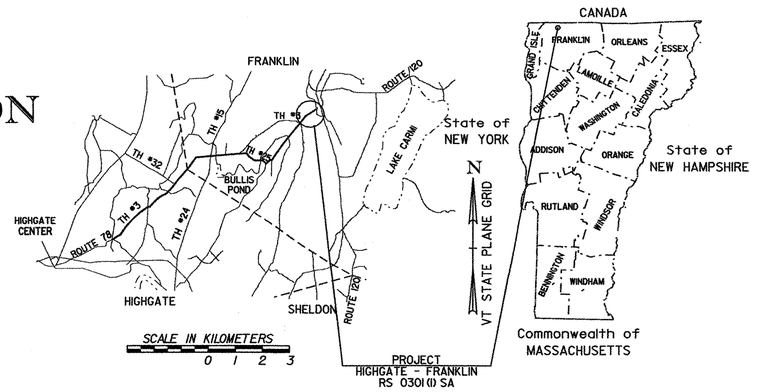
SEE SHEET 2 INDEX OF SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

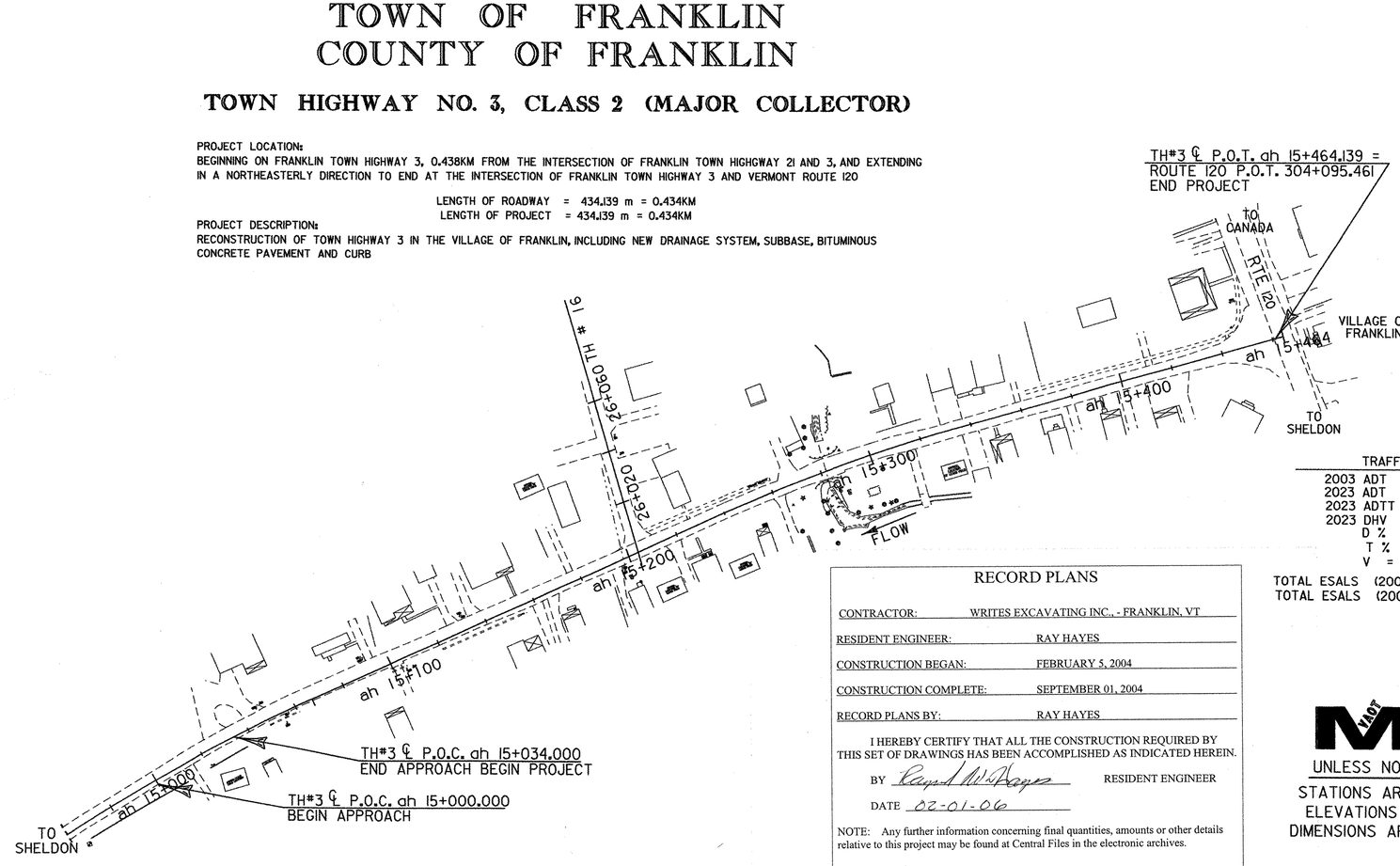


PROPOSED IMPROVEMENT
TOWN OF FRANKLIN
COUNTY OF FRANKLIN
TOWN HIGHWAY NO. 3, CLASS 2 (MAJOR COLLECTOR)

PROJECT LOCATION:
BEGINNING ON FRANKLIN TOWN HIGHWAY 3, 0.438KM FROM THE INTERSECTION OF FRANKLIN TOWN HIGHGWAY 21 AND 3, AND EXTENDING IN A NORTHEASTERLY DIRECTION TO END AT THE INTERSECTION OF FRANKLIN TOWN HIGHWAY 3 AND VERMONT ROUTE 120

LENGTH OF ROADWAY = 434.139 m = 0.434KM
LENGTH OF PROJECT = 434.139 m = 0.434KM

PROJECT DESCRIPTION:
RECONSTRUCTION OF TOWN HIGHWAY 3 IN THE VILLAGE OF FRANKLIN, INCLUDING NEW DRAINAGE SYSTEM, SUBBASE, BITUMINOUS CONCRETE PAVEMENT AND CURB



CONVENTIONAL SYMBOLS

COUNTY LINE	COUNTY LINE
TOWN 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 SR SR
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY :
SURVEYED DATE :

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

0 20 40 60 80 100
SCALE IN METERS

TRAFFIC DATA

2003 ADT	= 300
2023 ADT	= 400
2023 ADTT	= 30
2023 DHV	= 105
D %	= 59
T %	= 5
V	= 50 KPH

TOTAL ESALS (2003 ~ 2023) = 80,000
TOTAL ESALS (2003 ~ 2043) = 209,000

RECORD PLANS

CONTRACTOR:	WRITES EXCAVATING INC., - FRANKLIN, VT
RESIDENT ENGINEER:	RAY HAYES
CONSTRUCTION BEGAN:	FEBRUARY 5, 2004
CONSTRUCTION COMPLETE:	SEPTEMBER 01, 2004
RECORD PLANS BY:	RAY HAYES

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

BY Raymond W. Hayes RESIDENT ENGINEER

DATE 02-01-06

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

VAOT Metric

UNLESS NOTED OTHERWISE
STATIONS ARE IN KILOMETERS
ELEVATIONS ARE IN METERS
DIMENSIONS ARE IN MILLIMETERS

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

...85c060/design/dc0602nul.dgn
(21dc060111.)

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Dave Gibson DATE 4/3/03

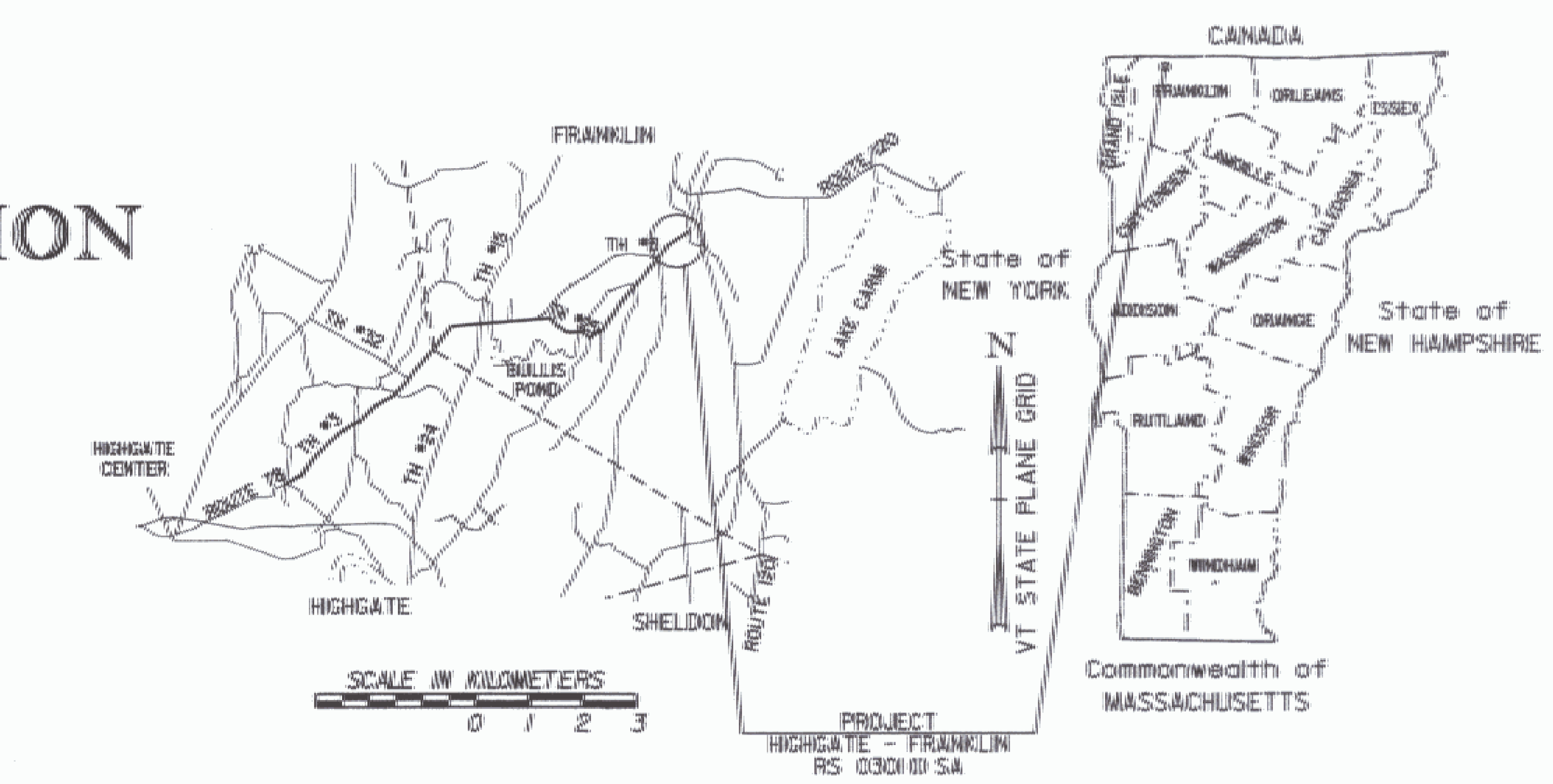
PROJECT MANAGER : G. DuBray

PROJECT NAME : FRANKLIN
PROJECT NUMBER : STP 0301(18)

SHEET 1 OF 60 SHEETS

SEE SHEET 2 INDEX OF SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION



Wrights Excavating Inc
Contractor

Brenda L Wright
Signature

Sec.
Title

PROPOSED IMPROVEMENT
TOWN OF FRANKLIN
COUNTY OF FRANKLIN
TOWN HIGHWAY NO. 3, CLASS 2 (MAJOR COLLECTOR)

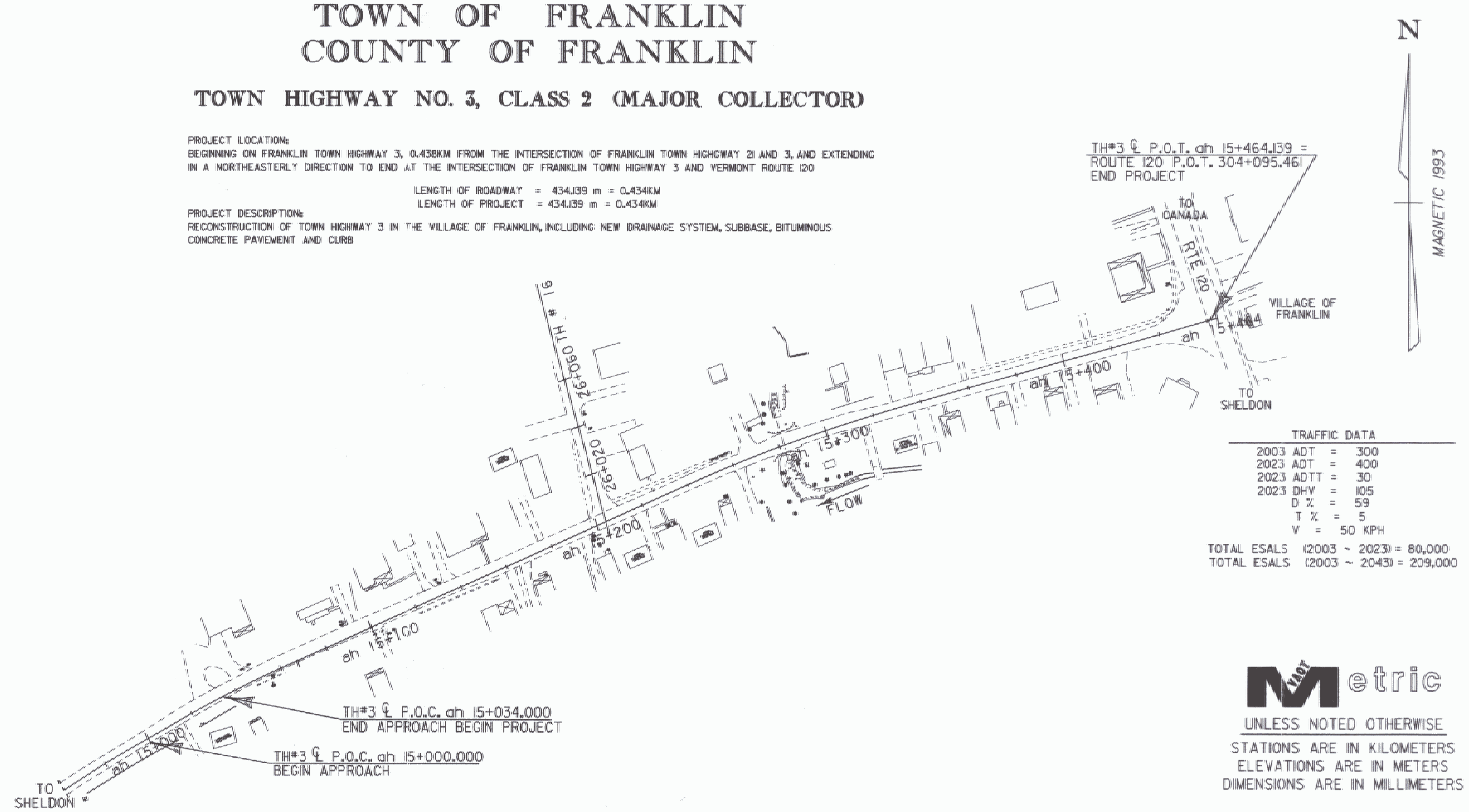
[signature]
Director of Finance and Administration
or Duly Authorized Agent

August 4, 2003
Date

PROJECT LOCATION:
BEGINNING ON FRANKLIN TOWN HIGHWAY 3, 0.438KM FROM THE INTERSECTION OF FRANKLIN TOWN HIGHGWAY 21 AND 3, AND EXTENDING IN A NORTHEASTERLY DIRECTION TO END AT THE INTERSECTION OF FRANKLIN TOWN HIGHWAY 3 AND VERMONT ROUTE 120

LENGTH OF ROADWAY = 434.139 m = 0.434KM
LENGTH OF PROJECT = 434.139 m = 0.434KM

PROJECT DESCRIPTION:
RECONSTRUCTION OF TOWN HIGHWAY 3 IN THE VILLAGE OF FRANKLIN, INCLUDING NEW DRAINAGE SYSTEM, SUBBASE, BITUMINOUS CONCRETE PAVEMENT AND CURB



TRAFFIC DATA

2003 ADT = 300
2023 ADT = 400
2023 ADTT = 30
2023 DHV = 105
D % = 59
T % = 5
V = 50 KPH

TOTAL ESALS (2003 ~ 2023) = 80,000
TOTAL ESALS (2003 ~ 2043) = 209,000

Metric

UNLESS NOTED OTHERWISE
STATIONS ARE IN KILOMETERS
ELEVATIONS ARE IN METERS
DIMENSIONS ARE IN MILLIMETERS

CONVENTIONAL SYMBOLS

- COUNTY LINE
- TOWN LINE
- LIMITS OF ACCESS
- POINT OF ACCESS
- 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

SURVEYED BY :
SURVEYED DATE :

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

0 20 40 60 80 100
SCALE IN METERS

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED [signature] DATE 7/3/03

PROJECT MANAGER : G. DuBray

PROJECT NAME : FRANKLIN
PROJECT NUMBER : STP 0301(18)

SHEET 1 OF 60 SHEETS

INDEX OF SHEETS

Metric

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

FILE NAME: ...85c060/design/dc060pms.dgn
PROJECT LEADER: DELLASANTA
DESIGNED BY: SQUAD B
IPAM FILE NAME: (2)dc060ind.i

PLOT DATE: 20-MAR-2003
DRAWN BY: SQUAD B
CHECKED BY: SQUAD B

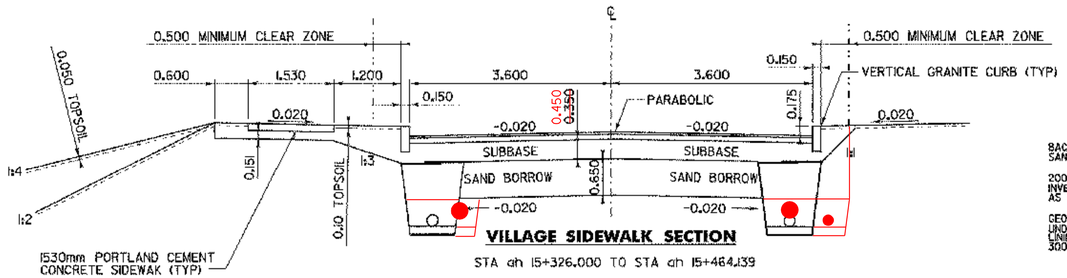
TYPICAL SECTIONS

NOT TO SCALE

150 mm BITUMINOUS CONCRETE PAVEMENT
(PLACED IN TWO LIFTS: 50mm TYPE III, 100mm TYPE I)
450 mm SUBBASE OF DENSE GRADED CRUSHED STONE
650 mm SAND BORROW
(ch 15+000 TO ch 15+464.139)
BITUMINOUS CONCRETE PAVEMENT REQUIRES THE USE OF PERFORMANCE GRADED ASPHALT, 58-34

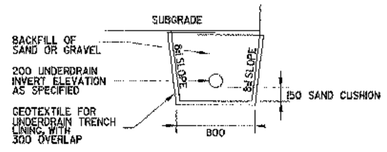
MATERIALS TOLERANCE TABLE

MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT (TOTAL DEPTH)	±5 mm
SUBBASE	±30 mm
SAND BORROW	±30 mm

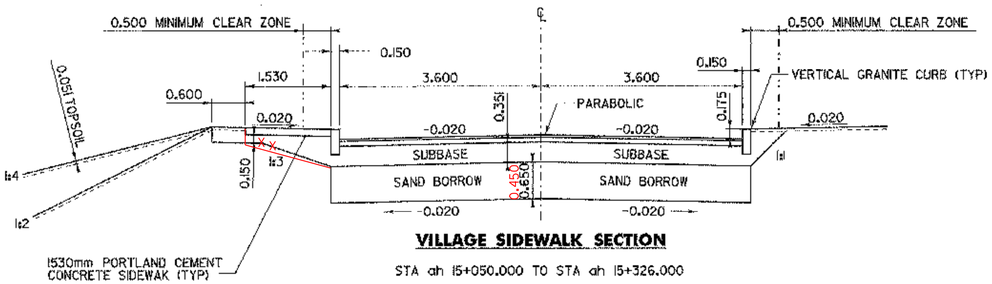


VILLAGE SIDEWALK SECTION

STA ch 15+326.000 TO STA ch 15+464.139

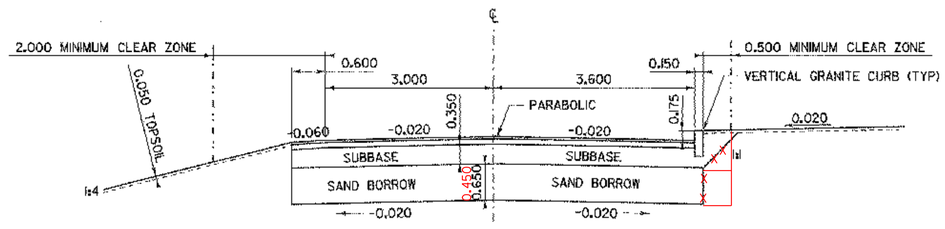


UNDERDRAIN DETAIL
NOT TO SCALE



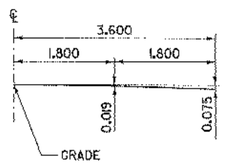
VILLAGE SIDEWALK SECTION

STA ch 15+050.000 TO STA ch 15+326.000



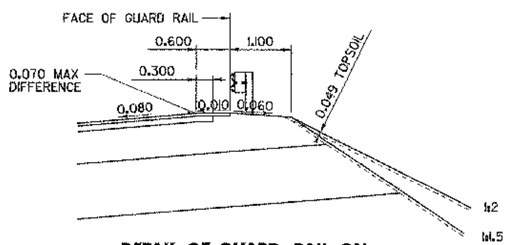
VILLAGE CURBED SECTION

STA ch 15+00.00 TO STA ch 15+050.00

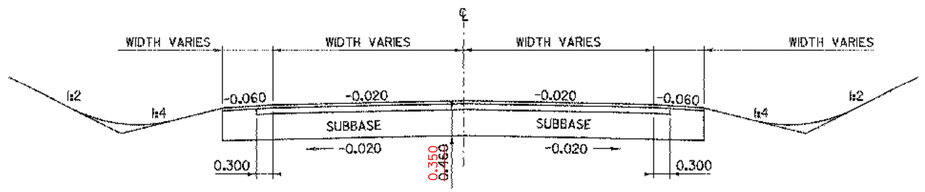


PARABOLIC DETAIL

3.6M LANE

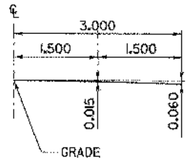


DETAIL OF GUARD RAIL ON HIGH SIDE OF BANKED SECTION



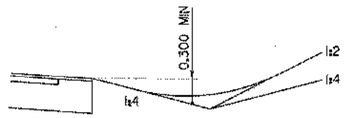
TOWH HIGHWAY TYPICAL SECTION

TH #16



PARABOLIC DETAIL

3.0M LANE



DETAILS OF DITCH & BACKSLOPE FOR LOW SIDE OF BANK < 0.040

SEEDING FORMULA

RURAL AREAS

% WT.	Kg/ha	NAME	PUR.%	GERM.%
5.0	4	RED TOP	95	90
37.5	26	CREEPING RED FESCUE	98	85
15.0	10	BIRDS FOOT TREFOIL (VAR. EMPIRE)	98	85
37.5	26	TALL FESCUE	95	90
5.0	4	ANNUAL RYE GRASS	95	85
100.0	70			

URBAN AREAS

% WT.	Kg/ha	NAME	PUR.%	GERM.%
42.5	38	CREEPING RED FESCUE (VAR. PENNLAWN)	98	85
42.5	38	KENTUCKY BLUEGRASS (COMMON)	85	85
10.0	9	PERENNIAL RYE GRASS (VAR. PENNFINE)	95	90
5.0	5	ANNUAL RYE GRASS	95	85
100.0	90			

GENERAL NOTES

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

SEED - TO BE APPLIED PER SEEDING FORMULAS DIRECTED BY THE ENGINEER.

FERTILIZER - FORMULA 10-20-10 TO BE USED WITH SEED, APPLIED AT THE RATE OF 560 kg/ha.

AGRICULTURAL LIMESTONE - TO BE APPLIED AT A RATE OF 4500 kg/ha OR AS DIRECTED BY THE ENGINEER.

HAY MULCH - TO BE PLACED ON EARTH SLOPES AT THE RATE OF 4500 kg/ha OR AS DIRECTED BY THE ENGINEER.

TOPSOIL - TO BE USED WITH SEED, AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

MARKER POSTS - TO BE PLACED AS DIRECTED BY ENGINEER.

SLOPE ROUNDING - ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5M.

TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.07 L/m2 BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.

NOT TO SCALE

ALL DIMENSIONS IN M UNLESS OTHERWISE NOTED

PROJECT NAME:	HIGHGATE - FRANKLIN
PROJECT NUMBER:	STP RS 030(I) SA
FILE NAME:	85a060/design/(2)dc060typ.dgn
PLOT DATE:	28-MAR-2003
PROJECT LEADER:	DELLASANTA
DRAWN BY:	SQUAD B
DESIGNED BY:	SQUAD B
CHECKED BY:	SQUAD B
IPARM FILE NAME:	dc060typ1.i
SHEET	3 OF 60

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

VAOT Metric

SUMMARY OF ESTIMATED QUANTITIES

		LAND-SCAPING	FULL E&C	EROSION CONTROL	HEADWALL	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NUMBER	RND
						1	1	L.S.	CLEARING AND GRUBBING (INCLUDING INDIV. TREES & STUMPS)	201.10	-
						5500	5500	M^3	COMMON EXCAVATION	203.15	-
						20	20	M^3	SOLID ROCK EXCAVATION	203.16	2.1
					10		10	M^3	UNCLASSIFIED CHANNEL EXCAVATION	203.27	EST
						50	50	M^3	EARTH BORROW	203.30	EST
						2500	2500	M^3	SAND BORROW	203.31	285
						4850	4850	M^2	FINE GRADING - SUBGRADE	203.40	22
						25	25	M^3	TRENCH EXCAVATION OF EARTH (MOD)	204.20	EST
				20		1700	1720	M^3	TRENCH EXCAVATION OF EARTH	204.20	19
						10	10	M^3	TRENCH EXCAVATION OF ROCK	204.21	8
					55		55	M^3	GRANULAR BACKFILL FOR STRUCTURES	204.30	EST
					70		70	M^3	COFFERDAM EXCAVATION EARTH	208.30	EST
					5		5	M^3	COFFERDAM EXCAVATION ROCK	208.35	EST
					1		1	L	COFFERDAM	208.40	EST
						100	100	M^2	COLD PLANING - BIT. PAVEMENT	210.10	15
				100		1800	1900	M^3	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	75
						75	75	M^3	AGGREGATE SURFACE COARSE	401.10	24
						275	275	KG	EMULSIFIED ASPHALT	404.65	11
						1550	1550	T	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25	21
					18	11	29	M 3	CONCRETE HIGH PERFORMANCE CLASS B	501.34	2.13
					1300	300	1600	KG	REINFORCING STEEL	507.15	2.4
					6		6	L	WATER REPELLENT	514.10	EST
						25.5	25.5	M	450 MM PCCSP 1.63 MM (68 MM X 12 MM)	601.0415	-
						6.0	6.0	M	750 MM PCCSP 2.01 MM (68 MM X 12 MM)	601.0436	-
									•••BEGIN OPTION PIPES•••		
						444.5	444.5	M	450 MM CAAP 1.52 MM (68 MM X 12 MM)	601.0215	-
						444.5	444.5	M	450 MM PCCSP 1.63 MM (68 MM X 12 MM)	601.0415	-
						444.5	444.5	M	450 MM RCP CLASS III	601.0815	-
						444.5	444.5	M	450 MM CPEP (SL)	601.2615	-
						83.5	83.5	M	750 MM CAAP 1.91 MM (68 MM X 12 MM)	601.0306	-
						83.5	83.5	M	750 MM PCCSP 2.01 MM (68 MM X 12 MM)	601.0436	-
						83.5	83.5	M	750 MM RCP CLASS III	601.0835	-
						83.5	83.5	M	750 MM CPEP(SL)	601.2625	-
									•••END OPTION PIPES•••		
						30	30	M	RELAYING PIPE CULVERT	601.99	EST

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION
4398	M^3	MAINLINE (INCL. DESIGNED SAND BORROW)
331	M^3	TOWN HIGHWAY * 16
548	M^3	DRIVES
223	M^3	ROUNDING
5500	M^3	TOTAL
		SOLID ROCK EXCAVATION
18	M^3	MAINLINE (REMOVAL OF EXISTING SIDEWALK)
2	M^3	ROUNDING
20	M^3	TOTAL
		SUBBASE DENSE GRADED CRUSHED STONE
1556	M^3	MAINLINE
169	M^3	TOWN HIGHWAY * 16
100	M^3	TEMPORARY EROSION CONTROL
75	M^3	ROUNDING
1900	M^3	TOTAL
		BITUMINOUS CONCRETE PAVEMENT
1363	T	MAINLINE
125	T	TOWN HIGHWAY * 16
41	T	DRIVES
21	T	ROUNDING
1550	T	TOTAL
		FINE GRADING - SUBGRADE
3464	M^2	MAINLINE
389	M^2	TOWN HIGHWAY * 16
975	M^2	DRIVES
22	M^2	ROUNDING
4850	M^2	TOTAL
		TRENCH EXCAVATION OF EARTH
615	M^3	DESIGNED DRAINAGE
1066	M^3	UNDERDRAIN (INS ESTIMATED)
19	M^3	ROUNDING
1700	M^3	TOTAL

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		TEMPORARY EROSION CONTROL (INC IN EROSION CONTROL)
20	M^3	TRENCH EXCAVATION OF EARTH
100	M^3	SUBBASE DENSE GRADED CRUSHED STONE
10	M^3	STONE FILL TYPE I
100	M^2	GEOTEXTILE FOR SILT FENCE
7	KG	SEED-WINTER RYE
1.0	T	HAY MULCH
50	M^2	EROSION MATTING

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

FILE NAME: ...85c060/design/dc060pms.dgn PLOT DATE: 16-MAY-2003
PROJECT LEADER: DELLASANTA DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B CHECKED BY: SQUAD B
IPAM FILE NAME: (2)dc060q01.i SHEET 4 OF 60

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

VAOT Metric

SUMMARY OF ESTIMATED QUANTITIES

		LAND-SCAPING	FULL E&C	EROSION CONTROL	HEADWALL	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NUMBER	RND
						20	20	EA	CONCRETE CATCH BASIN W/ CAST IRON GRATE	604.10	-
						4	4	EA	CAST IRON GRATE WITH FRAME, TYPE D	604.47	-
						750	750	M	150 MM UNDERDRAIN	605.10	30
						30	30	M	150 MM UNDERDRAIN CARRIER PIPE	605.20	15
						25	25	EA	UNDERDRAIN FLUSHING BASINS	605.95	-
						50	50	HR	ROADWAY PATROL MAINTENANCE	607.10	18
						10	10	HR	BULLDOZER RENTAL, TYPE I	608.10	EST
						10	10	HR	POWER GRADER RENTAL	608.15	EST
						10	10	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST
						10	10	HR	POWER BROOM RENTAL	608.30	EST
						10	10	HR	TRUCK RENTAL	608.37	EST
						10	10	HR	LOADER RENTAL, TYPE I	608.40	EST
						930	930	M^3	DUST CONTROL WITH WATER	609.10	EST
						1.6	1.6	T	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15	EST
				10			10	M^3	STONE FILL TYPE I	613.10	EST
					21	3.0	24	M^3	STONE FILL TYPE II	613.11	7.0
						815	815	M	VERTICAL GRANITE CURB	616.21	4.2
						8	8	EA	RELOCATE MAILBOX, SINGLE SUPPORT	617.10	-
						630	630	M^2	PORTLAND CEMENT CONCRETE SIDEWALK, 125 MM	618.10	4
						2	2	EA	REMOVING AND RESETTING PROPERTY MARKERS	619.20	EST
						25	25	M	REMOVING AND RESETTING FENCE	620.50	1
						38	38	M	STEEL BEAM GUARD RAIL	621.20	6.1
						4	4	EA	ANCHOR FOR STEEL BEAM RAIL	621.60	-
						25	25	M	REMOVAL AND DISPOSAL OF GUARD RAIL	621.80	6.0
						25	25	M	SEAMLESS COPPER WATER TUBE(3/4")	629.23	EST
						5	5	EA	EXTENSION SERVICE BOX AND CURB STOP	629.25	EST
						25	25	M	PLASTIC WATER PIPE, RIGID(8" CL150 PVC WATERLINE)	629.33	EST
						25	25	M	PIPE INSULATION	629.44	EST
						130	130	HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

FILE NAME: ...85c060/design/dc060pms.dgn PLOT DATE: 24-APR-2003
PROJECT LEADER: DELLASANTA DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B CHECKED BY: SQUAD B
IPAM FILE NAME: (2)dc060q02.I SHEET 5 OF 60

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

VAOT Metric

SUMMARY OF ESTIMATED QUANTITIES

		LAND-SCAPING	FULL E&C	EROSION CONTROL	HEADWALL	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NUMBER	RND
						400	400	HR	FLAGGERS	630.15	EST
			1				1	L.S.	FIELD OFFICE - ENGINEERS	631.10	-
			1				1	L.S.	TESTING EQUIPMENT - CONCRETE	631.16	-
			1				1	L.S.	TESTING EQUIPMENT - BITUMINOUS	631.17	-
			1				1	L.U.	FIELD OFFICE TELEPHONE (NOT A BID ITEM)	631.25	-
						1	1	L.S.	MOBILIZATION	635.10	-
						1	1	L.S.	TRAFFIC CONTROL	641.10	-
						1050	1050	M	DURABLE 100 MM WHITE LINE	646.40	20
						950	950	M	DURABLE 100 MM YELLOW LINE	646.41	40
						14.5	14.5	M	DURABLE 600 MM STOP BARS	646.46	-
						8	8	EA	DURABLE LETTER OR SYMBOL	646.50	-
						1050	1050	M	TEMPORARY 100 MM WHITE LINE	646.60	20
						950	950	M	TEMPORARY 100 MM YELLOW LINE	646.61	40
						14.5	14.5	M	TEMPORARY 600 MM STOP BARS	646.66	-
						8	8	EA	TEMPORARY LETTER OR SYMBOL	646.70	-
						44	44	EA	LINE STRIPING TARGETS	646.76	EST
				20	40		60	M^2	GEOTEXTILE UNDER STONE FILL	649.31	EST
				2500			2500	M^2	GEOTEXTILE FOR UNDERDRAIN TRENCH LINING	649.41	59
				300			300	M^2	GEOTEXTILE FOR SILT FENCE	649.51	5
				50			50	KG	SEED	651.15	0.1
				7			7	KG	SEED-WINTER RYE	651.17	0.1
				415			415	KG	FERTILIZER	651.18	2.2
				4			4	T	AGRICULTURAL LIMESTONE	651.20	0.7
				4			4	T	HAY MULCH	651.25	-
				50			50	M^2	SODDING	651.30	EST
						100	100	M^3	TOPSOIL	651.35	8
					25		25	M^2	GRUBBING MATERIAL	651.40	EST
				1			1	LS	EROSION & SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLAN	652.10	-
				1			50	HR	MONITORING EROSION & SEDIMENT AND STORMWATER MANAGEMENT PLAN	652.20	EST

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

FILE NAME: ...85c060/design/dc060pms.dgn PLOT DATE: 07-MAY-2003
PROJECT LEADER: DELLASANTA DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B CHECKED BY: SQUAD B
IPAM FILE NAME: (2)dc060q03.i SHEET 6 OF 60

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

VAOT Metric

SUMMARY OF ESTIMATED QUANTITIES

		LAND-SCAPING	FULL E&C	EROSION CONTROL	HEADWALL	ROADWAY	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NUMBER	RND
				1			1	LU	FEILD MAINTENANCE OF EROSION & SEDIMENT CONTROL & STORMWATER MANAGEMENT PLAN	652.30	-
				50			50	M^2	EROSION MATTING	654.10	8.2
		10					10	EA	DECIDOUS SHRUBS(EVERGREEN)	656.25	-
		14					14	EA	DECIDUOUS TREES	656.30	-
		2					2	EA	TRANSPLANTING TREES	656.45	-
		3					3	EA	TRANSPLANTING SHRUBS	656.50	-
						3.1	3.1	M^2	TRAFFIC SIGNS TYPE A	675.20	-
									*** BEGIN SIGN POSTS OPTIONS ***		
						27.0	27.0	M	FLANGED CHANNEL SIGN POSTS	675.301	0.65
						27.0	27.0	M	SQUARE TUBE STEEL SIGN POSTS	675.341	0.65
									*** END SIGN POSTS OPTIONS ***		
						10	10	EA	REMOVING SIGNS	675.50	-
						4	4	EA	ERECTING SALVAGED SIGNS	675.60	-

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

FILE NAME: ...85c060/design/dc060pms.dgn
PROJECT LEADER: DELLASANTA
DESIGNED BY: SQUAD B
IPAM FILE NAME: (2)dc060q04.1

PLOT DATE: 24-APR-2003
DRAWN BY: SQUAD B
CHECKED BY: SQUAD B
SHEET 7 OF 60

ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

From Bk-3

	STA.	STA.	POSITION	ASKEW	TYPE IN	DITCH IN	DITCH OUT	PIPE ARCH S (IN)	PIPE ARCH R (IN)	PIPE ARCH L (FT)	PIPE D (MM)	PIPE L (M)	PCCSP	CAAP	RCP (CL)	CSP (TH)	CPEP	PCCSP PI (TH)	PIPE ELBOW (NO-DEG)	ES (EA)	CB	PRCCP	DEPTH DI	Flushing Basins		DI GRATE (TYPE)	CHAN ELEV	CRM (CY)	TR EXCAV EARTH (M^3)	TR EXCAV ROCK (M^3)	COMM EXC (CY)	UNC CHAN EXC (CY)	STRUC EXCAV (CY)	GRAN BKF STRUC (M^3)	GRAN BORR (CY)	Fabric (comp Fabric) (M^2)	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	UNDER-DRAIN (Field Meas) (M)	Carrier Pipe (Field Meas) (M)	REMARKS
Pg 60	15+032	15+045.9	RT.							✓	450	13.2	X																14.1					10.46		62.30					12.8		
64	15+047.1	15+101.9	RT.		PRCCB	1					450	54.9					X							15+046.7	1				86.19	1.7				74.68		276.89					56.8	1.52	
66	15+103.1	15+155.9	RT.		PRCCB	1					450	52.8					X							15+098.1	1				70.76					60.43		249.92					54.1	1.52	
74	15+157.1	15+188.7	RT.		PRCCB	1					450	31.5					X							15+157	1				62.44					57.69		171.36					32.6	1.52	
76	15+124.6	15+173.4	LT.		PRCCB	1					450	49.6					X							15+123.9	1				35.63					33.0		197.18					50.2	1.52	
78	15+174.6	15+190.4	LT.		PBCCB	1					450	15.6					X							15+174.2	1				26.75					22.58		71.8					15.7	1.52	
80	15+191	15+189.5	L/R		PRCCB	1					450	5.8					X												35.0					25.7									
82	15+190.3	15+213.2	RT.		PRCCB	1				✓	750	24.3					X							15+189.26	1				97.25	1.9				74.84		156.68					24.2	1.52	
86	15+214.8	15+257.8	RT.		PRCCB	1					750	43.9					X							15+213.42	1				114.0					85.49		260.62					43.5	1.52	
88	15+259.3	15+275.2	RT.		PRCCB	1				✓	750	16.4					X							15+258.8	1				31.11					21.25		75.29					17.0	1.52	
90	15+276.8	15+280	RT		PRCCB	1				✓	250	6.1	X															/	18.0					18.8									
	TH #16																																										
94	26+039 RT	26+036.5 LT	C/L		PRCDI	1					450	5.4					X												19.11					15.07									
96	26+036.5	26+013.5	LT		PRCDI	1					450	21.4					X							26+035	1				62.36					54.27		94.55					21.8	1.52	
98	TH 26+013.5	M/L 15+214 RT	C/L		PRCDI	1					450	18.6					X												65.41					52.04									
	MAIN LINE	EAST OF BROOK																																									
100	15+283.5	15+293	RT		PRCCB	1					450	12.3	X																35.6					20.0									
102	15+293.6	15+310.6	RT		PRCDI	1					450	17.2					X							15+311.3	1				23.44					19.76		74.25					18.0	1.52	
104	15+311.5	15+318.4	RT		PRCCB	1					450	7.1					X							15+319.2	1				12.69					10.07		24.64					8.0	1.52	
106	15+319.6	15+344.4	RT		PRCCB	1					450	25.0					X							15+345.2	1				28.53					24.19		103.81					26.0	1.52	
108	15+345.6	15+362.4	RT		PRCCB	1					450	17.0					X							15+362.3	1				26.68					21.87		73.11					17.0	1.52	
110	15+363		C/L		PRCCB	1					450	5.0					X												11.62					9.14									
112	15+363.6	15+382.4	RT		PRCCB	1					450	19.0					X							15+383.2	1				33.5					27.19		106.07					20.5	1.52	
114	15+363.6	15+414.2	LT		PRCCB	1					450	51.6					X							15+416.2	1				59.77					52.02		230.67					53.0	1.52	
116	15+415 LT	15+425.6 RT	C/L		PRCCB	1					450	10.5					X												15.93					12.8									
118	15+415.8	15+439.4	LT		PRCCB	1					450	23.6					X							15+440.46	1				38.63					32.62		112.0					25.0	1.52	
120	15+440		C/L		PRCCB	1					450	5.5					X												10.77					8.57									
								450 PCCSP				25.5																															
								450 CPEP				437.1																															
					PRCCB	20		750 PCCSP				6.1																															
	TOTALS				PRCDI	4		750 CPEP				84.6																	1045.27 118.20 1163.47		3.6			844.73		2341.14 511.42 2852.56					496.2 159.2 655.4	24.32	

VWRF 01-07-05

VWRF 01-07-05

VWRF 01-07-05

GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT	
TOTALS					

UNDERDRAIN (See Bk 3 Pg 129)

STA.	STA.	TYPE	POS.	D	L	TRENCH E	TRENCH R	Fabric	FB	Carr. Pipe	MKR PST
15+098.1	15+124.3		LT	150	26.2	13.1		72.83	1	1.52	
15+383.2	15+424.4		RT	150	41.2	~~11.5~~ 7.8		85.22	1	1.52	
15+425.6	15+440.5		RT	150	14.9	4.9		34.47	1	1.52	
TH 16											
26+014.0			C/L	150	7.3	13.9		35.09	1	1.52	
26+014.0	26+039.5		RT	150	25.6	36.4		119.56	1	1.52	
26+039.5	26+059.7		RT	150	20.5	19.5		76.05	1	1.52	
26+036.5	26+059.7		LT	150	23.5	22.6		88.20	1	1.52	
TOTALS					159.2	118.2		511.42	7	10.64	

PROJECT NAME: FRANKLIN VWRF 01-07-05
PROJECT NUMBER: STP 0301(18)

FILE NAME: ______ PLOT DATE: 24-SEP-2001
PROJECT LEADER: ______ DRAWN BY: ______
DESIGNED BY: ______ CHECKED BY: ______
SHEET 007A OF ______

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

VAOT Metric

DRAINAGE STRUCTURES

STATION km + m	STATION km + m	POS.	ASKEW	INLET/OUTLET TYPE		DITCH		PIPE ARCH			PIPE		ALLOWABLE OPTIONS						PIPE ELBOW	ES	CB	RCCD I	DEPTH DI /CB	CONC CL B	REINF STEEL	DI GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS		REMARKS
				INLET	OUTLET	IN	OUT	SPAN mm	RISE mm	L m	D mm	L m	PCCSP mm	CAAP mm	RCP CL	CSP mm	CPEP SL mm	PCCSP PI mm	NO. DEG	EA	EA		mm	m^3	kg	TYPE	EA	m^3	EARTH m^3	ROCK m^3	m^3	m^3	m^3	m^3	m^3	m^2	m^3	TYPE	LT ea	RT ea	
MAIN LINE WEST OF BROOK																																								
15+032	15+046.5	RT.			C/B	X					450	13	1.63																5.9												PLUG PIPE @ STA. 15+032 FOR FUTURE USE.
15+048	15+061	RT.																																							REMOVE EXISTING DR. CULVERT(REMOVE WITH COMMON)
15+046.5	15+098	RT.		C/B	C/B						450	51	1.63	1.52	III		X				1		1840						30.2												CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+098	15+156.5	RT.		C/B	C/B						450	57	1.63	1.52	III		X				1		2070						26.8												CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+100	15+106	RT.																																							REMOVE EXISTING 380mm ACCGMP(REMOVE WITH COMMMON)
15+121	15+153	RT.																																							REMOVE EXISTING 450mm X 33M PIPE(REMOVE WITH COMMON)
15+153	15+156	RT.																																							REMOVE EXISTING 300mm X 3M PIPE(REMOVE WITH COMMON)
15+156.5	15+189.5	RT.		C/B	C/B						450	32	1.63	1.52	III		X				1		2060						31.7												CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+124	15+173.5	LT.		C/B	C/B						450	49	1.63	1.52	III		X				1		1900						20.2												CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+173.5	15+191	LT.		C/B	C/B						450	17	1.63	1.52	III		X				1		2070						17.8												CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+191 LT.	15+189.5 RT.	C/L	95°-23'-43" RT.	C/B	C/B						450	5	1.63	1.52	III		X				1		3020						23.0												CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+189.5	15+214	RT.		C/B	C/B						750	23	2.01	1.91	III		X				1		3100						58.1												CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+191		RT.																											50.0	2											REMOVE EXIST. DI &PIPE. PIPE TYPE AND LOCATION UNKNOWN.
15+214	15+258.5	RT.		C/B	C/B						750	44	2.01	1.91	III		X				1		2800						60.4												CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+258.5	15+276	RT.		C/B	C/B						750	16.5	2.01	1.91	III		X				1		1920						14.8												CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+276	15+280	RT.		C/B	DITCH						750	6	2.01								1		1250						17.4								2.1	II			CONCRETE CB @ INLET. W/CI GRATE- (WITH STONE FILL TYPE II @OUTLET)
15+281		C/L																																							RETAIN EXISTING 7'-8" X 5'-5" CGMP
TH * 16																																								
26+039 RT	26+036.5 LT	C/L	94°-59'-50" LT.	DI	DI						450	5	1.63	1.52	III		X						1140	1.61	79.7	D			3.6												CONCRETE DI @ INLET & OUTLET W/ CI GRATE. TYPE D.
26+036.5	26+013.5	LT.		DI	DI						450	23	1.63	1.52	III		X						1310	1.91	92.9	D			11.9												CONCRETE DI @ INLET & OUTLET W/ CI GRATE. TYPE D.
TH 26+013.5	M/L 15+191	LT.		DI	C/B						450	16	1.63	1.52	III		X						1550	2.16	105	D			41.3												CONCRETE DI @ INLET & CB @ OUTLET W/ CI GRATE. TYPE D.
TOTALS FOR SHEET											450	255.0	1.63	1.52	III		X				10			5.68	277.6	3-D			413.1	2							2.1	II			
											450	13.0	1.63																												
											750	83.5	2.01	1.91	III		X																								
											750	6.0	2.01																												

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

FILE NAME: ...85c060/design/dc060pms.dgn
PROJECT LEADER: DELLASANTA
DESIGNED BY: SQUAD B
IPAM FILE NAME: (2)dc060dr1.i

PLOT DATE: 31-MAR-2003
DRAWN BY: SQUAD B
CHECKED BY: SQUAD B

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

VAOT Metric

DRAINAGE STRUCTURES

STATION km + m	STATION km + m	POS.	ASKEW	INLET/OUTLET TYPE		DITCH		PIPE ARCH			PIPE		ALLOWABLE OPTIONS						PIPE ELBOW	ES	CB	PROCDT	DEPTH DI /CB	CONC CL B	REINF STEEL	DI GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS				REMARKS
				INLET	OUTLET	IN	OUT	SPAN mm	RISE mm	L m	D mm	L m	PCCSP mm	CAAP mm	RCP CL	CSP mm	CPEP SL mm	PCCSP PI mm	NO. DEG	EA	EA		DI /CB mm		kg	TYPE	EA	m^3	EARTH m^3	ROCK m^3	m^3	m^3	m^3	m^3	m^3	m^3	m^2	m^3	TYPE	LT ea	RT ea			
MAIN LINE	EAST OF BROOK																																								
15+283.5	15+293	RT.		C/B	DITCH						450	12.5	1.63								1		2290					31.9									1.0	II				CONCRETE CB @ INLET/ DITCH @ OUTLET. W/CI GRATE. TYPE D(STONE FILL TYPE II @ OUTLET)
15+293	15+311	RT.		D/I	C/B						450	18	1.63	1.52	III		X						1580	2.19	121	D		37.1														CONCRETE DI @ INLET & CB @ OUTLET W/ CI GRATE. TYPE D.
15+311	15+319	RT.		C/B	D/I						450	8.0	1.63	1.52	III		X				1		2070					23.1														CONCRETE CB @ INLET W/CI GRATE. TYPE D & DI @ OUTLET
15+319	15+345	RT.		C/B	C/B						450	25	1.63	1.52	III		X				1		2070					14.5														CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+345	15+363	RT.		C/B	C/B						450	17	1.63	1.52	III		X				1		2220					15.1														CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+363		C/L	90°00'-00"	C/B	C/B						450	4.5	1.63	1.52	III		X				1		2020					8.7														CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+363	15+383	RT.		C/B	C/B						450	19	1.63	1.52	III		X				1		2210					18.0														CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+363	15+415	LT.		C/B	C/B						450	51	1.63	1.52	III		X				1		2130					26.0														CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+415 LT	15+425.6 RT	C/L	27°12'-46"RT	C/B	C/B						450	18	1.63	1.52	III		X				1		2150					15.4														CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+415	15+440	LT.		C/B	C/B						450	24	1.63	1.52	III		X				1		2220					20.0														CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
15+440		C/L	90°00'-00"	C/B	C/B						450	5	1.63	1.52	III		X				1		2120					9.3														CONCRETE CB @ INLET & OUTLET W/ CI GRATE. TYPE D.
TOTALS FOR SHEET											450	189.5	1.63	1.52	III		X				10		2.19	121	1-D			201.1									1.0	II				
											450	11.5	1.63																												
PROJECT GRAND TOTAL											450	444.5	1.63	1.52	III		X				20		7.87	398.6	4-D			614.2	2								3.1	II				
											450	25.5	1.63																												
											750	83.5	2.01	1.91	III		X																								
											750	6.0	2.01																												

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

FILE NAME: ...85c060/design/dc060pms.dgn
PROJECT LEADER: DELLASANTA
DESIGNED BY: SQUAD B
IPAM FILE NAME: dc060dr2.1

PLOT DATE: 31-MAR-2003
DRAWN BY: SQUAD B
CHECKED BY: SQUAD B

STATE OF VERMONT
AGENCY OF TRANSPORTATION

ITEM DETAIL SHEET

Metric

GUARD RAIL

BEGIN STATION km + m	END STATION km + m	POSITION LEFT m	POSITION RIGHT m	END TREATMENT BEGIN EA	END TREATMENT END EA
15+279	15+294		20.27		
~~15+277~~ LT	~~15+295~~ LT		~~19~~	STA. G-Idm	
15+272	15+291		16.46		
~~15+275~~ RT	~~15+290~~ RT		~~19~~	STA. G-Idm	
			36.73		
	TOTALS		~~38~~		
ANCHORS FOR STEEL BEAM RAIL			62L60	4 EA.	

UNDERDRAIN

BEGIN STATION km + m	END STATION km + m	TYPE	POSITION	DIA. mm	LENGTH m	TRENCH EARTH m^3	TRENCH ROCK m^3	GRAN BKFILL m^3	FB EA	MKR PST EA
FRANKLIN										
15+032	15+046.5	U	RT	150	16	5.2				
15+048	15+098	U	RT	150	51	23.6			1	
15+098	15+124	U	LT	150	24	9.6			1	
15+099.5	15+156.5	U	RT	150	57	38.6			1	
15+125.5	15+173.5	U	LT	150	49	33.7			1	
15+158	15+189.5	U	RT	150	15	11.1			1	
15+175	15+191	U	LT	150	17	8.7			1	
15+190	15+214	U	RT	150	23	0.0			1	
15+215	15+258.5	U	RT	150	44	0.0			1	
15+259.5	15+276	U	RT	150	16.5	8.3			1	
15+293	15+310	U	RT	150	16	10.0			1	
15+311	15+317.5	U	RT	150	8	5.0			1	
15+319	15+343.5	U	RT	150	24	9.4			1	
15+345	15+361.5	U	RT	150	17	7.9			1	
15+363	15+381.5	U	RT	150	19	7.9			1	
15+363	15+413.5	U	LT	150	51.0	14.0			1	
15+383	15+424	U	RT	150	41.5	21.8			1	
15+415	15+438.5	U	LT	150	24.0	8.3			1	
15+425	15+438.5	U	RT	150	13.5	3.3			1	
TH # 16										
26+060	26+039	U	RT	150	22.0	10.5			1	1
26+037.5	26+013	U	RT	150	23.0	12.7			1	
26+013	26+013	U	RT/LT	150	5.0	4.0			1	
26+060	26+036.5	U	LT	150	23.0	11.9			1	1
26+035	26+013	U	LT	150	23.0	11.1			1	
M/L 15+192.5	TH 26+013	U	LT	150	17.0	9.0			1	
EST. UNDERDRAIN		U		150	80	75I			1	1
EST. CARRIER		C		150	15.0	29.0				
TOTAL		U		150	720	1036			25	3
TOTAL		C		150	15.0	29.0				
TOTAL TRENCH EARTH						1066				
TOTAL F/B AND MP									25	3

BEGIN STATION km + m	END STATION km + m	POSITION LEFT m	POSITION RIGHT m	REMARKS

BEGIN STATION km + m	END STATION km + m	POSITION LEFT m	POSITION RIGHT m	REMARKS

BEGIN STATION km + m	END STATION km + m	POSITION LEFT m	POSITION RIGHT m	REMARKS

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 030I(18)

FILE NAME: ...85c060/design/dc060pms.dgn PLOT DATE: 27-MAR-2003
PROJECT LEADER: DELLASANTA DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B CHECKED BY: SQUAD B
IPAM FILE NAME: (2)dc0601dl.i SHEET 10 OF 60

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EARTHWORKS

VAOT Metric

STATION km + m	DIST m	TOTAL EXCAVATION EARTH AND ROCK AREA m^2	TOTAL EXCAVATION EARTH AND ROCK VOLUME m^3	ROCK EXCAVATION AREA m^2	ROCK EXCAVATION VOLUME m^3	EMBANKMENT AREA m^2	EMBANKMENT VOLUME m^3	AREA m^2	VOLUME m^3
MAINLINE									
AH 15+000		1.637				2.332			
	20		58.640				29.630		
+020		4.227				.631			
	20		131.680				6.310		
+040		8.941				0		C=	776
	20		201.910				.180	F=	46
+060		11.250				.018		F FAC=	1.15
	20		198.210				3.360	EX C=	723
+080		8.571				.318			
	20		185.790				6.210		
+100		10.008				.303			
	20		194.550				5.760		
+120		9.447				.273			
	20		198.450				3.590		
+140		10.398				.086		C=	999
	20		204.110				1.060	F=	16
+160		10.013				.020		F FAC=	1.15
	20		196.450				1.040	EX C=	981
+180		9.632				.084			
	20		205.750				4.820		
+200		10.943				.398			
	20		206.120				5.620		
+220		9.669				.164			
	20		187.550				1.720		
+240		9.086				.008		C=	902
	20		169.570				3.560	F=	114
+260		7.871				.348		F FAC=	1.15
	20		170.190				45.640	EX C=	771
+280		9.148				4.216			
	20		168.900				57.420		
+300		7.742				1.526			
	20		134.320				32.820		
+320		5.690				1.756			
	20		131.970				28.900		
+340		7.507				1.134		C=	825
	20		157.130				18.180	F=	87
+360		8.206				.684		F FAC=	1.15
	20		187.620				6.840	EX C=	725
+380		10.556				0			
	20		214.220				0		
+400		10.866				0			
	20		213.720				0		
+420		10.506				0		C=	894
	20		179.750				.040	F=	0
+440		7.469				.004		F FAC=	1.15
	20		500.920				.040	EX C=	894
+460		42.623	BUTT			0			
SIDELINE (TH 16)									
26+010		14.085							
	10		112.040						
+020		8.323						C=	331
	20		132.220					F=	0
+040		4.899						F FAC=	1.15
	20		86.380					EX C=	331
+060		3.739	BUTT						

STATION km + m	DIST m	TOTAL EXCAVATION EARTH AND ROCK AREA m^2	TOTAL EXCAVATION EARTH AND ROCK VOLUME m^3	ROCK EXCAVATION AREA m^2	ROCK EXCAVATION VOLUME m^3	EMBANKMENT AREA m^2	EMBANKMENT VOLUME m^3	AREA m^2	VOLUME m^3

STATION km + m	DIST m	TOTAL EXCAVATION EARTH AND ROCK AREA m^2	TOTAL EXCAVATION EARTH AND ROCK VOLUME m^3	ROCK EXCAVATION AREA m^2	ROCK EXCAVATION VOLUME m^3	EMBANKMENT AREA m^2	EMBANKMENT VOLUME m^3	AREA m^2	VOLUME m^3

SUMMARY AND BALANCES

STATION TO STATION km + m	km + m	TOTAL EXC. EARTH+ROCK m^3	ROCK EXCAVATION m^3	EMBANKMENT m^3	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL
MAINLINE								
AH 15+000	AH 15+100	776		53	723		723	
AH 15+100	AH 15+200	999		18	981		1704	
AH 15+200	AH 15+300	902		131	771		2475	
AH 15+300	AH 15+400	825		100	725		3200	
AH 15+400	AH 15+460	894		0	894		4094	
SIDELINE								
26+010	26+060	331		0	331		4425	
DRIVES		548		23	525		4950	
TOTALS		5275		325			4950	

REMARKS

EARTH AND ROCK EXCAVATION	4950
SOLID ROCK EXCAVATION	
EARTH EXCAVATION	4950
PLANIMETERED FILL	325
LESS FACTORED SOLID ROCK	
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	
NET PLANIMETERED FILL	325
FACTOR	
PLANIMETERED FILL INCLUDING FACTOR	(325 X 1.15) = 374
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION	4950
CHANNEL EXCAVATION	
UNDERDRAIN EXCAVATION	(0.65 X 1066) = 640
STRUCTURE EXCAVATION	
TOTAL MATERIAL AVAILABLE FOR FILL	5590
TOTAL FILL INCLUDING FACTOR	375
TOTAL MATERIAL FOR FILL	5965
BORROW	
EXCESS EXCAVATION	5789

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

FILE NAME: ...85c060/design/dc060pms.dgn
PROJECT LEADER: DELLASANTA
DESIGNED BY: SQUAD B
IPARM FILE NAME: (2)dc060ewl.i
PLOT DATE: 27-MAR-2003
DRAWN BY: SQUAD B
CHECKED BY: SQUAD B
SHEET 11 OF 60

Metric

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
36	BENOIT, PIERRE & BETTY A.	8	AH 15+042.0 LT.				DRIVE (T)						GRAVEL 3.6M WIDE
37	LAURIE-DAY, ANNE S.	8	AH 15+038.4 RT.	AH 15+046.8 RT.			SLOPE (T) 8.3 SM±						89 S.F.±
			AH 15+046.6 RT.				REMOVE & RESET (T) 50 SM±						50 MM SPRUCE
			AH 15+047.9 RT.				REMOVE & RESET (T)						50 MM SPRUCE
			AH 15+051.0 RT.				DRIVE (T)						GRAVEL 3M WIDE
38	MAGNANT, TIMOTHY A. &	8	AH 15+053.4 RT.	AH 15+062.9 RT.			SLOPE (T) 23 SM±						248 S.F.±
	MARTHA E.		AH 15+068.0 RT.				DRIVE (T)						GRAVEL 3.6M WIDE
39	BENOIT, PIERRE & BETTY A.	8	AH 15+093.0 LT.				DRIVE (T)						GRAVEL 3M WIDE
	& JACOBS, GARY P.												
40	NOT USED												
41	DOMINA, LEE	8	AH 15+102.0 RT.				DRIVE (T)						GRAVEL 3M WIDE
42	BISHOP, LAWRENCE F. &	9	AH 15+160.0 RT.				DRIVE (T)						PAVED 3M WIDE
	VERA VIVIAN												
43	WILLIAMS, RODNEY L. &	9	AH 15+136.0 LT.				DRIVE (T)						GRAVEL 3.2M WIDE
	DARLENE N.		AH 15+154.0 LT.				INSTALL (T)						SIDEWALK
			AH 15+158.6 LT.				REMOVE & RESET (T)						LILAC
			AH 15+169.1 LT.	AH 15+170.4 LT.			SLOPE (T) 0.1 SM±						1 S.F.±
44	BULLIS, CLIFFORD J. &	9	AH 15+177.0 LT.				DRIVE (T)			FRANKLIN			GRAVEL 2.4M WIDE
	HILL, STARLENE A.		AH 15+180.0 LT.	AH 15+187.2 LT.			SLOPE (T) 1 SM±						11 S.F±
			AH 15+194.0 LT.	AH 15+197.0 LT.			REMOVE & RESET (T)						FENCE
			AH 15+197.1 LT.	AH 15+197.6 LT.			CULVERT (P)						
			TH16 26+043 LT.				DRIVE (T)						GRAVEL 6M WIDE
45	BRAYSON, MICHAEL C.	9	AH 15+162.2 RT.	AH 15+162.8 RT.			SLOPE (T) 0.3 SM±						3 S.F.±
			AH 15+169.0 RT.				DRIVE (T)						PAVED 2.8M WIDE
46	BARRETTE, STEPHEN D. &	9	AH 15+194.0 RT.				DRIVE (T)						GRAVEL 2.5M WIDE
	QUINTIN, GINA C.		AH 15+204.0 RT.				CONNECT (T)						CELLAR DRAIN
47	LOTHIAN, KEVIN E. &	9	AH 15+218.0 RT.				DRIVE (T)						PAVED 3.7M WIDE
	DARLA J.		AH 15+227.0 RT.				INSTALL (T)						SIDEWALK
			AH 15+231.0 RT.				CONNECT (T)						CELLAR DRAIN
48	WILLIAMS, MATTHEW L. &	9	AH 15+216.0 LT.	AH 15+220.0 LT.			SLOPE (T) 2 SM±						22 S.F.±
	JESSICA L.		AH 15+219.1 LT.				REMOVE (T)						450 MM MAPLE
			AH 15+227.0 LT.				INSTALL (T)						SIDEWALK
			AH 15+242.0 LT.				REMOVE & RESET (T)						IRON PIN
			TH16 26+031 RT.				DRIVE (T)						GRAVEL 11.3M WIDE

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	6,8	PARCEL NO. 37 LAURIE-DAY. DELETE EDWARD F. DAY. PER C.O. 9237.	05-24-02	M.J.R.	R.P.D.
2	6,8	PARCEL NO. 39 LEWIS. CHANGE NAME TO: BENOIT, PIERRE & BETTY A.; JACOBS, GARY P. PER C.O. 9238.	05-24-02	M.J.R.	R.P.D.
3	6,9	PARCEL NO. 46 LOTHIAN. CHANGE NAME TO: BARRETT, STEPHEN D. & QUINTIN, GINA C. PER C.O. 9239.	05-24-02	M.J.R.	R.P.D.
4	6,9	PARCEL NO. 47 LOTHIAN. CHANGE NAME TO: LOTHIAN, KEVIN E. & DARLA J. PER C.O. 9240	05-24-02	M.J.R.	R.P.D.
5	7,10	PARCEL NO. 52 GRANGER. REMOVE BEATRICE M. GRANGER FROM TITLE. PER C.O. 9241.	05-24-02	M.J.R.	R.P.D.
6	7,10	PARCEL NO. 53 TIPPER. REMOVE KIMBERLY L. TIPPER FROM TITLE. PER C.O. 9242.	05-24-02	M.J.R.	R.P.D.
7	10	PARCEL NO. 55 COOPER. CHANGE LAYOUT SO IT SHOWS FENCE ON EASTERLY BOUNDARY. NO ADDITIONAL RIGHTS NECESSARY. PER C.O. 9243.	05-24-02	M.J.R.	R.P.D.
8	7,10	PARCEL NO. 56 LUCE. ADD KING, CECIL AS OWNER. DELETE THE RIGHT 'REMOVE & RESET (T)' FOR FENCE. PER C.O. 9244.	05-24-02	M.J.R.	R.P.D.
9	1-10	CREATED NEW R.O.W. SET. RE-NUMBERED SHEETS. NEW SUB-PROJECT FOR VILLAGE OF FRANKLIN PORTION. ALL PARCELS(36-57) AFFECTED. RIGHTS REVISED FOR PARCELS 49(COOPER), 50(PIERCE) AND 51(LOTHIAN).	09-27-02	G.J.F.	R.P.D.
10	6,9	PARCEL NO. 46 BARRETT & QUINTIN. CHANGED SPELLING OF BARRETT, STEPHEN D. TO BARRETTE, STEPHEN D. PER C.O. 9266 ELECTRONIC IPARMS TO ROADWAY 4-28-03	01-09-03	P.J.H.	R.P.D.

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
C&T (P) CLEARING & TRIMMING
CZ (P) CLEAR ZONE
CONST.(T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE
UE (P) PERMANENT UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 10-01-02
CHIEF, PLANS & TITLES

R.O.W. PLANS
HIGHGATE-FRANKLIN
STP RS 0301(I)SA
VILLAGE PORTION
6 10
SHEET 12 OF 60

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DATE PLOTTED 28-APR-2003

Metric

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
49	COOPER, FREDERICK A. &	9	AH 15+278.00 LT.	AH 15+288.26 LT.	68 SM±					FRANKLIN			732 S.F.±
	RUTH		AH 15+268.0 LT.				DRIVE (T)						GRAVEL 3.7M WIDE
			AH 15+275.4 LT.	AH 15+279.1 LT.			SLOPE (T) 4 SM±						43 S.F.±
50	PIERCE, ROBERT J.	9	AH 15+275.0 RT.	AH 15+281.32 RT.±	17 SM±					FRANKLIN			183 S.F.±
			AH 15+255 RT.				CONNECT (T)						CELLAR DRAIN
			AH 15+264 RT.				DRIVE (T)						PAVED 4.7M WIDE
			AH 15+265.6 RT.				REMOVE (T)						STUMP
			AH 15+269.2 RT.	AH 15+281.8 RT.			CONST. (T) 22 SM±						INC. EROSION CONTROL
													237 S.F.±
			AH 15+272.6 RT.	AH 15+275.0 RT.			SLOPE (T) 1.4 SM±						15 S.F.±
			AH 15+276.2 RT.	AH 15+281.4 RT.			CHANNEL (P) 16 SM±						172 S.F.±
51	LOTHIAN, MERRIMAN E. &	9,10	AH 15+280.94 RT.±	AH 15+288.00 RT.	18 SM±					FRANKLIN			194 S.F.±
	LUCILLE		AH 15+280.8 RT.	AH 15+287.7 RT.			CHANNEL (P) 21 SM±						226 S.F.±
			AH 15+281.4 RT.	AH 15+298.2 RT.			CONST. (T) 27 SM±						291 S.F.±
			AH 15+288.0 RT.	AH 15+290.4 RT.			SLOPE (T) 3 SM±						32 S.F.±
			AH 15+316.0 RT.				DRIVE (T)						GRAVEL 3.2M WIDE
			AH 15+339.0 RT.				DRIVE (T)						GRAVEL 6.4M WIDE
			AH 15+361.8 RT.	AH 15+362.2 RT.			SLOPE (T) 0.1 SM±						1 S.F.±
52	GRANGER, JOHN P.	10	AH 15+366.0 RT.	AH 15+368.0 RT.			REMOVE & RESET (T)						FENCE
			AH 15+379.0 RT.				DRIVE (T)						GRAVEL 3M WIDE
53	TIPPER, ROBERT C., JR.	10	AH 15+391.0 RT.				INSTALL (T)						SIDEWALK
			AH 15+400.0 RT.										DRIVE
54	PLOOF, MARSHALL W. &	10	AH 15+416.0 RT.				DRIVE (T)						GRAVEL 14.6M WIDE
	COLETTE J., LESSOR												
	THE UNITED STATES POSTAL												
	SERVICE, LESSEE												
55	COOPER, RICHARD L. &	10	AH 15+333.0 LT.				DRIVE (T)						GRAVEL 8.6M WIDE
	DARLENE J.		AH 15+337.6 LT.	AH 15+357.5 LT.			SLOPE (T) 37 SM±						398 S.F.±
			AH 15+338.0 LT.	AH 15+343.0 LT.			INSTALL (T)						SIDEWALK
			AH 15+339.0 LT.	AH 15+341 LT.			REMOVE & RESET (T)						2 ROSE BUSHES
			AH 15+360.0 LT.				DRIVE (T)						GRAVEL 2.1M WIDE
			AH 15+361.1 LT.	AH 15+370.1 LT.			SLOPE (T) 8 SM±						86 S.F.±
56	LUCE, JACQUELINE C. &	10	AH 15+449.0 LT.	AH 15+456.07 LT.	36 SM±					FRANKLIN			388 S.F.±
	KING, CECIL		AH 15+370.1 LT.	AH 15+408.9 LT.			SLOPE (T) 15 SM±						161 S.F.±
			AH 15+412.0 LT.				DRIVE (T)						GRAVEL 3.2M WIDE
			AH 15+415.9 LT.	AH 15+450.1 LT.			SLOPE (T) 20 SM±						215 S.F.±
			AH 15+444.9 LT.	AH 15+451.3 LT.			INSTALL & MAINT. (P)						SIDEWALK
			AH 15+450.1 LT.	AH 15+454.2 LT.			SLOPE (T) 10 SM±						108 S.F.±
57	LEWIS, EDWARD P. SR.	9	TH16 26+050 RT.				DRIVE (T)						GRAVEL 3M WIDE
	& SANDRA P.												

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
11	7,10	PARCEL NO. 56 LUCE & KING. ADD 6' CURB CUT BETWEEN APPROX. STA. 15+370.5 LT. AND 15+372.3 LT. PER C.O. 9267	03-21-03	G.J.F.	R.P.D.
12	7,10	PARCEL NO. 51 LOTHIAN. REMOVE 600MM MAPLE TREE @ APPROX. STA. 15+329 RT. REMOVE MAPLE @ APPROX. STA. 15+345 RT. PER C.O. 9269	03-21-03	G.J.F.	R.P.D.
13	7,8	PARCEL NO. 38 MAGNANT. INCREASE DISTANCE AT CURB CUT OPENING TO A MINIMUM OF FIFTEEN FEET(15')[4.57 METERS±]WIDE AT APPROX. STA. AH 15+068.0 RT. PER C.O. 9277	03-21-03	G.J.F.	R.P.D.
14	7,9	PARCEL NO. 43 WILLIAMS. STRAIGHTEN ALIGNMENT OF NEW SIDEWALK TO BE INSTALLED BETWEEN APPROX. STA. AH 15+142.0 LT. AND STA. AH 15+170.0 LT. DELETE THE WORD 'SAVE' WHERE IT APPEARS IN CONNECTION WITH THE THREE MAPLE TREES LOCATED WITHIN THE RIGHT OF WAY IN FRONT OF OWNERS PARCEL. PER C.O. 9279	03-21-03	G.J.F.	R.P.D.
15	7,9	PARCEL NO. 44 BULLIS. STRAIGHTEN ALIGNMENT OF NEW SIDEWALK TO BE INSTALLED BETWEEN APPROX. STA. AH 15+170.0 LT. AND STA. AH 15+190.0 LT. PER C.O. 9280	03-21-03	G.J.F.	R.P.D.

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DATE PLOTTED 28-APR-2003

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
C&T (P) CLEARING & TRIMMING
CZ (P) CLEAR ZONE
CONST.(T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P PROPERTY LINE
L
TOP OF CUT
TOE OF SLOPE
UE (P) PERMANENT UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 10-01-02
CHIEF, PLANS & TITLES

R.O.W. PLANS
HIGHGATE-FRANKLIN
STP RS 0301(I)SA
VILLAGE PORTION
7 10
SHEET 13 OF 60

VAOT Metric

CONSTRUCT DRIVE

15+042 LT	GRAVEL
15+051 RT	GRAVEL
15+068 RT	GRAVEL
15+093 LT	GRAVEL
15+102 RT	GRAVEL

VERTICAL GRANITE CURB

15+033.8 TO 15+048.8 RT
15+040.1 TO 15+091.4 LT
15+053.0 TO 15+064.4 RT
15+068.2 TO 15+100.4 RT
15+095.0 TO 15+120.0 LT
15+103.5 TO 15+120.0 RT

RELOCATE MAIL BOX, SINGLE SUPPORT

15+048 LT TO 15+046 LT
15+057 RT TO 15+053 RT.
15+090 LT TO 15+091 LT.
15+107 RT TO 15+105 RT.

PORTLAND CEMENT CONCRETE SIDEWALK, 1530MM

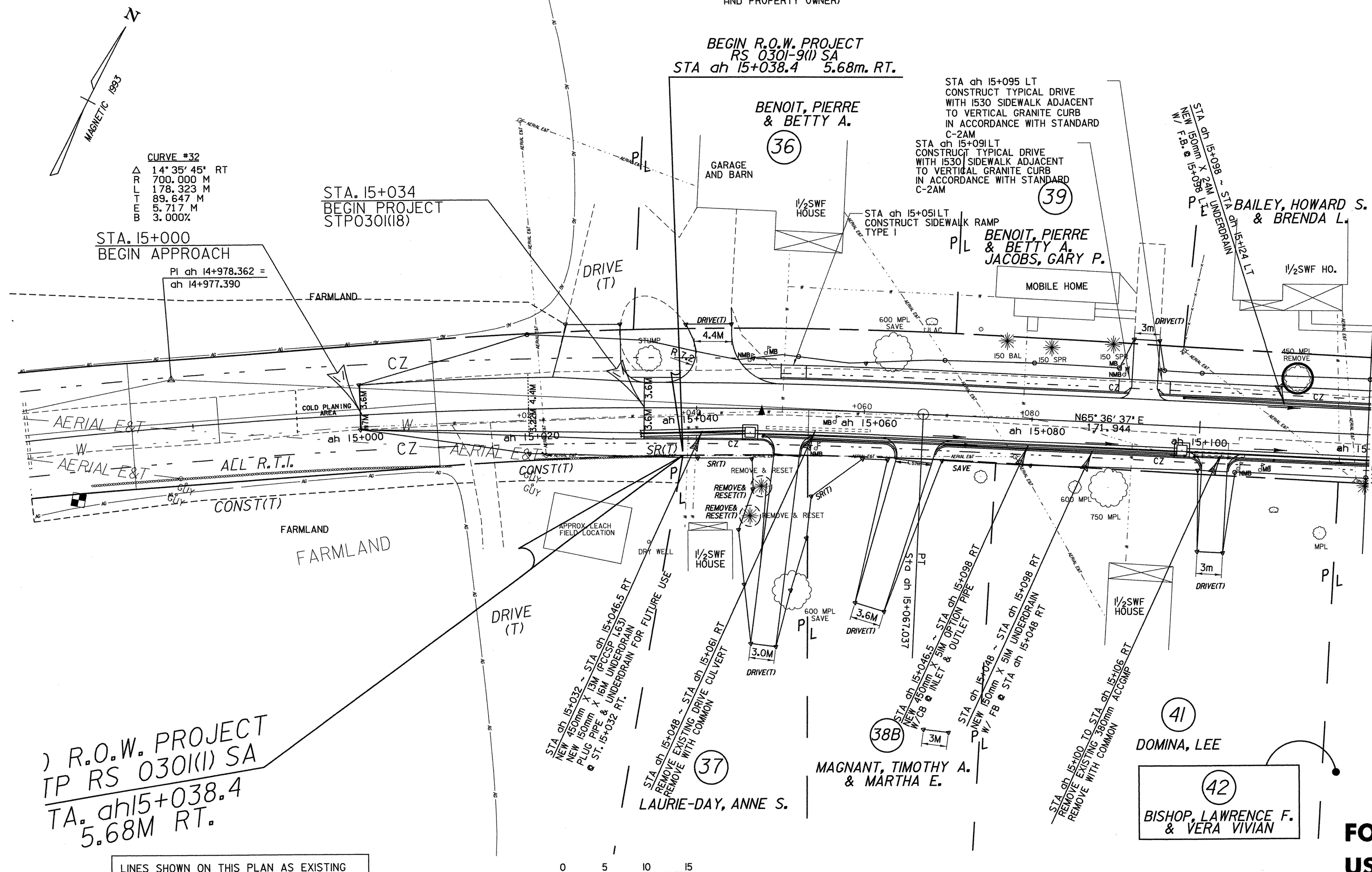
15+051 TO 15+091 LT
15+095 TO 15+120 LT

TRANSPLANTING TREES

15+046.6 RT 50 SM+/-
15+047.9 RT 50 SM+/-
(FINAL LOCATION WILL BE AT A MUTUALLY AGREED UPON LOCATION BETWEEN THE ENGINEER AND PROPERTY OWNER)

CURVE #32

Δ 14° 35' 45" RT
R 700.000 M
L 178.323 M
T 89.647 M
E 5.717 M
B 3.000%



N
MAGNETIC 1993
BEGIN R.O.W. PROJECT
RS 0301-9(1) SA
STA ah 15+038.4 5.68m. RT.
STA. 15+034
BEGIN PROJECT
STP0301(18)
STA. 15+000
BEGIN APPROACH
PI ah 14+978.362 = ah 14+977.390
BENOIT, PIERRE & BETTY A.
36
GARAGE AND BARN
1 1/2 SWF HOUSE
STA ah 15+095 LT CONSTRUCT TYPICAL DRIVE WITH 1530 SIDEWALK ADJACENT TO VERTICAL GRANITE CURB IN ACCORDANCE WITH STANDARD C-2AM
STA ah 15+091 LT CONSTRUCT TYPICAL DRIVE WITH 1530 SIDEWALK ADJACENT TO VERTICAL GRANITE CURB IN ACCORDANCE WITH STANDARD C-2AM
39
STA ah 15+051 LT CONSTRUCT SIDEWALK RAMP TYPE I
BENOIT, PIERRE & BETTY A. JACOBS, GARY P.
MOBILE HOME
STA ah 15+098 - STA ah 15+124 LT NEW 150mm X 24M UNDERDRAIN W/ F.B. @ 15+098 LT
BAILEY, HOWARD S. & BRENDA L.
1 1/2 SWF HO.
FARMLAND
DRIVE (T)
CZ
COLD PLANING AREA
AERIAL E&T
ALL R.T.T.
CONST(T)
ah 15+000
ah 15+020
ah 15+040
ah 15+060
ah 15+080
ah 15+100
N65° 36' 37" E 171.944
MATCH TO SHEET 9 OF 10
APPROX. LEACH FIELD LOCATION
DRY WELL
1 1/2 SWF HOUSE
600 MPL SAVE
3.0M DRIVE(T)
3.6M DRIVE(T)
3m DRIVE(T)
PT Sta ah 15+067.037
STA ah 15+032 - STA ah 15+046.5 RT NEW 450mm X 13M (PCCSP 1.63) NEW 150mm X 16M UNDERDRAIN PLUG PIPE & UNDERDRAIN FOR FUTURE USE @ ST. 15+032 RT.
STA ah 15+048 - STA ah 15+061 RT REMOVE EXISTING DRIVE CULVERT REMOVE WITH COMMON
STA ah 15+046.5 - STA ah 15+098 RT NEW 450mm X 51M OPTION PIPE W/CB @ INLET & OUTLET
STA ah 15+048 - STA ah 15+098 RT NEW 150mm X 51M UNDERDRAIN W/ FB @ STA ah 15+048 RT
STA ah 15+100 TO STA ah 15+106 RT REMOVE EXISTING 380mm ACCGMP REMOVE WITH COMMON
37
LAURIE-DAY, ANNE S.
38B
MAGNANT, TIMOTHY A. & MARTHA E.
41
DOMINA, LEE
42
BISHOP, LAWRENCE F. & VERA VIVIAN
1 1/2 SWF HOUSE
) R.O.W. PROJECT
TP RS 0301(1) SA
TA. ah15+038.4
5.68M RT.
0 5 10 15
1:250

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES (P/L) ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE TOWN OF FRANKLIN'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

○ DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-71M

FOR R.O.W. USE ONLY

PROJECT NAME: HIGHGATE - FRANKLIN VILLAGE PORTION	
PROJECT NUMBER: STP RS 0301(1) SA	
FILE NAME: ...85c060/design/dc060bdr.dgn	PLOT DATE: 28-APR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
R.O.W. SHEET 8 OF 10	SHEET 14 OF 60

VERTICAL GRANITE CURB
15+120.0 TO 15+125.2 LT
15+120.0 TO 15+158.7 RT
15+128.6 TO 15+133.9 LT
15+138.0 TO 15+175.7 LT
15+161.8 TO 15+164.9 RT
15+168.8 TO 15+191.8 RT
15+178.4 TO 15+197.7 LT
15+195.2 TO 15+216.0 RT
SL 26+006.1 TO SL 26+037.3 LT
SL 26+036.9 TO SL 26+047.4 RT
SL 26+024.4 RT TO ML 15+212.4 LT
15+214.4 TO 15+266.1 LT
15+219.7 TO 15+260.8 RT
15+265.5 TO 15+300.0 RT
15+270.4 TO 15+300.0 LT

RELOCATE MAIL BOX, SINGLE SUPPORT
15+132 LT TO 15+131.11
15+196 RT TO 15+194.7
SL 26+038 RT
SL 26+045 RT

REMOVING AND RESETTING FENCE
15+194 TO 15+197 LT

TRANSPLANTING SHRUBS
15+158.6 LT - LILAC BUSH
(FINAL LOCATION WILL BE AT A MUTUALLY AGREED UPON LOCATION BETWEEN THE ENGINEER AND PROPERTY OWNER

STA ah 15+025 LT AND STA ah 15+029 LT
CONSTRUCT TYPICAL DRIVE
WITH 1530 SIDEWALK ADJACENT
TO VERTICAL GRANITE CURB
IN ACCORDANCE WITH STANDARD
C-2AM

STA ah 15+175 LT AND STA ah 15+179 LT
STA ah 15+039 LT AND STA ah 15+033 LT
CONSTRUCT TYPICAL DRIVE
WITH 1530 SIDEWALK ADJACENT
TO VERTICAL GRANITE CURB
IN ACCORDANCE WITH STANDARD
C-2AM

STA ah 15+196 LT
CONSTRUCT SIDEWALK RAMP TYPE I

TH #16 STA. 26+060.000
END CONSTRUCTION
CONSTRUCT SATISFACTORY APPROACH

PORTLAND CEMENT CONCRETE WALK
15+227 RT (6.0M BACK)
15+227 LT (2.0M BACK)
15+154 LT 3M BACK

PORTLAND CEMENT CONCRETE SIDEWALK, 1530MM
15+212 TO 15+300 LT

CELLAR DRAIN SHALL BE ADJUSTED AS DIRECTED BY THE RESIDENT ENGINEER TO DRAIN INTO NEW UNDERDRAIN
15+204 RT
15+231 RT
15+255 RT

REMOVE & RESET PROPERTY MARKER
15+242.0 LT

REMOVE EXISTING SIDEWALK
15+154.250 (8.9M BACK) LT
15+226.970 (6.0M BACK) LT
15+226.570 (6.0M BACK) RT
15+210.150 TO 15+261.140 LT

STA ah 15+216 LT
CONSTRUCT SIDEWALK RAMP TYPE I

STA ah 15+246 LT AND STA ah 15+261 LT
CONSTRUCT TYPICAL DRIVE
WITH 1530 SIDEWALK ADJACENT
TO VERTICAL GRANITE CURB
IN ACCORDANCE WITH STANDARD
C-2AM

STEEL BEAM GUARD RAIL
15+277 LT TO 15+295 RT
15+275 RT TO 15+290 RT

CONSTRUCT DRIVE
15+127 LT GRAVEL
15+136 LT GRAVEL
15+160.3 RT PAVED
15+168 RT PAVED
15+177 LT GRAVEL
15+194 RT GRAVEL
15+218 RT PAVED
15+264 RT PAVED
15+268 LT GRAVEL
TH #16 STA 26+031RT GRAVEL
TH #16 STA 26+043 LT GRAVEL
TH #16 STA 26+050 RT GRAVEL

STONE FILL TYPE II
15+278 TO 15+280 RT
15+281.5 TO 15+283.5 RT

PI ah 15+287.269 =
ah 15+287.084

CURVE #33
Δ 08° 41' 50" RT
R 635.000 M
L 96.391 M
T 48.288 M
E 1.833 M
B 3.300%

STA ah 15+281 ℄ RETAIN EXISTING 7'-8"X5'-5" CGMP

BAILEY, HOWARD S. & BRENDA L. (43)
WILLIAMS, RODNEY L. & DARLENE N. (43)
BULLIS, CLIFFORD J. & HILL, STARLENE A. (44)
LEWIS, EDWARD P. SR. & SANDRA P. (57)
WILLIAMS, MATTHEW L. & JESSICA L. (48)
COOPER, FREDRICK A. & RUTH (49)
TOWN OF FRANKLIN (49)
PIERCE, ROBERT J. (50)
LOTHIAN, KEVIN E. & DARLA J. (47)
LOTHIAN, MERRIMAN E. & LUCILLE (51)
BISHOP, LAWRENCE F. & VERA VIVIAN (42)
BRAYSON, MICHAEL C. (45)
BARRETTE, STEPHEN D. QUINTIN, GINA C. (46)

TH #3 CONST. ℄ P.O.T. AH 15+203.980 =
TH #16 P.O.T. 26+000.000
ASKEW = 82° 01' 44" LT

BM #28
N.E. COR. OF BOT. CONC. STEP
ELEV. 137.380 m

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES (P/L) ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE TOWN OF FRANKLIN'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

0 5 10 15
1:250

○ DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-7IM

FOR R.O.W. USE ONLY

MATCH TO SHEET 8 OF 10
MATCH TO SHEET 10 OF 10

PROJECT NAME: HIGHGATE - FRANKLIN VILLAGE PORTION
PROJECT NUMBER: STP RS 0301(1) SA

FILE NAME: ...85c060/design/dc060bdr.dgn
PROJECT LEADER: DELLASANTA
DESIGNED BY: SQUAD B
R.O.W. SHEET 9 OF 10
PLOT DATE: 28-APR-2003
DRAWN BY: SQUAD B
CHECKED BY: SQUAD B
SHEET 15 OF 60

MADOT Metric

VERTICAL GRANITE CURB
15+300.0 TO 15+328.8 LT
15+300.0 TO 15+313.8 RT
15+317.1 TO 15+336.0 RT
15+317.9 TO 15+338.6 LT
15+322.5 TO 15+357.4 RT
15+341.4 TO 15+410.1 LT
15+380.6 TO 15+398.2 RT
15+401.5 TO 15+408.6 RT
15+413.9 TO 15+454.7 LT
15+423.2 TO 15+458.9 RT

CONSTRUCT DRIVE
15+316 RT GRAVEL
15+333 LT GRAVEL
15+339 RT GRAVEL
15+360 LT GRAVEL
15+379 RT GRAVEL
15+400 RT GRAVEL
15+412 LT GRAVEL
15+416 RT GRAVEL

PORTLAND CEMENT CONCRETE SIDEWALK, 1530MM
15+300 TO 15+451 LT

PORTLAND CEMENT CONCRETE WALK
15+338 TO 15+343 LT (BACK 4.6 M)
15+349 RT 3M BACK
15+391 RT 4.6M BACK

REMOVAL OF EXISTING SIDEWALK
15+363.830 TO 15+455.220 LT

TRANSPLANTING SHRUBS
15+339 LT - ROSE BUSHES
15+341 LT - ROSE BUSHES
FINAL LOCATION WILL BE AT A MUTUALLY AGREED APON LOCATION BETWEEN THE ENGINEER AND THE PROPERTY OWNER

REMOVING AND RESETTING FENCE
15+305 TO 15+323 LT
15+366 TO 15+368 RT

STA ah 15+414 LT AND STA ah 15+409 LT
CONSTRUCT NON-COMMERCIAL
DRIVE WITH GRASS PLOT AND
VERTICAL GRANITE CURB

STA ah 15+358 LT AND STA ah 15+362 LT
CONSTRUCT NON-COMMERCIAL
DRIVE WITH GRASS PLOT AND
VERTICAL GRANITE CURB

APPROXIMATE: STA ah 15+370.5 LT ~ STA ah 15+372.5 LT
1.8M CURB CUT

STA ah 15+227 LT AND STA ah 15+239 LT
CONSTRUCT NON-COMMERCIAL
DRIVE WITH GRASS PLOT AND
VERTICAL GRANITE CURB

CONSTRUCT WALK

TO CANADA

TO SHELDON

MATCH TO SHEET 9 OF 10

TOWN OF FRANKLIN

COOPER, RICHARD L. & DARLENE J. (55)

LUCE, JACQUELINE C. & KING, CECIL

LOTHIAN, MERRIMAN E. & LUCILLE (51)

GRANGER, JOHN P. (52)

TIPPER, ROBERT C., JR. (53)

PLOOF, MARSHALL W. & COLETTE J., LESSOR (54)
THE U. S. POSTAL SERVICE, LESSEE

HASTON LIBRARY

TOWN OF FRANKLIN

HISTORIC LOG CABIN

2½STORY BRICK HOUSE

1½SWF HOUSE

2 SWF HOUSE

GARAGE

GR. DR.

PAVED SHOULDER

PAVED

ROUTE 120

FILLER PIPE

PUMP FOUND

END R.O.W. PROJECT
RS 0301-9(I) SA
STA ah 15+456.07 7.54m. LT.

STA. 15+464.139
END PROJECT
STP0301(18)

STA ah 15+461.170
MATCH EXISTING PAVEMENT

TH#3 ℄ P.O.T. ah 15+464.139
ROUTE 120 P.O.T. 304+095.461
END PROJECT

PROFILE OF WALK MAY NEED TO BE ADJUSTED AS DIRECTED BY RESIDENT ENGINEER

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES (P/L) ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE TOWN OF FRANKLIN'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

0 5 10 15
1:250

○ DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-7IM

FOR R.O.W. USE ONLY

PROJECT NAME: HIGHGATE - FRANKLIN VILLAGE PORTION	
PROJECT NUMBER: STP RS 0301(I) SA	
FILE NAME: ...85c060/design/dc060bdr.dgn	PLOT DATE: 28-APR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
R.O.W. SHEET 10 OF 10	SHEET 16 OF 60

CONSTRUCT DRIVE

15+042 LT GRAVEL
15+051 RT GRAVEL
15+068 RT GRAVEL
15+093 LT GRAVEL
15+102 RT GRAVEL

VERTICAL GRANITE CURB

33.5 15+033.8 TO 15+048.6 RT 47.8
47.6 15+040.1 TO 15+081.4 LT 90.6
58.9 15+053.0 TO 15+064.4 RT
71.2 15+068.2 TO 15+100.4 RT 99.6
97.6 15+095.0 TO 15+120.0 LT
105.0 15+103.5 TO 15+120.0 RT

RELOCATE MAIL BOX, SINGLE SUPPORT

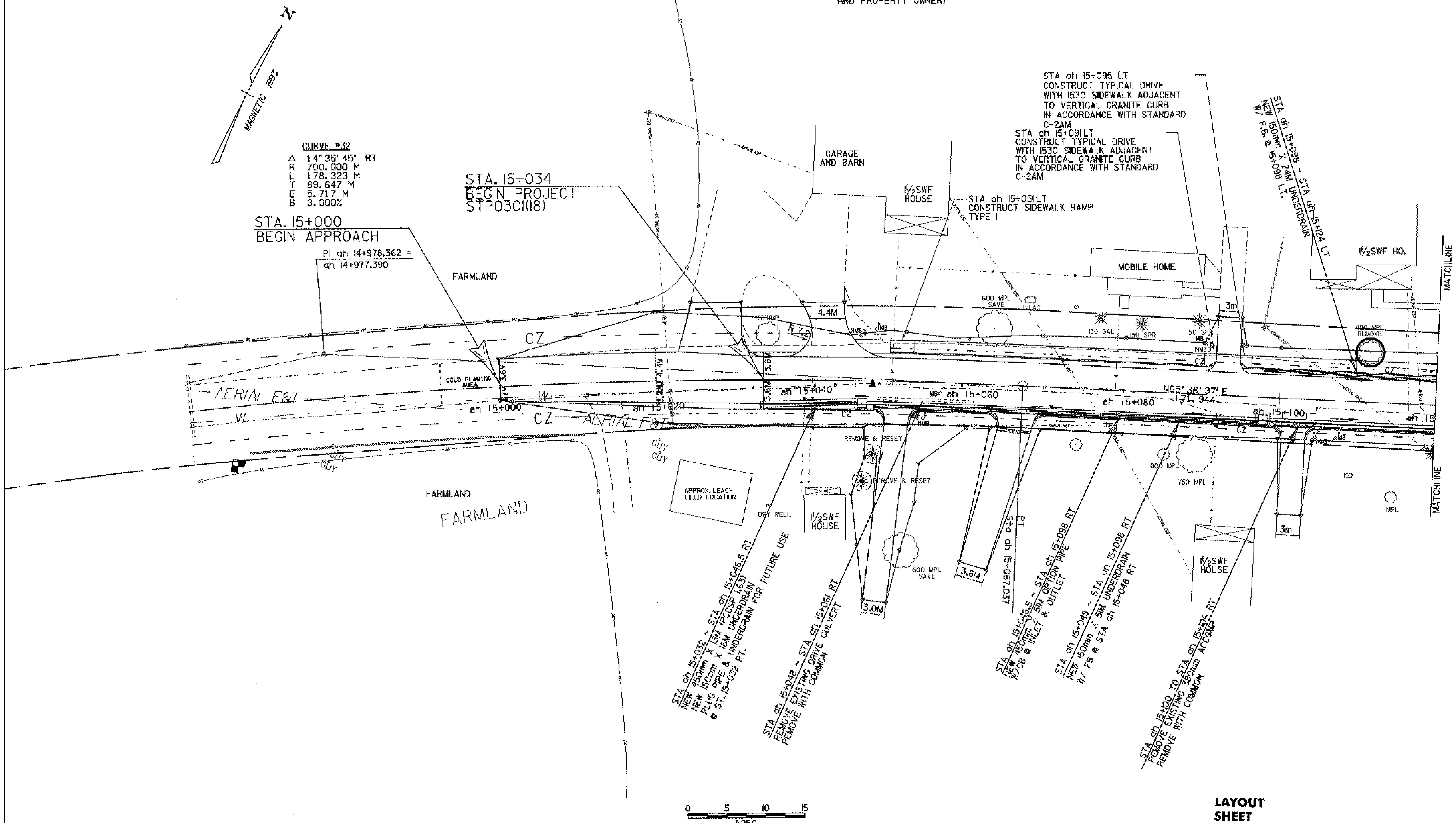
15+048 LT TO 15+046 LT
15+057 RT TO 15+053 RT. (2)
15+090 LT TO 15+091 LT. RT
15+107 RT TO 15+105 RT.

PORTLAND CEMENT CONCRETE SIDEWALK, 1530MM

047 15+051 TO 15+091 LT
15+095 TO 15+120 LT

TRANSPLANTING TREES

15+046.6 RT 50 SM+/-
15+047.9 RT 50 SM+/-
(FINAL LOCATION WILL BE AT A MUTUALLY AGREED UPON LOCATION BETWEEN THE ENGINEER AND PROPERTY OWNER)



N
MAGNETIC 1993
CURVE #32
Δ 14° 35' 45" RT
R 700.000 M
L 178.323 M
T 89.647 M
E 5.717 M
B 3.000%
STA. 15+000
BEGIN APPROACH
PI ah 14+978.362 = ah 14+977.390
STA. 15+034
BEGIN PROJECT
STP0301(18)
FARMLAND
GARAGE AND BARN
1½SWF HOUSE
MOBILE HOME
1½SWF HO.
STA ah 15+095 LT
CONSTRUCT TYPICAL DRIVE WITH 1530 SIDEWALK ADJACENT TO VERTICAL GRANITE CURB IN ACCORDANCE WITH STANDARD C-2AM
STA ah 15+091 LT
CONSTRUCT TYPICAL DRIVE WITH 1530 SIDEWALK ADJACENT TO VERTICAL GRANITE CURB IN ACCORDANCE WITH STANDARD C-2AM
STA ah 15+051 LT
CONSTRUCT SIDEWALK RAMP TYPE I
STA ah 15+098 - STA ah 15+124 LT
NEW 150mm X 24M UNDERDRAIN W/ F.B. @ 15+098 LT.
CZ
AERIAL E&T
W
COLD PLANING AREA
ah 15+000
ah 15+020
ah 15+040
ah 15+060
ah 15+080
ah 15+100
N65° 36' 37" E
71.944
4.4M
3.0M
3.6M
3m
STUMP
600 MPL SAVE
150 BAL
150 SPR
MB
650 MPL REMOVE
MATCHLINE
GUY
APPROX. LEACH FIELD LOCATION
DRY WELL
1½SWF HOUSE
REMOVE & RESET
600 MPL
750 MPL
MPL
FARMLAND
STA ah 15+032 - STA ah 15+046.5 RT
NEW 450mm X 13M (PCCSP 1.63)
NEW 150mm X 16M UNDERDRAIN
PLUG PIPE & UNDERDRAIN FOR FUTURE USE
@ ST. 15+032 RT.
STA ah 15+048 - STA ah 15+061 RT
REMOVE EXISTING DRIVE CULVERT
REMOVE WITH COMMON
Sta ah 15+067.037 RT
STA ah 15+046.5 - STA ah 15+098 RT
NEW 450mm X 5M OPTION PIPE
W/ CB @ INLET & OUTLET
STA ah 15+048 - STA ah 15+098 RT
NEW 150mm X 5M UNDERDRAIN
W/ FB @ STA ah 15+048 RT
STA ah 15+100 TO STA ah 15+106 RT
REMOVE EXISTING 380mm ACCGMP
REMOVE WITH COMMON
0 5 10 15
1:250

◯ DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-71M

Metric

LAYOUT SHEET

PROJECT NAME:	FRANKLIN		
PROJECT NUMBER:	STP 0301(18)		
FILE NAME:	85c060/design/2bdr.dgn	PLOT DATE:	24-MAR-2003
PROJECT LEADER:	DELLASANTA	DRAWN BY:	SQUAD B
DESIGNED BY:	SQUAD B	CHECKED BY:	SQUAD B
IPARM FILE NAME:	(2)do060IDL)	SHEET	17 OF 60

VERTICAL GRANITE CURB

15+120.0 TO 15+125.2 LT
15+120.0 TO 15+~~158.7~~ RT 157.2
15+128.6 TO 15+133.9 LT 133.5
140.4 15+~~136.0~~ TO 15+~~175.7~~ LT 174.8
~~15+161.8 TO 15+164.9 RT~~
168.1 15+~~168.8~~ TO 15+191.8 RT 189.6
180.2 15+~~178.4~~ TO 15+~~197.7~~ LT 193
15+195.2 TO 15+~~216.0~~ RT 214.5
003.9 SL 26+~~005.1~~ TO SL 26+037.3 LT 037.1
036.5 SL 26+~~036.9~~ TO SL 26+047.4 RT 641.3
~~SL 26+024.4 RT TO ML 15+212.4 LT~~
219.6 15+~~214.4~~ TO 15+~~265.1~~ LT 263.7
220.9 15+~~219.7~~ TO 15+~~260.8~~ RT 259.0
265.6 15+~~265.5~~ TO 15+300.0 RT
271.5 15+~~270.4~~ TO 15+300.0 LT
SL 26+005.0 TO 26+025.0 RT

RELOCATE MAIL BOX, SINGLE SUPPORT

15+140 RT 2
15+158 RT
15+210 RT
15+257 RT
15+260 RT
~~15+132 LT TO 15+131.11~~
~~15+196 RT TO 15+194.7~~
~~SL 26+038 RT~~
~~SL 26+045 RT~~

REMOVING AND RESETTING FENCE
~~15+194 TO 15+197 LT~~

TRANSPLANTING SHRUBS
~~15+158.6 LT - LILAC BUSH~~
(FINAL LOCATION WILL BE AT A MUTUALLY AGREED UPON LOCATION BETWEEN THE ENGINEER AND PROPERTY OWNER

STA ah 15+025 LT AND STA ah 15+029 LT
CONSTRUCT TYPICAL DRIVE
WITH 1530 SIDEWALK ADJACENT
TO VERTICAL GRANITE CURB
IN ACCORDANCE WITH STANDARD
C-2AM

STA ah 15+175 LT AND STA ah 15+179 LT
STA ah 15+039 LT AND STA ah 15+033 LT
CONSTRUCT TYPICAL DRIVE
WITH 1530 SIDEWALK ADJACENT
TO VERTICAL GRANITE CURB
IN ACCORDANCE WITH STANDARD
C-2AM

STA ah 15+196 LT
CONSTRUCT SIDEWALK RAMP TYPE I

TH #16 STA. 26+060.000
END CONSTRUCTION
CONSTRUCT SATISFACTORY APPROACH

PORTLAND CEMENT CONCRETE WALK

224 15+~~227~~ RT (6.0M BACK)
224 15+~~227~~ LT (2.0M BACK)
155 15+154 LT 3M BACK

PORTLAND CEMENT CONCRETE SIDEWALK, 1530MM

195 15+~~212~~ TO 15+300 LT

CELLAR DRAIN SHALL BE ADJUSTED AS DIRECTED BY THE RESIDENT ENGINEER TO DRAIN INTO NEW UNDERDRAIN

15+204 RT 26+013 RT 15+044 RT
15+231 RT 15+158 LT 15+178 RT
15+255 RT 15+158 RT

~~REMOVE & RESET PROPERTY MARKER~~
~~15+242.0 LT~~

REMOVE EXISTING SIDEWALK

15+154.250 (8.9M BACK) LT
15+226.970 (6.0M BACK) LT
15+226.570 (6.0M BACK) RT
15+210.150 TO 15+261.140 LT

STA ah 15+216 LT
CONSTRUCT SIDEWALK RAMP TYPE I

STA ah 15+246 LT AND STA ah 15+261 LT
CONSTRUCT TYPICAL DRIVE
WITH 1530 SIDEWALK ADJACENT
TO VERTICAL GRANITE CURB
IN ACCORDANCE WITH STANDARD
C-2AM

STEEL BEAM GUARD RAIL

219 15+~~277~~ LT TO 15+~~295~~ RT 294
272 15+~~275~~ RT TO 15+~~290~~ RT 291

CONSTRUCT DRIVE

15+127 LT GRAVEL
15+136 LT GRAVEL
15+160.3 RT PAVED
15+168 RT PAVED
15+177 LT GRAVEL
15+194 RT GRAVEL
15+218 RT PAVED
15+264 RT PAVED
15+268 LT GRAVEL
TH #16 STA 26+031 RT GRAVEL
TH #16 STA 26+043 LT GRAVEL
TH #16 STA 26+050 RT GRAVEL

STONE FILL TYPE II
15+278 TO 15+280 RT
15+281.5 TO 15+283.5 RT

PI ah 15+287.269 =
ah 15+287.084

CURVE #33
Δ 08° 41' 50" RT
R 635.000 M
L 96.391 M
T 48.288 M
E 1.833 M
B 3.300%

TH #3 CONST. ℄ P.O.T. AH 15+203.980 =
TH #16 P.O.T. 26+000.000
ASKEW = 82° 01' 44" LT

BM #28
N.E. COR. OF BOT. CONC. STEP
ELEV. 137.380 m

0 5 10 15
1:250

○ DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-71M

LAYOUT SHEET

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 030I(18)
FILE NAME:	85c060/design/2bdr.dgn
PROJECT LEADER:	DELLASANTA
DESIGNED BY:	SQUAD B
IPARM FILE NAME:	(2)dc060102.i
PLOT DATE:	18-APR-2003
DRAWN BY:	SQUAD B
CHECKED BY:	SQUAD B
SHEET	18 OF 60

VERTICAL GRANITE CURB

15+300.0 TO 15+~~328.8~~ LT 324.1
15+300.0 TO 15+~~313.8~~ RT 312.2
318.1 15+~~317.1~~ TO 15+~~336.0~~ RT 334.3
15+317.9 TO 15+338.6 LT 356.4
344.0 15+~~322.5~~ TO 15+~~357.4~~ RT 376.0
~~15+341.4 TO 15+410.1 LT~~
15+380.8 TO 15+~~398.2~~ RT 395.9
402.5 15+~~401.5~~ TO 15+408.6 RT 408.1
15+413.9 TO 15+454.7 LT
424.3 15+~~423.2~~ TO 15+458.9 RT 458.0
15+36.25 TO 15+408.7 LT

CONSTRUCT DRIVE

15+316 RT GRAVEL
15+333 LT GRAVEL
15+339 RT GRAVEL
15+360 LT GRAVEL
15+379 RT GRAVEL
15+400 RT GRAVEL
15+412 LT GRAVEL
15+416 RT GRAVEL

PORTLAND CEMENT CONCRETE SIDEWALK, 150MM
15+300 TO 15+~~451~~ LT 454

PORTLAND CEMENT CONCRETE WALK
15+338 TO 15+343 LT (BACK 4.6 M)
15+349 RT 3M BACK
~~15+391 RT 4.6M BACK~~

REMOVAL OF EXISTING SIDEWALK
15+363.830 TO 15+455.220 LT

TRANSPLANTING SHRUBS
~~15+339 LT - ROSE BUSHES~~
~~15+341 LT - ROSE BUSHES~~
FINAL LOCATION WILL BE AT A MUTUALLY AGREED UPON LOCATION BETWEEN THE ENGINEER AND THE PROPERTY OWNER

REMOVING AND RESETTING FENCE
~~15+305 TO 15+323 LT~~
~~15+366 TO 15+368 RT~~

STA ch 15+227 LT AND STA ch 15+239 LT
CONSTRUCT NON-COMMERCIAL DRIVE WITH GRASS PLOT AND VERTICAL GRANITE CURB

APPROXIMATE: STA ch 15+370.5 LT ~ STA ch 15+372.5 LT
1.8M CURB CUT

STA ch 15+358 LT AND STA ch 15+362 LT
CONSTRUCT NON-COMMERCIAL DRIVE WITH GRASS PLOT AND VERTICAL GRANITE CURB

STA ch 15+414 LT AND STA ch 15+409 LT
CONSTRUCT NON-COMMERCIAL DRIVE WITH GRASS PLOT AND VERTICAL GRANITE CURB

TO CANADA

STA. 15+464.139
END PROJECT
STP0301(18)

STA ch 15+461.70
MATCH EXISTING PAVEMENT

TH#3 & P.O.T. ch 15+464.139
ROUTE 120 P.O.T. 304+095.461
END PROJECT

TO SHELDON

PROFILE OF WALK MAY NEED TO BE ADJUSTED AS DIRECTED BY RESIDENT ENGINEER

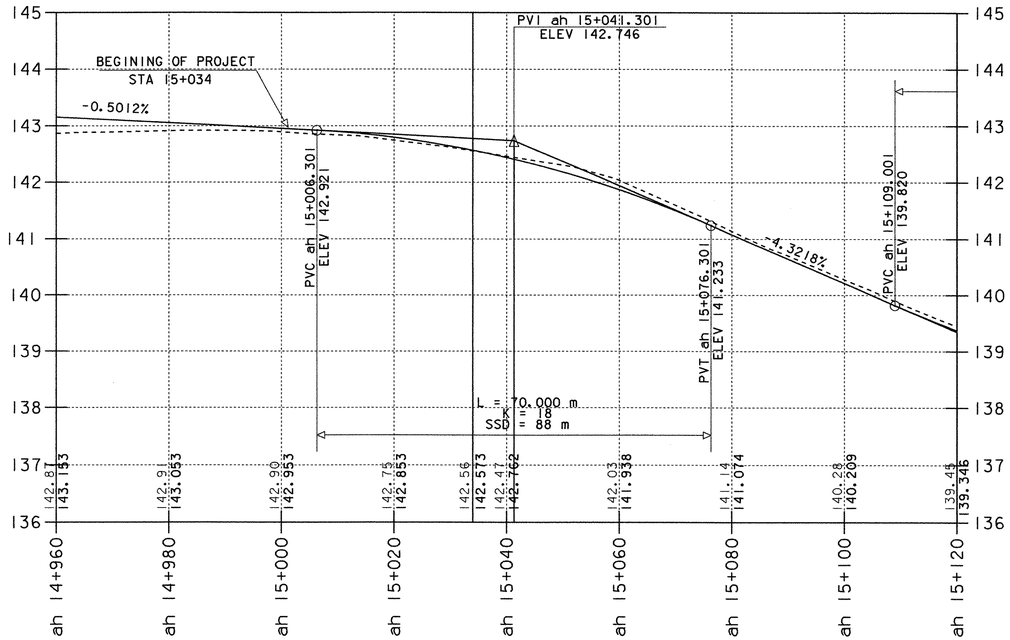
0 5 10 15
1:250

○ DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 9M UNLESS OTHERWISE NOTED PER STD B-71M

LAYOUT SHEET

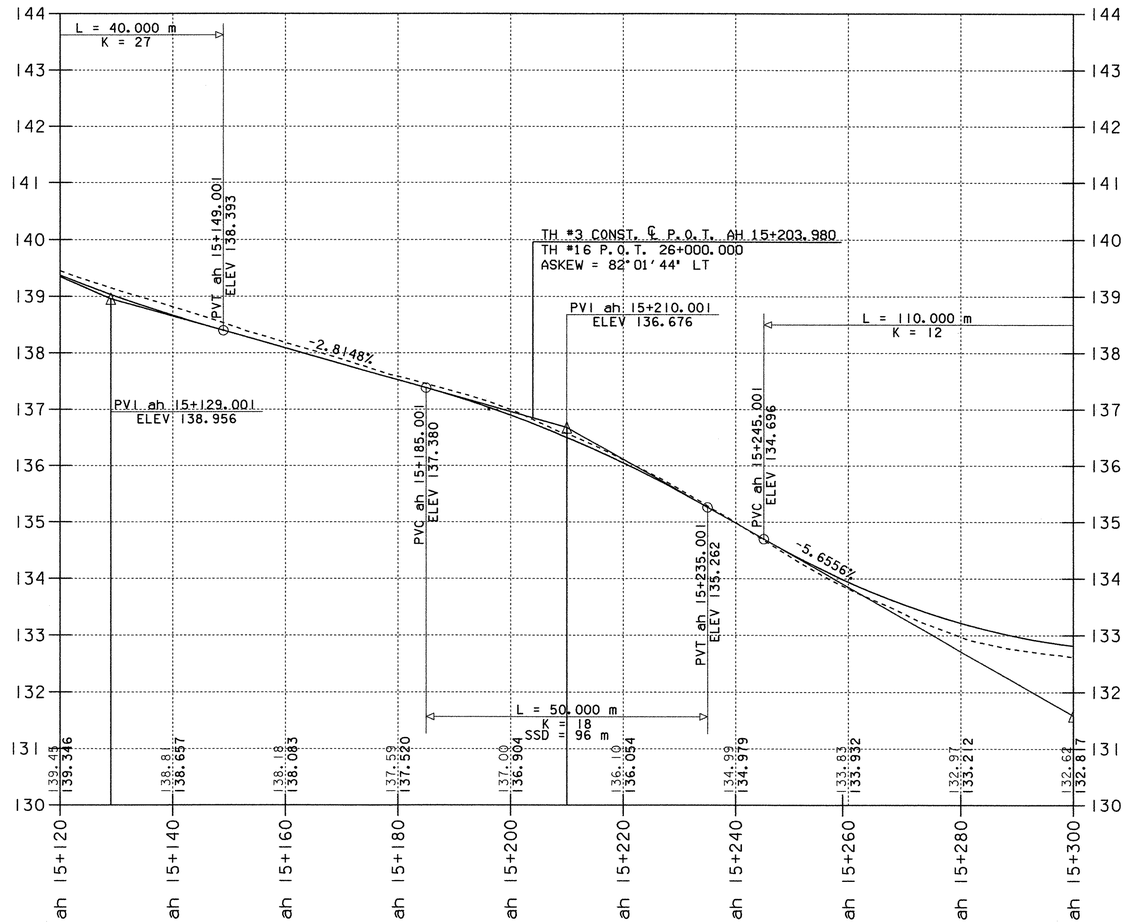
PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)
FILE NAME:	85c060/design/2bdr.dgn
PROJECT LEADER:	DELLASANTA
DESIGNED BY:	SQUAD B
IPARM FILE NAME:	(2)dc06013.I
PLOT DATE:	24-MAR-2003
DRAWN BY:	SQUAD B
CHECKED BY:	SQUAD B
SHEET	19 OF 60

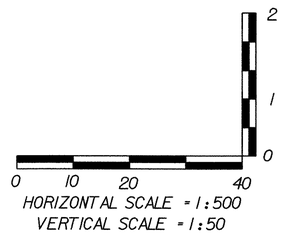


HORIZONTAL SCALE = 1:500
VERTICAL SCALE = 1:50

PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060/design/dc060xsl.dgn	PLOT DATE: 24-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060p01.i	SHEET 20 OF 60

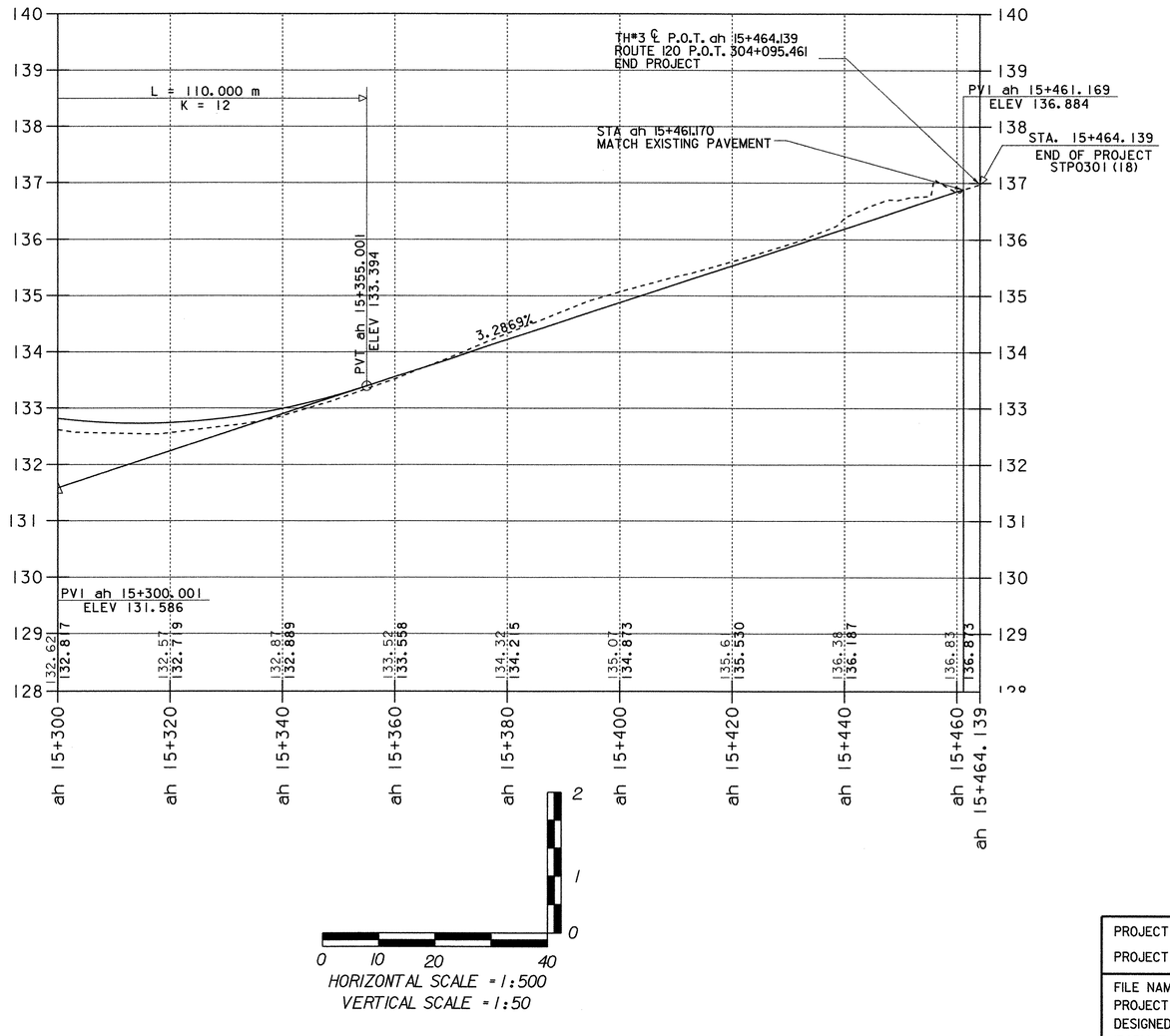
Metric





HORIZONTAL SCALE = 1:500
VERTICAL SCALE = 1:50

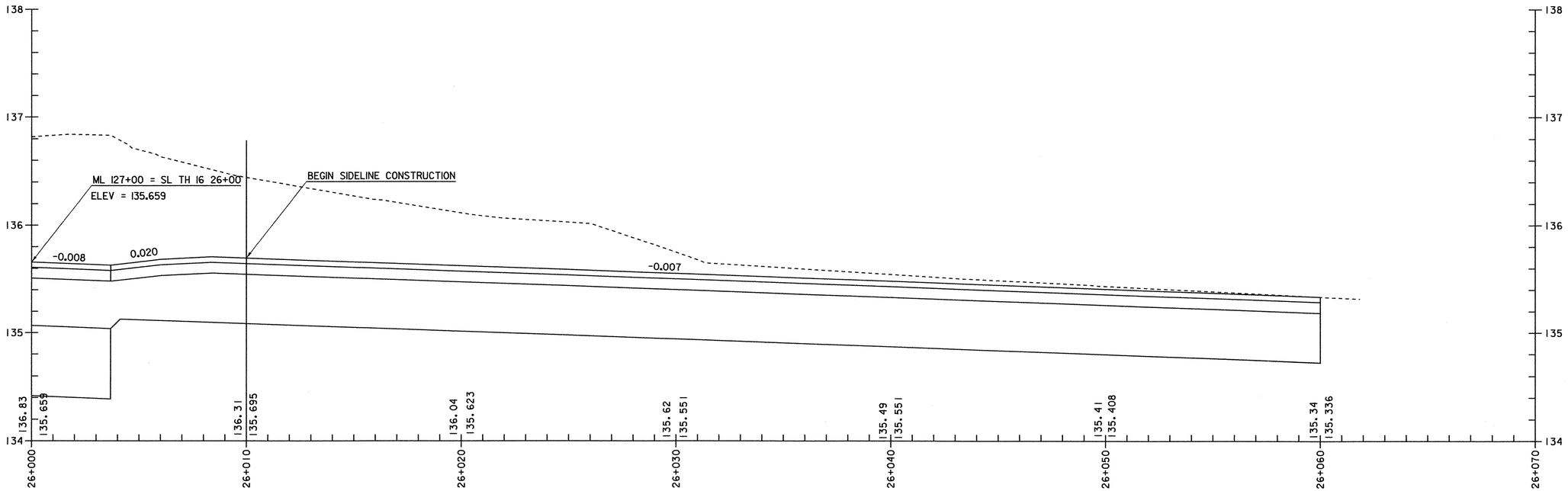
PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)
FILE NAME: ...85c060/design/dc060xsl.dgn	PLOT DATE: 24-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060p02.i	SHEET 21 OF 60



PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)
FILE NAME: ...85c060/design/dc060xsl.dgn	PLOT DATE: 24-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060p03.I	SHEET 22 OF 60

VAOT Metric

TH #16 PROFILE



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PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060\design\dc060xl2.dgn	PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060p04.I	SHEET 23 OF 60

MAINLINE STA. ah 15+282.18
CHANNEL LINE STA. 110+000.00
ASKEW 85°-18'-53" FROM
TANGENT TO CURVE

N15° 48' 22.8"W

110+000

ah 15+260

ah 15+280

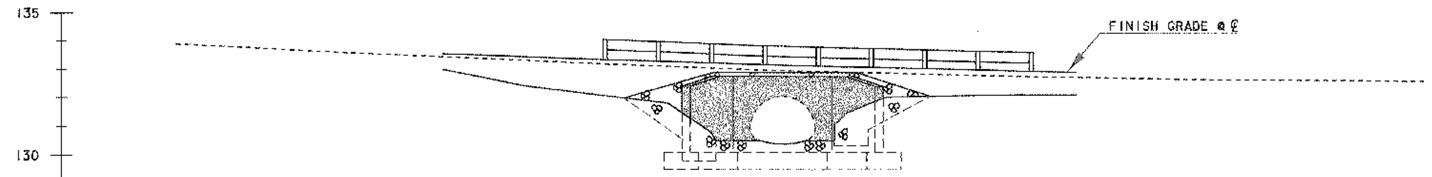
ah 15+300

TYPE II
STONEFILL

109+601

APPROXIMATE LOCATION OF
EXISTING UNDERGROUND WATERLINE
SEE GENERAL NOTE 2

109+985



ELEVATION VIEW

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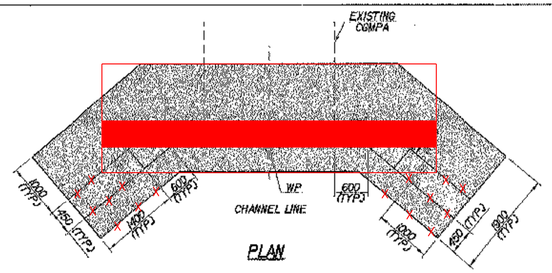
SCALE 1:100

PLAN AND ELEVATION SHEET

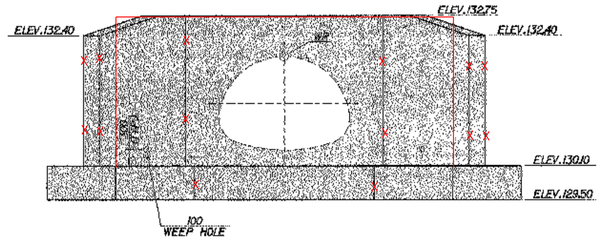
PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 030I(18)

FILE NAME: /85c060/sfr/sc85c060bdr.dg	PLOT DATE: 21-MAR-2003
PROJECT LEADER: S. FARNSWORTH	DRAWN BY: R. PELLETT
DESIGNED BY: M. FOWLER	CHECKED BY: G. SPILAK
sc060pel5282.i	SHEET 24 OF 60

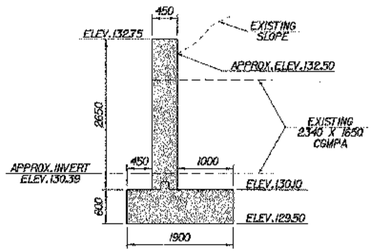


PLAN

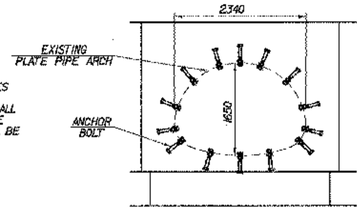
* CHANGE TO STRAIGHTEN HEADWALL BECAUSE OF WATERLINE CONFLICT



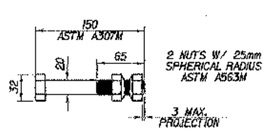
ELEVATION



SECTION @ C CGMPA AND MIDPOINT OF HEADWALL



1-ROW GALVANIZED ANCHOR BOLTS SPACED IN ALTERNATE CIRCUMFERENTIAL SEAM HOLES (ACTUAL ANCHOR BOLT SPACING TO BE DETERMINED IN THE FIELD). THE COST OF ALL WORK AND MATERIALS ASSOCIATED WITH THE INSTALLATION OF THE ANCHOR BOLTS SHALL BE INCLUDED IN THE COST OF CONCRETE, HIGH PERFORMANCE CLASS B.



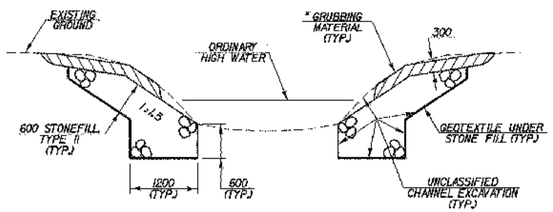
ANCHOR BOLT DETAIL

(NOT TO SCALE)

HEADWALL DETAILS

0 1 2 3 4 5

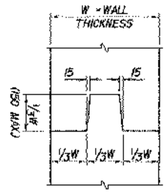
SCALE = 1:50



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

* GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL FROM THE END WINGWALLS TO CGMPA INLET. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



TYPICAL CONCRETE CONSTRUCTION JOINT

NOT TO SCALE

HYDRAULIC DATA

DRAINAGE AREA = 360 HA	DESIGN FLOW = Q25	
DESIGN TAILWATER DEPTH = 1.6 M	ELEVATION = 132.0	
ORDINARY HIGH WATER DEPTH = 0.5 M +/-		
Q 2.33 FLOW = 2.1 CM/S	HEADWATER ELEVATION = 131.3	
Q 10 FLOW = 4.1 CM/S	HEADWATER ELEVATION = 131.7	
Q 25 FLOW = 5.2 CM/S	HEADWATER ELEVATION = 132.0	
Q 50 FLOW = 6.4 CM/S	HEADWATER ELEVATION = 132.2	
Q100 FLOW = 7.2 CM/S	HEADWATER ELEVATION = 132.4	
COMMENTS: DEPTHS ARE APPROXIMATE BASED ON INLET CONTROL ANALYSIS.		

Metric

GENERAL NOTES

1) ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2001, AND THE LATEST AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

2) THE APPROXIMATE HORIZONTAL LOCATION OF AN EXISTING FRANKLIN VILLAGE WATERLINE IS SHOWN ON THE PLANS WITHIN THE PROPOSED CONSTRUCTION AREA OF THE HEADWALL. THERE HAS BEEN NO VERIFICATION OF THE LOCATION, EITHER HORIZONTALLY OR VERTICALLY, ASSOCIATED WITH THIS WATERLINE CROSSING AND IT HAS BEEN ASSUMED THERE WILL BE NO CONFLICT WITH THE PROPOSED FOOTING ELEVATION. IF DURING CONSTRUCTION IT IS FOUND THIS ASSUMPTION IS INCORRECT THE PROJECT MANAGER SHALL BE CONTACTED IMMEDIATELY WITH ALL PERTINENT DETAILS TO DETERMINE AN APPROPRIATE COURSE OF ACTION. ITEMS HAVE BEEN INCLUDED ON THE CONTRACT TO RELOCATE THE WATERLINE IF RELOCATION IS DETERMINED TO BE THE ONLY VIABLE OPTION.

3) IN-STREAM CONSTRUCTION SHALL BE RESTRICTED TO JUNE 1 TO OCTOBER 1, UNLESS THE CONTRACTOR OBTAINS WRITTEN PERMISSION FROM THE AGENCY OF NATURAL RESOURCES TO DO WORK OUTSIDE OF THAT TIME FRAME.

4) THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION OR POLLUTION, ESPECIALLY THE DISCHARGE OF RAW CONCRETE, INTO ANY BROOK, STREAM, OR RIVER.

5) WHEN CONSTRUCTION MACINERY IS WORKING OVER THE EXISTING PIPE, THE CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF 1000 mm OF COMPACTED MATERIAL.

6) LIMITS OF THE COFFERDAM SHALL BE DETERMINED BY THE CONTRACTOR. PAY LIMITS FOR COFFERDAM EXCAVATION, EARTH AND COFFERDAM EXCAVATION, ROCK SHALL BE 600 mm OUTSIDE THE PERIMETER OF THE FOOTING. IF A COFFERDAM IS CONSTRUCTED WHICH IS LARGER THAN THE COFFERDAM EXCAVATION PAY LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE COFFERDAM EXCAVATION PAY LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.

7) ITEM 208.30, COFFERDAM SHALL INCLUDE ALL NECESSARY WORK REQUIRED TO SAFELY CONSTRUCT THE FOUNDATION, FOOTING HEADWALL, AND WINGWALLS IN THE DRY. ANY AND ALL WORK ASSOCIATED WITH THE TEMPORARY WATER DIVERSION REQUIRED DURING CONSTRUCTION SHALL BE INCLUDED IN THE COST OF THIS ITEM. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SEQUENCE AND EROSION CONTROL PLAN BEFORE WORK MAY BEGIN.

8) THE FOLLOWING TABLE OF ALLOWABLE STRESSES AND WEIGHTS APPLY TO THESE PLANS FOR DESIGN PURPOSES:

CONCRETE, HIGH PERFORMANCE CLASS B: f'c = 25 MPa fc = 10 MPa

REINFORCING STEEL: Ft = 166 MPa GRADE 420
SOIL UNIT WEIGHT: 2250 kg/m3

DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL: 190 KPa

9) THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT, ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

10) ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25mm BY 25mm.

11) JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

12) ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).

REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING +/- 25 mm
CLEARANCE +/- 5 MM

13) MINIMUM COVER FOR REINFORCING STEEL SHALL BE FIFTY (50) MILLIMETERS ALONG THE BACK FACES OF WALLS AGAINST EARTH, AND EIGHTY (80) MILLIMETERS ELSEWHERE, UNLESS OTHERWISE NOTED.

14) IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY IN THE FIELD ALL EXISTING DIMENSIONS IN THE PLANS. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES CELSIUS UNLESS OTHERWISE NOTED.

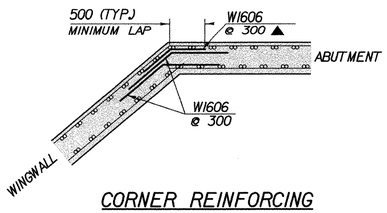
ESTIMATED QUANTITIES

NO.	ITEM	UNIT	TOTAL	FINAL
203.27	UNCLASSIFIED CHANNEL EXCAVATION	CM	10	23
204.30	GRANULAR BACKFILL FOR STRUCTURES	CM	55	43.1
208.30	COFFERDAM EXCAVATION, EARTH	CM	70	52
208.35	COFFERDAM EXCAVATION, ROCK	CM	5	4.5
208.40	COFFERDAM	LS	1	1
501.34	CONCRETE, HIGH PERFORMANCE CLASS B	CM	18	15.13
507.15	REINFORCING STEEL	KG	1300	1266
514.10	WATER REPELLENT	L	6	6
613.11	STONE FILL, TYPE II	CM	21	23
649.31	GEOTEXTILE UNDER STONE FILL	SM	40	38
651.40	GRUBBING MATERIAL	SM	25	25

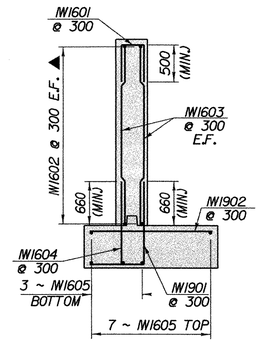
PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

FILE NAME: /str/85c060/s85c060ww.dgn
PROJECT LEADER: S. FARNSWORTH
DESIGNED BY: M. FOWLER
sc060ww15282.1

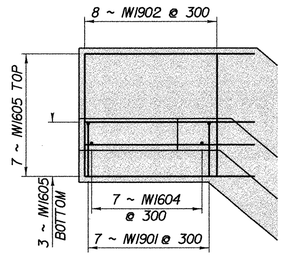
PLOT DATE: 21-MAR-2003
DRAWN BY: R. PELLETT
CHECKED BY: G. SPILAK
SHEET 25 OF 60



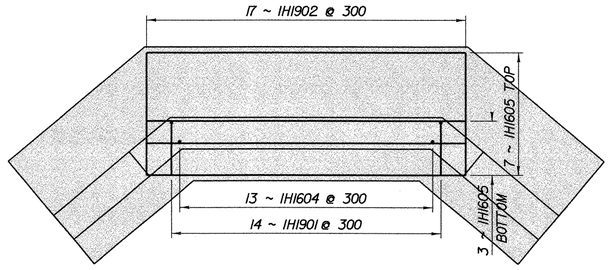
CORNER REINFORCING DETAIL



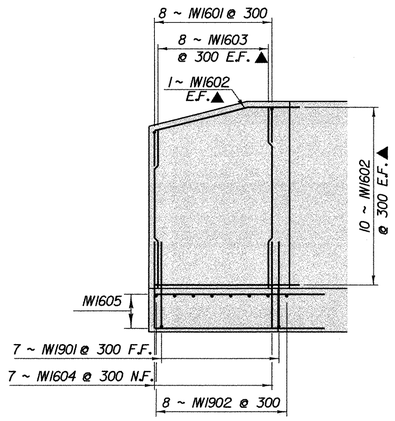
TYPICAL SECTION REINFORCING



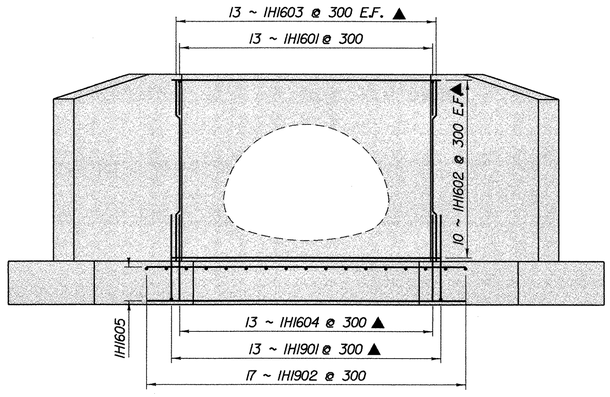
WINGWALL REINFORCING PLAN (TYPICAL)



HEADWALL REINFORCING PLAN



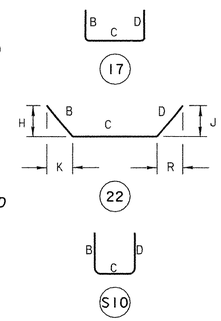
WINGWALL REINFORCING ELEVATION (TYPICAL)



HEADWALL REINFORCING ELEVATION

REINFORCING STEEL NOTES

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFROM TO THE REQUIREMENT OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A 615M-SI). ALL BARS SHALL BE GRADE 420, 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. "J" DIMENSION ON 180 DEGREE HOOKS ARE TO BE SHOWN ONLY WHEN NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
4. "H" DIMENSION ON STIRRUPS ARE TO BE SHOWN ONLY WHEN NECCESSARY TO MAINTAIN CLEARANCES.
5. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
6. ▲ DENOTES BARS TO BE CUT IN FIELD.



REINFORCING STEEL SCHEDULE

NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	H	J	K	R
58	16	3.83 ▲	W1602	STR	3.83							
50	16	2.57 ▲	W1603	STR	2.57							
27	16	1.21 ▲	W1604	STR	1.21							
30	16	4.53 ▲	W1605	STR	4.53							
33	19	1.74	W1902	STR	1.74							
28	19	1.98 ▲	W1901	17		0.77	1.21	—				
60	16	1.60 ▲	W1606	22		0.80	0.80	—	0.51	—	0.61	—
29	16	1.32	W1601	S10		0.50	0.32	0.50				

* REINFORCING STEEL LENGTHS IN METERS

* CUT BAR LENGTHS REUSED IN APPROPRIATE PLACES

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
75 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

0 1 2 3 4 5

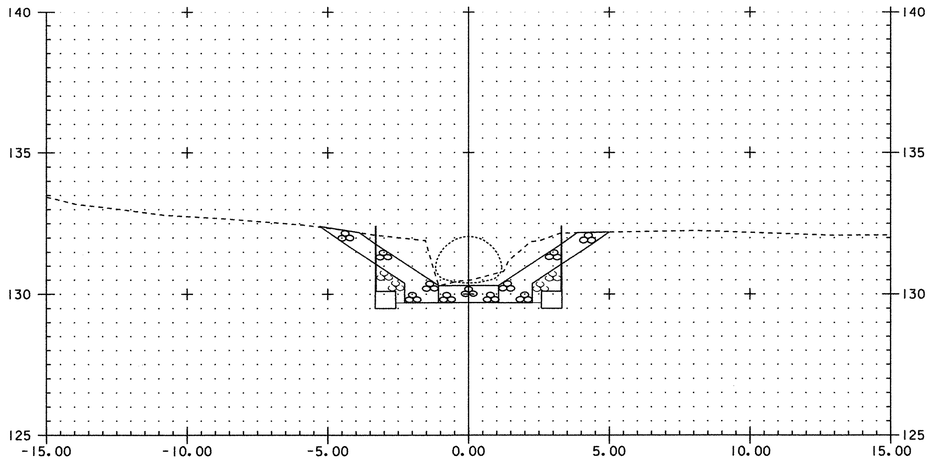
SCALE = 1:40

REINFORCING DETAIL SHEET

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

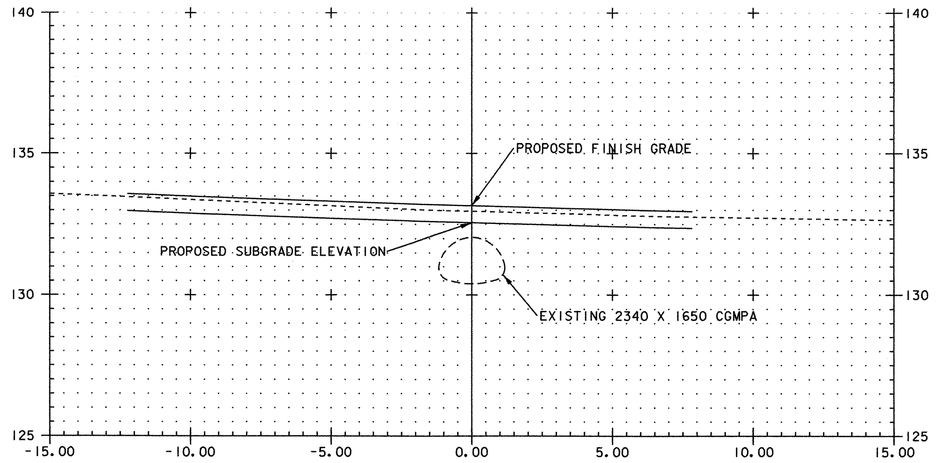
FILE NAME: /str/85c060/s85c060ww.dgn
PROJECT LEADER: S. FARNSWORTH
DESIGNED BY: M. FOWLER
sc060wrl5282.1

PLOT DATE: 24-MAR-2003
DRAWN BY: R. PELLETT
CHECKED BY: G. SPILAK
SHEET 26 OF 60

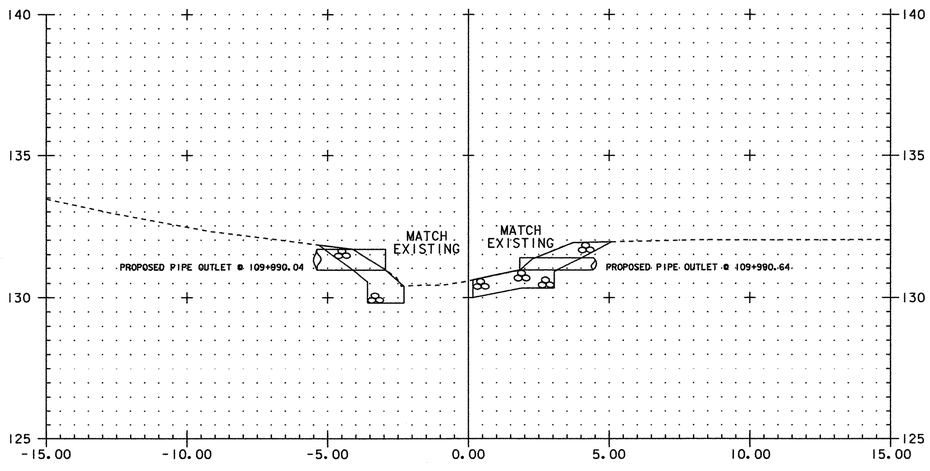


109+992.15

STA 109+992.16 END GRUBBING MATERIAL

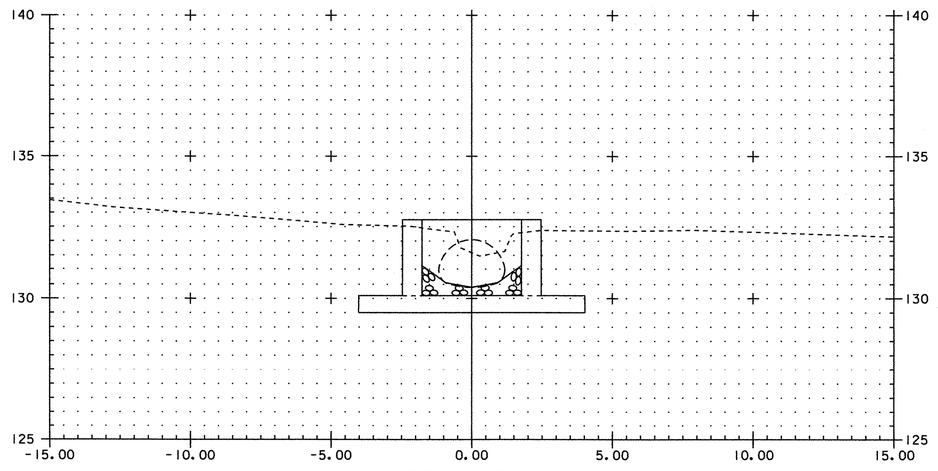


110+000.00



109+990.00

BEGIN TYPE II STONE FILL W/GEOTEXTILE UNDER STONE FILL AND GRUBBING MATERIAL



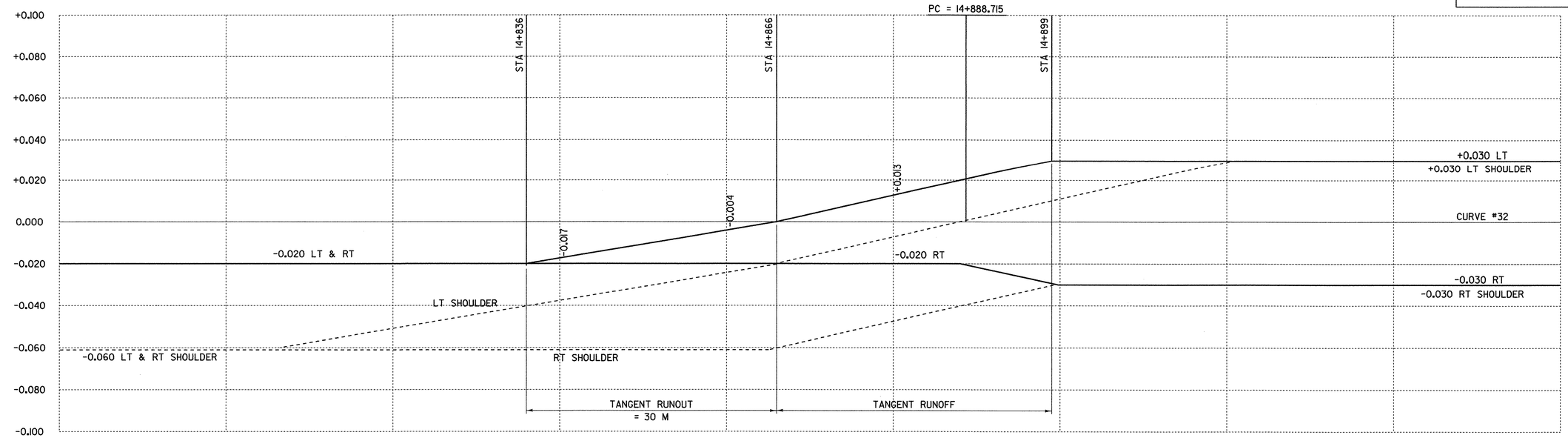
109+993.44

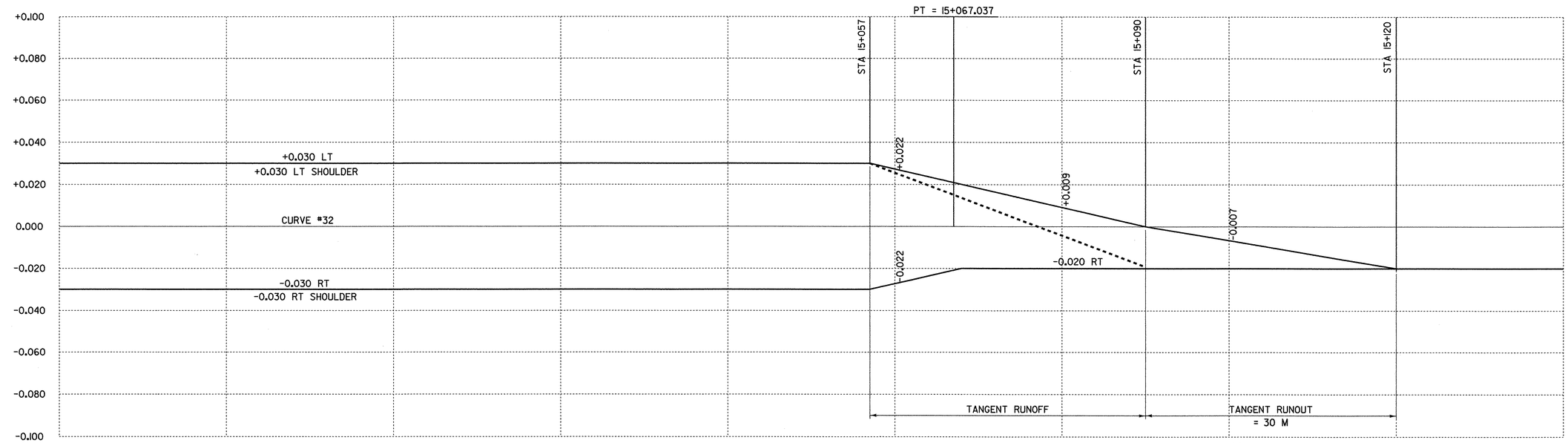
STA 109+993.43 END TYPE II STONE FILL
STA 109+992.98 END GEOTEXTILE UNDER STONE FILL

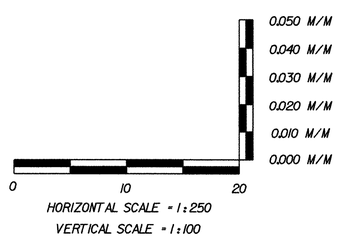
0 2 4 6 8 10
SCALE 1:100

PIPE STA. 15+282 – CHANNEL SECTIONS

PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: /85c060/str/s85c060xs.dgn	PLOT DATE: 21-MAR-2003
PROJECT LEADER: S. FARNSWORTH	DRAWN BY: R. PELLETT
DESIGNED BY: M. FOWLER	CHECKED BY: G. SPILAK
sc060xsl5282.i	SHEET 27 OF 60







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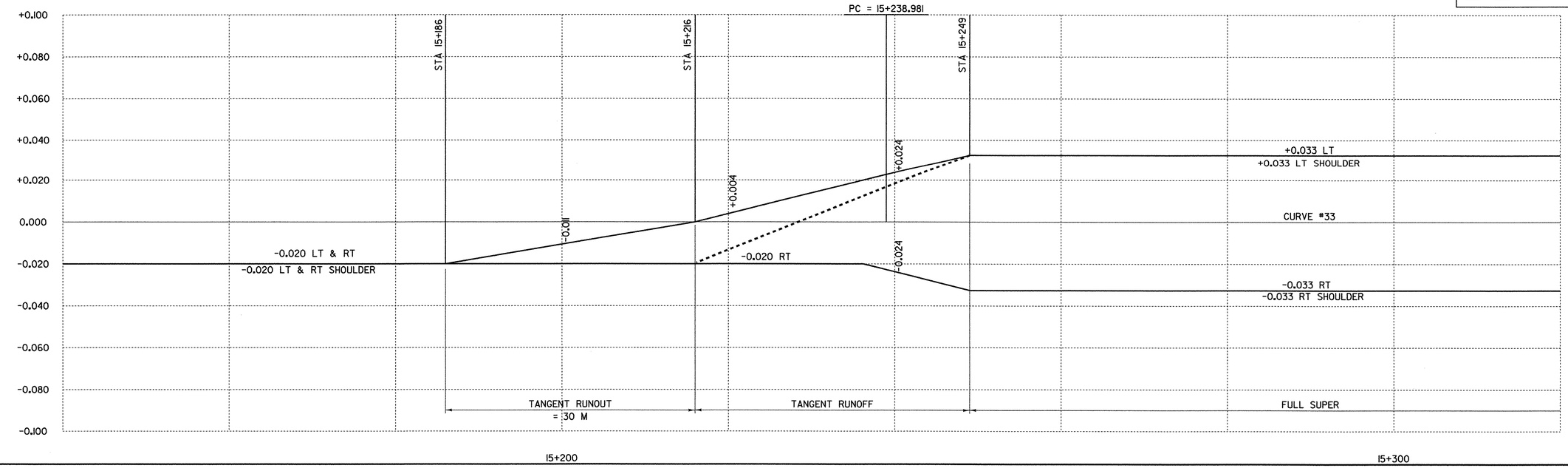
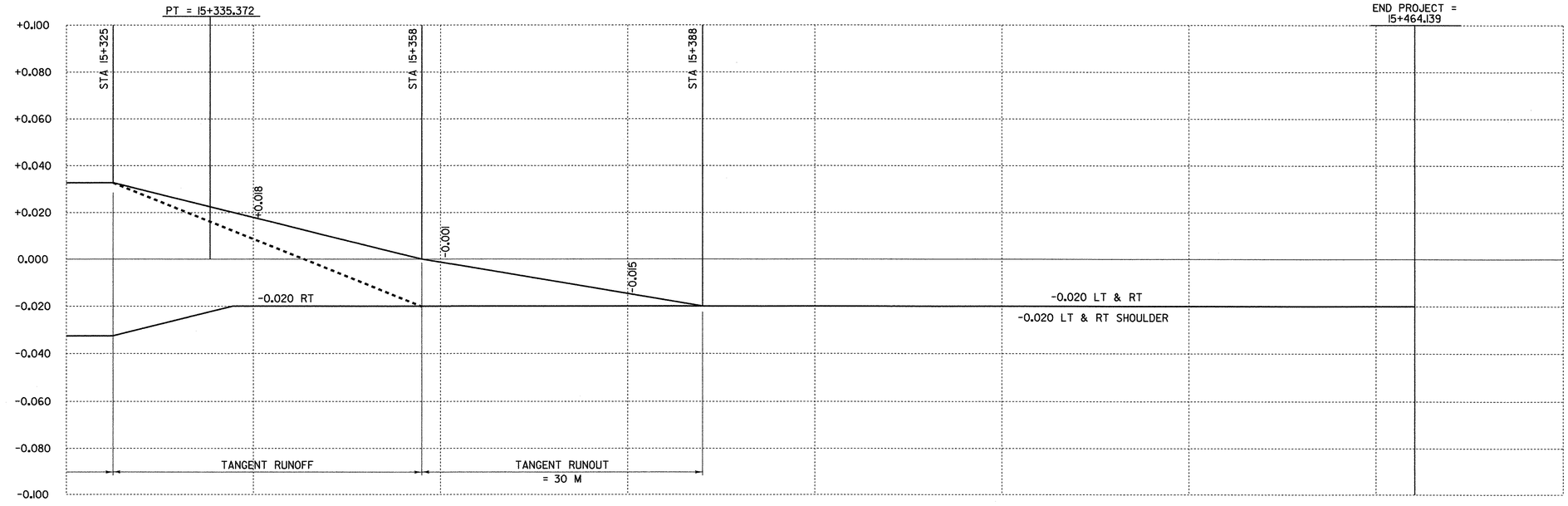
PROJECT NUMBER: STP 0301(18)

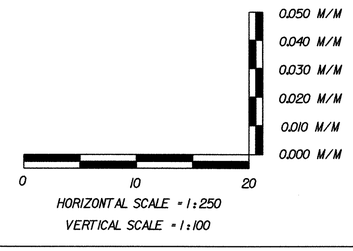
FILE NAME: ...85c060/design/dc060xsl.dgn
PROJECT LEADER: DELLASANTA
DESIGNED BY: SQUAD B
IPARM FILE NAME: dc060b24.i

PLOT DATE: 31-MAR-2003
DRAWN BY: SQUAD B
CHECKED BY: SQUAD B
SHEET 28 OF 60

Metric







PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

FILE NAME: ...85c060/design/dc060xsl.dgn
PROJECT LEADER: DELLASANTA
DESIGNED BY: SQUAD B
IPARM FILE NAME: dc060b25.i

PLOT DATE: 31-MAR-2003
DRAWN BY: SQUAD B
CHECKED BY: SQUAD B
SHEET 29 OF 60

EROSION CONTROL LAYOUT

MTO Metric

GEOTEXTILE FOR SILT FENCE
ah 15+000 ~ ah 15+023 LT. (25M)

SODDING
ah 15+056 ~ ah 15+090 LT. (31M)
ah 15+096 ~ ah 15+120 LT. (25M)
ah 15+096 ~ ah 15+120 LT. (16M)

NOTES
SODDING SHALL BE APPLIED IMMEDIATELY ON ALL LAWNS DISTURBED BEYOND THE WORK AREA DELINEATED ON THESE PLANS. ALL CONSTRUCTION SHALL BE PERFORMED FROM THE ROADWAY OUT.
OUTSIDE OF THE ROADWAY BOXED EXCAVATION, ALL NEWLY CONSTRUCTED SLOPES (EXCAVATED OR EMBANKMENT) SHALL BE SEALED WITH 5MM THICK TOPSOIL AND MULCHED AT THE END OF EACH WORKDAY IN ACCORDANCE WITH THE SPECIFICATION AND THESE PLANS.

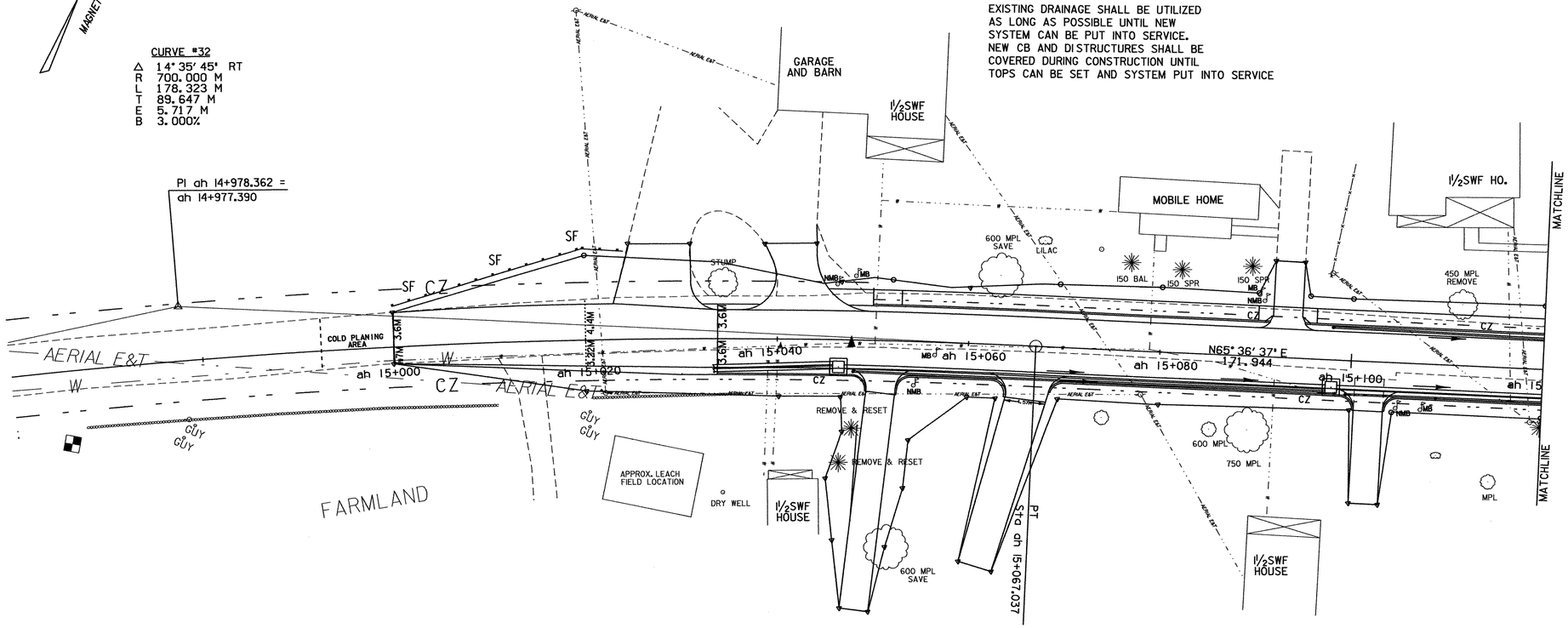
NOTES
EXISTING DRAINAGE SHALL BE UTILIZED AS LONG AS POSSIBLE UNTIL NEW SYSTEM CAN BE PUT INTO SERVICE. NEW CB AND DISTRUCTURES SHALL BE COVERED DURING CONSTRUCTION UNTIL TOPS CAN BE SET AND SYSTEM PUT INTO SERVICE

N

MAGNETIC 1993

CURVE #32
Δ 14° 35' 45" RT
R 700.000 M
L 178.323 M
T 89.647 M
E 5.717 M
B 3.000%

PI ah 14+978.362 =
ah 14+977.390



0 5 10 15
1:250

○ DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-71M

EROSION CONTROL LAYOUT

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)

FILE NAME:	85c060/design/2bdr.dgn	PLOT DATE:	27-MAR-2003
PROJECT LEADER:	DELLASANTA	DRAWN BY:	SQUAD B
DESIGNED BY:	SQUAD B	CHECKED BY:	SQUAD B
IPARM FILE NAME:	(2)dc060ecl.i	SHEET	30 OF 60

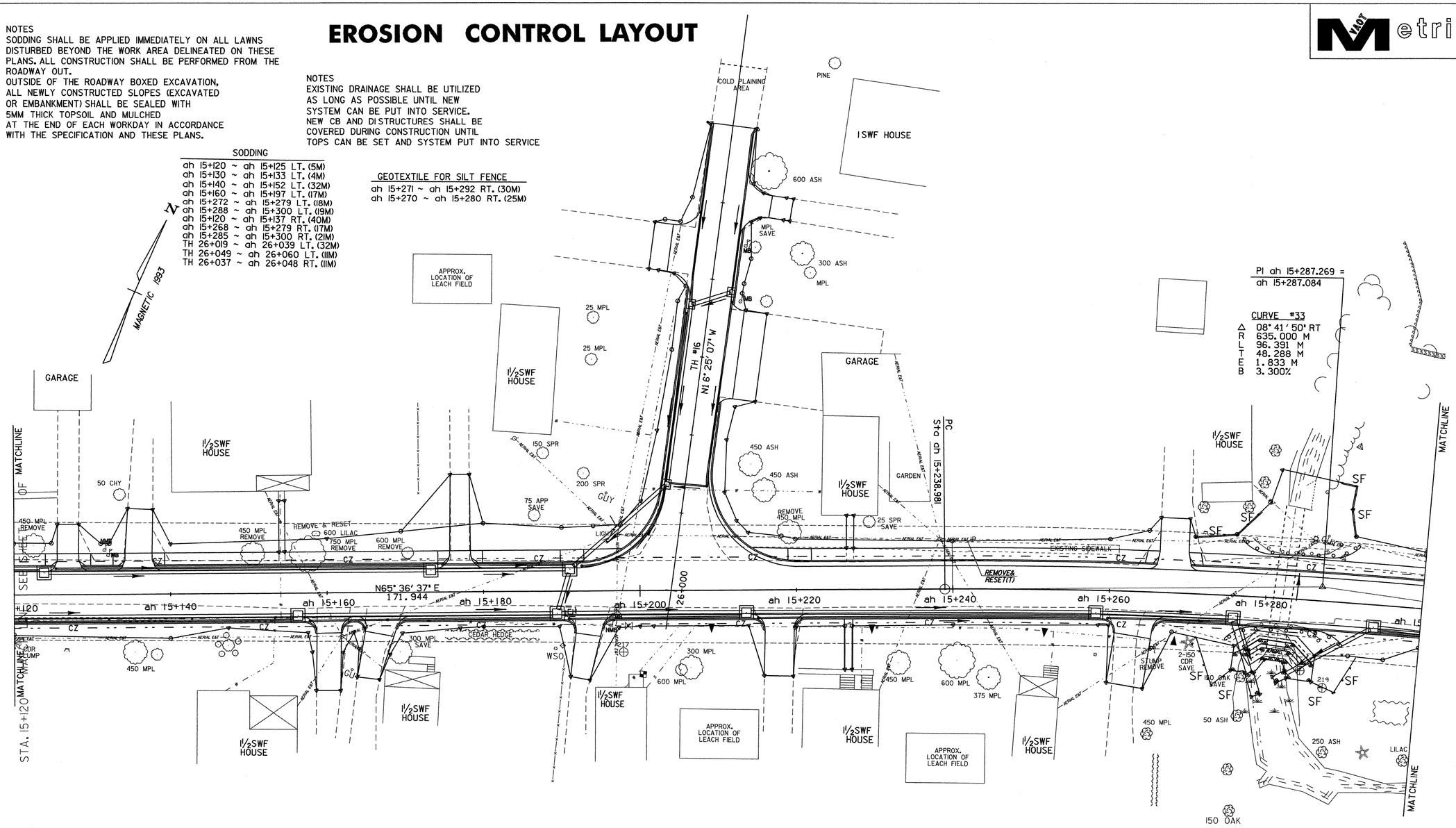
EROSION CONTROL LAYOUT

NOTES
SODDING SHALL BE APPLIED IMMEDIATELY ON ALL LAWNS DISTURBED BEYOND THE WORK AREA DELINEATED ON THESE PLANS. ALL CONSTRUCTION SHALL BE PERFORMED FROM THE ROADWAY OUT.
OUTSIDE OF THE ROADWAY BOXED EXCAVATION, ALL NEWLY CONSTRUCTED SLOPES (EXCAVATED OR EMBANKMENT) SHALL BE SEALED WITH 5MM THICK TOPSOIL AND MULCHED AT THE END OF EACH WORKDAY IN ACCORDANCE WITH THE SPECIFICATION AND THESE PLANS.

NOTES
EXISTING DRAINAGE SHALL BE UTILIZED AS LONG AS POSSIBLE UNTIL NEW SYSTEM CAN BE PUT INTO SERVICE.
NEW CB AND DI STRUCTURES SHALL BE COVERED DURING CONSTRUCTION UNTIL TOPS CAN BE SET AND SYSTEM PUT INTO SERVICE

SODDING
ah 15+120 ~ ah 15+125 LT. (5M)
ah 15+130 ~ ah 15+133 LT. (4M)
ah 15+140 ~ ah 15+152 LT. (32M)
ah 15+160 ~ ah 15+197 LT. (17M)
ah 15+272 ~ ah 15+279 LT. (18M)
ah 15+288 ~ ah 15+300 LT. (19M)
ah 15+120 ~ ah 15+137 RT. (40M)
ah 15+268 ~ ah 15+279 RT. (17M)
ah 15+285 ~ ah 15+300 RT. (21M)
TH 26+019 ~ ah 26+039 LT. (32M)
TH 26+049 ~ ah 26+060 LT. (11M)
TH 26+037 ~ ah 26+048 RT. (11M)

GEOTEXTILE FOR SILT FENCE
ah 15+271 ~ ah 15+292 RT. (30M)
ah 15+270 ~ ah 15+280 RT. (25M)



PI ah 15+287.269 =
ah 15+287.084

CURVE #33
Δ 08° 41' 50" RT
R 635.000 M
L 96.391 M
T 48.288 M
E 1.833 M
B 3.300%

0 5 10 15
1:250

○ DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-7IM

EROSION CONTROL LAYOUT

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)
FILE NAME: ...85c060/design/dc060bdr.dgn PLOT DATE: 10-APR-2003
PROJECT LEADER: DELLASANTA DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060ec2.1 SHEET 31 OF 60

EROSION CONTROL LAYOUT

VDOT Metric

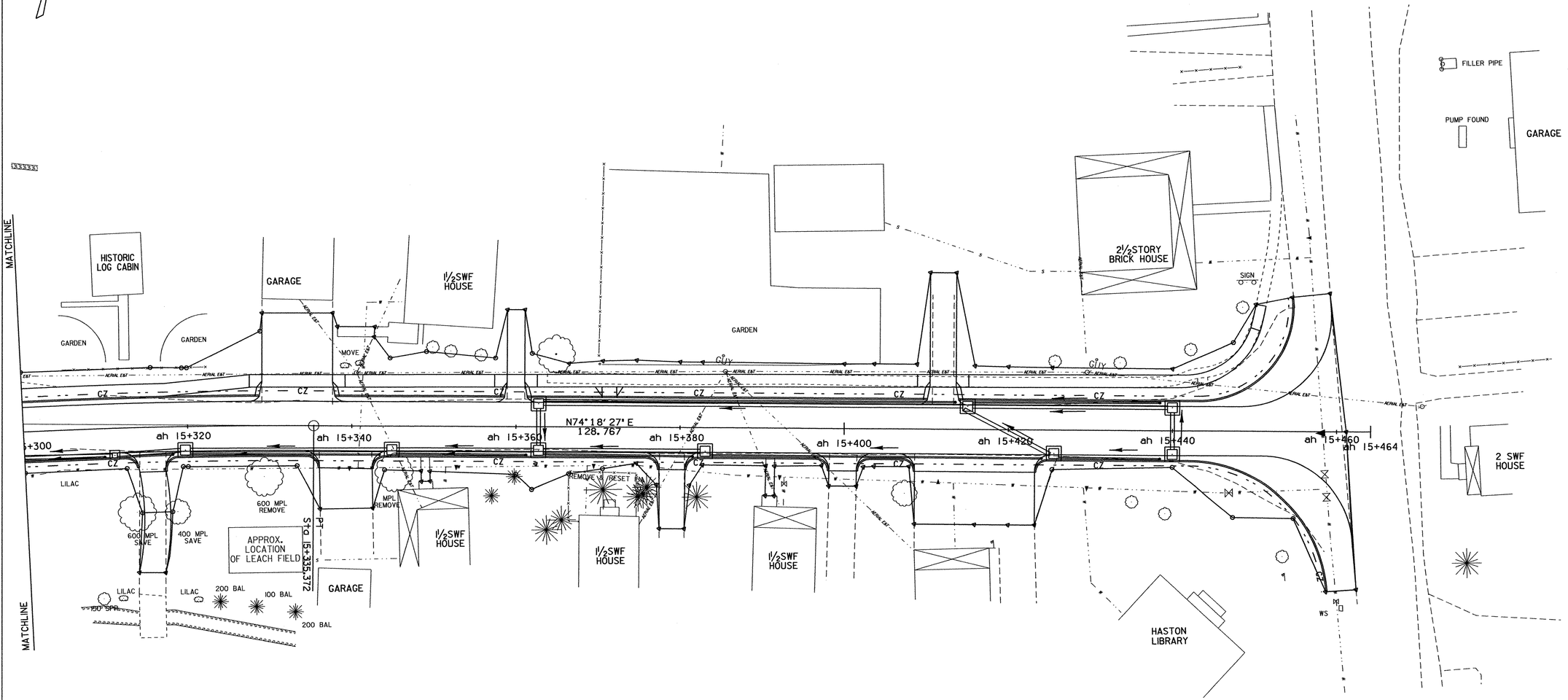
N

MAGNETIC 1993

SODDING
ah 15+300 ~ ah 15+313 RT. (13M)
ah 15+320 ~ ah15+334 RT. (15M)
ah 15+344 ~ ah 15+348 RT. (5M)
ah 15+349 ~ ah 15+371 RT. (26M)
ah 15+425 ~ ah 15+458 RT. (40M)
ah 15+300 ~ ah 15+328 LT. (29M)
ah 15+344 ~ ah 15+348 LT. (4M)
ah 15+349 ~ ah 15+353 LT. (9M)

NOTES
SODDING SHALL BE APPLIED IMMEDIATELY ON ALL LAWNS DISTURBED BEYOND THE WORK AREA DELINEATED ON THESE PLANS. ALL CONSTRUCTION SHALL BE PERFORMED FROM THE ROADWAY OUT.
OUTSIDE OF THE ROADWAY BOXED EXCAVATION, ALL NEWLY CONSTRUCTED SLOPES (EXCAVATED OR EMBANKMENT) SHALL BE SEALED WITH 5MM THICK TOPSOIL AND MULCHED AT THE END OF EACH WORKDAY IN ACCORDANCE WITH THE SPECIFICATION AND THESE PLANS.

NOTES
EXISTING DRAINAGE SHALL BE UTILIZED AS LONG AS POSSIBLE UNTIL NEW SYSTEM CAN BE PUT INTO SERVICE.
NEW CB AND DI STRUCTURES SHALL BE COVERED DURING CONSTRUCTION UNTIL TOPS CAN BE SET AND SYSTEM PUT INTO SERVICE



0 5 10 15
1:250

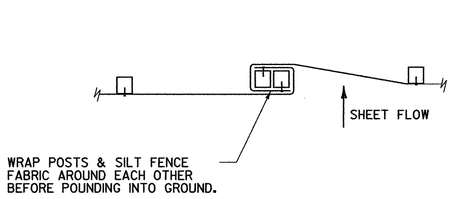
○ DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-7IM

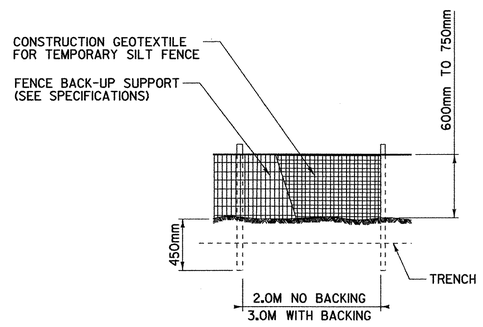
EROSION CONTROL LAYOUT

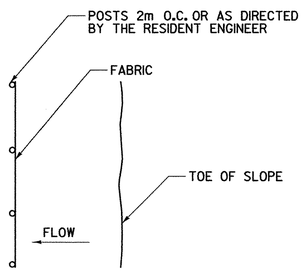
PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)
FILE NAME: ...85c060/design/dc060bdr.dgn	PLOT DATE: 27-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060ec3.I	SHEET 32 OF 60

VAOT Metric

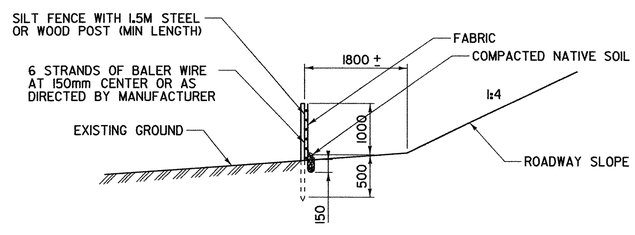


SPLICE DETAIL





PLAN



ELEVATION

SILT FENCE

NOT TO SCALE

NOTES:

1. FILTER TO BE BURIED APPROXIMATELY 150 mm INTO THE GROUND
2. FABRIC TO BE ATTACHED TO WIRE ON SLOPE SIDE
3. CONTRACTOR WILL FURNISH COMMERCIALLY AVAILABLE SILT FENCE THAT MEETS VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION
4. HAY BALES OR WIRE MESH MAY BE USED AT ENGINEERS DISCRETION IN CONJUCTION WITH THE SILT FENCE
5. HAY BALES SHALL NOT BE USED IN AREAS OF CONCENTRATED FLOW

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED.

EROSION CONTROL DETAIL

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)

FILE NAME:	85c060/design/(2)dc060pms.dgn	PLOT DATE:	20-MAR-2003
PROJECT LEADER:	DELLASANTA	DRAWN BY:	SQUAD B
DESIGNED BY:	SQUAD B	CHECKED BY:	SQUAD B
IPARM FILE NAME:	(2)dc060edl.i	SHEET	33 OF 60

PAVMENT MARKING & TRAFFIC SIGNING LAYOUT

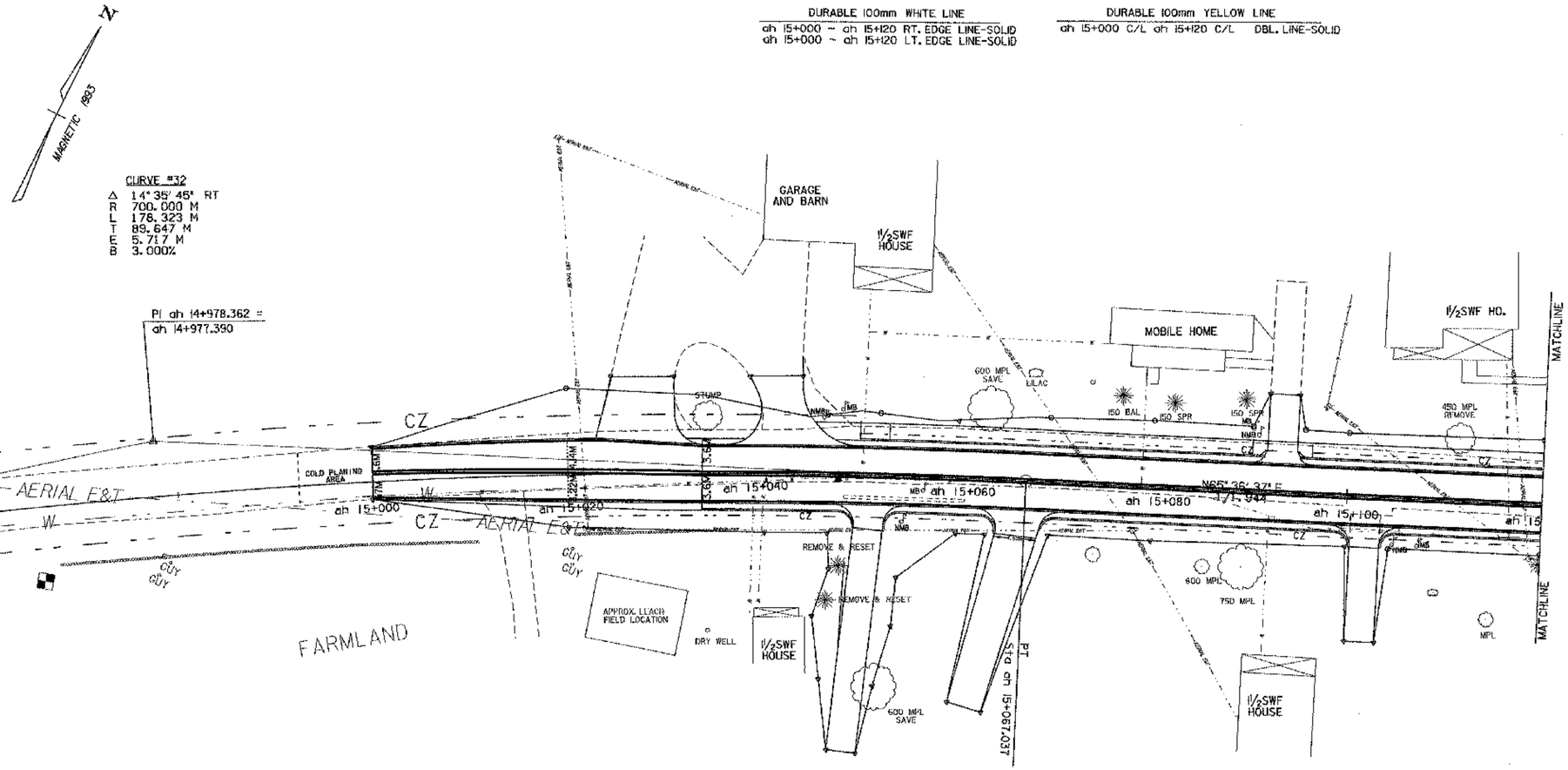
Metric

TEMPORARY 100mm WHITE LINE
~~ah 15+000 ~ ah 15+120 RT. EDGE LINE-SOLID~~
~~ah 15+000 ~ ah 15+120 LT. EDGE LINE-SOLID~~

DURABLE 100mm WHITE LINE
ah 15+000 ~ ah 15+120 RT. EDGE LINE-SOLID
ah 15+000 ~ ah 15+120 LT. EDGE LINE-SOLID

TEMPORARY 100mm YELLOW LINE
ah 15+000 C/L ah 15+120 C/L DBL. LINE-SOLID

DURABLE 100mm YELLOW LINE
ah 15+000 C/L ah 15+120 C/L DBL. LINE-SOLID



0 5 10 15
1:250

○ DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-7M

LEGEND
R = REMOVE
N = NEW
R&S = REMOVE & SALVAGE
RET = RETAIN

PAVEMENT MARKING & TRAFFIC SIGNING LAYOUT

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)
FILE NAME: ...85c060/design/dc060bdr.dgn	PLOT DATE: 24-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: dc060pml.i	SHEET 34 OF 60

PAVMENT MARKING & TRAFFIC SIGNING LAYOUT

TEMPORARY 100mm WHITE LINE

~~M/L ah 15+120 LT ~ SL 26+060 LT. EDGE LINE-SOLID~~
~~S/L 26+060 RT ~ ah 15+300 LT. EDGE LINE-SOLID~~
~~M/L ah 15+120 ~ ah 15+300 RT. EDGE LINE-SOLID~~

DURABLE 100mm WHITE LINE

M/L ah 15+120 LT ~ SL 26+060 LT. EDGE LINE-SOLID
S/L 26+060 RT ~ ah 15+300 LT. EDGE LINE-SOLID
M/L ah 15+120 ~ ah 15+300 RT. EDGE LINE-SOLID

TEMPORARY 100mm YELLOW LINE

M/L ah 15+120 C/L ~ 15+198 C/L DBL. LINE-SOLID
M/L ah 15+210 C/L ~ ah 15+300 C/L DBL. LINE-SOLID
S/L 26+010 C/L ~ 26+060 C/L DBL. LINE-SOLID

DURABLE 100mm YELLOW LINE

M/L ah 15+120 C/L ~ ah 15+198 C/L DBL. LINE-SOLID
M/L ah 15+210 C/L ~ ah 15+300 C/L DBL. LINE-SOLID
S/L 26+010 C/L ~ 26+060 C/L DBL. LINE-SOLID

REMOVING SIGNS

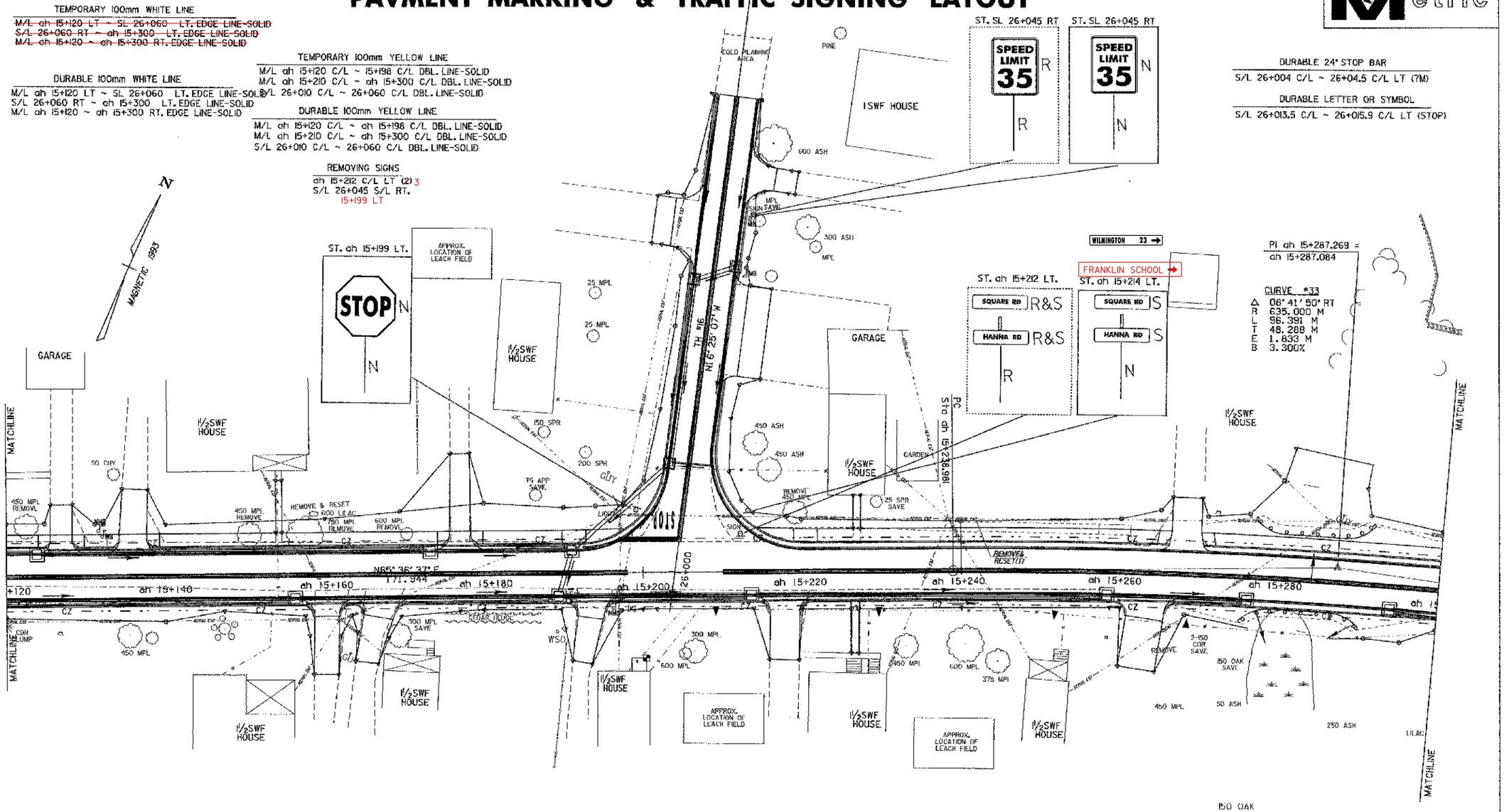
ah 15+212 C/L LT (2) 3
S/L 26+045 S/L RT.
15+199 LT

DURABLE 24" STOP BAR

S/L 26+004 C/L ~ 26+04.5 C/L LT (7M)

DURABLE LETTER OR SYMBOL

S/L 26+013.5 C/L ~ 26+015.9 C/L LT (STOP)



LEGEND

R = REMOVE
N = NEW
R&S = REMOVE & SALVAGE
RET = RETAIN

0 5 10 15
1:250

○ DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-7IM

PAVEMENT MARKING &TRAFFIC SIGNING LAYOUT

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)
FILE NAME: ...85c060/design/dc060bdr.dgn	PLOT DATE: 27-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2) dc060pms2	SHEET 35 OF 60

PAVMENT MARKING & TRAFFIC SIGNING LAYOUT

Metric

TEMPORARY 4" WHITE LINE
~~M/L ah 15+300 ~ ah 15+459 LT. EDGE LINE-SOLID~~
~~M/L ah 15+300 ~ ah 15+462 RT. EDGE LINE-SOLID~~

DURABLE 4" WHITE LINE
M/L ah 15+300 ~ ah 15+459 LT. EDGE LINE-SOLID
M/L ah 15+300 ~ ah 15+462 RT. EDGE LINE-SOLID

TEMPORARY 4" YELLOW LINE
M/L ah 15+300 C/L ~ ah 15+459 C/L DBL. LINE-SOLID

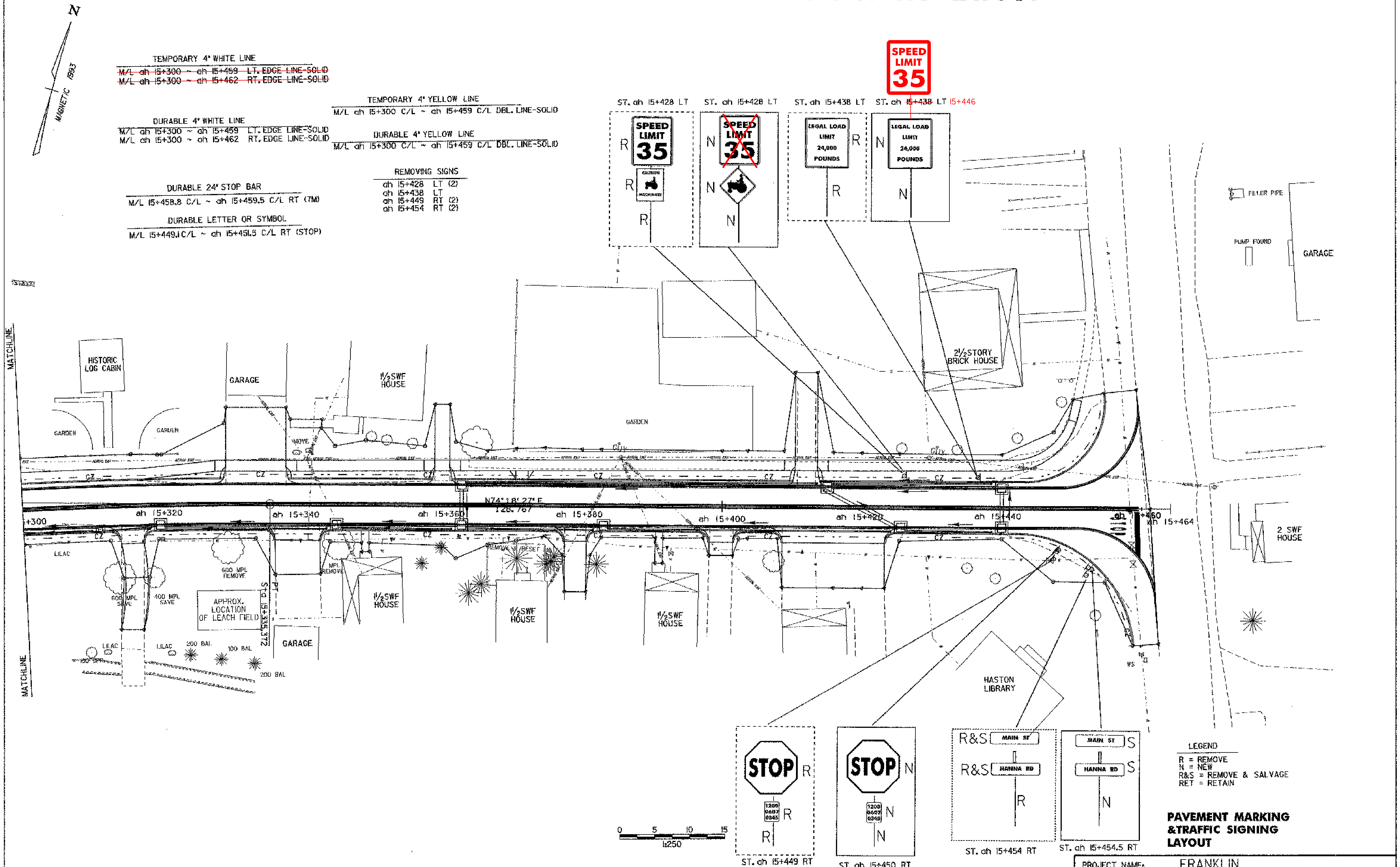
DURABLE 4" YELLOW LINE
M/L ah 15+300 C/L ~ ah 15+459 C/L DBL. LINE-SOLID

DURABLE 24" STOP BAR
M/L 15+458.8 C/L ~ ah 15+459.5 C/L RT (7M)

DURABLE LETTER OR SYMBOL
M/L 15+449.1C/L ~ ah 15+451.5 C/L RT (STOP)

REMOVING SIGNS

ah 15+428	LT	(2)
ah 15+438	LT	
ah 15+449	RT	(2)
ah 15+454	RT	(2)



DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-7M

LEGEND
R = REMOVE
N = NEW
R&S = REMOVE & SALVAGE
RET = RETAIN

PAVEMENT MARKING & TRAFFIC SIGNING LAYOUT

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)
FILE NAME: ...85c060/design/dc060bdr.dgn	PLOT DATE: 27-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: dc060pms3	SHEET 36 OF 60

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

Metric

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (mm)	HEIGHT (mm)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL Kg/m 1.7	3.0	4.5	SQUARE STEEL (mm) Kg/m 44 3.4	50 3.9	63 5.0	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (mm) 75 1.9	100 2.5	100 MOD 2.5	TUBULAR STEEL Ø (mm) FOUNDATION	75 11.3	89 13.4	100 16.1	125 21.7	W-SHAPE STEEL FTG. SIZE 600 mm	750 mm	WEIGHT	POST SIZE	SIGN REFRAMED REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																								
ah 15+199 LT.	STOP	1	750	750	0.562						1			X			3.66 X																	RI-1		E-143M
ah 15+214 LT.	SQUARE RD						X				1			X			3.66 X																	POST TOP MOUNTING		E-123M
	HANNA RD.						X																											POST TOP MOUNTING		E-123M
ah 15+~~428~~ 446 LT.	SPEED LIMIT 35	1	600	750	0.450						1			X			3.96 X																	R2-4		E-142M
ah 15+428 lt		1	750	750	0.562																														36	
ah 15+~~438~~ 446 LT.	LEGAL LOAD LIMIT 24,000 POUNDS	1	600	750	0.450						1			X			4.27 X																	VR-017		E-141M
ah 15+450 RT.	STOP	1	750	750	0.562						1			X			3.96 X																	RI-1		E-143M
	1200 0607 0345	1	150	200	0.030																													VD-700		E-138M
ah 15+454 LT.	MAIN ST						X				1			X			3.66 X																	POST TOP MOUNTING		E-123M
	HANNA RD.						X																											POST TOP MOUNTING		E-123M
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."												m 23			m 23				EA	kg				kg											
	TOTALS		m^2 2.62	m^2	EA.	m^2						m 23			m 23					kg			EA.	kg				EA.	EA.	kg					

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

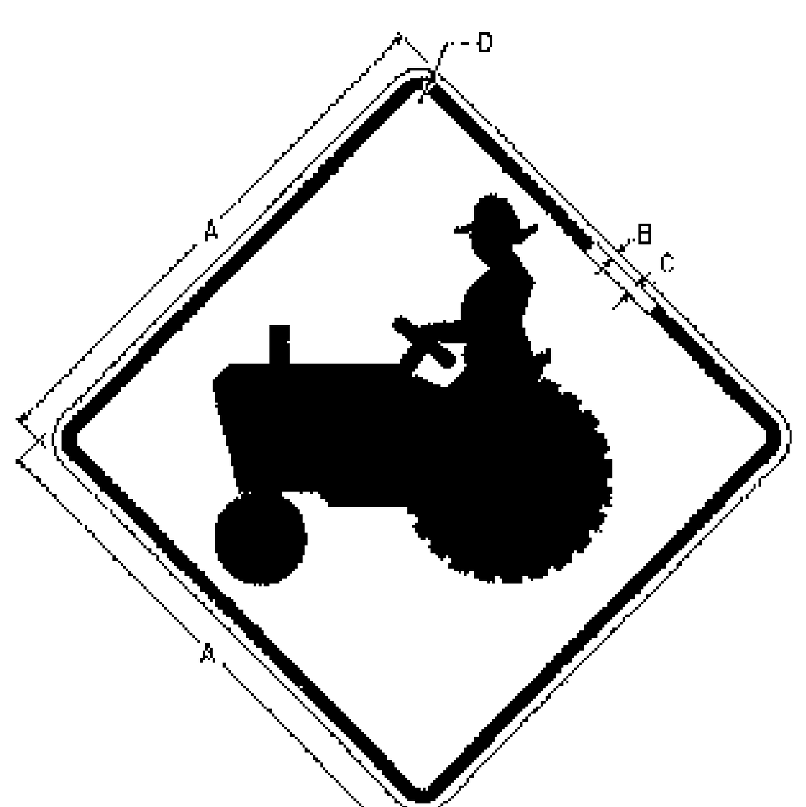
FILE NAME: ...85c060/design/dc060pms.dgn PLOT DATE: 27-MAR-2003
PROJECT LEADER: DELLASANTA DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060tss.i SHEET 37 OF 60

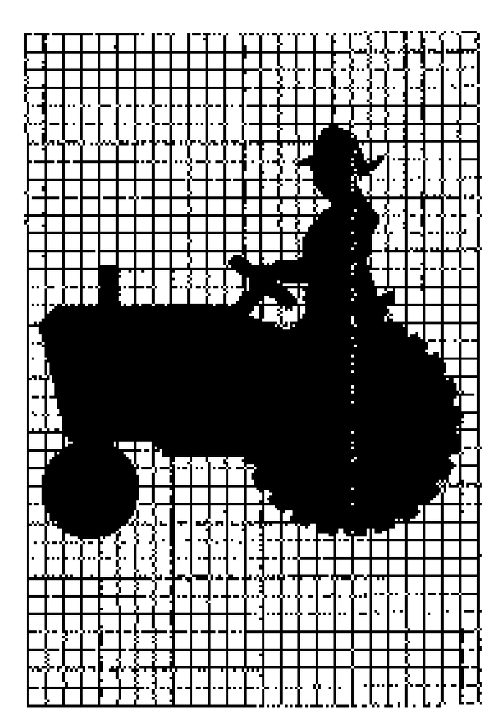
STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

Metric

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (mm)	HEIGHT (mm)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL kg/m 1.7	3.0	4.5	SQUARE STEEL (mm) 44 kg/m 3.4	50 3.9	63 5.0	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (mm) 75 kg/m 1.9	100 2.5	100 MOD 2.5	FOUNDATION	TUBULAR STEEL Ø (mm) 75 kg/m 11.3	89 13.4	100 16.1	125 21.7	W-SHAPE STEEL FTG. SIZE 600 mm	750 mm	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL: DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																							
	TH # 16																																		
SL 26+045 RT.	SPEED LIMIT 35	1	600	750	0.450						1			X			3.96 X																R2-4		E-142M





SCALE - 1 SQUARE = 1 UNIT

W11-5

NOTE: OPTICALLY CENTER

SIGN	DIMENSIONS (INCHES) A	B	C	D
MIN.	600	10	15	50
STD.	750	13	20	50
EXPWY.	900	15	25	60
SPECIAL	1200	20	30	70

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."

TOTALS / GRAND TOTALS	"A"	"B"	SALV SIGN	SALV TIS	FLANGED CHANNEL	SQUARE STEEL	ANCHOR	TUBULAR ALUMINUM	FOUNDATION	TUBULAR STEEL	FTG. 600	FTG. 750	WEIGHT
Units (by size)					m, m, m (4.5: 4)	m, m, m (63: 4)	EA	kg, kg, kg		kg, kg, kg, kg			
TOTALS	m² 0.450	m²	EA.	m²	m 4	m 4		kg	EA.	kg	EA.	EA.	kg
GRAND TOTALS	(3.07)				(27)	(27)							

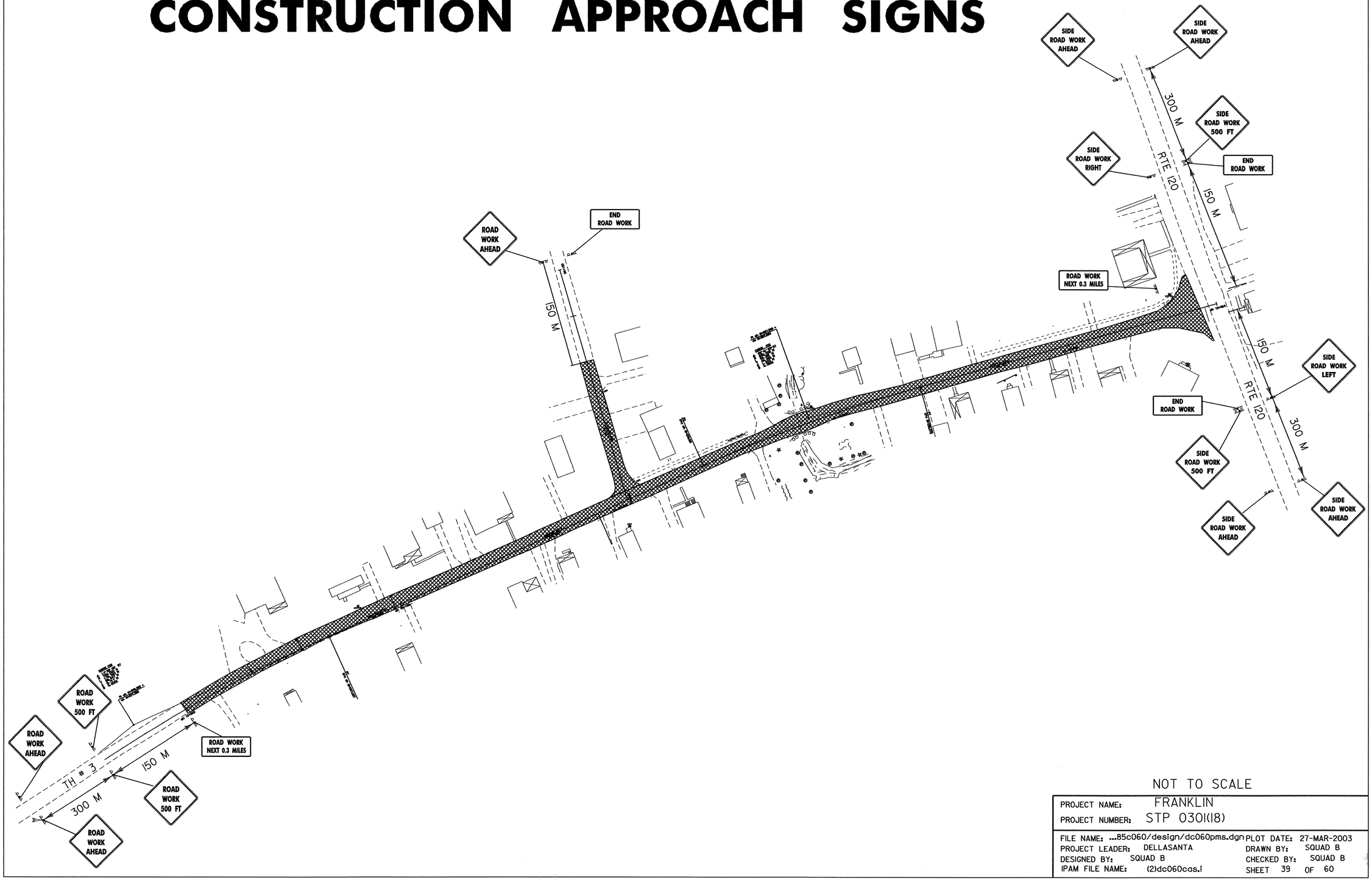
PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(8)

FILE NAME: ...85c060/design/dc060pms.dgn PLOT DATE: 27-MAR-2003
PROJECT LEADER: DELLASANTA DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B CHECKED BY: SQUAD B
IPAM FILE NAME: (2)dc060tsh.I SHEET 38 OF 60

SIDE ROAD CONSTRUCTION APPROACH SIGNS

CONSTRUCTION APPROACH SIGNS

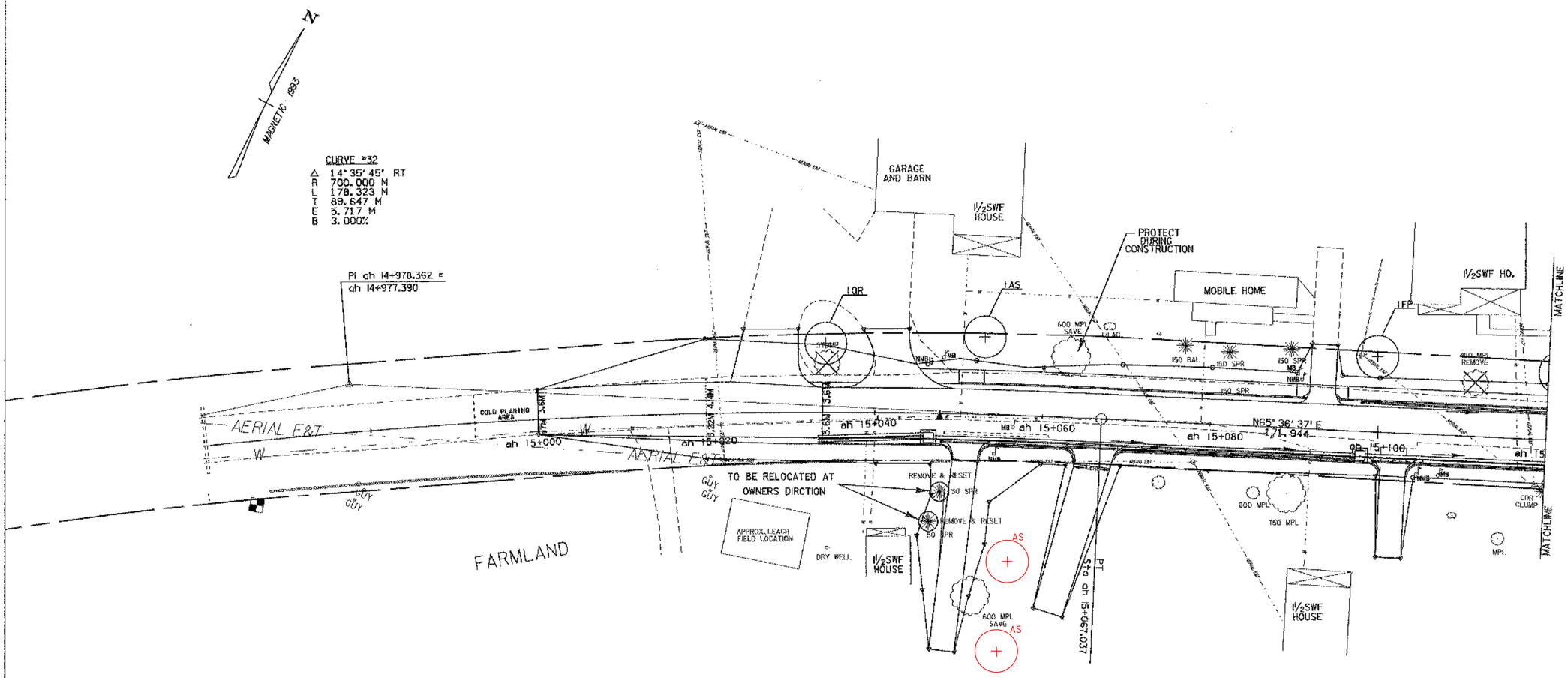
VDOT Metric



NOT TO SCALE

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)

FILE NAME:	...85c060/design/dc060pms.dgn	PLOT DATE:	27-MAR-2003
PROJECT LEADER:	DELLASANTA	DRAWN BY:	SQUAD B
DESIGNED BY:	SQUAD B	CHECKED BY:	SQUAD B
IPAM FILE NAME:	(2)dc060cas.i	SHEET	39 OF 60



LEGEND

- TO BE REMOVED
- PROPOSED TREE
- TO BE RELOCATED BY OTHERS
- PROTECT EXISTING TREES DURING CONSTRUCTION (PROTECT)
- EXISTING TREE (TO REMAIN)

0 5 10 15
1:250

DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-71M

LANDSCAPE PLANS

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)
FILE NAME:	85c060/design/2bdr.dgn
PROJECT LEADER:	DELLASANTA
DESIGNED BY:	SQUAD B
IPARM FILE NAME:	(2)dc060int.i
PLOT DATE:	27-MAR-2003
DRAWN BY:	SQUAD B
CHECKED BY:	SQUAD B
SHEET	40 OF 60

Metric

N

MAGNETIC 1993

GARAGE

MATCHLINE

1 QR

50 CHY

1/2 SWF HOUSE

SIDEWALK TO BE MOVED CLOSER TO EDGE OF ROAD

2 QR

450 DBH REMOVE

450 MPL REMOVE

REMOVE & RESET (T)

60 LILAC

750 MPL REMOVE

600 MPL REMOVE

APPROX. LOCATION OF LEACH FIELD

1/2 SWF HOUSE

25 MPL

25 MPL

150 SPR

200 SPR

75 APP SAVE

GUY

COLD PLANING AREA

PINE

1 SWF HOUSE

600 ASH

MPL SAVE

300 ASH

MPL

TH #16

N16° 25' 07" W

GARAGE

PC Sta ch 15+238.981

180 ASH

1 AS

450 ASH

1/2 SWF HOUSE

GARDEN

2 AR

REMOVE 450 MPL

25 SPR SAVE

SIGN

REMOVE & RESET (T)

N65° 36' 37" E

171.944

ch 15+120

ch 15+140

ch 15+160

ch 15+180

ch 15+200

26+000

ch 15+220

ch 15+240

ch 15+260

ch 15+280

ch 15

COR PUMP

450 MPL

300 MPL SAVE

CURB TO BE PROTECT DURING CONSTRUCTION

W50

300 MPL

600 MPL

1/2 SWF HOUSE

APPROX. LOCATION OF LEACH FIELD

450 MPL

600 MPL

375 MPL

1/2 SWF HOUSE

APPROX. LOCATION OF LEACH FIELD

1/2 SWF HOUSE

1/2 SWF HOUSE

Pl ch 15+287.269 =
ch 15+287.084

CURVE #33
Δ 08° 41' 50" RT
R 635.000 M
L 96.391 M
T 48.288 M
E 1.833 M
B 3.300%

MATCHLINE

1/2 SWF HOUSE

1 AR

2-150 CDR SAVE

REMOVE

5 RUG

150 OAK SAVE

217

5 RUG

5 QR

450 MPL

50 ASH

250 ASH

LILAC

150 OAK

MATCHLINE

LEGEND

- TO BE REMOVED
- PROPOSED TREE
- TO BE RELOCATED BY OTHERS
- PROTECT EXISTING TREES DURING CONSTRUCTION (PROTECT)
- EXISTING TREE (TO REMAIN)

0 5 10 15
1:250

DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-71M

SCAPE PLANS

LANDSCAPE PLANS

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)
FILE NAME:	85c060/design/(2)boreo.dgn
PLOT DATE:	27-MAR-2003
PROJECT LEADER:	DELLASANTA
DRAWN BY:	SQUAD B
DESIGNED BY:	SQUAD B
CHECKED BY:	SQUAD B
IPARM FILE NAME:	(2)dc060ln2.i
SHEET	41 OF 60

VDOT Metric

N

MAGNETIC 1993

MATCHLINE

HISTORIC LOG CABIN

GARDEN

GARDEN

GARAGE

1½SWF HOUSE

PROTECT DURING CONSTRUCTION

MPL

SPR SPR APP

MOVE

GARDEN

2½STORY BRICK HOUSE

MPL

MPL

PROTECT DURING CONSTRUCTION

FILLER PIPE

PUMP FOUND

GARAGE

2 SWF HOUSE

CZ

ah 15+300

ah 15+320

ah 15+340

ah 15+360

ah 15+380

ah 15+400

ah 15+420

ah 15+440

ah 15+460

ah 15+464

N74°18'27"E
128.767

LILAC

600 MPL REMOVE

600 MPL SAVE

400 MPL SAVE

APPROX. LOCATION OF LEACH FIELD

1QR Sta 15+335.372

PT

MPL REMOVE

1½SWF HOUSE

4 BLK LOCUST

REMOVE & RESET RM

LILAC

4 BLK LOCUST

BLK LOCUST

2 BLK LOCUST

1½SWF HOUSE

1½SWF HOUSE

MPL

LFP

SPR

WS

LILAC

LILAC

200 BAL

100 BAL

150 SPR

200 BAL

GARAGE

PROTECT DURING CONSTRUCTION

HASTON LIBRARY

MATCHLINE

LEGEND

- ⊗ - TO BE REMOVED
- \+ - PROPOSED TREE
- ○ - TO BE RELOCATED BY OTHERS
- PROTECT → · - PROTECT EXISTING TREES DURING CONSTRUCTION
- · - EXISTING TREE (TO REMAIN)

0 5 10 15
1:250

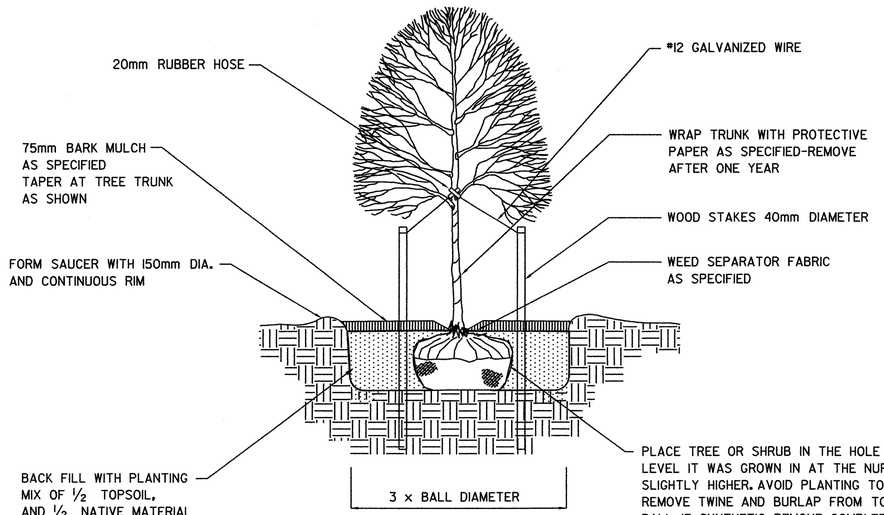
○ DENOTES TREE OR STUMP REMOVAL

ALL DRIVE RADII SHALL BE 6M UNLESS OTHERWISE NOTED PER STD B-71M

LANDSCAPE PLANS

PROJECT NAME:	FRANKLIN
PROJECT NUMBER:	STP 0301(18)
FILE NAME:	85c060/design/(2)borec.dgn
PLOT DATE:	27-MAR-2003
PROJECT LEADER:	DELLASANTA
DRAWN BY:	SQUAD B
DESIGNED BY:	SQUAD B
CHECKED BY:	SQUAD B
IPARM FILE NAME:	(2)dc06ln3.i
SHEET	42 OF 60

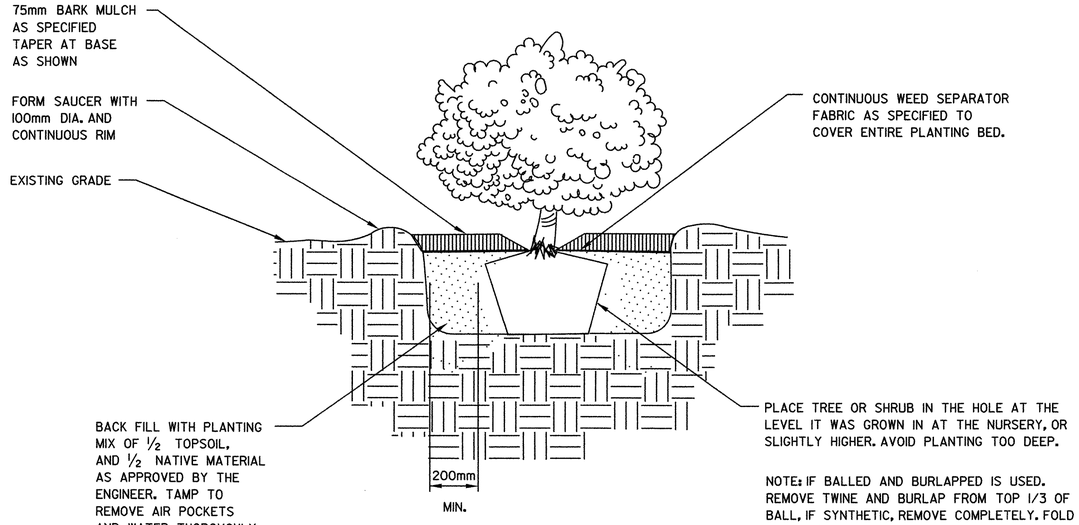
LANDSCAPE DETAIL SHEET



NOTES:

1. STAKE ONLY THOSE TREES PLANTE IN WINDY, EXPOSED LOCATIONS, WHERE THEY MIGHT BE BLOWN OVER OR VANDALIZED.
2. COMPLETELY REMOVE GUY WIRES, RUBBER HOSE AND STAKES ONE YEAR AFTER PLANTING.

TREE PLANTING DETAIL



SHRUB PLANTING DETAIL

PRELIMINARY PLANS
NOT TO SCALE

PROJECT NAME:	HIGHGATE - FRANKLIN
PROJECT NUMBER:	STP RS 0301(1) SA

FILE NAME:	..85c060/design/(2)dc060ldt.dgn	PLOT DATE:	20-MAR-2003
PROJECT LEADER:	DELLASANTA	DRAWN BY:	SQUAD B
DESIGNED BY:	SQUAD B	CHECKED BY:	SQUAD B
IPARM FILE NAME:	(2)dc060ldt01.i	SHEET	43 OF 60

Metric

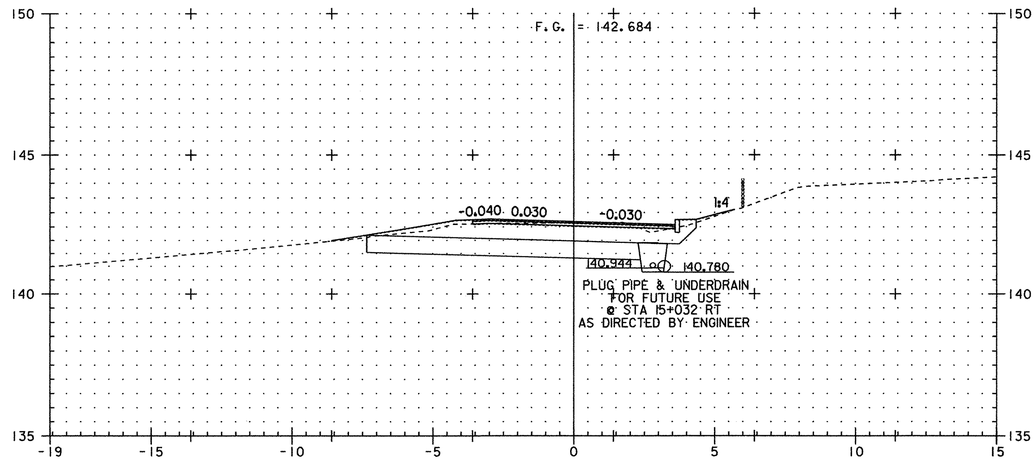
LANDSCAPE QUANTITY SHEET

QUANTITY	UNIT	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS	ITEM NO.
			DECIDUOUS TREES					
3	EA	AR	ACER RUBRUM	RED MAPLE "FREEMANI"	75MM - 90MM CAL.	AS SHOWN	B&B	
2	EA	AS	ACER SACHARUM	SUGAR MAPLE	75MM - 90MM CAL.	AS SHOWN	B&B	
4	EA	FP	FRAXINUS PENNSYLVANICA	GREEN ASH	75MM - 90MM CAL.	AS SHOWN	B&B	
7	EA	QR	QUERCUS RUBRA	NORTHERN RED OAK	75MM - 90MM CAL.	AS SHOWN	B&B	
			DECIDUOUS SHRUBS					
10	EA	RA	RHUS AROMATICA "GROLOW"	GROLOW SUMAC	600MM - 750MM	1M OC	CONTAINER	

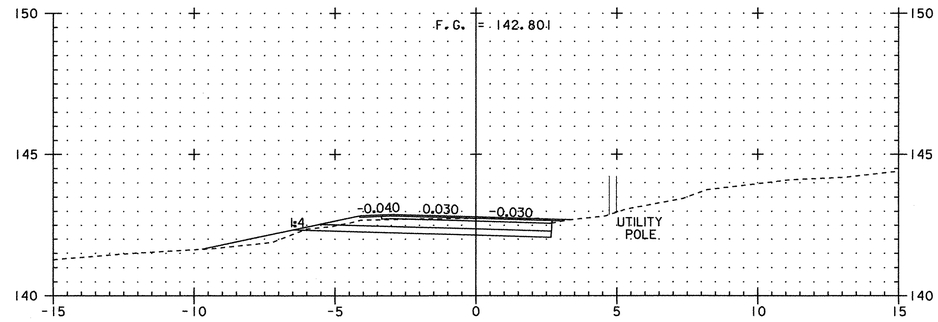
NOTES:

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP RS 0301(18)

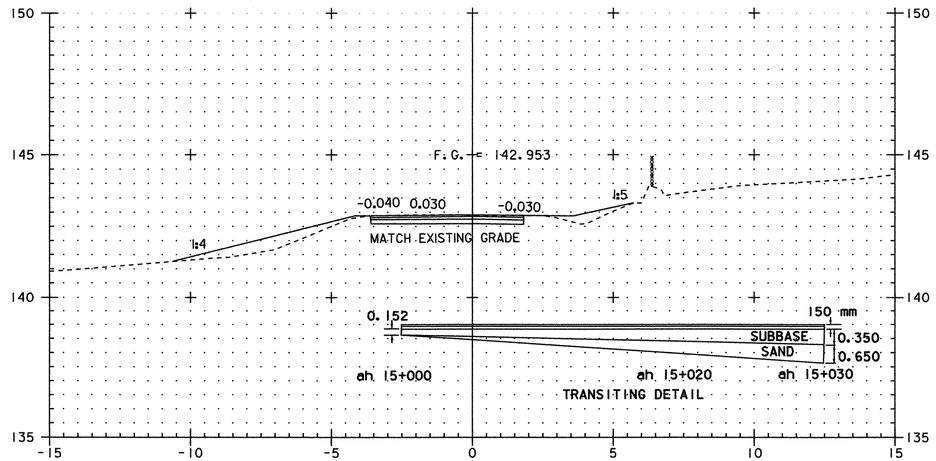
FILE NAME: ..85c060/design/(2)dc060ldt.dgn PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060lqt01.i SHEET 44 OF 60



ah 15+034
BEGIN PROJECT



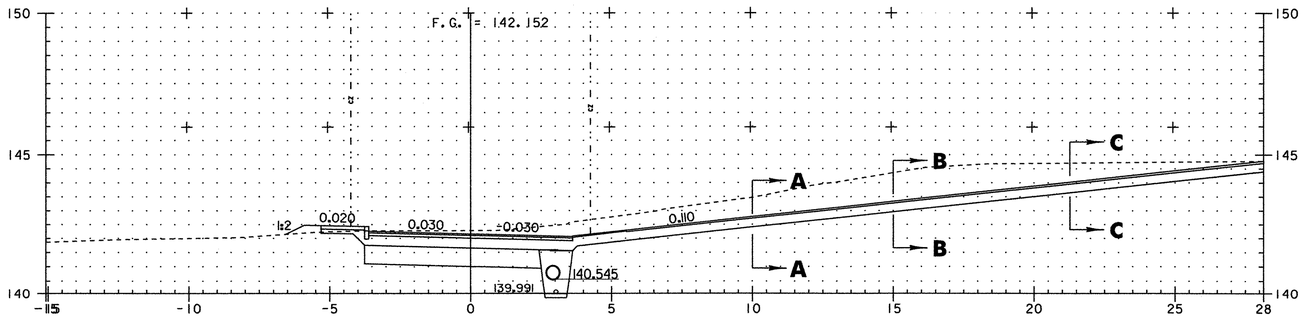
ah 15+020



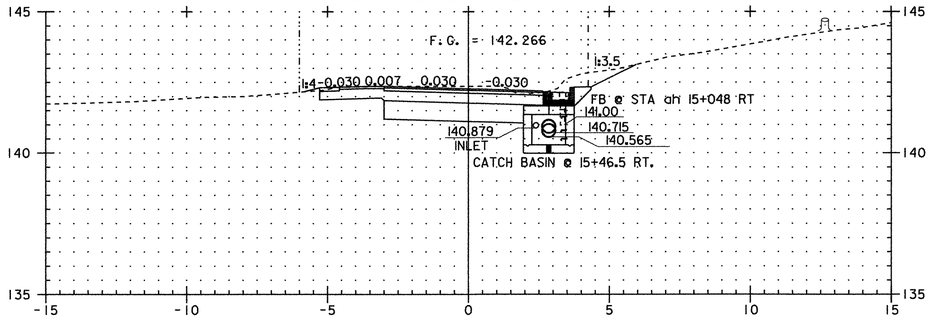
ah 15+000
BEGIN APPROACH CONSTRUCTION

0 2 4 6 8 10
SCALE 1:100

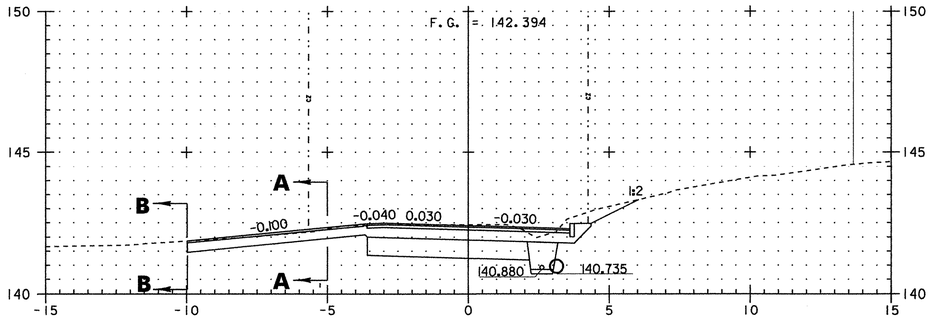
PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060\design\dc060xl2.dgn	PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060x01.1	SHEET 45 OF 60



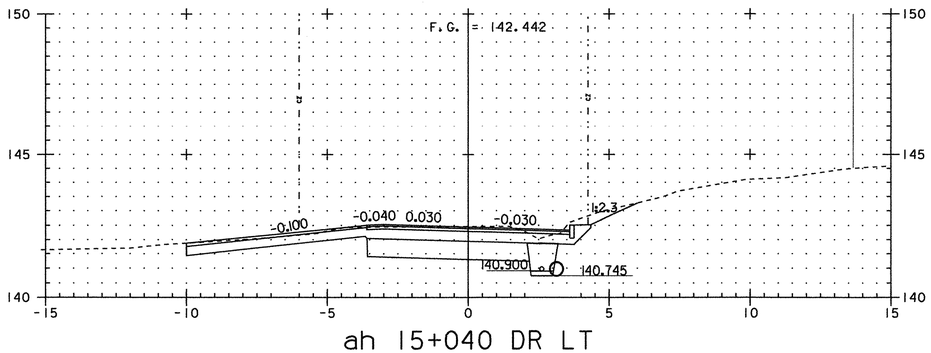
ah 15+051 DR RT



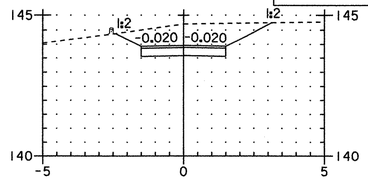
ah 15+047



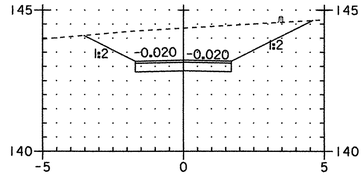
ah 15+042
DR LT



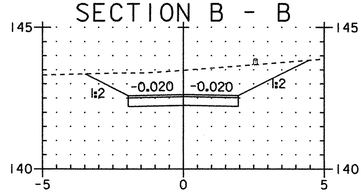
ah 15+040 DR LT



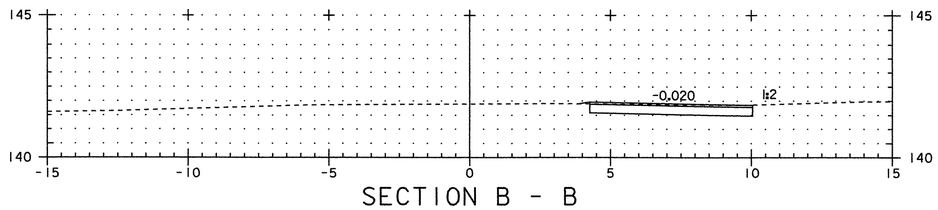
SECTION C - C



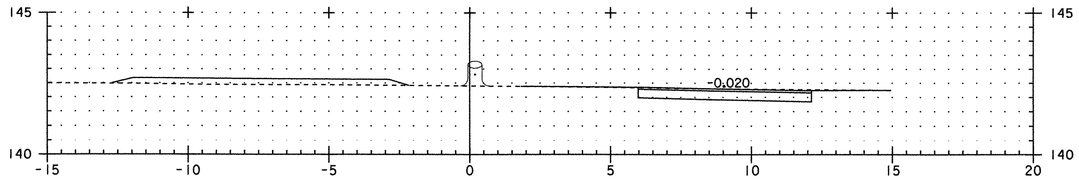
SECTION B - B



SECTION A - A
DRIVE @ ah 15+051 RT



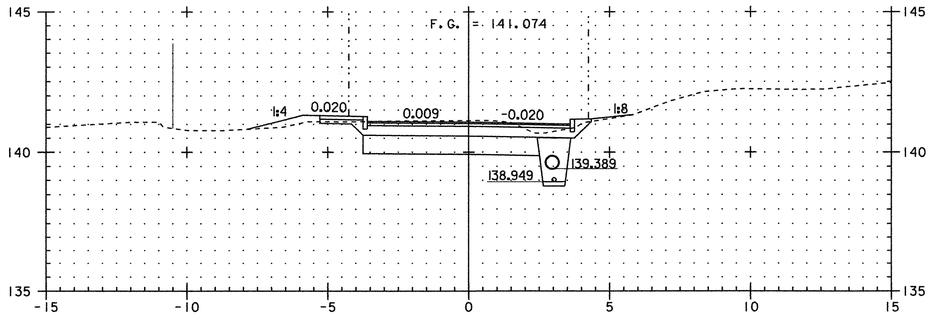
SECTION B - B



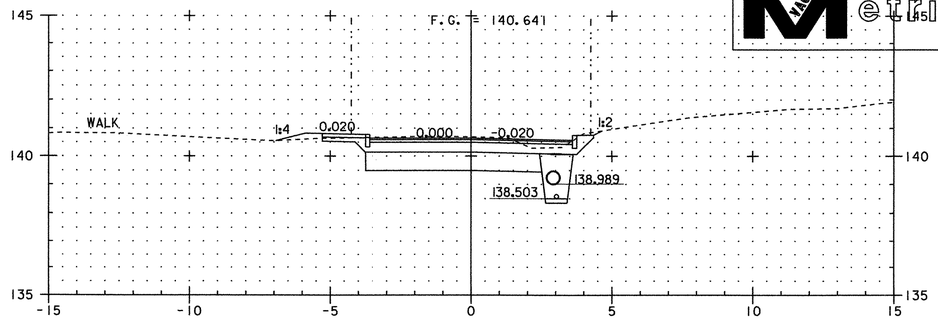
SECTION A - A
DRIVE @ ah 15+028 LT & ah 15+042 LT

0 2 4 6 8 10
SCALE 1:100

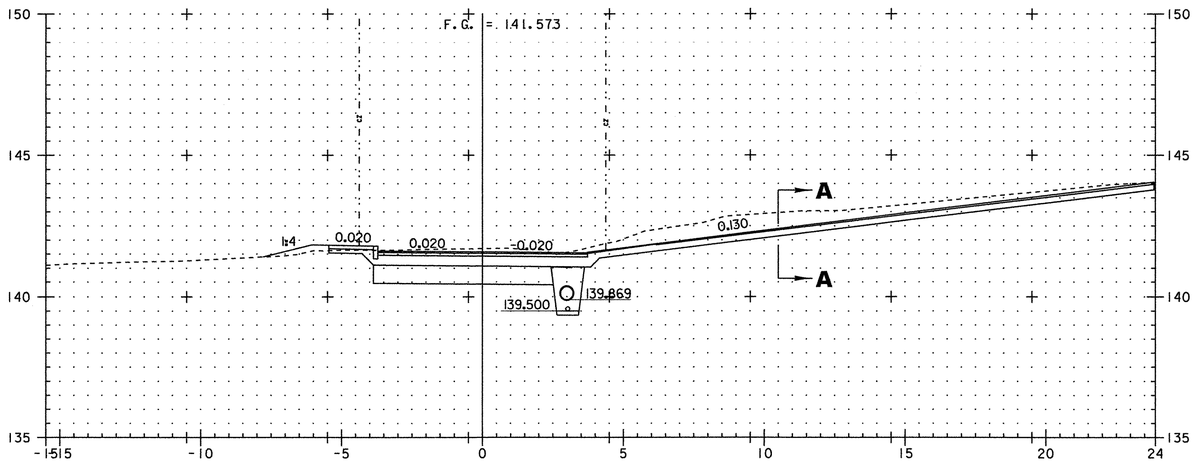
PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060\design\dc060x12.dgn	PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060x02.I	SHEET 46 OF 60



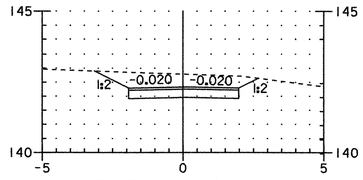
ah 15+080



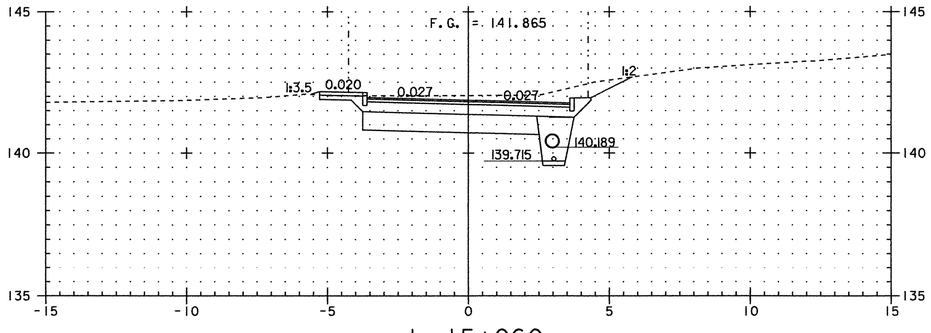
ah 15+090



ah 15+068 DR RT



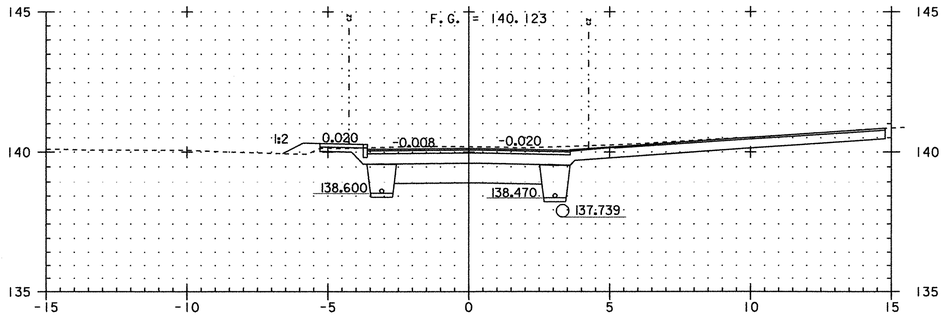
SECTION A - A
DRIVE @ ah 15+068 RT



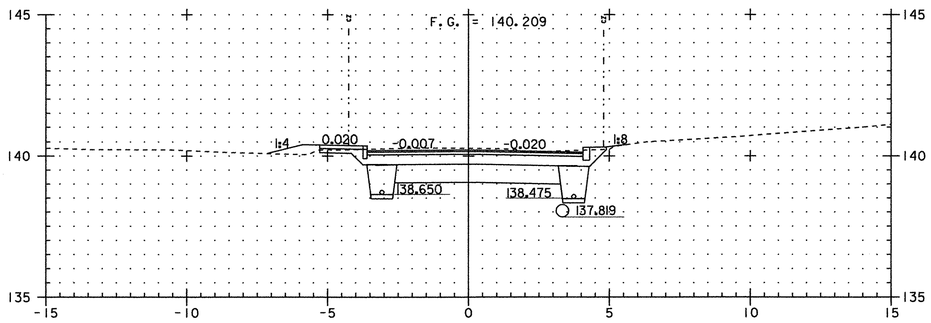
ah 15+060

0 2 4 6 8 10
SCALE 1:100

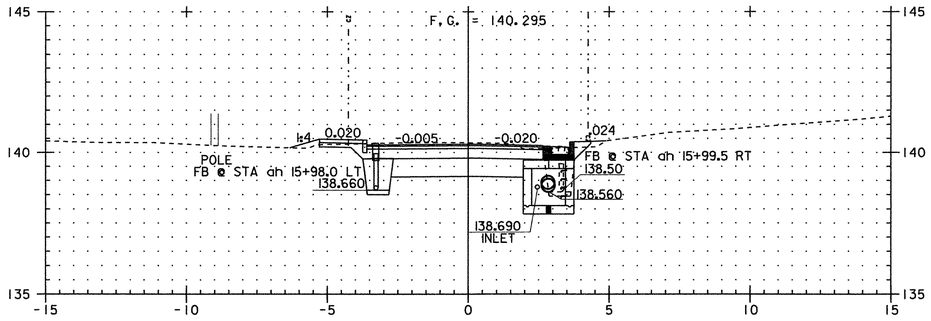
PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060\design\dc060x12.dgn	PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060x03.I	SHEET 47 OF 60



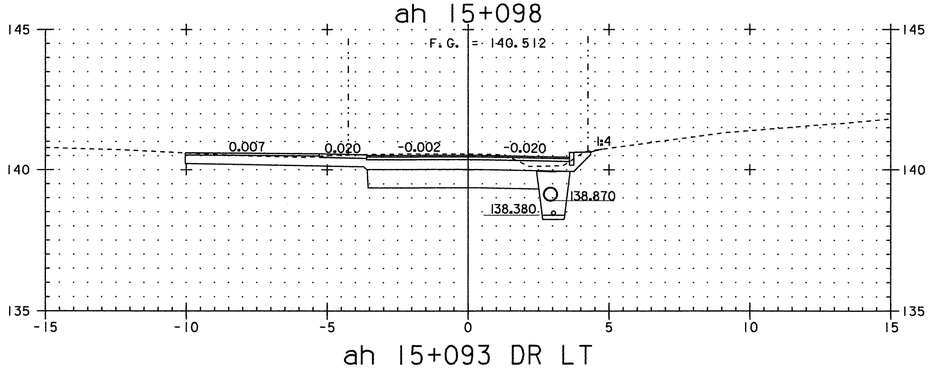
ah 15+102 DR RT



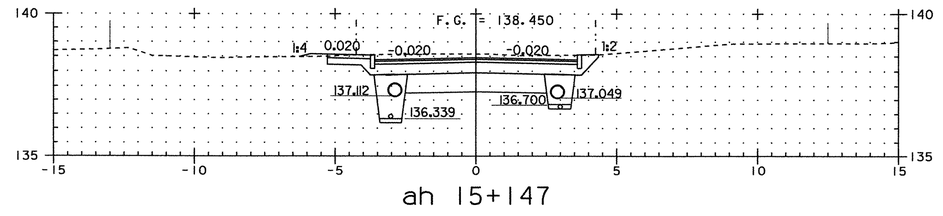
ah 15+100



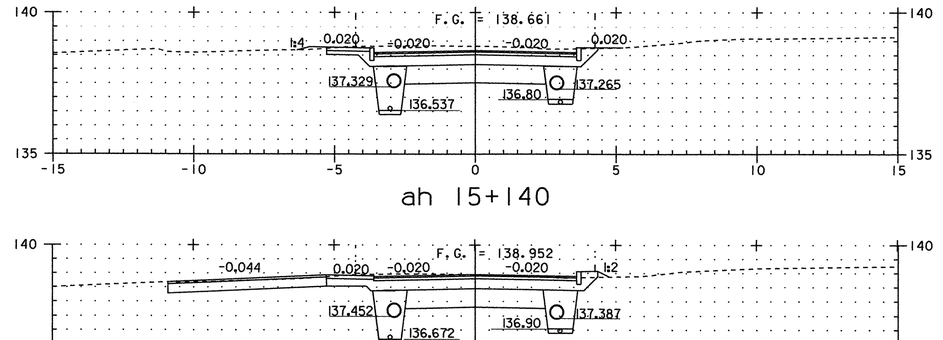
ah 15+098



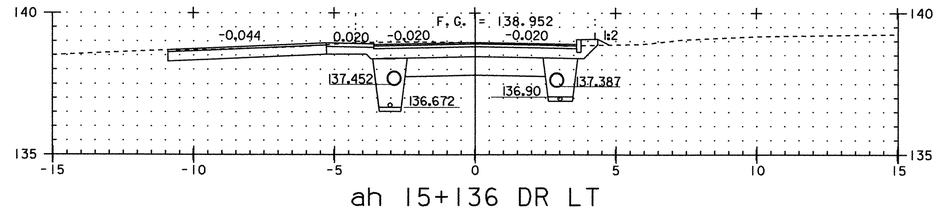
ah 15+093 DR LT



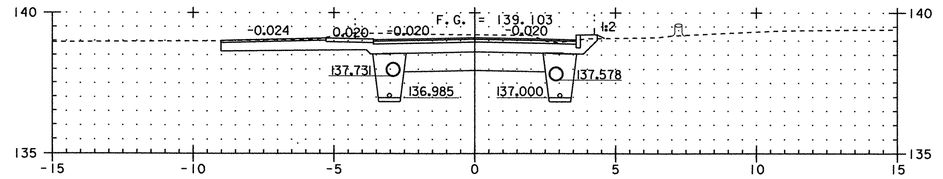
ah 15+147



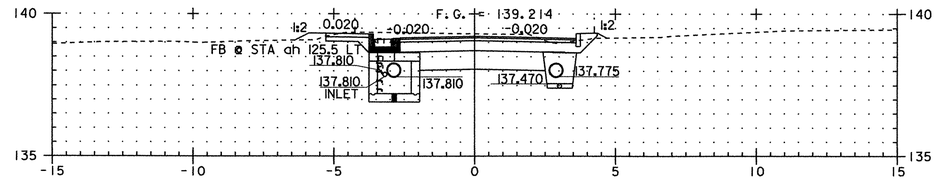
ah 15+140



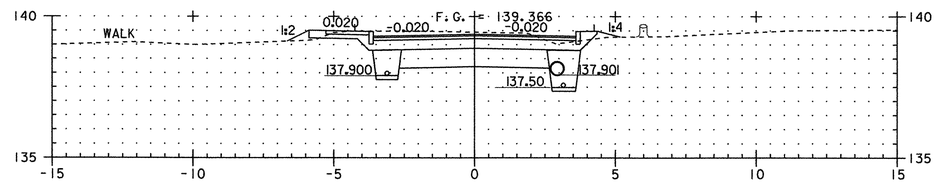
ah 15+136 DR LT



ah 15+127 DR LT



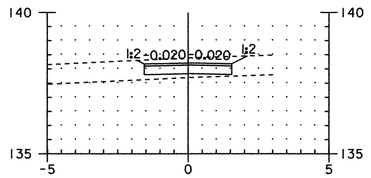
ah 15+124



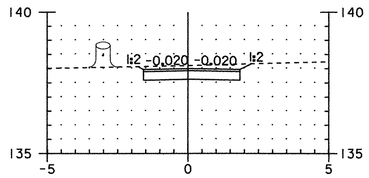
ah 15+120

0 2 4 6 8 10
SCALE 1:100

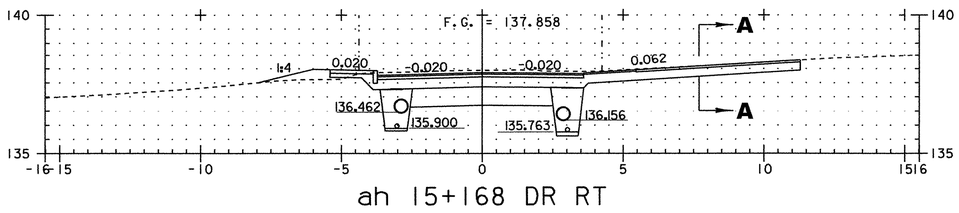
PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060\design\dc060xl2.dgn	PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060x04.i	SHEET 48 OF 60



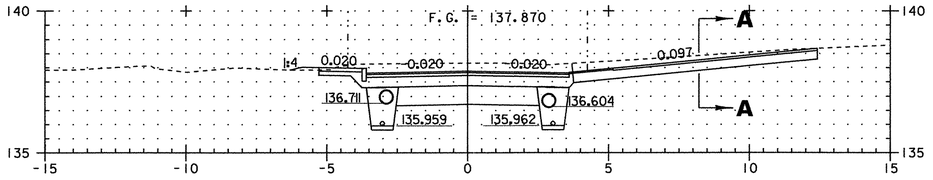
SECTION A - A
DRIVE @ ah 15+160.3 RT



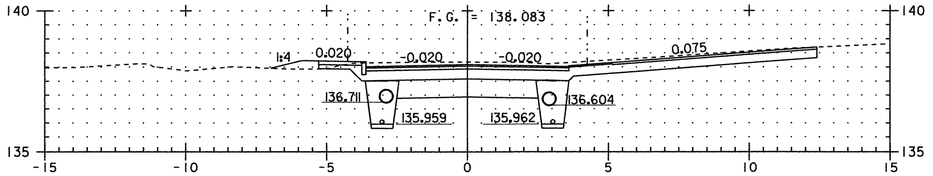
SECTION A - A
DRIVE @ ah 15+168 RT



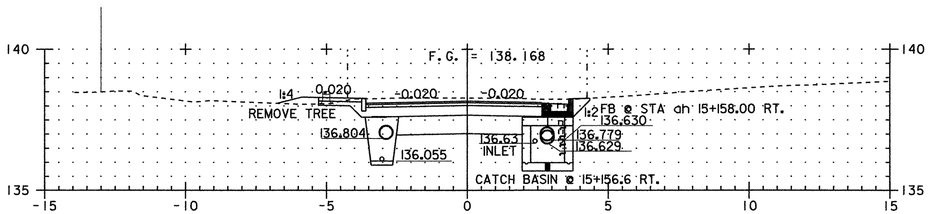
ah 15+168 DR RT



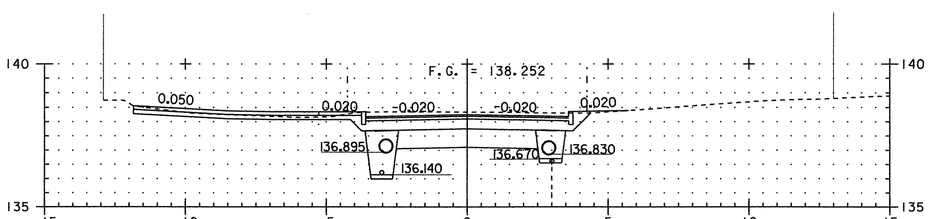
ah 15+160.3 DR RT



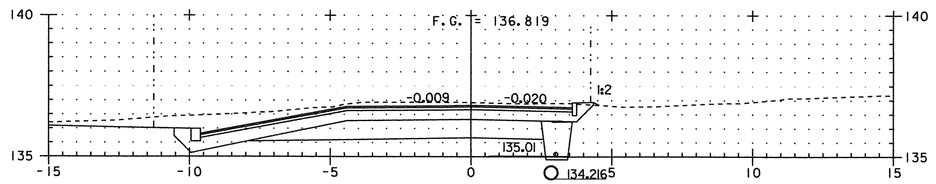
ah 15+160



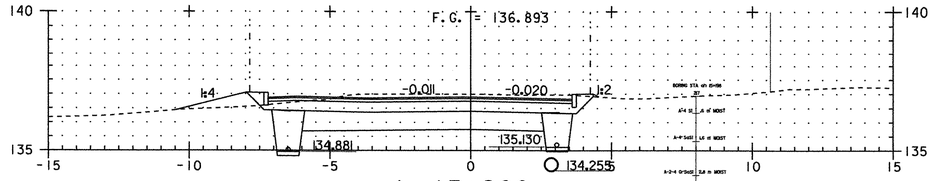
ah 15+157



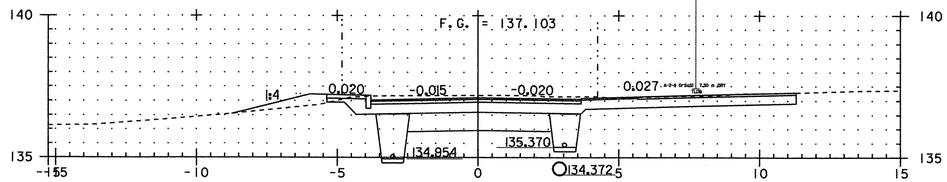
ah 15+154 WALK LT



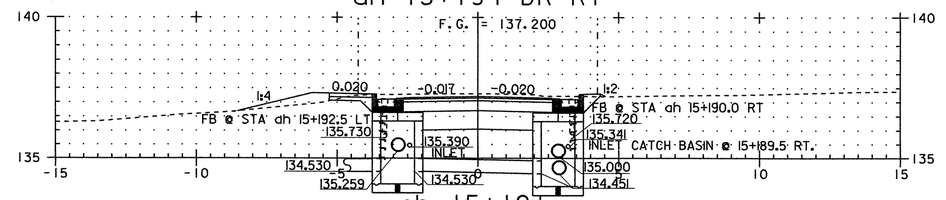
ah 15+202



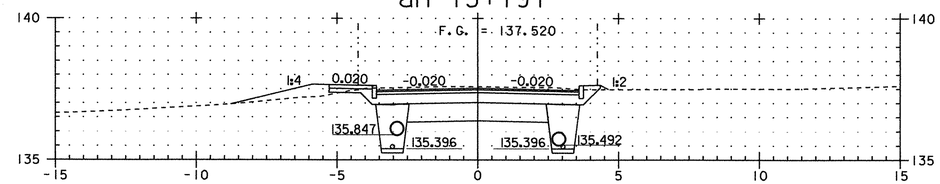
ah 15+200



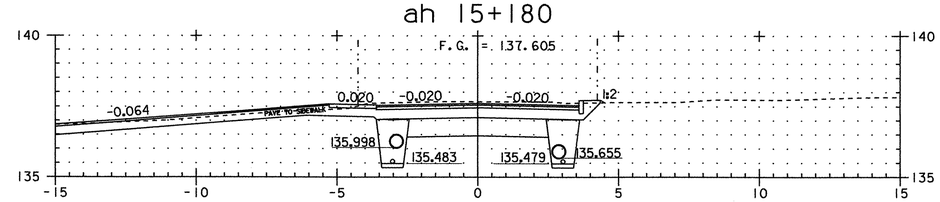
ah 15+194 DR RT



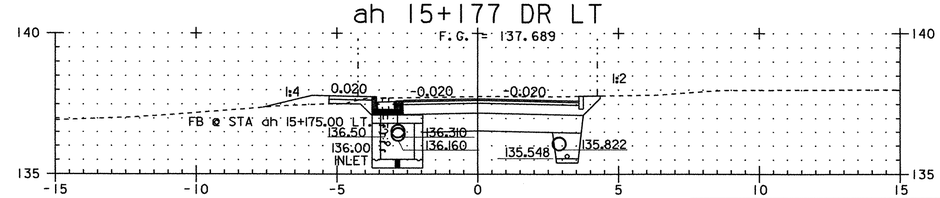
ah 15+191



ah 15+180



ah 15+177 DR LT



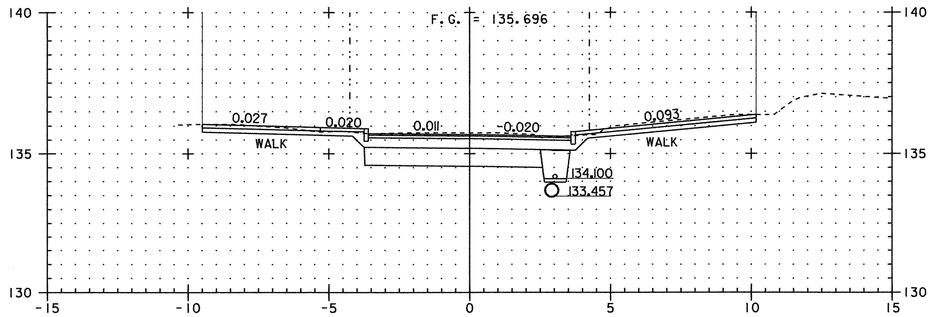
ah 15+174

0 2 4 6 8 10
SCALE 1:100

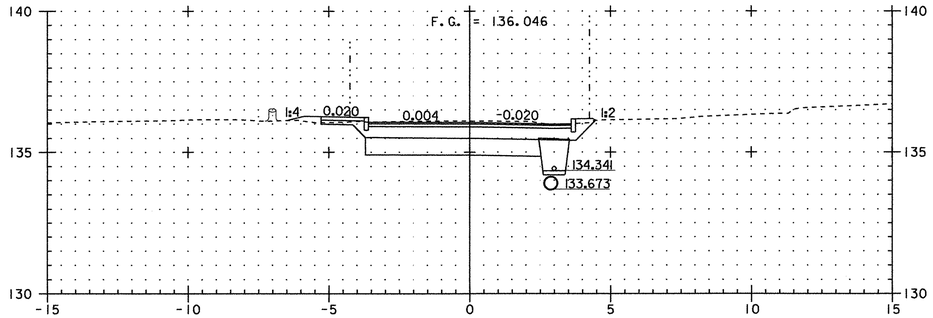
PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

FILE NAME: ...85c060\design\dc060xl2.dgn
PROJECT LEADER: DELLASANTA
DESIGNED BY: SQUAD B
IPARM FILE NAME: (2)dc060x05.i

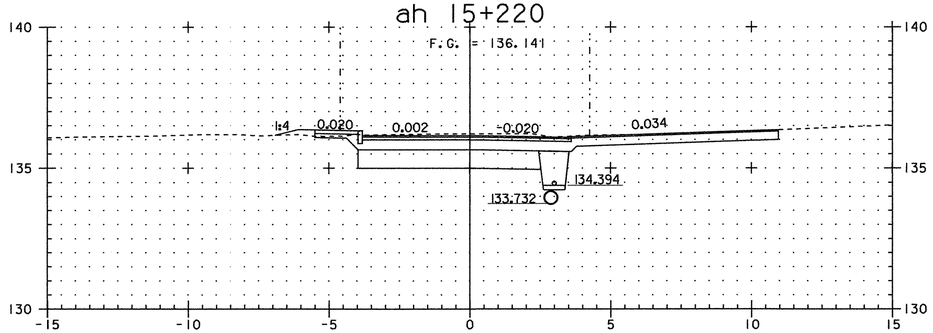
PLOT DATE: 20-MAR-2003
DRAWN BY: SQUAD B
CHECKED BY: SQUAD B
SHEET 49 OF 60



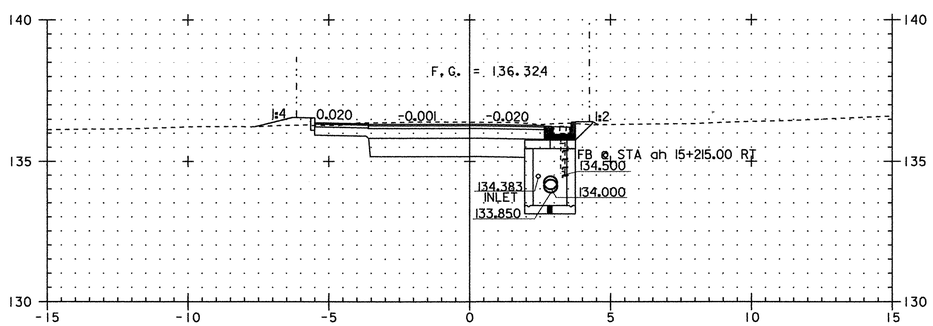
ah 15+227 WALK LT & RT



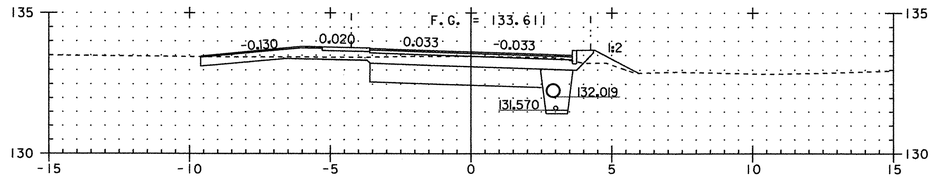
ah 15+220



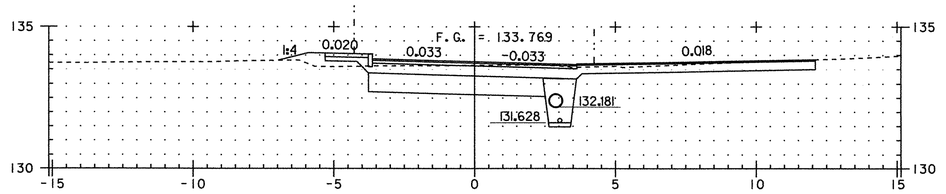
ah 15+218 RT RT



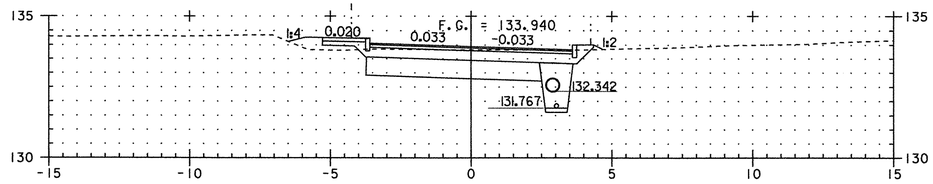
ah 15+214



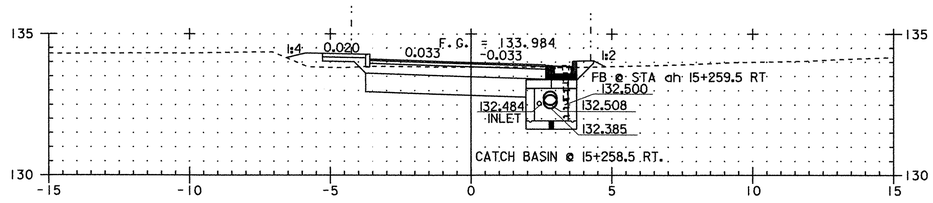
ah 15+268 DR LT



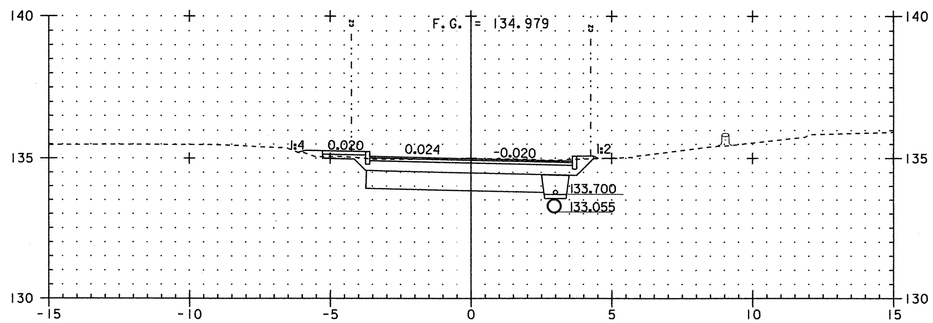
ah 15+264 DR RT



ah 15+260



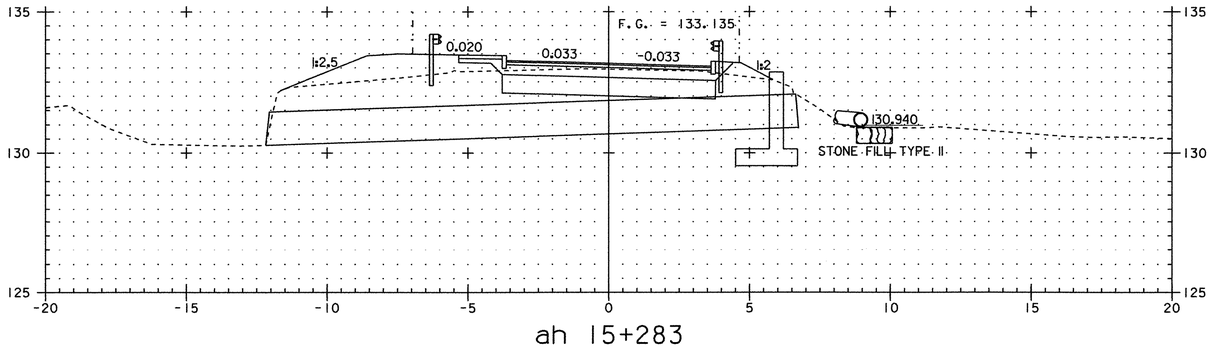
ah 15+259



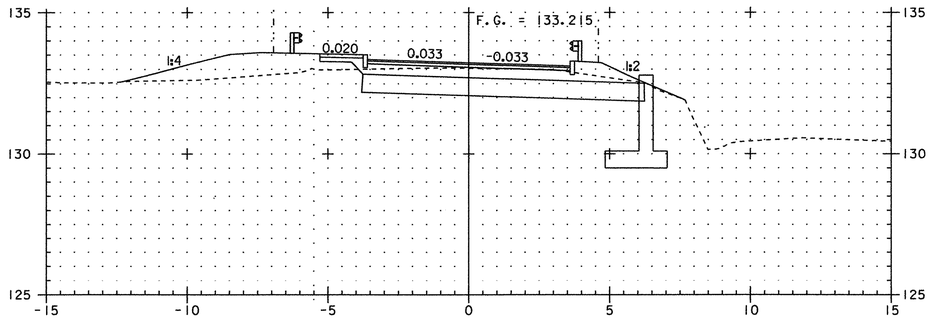
ah 15+240

0 2 4 6 8 10
SCALE 1:100

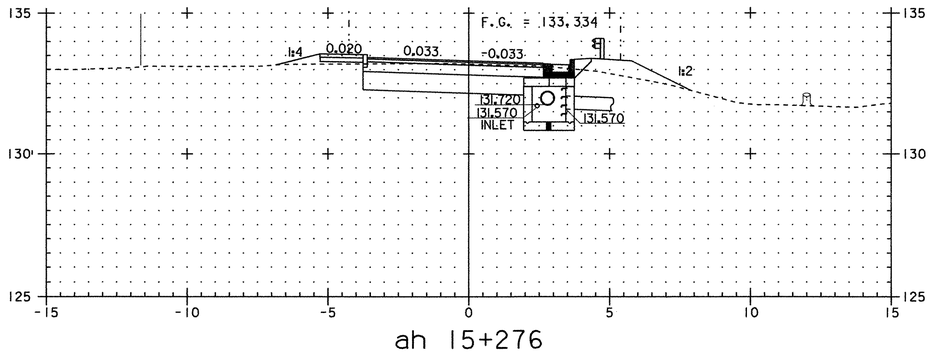
PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060\design\dc060xl2.dgn	PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060x06.i	SHEET 50 OF 60



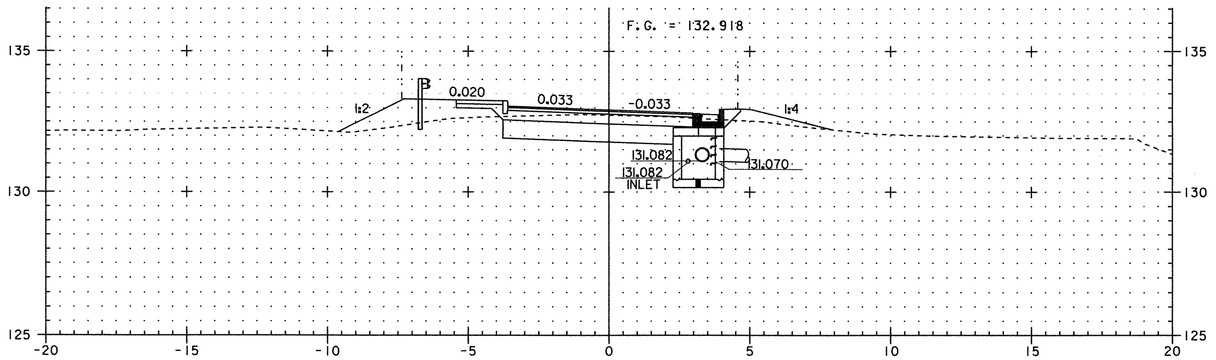
ah 15+283



ah 15+280



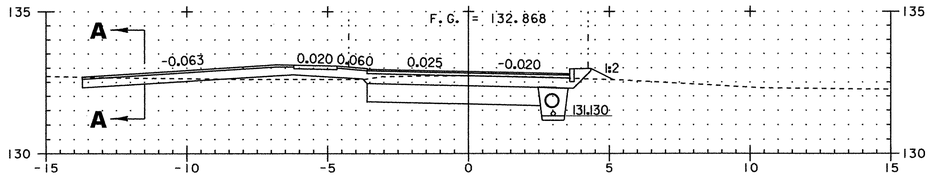
ah 15+276



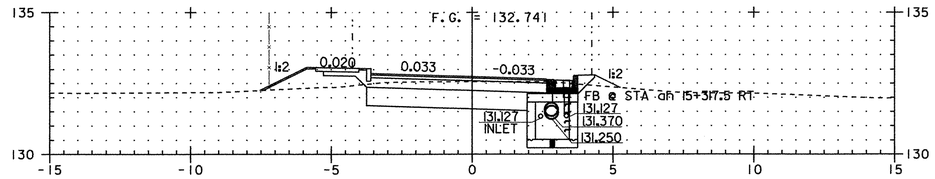
ah 15+293

0 2 4 6 8 10
SCALE 1:100

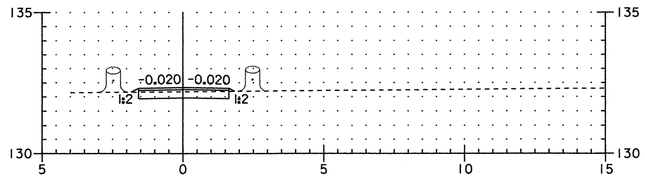
PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060\design\dc060xl2.dgn	PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060x07.i	SHEET 51 OF 60



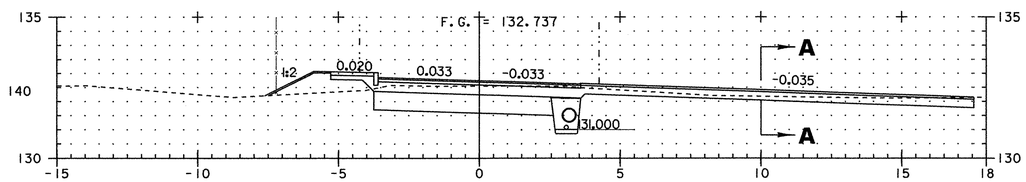
ah 15+333 DR LT



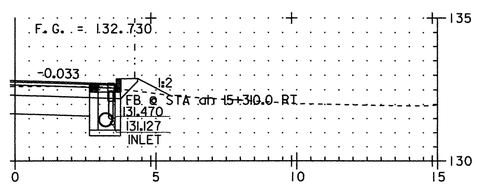
ah 15+320



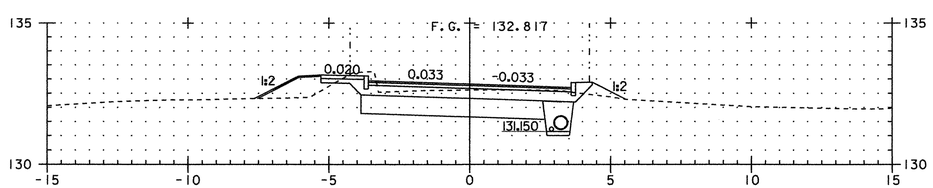
SECTION A - A
DRIVE @ ah 15+316 RT



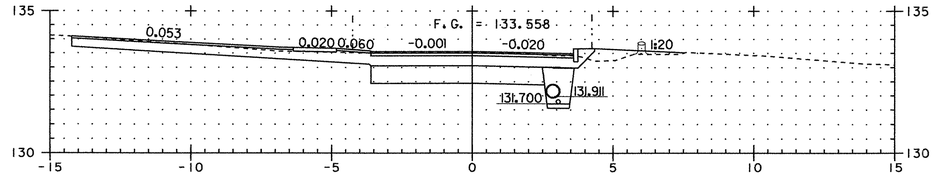
ah 15+316 DR RT



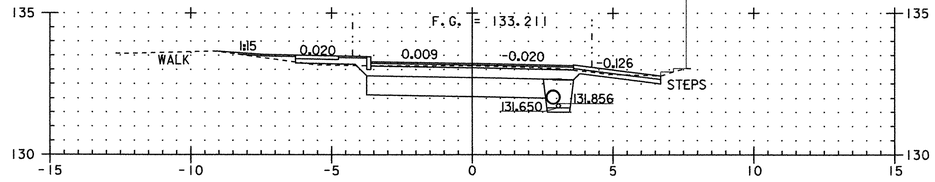
ah 15+311 DI RT



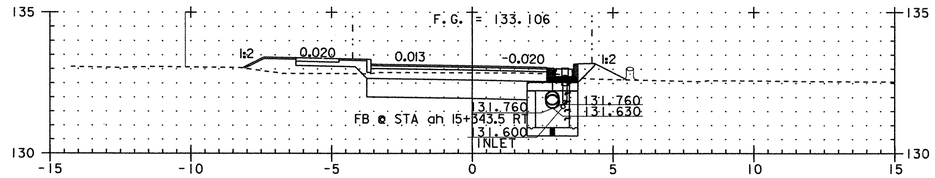
ah 15+300



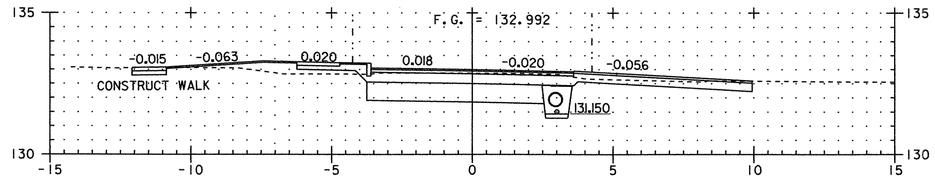
ah 15+360 DR LT



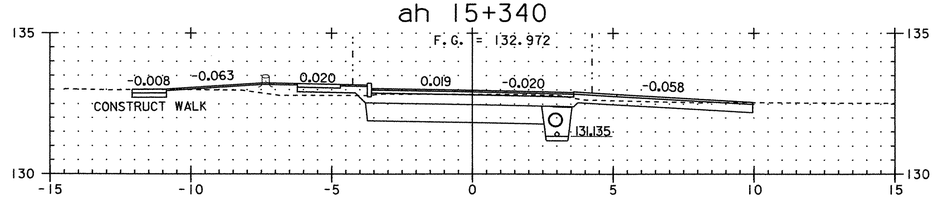
ah 15+349 WALK RT



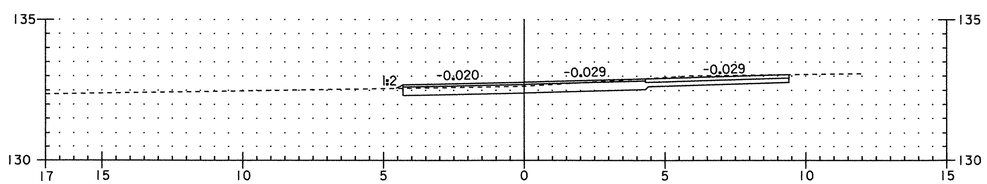
ah 15+345



ah 15+340



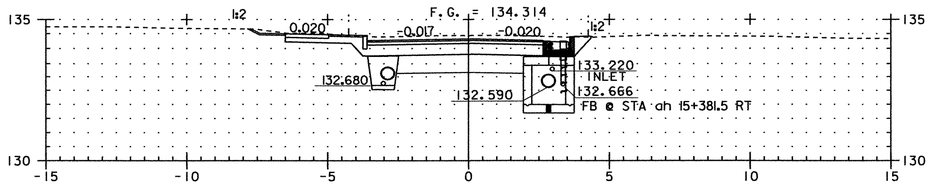
ah 15+339 DR RT



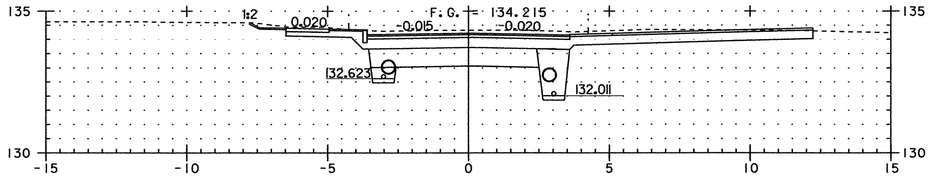
SECTION A - A
DRIVE @ ah 15+333 LT

0 2 4 6 8 10
SCALE 1:100

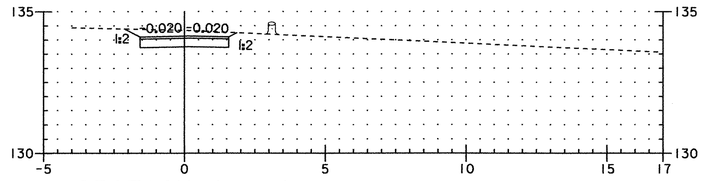
PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060\design\dc060xl2.dgn	PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060x08.i	SHEET 52 OF 60



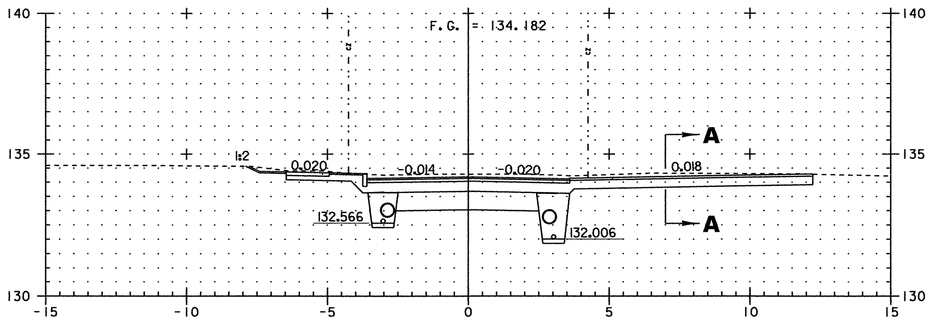
ah 15+383



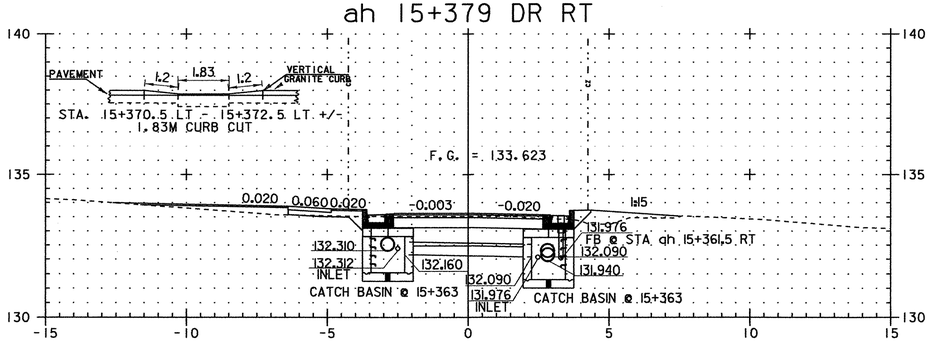
ah 15+380



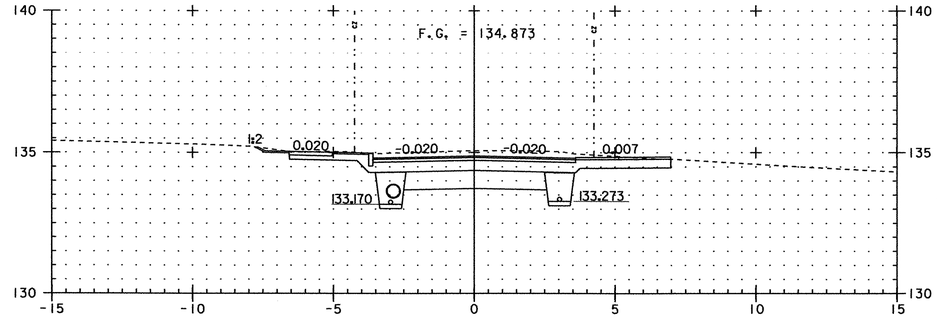
SECTION A - A
DRIVE @ ah 15+379 RT



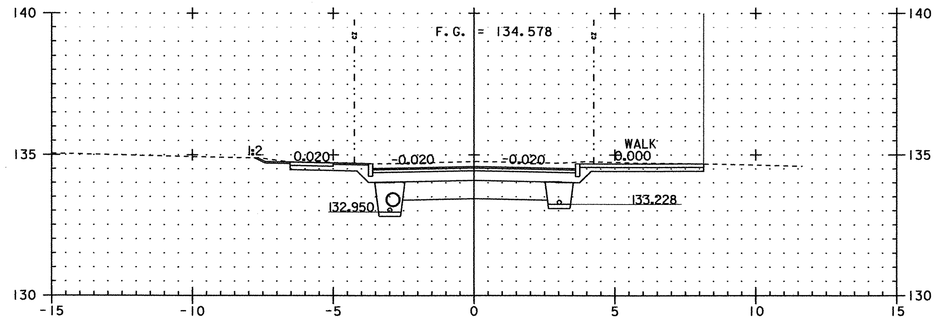
ah 15+379 DR RT



ah 15+362



ah 15+400
DR RT

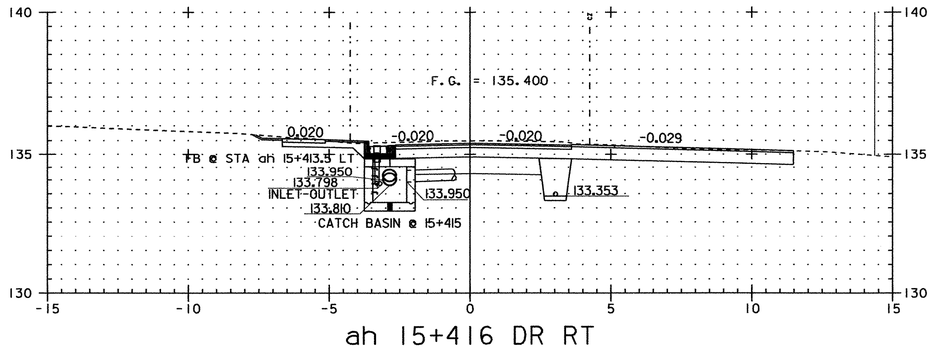


ah 15+391 WALK RT

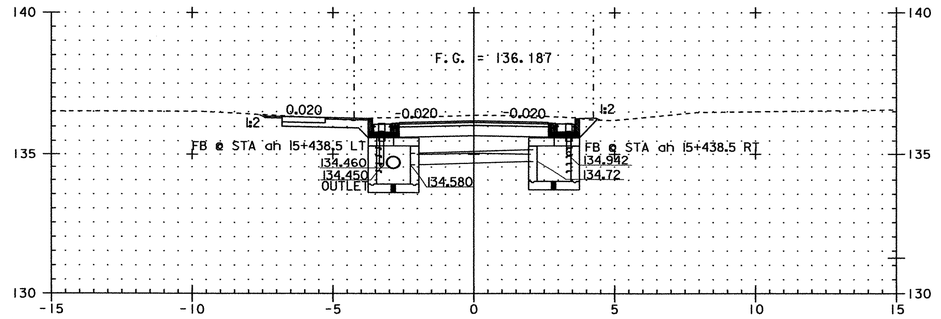
0 2 4 6 8 10
SCALE 1:100

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

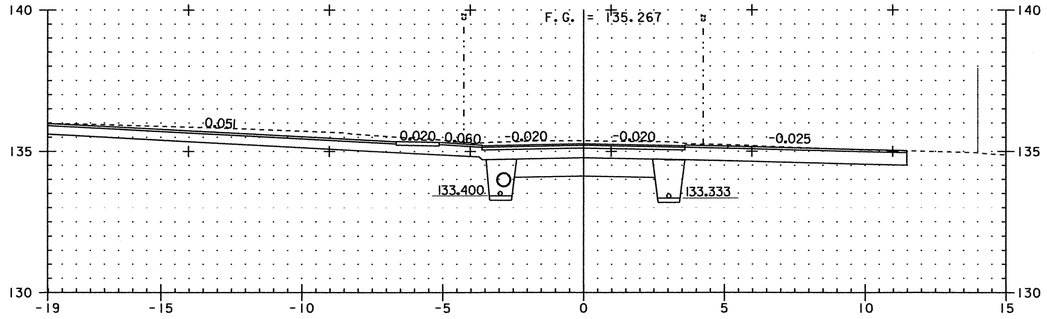
FILE NAME: ...85c060\design\dc060xl2.dgn
PROJECT LEADER: DELLASANTA
DESIGNED BY: SQUAD B
IPARM FILE NAME: (2)dc060x09.i
PLOT DATE: 20-MAR-2003
DRAWN BY: SQUAD B
CHECKED BY: SQUAD B
SHEET 53 OF 60



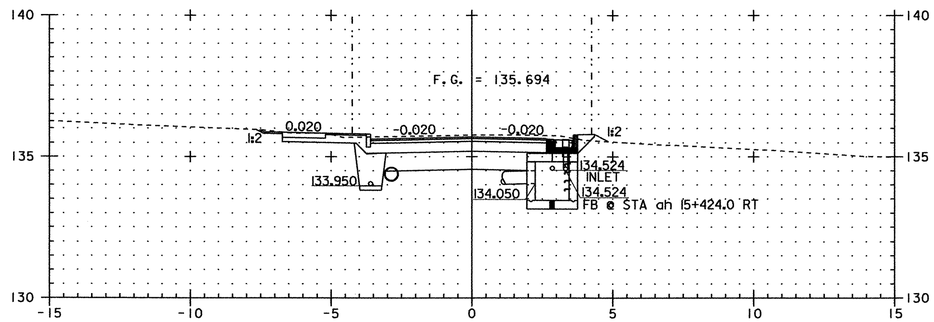
ah 15+416 DR RT



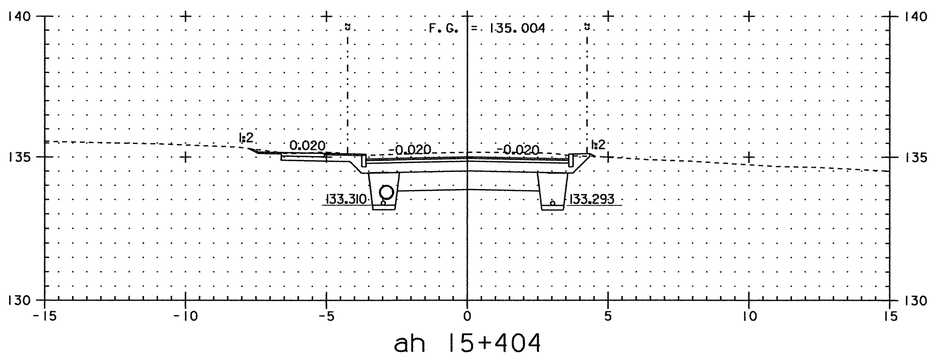
ah 15+440



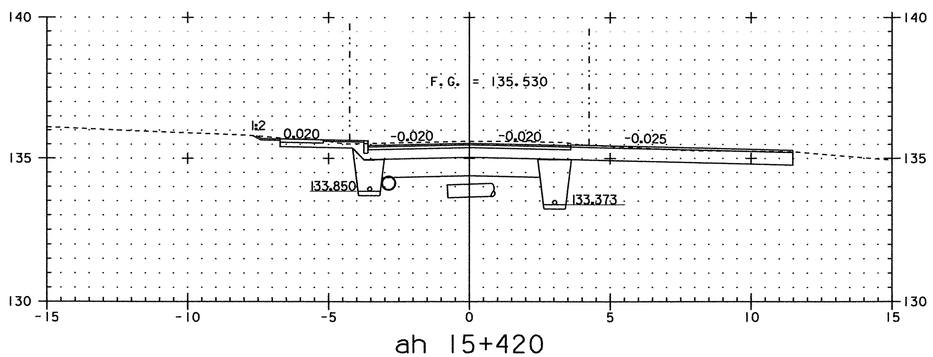
ah 15+412 DR LT



ah 15+425



ah 15+404

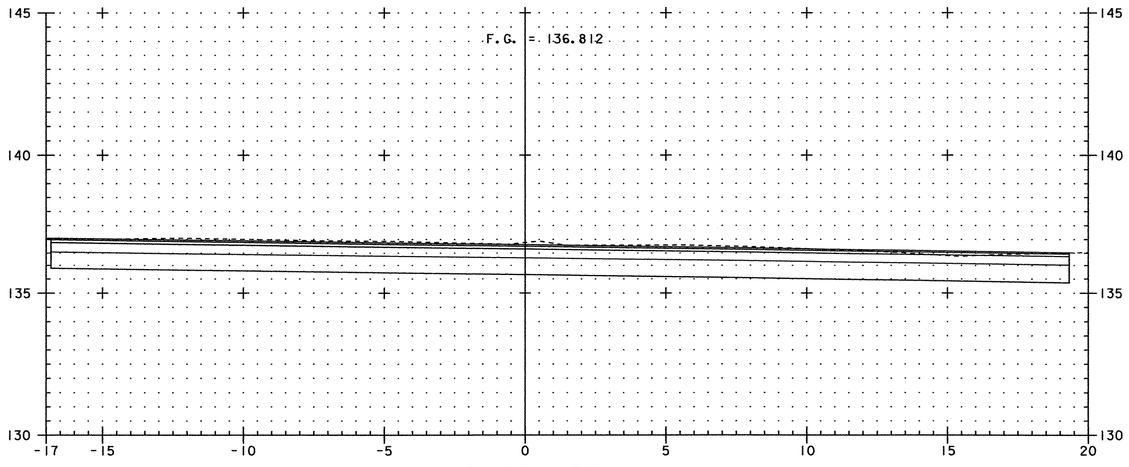


ah 15+420

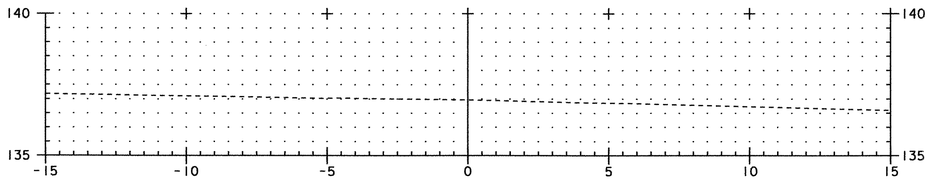
0 2 4 6 8 10
SCALE 1:100

PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060\design\dc060xl2.dgn	PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060xl0.i	SHEET 54 OF 60

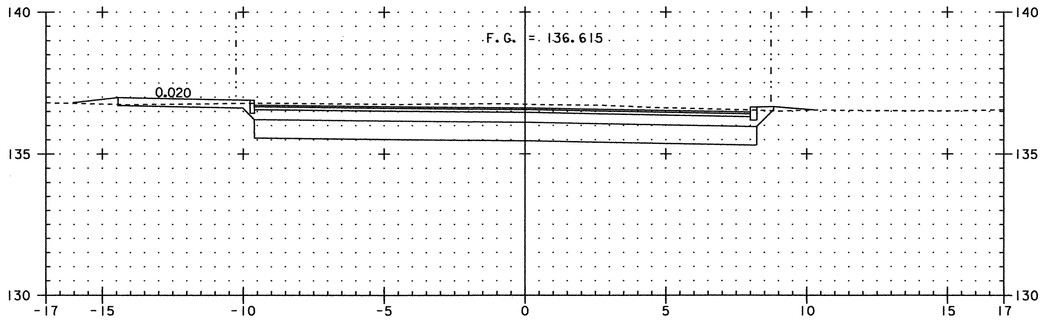
Metric



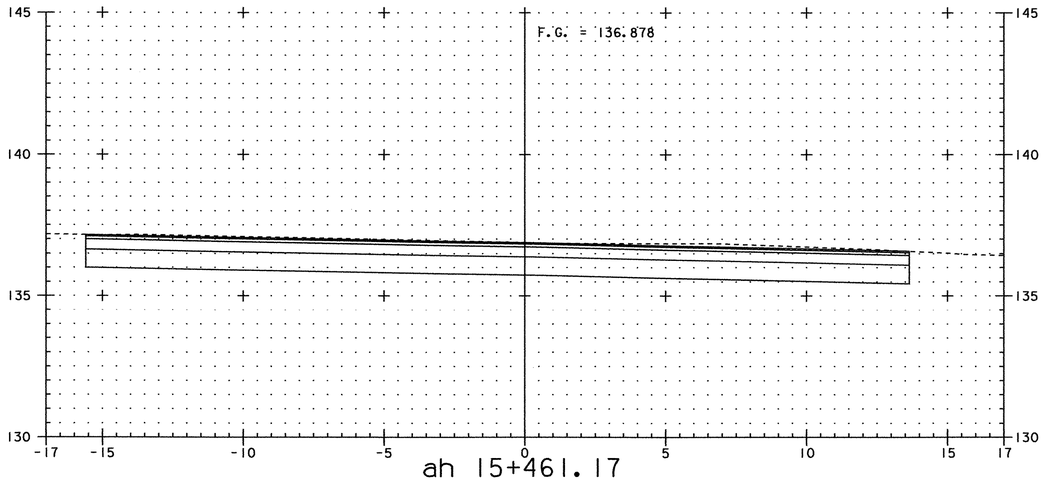
ah 15+459



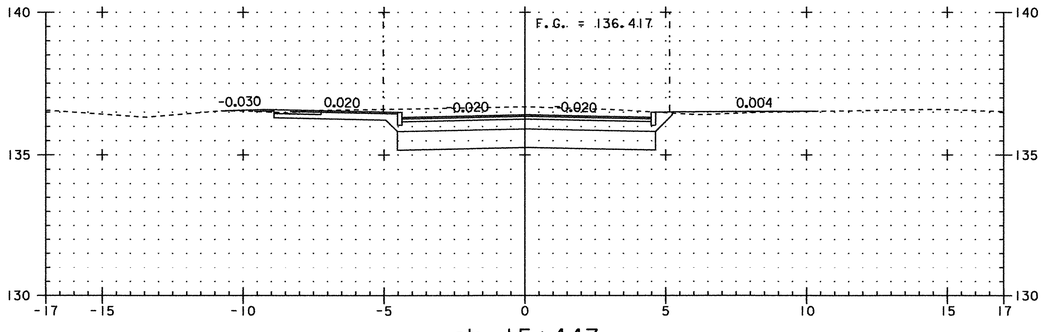
ah 15+464.13
END PROJECT



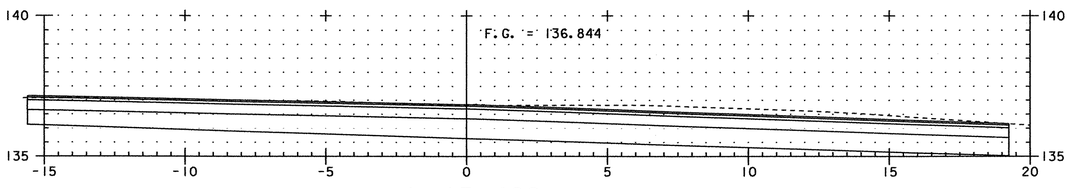
ah 15+453



ah 15+461.17
MATCH EXISTING PAVEMENT



ah 15+447

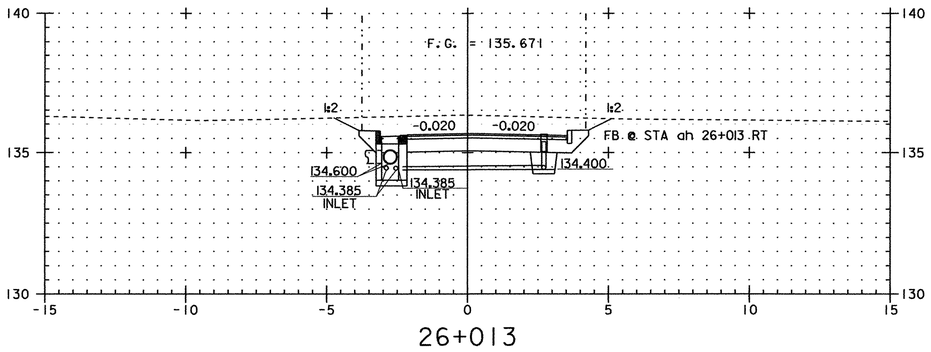


ah 15+460

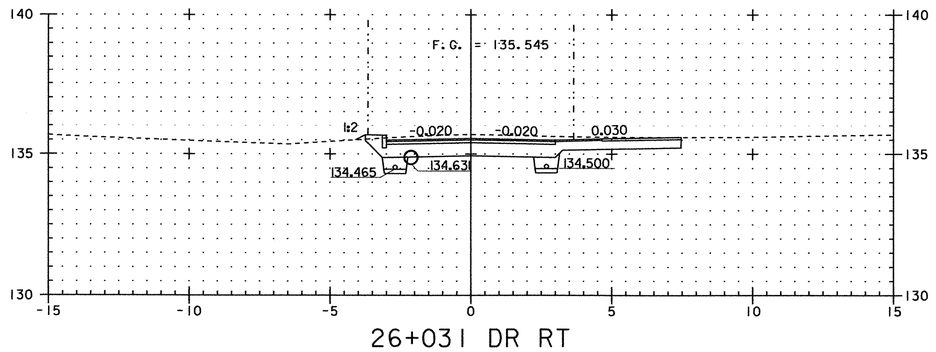
0 2 4 6 8 10
SCALE 1:100

PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060\design\dc060xl2.dgn	PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060xll.i	SHEET 55 OF 60

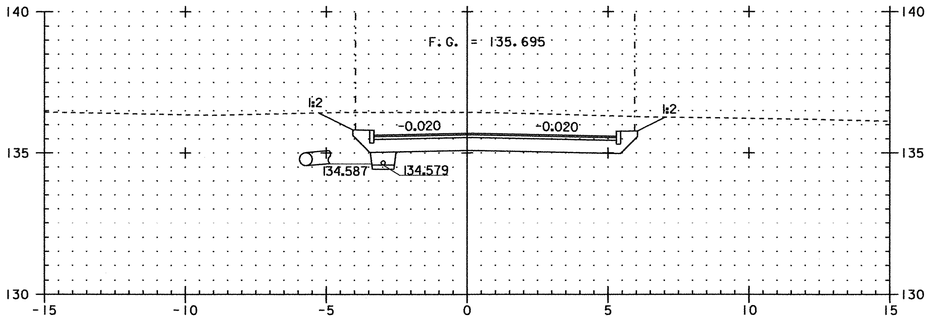
TH #16 SECTIONS



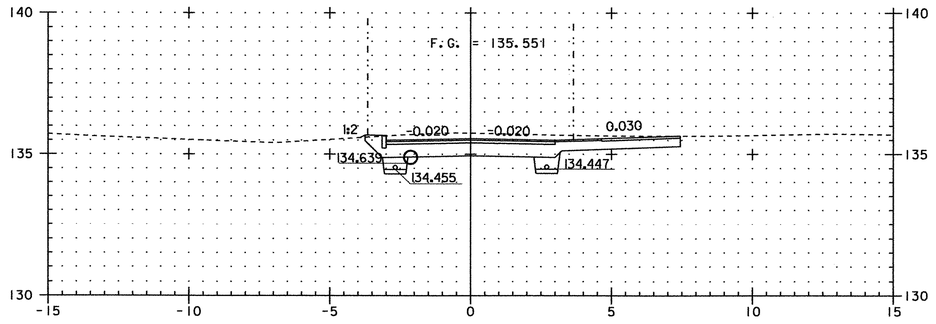
26+013



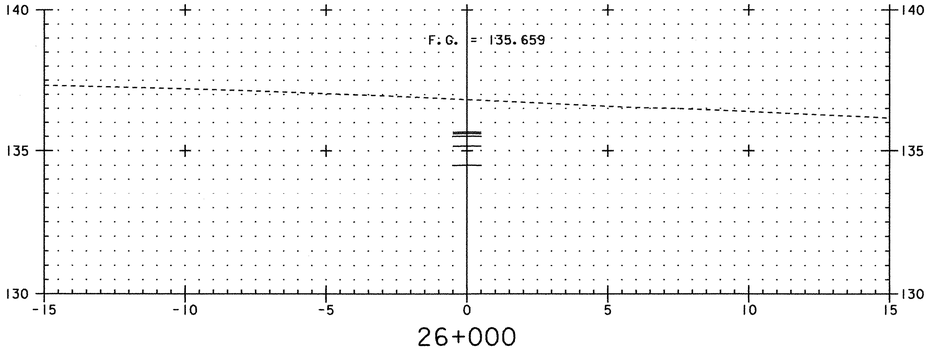
26+031 DR RT



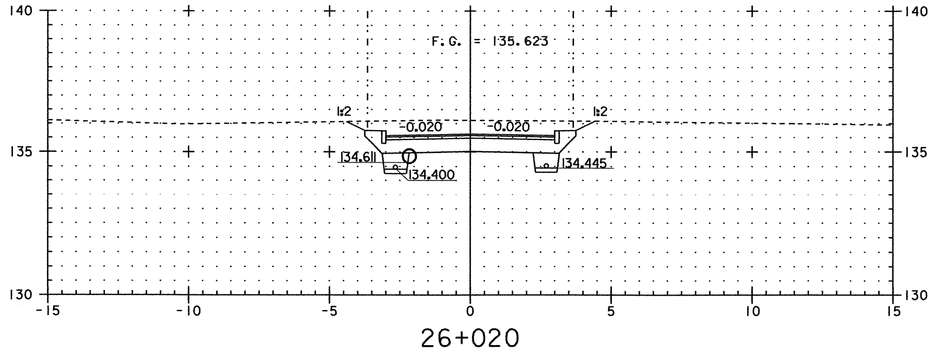
26+010
BEGIN SIDE LINE CONSTRUCTION



26+030



26+000



26+020

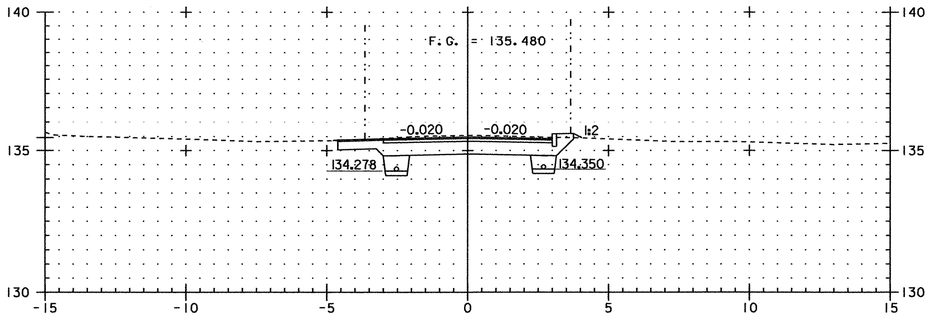
0 2 4 6 8 10
SCALE 1:100

PROJECT NAME: FRANKLIN
PROJECT NUMBER: STP 0301(18)

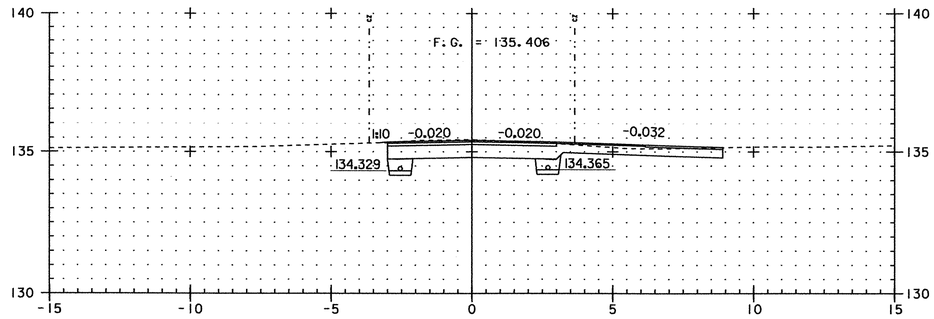
FILE NAME: ...85c060\design\dc060xl2.dgn
PROJECT LEADER: DELLASANTA
DESIGNED BY: SQUAD B
IPARM FILE NAME: (2)dc060xl2.i

PLOT DATE: 20-MAR-2003
DRAWN BY: SQUAD B
CHECKED BY: SQUAD B
SHEET 56 OF 60

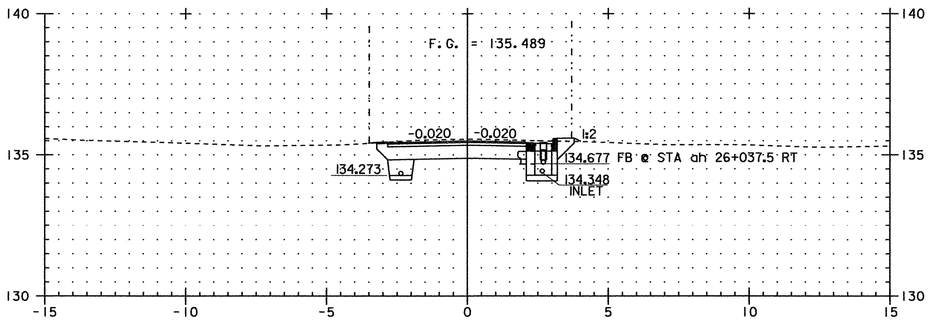
TH #16 SECTIONS



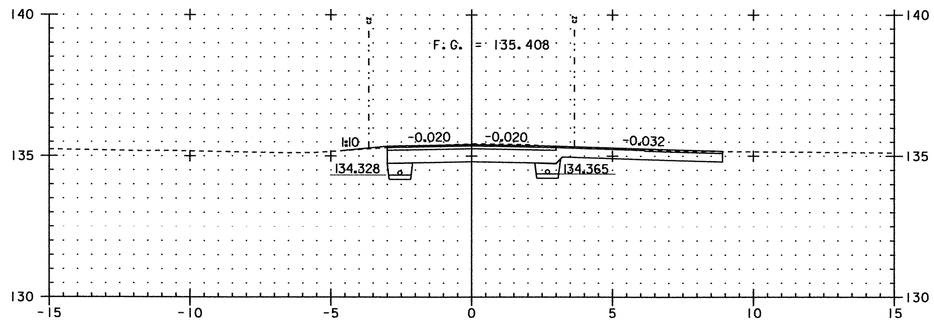
26+040



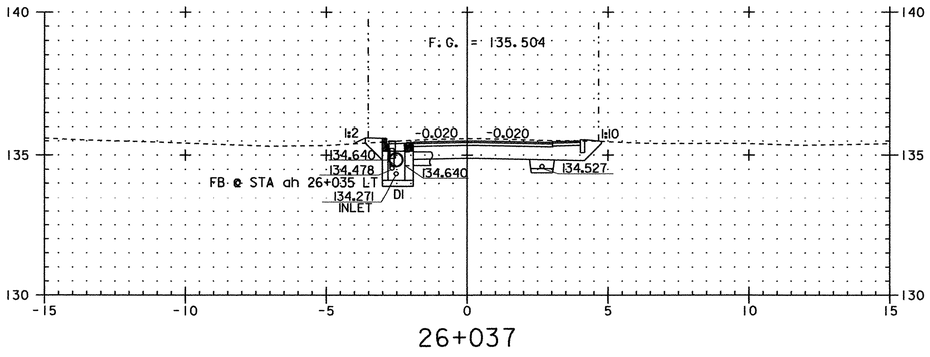
26+050
DR RT



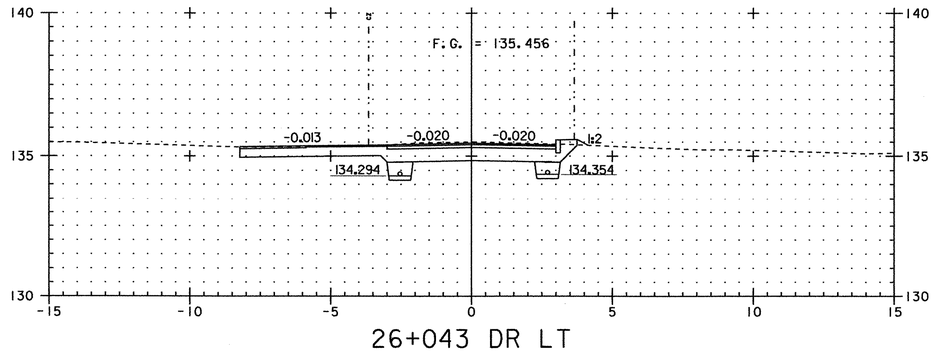
26+039



26+050



26+037

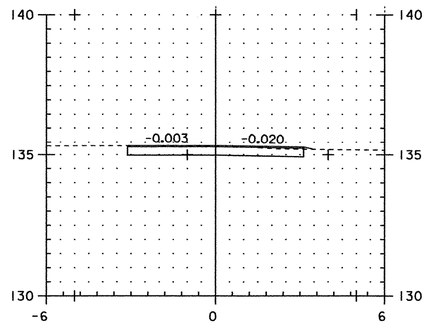


26+043 DR LT

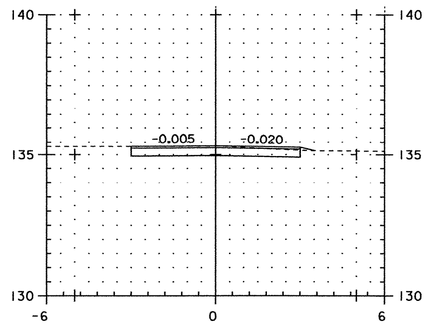
0 2 4 6 8 10
SCALE 1:100

PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060\design\dc060xl2.dgn	PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060xl3.i	SHEET 57 OF 60

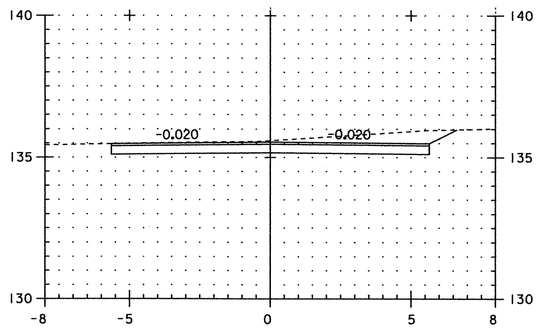
TH #16 SECTIONS



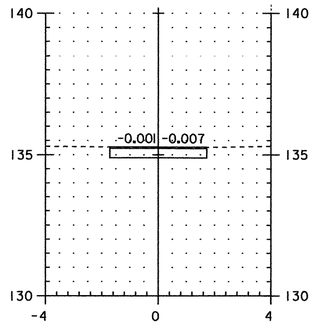
TH #16
DRIVE @ 26+043 LT
5M BACK FROM ℄



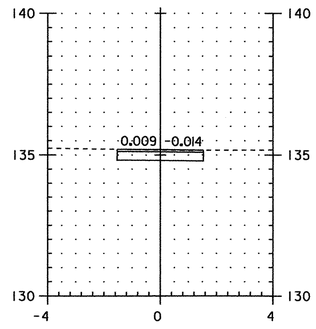
TH #16
DRIVE @ 26+043 LT
8M BACK FROM ℄



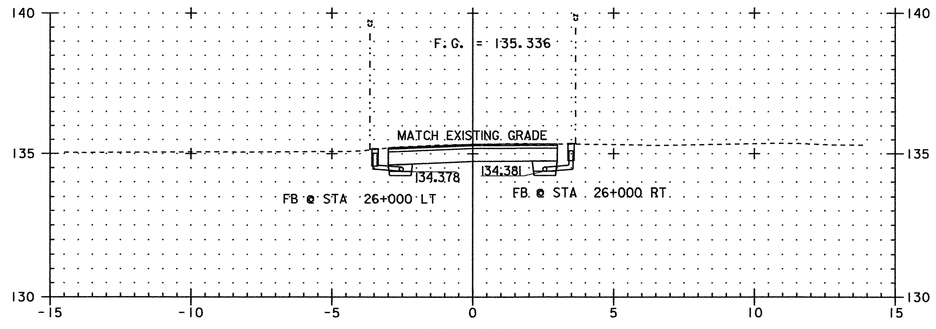
TH #16
DRIVE @ 26+030 RT
5M BACK FROM ℄



TH #16
DRIVE @ 26+050 RT
5M BACK FROM ℄



TH #16
DRIVE @ 26+050 RT
8M BACK FROM ℄



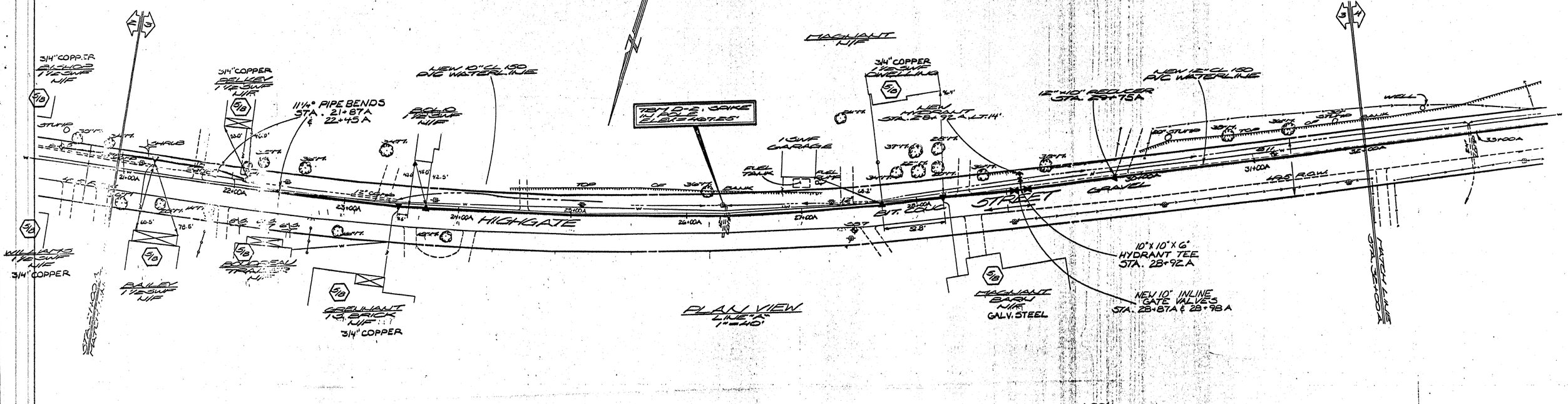
26+060

0 2 4 6 8 10
SCALE 1:100

PROJECT NAME: FRANKLIN	
PROJECT NUMBER: STP 0301(18)	
FILE NAME: ...85c060\design\dc060x12.dgn	PLOT DATE: 20-MAR-2003
PROJECT LEADER: DELLASANTA	DRAWN BY: SQUAD B
DESIGNED BY: SQUAD B	CHECKED BY: SQUAD B
IPARM FILE NAME: (2)dc060x14.i	SHEET 58 OF 60

at locations which may be in the immediate vicinity of underground utilities.
8" INLINE GATEVALVE STA. 10+38A
NEW HYDRANT STA. 18+81A
FIRE DEPARTMENT
MAIN STREET
HIGHGATE STREET
SCHOOL ST.
3/4" COPPER
NEW 8" CL 150 PVC WATERLINE
8"x 8"x 6" HYDRANT TEE STA. 18+81 A
PLAN VIEW
ORIGINAL GROUND
3/4" WATER SERVICE SADDLES
NEW 8" INLINE GATE VALVE STA. 10+38A
SANDY GRAVEL
BROWN, MOIST SILTY SAND W/ SMALL STONES
NEW 10" IN-LINE GATE VALVE STA. 19+32A
8"x10" REDUCER STA. 19+26A
NEW 10" CL 150 PVC WATERLINE
PROFILE
RECORD DRAWING
FEBRUARY 1990
2/20/90 RECORD DRAWING TCR
DATE 7/6/88 REVISION ADDED GATE VALVE STA. 18+95A BY AS
FRANKLIN FIRE DISTRICT No. 1
FRANKLIN, VERMONT
PLAN and PROFILE
10 + 00A to 21 + 00A
STATE OF VERMONT
ALOIS STRANSKY
NO. 5393
REGISTERED PROFESSIONAL ENGINEER
SURVEY MRM
DESIGN AS
DRAWN JRD
CHECKED AS/MCW
Donald L. Hamlin
CONSULTING ENGINEERS, INC.
Essex Junction, Vermont
SCALE SHOWN
DATE 5/24/88
DRW. NO. 2 of 20
59 OF 60
87-110
5813

1-800-225-4977 prior to any excavation, at locations which may be in the immediate vicinity of underground utilities.



PROFILE
LINE "A"
H 1"=40'
V 1"=4'

RECORD DRAWING
FEBRUARY 1990

STATE OF VERMONT
ALOIS STRANSKY
NO. 5393
REGISTERED
PROFESSIONAL ENGINEER

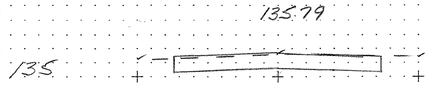
2/20/90	RECORD DRAWING		TCR
DATE 7/6/88	REVISION ADD GATE VALVES STA. 27+20 & 27+30	BY	AS

FRANKLIN FIRE DISTRICT No. 1
FRANKLIN, VERMONT

PLAN and PROFILE
21 + 00A to 32 + 00A

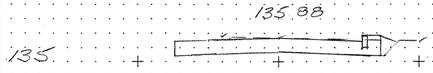
SURVEY MRM	Donald L. Hamlin	SCALE SHOWN	
DESIGN AS	CONSULTING ENGINEERS, INC. Essex Junction, Vermont	DATE 5/24/88	
DRAWN JRD		DRW. NO. 3 of 20	
CHECKED AS/MCW		60 OF 60	

87-110 | 5814



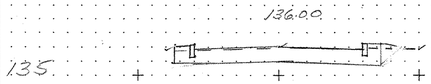
C = 0.45 x 7.4 = 3.3

26+05.0



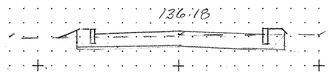
C = 0.5 x 7.4 = 3.7

26+04.0



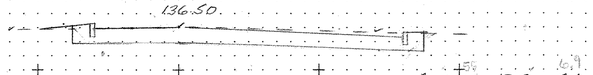
C = 0.5 x 7.4 = 3.7

26+030



C = 0.4 x 7.4 = 3.0

26+020



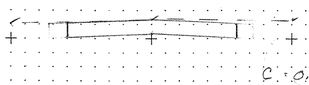
C = 0.75 x 12.5 = 5.6

26+010 (Zero Sand)

(Excavation)
15 x 1.15 = 17.3

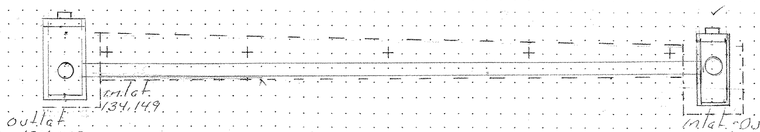
26+006 (Butt)

(Sand)
15 x 0.65 = 9.8



C = 0.55 x 6.0 = 3.3

26+0.60 (Butt Excav.)



26+010 26+020 26+030

26+013.5 ~ 26+036.5 LT.
New 450 mm x 21.4 m PCCSP
Bk 3 Pg 94

ITEM 204.20 TRENCH EXC	
CATCH BASIN @ 26+039 RT	
DEPTH 0-1.5	
1.5 x 3.15 x 2.18 =	7.13 m³
DEPTH OVER 1.5	
4.62 x 1.9 x 2.18 =	3.09 m³
	10.22 m³
PIPE 26+039.5 RT ~ 26+039 RT	
DEPTH 0-1.5	
1.58 x 4.62 x 1.99 =	7.24 m³
DEPTH OVER 1.5	
NONE	

ITEM 204.30 GRAN. BACKFILL	
CATCH BASIN	
DEPTH 0-1.5	
7.13 - (1.5 x 1.50) FT =	5.88 m³
DEPTH OVER 1.5	
3.09 - (1.5 x 1.50) FT =	2.75 m³
	8.40 m³
PIPE	
DEPTH 0-1.5	
1.58 x 4.62 x 1.99 =	6.67 m³
DEPTH OVER 1.5	
NONE	

Bk 3 Pg 95 RP 1-28-04

Plus (over 1.5)
3.09 x 0.5 = 1.55 m³

Total		
	7.13 m³	8.40 m³
	3.09 m³	6.67 m³
	1.55 m³	15.07 m³
	2.34 m³	
	14.11 m³	

W = 1.45 m

ITEM 204.20 TRENCH EXC	
CATCH BASIN @ 26+036.5 LT	
DEPTH 0-1.5	
1.5 x 2.11 x 2.0 =	6.68 m³
DEPTH OVER 1.5	
3.87 x 2.11 x 2.0 =	3.87 m³
	10.55 m³
PIPE 26+013.5 - 26+036.5 LT	
DEPTH 0-1.5	
1.07 x 1.75 x 5.25 =	13.78 m³
1.20 x 1.75 x 15.5 =	35.26 m³
	49.04 m³
DEPTH OVER 1.5	
.106 x 1.75 x 5.25 =	.55 m³

ITEM 204.30 GRAN. BACKFILL	
CATCH BASIN	
DEPTH 0-1.5	
6.68 - (1.5 x 1.50) FT =	5.20 m³
DEPTH OVER 1.5	
3.87 - (1.5 x 1.50) FT =	3.31 m³
	8.51 m³
PIPE	
DEPTH 0-1.5	
2.45 m² x 5.25 =	12.86 m³
2.10 m² x 15.5 =	32.55 m³
	45.41 m³
DEPTH OVER 1.5	
.106 x 1.75 x 5.25 =	.55 m³

Bk 3 Pg 94 RP 1-28-04

Plus (over 1.5)
3.87 x 0.5 = 1.94 m³
0.55 x 0.5 = 0.28 m³

Total		
	6.68 m³	8.31 m³
	3.87 m³	45.41 m³
	49.04 m³	0.55 m³
	0.55 m³	54.27 m³
	1.94 m³	
	0.28 m³	
	62.36 m³	

26+036.5 LT ~ 26+039 RT
New 450 mm x 5.4 m PCCSP
Bk 3 Pg 94

77 #16

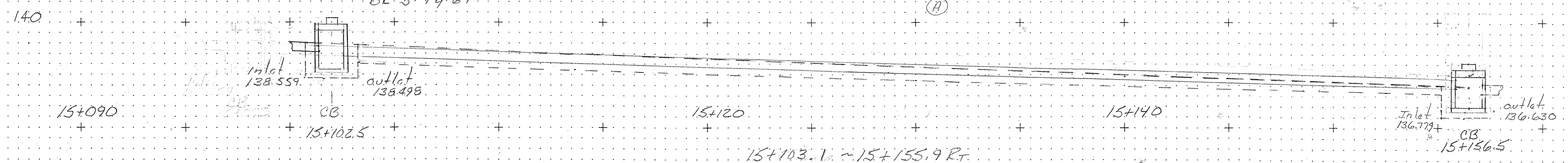
PROJECT: FRANKLIN	PROJECT NO.: STP 0301(18)
DESIGN FILE NAME: IPARM FILE NAME:	PLOT DATE: 01-MAY-1996
	SHEET: 1 OF 6

061

Metric

ITEM 204.20 TRENCH EXC	ITEM 204.30 GRAN. BACKFILL
CATCH BASIN @ 15+102.5 RT	CATCH BASIN
DEPTH 0-1.5	DEPTH 0-1.5
1.5x2.52x2.52 = 9.53 M³	9.53 - (1.37x(.74)²π = 7.17 M³
DEPTH OVER 1.5	DEPTH OVER 1.5
.14x2.52x2.52 = .89 M³	.14x2.52x2.52 = .89 M³
10.42	8.06
PIPE 15+103.1 - 15+155.9 RT	PIPE
DEPTH 0-1.5	DEPTH 0-1.5
.66x1.75x51.85 = 59.89 M³	1.01 M² x 51.85 = 52.37 M³
DEPTH OVER 1.5	DEPTH OVER 1.5
NONE	NONE
9.53	Total 60.43
0.89x1.5 = 1.34	12.14.04
59.89	
Total 70.76	
12.14.04	

Bk 3 Pg 67



15+103.1 ~ 15+155.9 RT
New 450mm x ~~53.8~~ 52.8 PCCSP
1.63mm (68mm x 12mm)

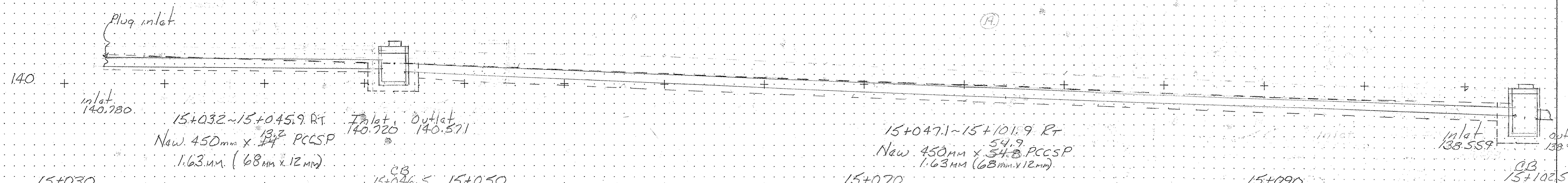
ITEM 204.20 TRENCH EXC	ITEM 204.30 GRAN. BACKFILL
PIPE 15+032 - 15+045.9 RT	PIPE
DEPTH 0-1.5	DEPTH 0-1.5
.61x1.75x13.2 = 14.1 M³	.89 M² x 13.2 = 10.46 M³
DEPTH OVER 1.5	DEPTH OVER 1.5
NONE	NONE

Bk B3 Pg 61

(B)

ITEM 204.20 TRENCH EXC	ITEM 204.30 GRAN. BACKFILL
CATCH BASIN @ 15+046.5 RT	CATCH BASIN
DEPTH 0-1.5	DEPTH 0-1.5
1.4x2.52x2.52 = 8.89 M³	8.89 - (1.1x(.74)²π = 7.0 M³
DEPTH OVER 1.5	DEPTH OVER 1.5
NONE	NONE
PIPE 15+047.1 - 15+101.9 RT	PIPE
DEPTH 0-1.5	DEPTH 0-1.5
.82x1.75x53.87 = 77.30 M³	1.26 M² x 53.87 = 67.88 M³
DEPTH OVER 1.5	DEPTH OVER 1.5
NONE	NONE
Total 86.19	Total 69.68
12.14.04	74.88
	12.14.04

Bk 3 Pg 65



15+032 ~ 15+045.9 RT
New 450mm x ~~14~~ 13.2 PCCSP
1.63mm (68mm x 12mm)

15+047.1 ~ 15+101.9 RT
New 450mm x ~~54.8~~ 54.9 PCCSP
1.63mm (68mm x 12mm)

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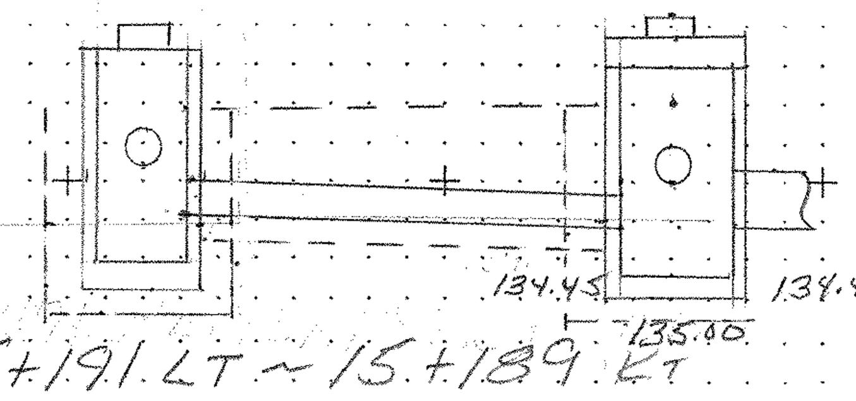
DESIGN FILE NAME:	
IPARM FILE NAME:	PLOT DATE: 01-MAY-1996
	SHEET: 2 OF 6

062

Metric

Item 204.20 Tr Earth	Item 204.39 GB For Struct
CB @ 15+191	CB @ 15+191
0-1.5	
1.5 x 2.48 x 2.48 = 9.2	2.48 x 2.48 x 2.65 − (.74² x π x 2.65) = 11.7
CB over 1.5	
1.15 x 2.48 x 2.48 x 1.5 = 7.1 10.60	
Pipe	Pipe
0-1.5	
1.5 x 1.75 x 4.45 = 11.7	1.8 x 1.75 x 4.45 = 14.0
over 1.5	
0.3 x 1.75 x 4.45 x 1.5 = 3.5	
31.5 m³	25.7 m³
35.0 JKE 12.14.04	JKE 12.14.04



15+191 LT ~ 15+189 LT
New 450mm x 5.8 PCCSP
1.63mm (68mm x 12mm)
Bk 3 Pg 80

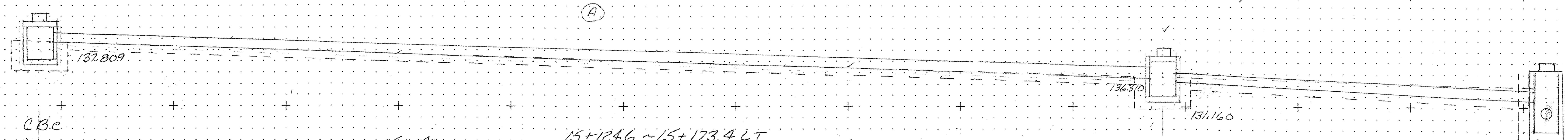
4.6

ITEM 204.20 TRENCH EXC	ITEM 204.30 GRAN. BACKFILL
CATCH BASIN @ 15+124 LT	CATCH BASIN
DEPTH 0-1.5	DEPTH 0-1.5
1.3 x 2.52 x 2.52 = 8.26 m³	8.26 − (1.05 x (.74)² π) = 6.46 m³
DEPTH OVER 1.5	DEPTH OVER 1.5
NONE	NONE
PIPE 15+124.6 − 15+173.4 LT	PIPE
DEPTH 0-1.5	DEPTH 0-1.5
.33 x 1.75 x 47.4 = 27.37 m³	.56 m² x 47.4 = 26.54 m³
DEPTH OVER 1.5	
NONE	
Bk #3 Pg 77	
Total 35.63 (12.14.04)	33.00 (12.14.04)

ITEM 204.20 TRENCH EXC.	ITEM 204.30 GRAN. BACKFILL
CATCH BASIN @ 15+174 LT	CATCH BASIN
DEPTH 0-1.5	DEPTH 0-1.5
1.4 x 2.48 x 2.48 = 8.61 m³	8.61 − (1.05 x (.74)² π) = 6.81 m³
DEPTH OVER 1.5	DEPTH OVER 1.5
NONE	NONE
PIPE 15+174.6 − 15+190.4 LT	PIPE
DEPTH 0-1.5	DEPTH 0-1.5
.71 x 1.75 x 14.6 = 18.14 m³	1.09 m² x 14.6 = 15.77 m³
DEPTH OVER 1.5	DEPTH OVER 1.5
NONE	NONE
Total 26.25 (JKE 12.14.04)	22.58 (JKE 12.14.04)

Bk 3 Pg 79

140



CB c
15+124 LT

15+140

15+124.6 ~ 15+173.4 LT
New 450mm x 49.6m PCCSP
1.63mm (68mm x 12mm)
Bk 3 Pg 76

15+160

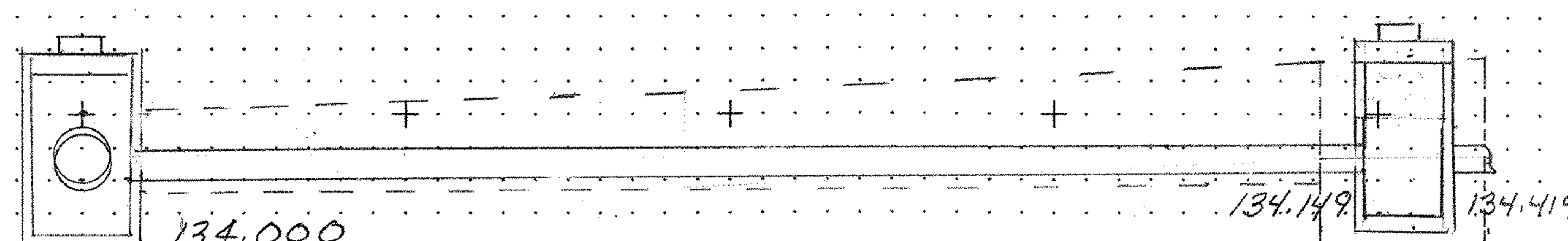
15+174

15+174.6 ~ 15+190.4 LT
New 450mm x 15.9 PCCSP
1.63mm (68mm x 12mm)
Bk 3 Pg 78

15+191

W = 1.45m

135



CB c
15+214 RT

15+214 Rt ~ 26+013.0 LT
New 450mm x 18.6 PCCSP
1.63mm (68mm x 12mm)
Bk 3 Pg 98

CB c
26+013.5 LT

ITEM 204.20 TRENCH EXC	ITEM 204.30 GRAN. BACKFILL
CATCH BASIN @ 26+013.5 LT	CATCH BASIN
DEPTH 0-1.5	DEPTH 0-1.5
1.5 x 2.52 x 2.52 = 9.53 m³	9.53 − (1.5 x (.74)² π) = 6.95 m³
DEPTH OVER 1.5	DEPTH OVER 1.5
1.42 x 2.52 x 2.52 = 9.02 m³	9.02 − (1.1 x (.74)² π) = 7.13 m³
PIPE 15+219 RT − 26+013 LT	PIPE
DEPTH 0-1.5	DEPTH 0-1.5
1.5 x 1.45 x 9.8 = 21.32 m³	2.03 m² x 9.8 = 19.89 m³
1.38 x 1.45 x 8.38 = 16.77 m³	1.84 m² x 8.38 = 15.42 m³
38.09 m³	35.31 m³
DEPTH OVER 1.5	DEPTH OVER 1.5
.2 x 1.45 x 9.8 = 2.84 m³	.27 x 9.8 = 2.65 m³
Totals 9.53	7-28-04
9.02 x 1.5 = 13.53	

21.32
16.77
2.84 x 1.5 = 4.26
65.41 (12.14.04)

52.04 (12.14.04)

Bk 3 Pg 98

13.2
4.3

19.0

PROJECT: FRANKLIN	PROJECT NO.: STP 0301(18)
DESIGN FILE NAME: IPARM FILE NAME:	PLOT DATE: 01-MAY-1996
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063

Metric

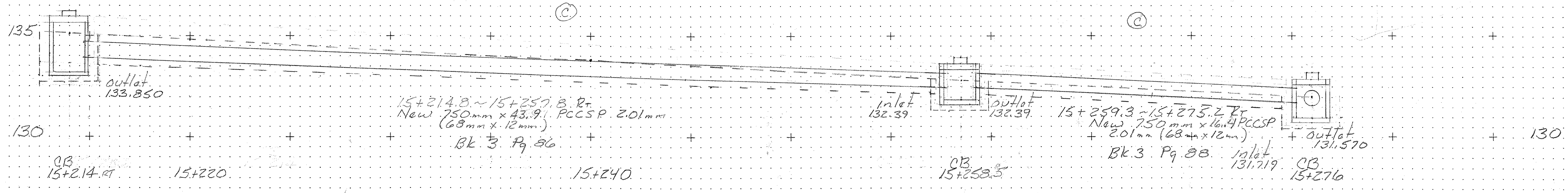
ITEM 204.20 TRENCH EXC.	ITEM 204.30 GRAN. BACKFILL FOR STRUCTURES
CATCH BASIN @ STA 15+214 RT	CATCH BASIN
DEPTH 0-1.5M	Depth 0-1.5M
1.5 × 2.83 × 2.83 = 12.01 M³	12.01 - (1.5×(.91)²π = 8.11
DEPTH OVER 1.5M	Depth over 1.5M
0.77 × 2.83 × 2.83 = 6.17 M³	6.17 - (.47×(.91)²π = 4.95
	13.06
PIPE @ STA 15+214.8 - 15+257.8 RT	PIPE
DEPTH 0-1.5M	1.09 × 1.65 × 41.5 = 72.43 M³
1.09 × 2.05 × 41.5 = 92.73 M³	DEPTH OVER 1.5 NONE
DEPTH OVER 1.5M NONE	Total 85.49

12.01
6.17 × 1.5 = 9.26
92.73
Total 114.00

Bk 3 Pg 87

ITEM 204.20 TRENCH EXC.	ITEM 204.30 GRAN. BACKFILL
CATCH BASIN @ ST. 15+258.5 RT	CATCH BASIN
DEPTH 0-1.5M	DEPTH 0-1.5
1.5 × 2.89 × 2.89 = 12.53 M3	12.53 - (1.2×(.91)²π = 9.41 M³
DEPTH OVER 1.5M NONE	
PIPE @ STA 259.3 - 15+275.2 RT	PIPE
DEPTH 0-1.5M	DEPTH 0-1.5M
0.62 × 2.05 × 14.62 = 18.58 M³	.81M² × 14.62 = 11.84 M³
DEPTH OVER 1.5M NONE	DEPTH OVER 1.5 NONE
Total 31.11	Total 21.25

Book #3 Pg 89

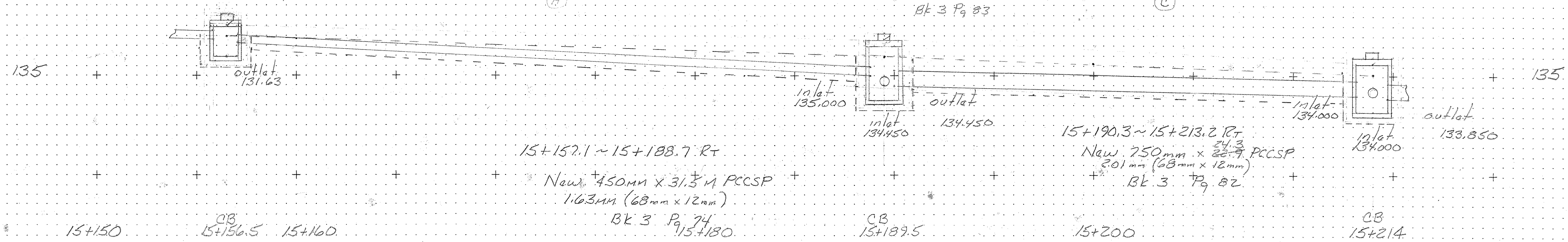


ITEM 204 TRENCH EARTH	Item 204.30 Gran Backfill For Structures
CATCH BASIN @ 15+156.5 RT.	CATCH BASIN
DEPTH 0-1.5M	DEPTH 0-1.5
1.5 × 2.55 × 2.55 = 9.75 m³	9.75 - (1.32×(.74)²π = 9.03 M³
DEPTH OVER 1.5	DEPTH OVER
.12 × 2.55 × 2.55 = .78 M³	.12 × 2.55 × 2.55 = .78 M³
PIPE Depth 0-1.5M	PIPE
.97 × 1.75 × 30.35 = 51.52 M³	1.52 M² × 31.5 = 47.88 M³
Depth over 1.5 - None	
9.25	
0.78 × 1.5 = 1.17	
51.52	
Total 62.44	Total 57.69

Bk 3 Pg 75

ITEM 204.20 TRENCH EXC.	ITEM 204.30 Gran. Backfill
CATCH BASIN @ 15+189.5	CATCH BASIN
DEPTH 0-1.5	DEPTH 0-1.5
1.5 × 2.82 × 2.82 = 11.93 M³	11.93 - (1.5×(.91)²π = 8.03 M³
DEPTH OVER 1.5	DEPTH OVER 1.5
1.11 × 2.82 × 2.82 = 8.83 M³	8.83 - (.81×(.91)²π = 6.72 M³
	14.75
PIPE 15+190.3 - 15+213.2 RT	PIPE
DEPTH 0-1.5	DEPTH 0-1.5
1.5 × 2.05 × 21.5 = 66.11	2.61 M² × 21.5 = 56.12 m³
DEPTH OVER 1.5	DEPTH OVER 1.5
.125 × 2.05 × 15.5 = 3.97 M³	.125 × 2.05 × 15.5 = 3.97 M³
11.93	
8.83 × 1.5 = 13.25	
66.11	
3.97 × 1.5 = 5.96	
Total 97.25	Total 74.84

Bk 3 Pg 83



PROJECT: FRANKLIN	PROJECT NO.: STP 0301(18)
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IPARM FILE NAME:	PLOT DATE: 01-MAY-1996
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MTO Metric

ITEM 204.20 TRENCH EXC	
CATCH BASIN @ 15+383 RT	
DEPTH 0-1.5	
1.55 x 2.55 x 2.55 = 9.75 m³	
DEPTH OVER 1.5	
.225 x 2.55 x 2.55 = 1.46 m³	
PIPE 15+363.6 - 15+382.4 RT	
DEPTH 0-1.5	
.71 x 1.75 x 17.35 = 21.56 m³	
DEPTH OVER 1.5	
NONE	
1.46 x 1.5 = 2.19	9.75
Total	23.50

ITEM 204.30 GRAN. BACKFILL	
CATCH BASIN	
DEPTH 0-1.5	
9.75 - (1.4 x (.7)²)π = 7.34 m³	
DEPTH OVER 1.5	
.225 x 2.55 x 2.55 = 1.46 m³	
8.80 m²	
PIPE	
DEPTH 0-1.5	
1.06 m² x 17.35 = 18.39 m³	
DEPTH OVER 1.5	
NONE	
Total	8.80 / 18.39 / 27.19

Bk 3 Pg 113

ITEM 204.20 TRENCH EXC	
CATCH BASIN @ 15+363 LT	
DEPTH 0-1.5	
1.55 x 2.50 x 0.80 = 8.44 m³	
DEPTH OVER 1.5	
NONE	
PIPE 15+363 LT - 15+363 RT	
DEPTH 0-1.5	
.6 x 1.75 x 3.65 = 3.18	
DEPTH OVER 1.5	
NONE	
Total	11.62

ITEM 204.30 GRAN. BACKFILL	
CATCH BASIN	
DEPTH 0-1.5	
8.44 - (1.12 (.7)²)π = 6.55 m³	
DEPTH OVER 1.5	
NONE	
PIPE	
DEPTH 0-1.5	
.91 m² x 3.65 = 2.59	
DEPTH OVER 1.5	
NONE	
Total	9.14

Bk 3 Pg 111

W = 1.45 m

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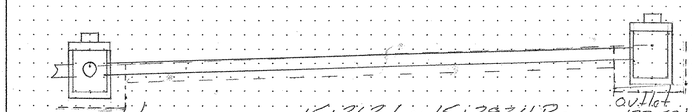
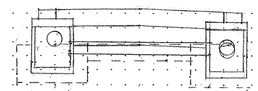


130

CB 15+363

15+363.6 ~ 15+382.4 Rt
New 450mm x 19.0m PCCSP
1.63mm (68mm x 12mm)
Bk 3 Pg 112

CB 15+383



15+363
New 450mm x 5m PCCSP
1.63mm (68mm x 12mm)
Bk 3 Pg 110

10 of 2.8

ITEM 204.20 TRENCH EXC	
CATCH BASIN @ 15+311 RT	
DEPTH 0-1.5	
1.35 x 2.15 x 2.15 = 6.21 m³	
DEPTH OVER 1.5	
NONE	
PIPE 15+293.6 - 15+310.6 RT	
DEPTH 0-1.5	
.63 x 1.75 x 15.6 = 17.26 m³	
DEPTH OVER 1.5	
NONE	
Total	23.44

ITEM 204.30 GRAN. BACKFILL	
CATCH BASIN	
DEPTH 0-1.5	
6.24 - (1.0 x (.7)²)π = 5.26	
DEPTH OVER 1.5	
NONE	
PIPE	
DEPTH 0-1.5	
.95 m² x 15.6 = 14.5 m³	
DEPTH OVER 1.5	
NONE	
Total	19.76

Bk 3 Pg 103

ITEM 204.20 TRENCH EXC	
CATCH BASIN @ 15+319 RT	
DEPTH 0-1.5	
1.30 x 2.5 x 2.5 = 8.12 m³	
DEPTH OVER 1.5	
NONE	
PIPE 15+311.5 - 15+318.4 RT	
DEPTH 0-1.5	
.47 x 1.75 x 5.55 = 4.56 m³	
DEPTH OVER 1.5	
NONE	
Total	12.68

ITEM 204.30 GRAN. BACKFILL	
CATCH BASIN	
DEPTH 0-1.5	
8.13 - (1.0 x (.7)²)π = 6.41 m³	
DEPTH OVER 1.5	
NONE	
PIPE	
DEPTH 0-1.5	
.66 m² x 5.55 = 3.66 m³	
DEPTH OVER 1.5	
NONE	
Total	10.07

Bk 3 Pg 105

ITEM 204.20 TRENCH EXC	
CATCH BASIN @ 15+345 RT	
DEPTH 0-1.5	
1.43 x 2.55 x 2.55 = 9.30 m³	
DEPTH OVER 1.5	
NONE	
PIPE 15+319.6 - 15+344.4 RT	
DEPTH 0-1.5	
.47 x 1.75 x 25.35 = 19.03 m³	
DEPTH OVER 1.5	
NONE	
Total	28.53

ITEM 204.30 GRAN. BACKFILL	
CATCH BASIN	
DEPTH 0-1.5	
9.30 - (1.15 x (.7)²)π = 7.36 m³	
DEPTH OVER 1.5	
NONE	
PIPE	
DEPTH 0-1.5	
.72 m² x 23.35 = 16.83 m³	
DEPTH OVER 1.5	
NONE	
Total	24.19

Bk 3 Pg 107

ITEM 204.20 TRENCH EXC	
CATCH BASIN @ 15+363 RT	
DEPTH 0-1.5	
1.55 x 2.60 x 2.60 = 10.14 m³	
DEPTH OVER 1.5	
NONE	
PIPE 15+345.6 - 15+362.4 RT	
DEPTH 0-1.5	
.61 x 1.75 x 15.49 = 16.54 m³	
DEPTH OVER 1.5	
NONE	
Total	26.68

ITEM 204.30 GRAN. BACKFILL	
CATCH BASIN	
DEPTH 0-1.5	
10.14 - (1.2 x (.7)²)π = 9.08 m³	
DEPTH OVER 1.5	
NONE	
PIPE	
DEPTH 0-1.5	
.88 m² x 15.49 = 13.79 m³	
DEPTH OVER 1.5	
NONE	
Total	21.87

Bk 3 Pg 109

135

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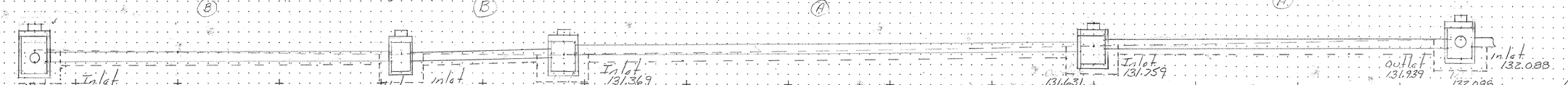

130

CB 15+293

15+293.6 ~ 15+310.6 Rt
New 450mm x 17.2 PCCSP
1.63mm (68mm x 12mm)
Bk 3 Pg 102
15+300

CB 15+311

CB 15+319

15+311.5 ~ 15+318.4 Rt
New 450mm x 7.4 m PCCSP
1.63mm (68mm x 12mm)
Bk 3 Pg 104

15+319.6 ~ 15+344.4 Rt
New 450mm x 25.0m PCCSP
1.63mm (68mm x 12mm)
Bk 3 Pg 106

CB 15+345

15+345.6 ~ 15+362.4 Rt
New 450mm x 17.0m PCCSP
1.63mm (68mm x 12mm)
Bk 3 Pg 108

CB 15+363

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MTO Metric

ITEM 204.20 TRENCH EXC	ITEM 204.30 GRAN. BACKFILL
CATCH BASIN @ 15+440.5 RT DEPTH 0-1.5 1.47 x 2.5m x 2.52 = 9.24 m³ DEPTH OVER 1.5 NONE PIPE 15+415 LT - 15+425.6 RT DEPTH 0-1.5 .419 x 1.45 x 9.28 = 6.58 m³ DEPTH OVER 1.5 NONE Total 15.82	CATCH BASIN DEPTH 0-1.5 9.24 - (1.17 x (.74)² m) = 7.32 m³ DEPTH OVER 1.5 NONE PIPE DEPTH 0-1.5 .38 m² x 9.28 = 5.47 m³ DEPTH OVER 1.5 NONE Total 12.80

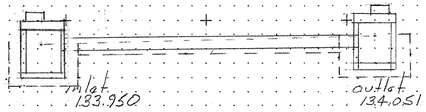
W = 1.45 m

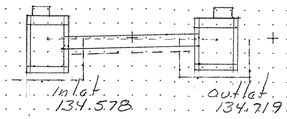
Bk 3 Pg 117

ITEM 204.20 TRENCH EXC	ITEM 204.30 GRAN. BACKFILL
CATCH BASIN @ 15+440 RT DEPTH 0-1.5 1.35 x 2.48 x 2.48 = 8.30 m³ DEPTH OVER 1.5 NONE PIPE 15+440 LT - 15+440 RT DEPTH 0-1.5 .50 x 1.45 x 2.40 = 2.47 m³ DEPTH OVER 1.5 NONE Total 10.77	CATCH BASIN DEPTH 0-1.5 8.30 - (1.05 x 1.74)² m = 6.50 m³ DEPTH OVER 1.5 NONE PIPE DEPTH 0-1.5 .61 m² x 3.40 = 2.07 m³ DEPTH OVER 1.5 NONE Total 8.57

W = 1.45 m

Bk 3 Pg 121





130

15+415 LT ~ 15+425.6 RT
New 450mm x 10.5m PCCSP
1.63mm x (68mm x 12mm)
Bk 3 Pg 116

15+440
New 450mm x 5.5m PCCSP
1.63mm (68mm x 12mm)
Bk 3 Pg 120

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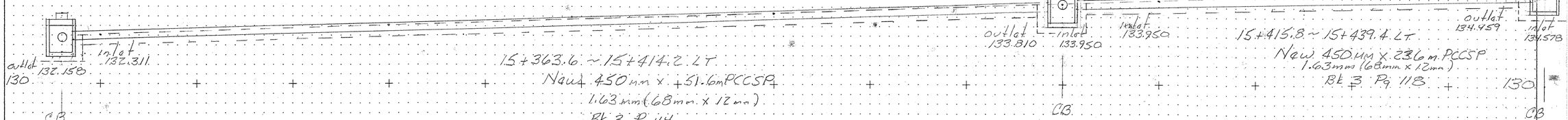
ITEM 204.20 TRENCH EXC	ITEM 204.30 GRAN. BACKFILL
CATCH BASIN @ 15+415 LT DEPTH 0-1.5 1.5 x 2.52 x 2.5 = 9.53 m³ DEPTH OVER 1.5 NONE PIPE 15+363.6 - 15+414.2 LT DEPTH 0-1.5 .58 x 1.75 x 49.5 = 50.24 m³ DEPTH OVER 1.5 NONE Total 59.77	CATCH BASIN DEPTH 0-1.5 9.53 - (1.2 x (.74)² m = 7.47 m³ DEPTH OVER 1.5 NONE PIPE DEPTH 0-1.5 .90 m² x 49.5 = 44.55 m³ DEPTH OVER 1.5 NONE Total 52.02

Bk 3 Pg 119

ITEM 204.20 TRENCH EXC	ITEM 204.30 GRAN. BACKFILL
CATCH BASIN @ 15+440 LT DEPTH 0-1.5 1.5 x 2.48 x 2.48 = 9.23 m³ DEPTH OVER 1.5 NONE PIPE 15+415.8 - 15+439.4 LT DEPTH 0-1.5 .75 x 1.75 x 22.4 = 29.4 m³ DEPTH OVER 1.5 NONE Total 38.63	CATCH BASIN DEPTH 0-1.5 9.23 - (1.25 x (.74)² m = 7.08 m³ DEPTH OVER 1.5 NONE PIPE DEPTH 0-1.5 1.14 m² x 22.4 = 25.54 m³ DEPTH OVER 1.5 NONE Total 32.62



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