV. STA 473+09.7 END ℄ UNDERDRAIN

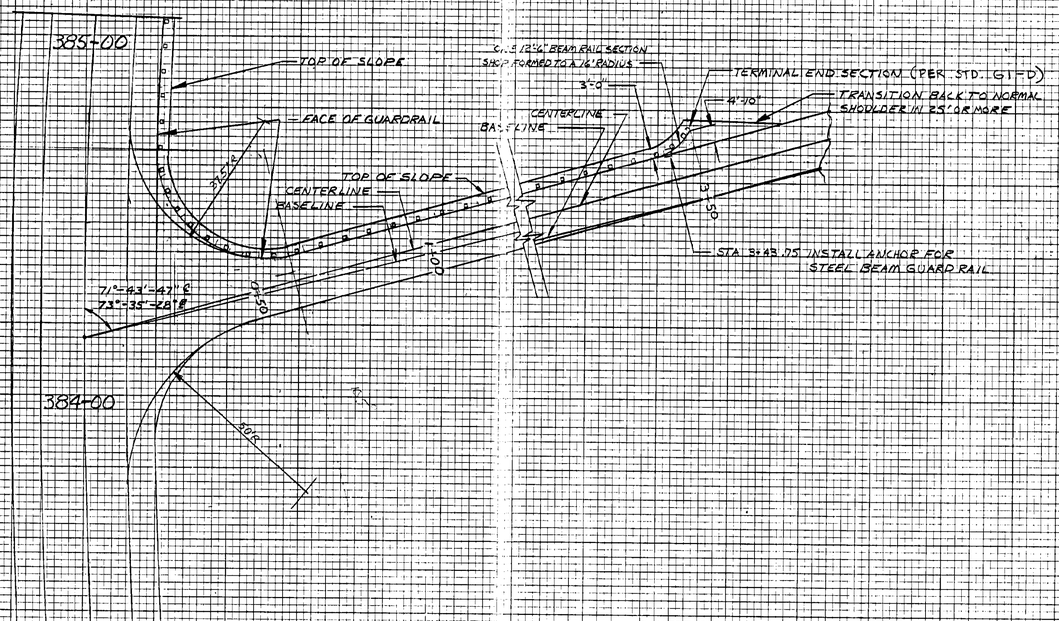
REV. 473+09.7
ASKEW 71°-00'-00" RT

STA. 473+13.0 REMOVE EXIST. 18" RCP
NEW 78"x 50" RCP | CPEP (SL)
CL III |
REV STA 473+09.7
NEW 29"x 96" PCCSP | CAAP | RCP | CPEP
(0.069") | (0.060") | CL III |
W/ 3'x 10'x 2' TYPE I STONE FILL AT OUTLET

HORIZONTAL
0 10 20
20
10
0
VERTICAL
SCALES IN FEET

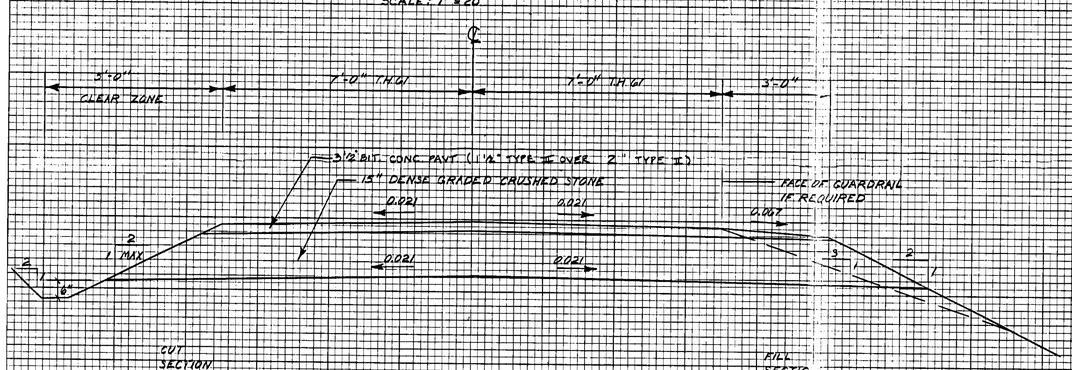
CROSS SECTIONS
STA. 473+13 TO STA. 487+26
GROTON-RYEGATE F026-1(30)
SHEET 18 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION



TOWN HIGHWAY 61 GROTON
SIDE ROAD INTERSECTION: STA. 384+17.69

SCALE: 1" = 20'



TYPICAL SECTION
FOR TH 61 GROTON
NOT TO SCALE

TYPICAL GUARD RAIL @
TH 61 SIDE ROAD INTERSECTION
GROTON - RYEGATE F026-1(30)
SHEET 149 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	KEE, RWB	MAR. 87
No.	TRACED	GEE, RWB	MAR. 87
	AREAS	CHK	JAN. 90
	AREAS CHECKED	SJS	SEPT. 90

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
No. 617	TRACED		
	AREAS		
	AREAS CHECKED		

ELEV. 815.45
-6.3%
-3.0%
PVC
PVI
PVT
L=0
L=0
800
MAINLINE STA 384+17.69 =
SIDELINE STA 0+00
PVI
STA 0+10
ELEV. 813.57
L = 140.00'
E = 0.45
-12.00%
PVI
STA 3+50
ELEV. 774.37
L = 100'
E = 0.78
PVC
PVI
PVT
-5.74%
0+0
1+0
2+0
3+0
4+0

℄ PROFILE

SCALE HORZ 1"=50'
VERT 1"=10'

E.CEM

FACE OF GUARD RAIL
800.37
L.RD
L.RD
800
1+50

E.CEM

FACE OF GUARD RAIL
℄ 806.37
L.RD
L.RD
800
1+00

FACE OF GUARD RAIL
℄ 812.26
E.CEM
L.RD
L.RD
MATCH TO MAINLINE SECTION 384+80
800
0+50

℄

780
E.RD
℄
L.RD
4+00

780
STA 3+50 BEGIN GUARDRAIL AND INSTALL TERMINAL END SECTION
STA 3+43.75 INSTALL ANCHOR FOR STEEL BEAM RAIL SEE SHEET 149 OF 153 FOR DETAILS
E.RD
℄
L.RD
774.15
INV. 772.10
STA. 3+50
NEW 18"X24" C.S.P. (.064)
W/ 3"X1"X1" TYPE I STONE FILL AT OUTLET AND END SECTION AT INLET

3+50

780
E.RD
℄
L.RD
768.39

780

3+00

E.RD
℄
L.RD
780.37

780

2+50

E.CEM

L.RD
E.RD
794.39

780

2+00

℄

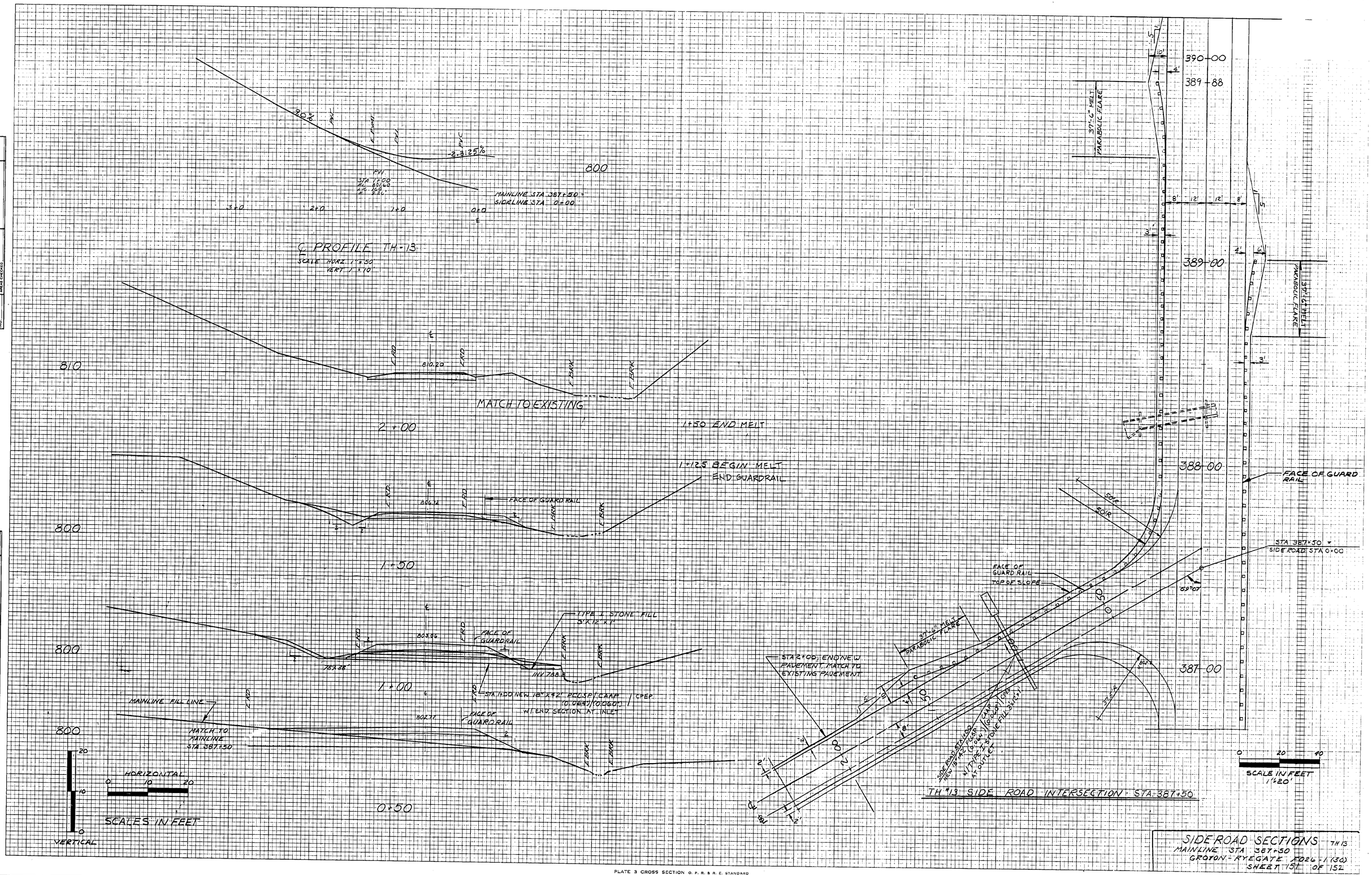
HORIZONTAL
0 10 20
SCALES IN FEET
20
10
0
VERTICAL

SIDE ROAD SECTIONS TH 61
MAINLINE STA 384+17.69
GROTON-RYEGATE F026-1(30)
SHEET 150 OF 152

FINAL SURVEY
NOTE BOOK
No.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
No. 60
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

BY: E.F.LOR, G.F.E., G.F.E., F.A.W., S.T.S.
DATE: MAR. 67, APR. 67, JAN. 70, SEPT. 70



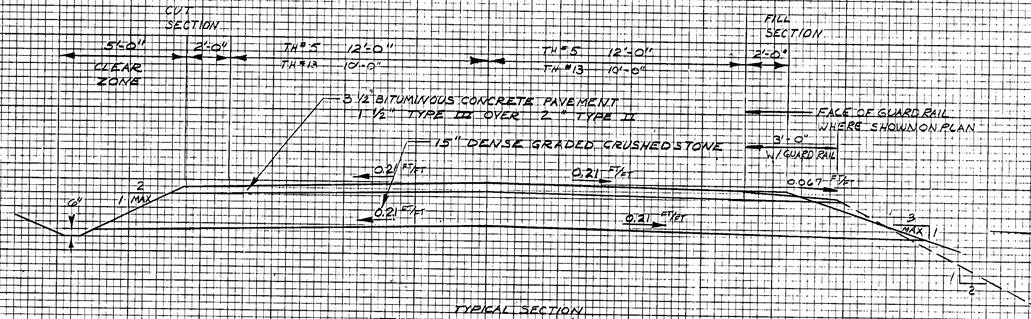
TH #13 SIDE ROAD INTERSECTION: STA. 387+50

SIDE ROAD SECTIONS TH 13
MAINLINE STA 387+50
GROTON - RYEGATE FD26-1(30)
SHEET 151 OF 152

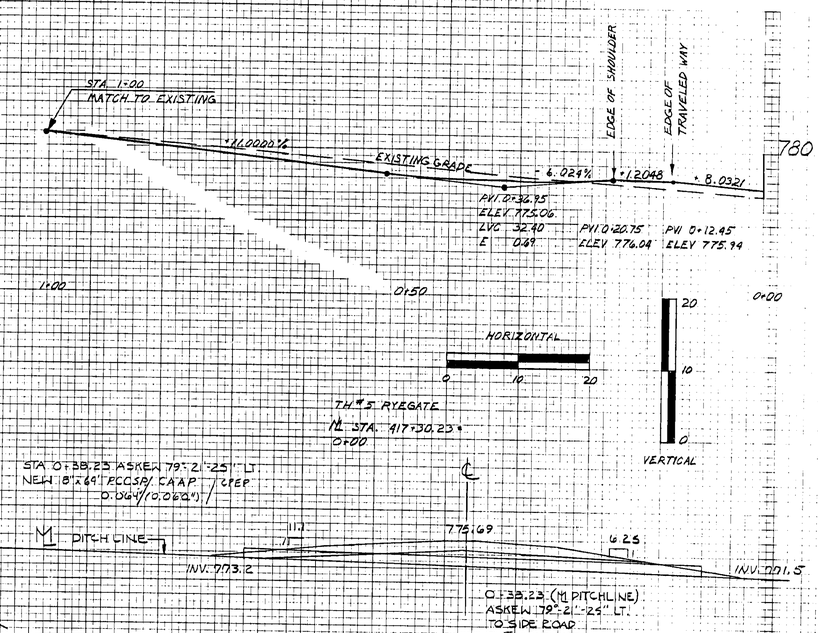
PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

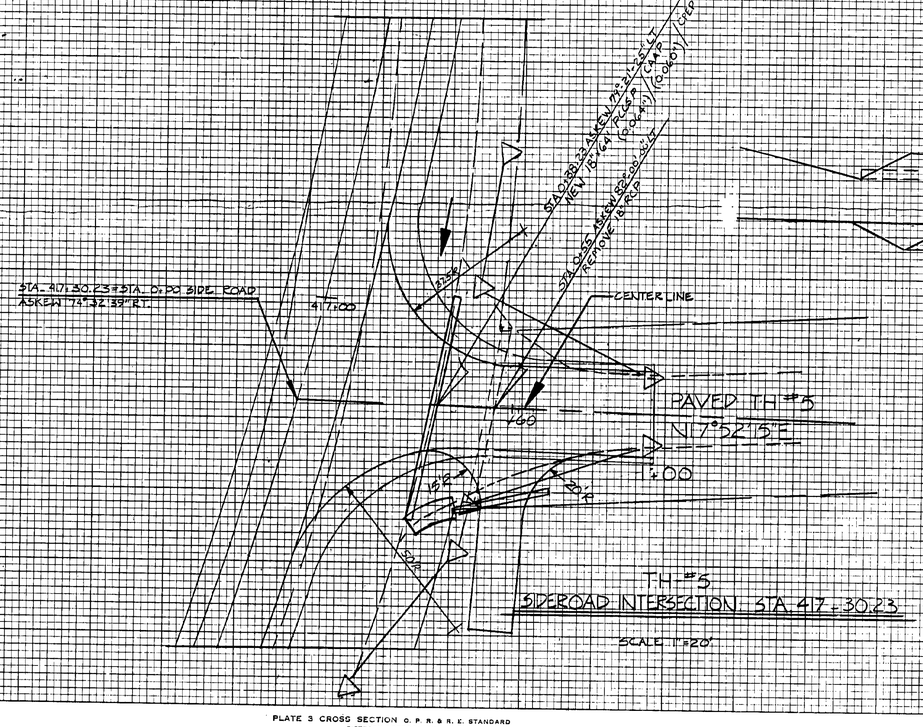
FINAL SURVEY	SURVEYED	BY
NOTE BOOK	PLOTTED	DATE
NO.	TEMPLATE	
	AREAS	
	AREAS CHECKED	

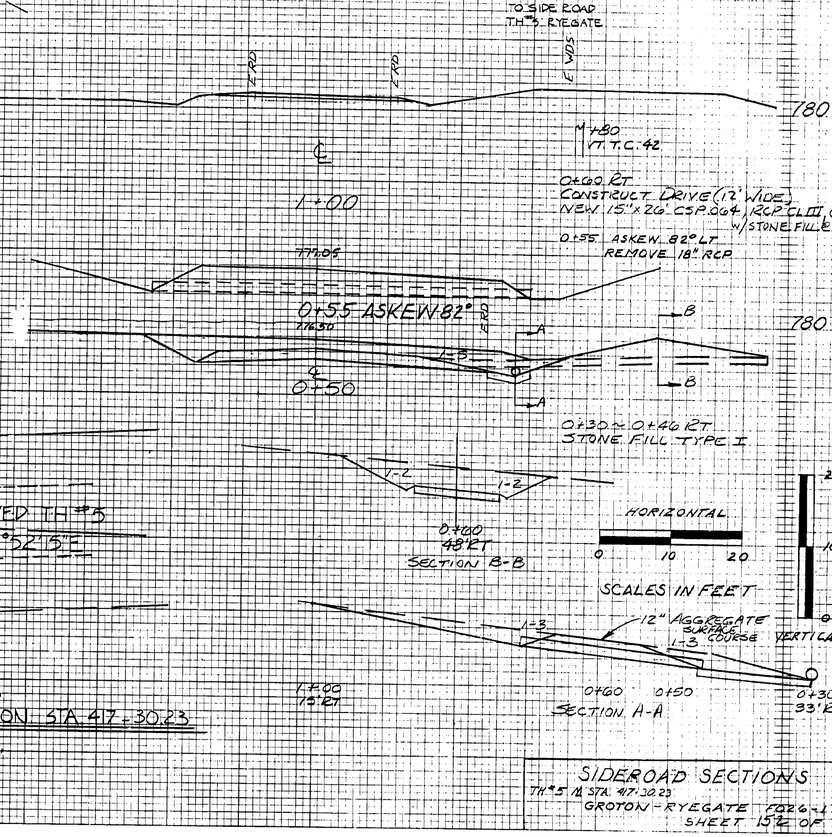
ORIGINAL SURVEY	SURVEYED	BY R.L.B.	DATE AUG. '67
NOTE BOOK 647	PLOTTED	C.F.F. D.J.R.	APR. '87
	TEMPLATE	C.F.F.	APR. '87
	AREAS	D.J.W.	JULY '90
	AREAS CHECKED	S.J.S.	SEPT. '90



TYPICAL SECTION
TH 13 GROTON & TH 5 RYEGATE
NOT TO SCALE







SIDEROAD SECTIONS

TH # 5 ℄ STA. 417+30.23
GROTON - RYEGATE F026-1(30)
SHEET 152 OF 152

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
DIETZGEN CORPORATION

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

STA.	STA.	POSITION	ASKEW	TWIN-WALL TEMP. SCOPE LS	CSP (RD) 12" EA	CSP (RD) 18" EA	CSP (OVAL) 12"	CSP (OVAL) 18"	12" CMP LF	18" CMP LF	12" CPEP	15" CPEP	18" CPEP	24" CPEP	30" CPEP	CSPE 12	CSPE 18	CPEPE 12	CPEPE 18	CSPE 18	CSPE 15	CPEPE 18	CPEPE 24	PRCC DI	DI	DEPTH DI	CONC CL B CY	REIN STEEL LBS	DI GRATE TYPE	CHAN ELEV LINK/S	CRM CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	GRAN BORROW CY	CAA PP EA	STRUC EXCAV CY	GRAN BKF STRUC CY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	CAA PPA EA	GEOTEX UNDER SY	3/4" PERF x 1/16 PIPE LF	SCREENED LOAM CUYD. LF	SEAM LESS CU. ALUM TUBE LF	SEAM LESS CU. ALUM TUBE LF	REMARKS	GRUB MATL.	DENSE GRADED
374+00		℄											51'													4.0	2.1	193	1-B			33'						2.7'	I				5.0					2/1		
376+91.9		℄	80-16 LT										84'									1'									58'						5.3'	I				18					2/2		
378+11		LT										61'								1'																												2/5		
381+82	382+40	RT-LT																													43'	60.1											225'	90'			2/7		
384+99		RT										53'														3.0	1.7	150	1-A			25'																2/8		
386+08.2		℄	89-13 LT		1'		114'																								45'						3.6'	II				9.0					2/12		
392+80	393+50	RT-LT											96'													4.0'	2.1	193	1-A			35'																2/17		
393+50	394+35	LT											84'													4.0'	2.1	193	1-A			64'																2/18		
394+35	397+00	LT-LT												264'												5.5'	28	239	1-A			228'	0.8'															2/19		
396+0		RT										33'									2'																											2/22		
396+15		℄																									11.11				60'														440'				2/22		
397+00		℄											68'													3.5'	1.9	158	1-A			26'	13.7'															2/23		
397+00	398+50	LT-LT												240'												4.5'	2.3	200	1-A			121'	17.2'															2/24		
399+50		LT-RT													68'											5.0'	3.4	284	1-B			83'																2/27		
399+50	400+00	℄													78'											9.0'	5.8	489	1-B			250'						9.5'	III				20'					2/28		
SP. Ditch 402+86		RT																													15'						14.8'	I				56'					2/113		
402+86.2		℄	72-04 RT											88'								1'									46'						5.3'	I				24'					2/32		
SP. Ditch 403+25		RT																													3'						2.7'	I				12'					2/113		
404+23		℄	63-24 LT										97'													3.5'	1.9	158	1-A			78'	3.6'															2/34		
401+65		LT											62'																																			2/31		
404+42		RT												76'												9.5'	4.6	416	1-A			101'						4.4'	I				13'					2/35		
405+20		℄																													57'													91'		100'	2/36		
407+0		℄	74° LT											93'													2.3'	200	1-B			59'						1.0'	I									2/38		
414+20.6		℄	88-39 RT										90'									1'									38'						2.5'	I									2/40		
422+50		RT			38'										1'							1'									15'						5'	I				11'					2/52		
422+56.44		℄	79-08 RT											106'								1'									44'						5.3'	I				24'					2/53		
426+00		℄											86'													4.0'	2.1	193	1-B			70'						9'	II				3'					2/55		
429+78.7		℄	69-30 LT											108'								1'									117'						8.9'	I									2/58		
433+02.77		℄	65-51 RT											108'								1'									87'						3.4'	I									2/60		
435+50		RT			32'										2'							1'									13'						1.8'	I				11'					2/61		
437+05.5		℄	90-46 RT												106'											4.5'	3.1	252	1-A			144'						9'	II				20'					2/62		
441+24.4														114'												CH	1.0	12	0			106'	6'					9'	I									2/65		
441+98		LT										74'									1'									25'																2/66		
445+87.5		RT																													17'	2'															2/68		
Rev. 2 448+0		℄											88'													4.0'	2.1	193	1-B			28'						5.3'	I				20'					2/69		
450+68.9		℄	87-28 RT						132'																	2-CH	3.4	21				195'	62'					5.5' 14.5'	II III				170'					2/71	92'	35'		
454+53																															51.2'																2/74		
454+50		℄				100'									2'											3.5'	1.9	158	1-A			16'	14'					4'	II				13'					2/75		
				1'	70'	214'		132'		22.1'	806'	1197'	252'	3'	2'			4'	2'	4'	2'				59.71'	37.12	10-A 6-B				2396'	181.4'					164' I 1706' II 9.5' III					499'	225'	62.1'	100'		92'	35'			

TOTALS

GUARD RAIL

STA.	STA.	LT.	RT.	ANCHOR

UNDERDRAIN

Book 2A

STA.	STA.	TYP.	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB	MKR PST
374+0	375+50	U	LT	6"	150	68			1	
379+0	381+50	U	LT	6"	430	87	128		1	
379+0	379+20	C	LT	6"	20				0	
381+55	385+55	U	LT	6"	395	118	104		1	
389+0	393+50	U	LT	6"	450	170			1	
393+50	397+0	U	LT	6"	355	162			1	
398+0	399+50	U	LT	6"	159	58			1	
399+60	402+75	U	LT	6"	305	119			1	
402+75	404+50	U	LT	6"	175	64			1	
404+52	406+72	U	LT	6"	222	92			1	
409+10	411+0	U	LT	6"	192	142			1	
418+20		C	LT-RT	6"	40				0	
422+50	425+90	U	LT	6"	340	160			1	
424+32		C	RT	6"	80				0	
426+0	428+45	U	LT	6"	245	105			1	
428+30		U	℄	6"	53	12	2		0	
431+0	433+70	U	RT	6"	236	109			1	
435+0	437+01	U	LT	6"	200	109			1	
437+63	441+0	U	LT	6"	400	128	89		0	
441+0	445+0	U	LT	6"	400	156			1	
453+0	457+50	U	LT	6"	150	92	15		1	
454		C	℄ RT	6"	80				0	
454+50	457+90	U	LT	6"	340		150		1	
458+0	460+50	U	LT	6"	250		120		1	
461+50	464+70	U	LT	6"	320	72	51		1	
464+80	468+48	U	LT	6"	370	20A			1	
468+60	473+08	U	LT	6"	450	248			1	
473+32	476+31	U	LT	6"	299	132			1	
TOTALS				C	220				0	
				U	9115	2555	659		22	

PROJECT NAME: BROTON-RYEGATE
PROJECT NUMBER: STP-F026-1(30)

153
SHEET 1 OF 3 SHEETS

D-4 JAN 85

BRUNING 65083

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

GUARD RAIL

STA.	STA.	POSITION	ASKEW	~~INLET~~ 2-WAY TEMP DR	12"CSP EQUIV OUT	CSP (DOWN) 12"	18"	48"CMP	48"CMP	12"CPEP	15"	18	24	30	FES 12	18	12	18	18	15	FES 18	24	FOC CCC	DI	DEPTH DI	CONC CL B	REIN STEEL	DI GRATE	CHAN ELEV	C R M	TR EXCAV EARTH	TR EXCAV ROCK	GRAN BKF	CAPA PP	STRUC EXCAV	GRAN BKF STRUC	STONE FILL		MRKR POSTS		CAPA APA	CERTIFICATION UNDER SF	3/4"NON H2O LINE	SCREW FOR UNC	3/4" CU H2O LINK	EROSION MATTING	REMARKS	BK/PG
					LF	LF	LF				CPEP	CPEP	CPES	CPEP	CSPE	CSPE	CPEPE	CPEPE	CSPES	CPEPE	CPEPE	CPEPE				CY	LBS	TYPE	LINEAR		CY	CY	CY	CY	CY	CY	CY	TYPE	LT	RT								
453+00		℄				106										2									4.0	2.1	193	I-A			50	28					4	II										2/77
462+11		RT																												50																	2/79
454+82	TEMPORARY EROSION	Control			20																																											2/72
464+70	467+02	LT										232													4.5	2.3	200	I-A			124																		2/80
REMOVAL 464+79.9		℄	84-41RT																												34																	2/81
467+02	468+50	LT										148													4.0	2.1	193	I-A			82																		2/82
468+50		℄											64												5.5	2.8	239	I-A			46																		2/84
468+50		RT											108												6.5	3.2	278	I-A			312					826	II										2/85
471+10		LT										46								1																												2/87
472+09		℄										52													4.0	2.1	193	I-A			30																		2/88
473+09		RT-RT											60												8.0	3.9	347				82.9					4.4	I										2/89
473+10	473+84	RT-RT										74													6.5	3.2	278	I-D			35																		2/90
474+50		℄																													63																	2/91
476+37		℄	82-20 RT	CRATE OUT			86																			3.0	20				391					160.7	I										2/92
DRIVE 478+50		LT										72								1																												2/95
DRIVE 478+10		RT										42																																					2/96
486+50	486+30	LT																																														2/98
486+50		LT										61								1																												2/100
487+26		℄	67-57LT									96										1									37	0.6				1.0	I										2/101
					26	106	86				22.1	602	332		2					3	1				24.10	1941	6-A 1-D			1339	29				165.1 86.6	I II										
D-4 JAN 85																																															

TOTALS

UNDERDRAIN

-8/29/18 DS

STA.	STA.	TYP.	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	FB	MKR PST
480+99	483+99	U	LT	6"	282	114			1	
483+50	487+36	U	LT	6"	397	209			1	
484+30		C	RT	6"	6				0	
SHEET "2		C			6	323			2	
		U			699					
		C			220					
FWD SHEET "1		U			7115	2555	659		22	

TOTALS: 6" U-R CARRIER = 326 LF
6" U-D = 2794 LF
TRENCH EARTH = 2878 CY
TRENCH ROCK = 659 CY

37.3	120	60	108	304						

TOTALS

PROJECT NAME GROTON-RIEGATE
PROJECT NUMBER STP-F026-1(30)

154
SHEET 2 OF 3 SHEETS

BRUNING 65083

FINAL DRAINAGE SUMMARY

PREPARED BY _____ PROJECT GROTON-RYEGATE 3/3
CHECKED BY _____ NO. STP-FOZ-1(30)

	STATION	STATION	POSITION	36" CMP or RCP	12" CSP	18" CSP	42" CMP	48" CMP	12" CPEP	15" CPEP	18" CPEP	24" CPEP	30" CPEP	12" CSP ELB	15" CSP ELB	12" CPEP ELB	15" CPEP ELB	15" CPEP ES	15" CPEP ES	18" CSP ES	24" CPEP ES	PERC COC	DEPTH DI	CONC B	RE STEEL	TE	TR	Grav Box	CAA PP	STRUCT EXC	S.B. STRUCT	S.F. I	S.F. II	S.F. III	S.F. IV	CAA PAA	GEOTEX UNDER SF	3/4" FILTER HOLE	SEDIM LMK	3/4 CL0 LINE	EXIS MAT.	UNCL CH EXC	SUB. DEMOL GRADED	GRUB MATL	REM. OF STRK.	GEOTEX A	GEOTEX B	GEOTEX D	1" FILTER FOR DRAIN	BK/PG
Dr. PIPE	488+40		LT							40'																																									2/102
	TH13	0+85																							18'																											3/105
TH61	3+50		E								43'						1'								17'						0.8																		2/106
TH61	0+53-3+94		RT																						79.1'						79.1				308'														2/112
TH13	1+00		E								45'						1'								14'						1.1																		2/107
TH5	0+42		E								74'														15'																										2/108
TH5	0+55'																								21'																										2/109
TH5	0+60' RT									28'								N1'																																2/110
SHEET 1 TOTAL				70'	214'		132'		321'	806'	1197'	252'	3'	2'			2'	4'	1'	4'	2'		57.71	37.12	339'	181'					164'	170.6	10'			429'	225'	621'				35'	92'		10'	6'		100'	
SHEET 2 TOTAL					106'	86'		20'	221'	602'	232'			2'			1'	3'					24.22	19.41	133'	29'					165.1	86.6				37'	120'	60'	48'	304'					6'		1'		
SHEET 3 TOTAL									68'	102'							2'	1'							164'						81'					303'													
PROJECT TOTAL				70'	320'	86'	132'	20'	510'	1570'	1429'	252'	3'	4'	0	0	5'	8'	1'	4'	2'	—	82.41	56.53	389'	210'					410'	257'	10'			769'	345'	681'	108'	304'		35'	92'		16'	6'	1'	100'	

8/98 DP
8/26/98 RA

BRIDGE

| | | | | | | | | | | | | | | | | | | |

PLOTTED D.M.
L.M.

CLARK HATCH BROOK C/L 7-24-97

Gradon-Ryegate STP-F026-1(30)
388400
84"x120' PLATE PIPE CAAPP

FINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / NOTE BOOK / AREAS CHECKED / NO. — BY / DATE

ORIGINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / NOTE BOOK / AREAS CHECKED / NO. — BY / DATE

781

STR. EX. = 55^A
T.B.
E.BRK.
E.BRK.
INVERT 780.71
1+20

790

T. HW
T. HW
T. HWY
E.G.R.
E.R.
STR. EX. = 160^A
INVERT 784.16
E.BRK.
E.BRK.
℄ 0+90 = REV ℄ 388+00

796

EP
EP
STR. EX = 98^A
INVERT 787.61
0+60

792

STR. EX @ 0+49 BUTT = 98^A
STR EX @ 0+49 BUTT = 203^A
INVERT 788.8
STR. EX
CHAN. EX
E.BRK.
E.BRK.
STR. EX 0+37 BUTT = 203^A
0+41
INVERT PIPE
STA 0+37 (BUTT)
CHAN. EX = 290^A

796

CHAN = 252^A
0+20

797

E.BRK.
E.BRK.
CHAN = 156^A
0+00
℄
BUTT @ ℄ 28

GRANULAIR ISBOROW:

STA	E. AREA	C.Y.
0+40	203	141
0+60	178	297
0+70	358	498
1+20	538	279
1+40	266	107
1+52	216	32
1+60	0	

1119 x 1.15 = 1557 C.Y. 2-98 RJC

ITEM 301.35 DENSE GRADED CRUSHED STONE
1' USED UNDER PIPE
7.0 x 1.0 x 119 x 1/27 = 30.3 CY 2-97 RJC

CHANNEL EX.

STA	E. AREA	C.Y.
0(-)28 (BUTT)	156	162
0+0	156	151
0+20	252	171
0+37 (BUTT)	290	
1+60 (BUTT)	72	82
1+64	82	100
1+80	150	69
2+20	120	75
2+47 (BUTT)	84	

TOTAL = 810 C.Y. 2-98 RJC

STRUCTURE EX.:

STA	E. AREA	C.Y.
(BUTT) 0+37	203	90
BUTT 0+49	203	
BUTT 0+49	98	46
0+60	98	193
0+90	160	119
1+20	55	28
1+40	20	9
(BUTT) 1+52	20	
(BUTT) 1+52	216	64
1+60	216	32
(BUTT) 1+64	216	

525 CY - 2-98 RJC

772

773

776

777

779

2/19/98 RJC

E.BRK.
T.B.
T.B.
E.BRK.
CHAN. EX (BUTT) = 84^A
2+40 47

E.BRK.
T.B.
T.B.
E.BRK.
CHAN EX = 66^A
2+20

CHAN E = 120^A
E.BRK.
T.B.
T.B.
E.BRK.
E.BRK.
E.BRK.
2+00

CHAN EX = 150^A
E.BRK.
E.BRK.
T.B.
E.BRK.
E.BRK.
1+80

CHAN EX. @ 1+60 BUTT = 72^A
STR. EX. @ 1+64 BUTT = 216^A

STR. EX = 216^A
T.B.
T.B.
E.BRK.
E.BRK.
E.BRK.
E.BRK.
779.60
OUTLET 776.10
776.10
1+60
OUTLET

Out/Lf Headwall Structure Excavation
216"x 12' x 1/27 96 cy
DENSE GRADED CRUSHED STONE:
30 x 12 x 1 x 1/27 13.3 cy

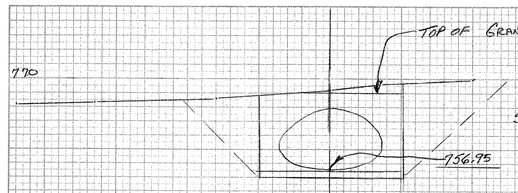
1+52
STR EX. BUTT = 216^A
STR EX. BUTT = 20^A
E.BRK.
E.BRK.
T.B.
E.BRK.
E.BRK.
INVERT 778.40
STR. EX = 20^A
1+40
℄

NOTE: STONE FILL WAS FIELD MEAS - RJC

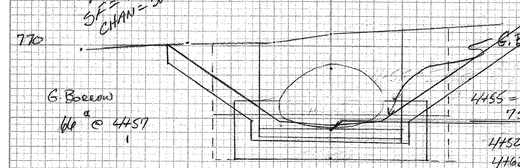
K&E PLATE 3, CROSS SECTION
KEUFFEL & ESSER CO
48 7052 MADE IN U.S.A.

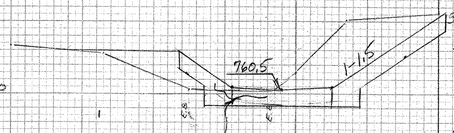
156 PP. SH 1

FINAL SURVEY | SURVEYED | DRAWN | TEMPLATE | AREAS | AREAS CHECKED | NOTE BOOK | NO. | BY | DATE
ORIGINAL SURVEY | SURVEYED | DRAWN | TEMPLATE | AREAS | AREAS CHECKED | NOTE BOOK | NO. | BY | DATE



CH/L STOO = M/L 4/18+20





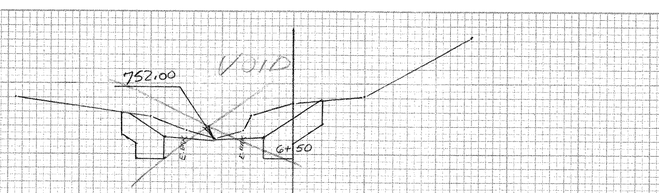
SF BACK 90 TYPE II
SF AHEAD 100 SF
CHAN BACK 155
CHAN AHEAD 185

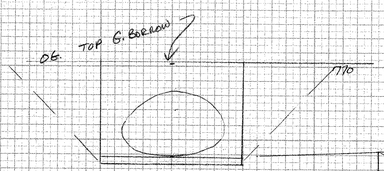
4+25
BEGIN FULL WIDTH STONE BOTTOM

STRUCT. EXCAVATION

STA	AREA	VOL
4+52	567 (BUTT)	210
4+62	567 (BUTT)	
4+62	286 (BUTT)	316
5+00	248	44
5+05	230	141
5+25	152	66
5+38	122 (BUTT)	
5+38	297 (BUTT)	110
5+48	297 (BUTT)	

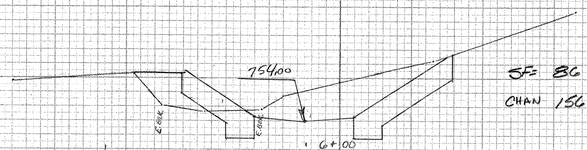
STRUCT TOTAL 947 CY 2/98 Diff





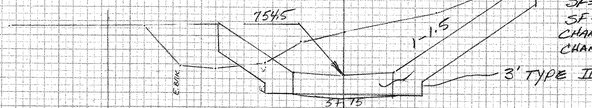
END WORK @ 6+25 PER PM/C

BUTT STONE FILL TYPE III 58
BUTT CHANNEL EXCAVATION 100



SF= 86
CHAN 156

STATION 5+75 LAST STATION WITH FULL STONE BOTTOM

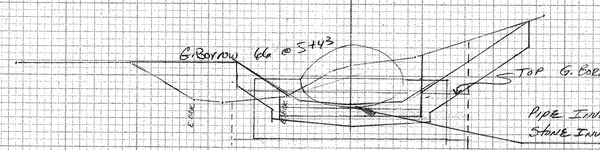


SF= 155 BACK
SF= 113 AHEAD
CHAN 295 BACK
CHAN 243 AHEAD

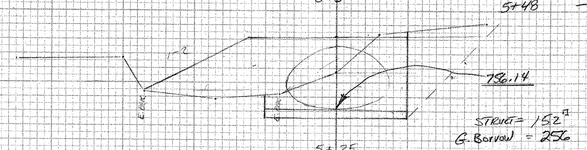
3' TYPE III STONE FILL

INLET CHANNEL

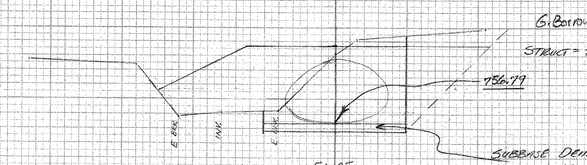
STA.	AREA SF II	AREA UNC CHAN	VOL SF II	VOL UNC CH
4+00 (BUTT)	50	101		
4+25 BUTT	70	155	55.5	118.5
4+25 BUTT	100	185	44.4	103.8
4+37	100	282	63.3	224.2
4+52	128	525		
			108 CY	328 CY



5+38 STRUCT - 122° BUTT
5+38 " - 297° (BUTT)
5+48 - 297° (BUTT)



STRUCT = 152°
G. BORROW = 252

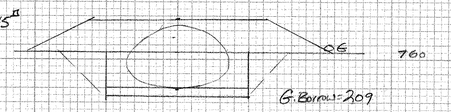


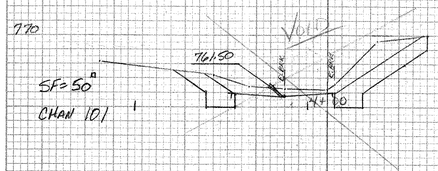
OUTLET CHANNEL

STA	AREA SF III	AREA UNC CHAN.	VOL. SF III	VOL UNC CHAN
5+48 (BUTT)	149	245	152	270
5+75	155 BACK	295		
5+75	113 AHEAD	243	92	185
6+00	86	156	67	119
6+25 (BUTT)	58	100		
			311 CY	574 CY

8/28/98 RJC

TOTAL UNC CHANNEL = 328+574 = 902

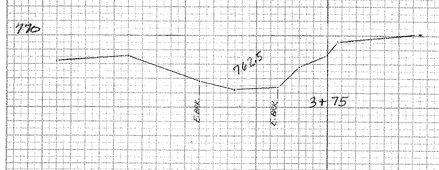


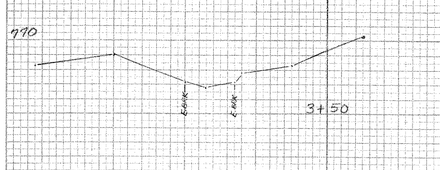


GRANULAR BORROW

STA	AREA	VOL
4+57	66	107
4+71	348	361
5+00	325	55
5+05	271	191
5+25	256	60
5+32	206	155
5+43	66	
	1.15 x 829	953 CY
		958 CY

9-28-98 RJC





SUBBASE OF DENSE GRADED CR STONE

HEADWALLS:	2 (33) (9.75) (1.0) (1/27)	=	24
PIPE	84 x 20 x 1.0 x 1/27	=	62
2/98 Diff		TOTAL	86 CY

5/28/98 RJC

GEOTEXTILE UNDER SF°

		WIDTH		LENGTH		
INLET	81 (AVG)	x	30	x 1/9	=	270
OUTLET	73 (AVG)	x	80	x 1/9	=	649
TOTAL						919 SY

8/1/98 RJC

GRUBBING MATERIAL

	WIDTH		LENGTH		
INLET	48 (AVG)	x	30	x 1/9	= 160
OUTLET	42	x	80	x 1/9	= 373
TOTAL					533 SY

8/1/98 RJC

8/28/98 RJC

S = 3.2222%

CL X-SECTIONS DARIUS JAMES BROOK
@ 4/18+20 = CL 5+00 ASKEW 88°30' LT

K&E PLATE 3, CROSS SECTION KEUFFEL & ESSER CO
48 7052 MADE IN U.S.A.

9-3-97 VS & E

FINAL EARTHWORK SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATION	DIST	EARTH EXCAVATION AREA	EARTH EXCAVATION CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.								
373															
	50														
+50		0													
			169												
374		183				0									
			466				44								
+50		320				48									
			459				96								
375		174				56									
			239				116								
+50		82				69									
			76				142								
376		0				84									
			0				153								
+50		0				81									
			65				143								
377		70				73									
			291				128								
+50		244				65									
			394				121								
378		160				66									
			313				122								
+50		178				66									
			415				122								
379		270		0		66									
			1219		191		114								
+50		1046		206		57									
			2067		431		113								
380		1186		260		65									
			2607		691		94								
+50		1630		486		36									
			2922		765		67								
381		1526		340		36									
			3456		600		74								
+50		2206		308		44									
			3724		624		82								
382		1816		366		45									
			2670		641		84								
+50		1068		326		46									
			1826		346		105								
383		904		48		67									
			1569		44		134								
+50		790		0		78									
			1124				156								
384		424				90									
			596				163								
+50		220				86									
			237				152								
385		36				78									
			39				152								
+50		6				86									
			6				161								
386		0				88									
			0				165								
+50		0				90									
			0				167								
387		0				90									
			0				167								
+50		0				90									
			0				164								
388		0				87									
			3				169								
+50		3				95									
			427				151								
389		458				68									
			1133				126								
+50		766				68									
			1413				126								
390		760				68									
	50		1074				126								
+50		400				68									
CARRIED FORWARD															
COLUMN FOOTINGS			30975		4333		4199								

8-7-98 AC

STATION	DIST	EARTH EXCAVATION AREA	EARTH EXCAVATION CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.								
390+50	50	400	693			68	126								
391		349	612			68	126								
+50		312				68									
			491				126								
392		218				68									
			353				126								
+50		163				68									
			289				126								
393		149				68									
			278				126								
+50		151				68									
			366				126								
394		244				68									
			524				126								
+50		322				68									
			510				126								
395		229				68									
			412				126								
+50		216				68									
			374				126								
396		188				68									
			364				126								
+50		205				68									
			445				126								
397		276				68									
			606				126								
+50		378				68									
			659				126								
398		334				68									
			841				126								
+50		524				68									
			1348				126								
399		882				68									
			1647				126								
+50		897				68									
			1064				133								
400		241				76									
			588				133								
+50		394				68									
			493				133								
401		138				76									
			176				141								
+50		52				76									
			87				156								
402		42				89									
			61				173								
+50		24				98									
			59				159								
403		40				74									
			161				148								
+50		134				86									
			220				152								
404		104				78									
			228				141								
+50		142				74									
			275				137								
405		155				74									
			284				137								
+50		152				74									
			278				141								
406		148				78									
			265				144								
+50		138				78									
			293				148								
407		178				82									
			294				148								
+50		140				78									
			264				144								
408		145				78									
			259				144								
+50		135				78									
CARRIED FORWARD															
COLUMN FOOTINGS			16151				4880								

CONSTEW. PRF; 1
21-SEP-1989
ZGO: [50.50]CONST. DGN

PROJECT NAME GROTON-RYEGATE STP
PROJECT NUMBER F026-1(30)

158
SHEET 1 OF SHEETS

FINAL EARTHWORK SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATION	DIST	EXCAVATION EARTH AREA	EXCAVATION EARTH CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.								
408+50		135				78									
			319				144								
409		210				78									
			478				141								
+50		306				78									
			817				148								
410		576				82									
			1022				152								
+50		528				82									
			833				152								
411		372				82									
			598				154								
+50		274				84									
			519				156								
412		286				84									
			575				157								
+50		335				86									
			610				163								
413		324				90									
			496				170								
+50		190				94									
			205				181								
414		31				102									
			68				189								
+50		42				102									
			119				180								
415		86				92									
			251				149								
+50		185				69									
			443				128								
416		293				69									
			569				128								
+50		322				69									
			604				128								
417		330				69									
			615				128								
+50		334				69									
			381				128								
418		78				69									
			78				164								
+50		6				108									
			6				214								
419		0				123									
			0				206								
+50		0				100									
			0				187								
420		0				102									
			20				183								
+50		22				96									
			~~106~~ 27				175								
421		~~93~~ 7				93									
			~~101~~ 21				174								
+50		16				95									
			29				193								
422		15				113									
			27				196								
+50		14				99									
			24				179								
423		12				94									
			56				159								
+50		48				78									
			398				144								
424		382				78									
			1020				144								
+50		720				78									
			1293				144								
425		676				78									
			1593				144								
+50		1044				78									
			2413				150								
426		1562				84									
CARRIED FORWARD															
COLUMN FOOTINGS			~~16666~~ 16507				5635								

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.								
426		1562				84									
			2761				159								
+50		1420				88									
			2313				163								
427		1078				88									
			1420				163								
+50		456				88									
			572				163								
428		162				88									
			222				159								
+50		78				84									
			137				159								
429		70				88									
			128				165								
+50		68				90									
			117				167								
430		58				90									
			102				172								
+50		52				96									
			124				153								
431		82				69									
			389				128								
+50		338				69									
			587				128								
432		296				69									
			~~334~~ 485				128								
+50		69 228				69									
			~~251~~ 398				136								
433		202				78									
			269				160								
+50		88				95									
			719				162								
434		688				80									
			1728				148								
+50		1178				80									
			1913				169								
435		888				102									
			1352				189								
+50		572				102									
			776				189								
436		266				102									
			289				189								
+50		46				102									
			65				180								
437		24				92									
			94				154								
+50		78				74									
			281				137								
438		226		0		74									
			728		69		~~134~~ 131								
+50		560		75		68									
			963		334		131								
439		480		286		74									
			1083		325		137								
+50		690		65		74									
			994		106		137								
440		384		50		74									
			530		46		137								
+50		188		0		74									
			330				137								
441		168				74									
			276				137								
+50		130				74									
			199				139								
442		85				76									
			167				141								
+50		95				76									
			240				141								
443		164				76									
			291				133								
+50		150				68									
CARRIED FORWARD															
COLUMN FOOTINGS			~~22744~~ 23042		880		5324								

v 8-10-98

21-SEP-1989 CONSTEW. PRF;1 ZGO:[50,50]CONST.DGN

PROJECT NAME GROTON-RYEGATE STP
PROJECT NUMBER F026-1(30)

159
SHEET 2 OF SHEETS

37 74

FINAL EARTHWORK SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATION	DIST	EXCAVATION EARTH AREA	EARTH CU. YDS.	ROCK EXCAVATION AREA	ROCK CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
443+50		150				68									
	50		285				134								
444		158		0		77									
			170		111		143								
+50		26		120		77									
			159		111		143								
445		146		0		77									
			647				144								
+50		553				78									
			697				144								
446		200				78									
			320				152								
+50		146				86									
			311				159								
447		190				86									
			294				159								
+50		127				86									
			406				159								
448		312				86									
			567				159								
+50		300				86									
			560				159								
449		305				86									
			334				162								
+50		56				89									
			134				165								
450		89				89									
	50		82				165								
+50		0				89									
	43.29		0				143 165								
451		0				89									
	50		26				165								
+50		28				89									
			253				152								
452		245				75									
			575				139								
+50		376				75									
			793				139								
453		480				75									
			1035				139								
+50		638		0		75									
			739		244		133								
454		160		264		69									
			167		613		119								
+50		20		398		60									
			19		866		108								
455		0		537		57									
			44		1034		106								
+50		48		580		57									
			44		699		116								
456		0		175		68									
			28		581		119								
+50		30		452		60									
			94		1409		103								
457		71		1070		51									
			295		1380		98								
+50		248		420		54									
			431		683		94								
458		218		318		48									
			202		1202		94								
+50		0		980		54									
			224		1739		106								
459		242		898		60									
			731		1609		107								
+50		548		840		56									
			1134		1585		104								
460		677		872		56									
			1830		1067		113								
+50		1299		280		66									
	50		2094		369		142								
461		962		118		87									
CARRIED FORWARD															
COLUMN FOOTINGS			15724		15302		4686 4708								

STATION	DIST	EXCAVATION EARTH AREA	EARTH CU. YDS.	ROCK EXCAVATION AREA	ROCK CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.
461		962		118		87									
	50		1444		109		161								
+50		598		0		87									
			551				158								
462		429		0		84									
			958		226		155								
+50		606		244		83									
			1178		226		154								
463		666		0		83									
			931				156								
+50		340				86									
			406				159								
464		98				86									
			173				149								
+50		89				75									
			269				139								
465		202				75									
			281				139								
+50		102				75									
			157				139								
466		68				75									
			269				139								
+50		222				75									
			359				132								
467		164				68									
			348				126								
+50		212				68									
			494				126								
468		322				68									
			780				126								
+50		520				68									
			876				126								
469		426				68									
			862				126								
+50		505				68									
			1001				126								
470		576				68									
			1041				126								
+50		548				68									
			981				126								
471		512				68									
			933				126								
+50		476				68									
			921				126								
472		499				68									
			1111				126								
+50		701				68									
			1346				126								
473		753				68									
			1259				126								
+50		607				68									
			867				126								
474		329				68									
			483				126								
+50		193				68									
			352				129								
475		187				71									
			255				137								
+50		88				77									
			109				143								
476		30				77									
			285				163								
+50		278				99									
			518				186								
477		281				102									
			391				186								
+50		141				99									
			149				183								
478		20				99									
	50		19				178								
+50		0				93									
CARRIED FORWARD															
COLUMN FOOTINGS			23355 22355		561		4975								

v 8-11-98 RAC

21-SEP-1989 CONSTEW. PRF; 1 ZGO: [50, 50] CONST. DGN

PROJECT NAME GROTON - IRVEGATE
PROJECT NUMBER STP- F026-1(30)

160
SHEET 3 OF SHEETS

FINAL EARTHWORK SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATION	DIST	EXCAVATION EARTH AND ROCK AREA	EXCAVATION EARTH AND ROCK CU. YDS.	ROCK EXCAVATION AREA	ROCK EXCAVATION CU. YDS.	SAND BORROW AREA	SAND BORROW CU. YDS.								
478+50		0				93									
479		0	0			93	172								
			7				172								
+50		8				93									
			7				172								
480		0				93									
			39				172								
+50		42				93									
			148				160								
481		118				80									
			323				152								
+50		231				84									
			509				153								
482		319				81									
			664				156								
+50		398				87									
			1007				163								
483		696				89									
			1180				159								
+50		584				83									
			1120				144								
484		626				72									
			1260				135								
+50		735				74									
			1264				137								
485		630				74									
			1022				137								
+50		474				74									
			698				145								
486		280				83									
			381				152								
+50		132				81									
			167				163								
487		48				95									
			89				163								
+50		48				81									
			228				150								
488		198				81									
			370				151								
+50		202				82									
			396				152								
489		226				82									
			572				141								
+50		392				70									
			1102				157								
490		798				100									
			1204				191								
+50		502				106									
			701				181								
491		255				90									
			384				139								
+50	BUTT	160				60	BUTT								
492															
PAGE TOTALS			14842				4069	8-11-98 PAZ							
BK 7 PAGE 25					7										
CULVERTS FROM BK 7 PAGE 41					481										
PAGE 1			30975		4333		4189								
PAGE 1			16151				4880								
PAGE 2			16507		880		5635								
PAGE 2			23042				5324								
PAGE 3			15724		15302		4708								
PAGE 3			22355		561		4975								
PAGE 4			14842				4069								
CARRIED FORWARD															
COLUMN FOOTINGS															
PROJECT TOTALS			139596		21564		33790	8-11-98 PAZ							

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA	TOTAL EXCAVATION EARTH AND ROCK CU. YDS.												
CARRIED FORWARD															
COLUMN FOOTINGS															

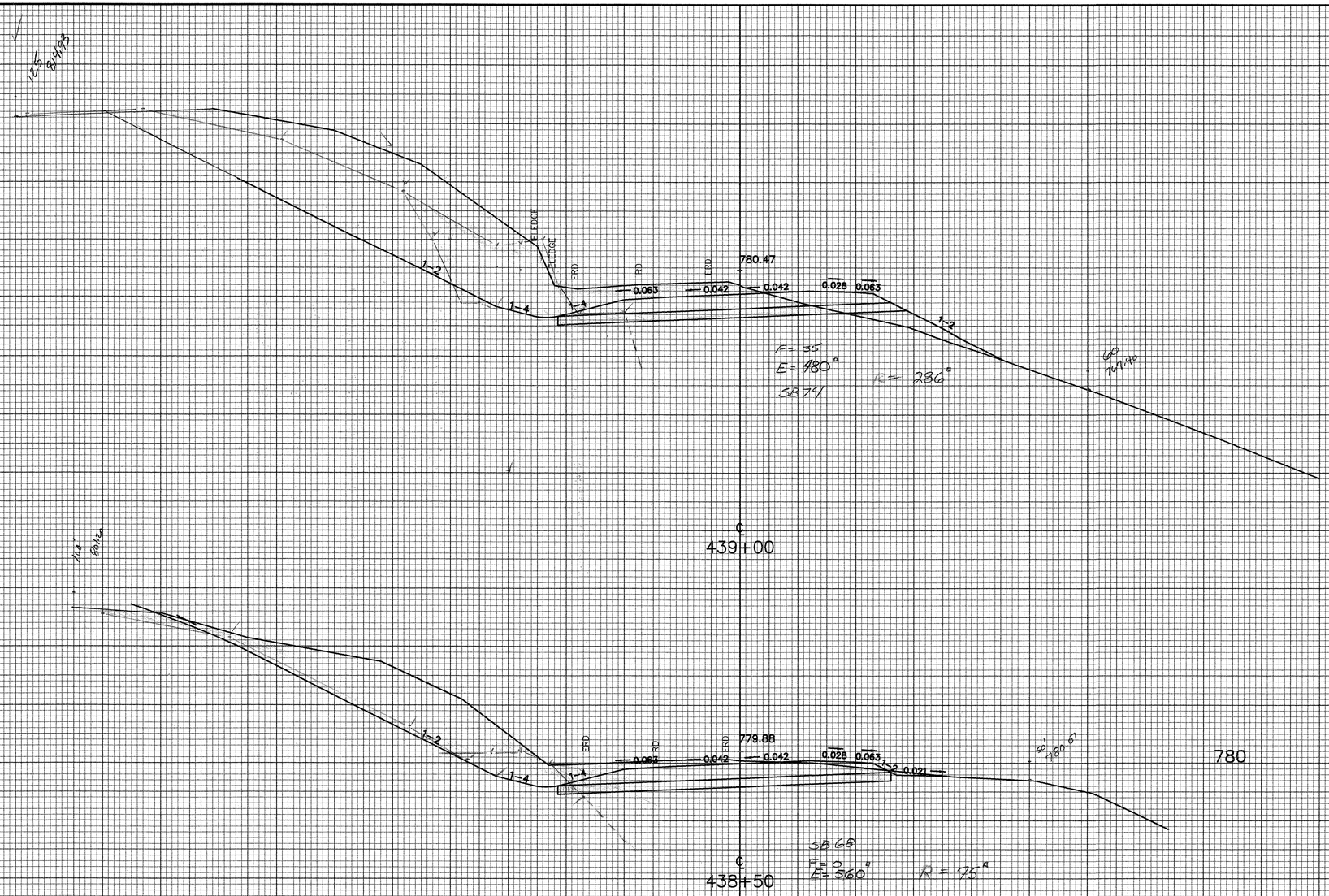
CONSTEW. PRF; 1
21-SEP-1989
ZGO: [50, 50] CONST. DGN

PROJECT NAME GROTON - ICYEGATE
PROJECT NUMBER STP- F026-1(30)

162
SHEET 4 OF SHEETS

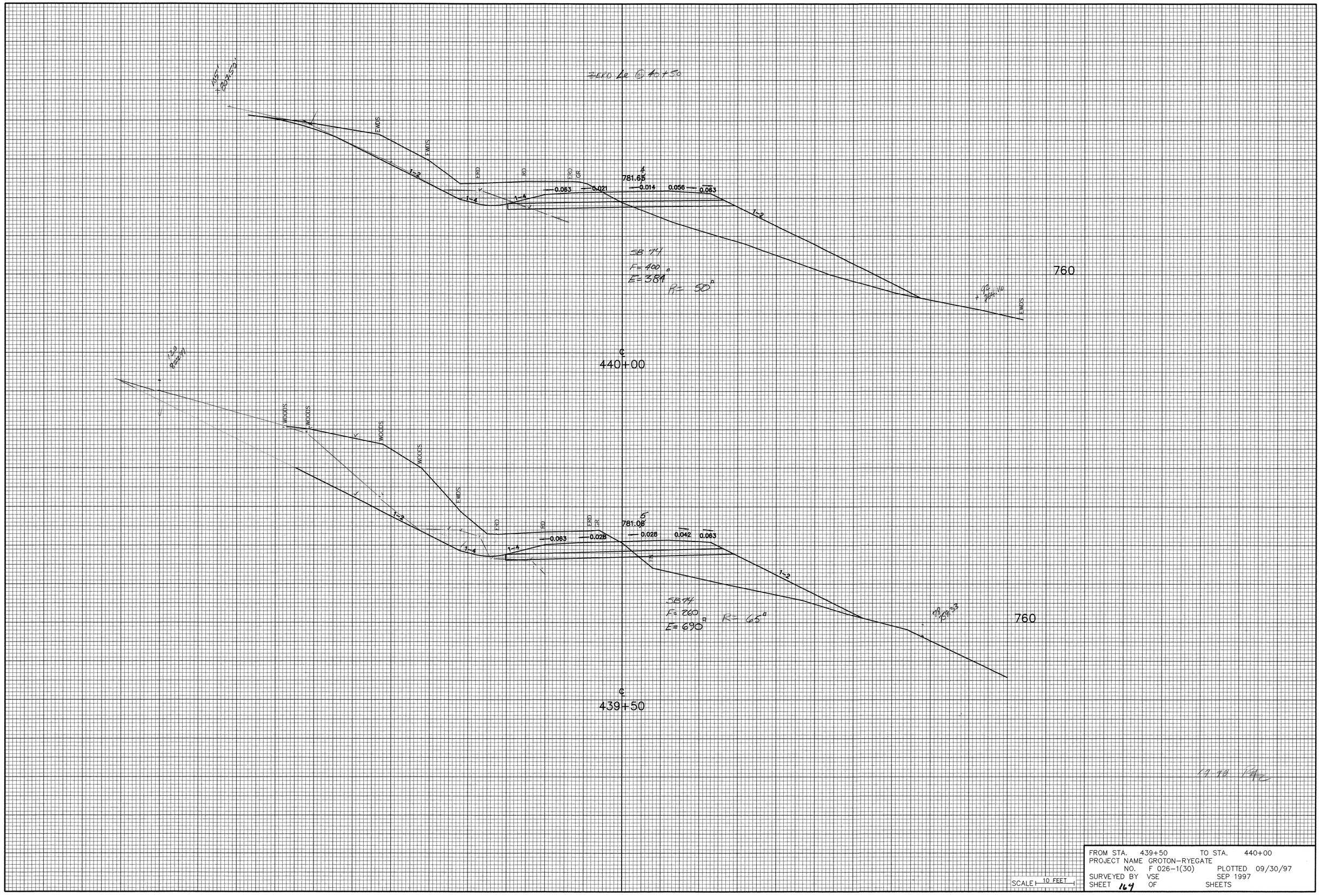
FROM STA.	437+00	TO STA.	438+00
PROJECT NAME	GROTON–RYEGATE		
NO.	F 026–1(30)	PLOTTED	09/30/97
SURVEYED BY	VSE		SEP 1997
SHEET	162 OF		SHEETS

SCALE 10 FEET



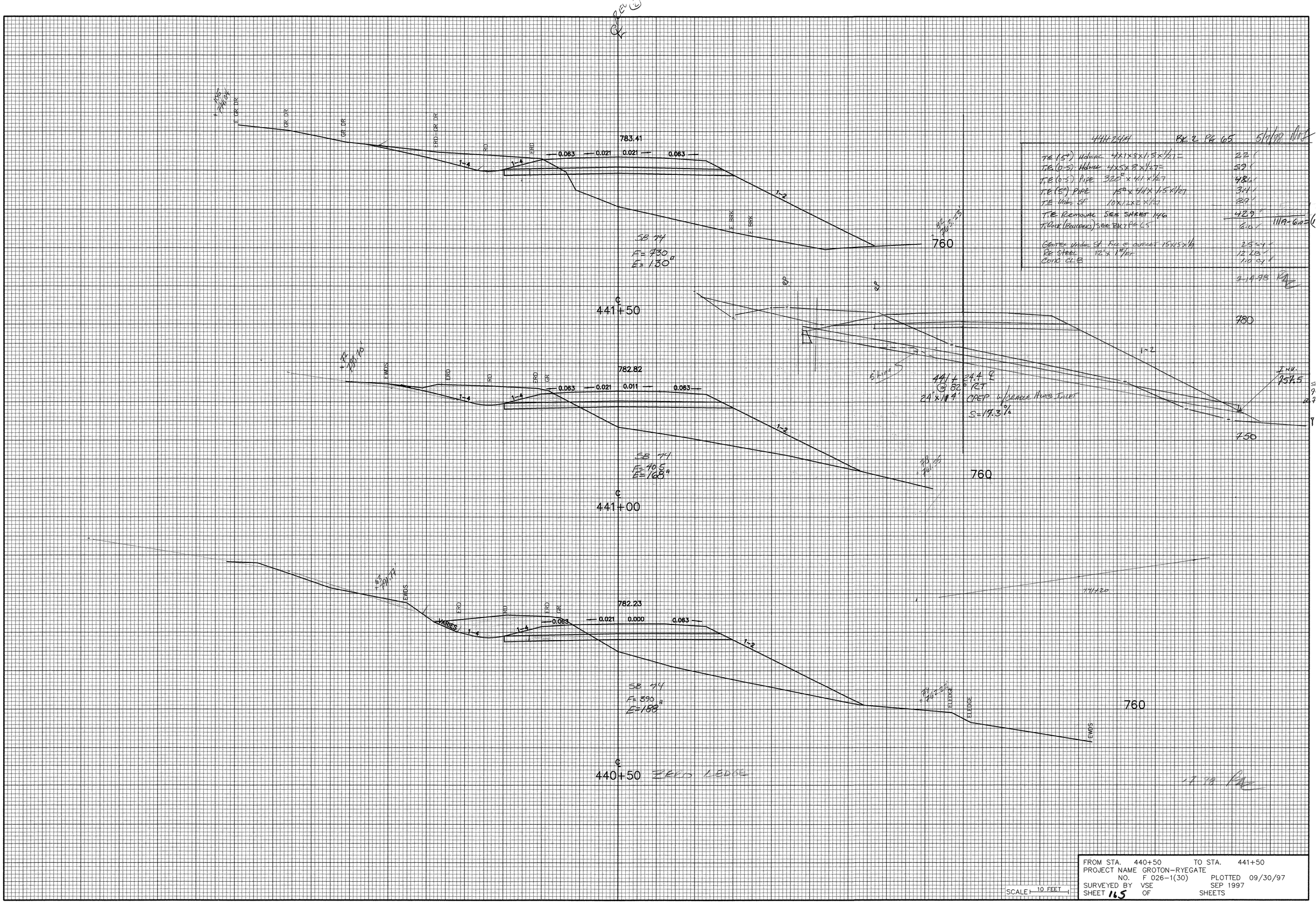
FROM STA.	438+50	TO STA.	439+00
PROJECT NAME	GROTON–RYEGATE		
NO.	F 026–1(30)	PLOTTED	09/30/97
SURVEYED BY	VSE		SEP 1997
SHEET	163	OF	SHEETS

SCALE 10 FEET



FROM STA. 439+50 TO STA. 440+00
PROJECT NAME GROTON–RYEGATE
NO. F 026-1(30) PLOTTED 09/30/97
SURVEYED BY VSE SEP 1997
SHEET 164 OF SHEETS

SCALE 10 FEET

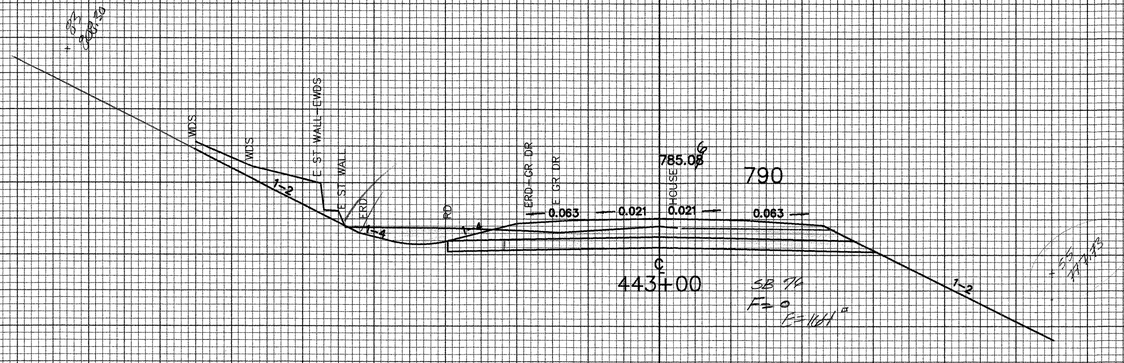


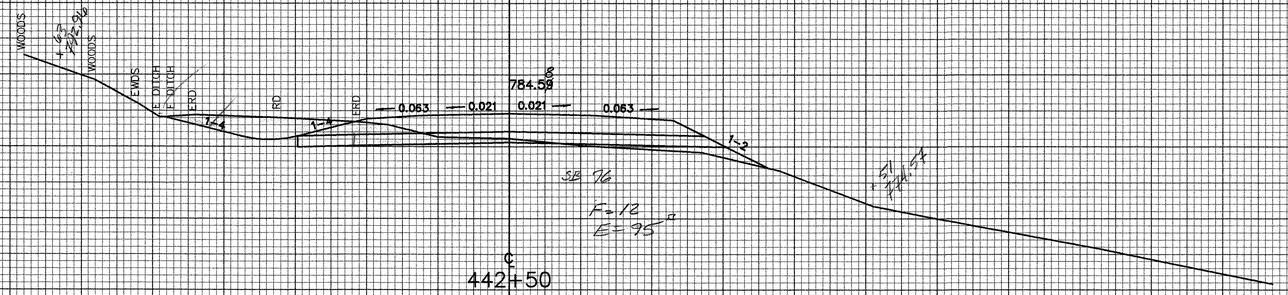
4441+29.44 BK 2 PG 65 6/9/98 MWJ

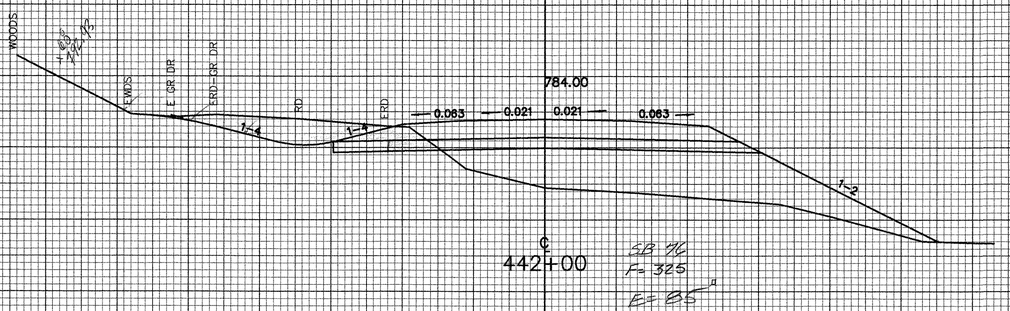
TE (15") Helical	4'X1'X8"X1.5"X1/2"=	22 ℄
TE (0-5) Helical	4'X5'X8"X1/2"=	59 ℄
TE (0-5) Pipe	320° X 4'-1" X 1/2"	48 ℄
TE (5') Pipe	15° X 4'-1" X 1.5" X 1/2"	3.4 ℄
TE Under SP	10'X12'X2"X1/2"	89 ℄
TE Removal	SEE SHEET 146	42.9 ℄ 1119-69=(1
TE Curb (Pavement)	SEE BK 2 PG 65	6.0 ℄
Concrete Under SP	Face of curbs 15'X5'X1'	25 C.Y.
Re Steel	12.4 x 1.49 LBS/FT	12.2 LBS
Cond 4.6		1.0 C.Y.

7.14.98 KAG

FROM STA.	440+50 TO STA. 441+50
PROJECT NAME	GROTON–RYEGATE
NO.	F 026–1(30) PLOTTED 09/30/97
SURVEYED BY	VSE SEP 1997
SHEET	165 OF SHEETS

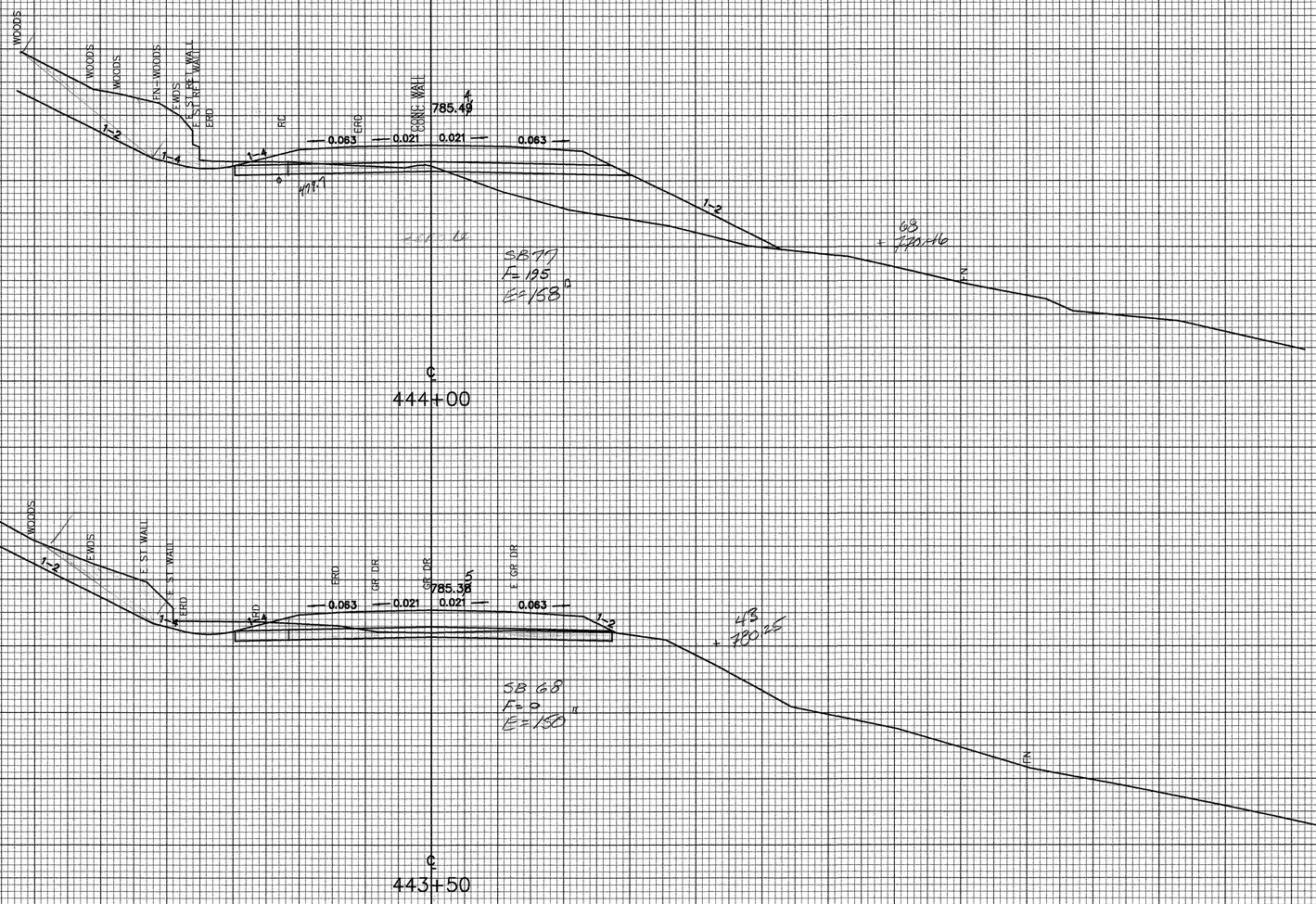






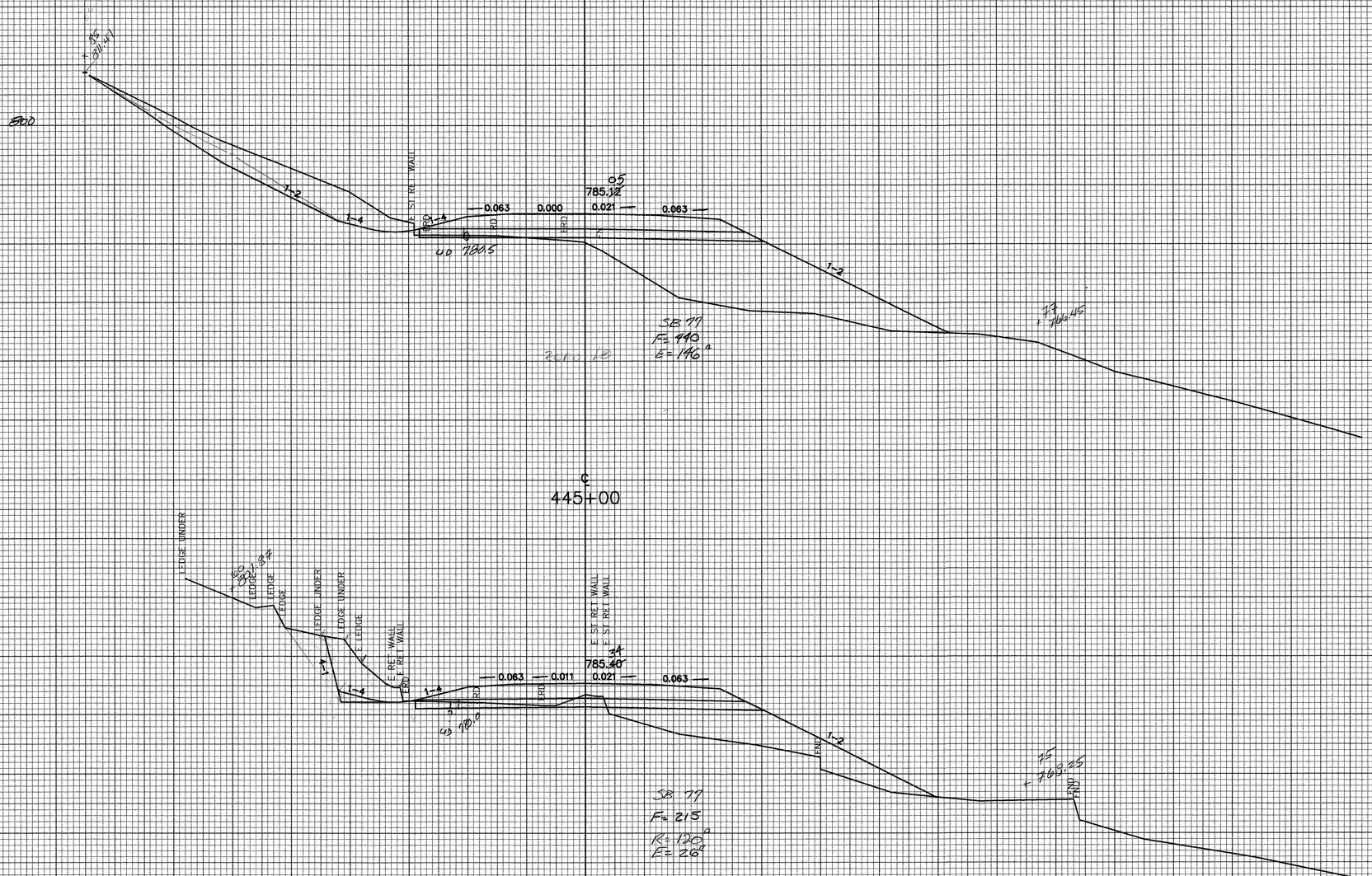
FROM STA.	442+00	TO STA.	443+00
PROJECT NAME	GROTON–RYEGATE		
NO.	F 026–1(30)	PLOTTED	09/30/97
SURVEYED BY	VSE		SEP 1997
SHEET	166	OF	SHEETS

SCALE 10 FEET



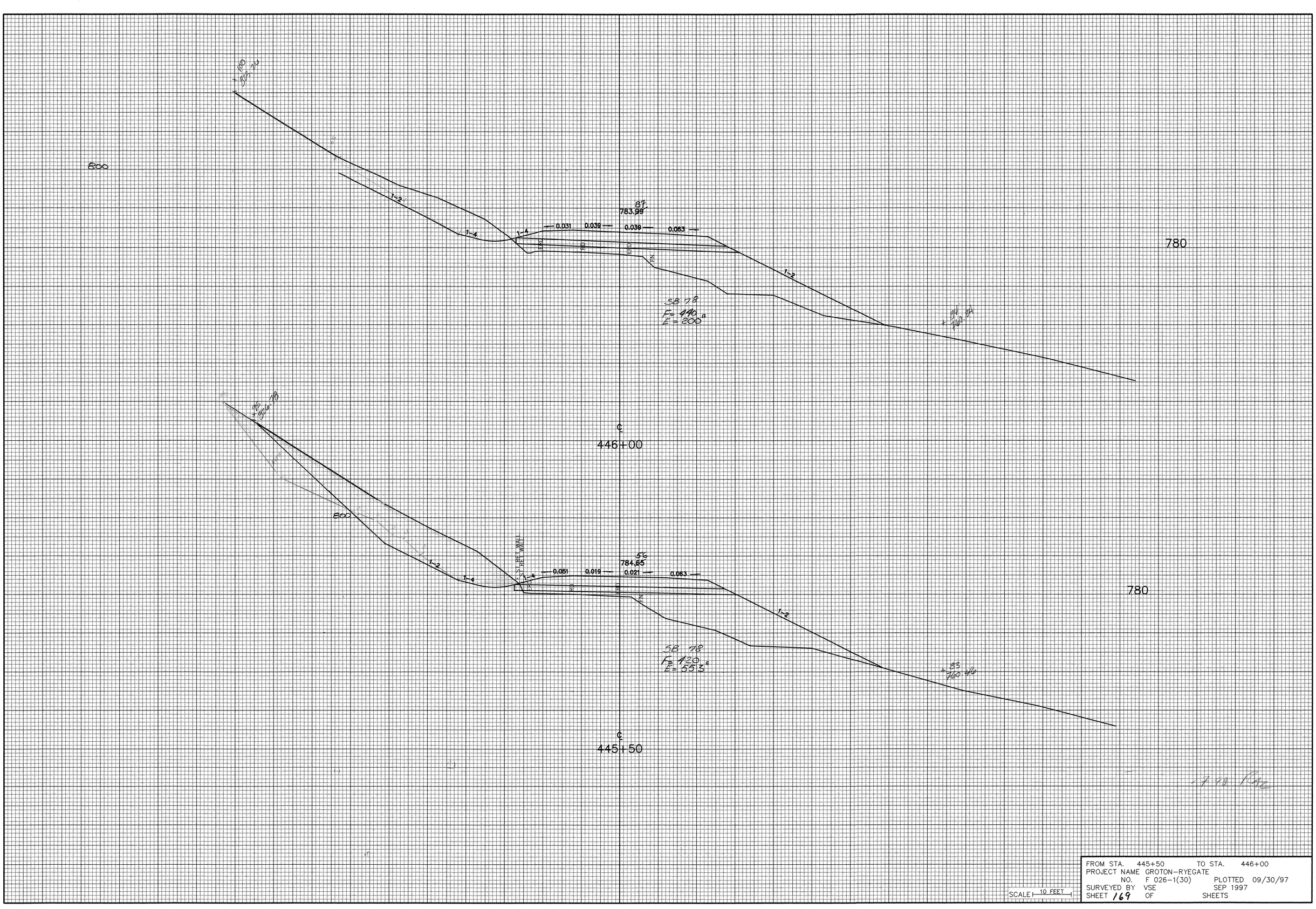
FROM STA. 443+50 TO STA. 444+00
PROJECT NAME GROTON–RYEGATE
NO. F 026–1(30) PLOTTED 09/30/97
SURVEYED BY VSE SEP 1997
SHEET 167 OF SHEETS

SCALE 10 FEET



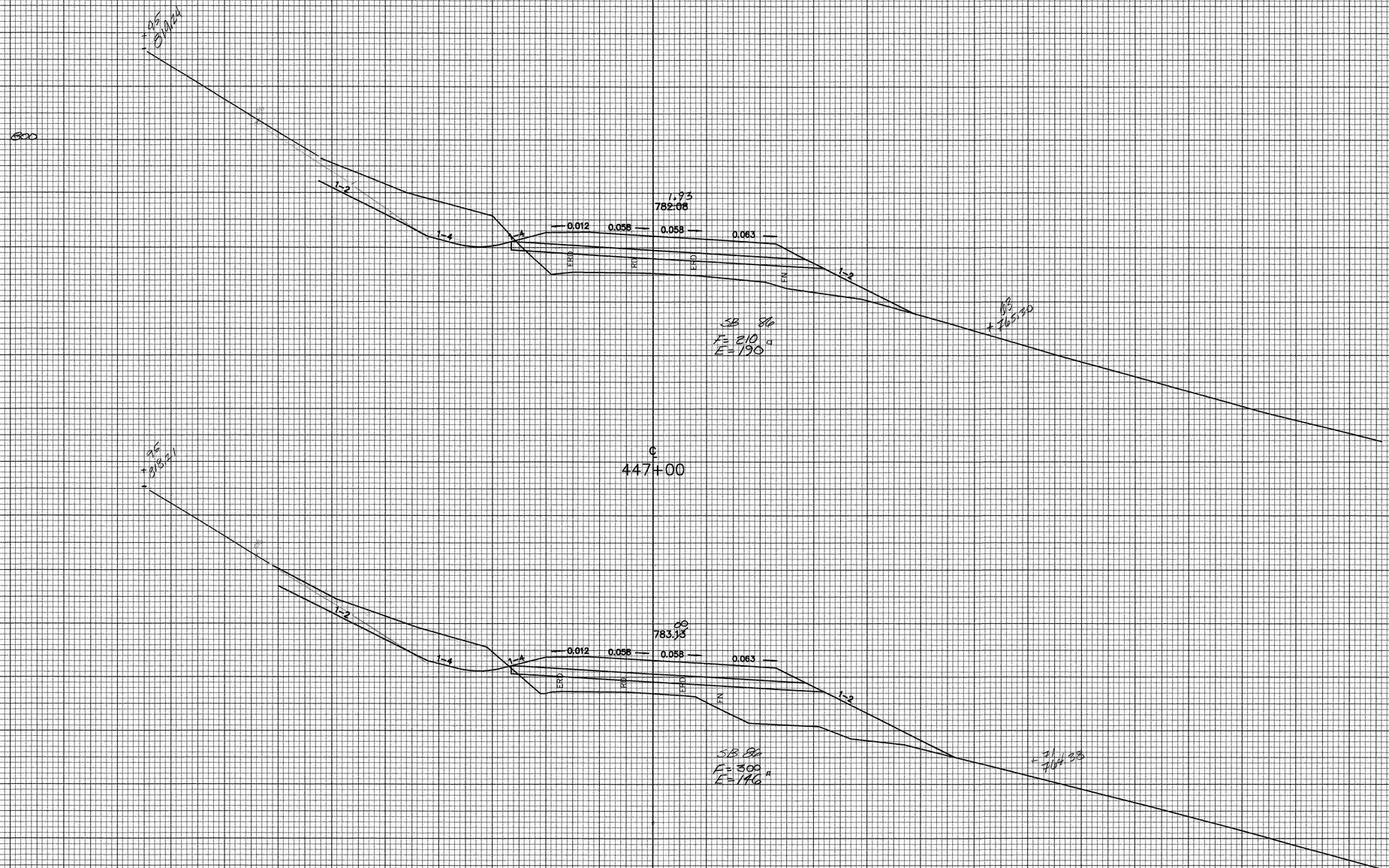
FROM STA.	444+50 TO STA. 445+00
PROJECT NAME	GROTON–RYEGATE
NO.	F 026–1(30) PLOTTED 09/30/97
SURVEYED BY	VSE SEP 1997
SHEET	168 OF SHEETS

SCALE 10 FEET



FROM STA. 445+50 TO STA. 446+00
PROJECT NAME GROTON–RYEGATE
NO. F 026–1(30) PLOTTED 09/30/97
SURVEYED BY VSE SEP 1997
SHEET 169 OF SHEETS

SCALE 10 FEET



FROM STA. 446+50 TO STA. 447+00
PROJECT NAME GROTON–RYEGATE
NO. F 026–1(30) PLOTTED 09/30/97
SURVEYED BY VSE SEP 1997
SHEET 170 OF SHEETS

SCALE 10 FEET

448+00 6/98 DSE

TE 5° OF	36" X 0.5 X 1.5 X 1/27 =	1.0
TE 0-5 DE	36" X 5.0 X 1/27 =	6.7
TE 0-5 PIPE	102 X 3.6 X 1/27 =	13.6
TE 0-5 SF @ OUTLET	6'X12'X2'X1/27 =	7.11
	28.4 SY	28SY TOTAL

SF TYPE E OUTLET	6'X12'X2'X1/27 =	7.11	
GEOTEX FAB Under SF	10'X18'X1/9 =	20 SY	6/98

448+40 @ 90°
18" x 88' EP
3/0 = 13.6

21
779.11

GRATE
776.15

0.012 — 0.058 — 0.058 — 0.063

1-1.75

1-2

1-4

BRUSH

BRUSH

E BRUSH

ERD

RD

ERD

EN

773.0

761.0

76
+ 70.20

760

SB 86
F = 436 ft
E = 3.12

800

℄
448+00

53
+ 00.24

800

WOODS

WOODS

WOODS

1-1.75

1-4

LEWIS

67
780.84

0.012 — 0.058 — 0.058 — 0.063

ERD

RD

ERD

EN

1-2

SB 86
F = 855
E = 12.7

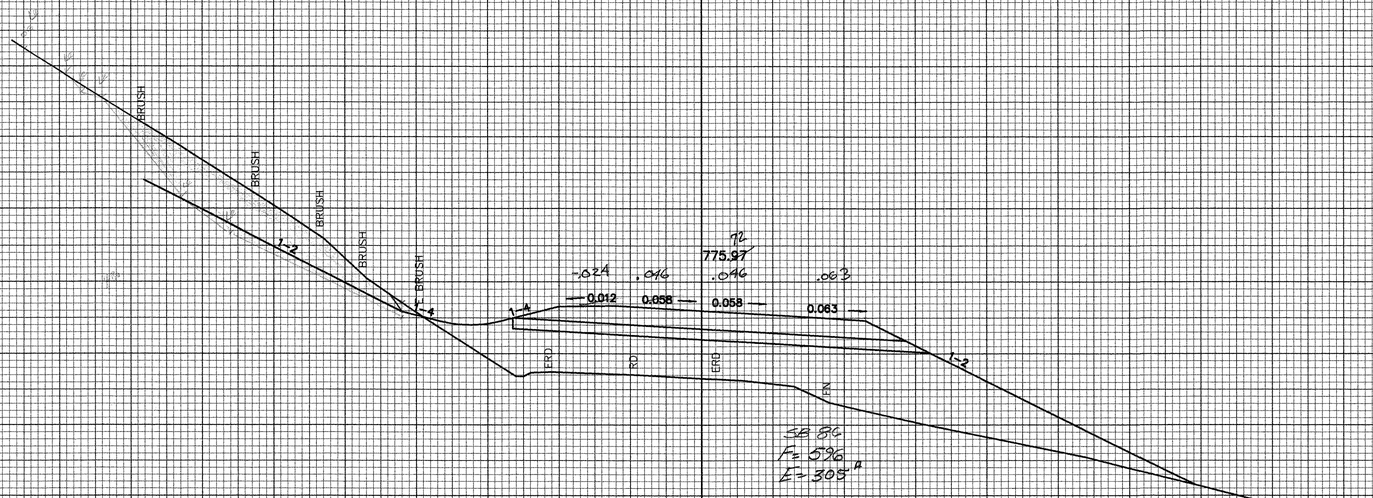
GE
+ 68.60

760

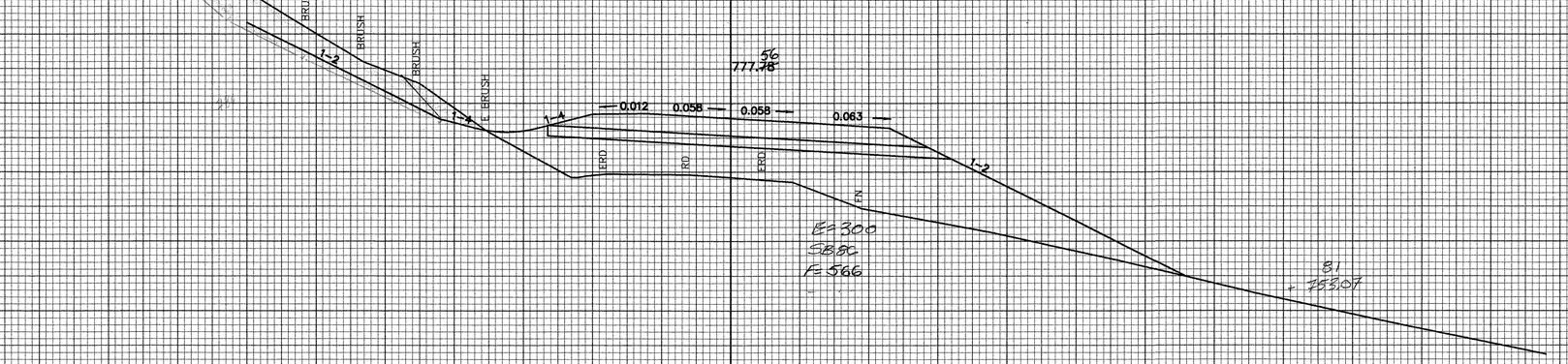
℄
447+50

FROM STA.	447+50	TO STA.	448+00
PROJECT NAME	GROTON–RYEGATE		
NO.	F 026–1(30)	PLOTTED	09/30/97
SURVEYED BY	VSE		SEP 1997
SHEET	171	OF	SHEETS

SCALE 10 FEET



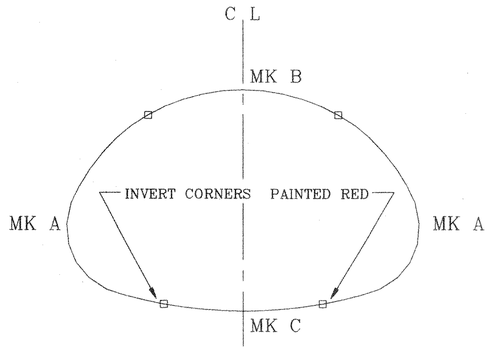
℄
449+00



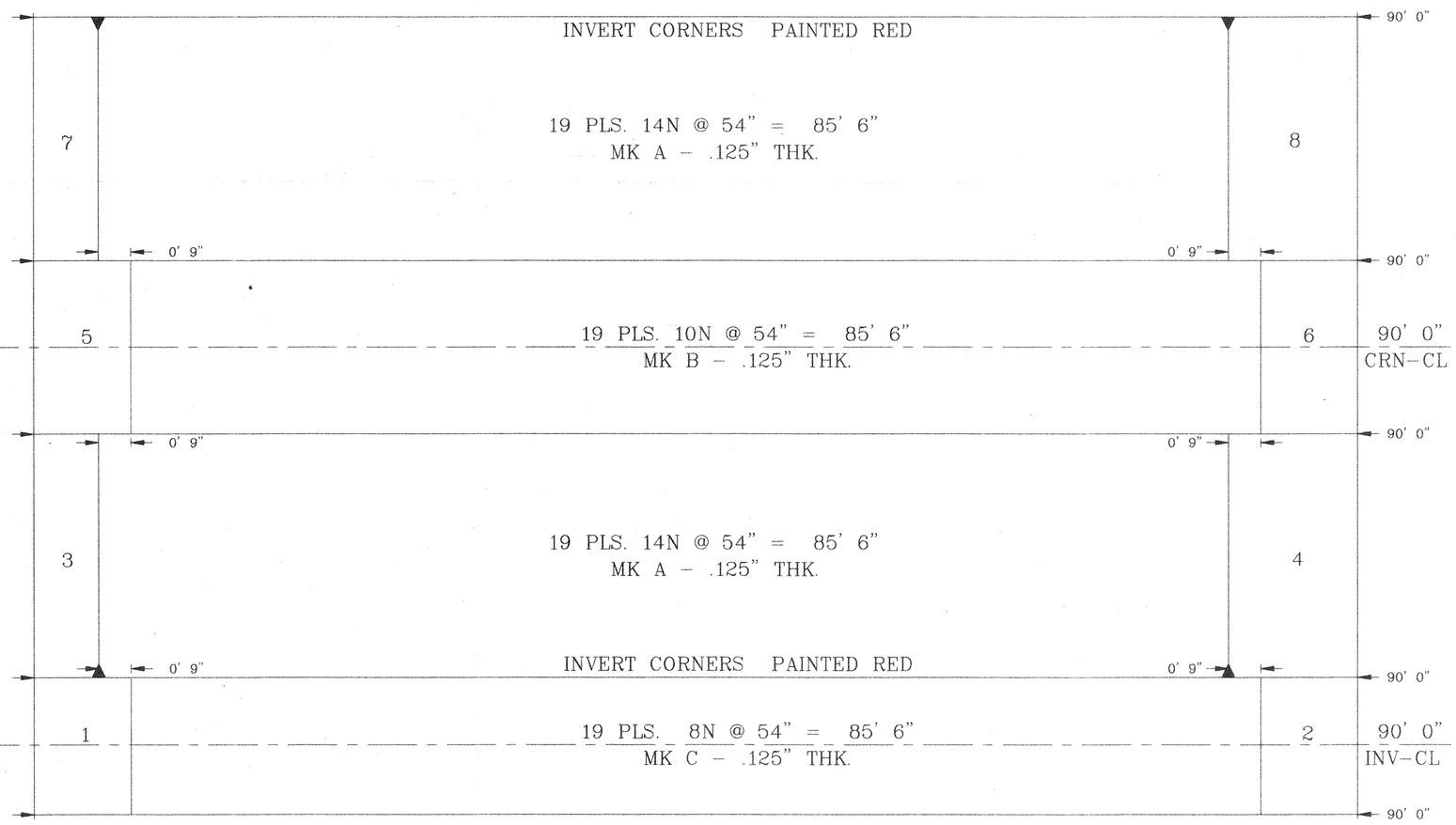
℄
448+50

FROM STA. 448+50 TO STA. 449+00
PROJECT NAME GROTON–RYEGATE
NO. F 026–1(30) PLOTTED 09/30/97
SURVEYED BY VSE SEP 1997
SHEET 172 OF SHEETS

SCALE 10 FEET



END VIEW



DEVELOPED PLAN - NO SCALE

OUTSIDE SURFACE SHOWN

13 ANCHOR BOLT HOLES REQD. IN EACH END.
9.0" IN FROM THE CUT EDGE AND ON
18.0" CENTERS, BEGINNING AT INVERT C-L
IN BOTTOM HALF OF PIPE ONLY

GENERAL NOTES:

1. Confirmation of cover - This structure is within the minimum and maximum allowable height of cover, for the designated loading, as follows:
   Loading: HS-20 or _____ Minimum cover (FT) 2.70 Maximum cover (FT) 12.0
2. For proper bolt size usage, refer to following:

Plate only	2 plate lap	3 plate lap	4 plate lap
0.100" - 0.125" thk. plate	1-1/4"	1-1/4"	1-1/4"*
0.150" - 0.200" thk. plate	1-1/4"	1-1/2"	N/A
0.225" - 0.250" thk. plate	1-1/2"	2"	N/A
With Reinforcing Rib (if req'd) 1 plate			
0.100" - 0.175" thk. plate	1-1/4"	1-1/2"	2"
0.200" - 0.250" thk. plate	1-1/2"	2"	2"

   *Occurs with full inverts only which have 0.100" thick plates
3. Nuts may be located on structure's interior or exterior to allow conventional access during assembly and torquing. Only one side of nut has a curved surface and it should be in direct contact with plate valley.
4. All plate laps and reinforcing ribs must be properly mated in a tangent fashion using proper alignment techniques and held in alignment by fasteners (finger tightened only). Before backfilling commences, all fasteners must be torqued for adequate component contact. Good component fit is better than high torque.
5. Fastener torque requirements: .0100" thick plate at 90-115 foot-pounds. For all thicker plates and reinforcing ribs, torque at 115-135 foot-pounds. Torque levels are for installation, not residual, in-service requirements. Since torquing may loosen previously tightened fasteners, multiple passes may be necessary. When seam sealant tape is used, fasteners should be torqued again after 24 hours.
6. All aluminum structural plate material is manufactured in accordance with AASHTO M219 and ASTM B746 specifications.
7. See ASSEMBLY INSTRUCTIONS shipped with material in fastener container. Also refer to specific product catalog for additional product information.

FOR APPROVAL

APPROVED BY: _____

DATE: _____

CONTECH® CONSTRUCTION PRODUCTS INC.
ANDERSON, S.C. 29625
(864)224-8837

ALUMINUM STRUCTURAL PLATE PRODUCTS

PROJECT IDENTIFICATION

WINTERSET, INC.
VERMONT DOT PROJECT # F026-1(30)
U.S. ROUTE 302 OVER CLARK HATCH BROOK
CALEDONOA COUNTY, GROTON, VT

PLANT ORDER NO. 10-8967
SALES ORDER NO. 17-0448-02
SALES REGION 4317
BUYERS NO. C 0205
DRAWN BY WASTERLAIN
DATE 06/23/97
SCALE NONE
SHT 1 OF 1

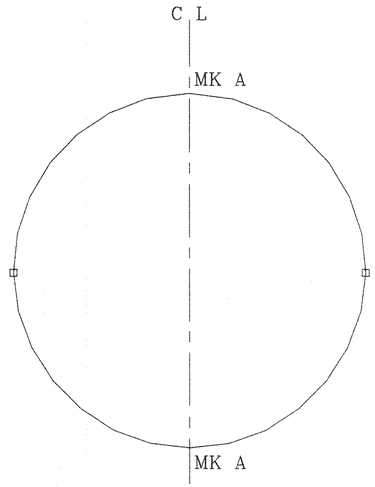
INLET/OUTLET
SKEW NO.
BEVEL

SIZE 14' 0" x 8' 7"
TYPE STRUCTURE PIPE ARCH
INV LENGTH @ ℄ 90' 0"

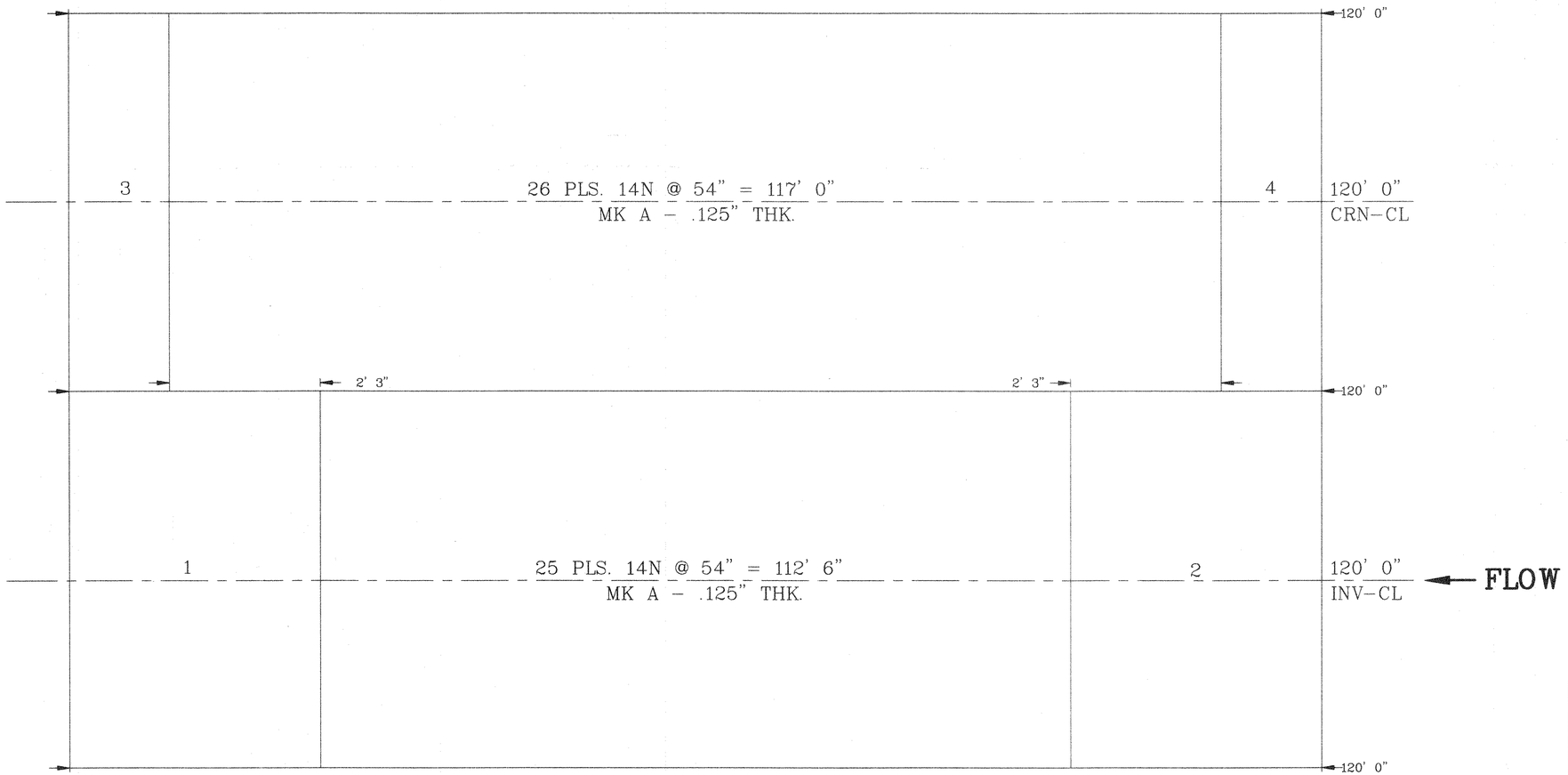
PLATE THICKNESS .125"
REINFORCING RIB SPACING
REINFORCING RIB TYPE
NUMBER OF STRUCTURES 1

NO.	DATE	REVISION	BY	CHK

NOTICE
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END VIEW



DEVELOPED PLAN – NO SCALE

OUTSIDE SURFACE SHOWN

9 ANCHOR BOLT HOLES REQD. IN EACH END.
9.0" IN FROM THE CUT EDGE AND ON
18.0" CENTERS, BEGINNING AT INVERT C–L
FOR BOTTOM HALF OF PIPE ONLY

NOTE:
PIPE SHALL NOT BE 5% ELONGATED PER
NOTE # 6 ON STATE OF VERMONT PLANS.

FOR APPROVAL

APPROVED BY: _____

DATE: _____

GENERAL NOTES:

1. Confirmation of cover: This structure is within the minimum and maximum allowable height of cover for the designated loading type as follows: Loading: HS-20 or _____ Minimum cover (ft) 1.50 , Maximum cover (Ft) 32.00
2. For proper bolt size usage, refer to following:

Plate only	2 plate lap	3 plate lap	4 plate lap
0.100" – 0.125" thk. plate	1-1/4"	1-1/4"	1-1/4"
0.150" – 0.200" thk. plate	1-1/4"	1-1/2"	N/A
0.225" – 0.250" thk. plate	1-1/2"	2"	N/A
With Reinforcing Rib (if req'd) 1 plate			
0.100" – 0.175" thk. plate	1-1/4"	1-1/2"	2"
0.200" – 0.250" thk. plate	1-1/2"	2"	2"

*Occurs with full inverts only which have 0.100" thick plates.

3. Nuts may be located on structure's interior or exterior to allow conventional access during assembly and torquing. Only one side of nut has a curved surface and it should be in direct contact with plate valley.
4. All plate laps and reinforcing ribs must be properly mated in a tangent fashion using proper alignment techniques and held in alignment by fasteners (finger tightened only). Before backfilling commences, all fasteners must be torqued for adequate component contact. Good component fit is better than high torque.
5. Fastener torque requirements: 0.100" thick plate at 90–115 foot–pounds. For all thicker plates and reinforcing ribs, torque at 115–135 foot–pounds. Torque levels are for installation, not residual, in–service requirements. Since torquing may loosen previously tightened fasteners, multiple passes may be necessary. When seam sealant tape is used, fasteners should be torqued again after 24 hours.
6. All aluminum structural plate material is manufactured in accordance with AASHTO M219 and ASTM B746 specifications.
7. See ASSEMBLY INSTRUCTIONS shipped with material in fastener container. Also refer to specific product catalog for additional product information.

CONTECH® CONSTRUCTION PRODUCTS INC.
ANDERSON, S.C. 29625
(864)224–8837

ALUMINUM STRUCTURAL PLATE PRODUCTS

PROJECT IDENTIFICATION

WINTERSET, INC.
VERMONT DOT PROJECT # F026–1(30)
U.S. ROUTE 302 OVER CLARK HATCH BROOK
CALEDONOA COUNTY, GROTON, VT

PLANT ORDER NO.	10–8966
SALES ORDER NO.	17–0448–01
SALES REGION	4317
BUYERS NO.	C 0205
DWN BY	WASTERLAIN
DATE	06/23/97
SCALE	NONE
SHT OF	1 1

INLET OUTLET
SKEW NO.
BEVEL

SIZE 7' 0" x 7' 0"
TYPE STRUCTURE ROUND
INV LENGTH @ ℄ 120' 0"

PLATE THICKNESS .125"
REINFORCING RIB SPACING
REINFORCING RIB TYPE
NUMBER OF STRUCTURES 1

NO.	DATE	REVISION	BY	CHK.

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REV

Received 4/10/98 Vtrans Engineering