

Survey Report

Differential Leveling Network and Benchmark Determination In Weymouth, Massachusetts

Between December of 2010 and March of 2012, the Norfolk County Engineering Department conducted a Town wide differential leveling survey in the Town of Weymouth, Massachusetts. The differential leveling survey was performed using a network of leveling segments between benchmarks, the entire survey spanned over 70 linear miles on the ground. The result of the leveling survey allows for the benchmarks to have elevations values in either NGVD29 or NAVD88 vertical datum. 60 new benchmarks were established during this project, as well as the recovery of 76 existing benchmarks, and the recovery of 29 first and second order control benchmarks.

N.G.V.D.29 Vertical Control:

Station	Record Elevation	Agency	Order	Class	Datum	Note
H-13	190.60	NGS	First	II	NGVD29	Leveled
WBR22	162.448	MA/DOT	First	II	NGVD29	Leveled
3060	128.992	MA/DOT	First	II	NGVD29	Leveled
3061	151.350	MA/DOT	First	II	NGVD29	Leveled
85AR	30.300	MA/DOT	Second	II	NGVD29	Leveled
85AQ	44.263	MA/DOT	First	II	NGVD29	Leveled
13AF	157.16	NGS	First	I	NGVD29	Leveled
93A	102.842	MA/DOT	Second	I	NGVD29	Leveled
93C	163.941	MA/DOT	Second	I	NGVD29	Leveled
93F	181.587	MA/DOT	Second	I	NGVD29	Leveled
EMERY1934	155.60	NGS	Second	I	NGVD29	Leveled
WBR3	27.64	MA/DOT	Second	I	NGVD29	Leveled
WBR10	72.22	MA/DOT	Second	I	NGVD29	Leveled
WBR20	139.68	MA/DOT	Second	I	NGVD29	Leveled
68J11	159.52	MA/DOT	Second	I	NGVD29	Leveled
68J12	173.12	MA/DOT	Second	I	NGVD29	Leveled
68J17A	195.69	MA/DOT	Second	I	NGVD29	Leveled
68J18A	26.68	MA/DOT	Second	I	NGVD29	Leveled
5240Z	124.295	MA/DOT	Second	I	NGVD29	Leveled
85AD	15.341	MA/DOT	Second	I	NGVD29	Leveled
85AE	33.547	MA/DOT	First	I	NGVD29	Leveled



N.A.V.D.88 Vertical Control:

Station	Record Elevation M, (FT)	Agency	Order	Class	Datum	Note
8073	48.995M, (160.744FT)	MA/DOT	Second	I	NAVD88	Rivet
8074	47.220M, (154.920FT)	MA/DOT	Second	I	NAVD88	Rivet
93F	55.055M, (180.626FT)	MA/DOT	Second	I	NAVD88	Disk
WBR20	42.305M, (138.795FT)	MA/DOT	Second	I	NAVD88	Sqr. Cut
9033	12.603M, (41.348FT)	MA/DOT	Second	I	NAVD88	Leveled
9016	44.793M, (146.958FT)	MA/DOT	Second	I	NAVD88	Rivet
9018	51.864M, (170.157FT)	MA/DOT	Second	I	NAVD88	Rivet
9024	11.885M, (38.992FT)	MA/DOT	Second	I	NAVD88	Rivet
9025	6.549M, (21.486FT)	MA/DOT	Second	I	NAVD88	Rivet
F42	3.580M, (11.745FT)	MA/DOT	First	II	NAVD88	Disk
J42	2.994M, (9.822FT)	MA/DOT	First	II	NAVD88	Disk
85AR	8.967M, (29.419FT)	MA/DOT	First	II	NAVD88	Disk
85AQ	13.192M, (43.28FT)	MA/DOT	First	II	NAVD88	Disk
85AD	4.405M, (14.452FT)	MA/DOT	First	II	NAVD88	Disk

Measured Elevations:

Benchmark

Feet, NGVD29 & NAVD88

Description

B.M. Ties & Pictures

(#)=Change from Record Elevation

B.M. STATION	NGVD 29 Elevations (FEET)	NAVD 88 Elevations (FEET)	B.M. Description	B.M. Ties & Picture on Report Page (Pg. #)
H-13	190.60 (HELD)	189.774	U.S.G.S. Disk in east end of 1 st granite step at S.W. entrance to Fogg library	17
85AR	30.25(-0.05)	29.419 (HELD)	MAGS Disk under pavement	17
85AQ	44.13(-0.133)	43.28(HELD)	MAGS Disk under pavement	18
WBR22	162.448(HELD)	161.64	Ch. Sqr. Cut Conc. Hdwall Randolph St.	18
WBR20	139.59	138.795(HELD)	Ch. Sqr. Cut Conc. Hdwall Randolph St.	63
13AF	157.16 (HELD)	156.36	Disk Main St./RxR crossing	19
3060	128.992(HELD)	128.18	Rivet Conc.Walk #108 Ralph Talbot	19
3061	151.35 (HELD)	150.52	Rivet S.B. @ #393 Ralph Talbot/Pine	20
93A	102.69 (-0.15)	101.87	Disk under pavement	20
93C	163.941(HELD)	163.12	MAGS Disk #616 Main St.	21
93F	181.43 (-0.157)	180.626(HELD)	Disk just off side of roadway	21
9033	42.19	41.348 (HELD)	Rivet traffic ctrl box North St.	22
EMERY 1934	155.67(+0.07)	154.84	Disk conc. Bound (Emery Estate)	22
68J11	159.52 (HELD)	158.70	Rivet Door Sill/ Floor Hollis St. Old Pump Station	23
68J12 DESTROYED	173.12	172.31	Now Gone (2012)	
68J17A	195.69 (HELD)	194.86	Rivet S.B. @ Central St. / Reed Ave.	23
68J18A	26.68 (HELD)	25.84	Rivet S.B. @ Monatiquot St. / Bluff Rd.	24
8073	161.568	160.744 (HELD)	Rivet Conc. Retwall Trotter Rd.	24
8074	155.72	154.92 (HELD)	Rivet Conc. Hdwl. Main St.	25
9016	147.75	146.958(HELD)	Rivet (Abington, Ma)	25
9018	170.98	170.157(HELD)	Rivet (Braintree, Ma)	26
9024	39.80	38.992(HELD)	Rivet (Braintree, Ma)	26
9025	22.32	21.486(HELD)	MA DPW Disk on top of Concrete Bridge Abutment. (Braintree, Ma)	27
85AD	15.22(-0.12)	14.38(-0.07)	Disk MAGS (Hingham, Ma)	27
85AE	33.44 (-0.11)	32.60	Disk MAGS (Hingham, Ma)	27
F42	12.54	11.69(-0.05)	Disk (Hingham, Ma)	28
J42	10.59	9.75 (-0.07)	Disk (Hingham, Ma)	28
BM #2	11.00	10.16	Disk U.S.C.&G.S. Stamped #2 on Headwall. (Hingham, Ma)	28
BM100	15.75	14.91	RxR Spike @ Willow Ave.	29
BM101	10.71	9.87	Rivet Fore River Ave./Birchbrow Ave.	29
BM102	43.79	42.95	Chiseled Sqr. Cut Wessagussett Rd.	30
BM103	15.00	14.17	Rivet Gran.curb River St.	30
BM104	10.28	9.44	Rivet in S.B. Webb State Park	31
BM105	8.57	7.73	Rivet Gran.curb Neck St.	31
BM106	38.03	37.19	Rivet Gran.curb A.A.Park Bridge St.	32
BM107	11.12	10.28	Rivet Conc. Hdwall Pearl/North St.	32

B.M. STATION	NGVD 29 Elevations (FEET)	NAVD 88 Elevations (FEET)	B.M. Description	B.M. Ties & Picture on Report Page (PG. #)
BM108	31.61	30.78	Rivet Conc. Curb Green/East St.	33
BM109	44.74	43.91	Disk TOW C.bnd.#586 North St.	33
BM110	111.10	110.27	R.O.C.B.Slate Capped Step #791 Commercial St.	34
BM111	46.60	45.77	Rivet on Island East St.	34
BM112	67.64	66.82	Rivet on Conc. Retwall @ #610 Broad St. (M.Temple)	35
BM113	97.48	96.66	Rivet on Top Step Davis-Bates Clapp Bldg. Middle St.	35
BM114	77.37	76.54	Rivet conc. curb @ #216 Essex St. & Broad St.	36
BM115	27.03	26.20	Rivet on Guard Rail Post @ Commercial/Essex St.	36
BM116	20.95	20.12	Rivet conc.s.w. RxR/Comm. St.	37
BM118	90.98	90.15	Rivet ledge Broad St. El.Eas.	37
BM119	107.99	107.16	Rivet ledge cemetery Wash.St.	38
BM120	102.87	102.05	Rivet Conc Isl. Wash./Main St.	38
BM121	89.05	88.22	Rivet ledge #664 Wash. St.	39
BM122	101.20	100.38	Disk TOW Carroll/Middle St.	39
BM123	109.94	109.11	Rivet set in Ledge across from 1385 Washington St.	40
BM124	157.88	157.06	Rivet Gran. curb Main St.	40
BM125	150.70	149.88	Rivet	41
BM126	131.75	130.93	Rivet	41
BM127	114.91	114.09	Rivet S.Bnd.Pleasant St./Elm St.	42
BM128	138.69	137.87	Rivet top headwall West St.	42
BM129	150.30	149.48	Rivet ledge outcrop West St.	43
BM130	150.25	149.43	Rivet Commerce Dr. Braintree	43
BM131	133.52	132.69	EP/LP DH/C.Bnd.	44
BM132	139.72	138.89	Disk	44
BM133	151.92	151.09	Disk conc. Bound @ Pine/ Merrymount	45
BM134	111.27	110.45	Rivet on Conc. Hdwall @ Ralph Talbot	45
BM135	118.62	117.80	Rivet on Conc. Bound @ Ralph Talbot/Fairview	46
BM136	163.02	162.19	Rivet on Conc. Bound @ Union St./Marie Ave.	46
BM137	182.19	181.37	Rivet in ledge 310 Union St.	47
BM138	63.36	62.53	Rivet	47
BM139	120.08	119.26	Rivet	48
BM140	162.29	161.47	Bolt	48
BM141	149.98	149.16	Chiseled Sqr. Cut of signal box@ Pond/Derby St.	49
BM142	170.57	169.75	Rivet	49
BM143	181.60	180.79	Rivet in conc. walk	50
BM144	158.81	158.00	Rivet	50
BM145	105.03	104.21	Rivet	51
BM146	99.34	98.52	Rivet	51
BM147	128.11	127.29	Rivet	52
BM148	125.72	124.90	Rivet	52

B.M. STATION	NGVD 29 Elevations (FEET)	NAVD 88 Elevations (FEET)	B.M. Description	B.M. Ties & Picture on Report Page (PG. #)
BM SQRNCLO149	109.07	108.25	Chiseled Square Cut	53
BM150	33.14	32.31	Rivet	54
BM151	101.34	100.52	Rivet	54
BM152	99.06	98.23	Rivet	55
BM153	105.27	104.45	Rivet on S.Bnd. Mian St.	55
BMG1	171.76	170.95	Mag nail in Bit. Conc. S.W.	56
BMG4	148.76	147.94	PK nail in Bit. Conc. S.W.	56
BMG9	114.89	114.06	Disk in C.bnd. Pond Meadow	57
BMG10	87.75	86.92	PK nail Broad St.	57
BMG12	34.10	33.26	PK nail Bridge & Sea St.	58
BMG13	36.70	35.86	D.H. S.B. Wessagussett Rd.	58
BMG14	24.65	23.82	PK nail in Bit. s.w. Green St.	59
BMG15	79.56	78.73	Spike bit. s.w. Essex St.	59
BMG16	105.51	104.68	PK traffic island Middle St.	60
BMG17	43.30	42.47	D.H. conc. walk Broad/Commercial St.	60
WBR3	27.53 (-0.11)	26.706	Chiseled Sqr. Cut on Conc. Hdwall	61
WBR6A	65.20	64.38	Chiseled Sqr. Cut on Conc. Hdwall	62
WBR6B	65.91	65.09	Chiseled Sqr. Cut on Conc. Hdwall	62
WBR10	72.10 (-0.12)	71.275	Chiseled Sqr. Cut Whitman's Pond	63
WBR20	139.59(-0.08)	138.795(HELD)	Chiseled Sqr. Cut on Conc. Hdwall	63
BMW4	82.81	81.98	Disk TOW in Conc. Bnd.@ East St./Hinston Rd.	64
BMW6	85.69	84.86	Disk TOW in Conc. Bnd.@ Broad St.	65
BM1W	173.31	172.50	PK set Bit. Conc. Driveway to Sewer bed of Lagoon C	65
WM1	10.40	9.57	Disk TOW Conc.bnd. River St.	64
WM11	83.81	82.98	Disk in S.Bnd. @ Pleasant/Washington	66
WM12	106.96	106.14	Disk in Bnd. Pleasant St.	66
WM13	182.35	181.53	Disk in C.Bnd. Pleasant Rd.	67
WM14	171.39	170.56	Disk in S.B. Central St.	67
WM15	123.26	122.44	Disk in S.B. Middle St.	68
WM16	182.44	181.61	Disk in S.B. Pleasant St.	68
WM17	72.25	71.42	Disk in S.B. Lambert Ave.	69
WM18	102.40	101.58	Disk in C.Bnd. Roseen Ave.	69
WM19	16.88	16.04	Disk conc. Walk Green St.	70
WM22	143.45	142.63	Disk in ledge	70
WM23	168.06	167.25	Disk in C.Bnd. Sheri Lane	71
WM24	138.34	137.52	Disk in C.Bnd. Mansfield St.	71
WM25	105.80	104.97	Disk ledge Wash./Middle St.	72
WM26	71.58	70.76	Disk ledge Chap.Sch. Comm. St.	72
WM27	196.31	195.50	Disk in ledge Forest St.	73

B.M. STATION	NGVD 29 Elevations (FEET)	NAVD 88 Elevations (FEET)	B.M. Description	B.M. Ties & Picture on Report Page (PG. #)
WM28	73.62	72.80	Disk C.bnd. @Pond Middle St.	73
WM36	121.69	120.86	Disk in Ledge Westminster	76
C11	128.32	127.50	TOW Disk C.Bnd.	77
C21	153.16	152.34	RxR Spike in Bit.S.W. @ Oak St. & Ralph Talbot	77
C22	178.07	177.26	D.H.SB Pond St.	78
SQRNCLO	102.79	101.97	SQR.Cut ledge Middle St.	
BM WM29	161.74	160.92	TOW Disk	74
BM WM30	156.22	155.40	TOW Disk	75
BM WM33	146.56	145.73	TOW Disk	75
BM WM34	141.04	140.22	TOW Disk	76
BM FULTON	181.61	180.80	Rivet set in Conc. Walk to Fulton School	
BM 2N LAGOONC	173.71	172.91	Rivet on Conc. Overflow Structure Of Sewer Bed Lagoon C	78
BM 5240Z	124.32	123.50	Disk N.E.Conc. Bridge Abutt. 124.30Middle/RTE.3	79
Temporary B.M. (TBM) STATION	NGVD 29 Elevations (FEET)	NAVD 88 Elevations (FEET)	B.M. Description	B.M. Ties & Picture on Report Page (PG. #)
BMHYD1	15.15	14.31	Hydrant Spindle @ Corner North/Wessagussett St.	
BMHYD2XCUT	16.67	15.83	Hydrant with X-Cut on Bolt	79
LOCCPL #165	20.99	20.15	L.O.C. Conc. Platform #165 Green St.	79
ROCBCS #305	63.12	62.29	R.O.C. Bottom Conc. Step #305 East St./Unicorn Ave.	80
ROCBCS #972	81.02	80.19	#972 Commercial St.	80
LOCBCS #1217	54.96	54.13	L.O.C. Bottom Conc. Step #1217 Commercial St.	80
ROCBBS #641	46.93	46.10	641 Commercial St.	80
LOCBCS #668	50.77	49.94	668 Commercial St.	81
ROCBGS #716	76.26	75.43	716 Commercial St.	81
BMSTONEPOST	22.60	21.77	Gran.Post RxR/Commercial St.	81
ROCBCS #410	60.06	59.23	410 Commercial St.	82
ROCGPLAT #444	67.20	66.37	444 Commercial St.	82
HYDSPINDLE	51.56	50.73		82
ROCGS #541	43.60	42.77	541 Commercial St.	82
ROCBCS #1325	29.64	28.81	1325 Pleasant St.	82
ROCBCS #1297	33.45	32.62	1297 Pleasant St.	83
LOCGS #1273	36.35	35.52	1273 Pleasant St.	83
LOCCPLAT #1189	54.96	54.13	1189 Pleasant St.	83
LOCCPL #1126-1128	78.20	77.37	1126-1128 Pleasant St.	83
ROCBCS #1080	86.35	85.52	1080 Pleasant St.	84
LOCBCS #49	83.80	82.97	49 Edgeworth St.	84

Temporary B.M. (TBM) STATION	NGVD 29 Elevations (FEET)	NAVD 88 Elevations (FEET)	B.M. Description	B.M. Ties & Picture on Report Page (PG. #)
BM SQR SB T.L. #123	109.92	109.09	Chiseled Sqr. Cut on Town Line Bnd. Washington St.	84
LOCBCSA #1060	100.52	99.69	Left Outer Corner Bottom Conc. Step #1060 Wash. St.	84
LOCBCSB #989	74.49	73.66	#989 Washington St.	85
SQRSB #844	115.48	114.65	Sqr. Cut S.B. 844 Washington St.	85
ROCBBS #777	101.21	100.39	777 Middle St.	85
ROCBCS #843	100.11	99.29	843 Middle St.	85
LOCBCS #930	125.15	124.33	930 Middle St.	86
TBM U.P.76	158.35	157.53	Spike U.P. #76 Main St.	86
ROCCS #91	139.52	138.70	91 park Ave.	86
ROCCPL #731	97.33	96.51	731 Pleasant St.	87
ROCBC3S #266	155.32	154.50	266 West St.	87
LOCBCS #391	148.25	147.43	391 Columbian St.	87
BM RR 1	116.81	115.98	RxR spike in berm Tilden Cir.	88
ROCB2CS #135	137.87	137.05	135 Liberty St.	88
ROCBCS #8	139.96	139.14	8 Mansfield St.	88
LOCBGS #52	39.95	39.12	52 High St. Left Outer Corner Bottom Granite Step	89
ROCBCS #131	89.80	88.98	131 Summer St.	89
ROCBCS #131	138.29	137.46	131 Belmont St.	89
LOCBGS #1273	36.33	35.50	1273 Pleasant St.	90
LOCBCS #220	163.28	162.46	220 Forest St.	90
LOCBCS #5A	160.04	159.23	5A Webster St.	90
LOCBCS #70	177.81	176.99	70 Thickett St.	90
LOCBCS #45	100.79	99.97	45 Winter St.	91
ROC3S #20	45.86	45.04	20 Iron Hill St.	91
RR SPK UP #13	25.98	25.14	RxR Spike U.P.#13 Bluff Road	91

Equipment Utilized:

Sokkia SDL30 Digital Level, Serial Number 2828

Sokkia BAS55 Aluminum RAB-Code Staffs with levels (10' circular vial~ bulls eye)

Leveling Plates

Leveling Pins

Procedures:

Differential Leveling Sections were run between benchmarks of known elevations. Level loops were not utilized for the majority of this project; level loops were utilized to tie into existing Benchmarks in adjacent Towns. All new benchmarks were established as a part of a level section, none were side shots. To strengthen the Leveling Network, additional leveling sections were run to interconnect level sections between benchmarks and add redundant measurement data. For this project the instrument was operated in HT/Diff mode. This mode reads center wire and the distance to either back sight or fore sight. This data information was recorded manually in a traditional Survey Field book format. A peg test was performed on the Digital level at the beginning of the project and repeatedly at random times throughout the project until the project's completion.

Maximum line of Sight Length:

295 feet

Difference of Forward and Back Sight Lengths not to Exceed:

30.0 feet

Minimum Ground Clearance Rod Reading:

1.0 feet

Maximum Ground Rod Reading:

12.0 feet

Level Section Running:

Single Run^{1,2}

Compliance:

In general, all Differential leveling that was performed conformed to Third Order leveling specifications and procedures as outlined within the FGCS VERT, Geodetic Leveling Publication VERT (4.1)² with the following exceptions:

1. Leveling rods used (BAS55 Aluminum RAB-Code Staff) were non-invar metal five sections, not one piece invar rods.
2. Leveling Survey did not connect to all network control points within 3 Kilometers of its path.
3. Adjustment of leveling survey data did not take into account modeling for effects of gravity, rod scale errors, rod, temperature, refraction, earth tides and magnetic fields, collimation error, or crustal motion.
4. Minimum ground clearance of line of sight was 1.00 feet not the (1.64) feet required. With two exceptions the leveling network survey did meet the maximum section misclosure of the FGCS Geodetic Leveling Publication Vert (. 4.1)² and the minimum accuracy requirement as listed in 250CMR 6.02,(2), (a),4,(b)⁴; see misclosure calculations in this report.

Level Section Misclosures:

	BM 85AR-BM 85AQ-BM9033						
250 CMR 6.02:(2)(a)4.b. Closure			PASS				
Sum of level run distance =		9349					
Distance in Miles =		1.77					
Allowable Misclosure		0.07	0.02	= Level Run Misclosure			
FGCS Maximum Section Misclosure							
Sum of level run distance FEET =		9349	PASS				
Distance in KM=		2.849581					
Level Run Misclosure in mm=		6.10					
Misclosure not to Exceed (mm)=		20.25684					

	BM 85 AQ - BM 9033						
250 CMR 6.02:(2)(a)4.b. Closure			PASS				
Sum of level run distance =		10253.00					
Distance in Miles =		1.94					
Allowable Misclosure (FT.)		0.069675	0	= Level Run Misclosure			
FGCS Maximum Section Misclosure							
Sum of level run distance FEET =		10253.00	PASS				
Distance in KM=		3.125121					
Level Run Misclosure in mm=		0					
Misclosure not to Exceed (mm)=		21.21361					

	BM HYD1 - BM 9033						
250 CMR 6.02:(2)(a)4.b. Closure			PASS				
Sum of level run distance =		7509.00					
Distance in Miles =		1.42					
Allowable Misclosure (FEET)=		0.059627	0.05	= Level Run Misclosure			
FGCS Maximum Section Misclosure							
Sum of level run distance (FEET) =		7509.00	PASS				
Distance in KM=		2.288748					
Level Run Misclosure in (mm)=		15.24003					
Misclosure not to Exceed (mm)=		18.15433					

BM W1 -BMHYD2XCUT- BM W1					
250 CMR 6.02:(2)(a)4.b. Closure				PASS	
Sum of level run distance =		8706.00			
Distance in Miles =		1.65			
Allowable Misclosure (FEET)=		0.064204	0.01	= Level Run Misclosure	
FGCS Maximum Section Misclosure					
Sum of level run distance (FEET) =		8706.00	PASS		
Distance in KM=		2.653594			
Level Run Misclosure in (mm)=		3.048006			
Misclosure not to Exceed (mm)=		19.54783			

BM9033 -BMWM19					
250 CMR 6.02:(2)(a)4.b. Closure				PASS	
Sum of level run distance =		11700.00			
Distance in Miles =		2.22			
Allowable Misclosure (FEET)=		0.07443	0.06	= Level Run Misclosure	
FGCS Maximum Section Misclosure					
Sum of level run distance (FEET) =		11700.00	PASS		
Distance in KM=		3.566167			
Level Run Misclosure in (mm)=		18.28804			
Misclosure not to Exceed (mm)=		22.66116			

BM108-G17-BM113-G15-BM115-BM108					
250 CMR 6.02:(2)(a)4.b. Closure				PASS	
Sum of level run distance =		28168.00			
Distance in Miles =		5.33			
Allowable Misclosure (FEET)=		0.115486	0.05	= Level Run Misclosure	
FGCS Maximum Section Misclosure					
Sum of level run distance (FEET) =		28168.00	PASS		
Distance in KM=		8.585624			
Level Run Misclosure in (mm)=		15.24003			
Misclosure not to Exceed (mm)=		35.16148			

BM105-BM106-BMWM19					
250 CMR 6.02:(2)(a)4.b. Closure				PASS	
Sum of level run distance =		4173.00			
Distance in Miles =		0.79			
Allowable Misclosure (FEET)=		0.044451	0	= Level Run Misclosure	
FGCS Maximum Section Misclosure					
Sum of level run distance (FEET) =		4173.00	PASS		
Distance in KM=		1.271933			
Level Run Misclosure in (mm)=		0			
Misclosure not to Exceed (mm)=		13.5336			

	BM15-BMG10-BM115					
250 CMR 6.02:(2)(a)4.b. Closure				PASS		
Sum of level run distance =			12815.00			
Distance in Miles =			2.43			
Allowable Misclosure (FEET)=			0.077895	0.01	= Level Run Misclosure	
FGCS Maximum Section Misclosure						
Sum of level run distance (FEET) =			12815.00	PASS		
Distance in KM=			3.90602			
Level Run Misclosure in (mm)=			3.048006			
Misclosure not to Exceed (mm)=			23.71638			
	BM113-BMWM25-BMG10					
250 CMR 6.02:(2)(a)4.b. Closure				PASS		
Sum of level run distance =			13985.00			
Distance in Miles =			2.65			
Allowable Misclosure (FEET)=			0.081374	0.03	= Level Run Misclosure	
FGCS Maximum Section Misclosure						
Sum of level run distance (FEET) =			13985.00	PASS		
Distance in KM=			4.262637			
Level Run Misclosure in (mm)=			9.144018			
Misclosure not to Exceed (mm)=			24.77538			

	BMG17-BMWM11-BMWM25					
250 CMR 6.02:(2)(a)4.b. Closure				PASS		
Sum of level run distance =			19065.00			
Distance in Miles =			3.61			
Allowable Misclosure (FEET)=			0.09501	0	= Level Run Misclosure	
FGCS Maximum Section Misclosure						
Sum of level run distance (FEET) =			19065.00	PASS		
Distance in KM=			5.811024			
Level Run Misclosure in (mm)=			0			
Misclosure not to Exceed (mm)=			28.92728			

	BMWM25-BM124-TBM76-BM125-BM126-BM127-BMWM11					
250 CMR 6.02:(2)(a)4.b. Closure				PASS		
Sum of level run distance =		21517.00				
Distance in Miles =		4.08				
Allowable Misclosure (FEET)=		0.100935		0	= Level Run Misclosure	
FGCS Maximum Section Misclosure						
Sum of level run distance (FEET) =		21517.00		PASS		
Distance in KM=		6.558395				
Level Run Misclosure in (mm)=		0				
Misclosure not to Exceed (mm)=		30.73124				

	BM124-BM130-BMG4-BM125						
250 CMR 6.02:(2)(a)4.b. Closure			PASS				
Sum of level run distance =		12947.00					
Distance in Miles =		2.45					
Allowable Misclosure (FEET)=		0.078296	0.01	= Level Run Misclosure			
FGCS Maximum Section Misclosure							
Sum of level run distance (FEET) =		12947.00	PASS				
Distance in KM=		3.946253					
Level Run Misclosure in (mm)=		3.048006					
Misclosure not to Exceed (mm)=		23.83822					

	BM124-BM130-BMG4-BM125						
250 CMR 6.02:(2)(a)4.b. Closure			PASS				
Sum of level run distance =		12947.00					
Distance in Miles =		2.45					
Allowable Misclosure (FEET)=		0.078296	0.01	= Level Run Misclosure			
FGCS Maximum Section Misclosure							
Sum of level run distance (FEET) =		12947.00	PASS				
Distance in KM=		3.946253					
Level Run Misclosure in (mm)=		3.048006					
Misclosure not to Exceed (mm)=		23.83822					
	BM127-BM134-BM135-BM126						
250 CMR 6.02:(2)(a)4.b. Closure			PASS				
Sum of level run distance =		17269.00					
Distance in Miles =		3.27					
Allowable Misclosure (FEET)=		0.090425	0.01	= Level Run Misclosure			
FGCS Maximum Section Misclosure							
Sum of level run distance (FEET) =		17269.00	PASS				
Distance in KM=		5.263602					
Level Run Misclosure in (mm)=		3.048006					
Misclosure not to Exceed (mm)=		27.53105					

BM134-BM135							
250 CMR 6.02:(2)(a)4.b. Closure			PASS				
Sum of level run distance =		25404.00					
Distance in Miles =		4.81					
Allowable Misclosure (FEET)=		0.109674	0.03	= Level Run Misclosure			
FGCS Maximum Section Misclosure							
Sum of level run distance (FEET) =		25404.00	PASS				
Distance in KM=		7.743155					
Level Run Misclosure in (mm)=		9.144018					
Misclosure not to Exceed (mm)=		33.39183					

BMG17-ROBCS1325							
250 CMR 6.02:(2)(a)4.b. Closure				PASS			
Sum of level run distance =			5921.00				
Distance in Miles =			1.12				
Allowable Misclosure (FEET)=			0.052948	0.02	= Level Run Misclosure		
FGCS Maximum Section Misclosure							
Sum of level run distance (FEET) =			5921.00	PASS			
Distance in KM=			1.804724				
Level Run Misclosure in (mm)=			6.096012				
Misclosure not to Exceed (mm)=			16.1208				

BMG10-BM130							
250 CMR 6.02:(2)(a)4.b. Closure				PASS			
Sum of level run distance =			15700.00				
Distance in Miles =			2.97				
Allowable Misclosure (FEET)=			0.086219	0.03	= Level Run Misclosure		
FGCS Maximum Section Misclosure							
Sum of level run distance (FEET) =			15700.00	PASS			
Distance in KM=			4.78537				
Level Run Misclosure in (mm)=			9.144018				
Misclosure not to Exceed (mm)=			26.25059				

HSE#1189-BMWM36-HSE#1273							
250 CMR 6.02:(2)(a)4.b. Closure				PASS			
Sum of level run distance =			7022.00				
Distance in Miles =			1.33				
Allowable Misclosure (FEET)=			0.057661	0.02	= Level Run Misclosure		
FGCS Maximum Section Misclosure							
Sum of level run distance (FEET) =			7022.00	PASS			
Distance in KM=			2.14031				
Level Run Misclosure in (mm)=			6.096012				
Misclosure not to Exceed (mm)=			17.55576				

BMG-4-BM125							
250 CMR 6.02:(2)(a)4.b. Closure				FAIL			
Sum of level run distance =			13362.00				
Distance in Miles =			2.53				
Allowable Misclosure (FEET)=			0.079541	0.08	= Level Run Misclosure		
FGCS Maximum Section Misclosure							
Sum of level run distance (FEET) =			13362.00	FAIL			
Distance in KM=			4.072746				
Level Run Misclosure in (mm)=			24.38405				
Misclosure not to Exceed (mm)=			24.21725				

BMH-13-BM143-BMC22-BMG-1-BM125								
250 CMR 6.02:(2)(a)4.b. Closure				PASS				
Sum of level run distance =			18222.00					
Distance in Miles =			3.45					
Allowable Misclosure (FEET)=			0.092886	0.07	= Level Run Misclosure			
FGCS Maximum Section Misclosure								
Sum of level run distance (FEET) =			18222.00	PASS				
Distance in KM=			5.554077					
Level Run Misclosure in (mm)=			21.33604					
Misclosure not to Exceed (mm)=			28.28051					
BMG-1-BM144-BMG-1								
250 CMR 6.02:(2)(a)4.b. Closure				PASS				
Sum of level run distance =			4453.00					
Distance in Miles =			0.84					
Allowable Misclosure (FEET)=			0.045918	0.03	= Level Run Misclosure			
FGCS Maximum Section Misclosure								
Sum of level run distance (FEET) =			4453.00	PASS				
Distance in KM=			1.357277					
Level Run Misclosure in (mm)=			9.144018					
Misclosure not to Exceed (mm)=			13.98027					
BMC22-WM13-WM23-BMC22								
250 CMR 6.02:(2)(a)4.b. Closure				PASS				
Sum of level run distance =			13426.00					
Distance in Miles =				2.54				
Allowable Misclosure (FEET)=			0.079731	0.01	= Level Run Misclosure			
FGCS Maximum Section Misclosure								
Sum of level run distance (FEET) =			13426.00	PASS				
Distance in KM=				4.092253				
Level Run Misclosure in (mm)=			3.048006					
Misclosure not to Exceed (mm)=			24.27518					

BMWBR22-BMC22							
250 CMR 6.02:(2)(a)4.b. Closure				PASS			
Sum of level run distance =			11576.00				
Distance in Miles =			2.19				
Allowable Misclosure (FEET)=			0.074034	0.01	= Level Run		
					Misclosure		
FGCS Maximum Section Misclosure							
Sum of level run distance (FEET) =			11576.00	PASS			
Distance in KM=			3.528372				
Level Run Misclosure in (mm)=			3.048006				
Misclosure not to Exceed (mm)=			22.54075				

BM93F-BM13AF-BM8074				
250 CMR 6.02:(2)(a)4.b. Closure			PASS	
Sum of level run distance =		2111.00		
Distance in Miles =		0.40		
Allowable Misclosure (FEET)=		0.031615	0.02	= Level Run
				Misclosure
FGCS Maximum Section Misclosure				
Sum of level run distance (FEET) =		2111.00	PASS	
Distance in KM=		0.643434		
Level Run Misclosure in (mm)=		6.096012		
Misclosure not to Exceed (mm)=		9.625721		
SQRNCLO-SQRNCLO149-BM120				
250 CMR 6.02:(2)(a)4.b. Closure			PASS	
Sum of level run distance =		6204.00		
Distance in Miles =		1.18		
Allowable Misclosure (FEET)=		0.054199	0	= Level Run
				Misclosure
FGCS Maximum Section Misclosure				
Sum of level run distance (FEET) =		6204.00	PASS	
Distance in KM=		1.890983		
Level Run Misclosure in (mm)=		0		
Misclosure not to Exceed (mm)=		16.50156		

SQRNCLO149-BM124				
250 CMR 6.02:(2)(a)4.b. Closure			PASS	
Sum of level run distance =		3953.00		
Distance in Miles =		0.75		
Allowable Misclosure (FEET)=		0.043263	0	= Level Run
				Misclosure
FGCS Maximum Section Misclosure				
Sum of level run distance (FEET) =		3953.00	PASS	
Distance in KM=		1.204877		
Level Run Misclosure in (mm)=		0		
Misclosure not to Exceed (mm)=		13.17203		

BMG17-ROCBCS1325				
250 CMR 6.02:(2)(a)4.b. Closure			PASS	
Sum of level run distance =		3101.00		
Distance in Miles =		0.59		
Allowable Misclosure (FEET)=		0.038318	0.01	= Level Run
				Misclosure
FGCS Maximum Section Misclosure				
Sum of level run distance (FEET) =		3101.00	PASS	
Distance in KM=		0.945187		
Level Run Misclosure in (mm)=		3.048006		
Misclosure not to Exceed (mm)=		11.66649		

BM119-BM93A-BMG10					
250 CMR 6.02:(2)(a)4.b. Closure			FAIL		
Sum of level run distance =			1624.00		
Distance in Miles =			0.31		
Allowable Misclosure (FEET)=			0.02773	0.04	= Level Run
					Misclosure
FGCS Maximum Section Misclosure					
Sum of level run distance (FEET) =			1624.00	FAIL	
Distance in KM=			0.494996		
Level Run Misclosure in (mm)=			12.19202		
Misclosure not to Exceed (mm)=			8.442716		
BM124-BM93C-TBM76					
250 CMR 6.02:(2)(a)4.b. Closure			PASS		
Sum of level run distance =			2504.00		
Distance in Miles =			0.47		
Allowable Misclosure (FEET)=			0.034433	0.02	= Level Run
					Misclosure
FGCS Maximum Section Misclosure					
Sum of level run distance (FEET) =			2504.00	PASS	
Distance in KM=			0.763221		
Level Run Misclosure in (mm)=			6.096012		
Misclosure not to Exceed (mm)=			10.4835		

BM113-BM152-BM151-BMG16					
250 CMR 6.02:(2)(a)4.b. Closure			PASS		
Sum of level run distance =			3534.00		
Distance in Miles =			0.67		
Allowable Misclosure (FEET)=			0.040906	0.02	= Level Run
					Misclosure
FGCS Maximum Section Misclosure					
Sum of level run distance (FEET) =			3534.00	PASS	
Distance in KM=			1.077165		
Level Run Misclosure in (mm)=			6.096012		
Misclosure not to Exceed (mm)=			12.45439		

BMG16-BMEMERY1934-BM151					
250 CMR 6.02:(2)(a)4.b. Closure			PASS		
Sum of level run distance =			2388.00		
Distance in Miles =			0.45		
Allowable Misclosure (FEET)=			0.033626	0	= Level Run
					Misclosure
FGCS Maximum Section Misclosure					
Sum of level run distance (FEET) =			2388.00	PASS	
Distance in KM=			0.727864		
Level Run Misclosure in (mm)=			0		
Misclosure not to Exceed (mm)=			10.23779		

BM85AR-BM68J18A-BM85AR				
250 CMR 6.02:(2)(a)4.b. Closure			PASS	
Sum of level run distance =		2700.00		
Distance in Miles =		0.51		
Allowable Misclosure (FEET)=		0.035755	0.01	= Level Run
				Misclosure
FGCS Maximum Section Misclosure				
Sum of level run distance (FEET) =		2700.00	PASS	
Distance in KM=		0.822962		
Level Run Misclosure in (mm)=		3.048006		
Misclosure not to Exceed (mm)=		10.88607		

BM130-BM9018-BMG-4				
250 CMR 6.02:(2)(a)4.b. Closure			PASS	
Sum of level run distance =		3090.00		
Distance in Miles =		0.59		
Allowable Misclosure (FEET)=		0.03825	0.03	= Level Run
				Misclosure
FGCS Maximum Section Misclosure				
Sum of level run distance (FEET) =		3090.00	PASS	
Distance in KM=		0.941834		
Level Run Misclosure in (mm)=		9.144018		
Misclosure not to Exceed (mm)=		11.64578		

BM144-BM9016-BM144				
250 CMR 6.02:(2)(a)4.b. Closure			PASS	
Sum of level run distance =		11089.00		
Distance in Miles =		2.10		
Allowable Misclosure (FEET)=		0.07246	0.01	= Level Run
				Misclosure
FGCS Maximum Section Misclosure				
Sum of level run distance (FEET) =		11089.00	PASS	
Distance in KM=		3.379934		
Level Run Misclosure in (mm)=		3.048006		
Misclosure not to Exceed (mm)=		22.06152		

BM106-BMF42-BM85AD-BM85AE-BMJ42-BM106				
250 CMR 6.02:(2)(a)4.b. Closure			PASS	
Sum of level run distance =		36115.00		
Distance in Miles =		6.84		
Allowable Misclosure (FEET)=		0.130767	0.02	= Level Run
				Misclosure
FGCS Maximum Section Misclosure				
Sum of level run distance (FEET) =		36115.00	PASS	
Distance in KM=		11.00787		
Level Run Misclosure in (mm)=		6.096012		
Misclosure not to Exceed (mm)=		39.81374		

BMROBCS31-BM9024-BM9025-BM116					
250 CMR 6.02:(2)(a)4.b. Closure				PASS	
Sum of level run distance =		13782.00			
Distance in Miles =		2.61			
Allowable Misclosure (FEET)=		0.080781	0.01	= Level Run	
				Misclosure	
FGCS Maximum Section Misclosure					
Sum of level run distance (FEET) =		13782.00	PASS		
Distance in KM=		4.200762			
Level Run Misclosure in (mm)=		3.048006			
Misclosure not to Exceed (mm)=		24.59491			

Adjustment:

NGVD 29

The differential leveling data was processed using Star*Net Least Squares Survey Adjustment Leveling software; this is a least squares adjustment program. In addition to a minimally constrained adjustment, a fully constrained adjustment was performed on the vertical field observation holding TEN control benchmarks fixed. The leveling data in the adjustment passed a two tailed Chi-Squared test at the 5% significant level. See the attached Star*Net adjustment report for the complete information relating to the adjustment methods, criteria, and final results.

NAVD 88

The differential leveling data was processed using Star*Net Least Squares Survey Adjustment Leveling software; this is a least squares adjustment program. In addition to a minimally constrained adjustment, a fully constrained adjustment was performed on the vertical field observation holding EIGHT control benchmarks fixed, and THREE constrained within an assigned standard error estimate, between 0.01 and 0.02 of a foot. The leveling data in the adjustment passed a two tailed Chi-Squared test at the 5% significant level. See the attached Star*Net adjustment report for the complete information relating to the adjustment methods, criteria, and final results.

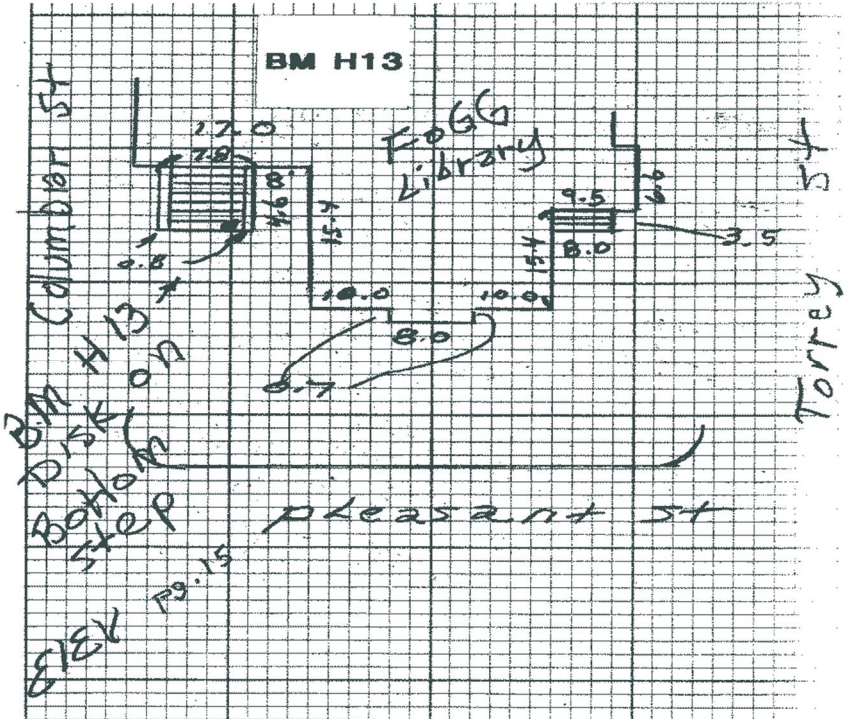
GPS Field Check of Benchmarks NAVD88 Elevations :

In 2012, a number of the established benchmarks were occupied using RTK GPS as a check of the orthometric heights. Benchmarks were observed using Leica GS12 dual frequency GPS Receiver, Leica Viva CS15 Controller connected to Maine Technical Source RTK Spider Network via a cell modem. Vertical network accuracies are expected in the 20-30 millimeter range at the 68% confidence interval. Observed 3D quality of the TWENTY-TWO benchmarks fit the expected accuracies. The absolute difference between RTK GPS derived and Differential Leveled Orthometric Height for SEVENTEEN benchmarks fell below the 30 millimeter level while FIVE exceeded it at 50 millimeters.

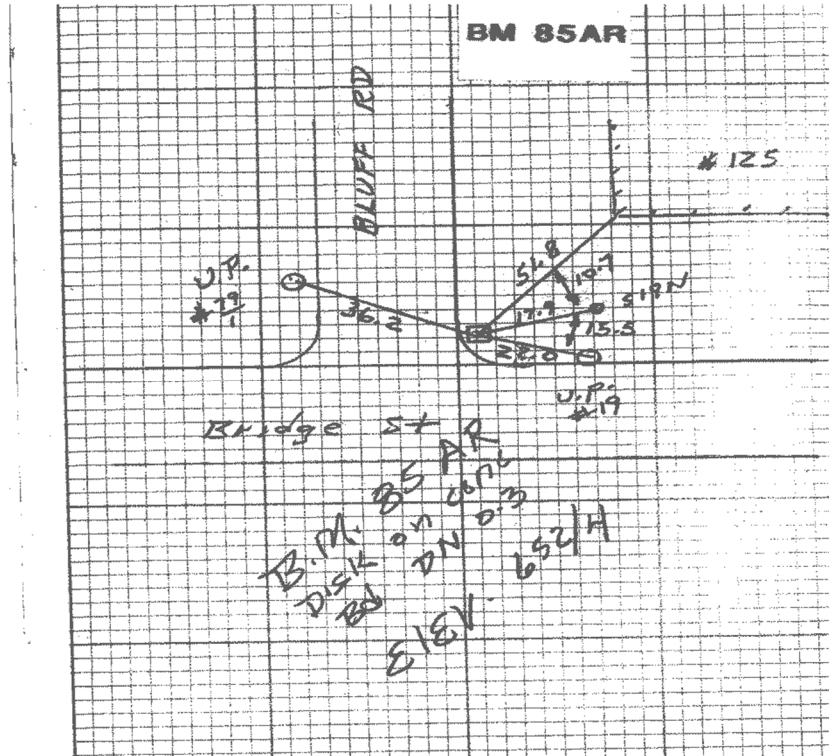
Notes:

1. The Single run differential level sections allowed as published height differences were substituted for backward level running.
2. Federal Geodetic Control Subcommittee Publication FGCS VERT, Section 3.5 Geodetic Leveling, version 4.1, 5/27/2004.
3. See Star*NET adjustment report for complete information on adjustment methods and criteria.
4. Commonwealth of Massachusetts, Board of Registration of Professional Engineers and Land Surveyors, 250 CMR (Code of Massachusetts regulation) 6.0, Procedural and Technical Standards for the Practice of Land Surveying 12/1/1993.

In general, the following ties and photos should provide the information necessary to locate and recover a majority of the Benchmarks listed within this report.

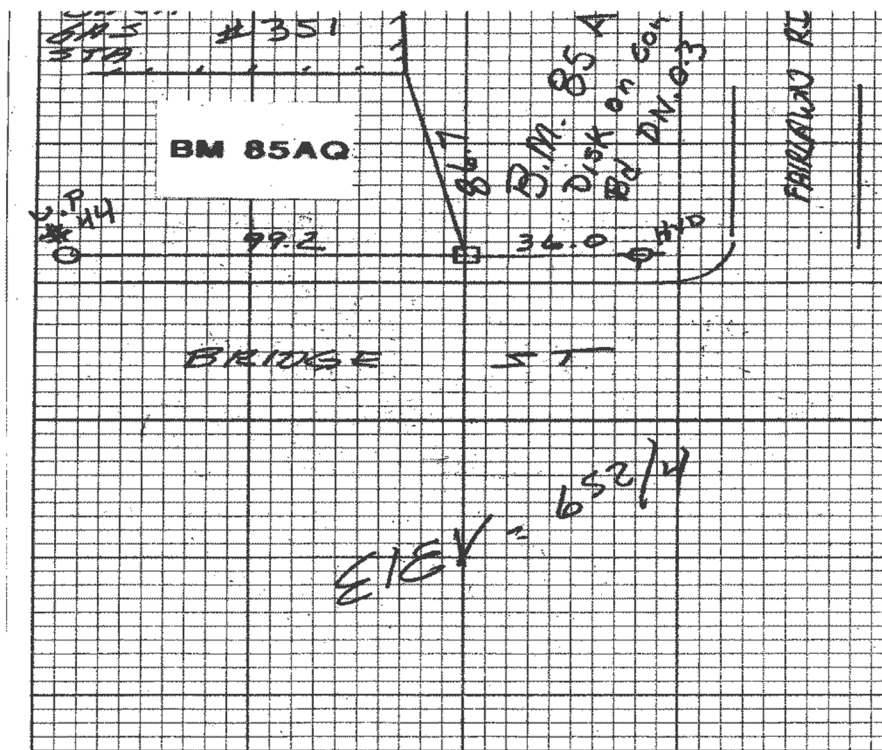


BM H-13 Disk on top of Granite Steps to Library.

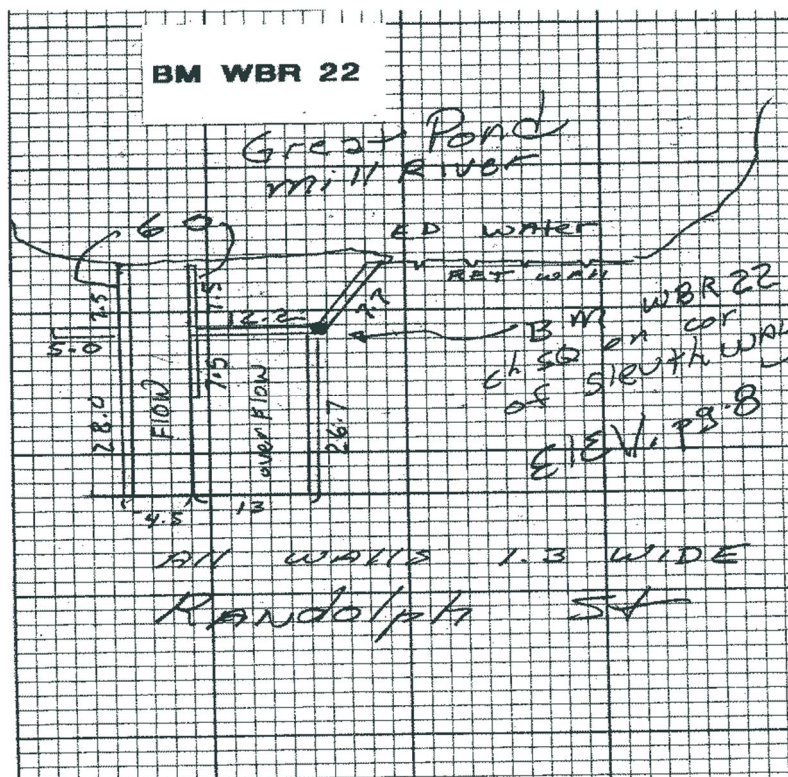


NORTH WEYMOUTH, AT THE JUNCTION OF ROUTE 3A (BRIDGE STREET) AND BLUFF ROAD, 41.5 FT SOUTH OF THE CENTER OF ROUTE 3A, 22 FT WEST OF THE CENTER OF BLUFF ROAD, 51.9 FT SOUTHEAST OF THE SOUTHEAST CORNER OF AUTO PARTS STORE, 34.0 FT NORTHEAST OF POLE 79/1, 19.4 FT SOUTHWEST OF POLE 19.

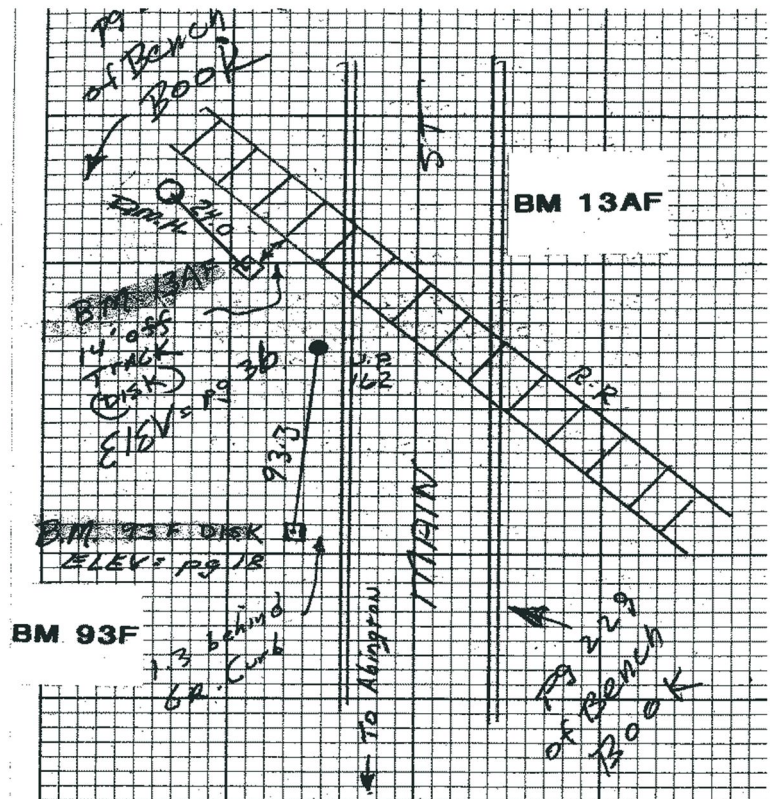
BM 85AR Disk on top of Concrete Monument.



BM 85AQ Disk in parking lot paved over.

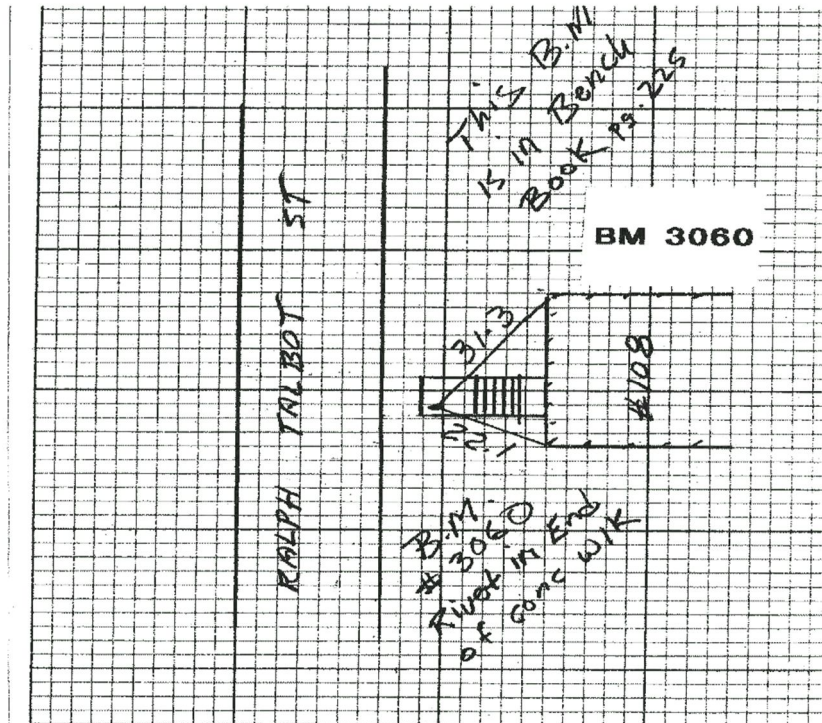


BM WBR22 Square Cut on top of Concrete Headwall.



IN THE SOUTH PART OF TOWN, ON THE WEST SIDE OF THE NYNH&H RAILROAD (PLYMOUTH BRANCH), 13.6 FT WEST OF THE WEST RAIL, ABOUT 120 FT NORTHWEST OF THE CENTER OF ROUTE 18 (MAIN STREET), 78 FT NORTH OF NORTHEAST CORNER OF WEST ABUTMENT, 62.3 FT SOUTHWEST OF NORTHWEST CORNER OF THE EAST ABUTMENT.

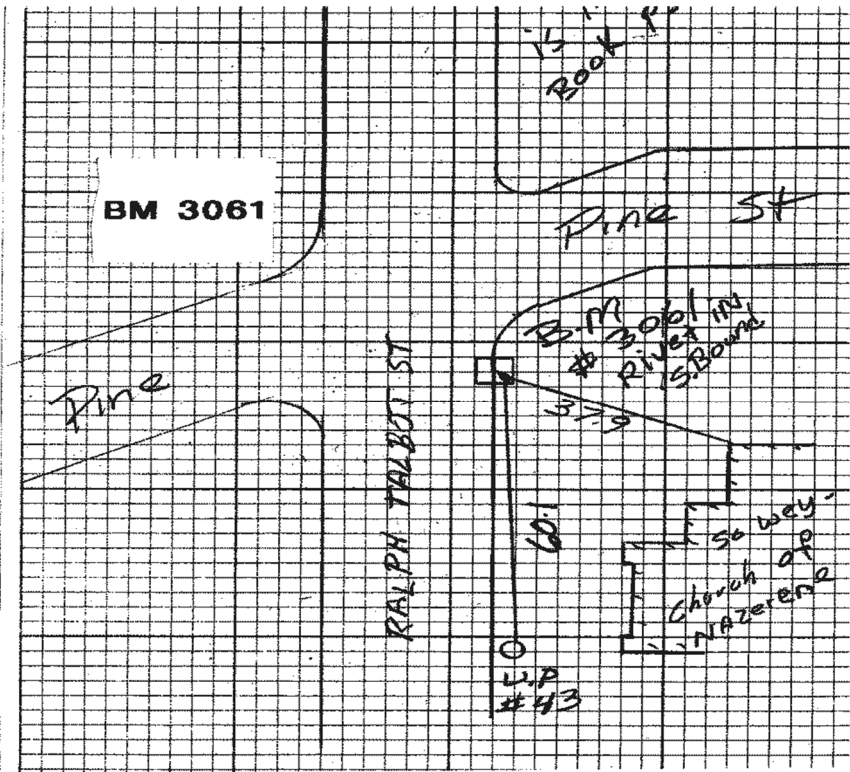
BM 13AF Disk on top of Concrete Monument.



BM 3060 Rivet on top of Concrete.

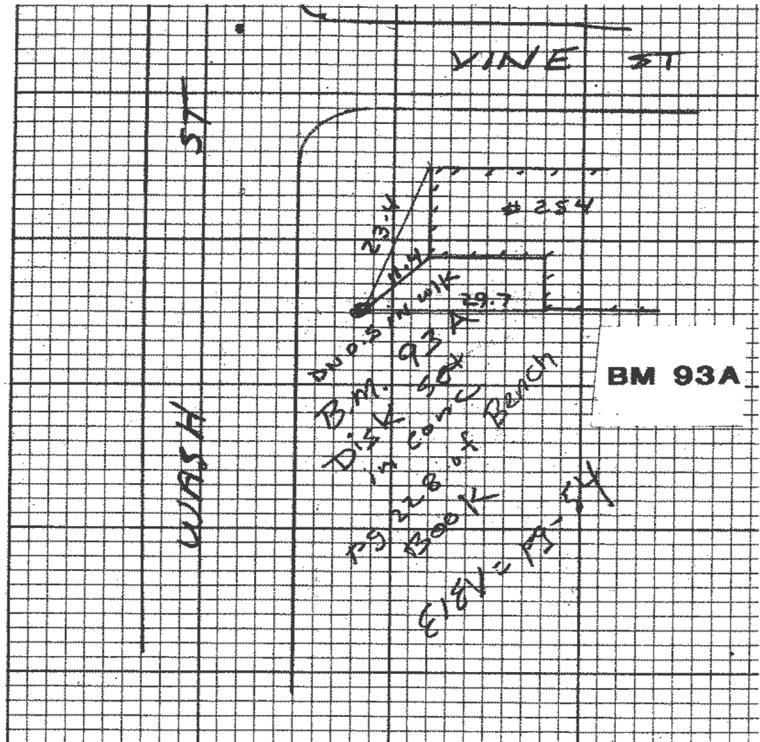


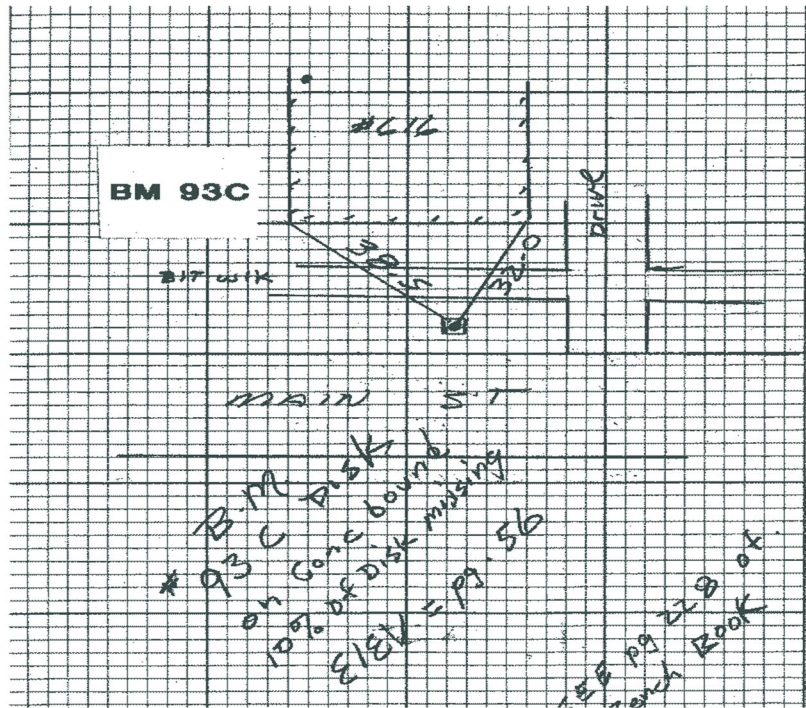
BM 3061 Rivet on top of Stone Bound Monument.



WEYMOUTH LANDING, ON THE EAST SIDE OF ROUTE 3 (WASHINGTON STREET), 26 FT EAST OF THE CENTERLINE, 42 FT SOUTH OF THE CENTERLINE OF VINE STREET, 11.4 FT WEST OF SOUTHWEST CORNER OF HOUSE 254, 23 FT SOUTHWEST OF THE NORTHWEST CORNER, 13.3 FT SOUTH OF HYDRANT, 20.3 FT NORTH OF 20 INCH ELM TREE.

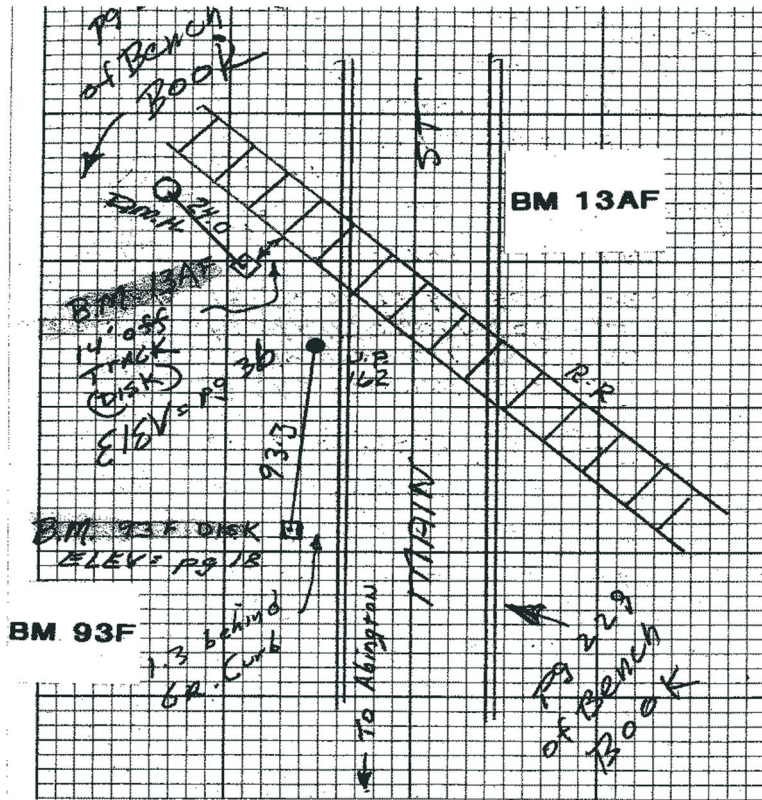
BM 93A Disk on top of Concrete Monument.





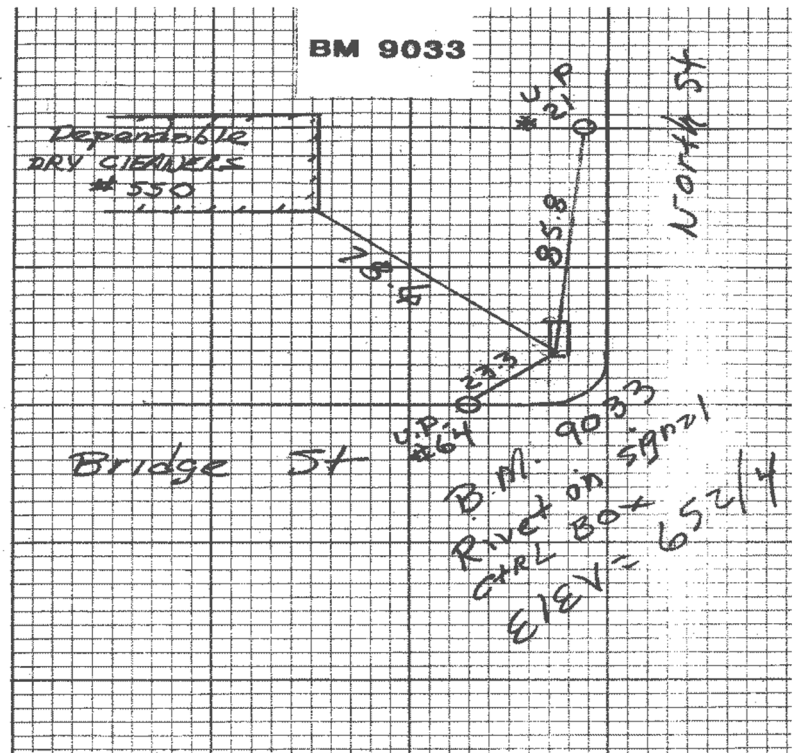
ABOUT 0.75 MI NORTH OF SOUTH WEYMOUTH, ON THE EAST SIDE OF MAIN STREET, 26 FT EAST OF THE CENTERLINE, 1431 FT SOUTH OF MIDDLE STREET, 32.0 FT WEST OF SOUTHEAST CORNER OF HOUSE 616, 30.0 FT SOUTHWEST OF FENCE CORNER, 97.0 FT SOUTHEAST OF POLE 29/70, 60.4 FT NORTHEAST OF POLE 29/71.

BM 93C Disk on top of Concrete Monument.



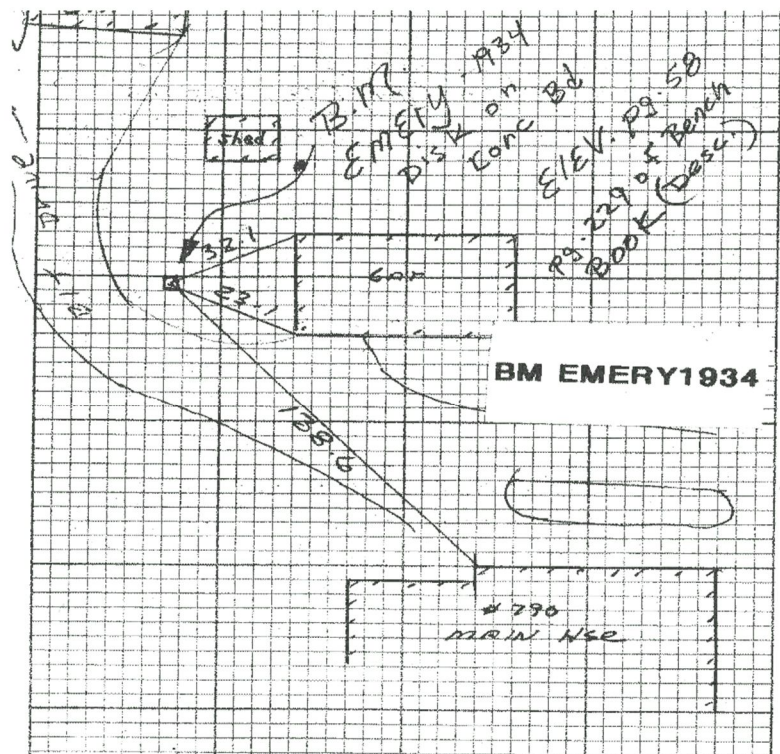
ABOUT 1.25 MI SOUTH OF SOUTH WEYMOUTH, ON THE WEST SIDE OF THE ROUTE 18 (MAIN STREET) BRIDGE OVER THE NYNH&H RAILROAD, 21.2 FT WEST OF THE CENTERLINE, 43.2 FT WEST OF SOUTHEAST END OF GIRDER, 94.3 FT SOUTH OF POLE 29/162, 110.2 FT SOUTH OF CENTERLINE OF BRIDGE OVERPASS, 1.2 FT WEST OF CURB.

BM 93F Disk on top of Concrete Monument.



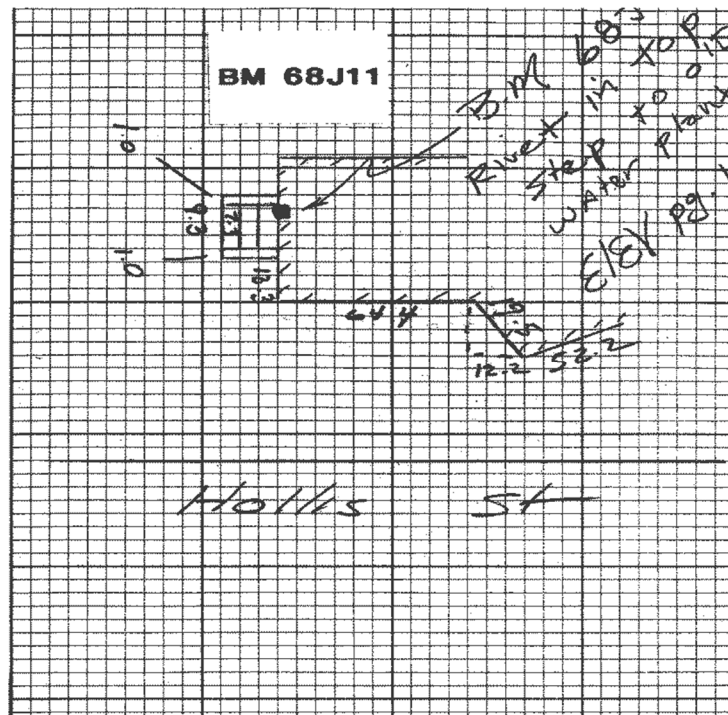
LOCATED IN THE NORTH SECTION OF WEYMOUTH, AT THE INTERSECTION OF ROUTE 3A (BRIDGE ST.) AND NORTH ST. THE MARK IS A BRASS RIVET SET IN THE CONCRETE BASE FOR A TRAFFIC LIGHT CONTROL BOX (NOT IN USE) THAT IS ABOUT 0.75 FT ABOVE THE LEVEL OF ROUTE 3A. THE MARK IS: 14.3 M (47.0 FT) NORTH OF THE CENTER OF ROUTE 3A, 7.4 M (24.5 FT) EAST OF A STEEL POST FOR A SIGN "DEPENDABLE CLEANERS", 7.2 M (23.75 FT) WEST OF THE CENTER OF NORTH ST., 7.1 M (23.5 FT) NORTHEAST OF POLE # 64.

BM 9033 Rivet on top of Concrete Base of Traffic Control Box @ Bridge St. & North St.



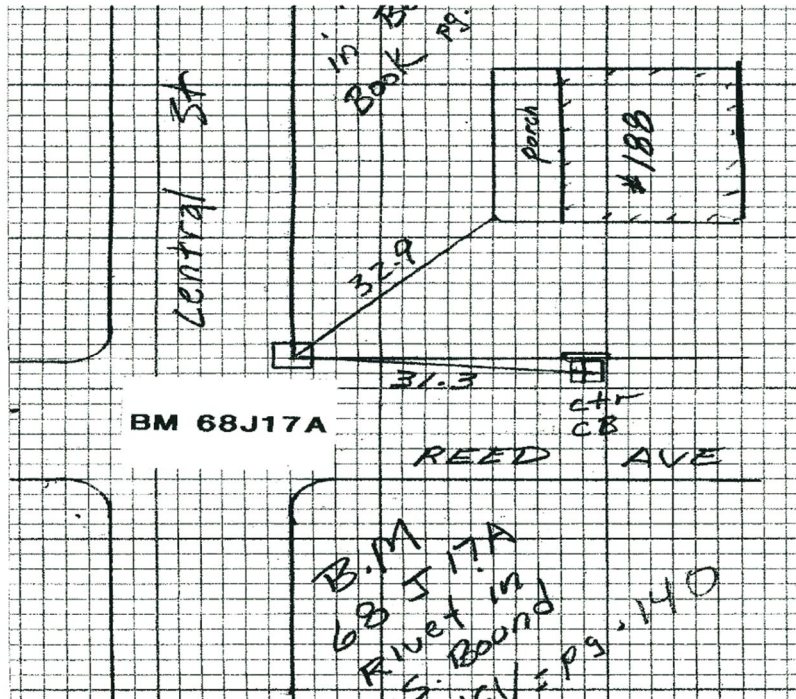
WEYMOUTH HEIGHTS, NEAR THE SOUTHEAST CORNER OF HOUSE 790 COMMERCIAL STREET, 139.8 FT SOUTHEAST OF BRICK STEPS, 23 FT EAST OF NORTHEAST CORNER OF GARAGE, 32 FT NORTHEAST OF SOUTHEAST CORNER, 22.4 FT EAST OF EAST SIDE OF GARAGE.

BM EMERY1934 Disk on top of Concrete Monument.



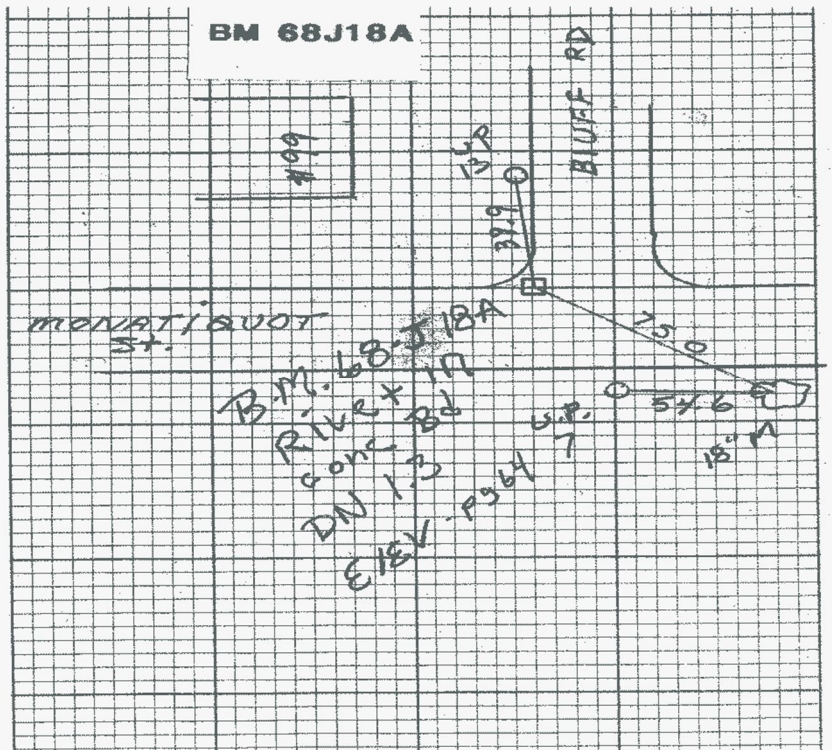
ABOUT 0.3 MI SOUTHWEST OF SOUTH WEYMOUTH DEPOT, AT THE HOLLIS ST PUMP HOUSE, SET IN THE NORTH END OF DOOSILL AT NORTHWEST END OF PUMP HOUSE, 102 FT NORTHEAST OF CENTERLINE OF HOLLIS STREET, 32 FT SOUTHEAST OF CENTERLINE OF DRIVEWAY. 68-J11 A....MONEL RIVET IN CONCRETE RETAINING WALL 107 FT NORTHEAST OF NORTHEAST CORNER OF PUMP HOUSE, 155 FT EAST OF NORTHEAST CORNER. ELEV 148.86 FT. 68-J11 B....MONEL RIVET IN LEDGE 90 FT NORTH OF DRIVEWAY IN REAR OF PUMP HOUSE, 84 FT NORTHWEST OF 68-J11 A. ELEV 143.59 FT.

BM 68J11 Rivet on top of Granite Coping.



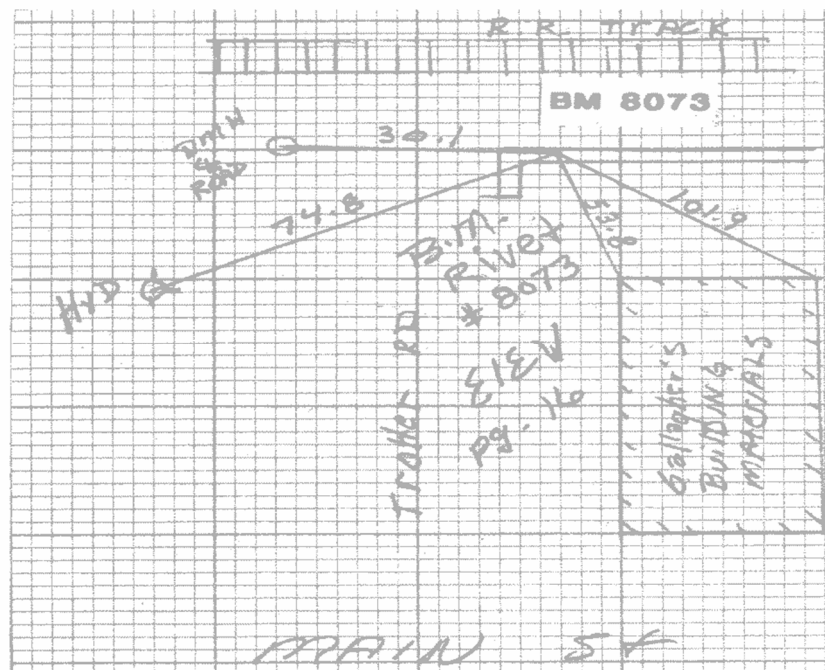
ABOUT 0.5 MI SOUTHEAST OF TOWN, ABOUT 400 FT NORTHEAST OF CENTRAL ST AT THE REED AVE STANDPIPE, 40 FT WEST OF THE CENTERLINE OF REED AVENUE, 38 FT NORTHEAST OF VALVE GATE ON EAST FACE OF STANDPIPE. 68-J13 A....MONEL RIVET IN GRANITE BOUND AT NORTHWEST CORNER OF REED AVE AND CENTRAL STREET, 21.7 FT WEST OF THE CENTERLINE OF REED AVENUE, 25 FT NORTH OF CENTERLINE OF CENTRAL STREET, 400 FT SOUTH OF 68-J17, 32.9 FT SOUTHEAST OF SOUTHEAST CORNER OF PORCH. ELEV 195.69 FT 68-J17 B....MONEL RIVET ON GRANITE BOUND AT THE NORTHWEST CORNER OF HUNT AVE (DEAD END), 6.7 FT WEST OF A SECOND GRANITE BOUND, 11.6 FT NORTHWEST OF CATCH BASIN.

BM 68J17A Rivet on top of Stone Bound.



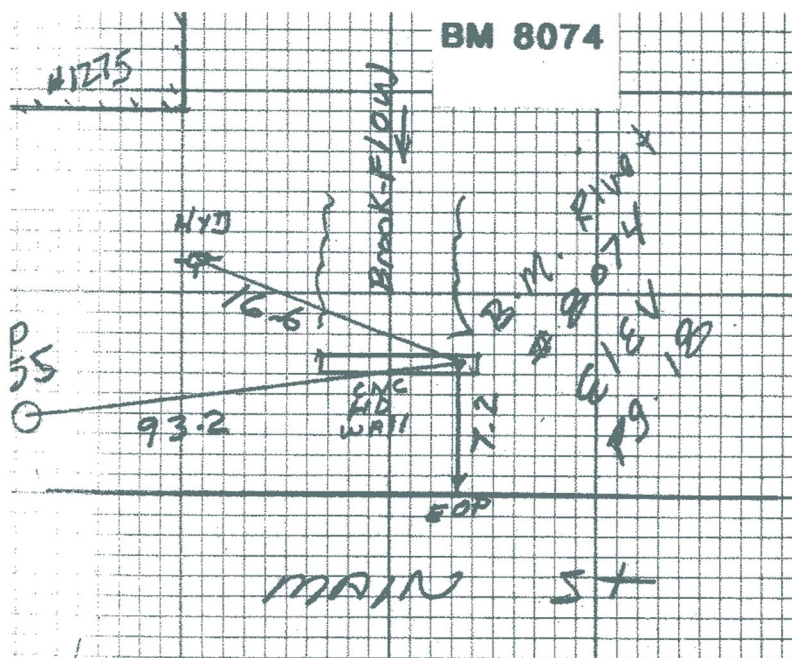
NORTH WEYMOUTH, ABOUT 0.15 MI SOUTHWEST OF BRIDGE STREET, AT THE TOWN STANDPIPE, 3.3 FT WEST OF EAST FACE OF BASE, 11.2 FT SOUTHEAST OF EAST FACE OF STANDPIPE. 68-J18 A....MONEL RIVET IN STONE BOUND AT NORTHWEST CORNER OF MONATIQUOT ST AND BLUFF ROAD, 19.2 FT EAST OF THE CENTERLINE OF MONATIQUOT STREET, 26.9 FT NORTH OF THE CENTERLINE OF BLUFF ROAD, 45.2 FT SOUTHEAST OF 68-J18. ELEV 26.68 FT. 68-J18 B....MONEL RIVET ON STONE BOUND ON THE SOUTHWEST SIDE OF BLUFF ROAD, 19.3 FT SOUTHWEST OF THE CENTERLINE, 27.3 FT NORTHWEST OF THE NORTHWEST CORNER OF HOUSE 86, 212.5

BM 68J18A Rivet on top of Stone Bound.

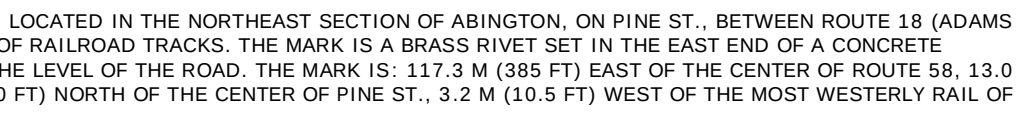


LOCATED IN THE SOUTH SECTION OF WEYMOUTH, ON TROTTER ROAD WHICH IS THE ACCESS ROAD TO A COAST GUARD DEPOT, AT THE WEYMOUTH NAVAL AIR STATION. THE MARK IS A BRASS RIVET SET NEAR THE NORTHEAST CORNER OF A CONCRETE RETAINING WALL THAT IS ABOUT 2.0 FT ABOVE THE LEVEL OF THE ROAD. THE MARK IS: 16.4 M (53.8 FT) NORTHEAST OF THE NORTHEAST CORNER OF THE GALLAGHERS BUILDING MATERIALS BUILDING, 14.0 M (46.2 FT) WEST OF THE CENTER OF THE NY, NH & H RAILROAD TRACKS, 8.2 M (27.0 FT) SOUTH OF THE CENTER OF TROTTER ROAD, 1.6 M (5.4 FT) SOUTH OF THE NORTHEAST CORNER OF THE RETAINING WALL.

BM 8073 Brass Rivet on top of Concrete Retaining wall.



BM 8074 Brass Rivet on top of Concrete Headwall.



BM 9016 Rivet on top of Concrete Retaining wall. (located in Abington, Ma)



LOCATED IN THE SOUTHEAST SECTION OF BRAINTREE, JUST WEST OF THE BRAINTREE-WEYMOUTH TOWNLINE, EAST OF THE INTERSECTION OF GROVE, WEST AND COLUMBIAN STREETS AND OPPOSITE THE MA STATE LOTTERY BUILDING, AT BUILDING NUMBER 60. THE MARK IS A BRASS RIVET SET IN THE NORTH END OF A CONCRETE RETAINING WALL THAT IS ABOUT 4.75 FEET ABOVE THE LEVEL OF THE ROAD. THE MARK IS: 16.76 M (55.0 FT.) SOUTHEAST OF POLE # 6, 9.75 M (32.0 FT) SOUTH OF A STRAIN POLE, 8.84 M (29.0 FT) EAST OF THE CENTER OF THE ROAD.

BM 9018 Rivet on top of Concrete Retaining wall. (located in Braintree, Ma)



LOCATED IN THE EASTERN SECTION OF BRAINTREE, AT THE INTERSECTION OF UNION STREET AND ALEXANDER ROAD. THE MARK IS A BRASS RIVET SET AT THE NORTH END OF A CONCRETE RETAINING WALL THAT IS ABOUT 0.5 FEET ABOVE THE LEVEL OF ALEXANDER ROAD. THE MARK IS: 31.0 M (102.0 FT) SOUTH OF THE CENTER OF UNION STREET, 6.55 (21.5 FT) SOUTHEAST OF THE MOST EASTERLY CORNER OF THE FOUNDATION FOR HOUSE #603, 5.79 M (19.0 FT) WEST OF THE CENTER OF ALEXANDER ROAD, 1.37 M (4.5 FT) SOUTHWEST OF POLE #1.

BM 9024 Rivet on top of Concrete Retaining wall. (located in Braintree, Ma)



LOCATED IN THE EASTERN SECTION OF BRAINTREE, AT THE ROUTE 53 BRIDGE OVER THE WEYMOUTH FORE RIVER. THE MARK IS A MASS. DPW DISK THAT IS SET IN THE SOUTHEAST CONCRETE END CAP, WHICH HAS THE SEAL MISSING, DATED 1974 AND IS ABOUT 1.0 FEET ABOVE THE LEVEL OF THE ROAD. THE MARK IS 9.44 M (31.0 FT) EAST OF THE CENTER OF ROUTE 53, 4.63 M (15.2 FT) NORTH OF A LIGHTING POLE.

BM 9025 MA DPW Disk on top of Concrete Bridge Abutment. (located in Braintree, Ma)



ABOUT 0.45 MI NORTHWEST ALONG LINCOLN STREET FROM THE POST OFFICE AT HINGHAM, DIRECTLY IN LINE WITH THE EXTENDED CENTERLINE OF BURDITT AVENUE, 18 FT SOUTHWEST OF THE CENTER OF LINCOLN STREET, 6.0 FT NORTHEAST OF HYDRANT, BETWEEN TWO DRIVEWAYS.

BM 85AD Disk on top of Concrete monument. (located in Hingham, Ma)



IN THE CENTRAL PART OF HINGHAM, ON THE SOUTHWEST SIDE OF LINCOLN STREET, 26 FT SOUTHWEST OF THE CENTERLINE, 207 FT SOUTH OF MYLES ROAD, 107 FT SOUTHEAST OF POLE 51-15, 6.1 FT SOUTH OF POLE 51-14, 68.1 FT NORTHWEST OF POLE 51-13, 27.0 FT SOUTHEAST OF SOUTH PILLAR AT DRIVEWAY.

BM 85AE Disk on top of Concrete monument. (located in Hingham, Ma)



ABOUT 1.1 MI NORTHWEST OF HINGHAM POST OFFICE, LOADING DOCK AT 211 LINCOLN STREET, 226 FT NORTH OF CENTERLINE OF ROUTE 3A (LINCOLN STREET), 1 FT WEST OF SOUTHWEST CORNER OF SHOPPING CENTER, ABOUT LEVEL WITH THE STREET. NGS UNADJUSTED ELEV. New guy wire set in conc. Sidewalk a foot away.

BM F42 1978 Disk on top of Concrete sidewalk. (located in Hingham, Ma)



ON THE NORTHWEST SIDE OF HINGHAM, AT ROTARY OF ROUTE 3A, 145 FT NORTHEAST OF SOUTHWEST END OF CONCRETE SEAWALL, 57.5 FT NORTHEAST OF SOUTHWEST END OF STEEL GUARD RAIL, 54.5 FT NORTHWEST OF NORTHWEST CURB OF ROTARY, ABOUT LEVEL WITH THE HIGHWAY. NGS UNADJUSTED ELEV.

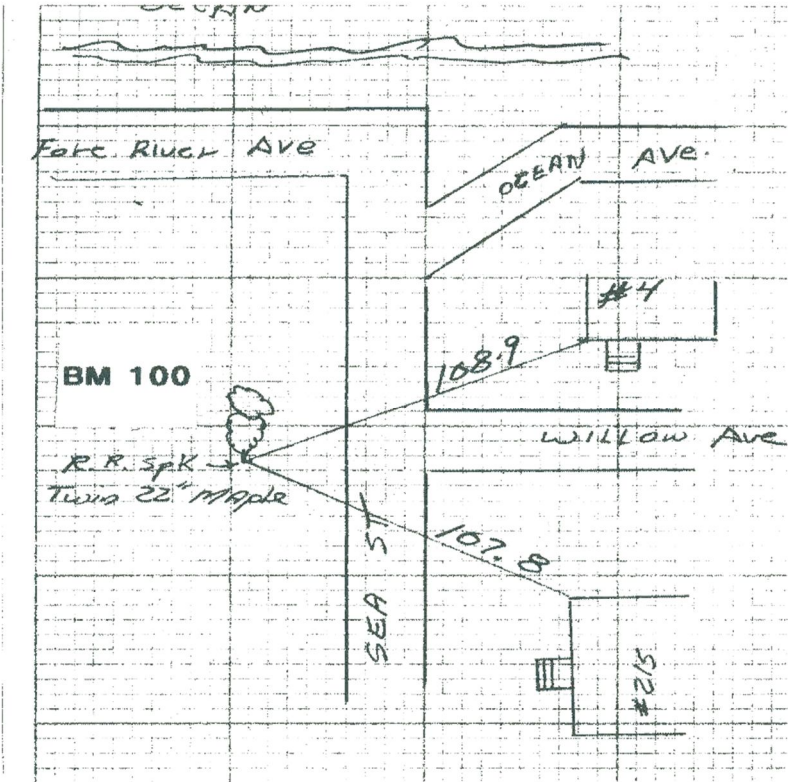
BM J42 1978 Disk on top of Concrete wall. (located in Hingham, Ma)



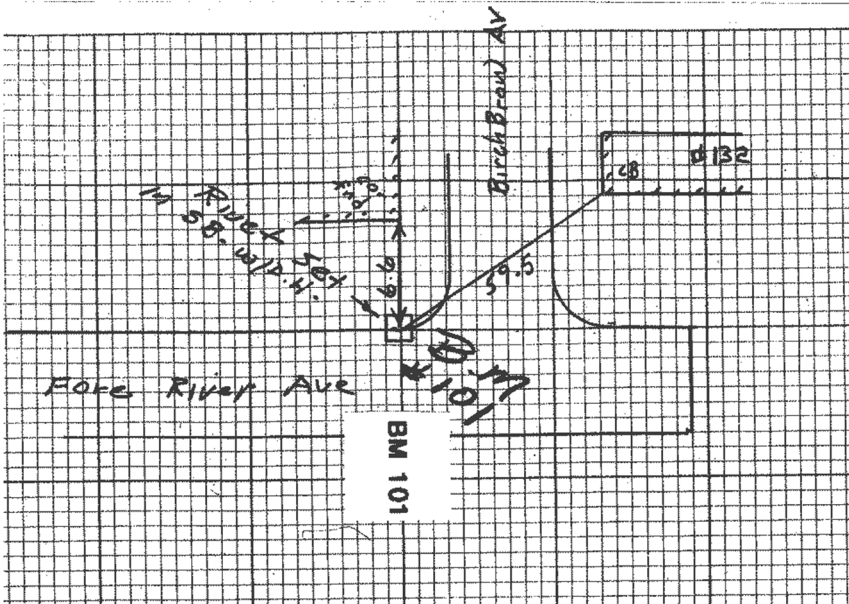
BM #2 Disk on top of Concrete wall. (located in Hingham, Ma)

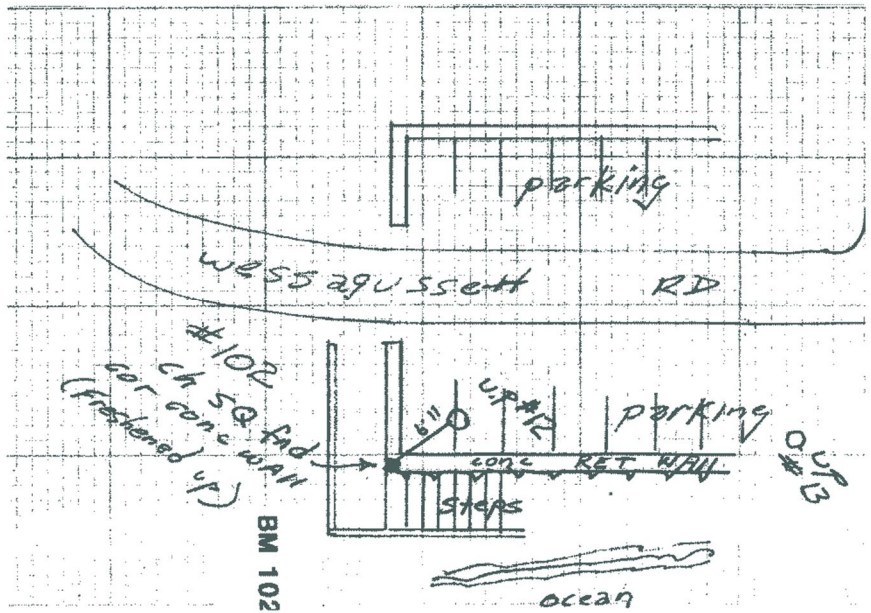


BM 100 Railroad Spike in Twin 22" Maple @ Sea St.

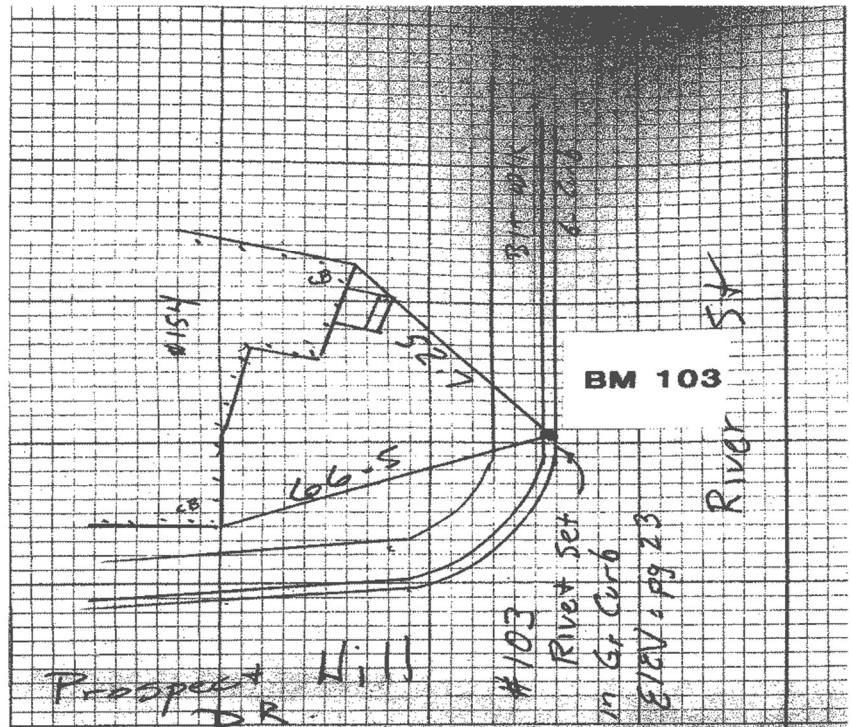


BM 101 Brass Rivet Stone Bound @ Fore River Ave. & Birch Brow ave.

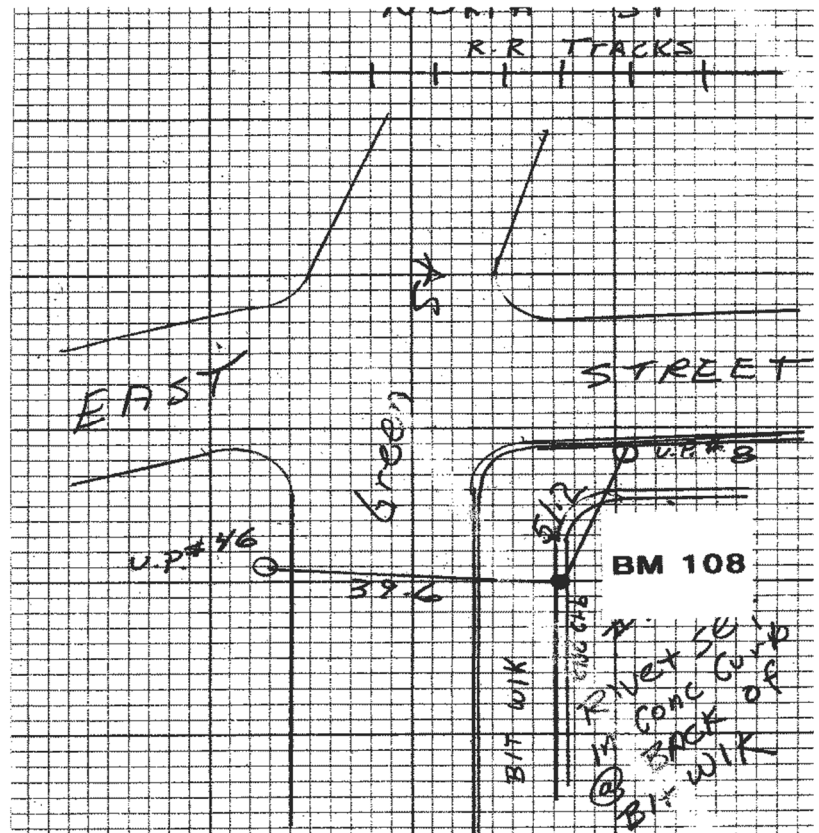




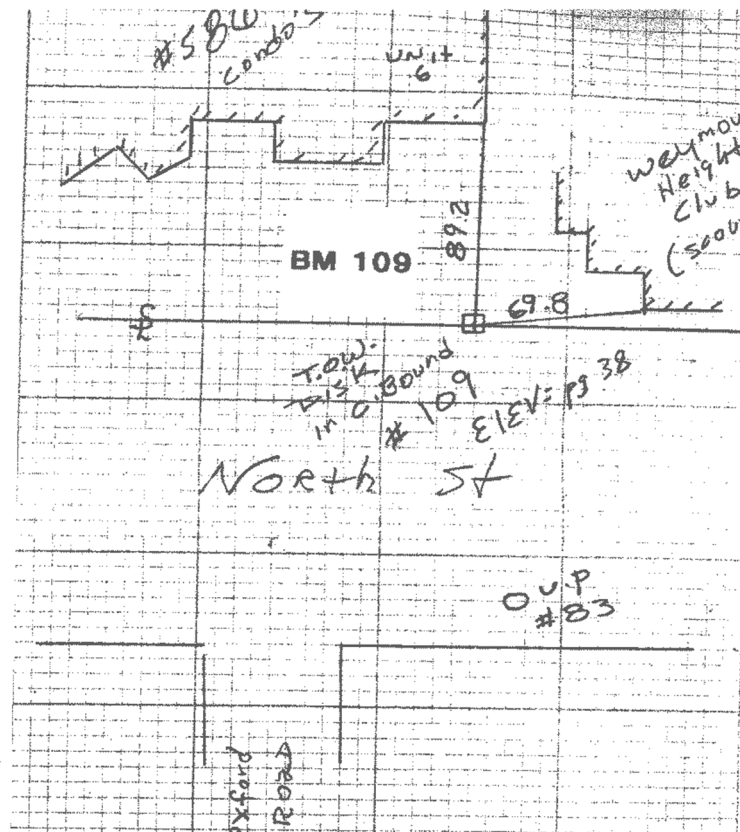
BM 102 Square Cut on top of Concrete Retaining wall to Parking Area @ Wessagussett Rd..



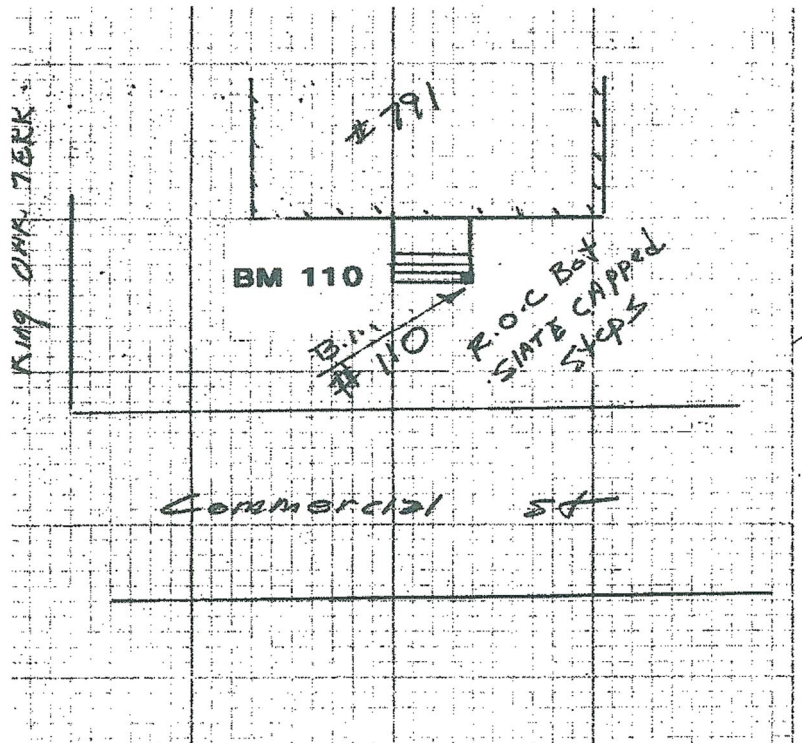
BM 103 Rivet on top of Granite Curb.



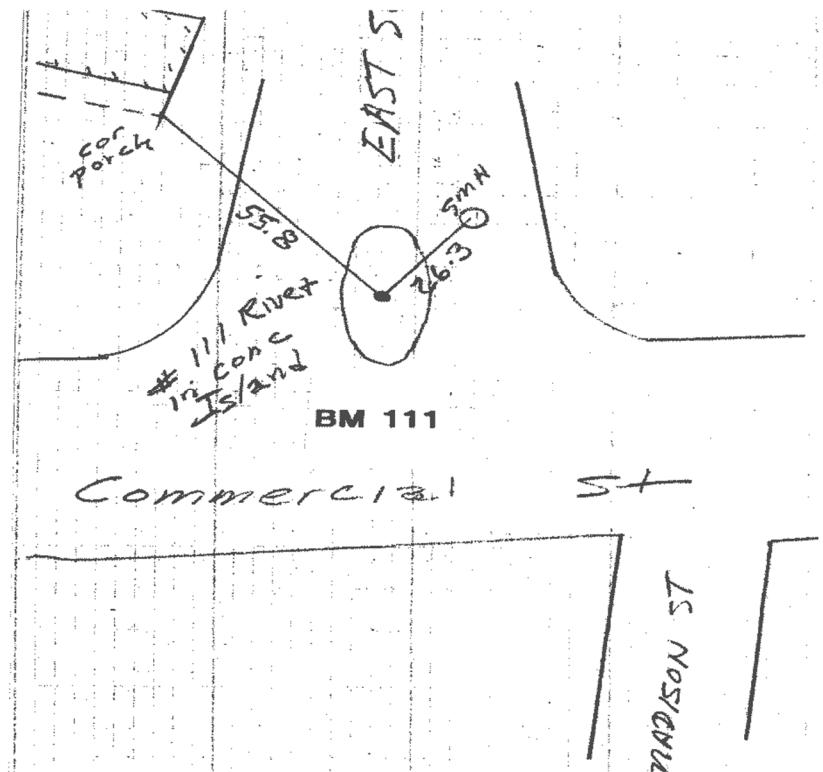
BM 108 Rivet on top of Concrete Retaining Wall.



BM WM109 Disk on top of Concrete Bound.



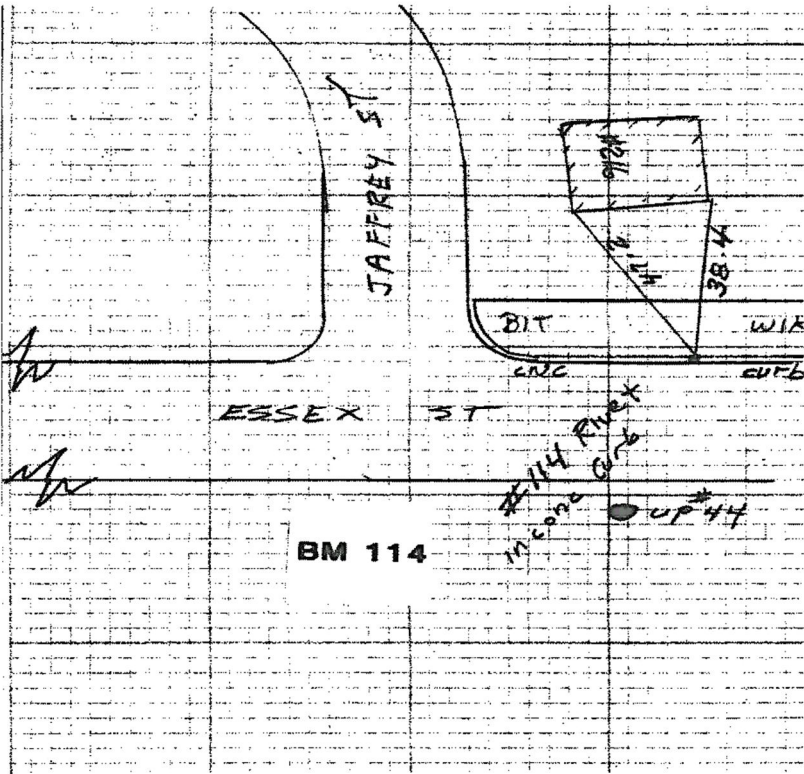
BM 110 R.O.C.B.S.C.S. #791 (Right Outer Bottom Corner Slate Capped Step) #791 Commercial St.



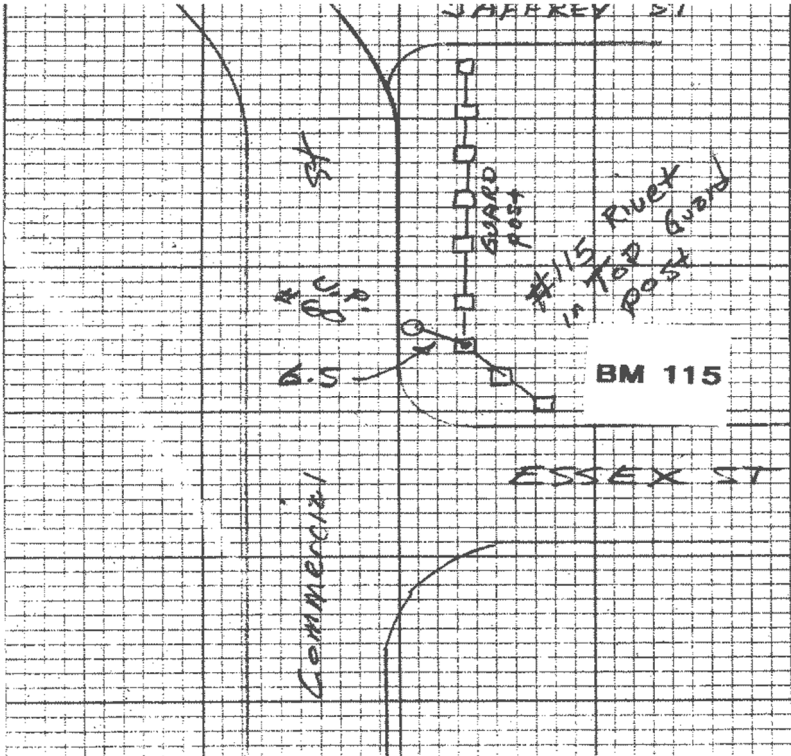
BM 111 Rivet on top of Concrete sidewalk.



BM 114 Rivet on top of Concrete curb.

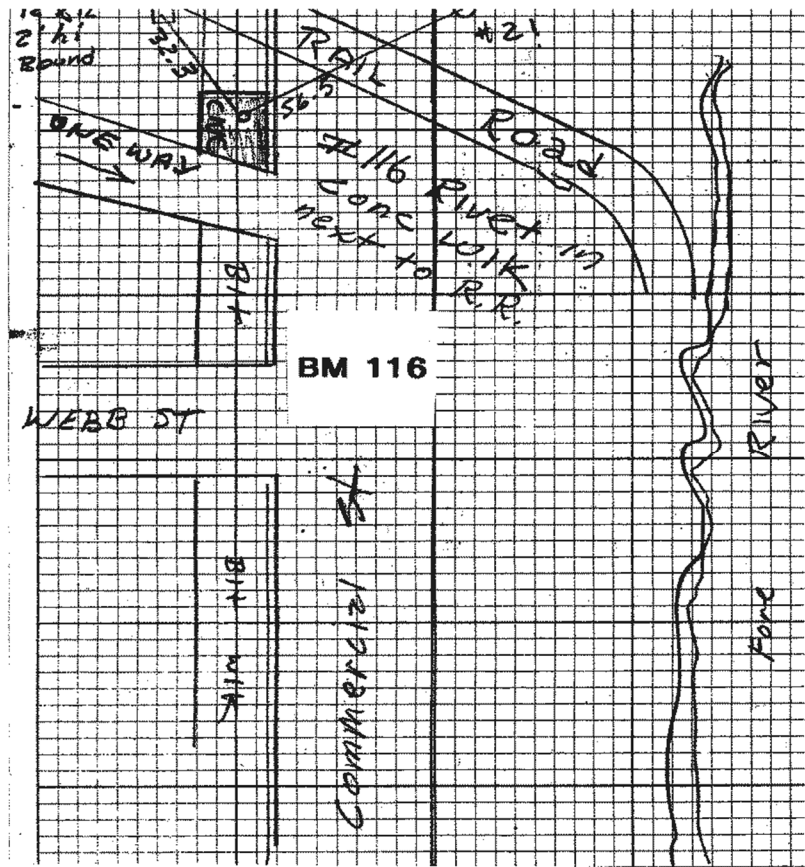


BM 115 Brass Rivet on top of Concrete guard rail post.

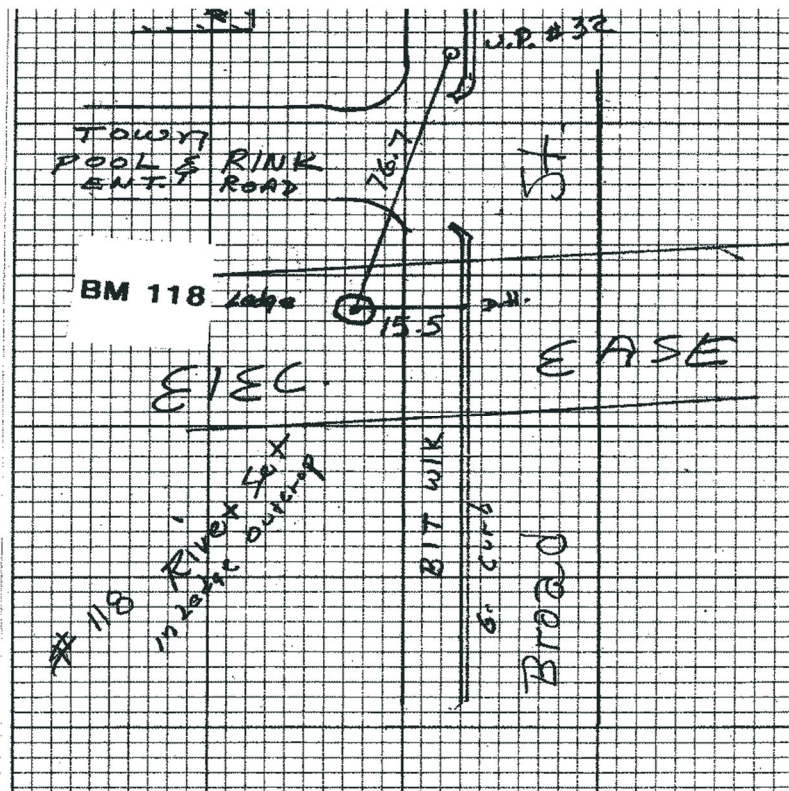




BM 116 Rivet on top of Concrete sidewalk.

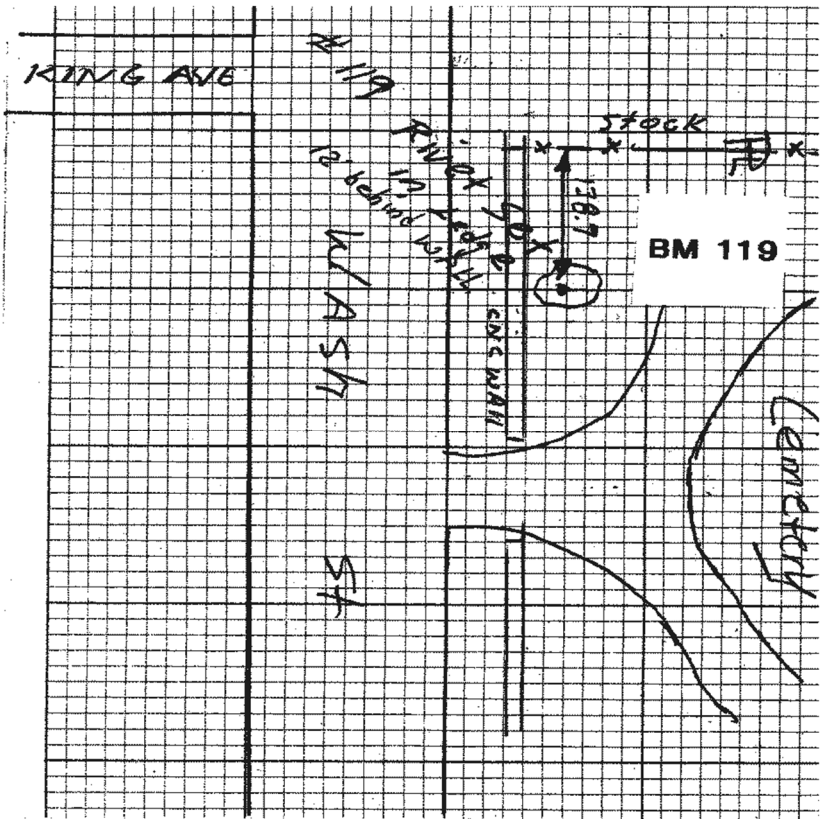


BM 118 Rivet on top of granite rock.

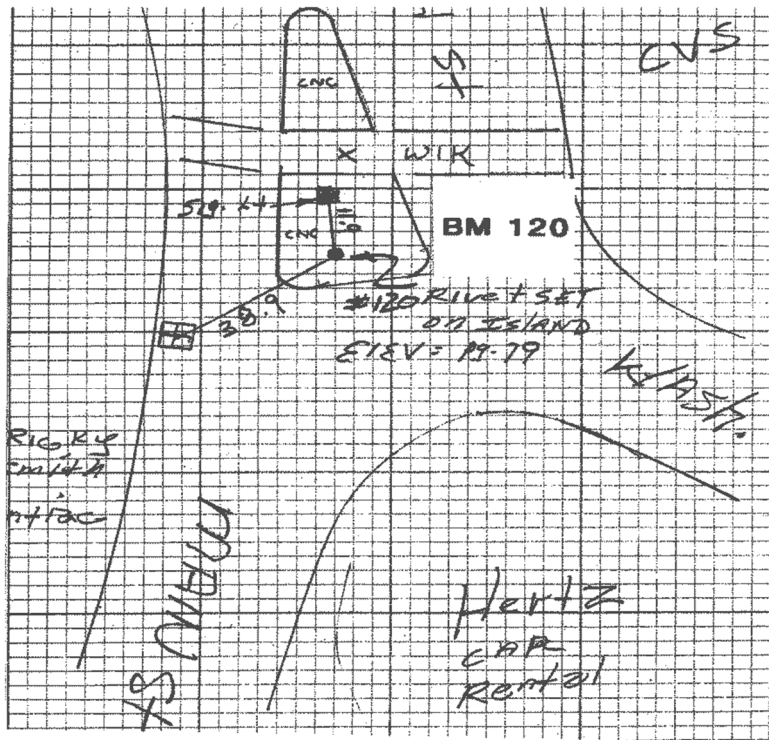




BM 119 Rivet on top of Ledge Outcrop.

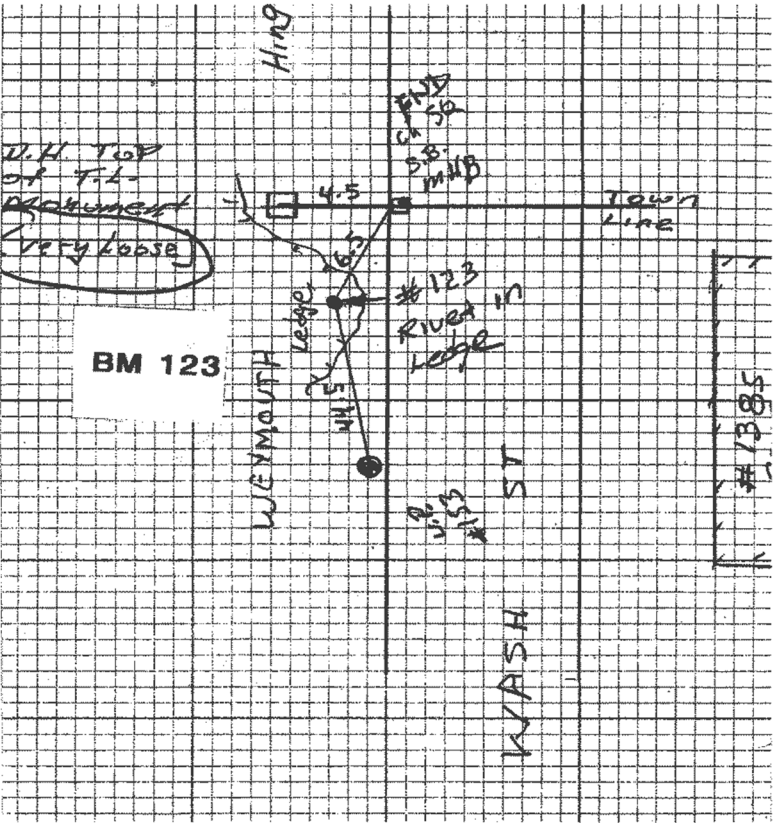


BM 120 Rivet on top of Concrete Traffic Island.

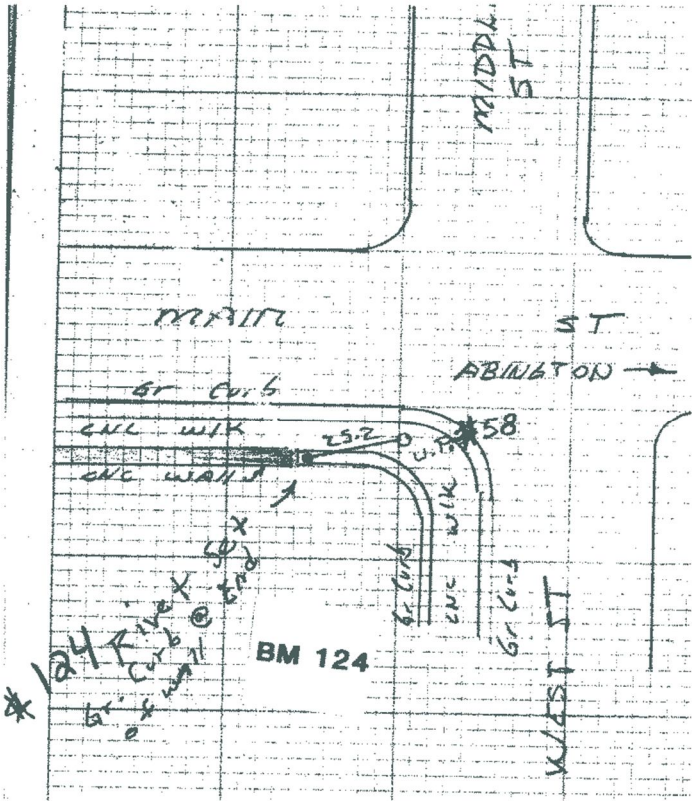




BM 123 Rivet on top of Granite Ledge Outcrop.

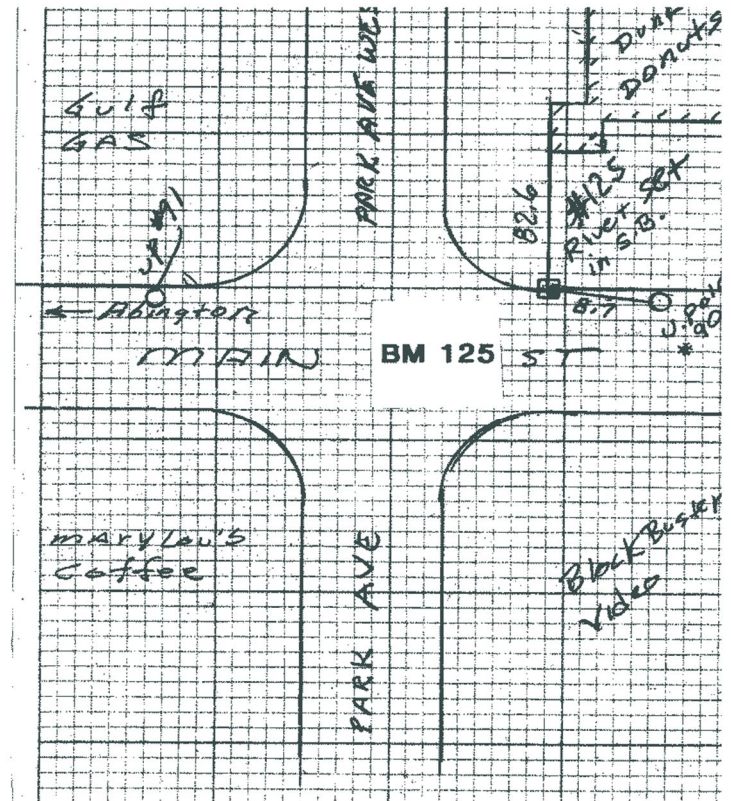


BM 124 Brass Rivet on top of Granite Curb.

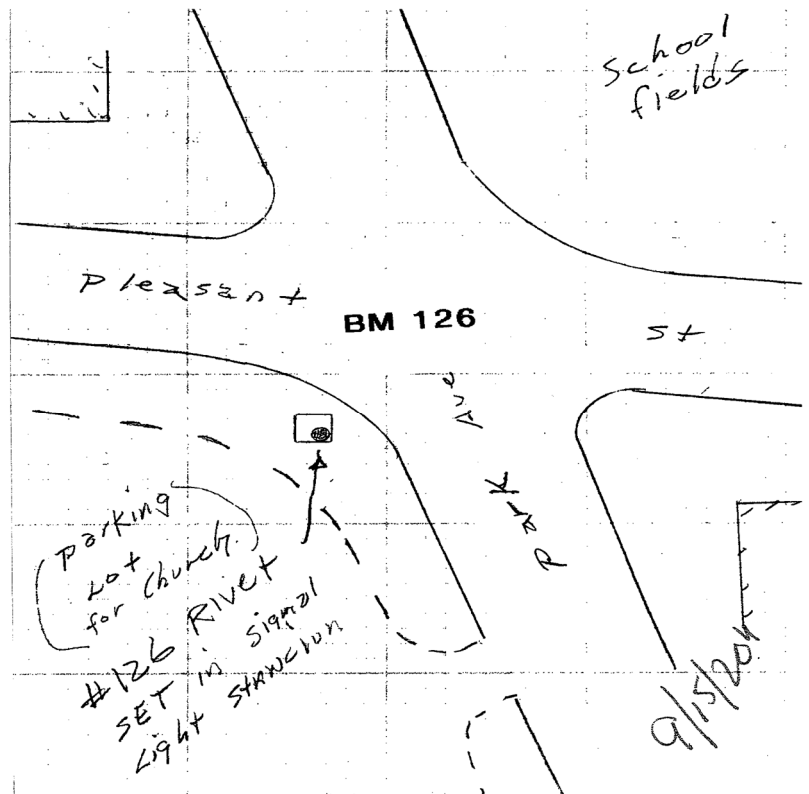




BM 125 Brass Rivet on top of Granite Bound.

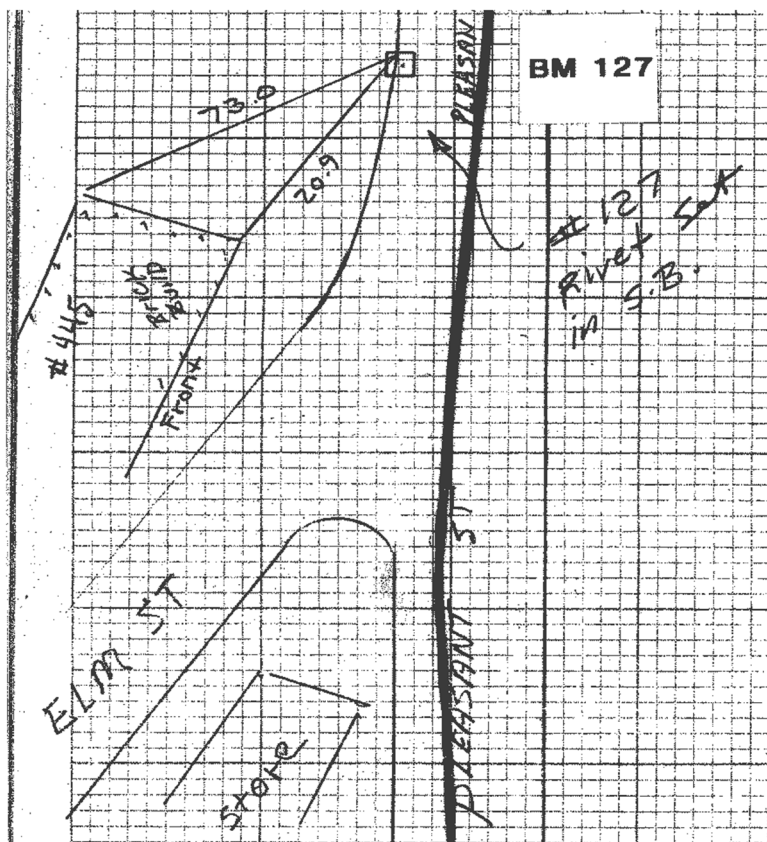


BM 126 Brass Rivet on top of Concrete Pier of Traffic Pole.

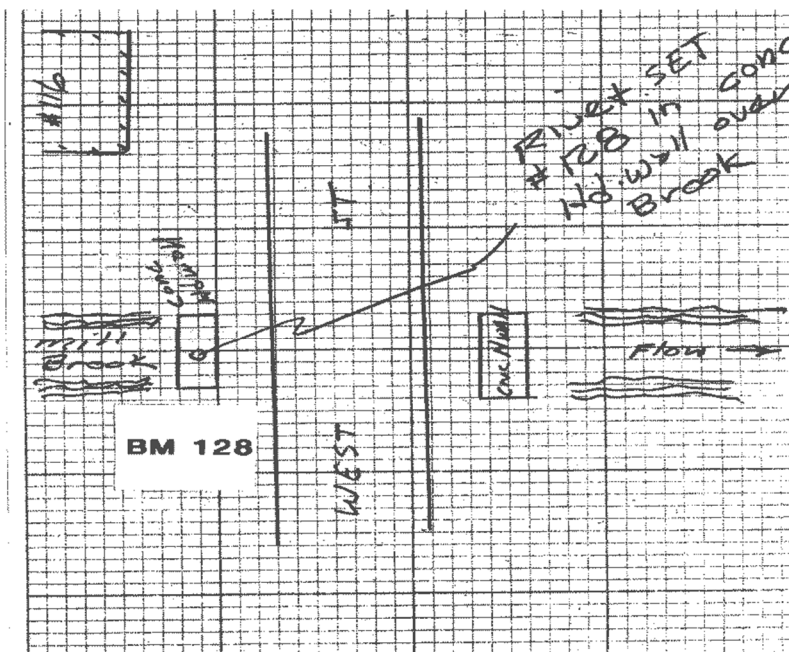




BM 127 Brass Rivet on top of Stone Bound.

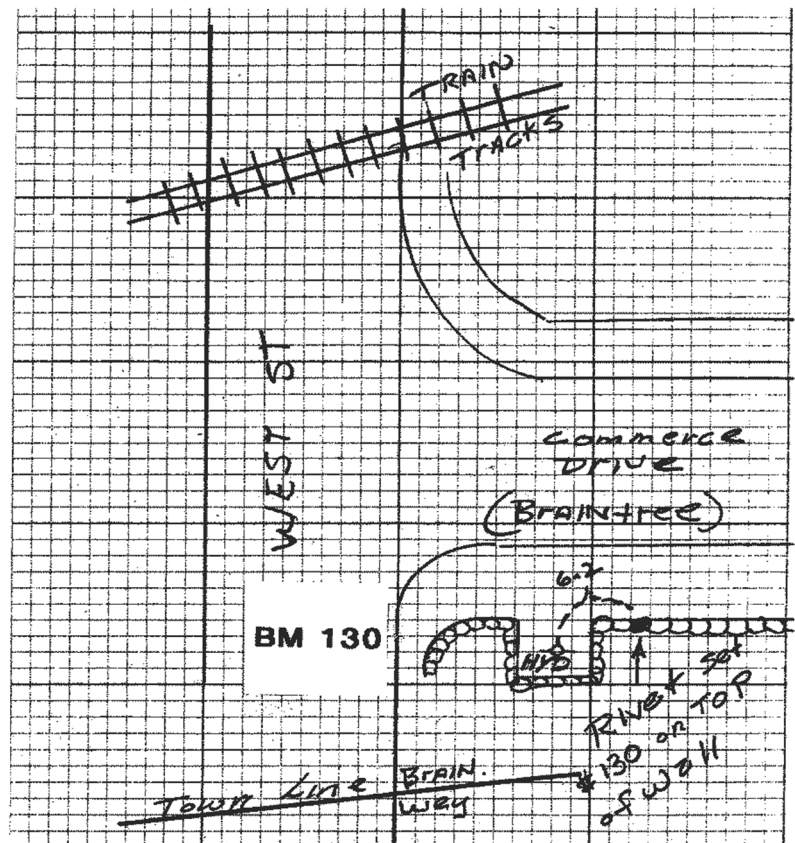
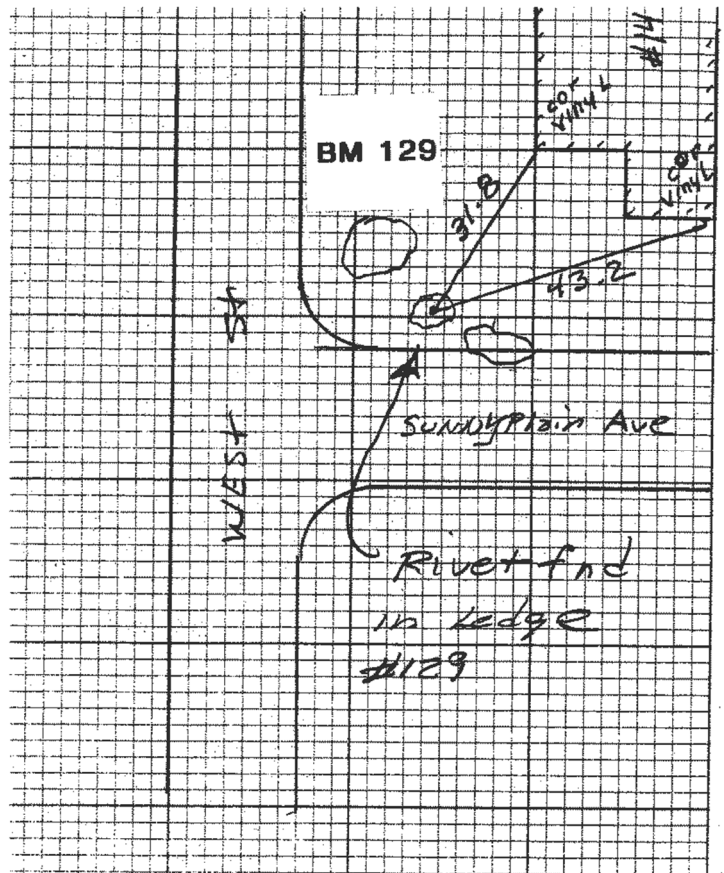


BM 128 Brass Rivet on top of Concrete Headwall.

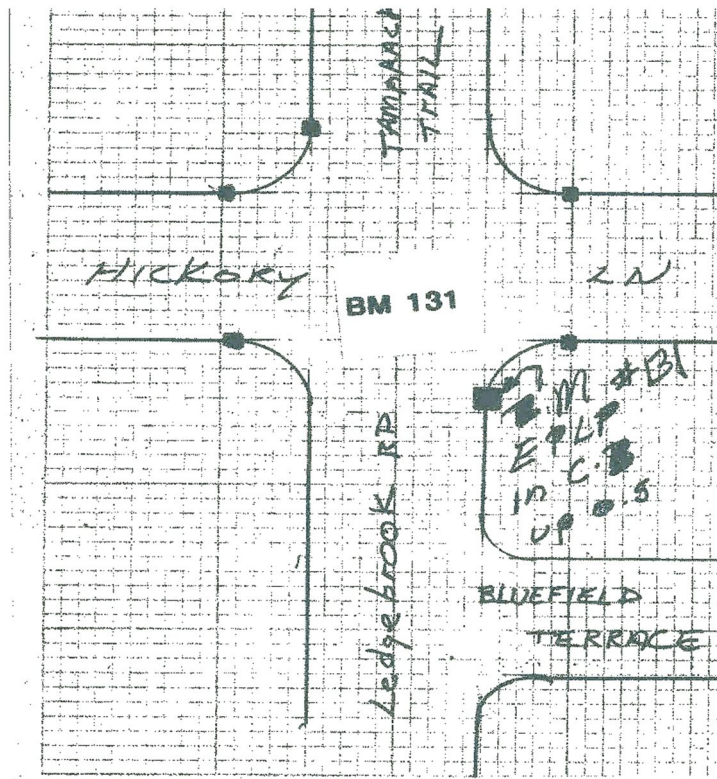




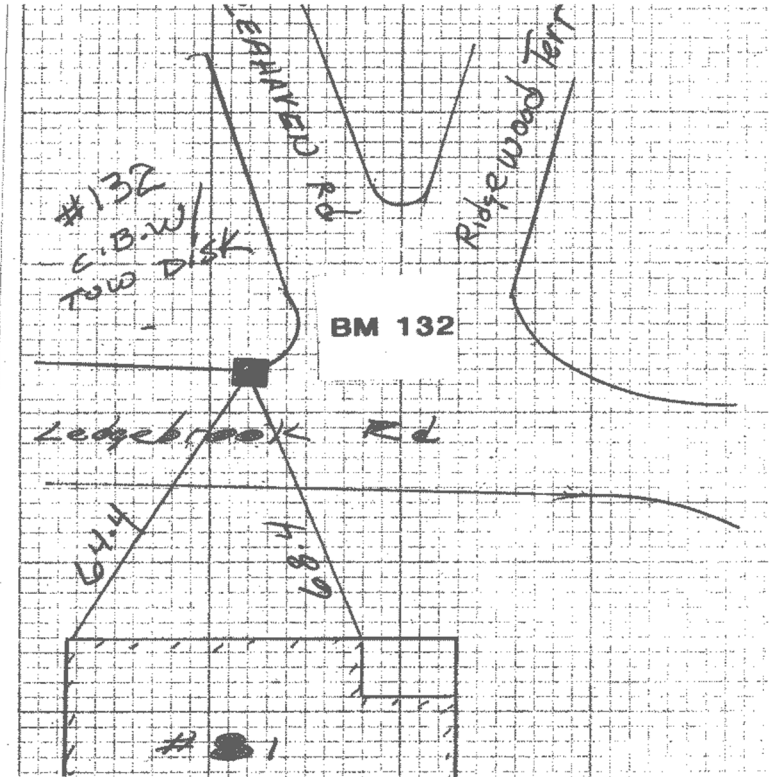
BM 129 Brass Rivet on top of ledge outcrop.



BM 130 Brass Rivet on top of wall.



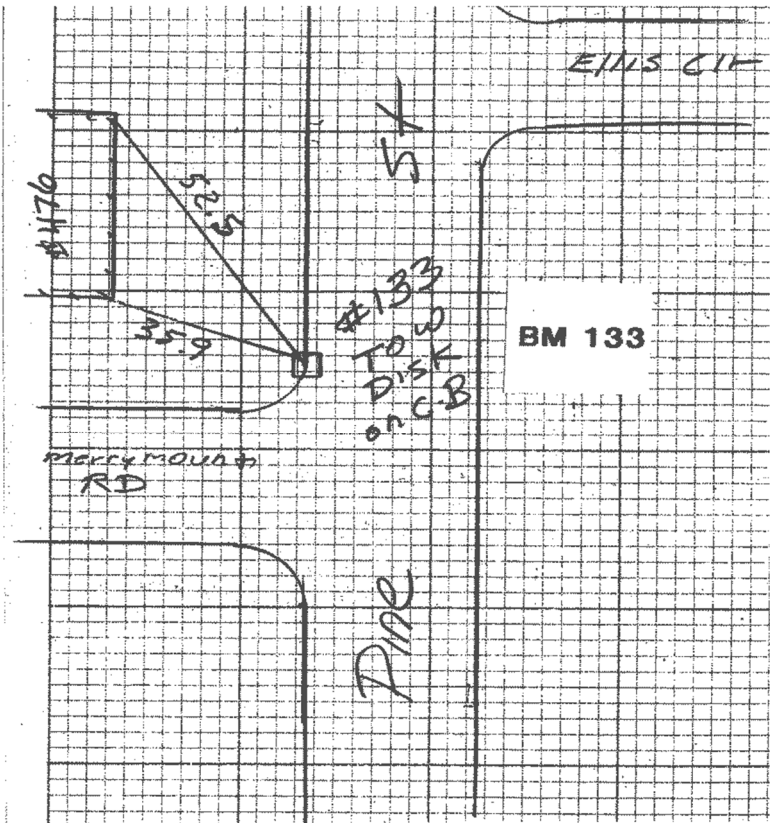
BM 131 Excussion Pin in Lead Plug in Concrete Bound @ Ledgebrook Rd. & Hickory Ln.



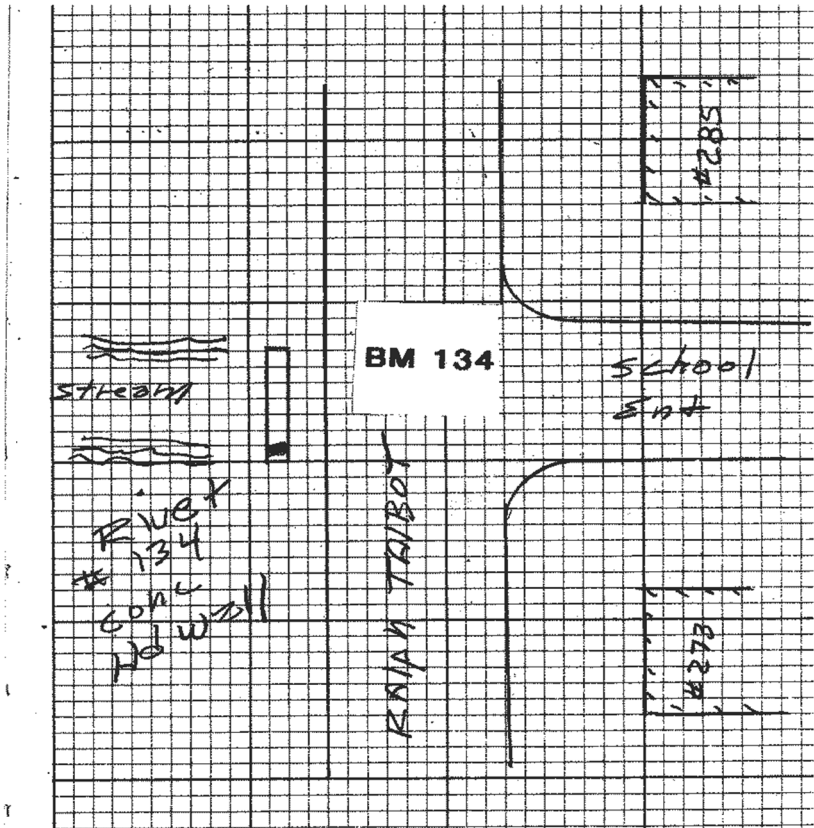
BM 132 Disk on top of Concrete Bound.



BM 133 Disk on top of Concrete Bound.

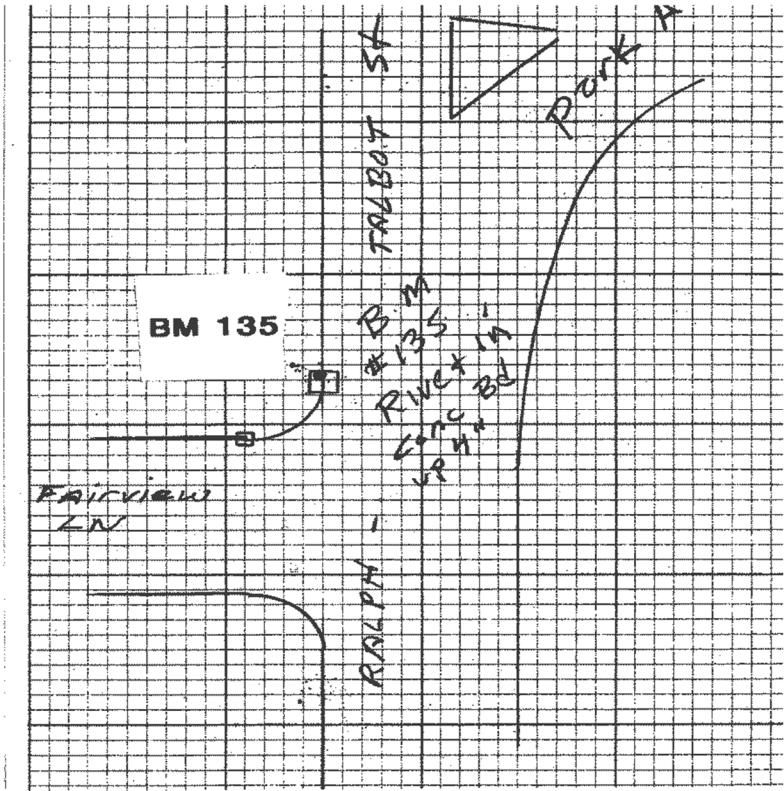


BM 134 Brass Rivet on top of Concrete Headwall.

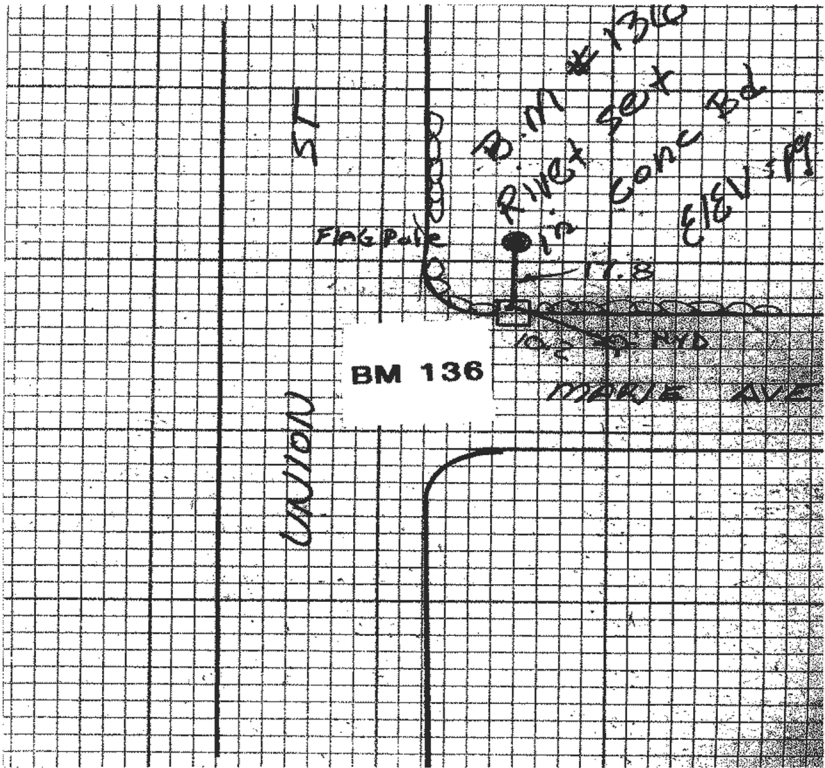




BM 135 Brass Rivet on top of Concrete Bound.

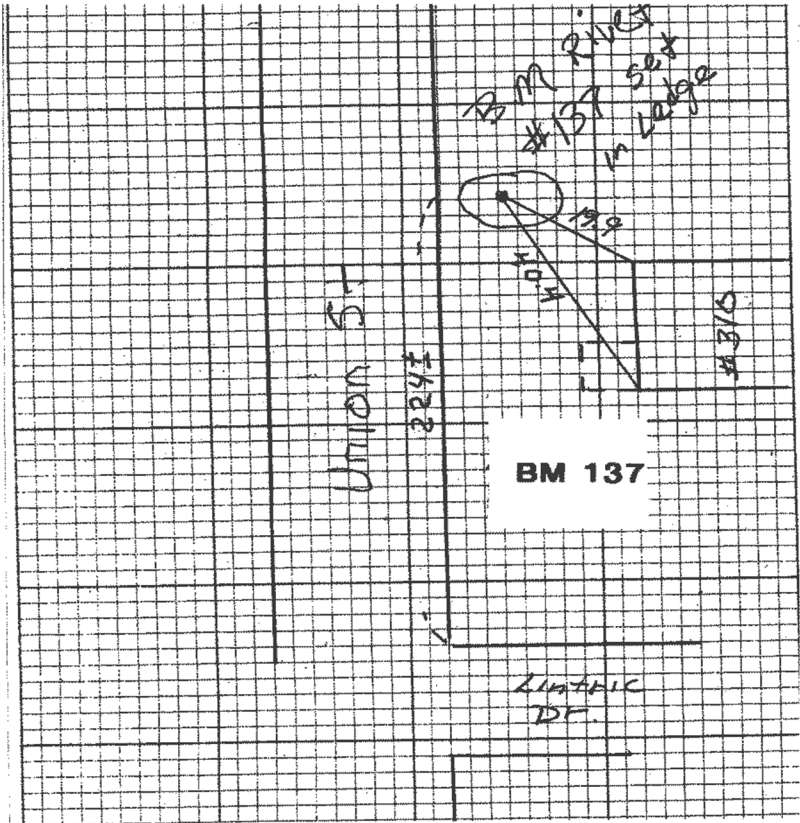


BM 136 Brass Rivet on top of Concrete Bound.

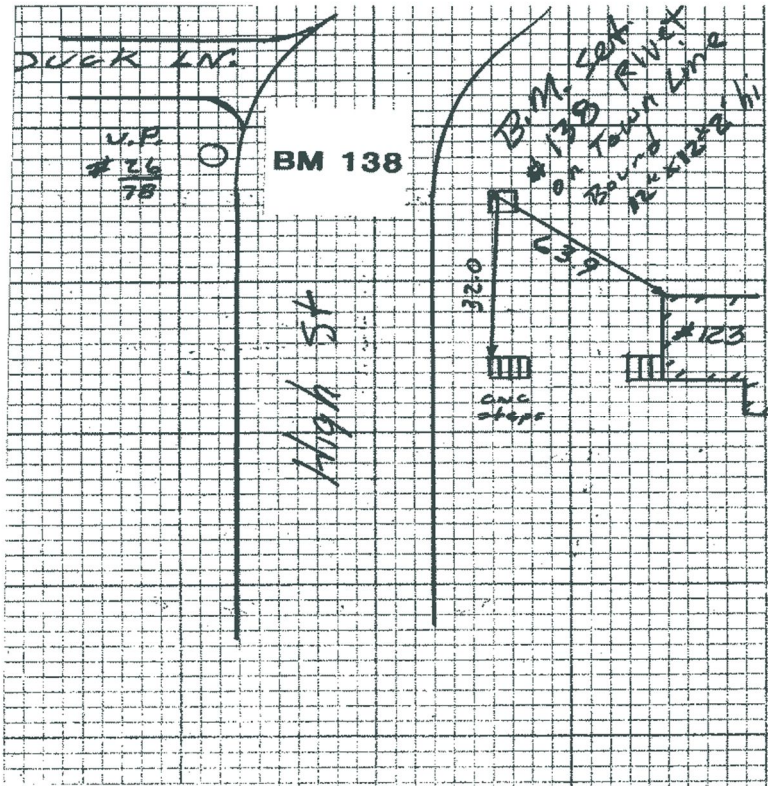




BM 137 Brass Rivet on top of Ledge Outcrop.

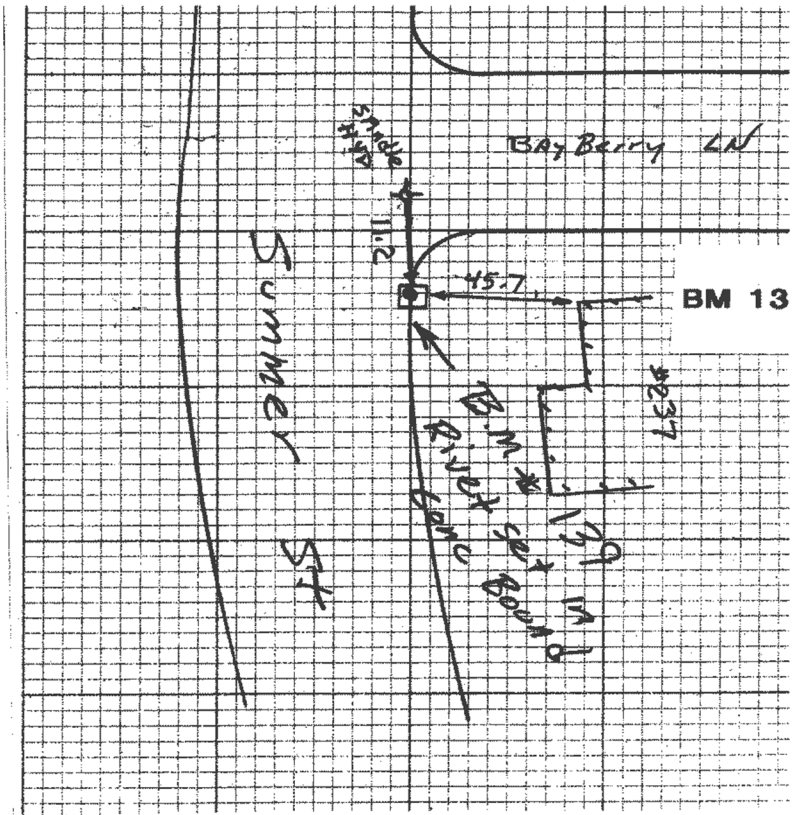


BM 138 Brass Rivet on top of Granite Post.

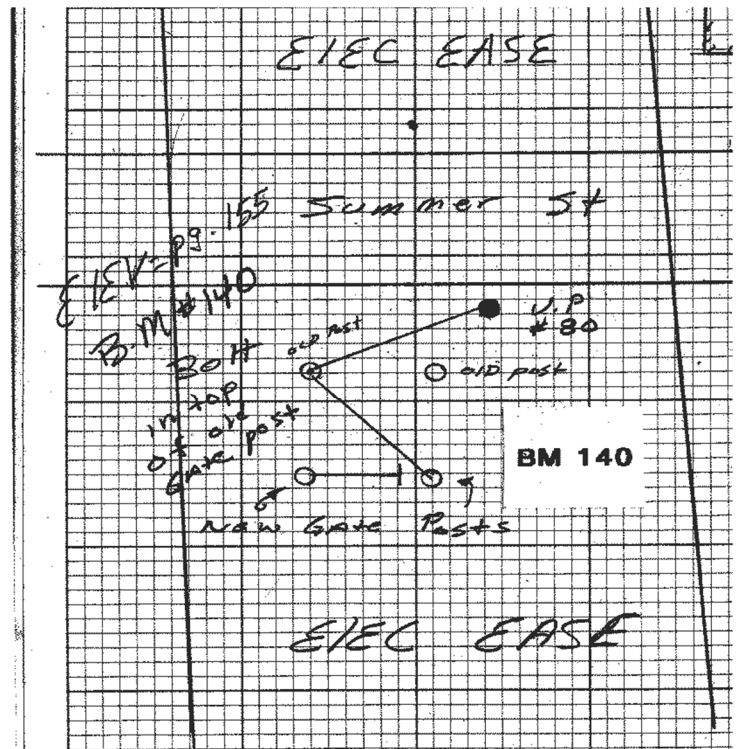




BM 139 Brass Rivet on top of Concrete Bound.

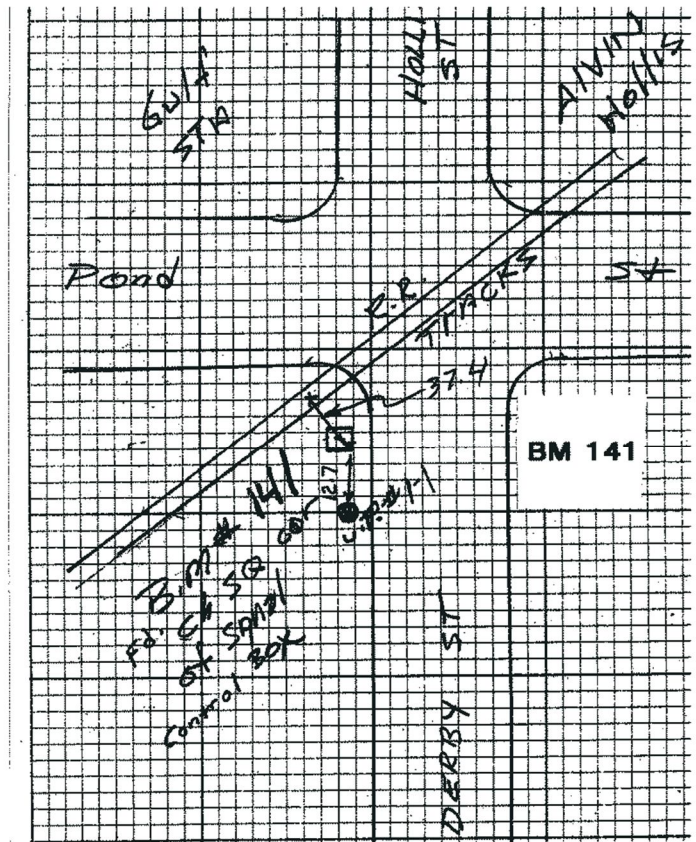


BM 140 Brass Rivet on top of Concrete post inside of metal post.

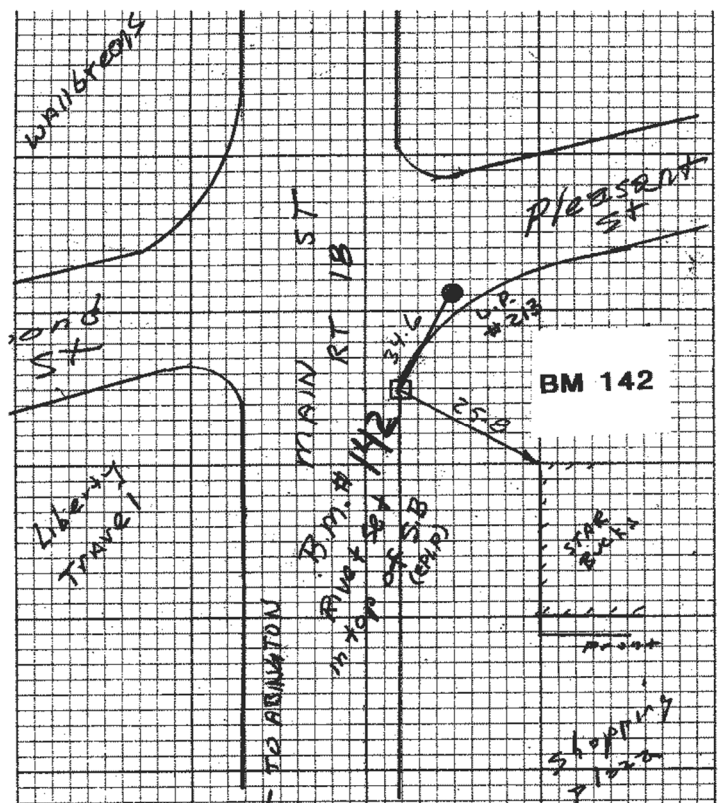




BM 141 Square Cut on top of Concrete Base.

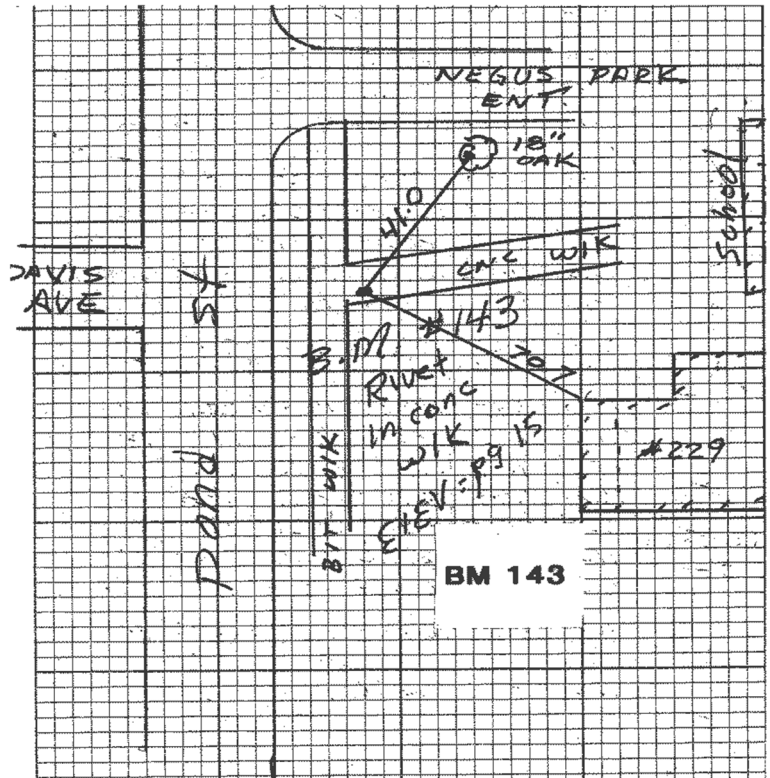


BM 142 Brass Rivet on top of Granite Bound.

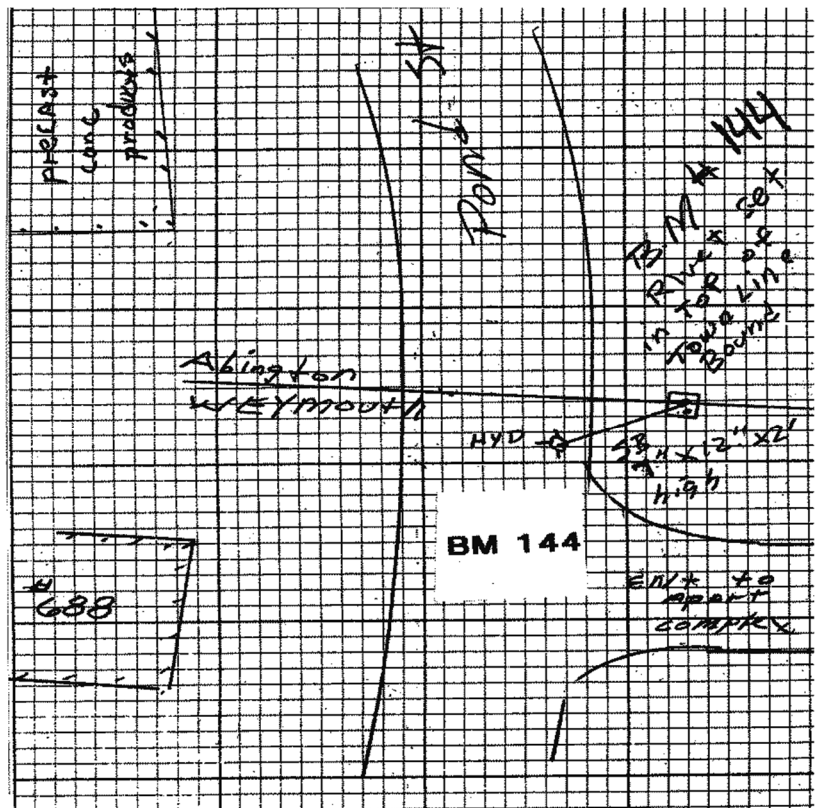




BM 143 Brass Rivet on top of Concrete sidewalk.

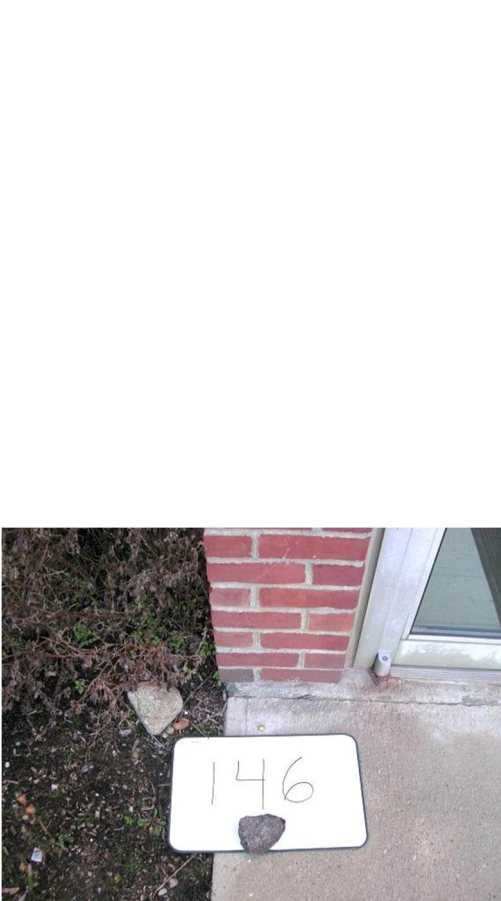
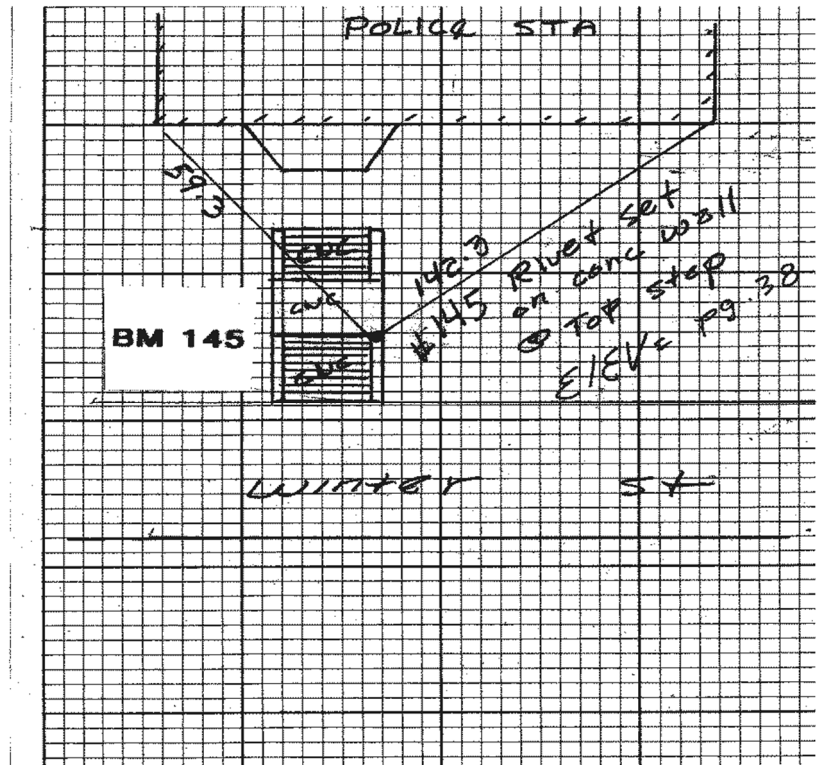


BM 144 Brass Rivet on top of Granite Town Line Post.

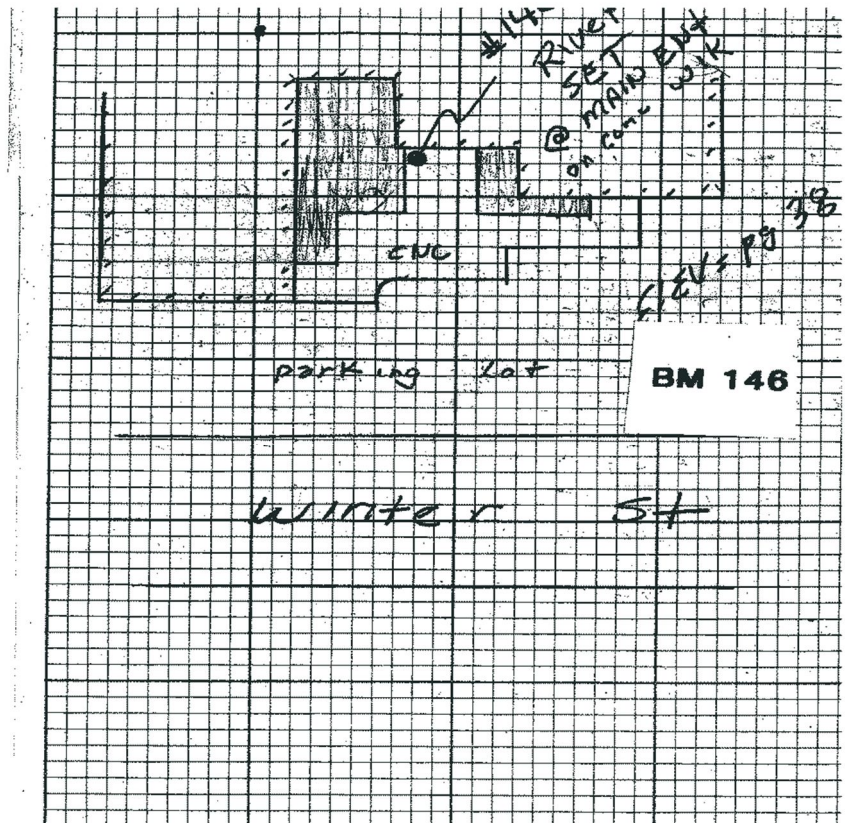




BM 145 Brass Rivet on top of Concrete retaining wall for stairs.

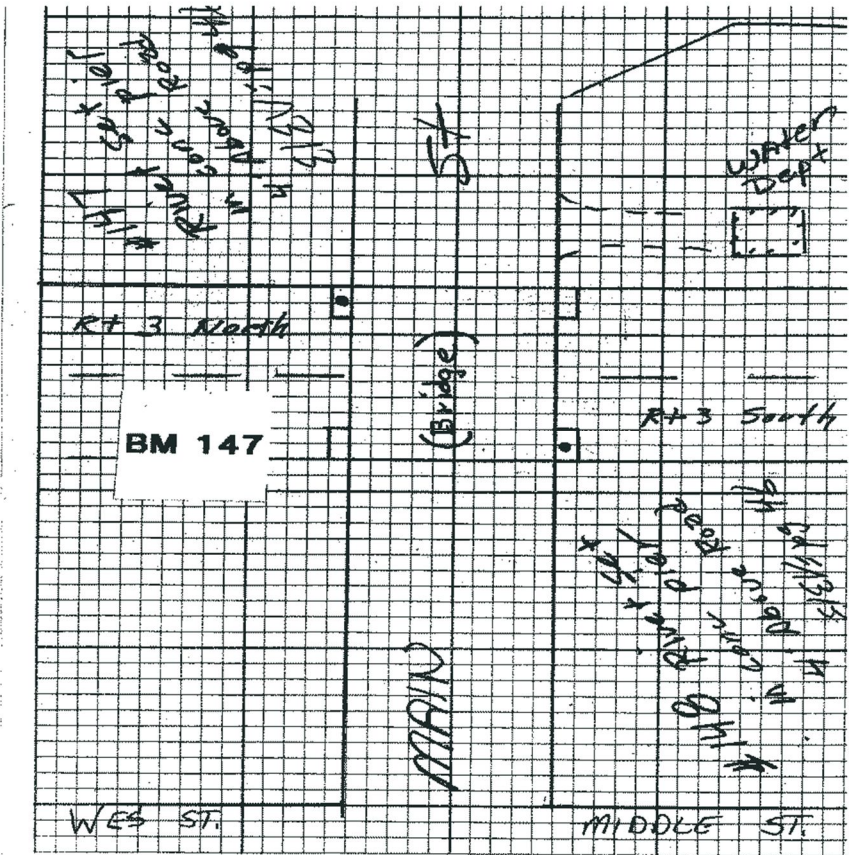


BM 146 Brass Rivet on top of Concrete sidewalk.

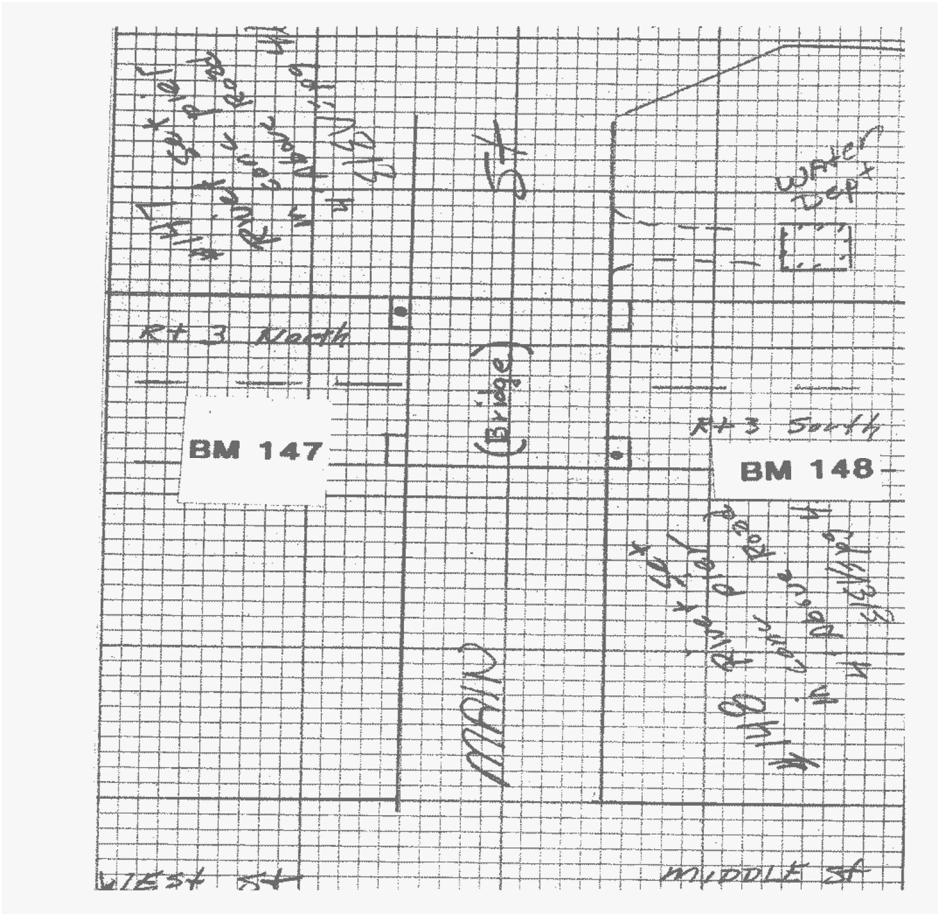




BM 147 Brass Rivet on top of Concrete Retaining wall.

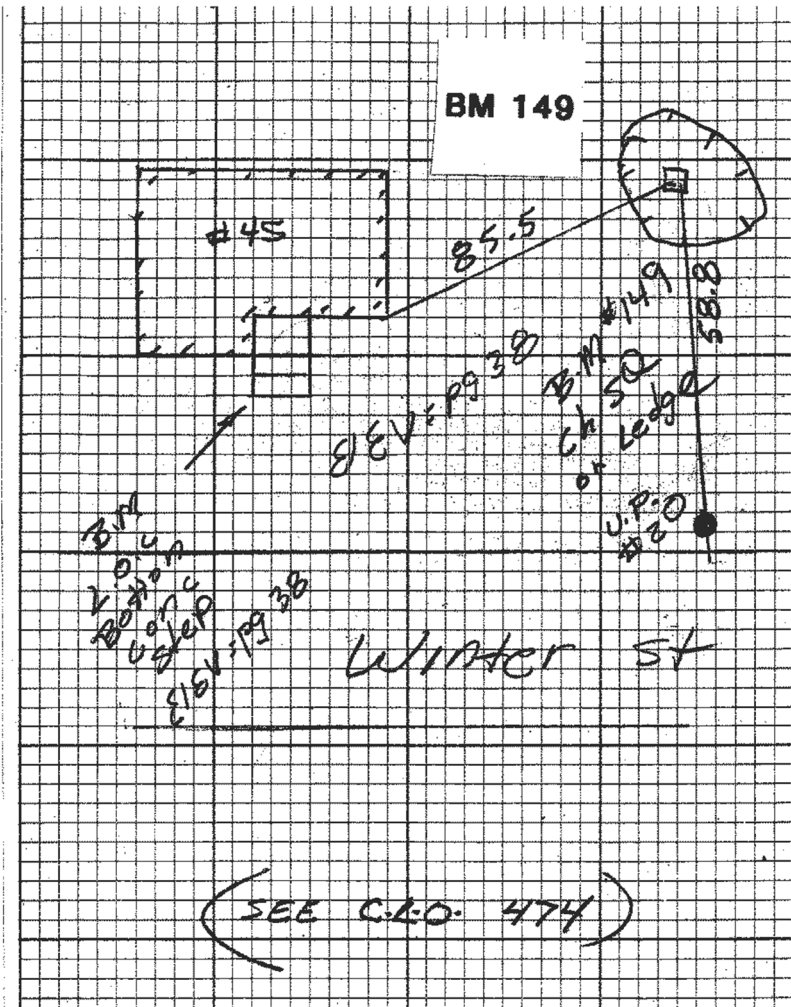


BM 148 Brass Rivet on top of Concrete Retaining wall.



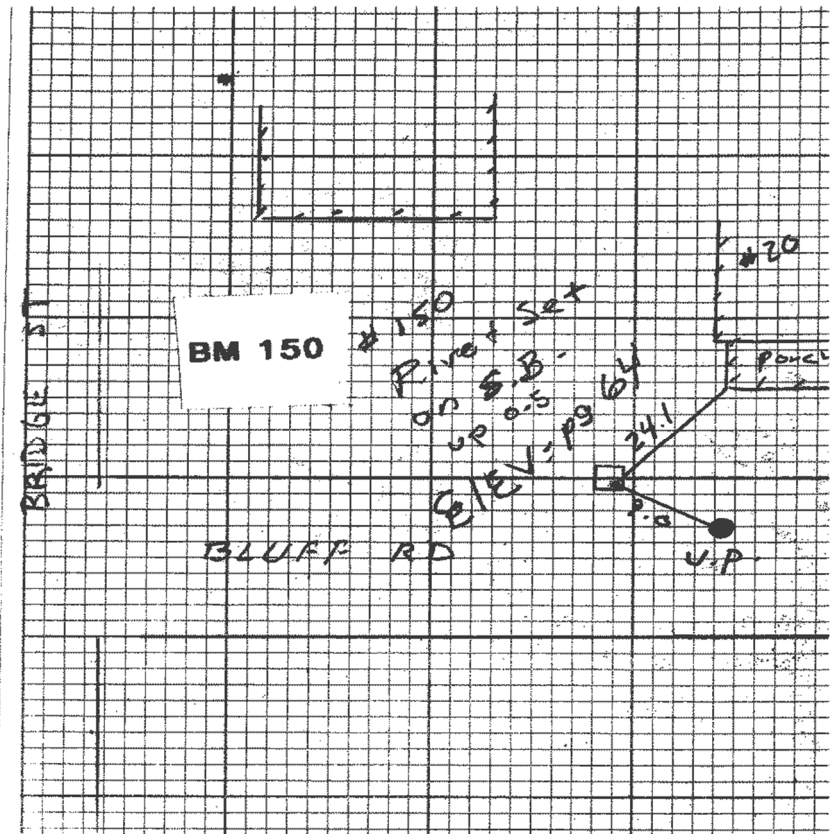


BM 149 Chiseled Square Cut on top of Ledge Outcrop.

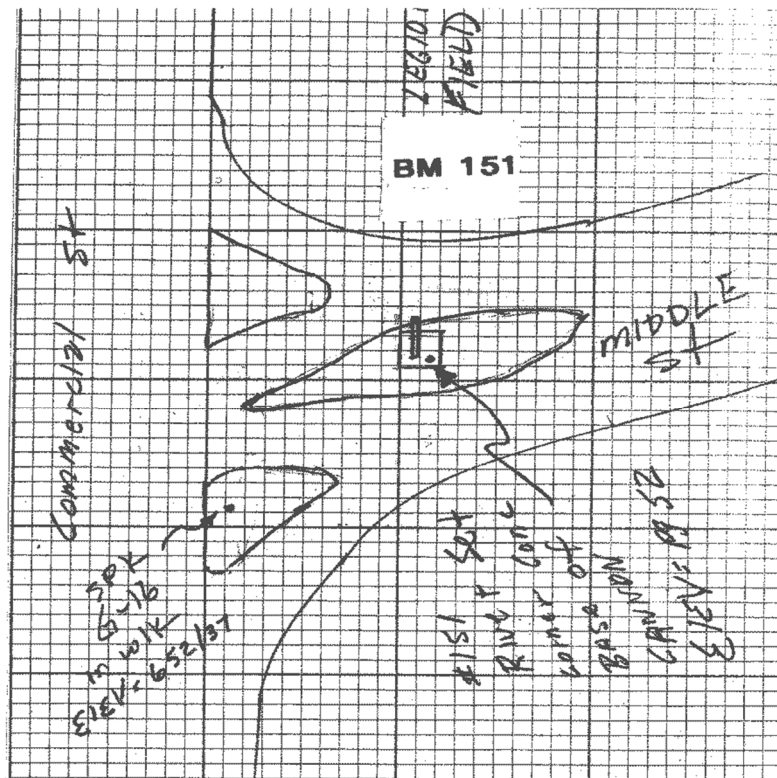




BM 150 Brass Rivet on top of Granite Bound.

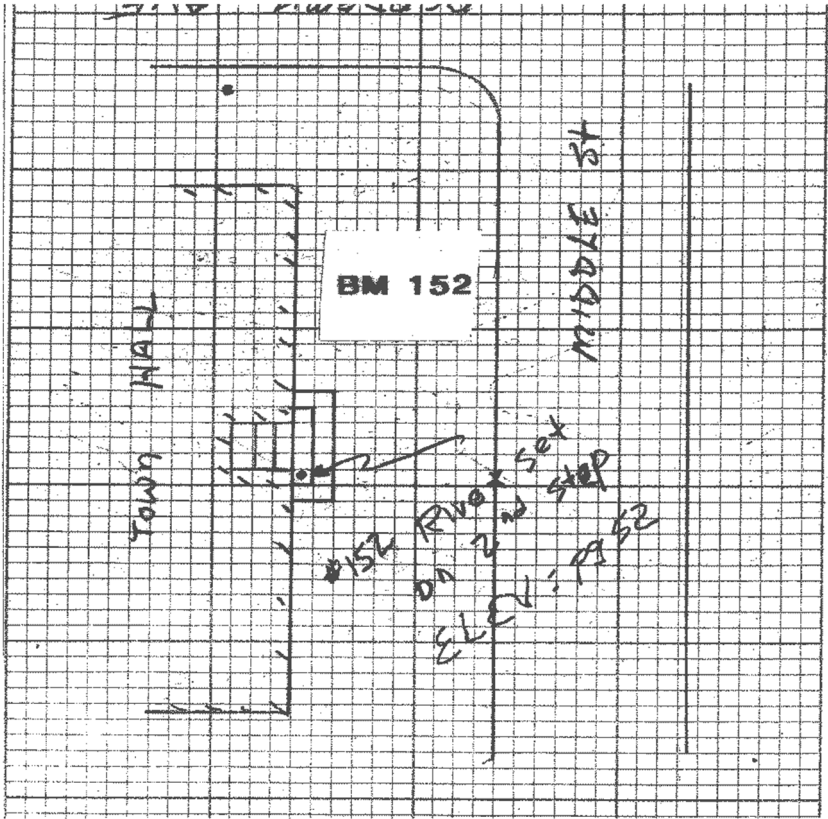


BM 151 Brass Rivet on top of Concrete pad.

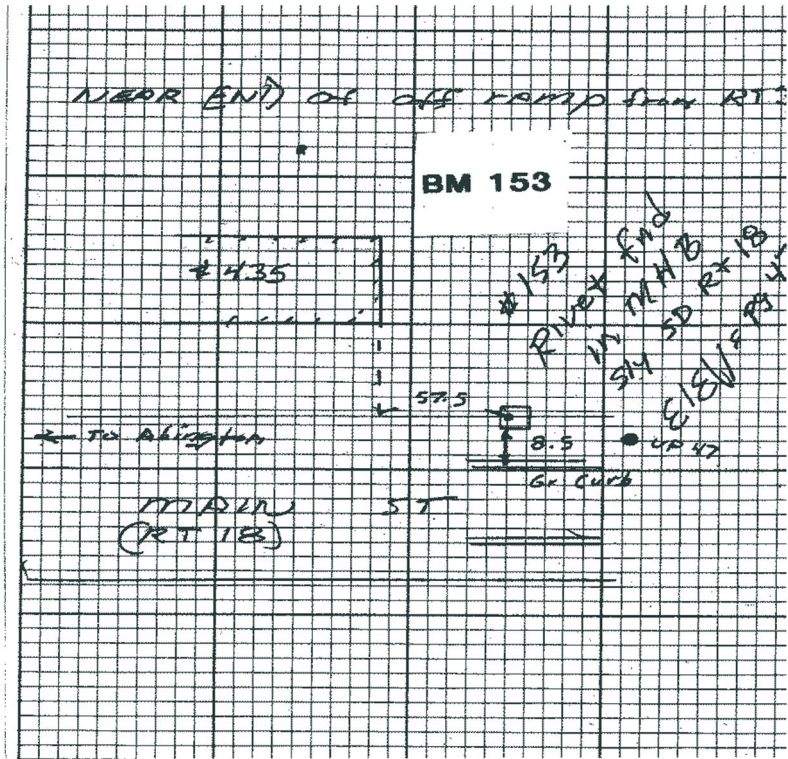




BM 152 Brass Rivet on top of Granite Steps.

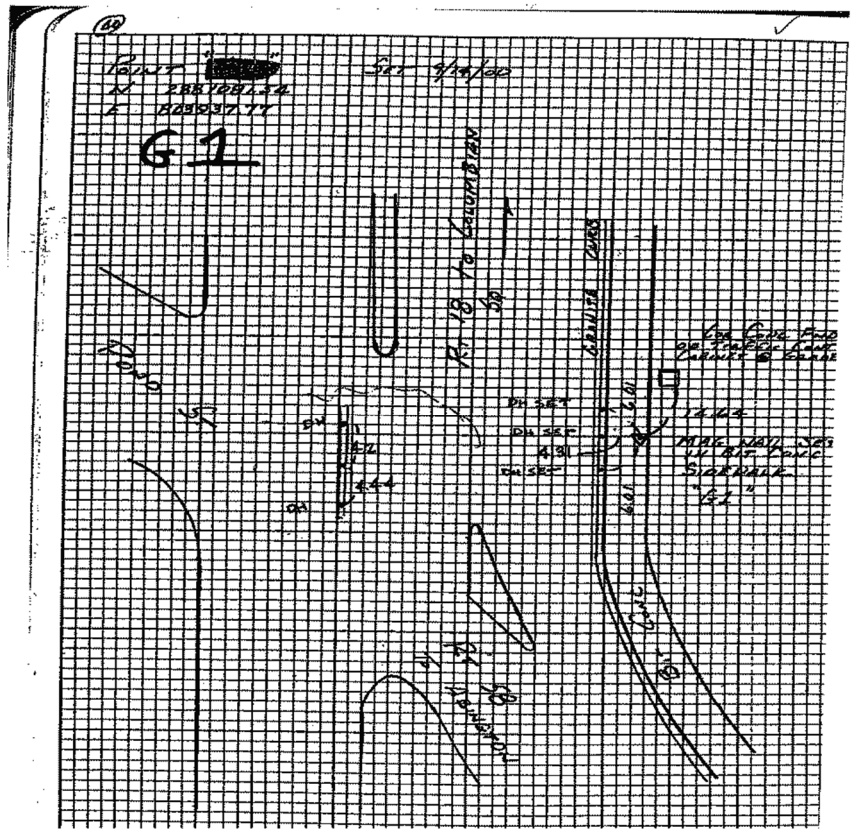


BM 153 Rivet on top of Granite Mass Highway Stone Bound.

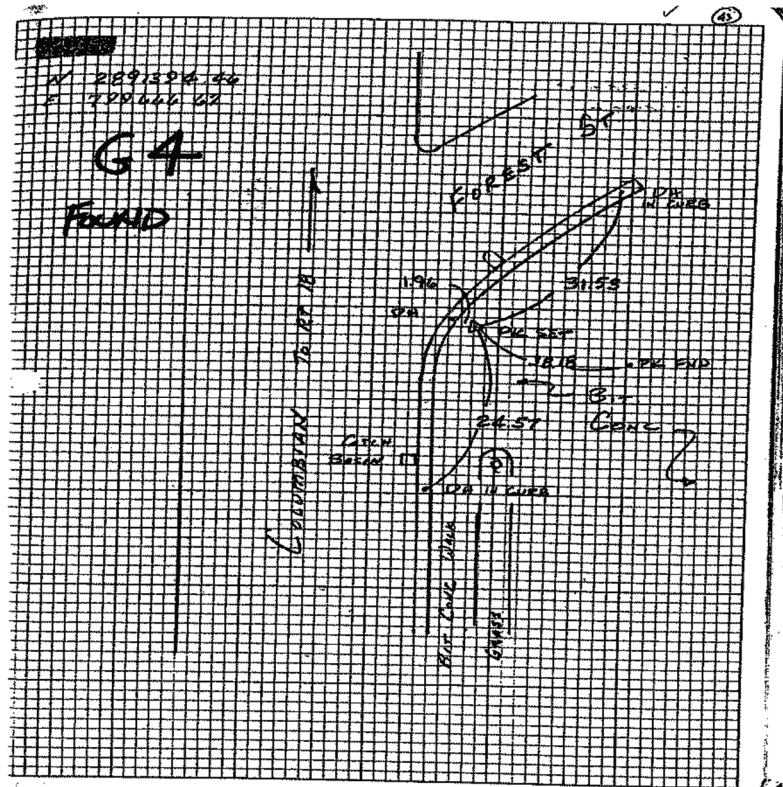




BM G1 Spike in bitumimous Concrete Pavement.

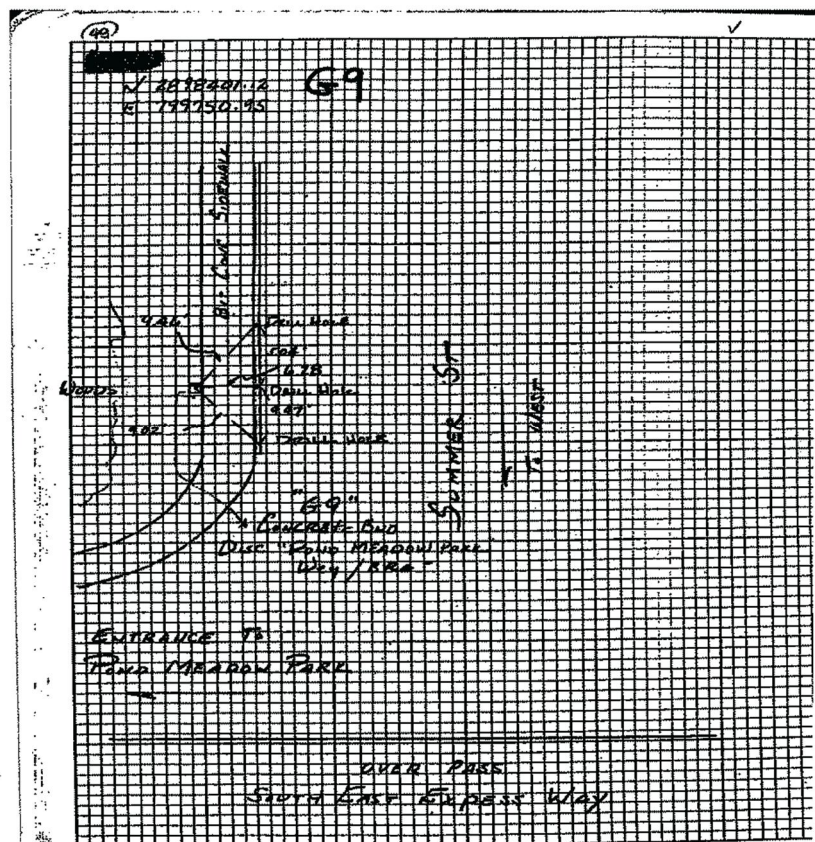


BM G4 Spike in bitumimous Concrete Pavement.

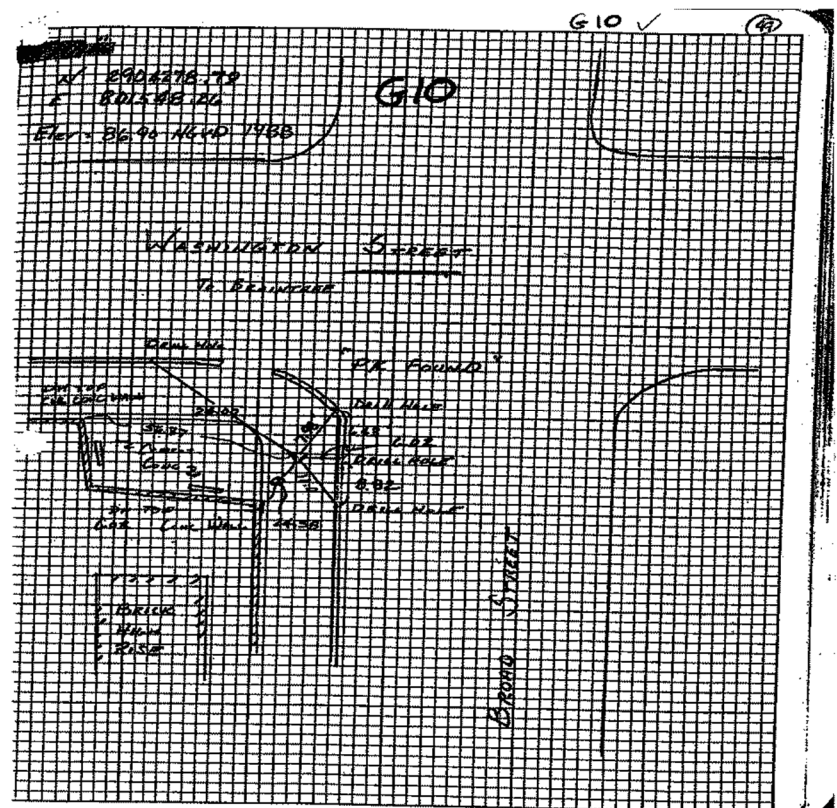




BM G9 Disk on top of Concrete Bound.

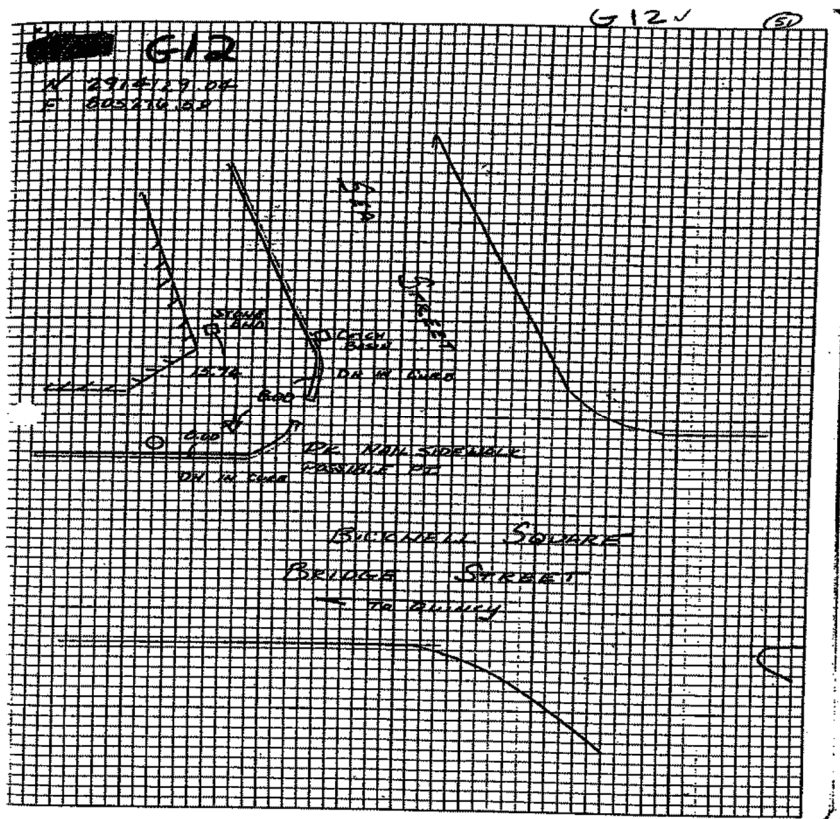


BM G10 Spike in bituminous Concrete Pavement.

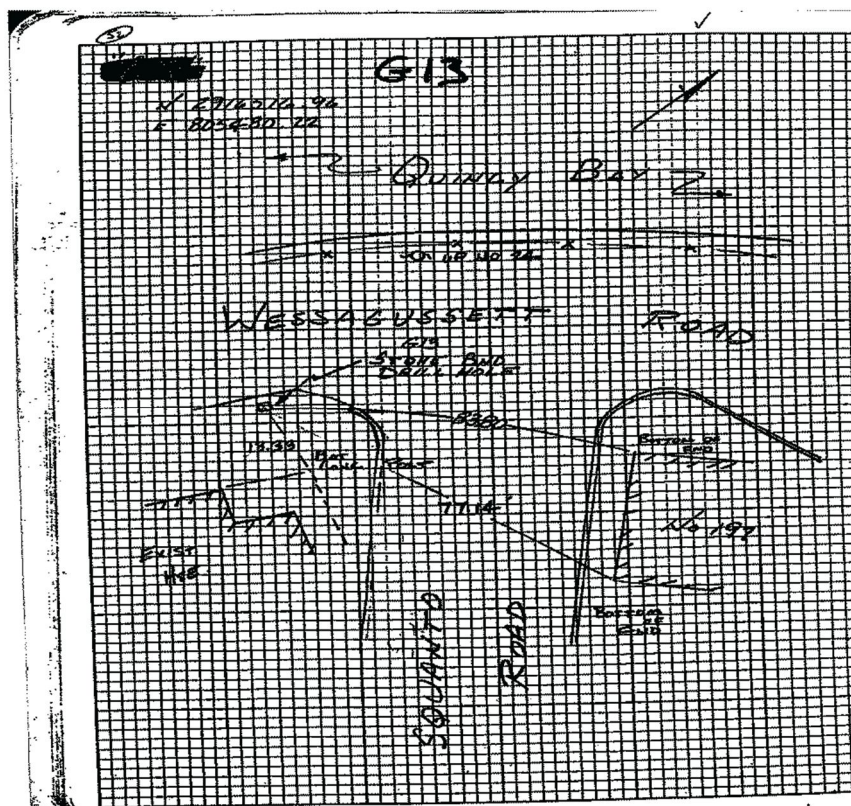




BM G12 Spike in bituminous Concrete pavement.

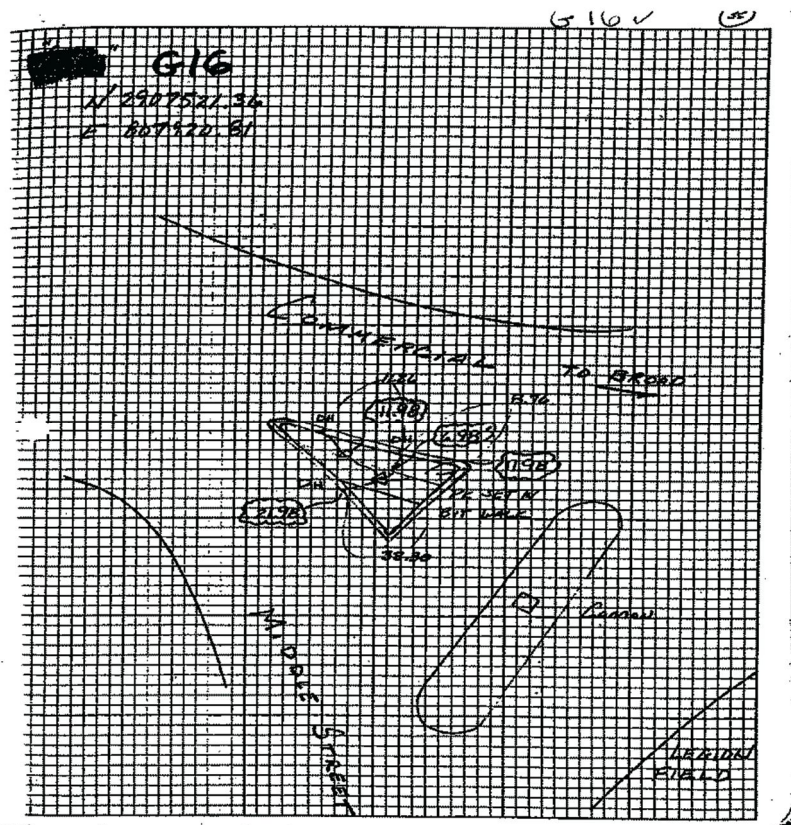


BM G13 Drill Hole Stone Bound.

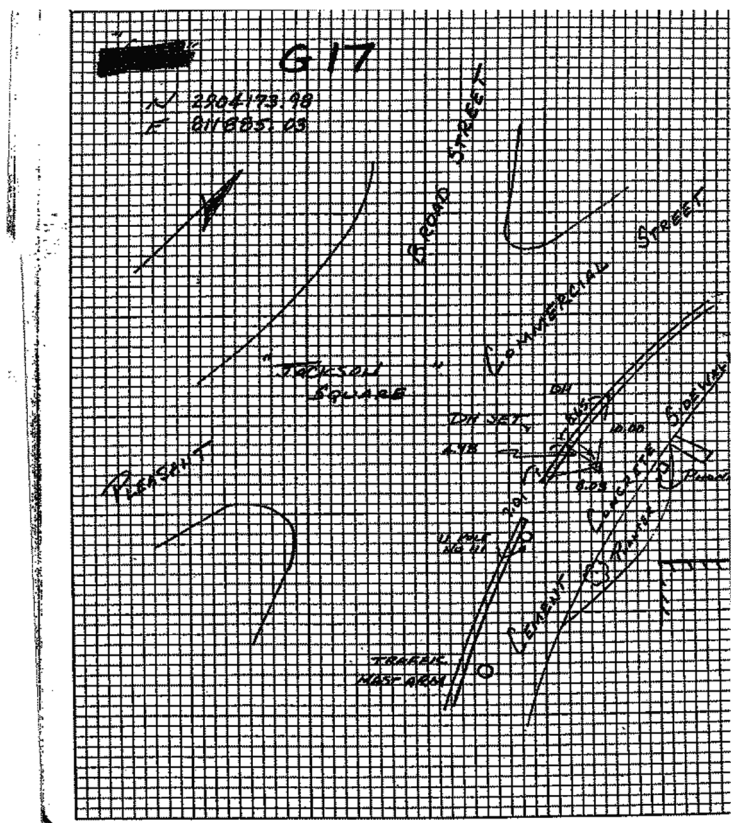


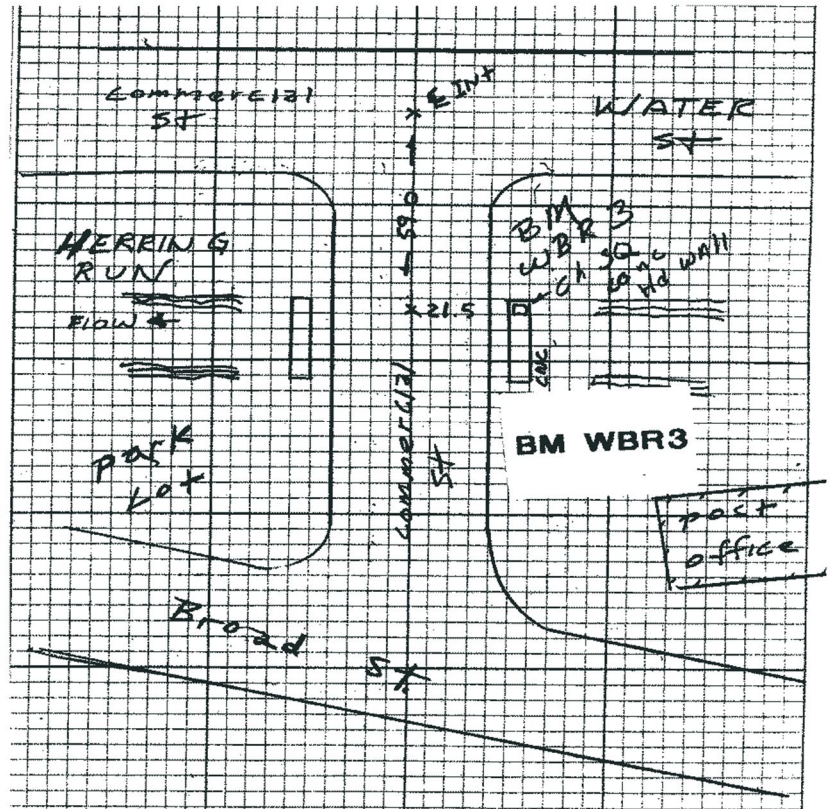


BM G16 Spike in bituminous Concrete pavement.



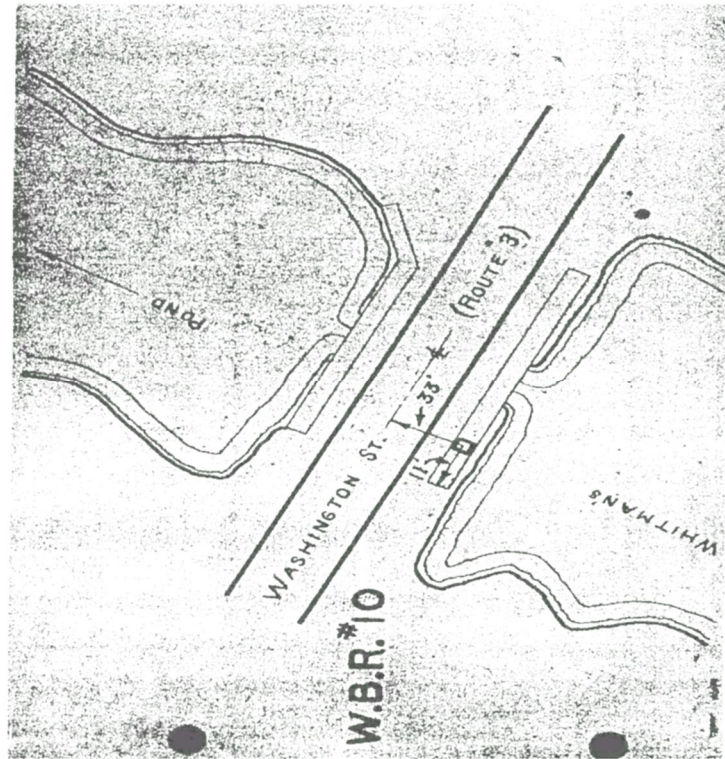
BM G17 Drill Hole in Concrete sidewalk.





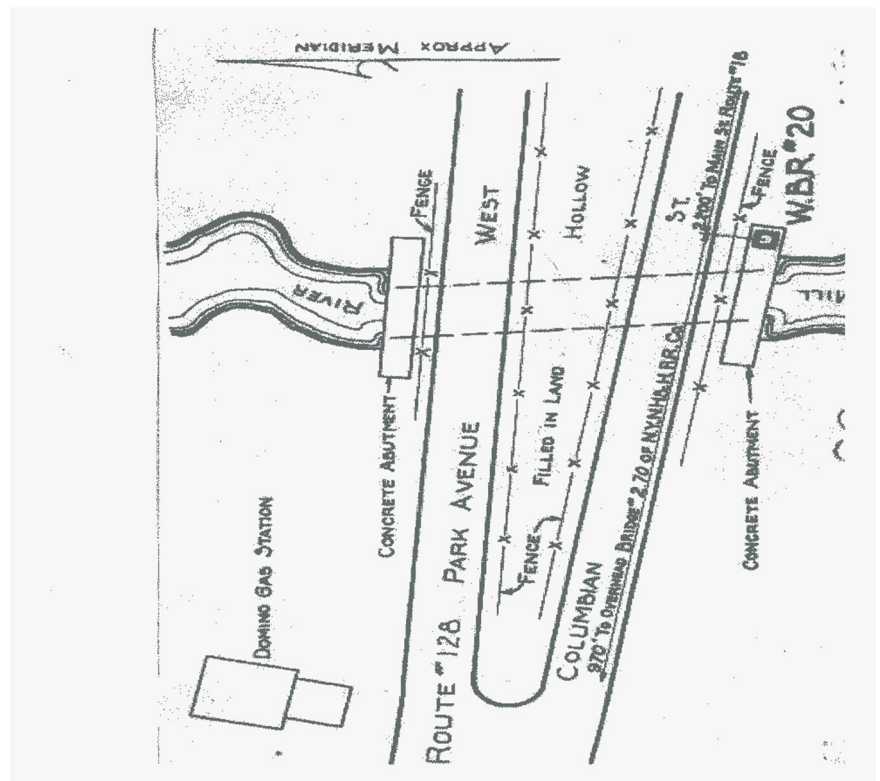
EAST WEYMOUTH, AT THE INTERSECTION OF WATER ST AND COMMERCIAL STREET, ON THE EAST END OF SOUTH RETAINING WALL OF COMMERCIAL ST BRIDGE OVER THE RIVER.

BM WBR3 Square Cut on top of Concrete Headwall.



WEYMOUTH BACK RIVER 10: IN THE CENTER OF TOWN, AT THE WHITMANS POND CULVERT UNDER ROUTE 3 (WASHINGTON STREET), ON THE WEST END OF THE SOUTH RETAINING WALL, 11 FT EAST OF THE WEST END.

BM WBR10 Square Cut on top of Concrete Headwall.

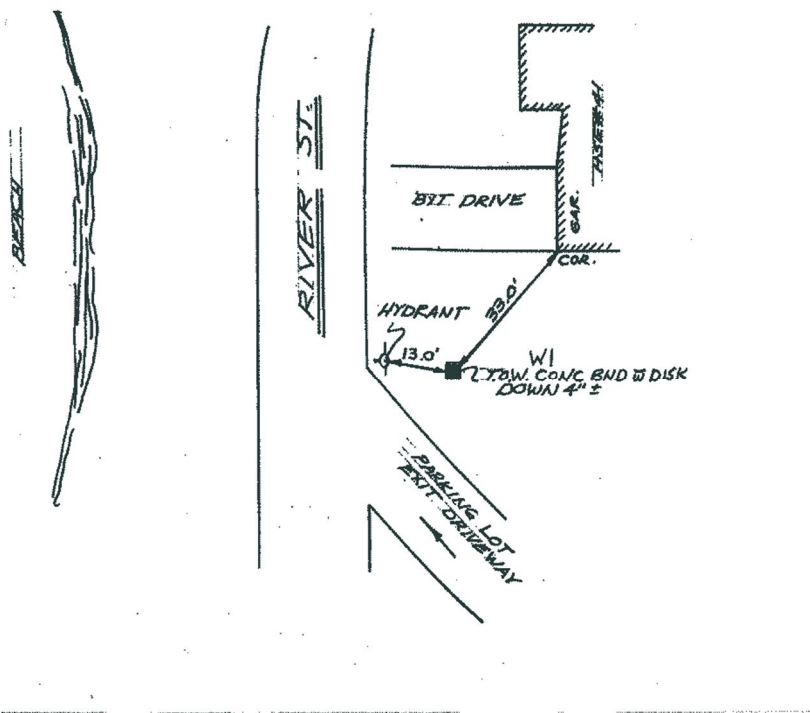


WEYMOUTH BACK RIVER 20, SOUTH WEYMOUTH, ON THE SOUTH SIDE OF COLUMBIAN STREET, ABOUT 2200 FT WEST OF ROUTE 18 (MAIN STREET), 970 FT EAST OF ROUTE 128 BRIDGE (2.70) OVER THE NYNH&H RAILROAD, ON THE SOUTHEAST CORNER OF THE EAST END OF THE SOUTH ABUTMENT OF THE MILL RIVER BRIDGE.

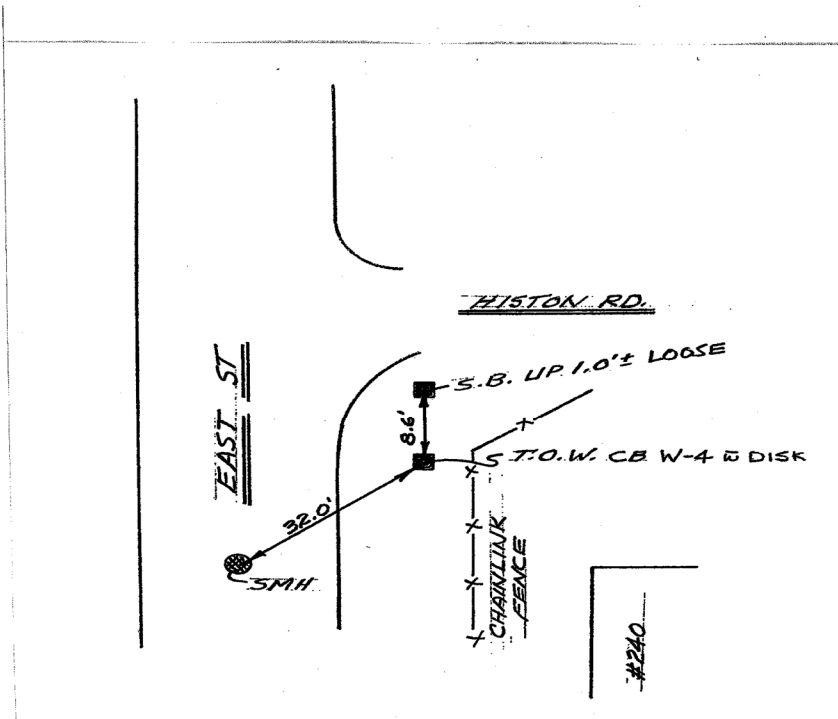
BM WBR20 Square Cut on top of Concrete Headwall.



BM WM1 Disk on top of Concrete Bound.

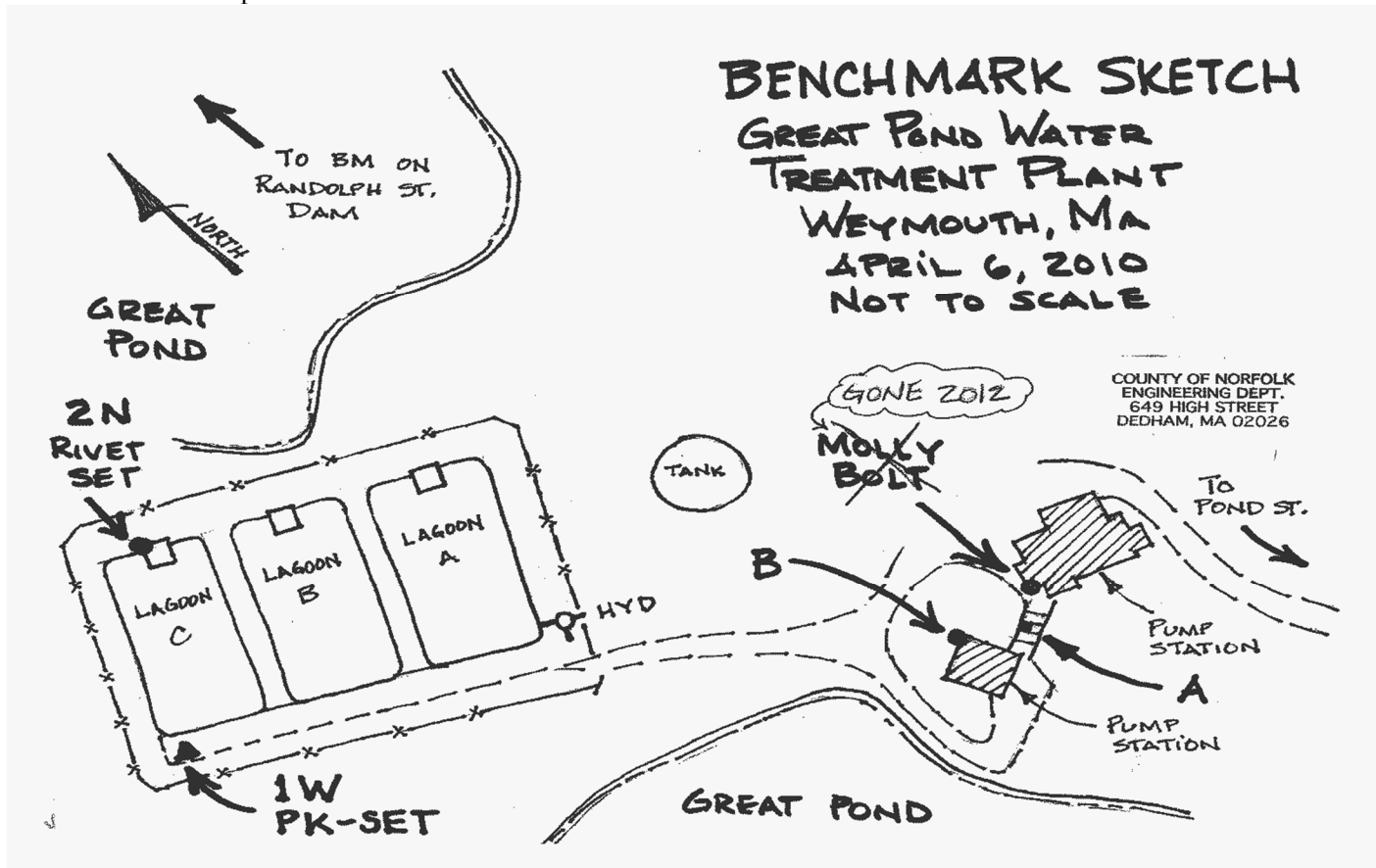
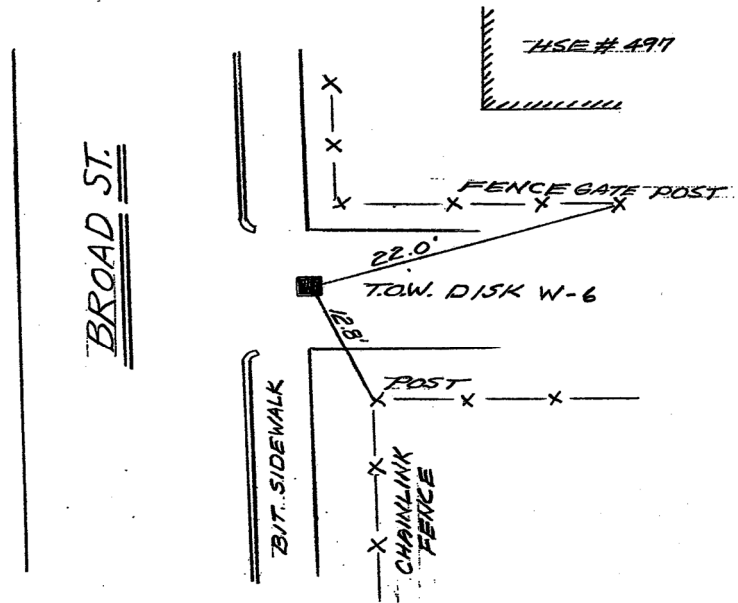


BM W4 Disk on top of Concrete Bound.





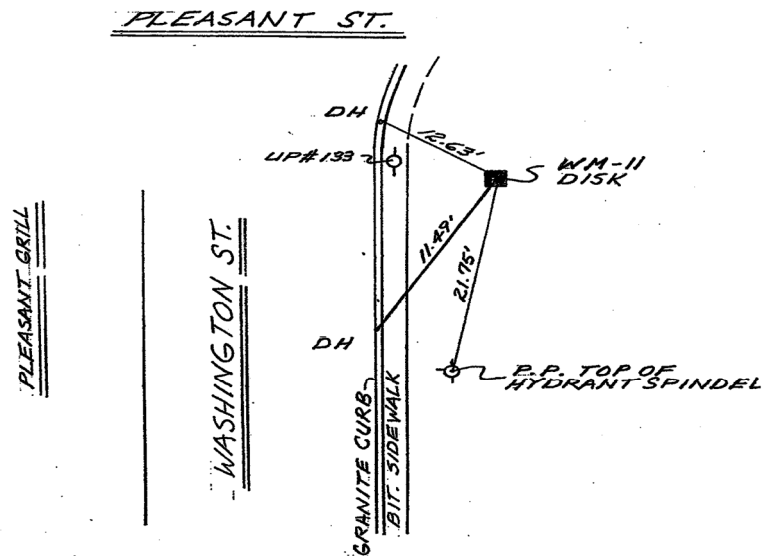
BM W6 Disk on top of Concrete Bound.



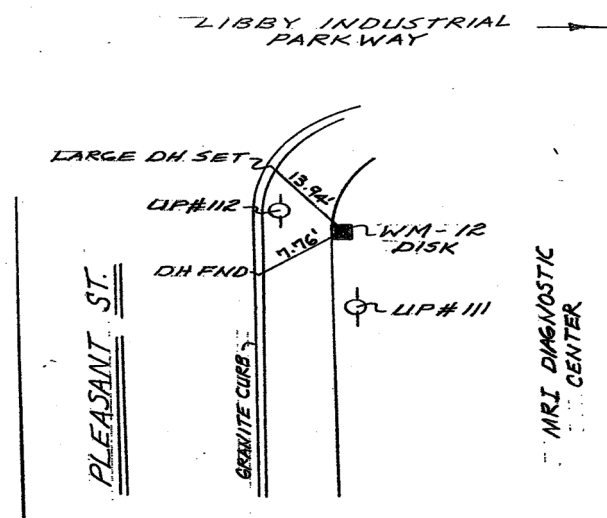
BM 1W PK NAIL BIT. CONC. DWY GREAT POND WATER TREATMENT PLANT.



BM WM11 Disk on top of Concrete Bound under bush.

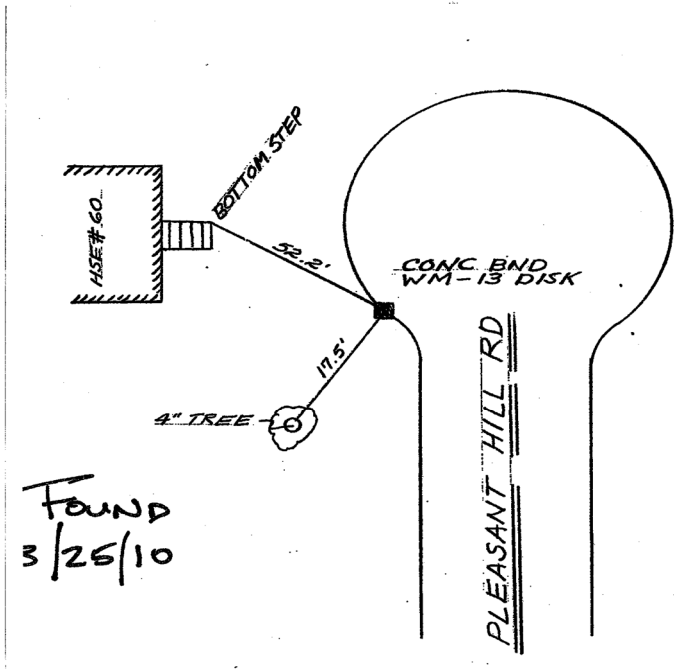


BM WM12 Disk on top of Concrete Bound.

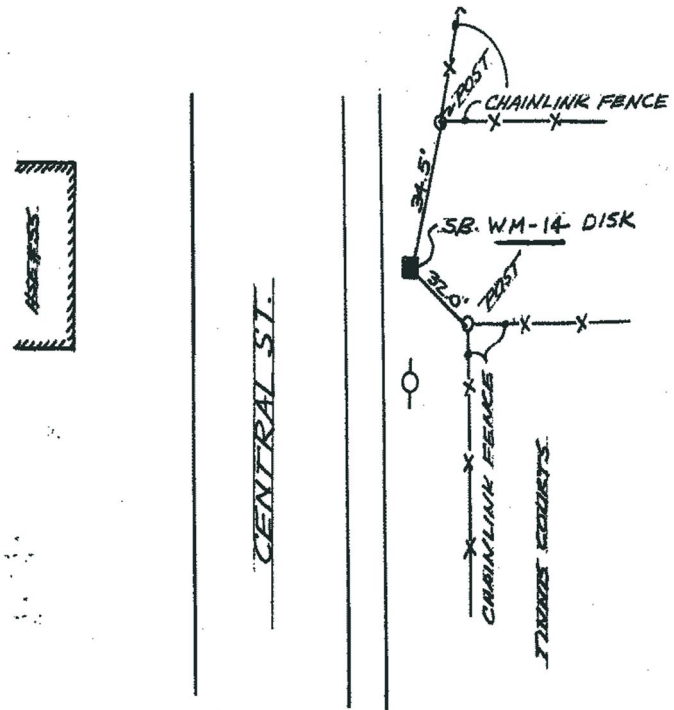


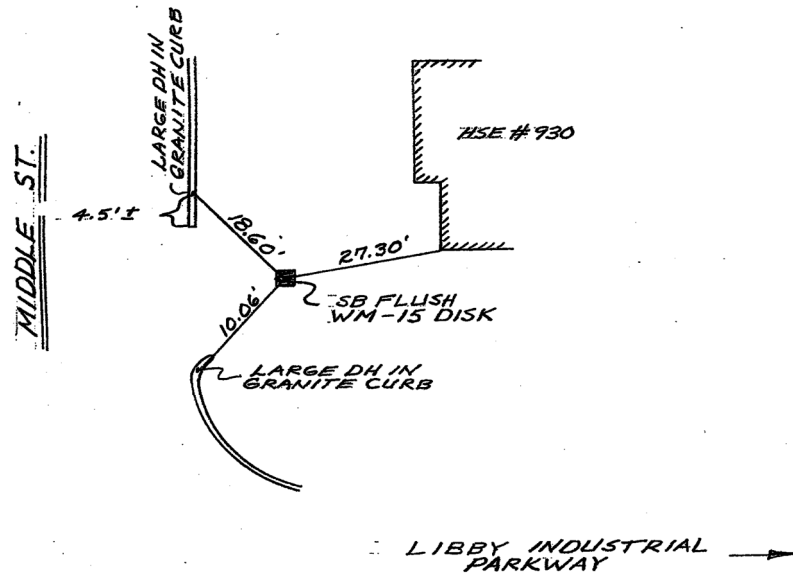


BM WM13 Disk on top of Concrete Bound.

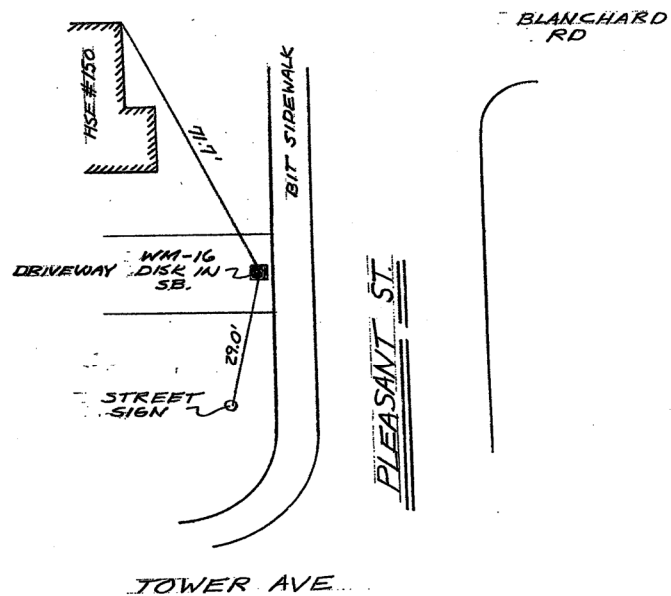


BM WM14 Disk on top of Granite Bound.

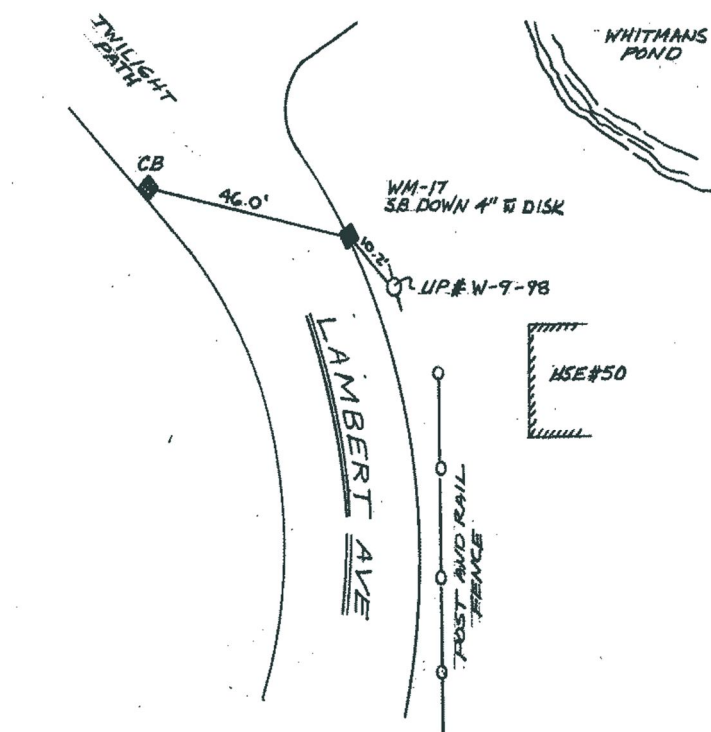




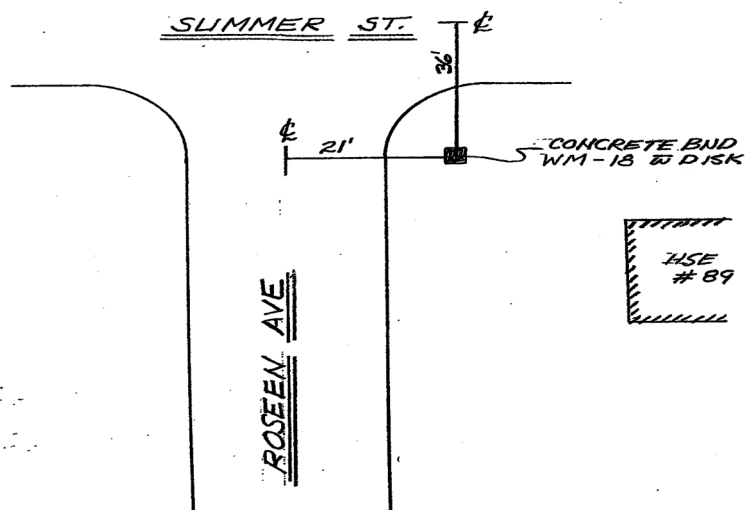
BM WM15 Disk on top of Granite Bound.



BM WM16 Disk on top of Granite Bound.



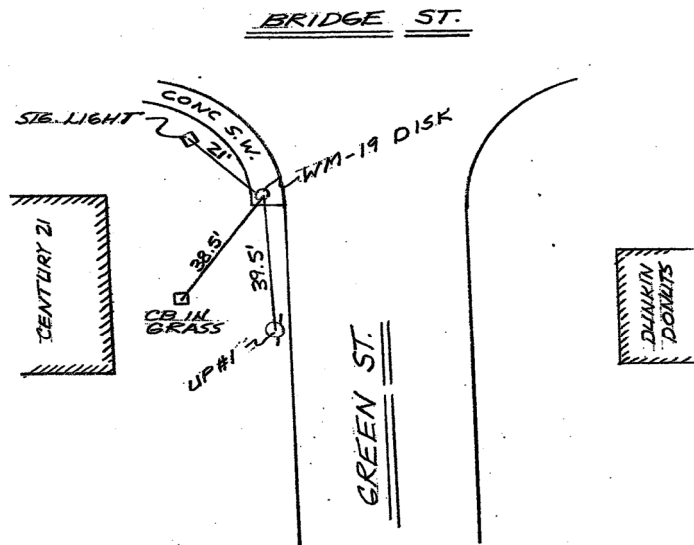
BM WM17 Disk on top of Concrete Bound.



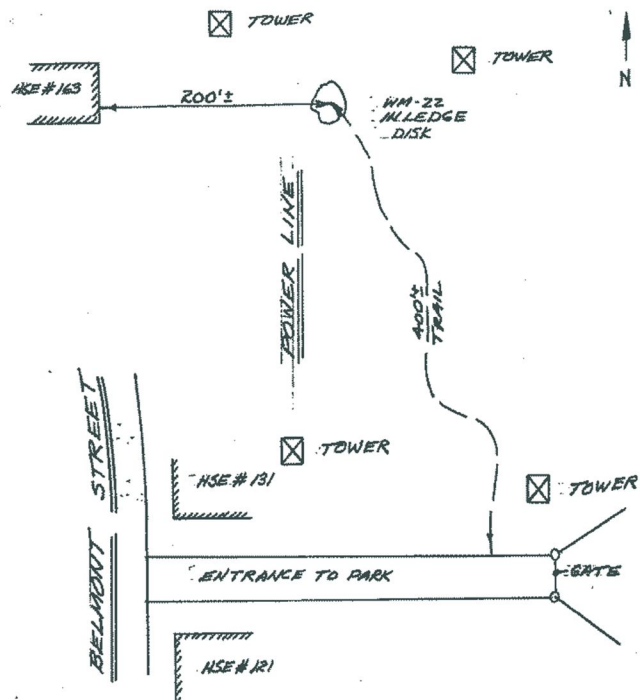
BM WM18 Disk on top of Concrete Bound.



BM WM19 Disk on top of Concrete Sidewalk.

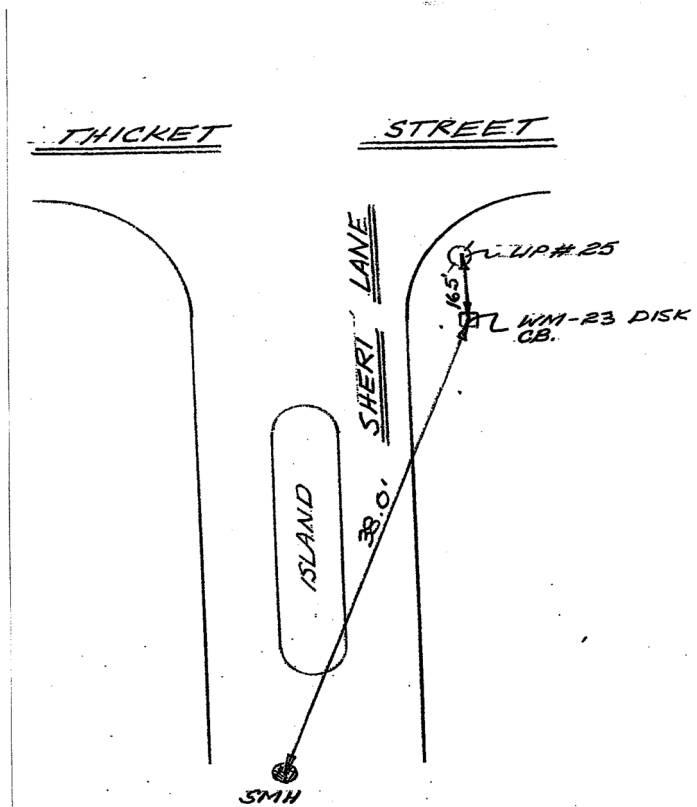


BM WM22 Disk on top of granite Ledge Outcrop.

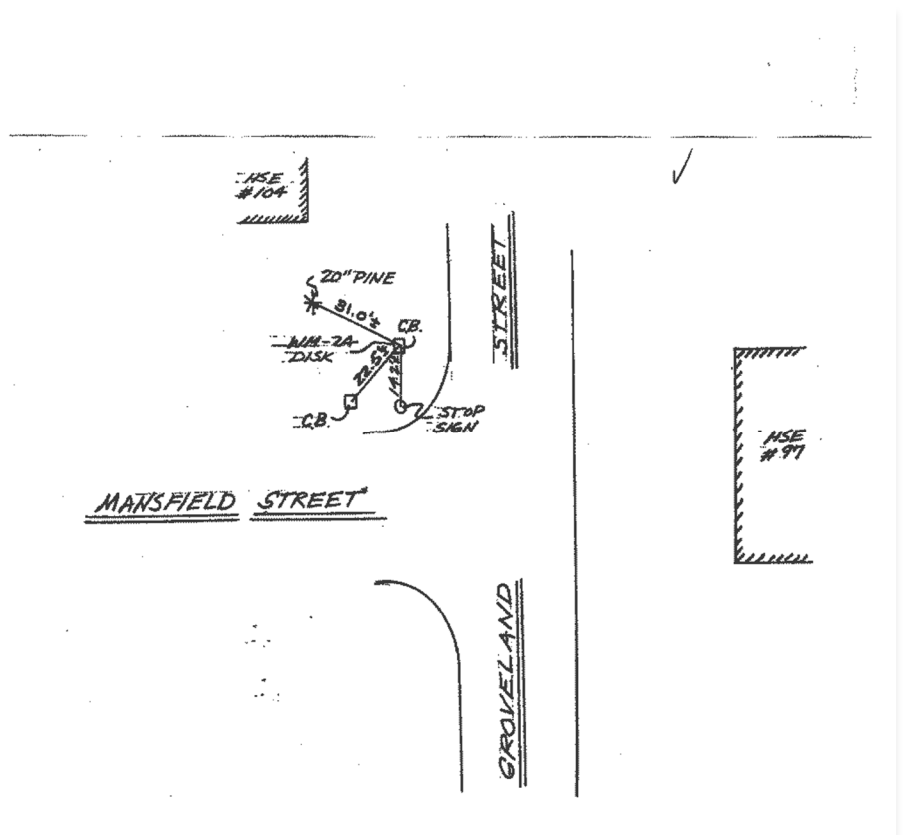




BM WM23 Disk on top of Concrete Bound.

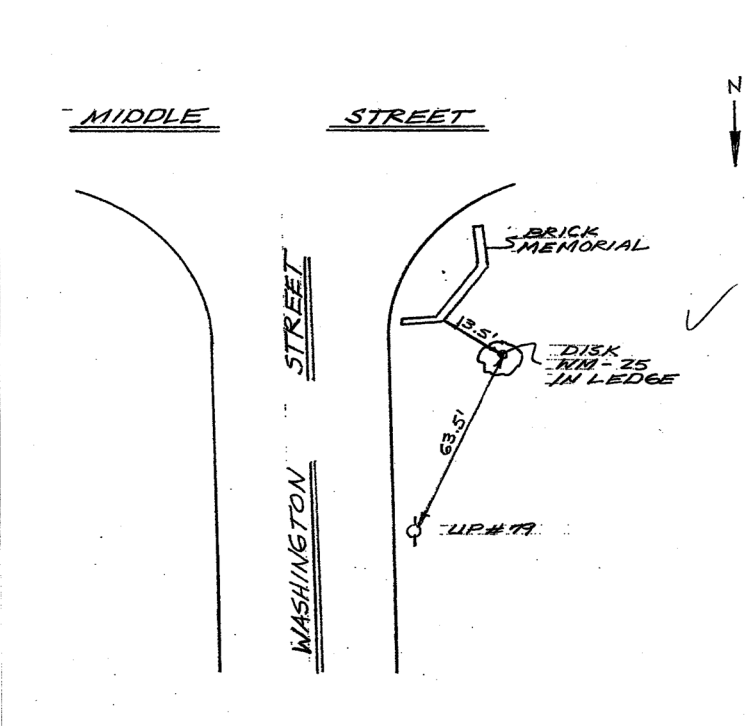


BM WM24 Disk on top of Bound.

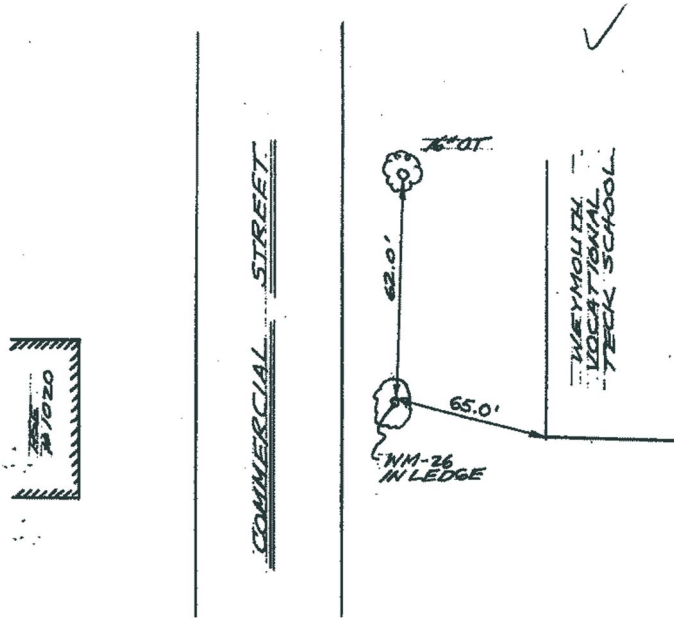




BM WM25 Disk on top of Granite Ledge Outcrop.

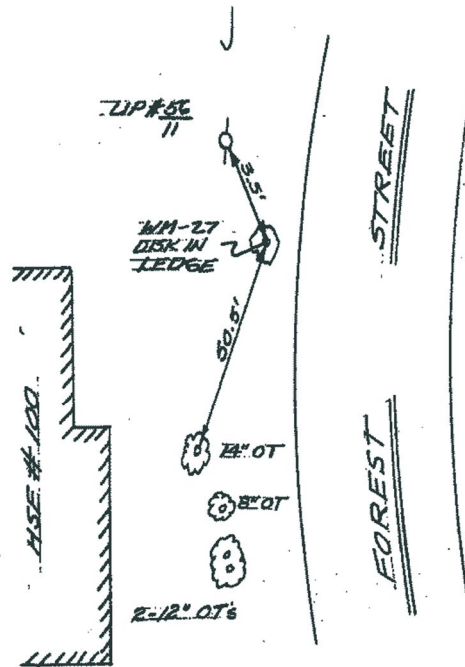


BM WM26 Disk on top of Granite Ledge Outcrop.

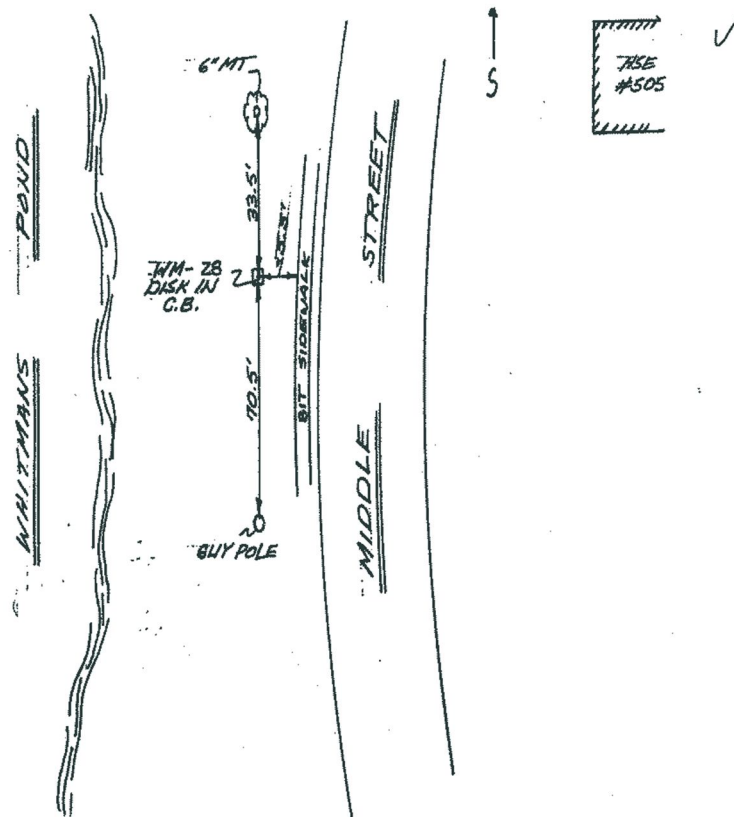


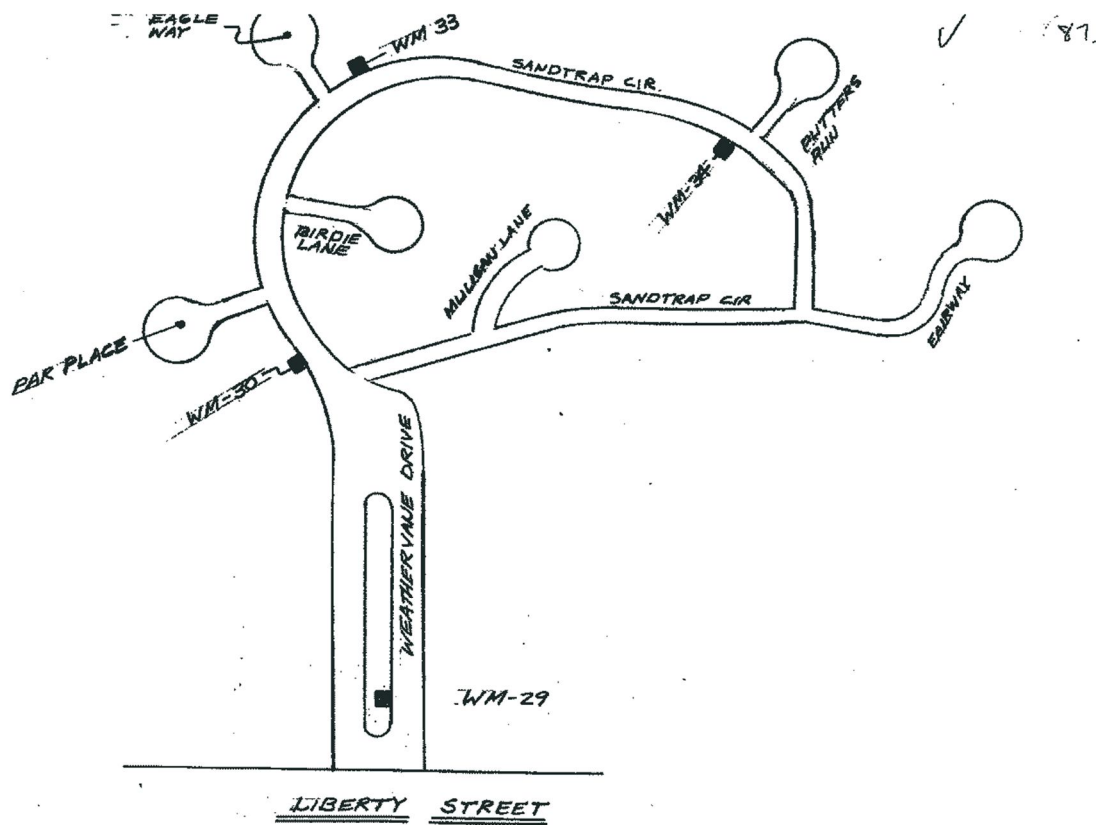


BM WM27 Disk on top of Concrete Bound.

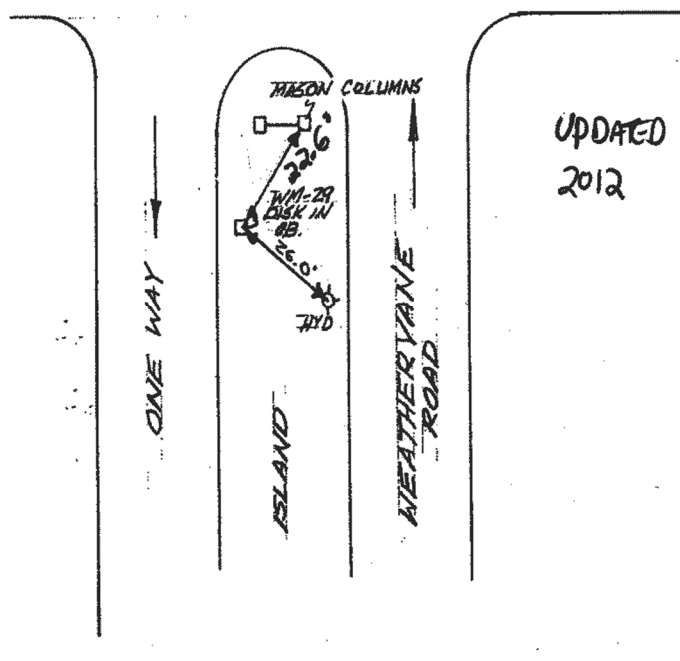


BM WM28 Disk on top of Concrete Bound.





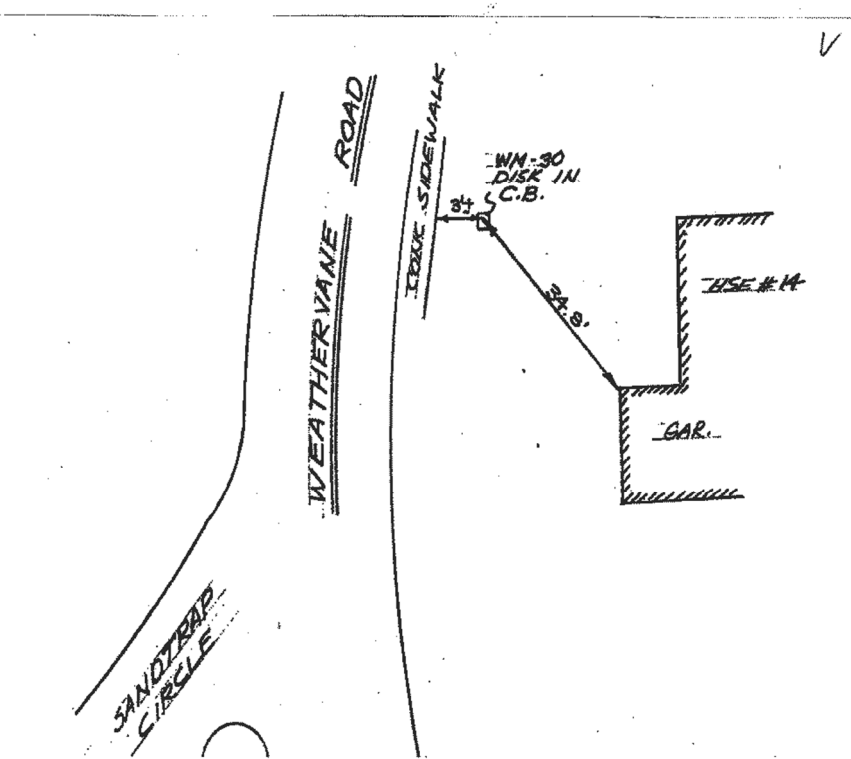
LIBERTY STREET TO UNION ST. →



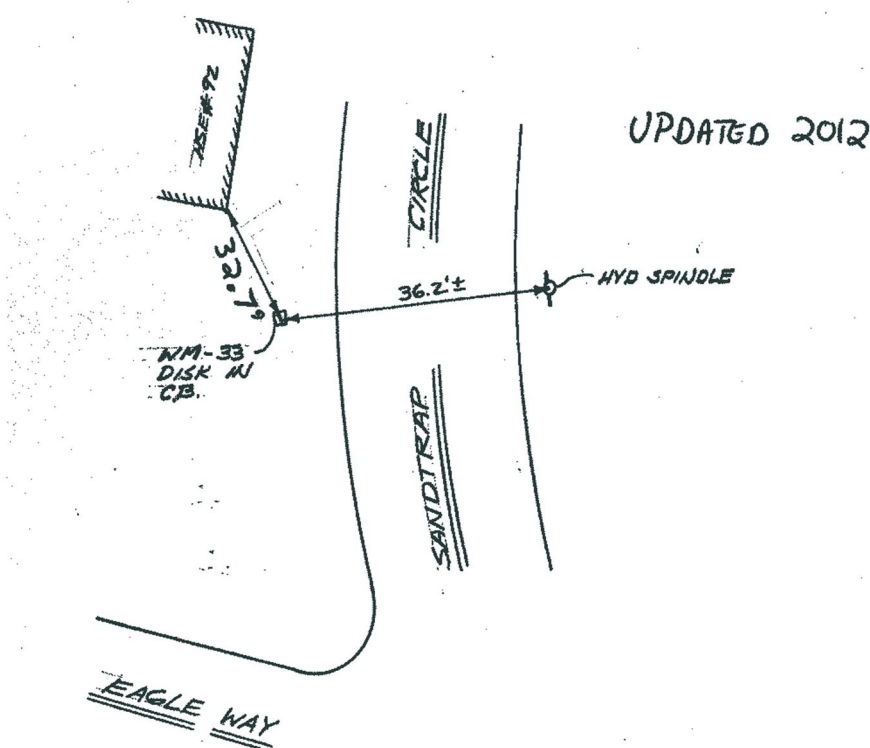
BM WM29 Disk on top of Concrete Bound.



BM WM30 Disk on top of Concrete Bound.

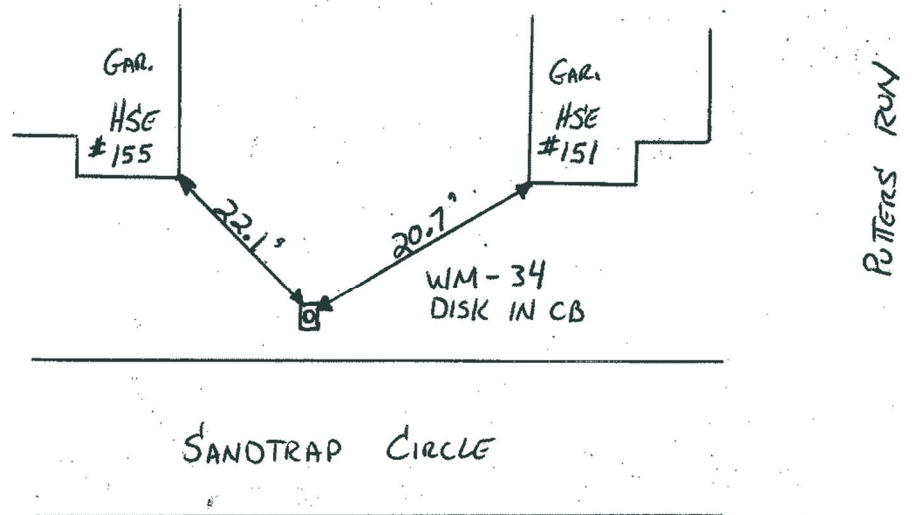


BM WM33 Disk on top of Concrete Bound.

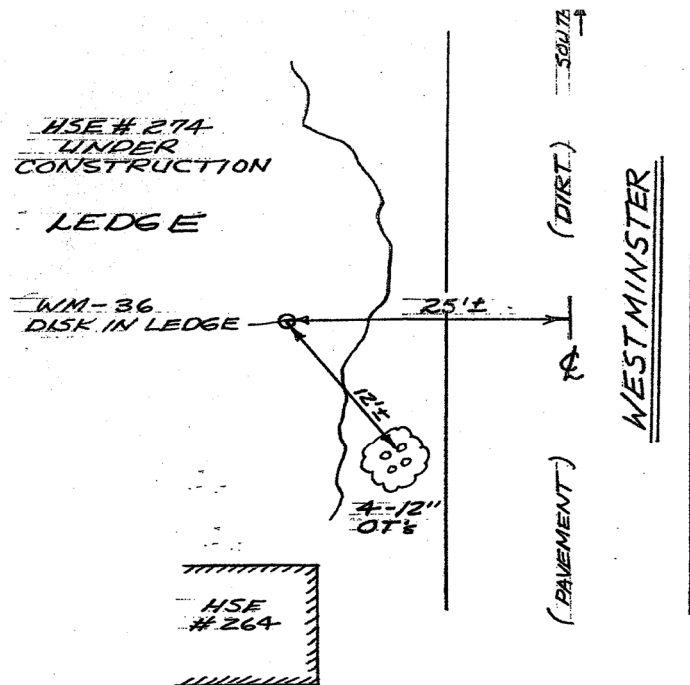




BM WM34 Disk on top of Concrete Bound.



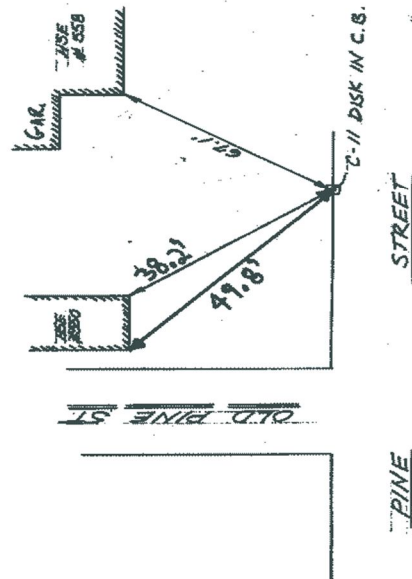
BM WM36 Disk on top of Granite Ledge Outcrop.



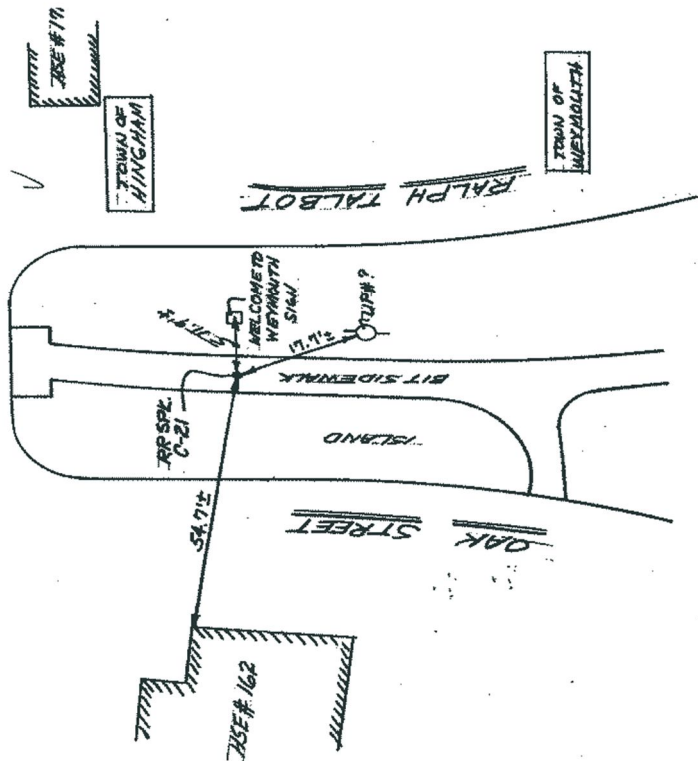


BM C11 Disk on top of Concrete monument

2012
VIRGINIA



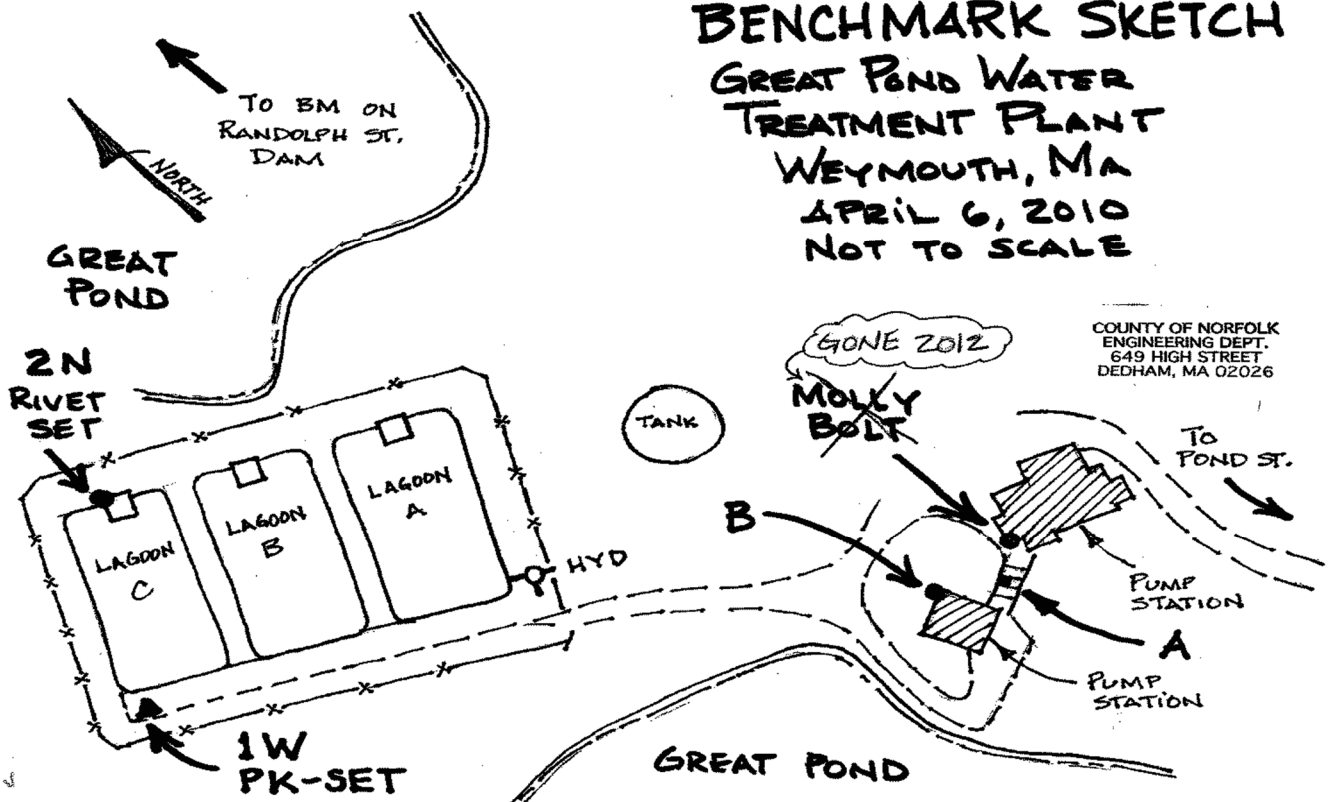
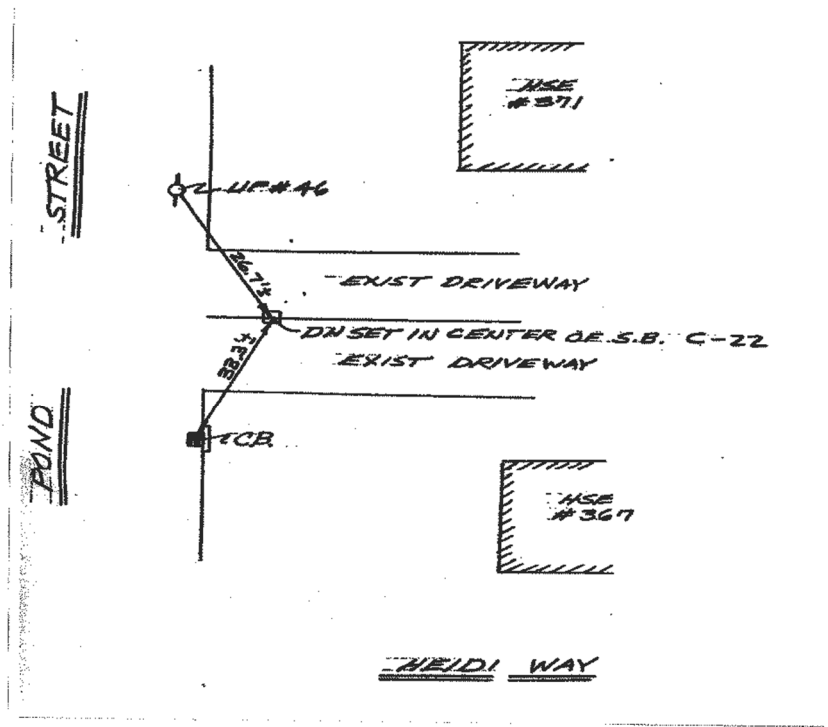
BM C21 Rail Road Spike in Bituminous Concrete Pavement.



8



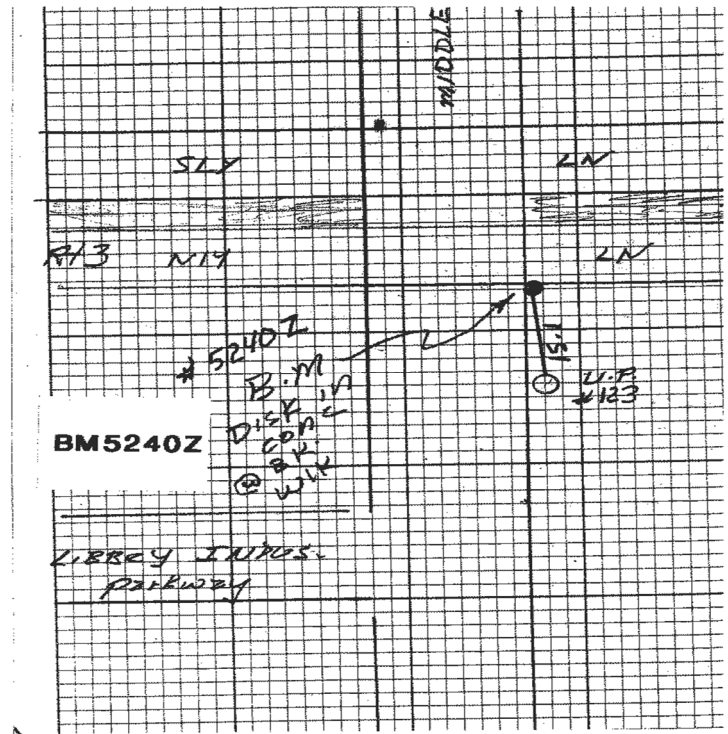
BM C22 Square Cut on top of Granite Bound.



BM 2N RIVET set Conc. Overflow Structure Lagoon "C" @ GREAT POND WATER TREATMENT PLANT.



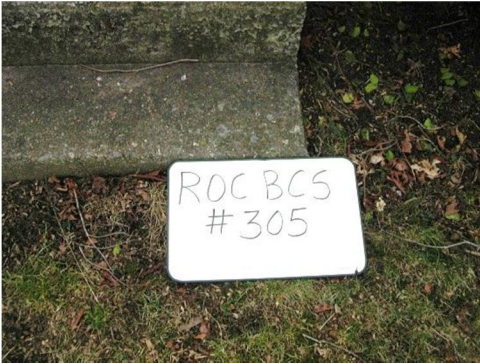
BM 5240Z Disk on top of Concrete.



BM HYD2XCUT @ River St.



BM LOCC PLAT 165 ~ Left Outer Corner Conc. Platform @ HSE.#165 Green St..



BM ROCBBS 305 ~ Right Outer Corner Bottom Conc. Step @ HSE.#305 East St./Unicorn Ave.



BM ROCBBS 972 ~ Right Outer Corner Bottom Conc. Step @ HSE.#972 Commercial St.



BM LOCBS 1217 ~ Left Outer Corner Bottom Conc. Step @ HSE.#1217 Commercial St.



BM ROCBBS 641 ~ Right Outer Corner Bottom Brick Step @ HSE. #641 Commercial St.



BM LOCBCS 668 ~ Left Outer Corner Bottom Conc. Step @ HSE.#668 Commercial St.



BM ROCBGS 716 ~ Right Outer Corner Bottom Granite Step @ HSE. #716 Commercial St.



BM STONE POST ~ Top of Stone Post near BM and RxR crossing @ Commercial St. and Town Line.



BM ROCBCS 410 ~ Right Outer Corner Bottom Conc. Step @ HSE. #410 Commercial St.



BM ROCGPLAT 444 ~ Right Outer Corner granite Platform @ HSE. #444 Commercial.



BM ROCGS 541 ~ Right Outer Corner Granite Step @ HSE. #541 Commercial.



BM ROCBCS 1325 ~ Right Outer Corner Bottom Conc. Step @ HSE. #1325 Pleasant St.



BM ROCBCS 1297 ~ Right Outer Corner Bottom Conc. Step @ HSE. #1297 Pleasant St.



BM LOCBGS 1273 ~ Left Outer Corner Bottom Granite Step @ HSE. #1273 Pleasant St.



BM LOCCPLAT 1189 ~ Left Outer Corner Conc. Platform @ HSE.#1189 Pleasant St.



BM LOCCPL 1126-1128 ~ Left Outer Corner Conc. Platform @ HSE.#1126-1128 Pleasant St.



BM ROCBCS 1080 ~ Right Outer Corner Bottom Conc. Step @ HSE. #1080 Pleasant St.



BM LOCBCS 49 ~ Left Outer Corner Bottom Conc. Step @ HSE. #49 Pleasant St.



BM CHSQRSB ~ Chiseled Square Stone Bound @ Town Line on Washington St.



BM LOCBCS 1060 ~ Left Outer Corner Bottom Conc. Step @ HSE. #1060 Washington St.



BM LOCBCS 989 ~ Left Outer Corner Bottom Conc. Step @ HSE. #989 Washington St.



BM CHSQRBS 844 ~ Chiseled Square Cut Stone Bound @ HSE. #844 Washington St.



BM ROCBBS 777 ~ Right Outer Corner Bottom Brick Step @ HSE. #777 Middle St.



BM ROCBCS 843 ~ Right Outer Corner Bottom Conc. Step @ HSE. #843 Middle St.



BM LOCBCS 930 ~ Left Outer Corner Bottom Conc. Step @ HSE. #930 Middle St.



BM TBM UP 76 ~ SPK in UP # 76 on MAIN ST.



BM ROCCS 91 ~ Right Outer Corner Conc. Step HSE. #91 Park Ave.



BM ROCCPL 731 ~ Right Outer Corner Conc. Platform @ HSE.#731 Pleasant St.



BM ROCBCS 266 ~ Right Outer Corner Bottom Conc. Step HSE. #266 West St.



BM LOCBCS 391 ~ Left Outer Corner Bottom Conc. Step @ HSE. #391 Columbian St.



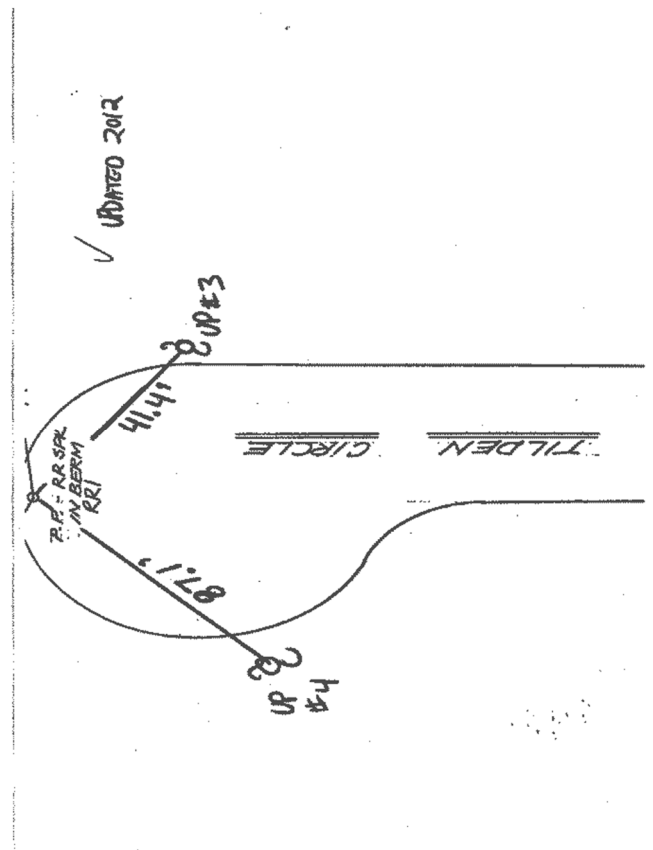
BM RR1 Rail Road Spike in Bituminous Concrete Berm Tilden Circle.

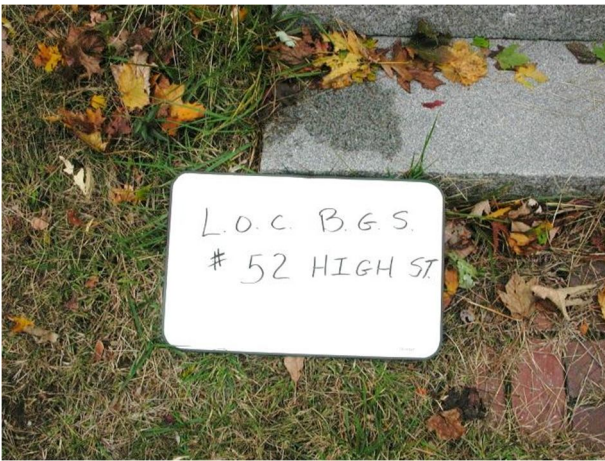


BM ROC2CS 135 ~ Right Outer Corner 2nd Conc. Step @ HSE. #135 Liberty St.



BM ROCBCS 8 ~ Right Outer Corner Bottom Conc. Step @ HSE. #8 Mansfield St.





BM LOCBGS 52 ~ Left Outer Corner Bottom Granite Step @ HSE. #52 High St.



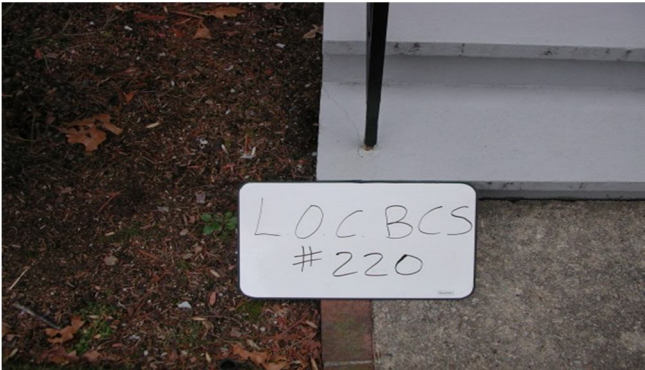
BM ROCBCS 131S ~ Right Outer Corner Bottom Conc. Step @ HSE. #131 Summer St.



BM ROCBCS 131B ~ Right Outer Corner Bottom Conc. Step @ HSE. #131 Belmont St.



BM LOCBGS 1273 ~ Left Outer Corner Bottom Granite Step @ HSE. #1273 Pleasant St.



BM LOCBCS 220 ~ Left Outer Corner Bottom Conc. Step @ HSE. #220 Forest St.



BM LOCBCS 5A ~ Left Outer Corner Bottom Conc. Step @ HSE. #5A Webster St.



BM LOCBCS 70 ~ Left Outer Corner Bottom Conc. Step @ HSE. #70 Thickett St.



BM LOCBCS 45 ~ Left Outer Corner Bottom Conc. Step @ HSE. #45.



BM ROC3GS 20 ~ Right Outer Corner 3rd Granite Step @ HSE. #20 Iron Hill St.



BM RxR SPK UP 13 ~ RailRoad Spike in Utility Pole #13.

Summary of Files Used and Option Settings
=====

Project Folder and Data Files

Project Name 2011-WEYMOUTH-LEVELS
Project Folder Z:\STARNET PROJECTS\WEYMOUTH
Data File List 1. WEYMOUTH 2012 LEVELS NAVD88.DAT

Project Option Settings

STAR*NET Run Mode : Adjust with Error Propagation
Type of Adjustment : Lev
Project Units : FeetUS
Input/Output Coordinate Order : North-East
Create Coordinate File : Yes

Instrument Standard Error Settings

Project Default Instrument
Differential Levels : 0.014000 FeetUS / Mile

Adjustment Statistical Summary

NAVD88

```

Number of Stations      =    175
Number of Observations =    228
Number of Unknowns     =    167
Number of Redundant Obs =     61
  
```

Observation	Count	Sum Squares of StdRes	Error Factor
Coordinates	3	3.182	1.991
Level Data	225	78.386	1.141
Total	228	81.568	1.156

The Chi-Square Test at 5.00% Level Passed
Lower/Upper Bounds (0.823/1.177)

Adjusted Station Information

NAVD88

Coordinate Changes from Entered Provisionals (FeetUS)

Station	dZ
BM8073	-0.000000
BM8074	-0.011116
BM9033	-0.000000
BM93F	-0.000000
BMWBR20	-0.016795
BM9016	-0.000000
BM9018	-0.000000
BM9024	-0.000000
BM9025	-0.000000
BMF42	-0.049334
BMJ42	-0.071387
BM85AR	-0.000000
BM85AQ	0.011142
BM85AD	-0.066348

Adjusted Elevations and Error Propagation (FeetUS)

Station	Elev	StdDev	95	Description
BM8073	160.744000	0.000000	0.000001	
BM8074	154.908884	0.004079	0.007995	
BM9033	41.348000	0.000000	0.000001	
BM93F	180.626000	0.000000	0.000001	
BMWBR20	138.778205	0.008216	0.016103	
BM9016	146.958000	0.000000	0.000001	
BM9018	170.157000	0.000000	0.000001	
BM9024	38.992000	0.000000	0.000001	
BM9025	21.486000	0.000000	0.000001	
BMF42	11.695666	0.014737	0.028884	
BMJ42	9.750613	0.020129	0.039451	
BM85AR	29.419000	0.000000	0.000001	
BM85AQ	43.291142	0.004057	0.007952	
BM85AD	14.385652	0.016911	0.033145	
BM2	10.162666	0.020075	0.039347	
BM100	14.911349	0.007620	0.014934	
BM101	9.871349	0.008984	0.017608	
BM102	42.956950	0.007405	0.014514	
BM103	14.165706	0.010226	0.020043	
BM104	9.440716	0.012608	0.024711	
BM105	7.733954	0.007520	0.014739	
BM106	37.190703	0.008367	0.016400	
BM107	10.285820	0.008026	0.015731	
BM108	30.779868	0.008494	0.016647	
BM109	43.909914	0.008688	0.017029	
BM110	110.267574	0.010094	0.019784	
BM111	45.774403	0.013464	0.026389	
BM112	66.817830	0.011628	0.022790	
BM113	96.655634	0.010385	0.020354	
BM114	76.541377	0.010537	0.020651	
BM115	26.204773	0.009547	0.018712	
BM116	20.120591	0.008105	0.015886	
BM118	90.153736	0.010285	0.020158	
BM119	107.165382	0.009380	0.018385	
BM120	102.048328	0.010079	0.019755	
BM121	88.224865	0.010776	0.021121	
BM122	100.377362	0.011441	0.022424	
BM123	109.114434	0.013927	0.027297	
BM124	157.057105	0.008592	0.016839	
BM125	149.881146	0.008013	0.015706	
BM126	130.929482	0.010353	0.020292	
BM127	114.088070	0.012054	0.023626	
BM128	137.869302	0.009109	0.017852	
BM129	149.477746	0.009023	0.017684	
BM130	149.434898	0.005056	0.009909	
BM132	138.888075	0.015770	0.030908	
BM133	151.088077	0.015032	0.029461	

BM134	110.448080	0.012259	0.024028
BM135	117.799478	0.010945	0.021452
BM136	162.192952	0.016989	0.033298
BM137	181.369162	0.015515	0.030409
BM138	62.531746	0.014468	0.028357
BM139	119.262488	0.012157	0.023827
BM140	161.471549	0.010327	0.020240
BM141	149.157519	0.008213	0.016096
BM142	169.753229	0.007748	0.015185
BM143	180.787780	0.009409	0.018441
BM144	157.998986	0.006469	0.012680
BM145	104.212782	0.010862	0.021289
BM146	98.522851	0.010860	0.021286
BM147	127.290652	0.010495	0.020570
BM148	124.900228	0.010407	0.020398
BM150	32.308330	0.002504	0.004907
BM151	100.516424	0.010493	0.020566
BM152	98.226160	0.011000	0.021560
BMG1	170.948283	0.004931	0.009665
BMG4	147.941318	0.006244	0.012237
BMG9	114.065296	0.012762	0.025014
BMG10	86.923037	0.008570	0.016797
BMG12	33.261208	0.006110	0.011976
BMG13	35.861496	0.006714	0.013159
BMG14	23.815748	0.009420	0.018463
BMG15	78.734452	0.010156	0.019905
BMG16	104.676441	0.010439	0.020461
BMG17	42.472283	0.012502	0.024504
BMW4	81.981802	0.013414	0.026292
BMW6	84.860951	0.010903	0.021370
BM29	160.919249	0.017178	0.033668
BM30	155.400563	0.016879	0.033082
BM33	145.732891	0.016035	0.031428
BM34	140.221844	0.016467	0.032275
BMHYD1	14.309540	0.006585	0.012907
BMHYD2XCUT	15.829605	0.012503	0.024505
BM156	32.989400	0.008675	0.017002
BMWM1	9.565706	0.008841	0.017328
BMWM19	16.038459	0.005506	0.010793
LOCCPL165	20.148937	0.008722	0.017095
ROCBBS305	62.293087	0.012873	0.025230
ROCBBS972	80.188385	0.014059	0.027555
BMWM26	70.757261	0.014038	0.027514
LOCBBS1217	54.133520	0.013124	0.025723
ROCBBS641	46.103085	0.009692	0.018997
LOCBBS668	49.942329	0.009610	0.018835
ROCBBS716	75.431361	0.009367	0.018360
BM117GONE	20.611991	0.009487	0.018593
BMSTONEPOST	21.770634	0.008168	0.016008
ROCBBS410	59.232560	0.009818	0.019243
ROCGPLAT444	66.373008	0.009936	0.019475
HYDSPINDLE	50.733579	0.009960	0.019522
ROCGS541	42.774315	0.009782	0.019172
BMWM28	72.800080	0.011601	0.022738
BMWM25	104.972765	0.009956	0.019514
ROCBBS1325	28.812416	0.012981	0.025443
ROCBBS1297	32.622501	0.013272	0.026012
LOCGS1273	35.522565	0.013191	0.025853
LOCCPL1189	54.132934	0.013531	0.026520
LOCCPL1126	77.373207	0.013629	0.026713
ROCBBS1080	85.523428	0.013616	0.026686
LOCBBS49	82.974254	0.012803	0.025094
BMWM11	82.984434	0.012453	0.024407
BMSQRSB123	109.094434	0.013972	0.027384
LOCBBSA	99.693871	0.012654	0.024802
LOCBBSB	73.663613	0.012422	0.024348
BMWBR10	71.273396	0.012060	0.023637
SQRSB844	114.653053	0.011140	0.021833
SQRNCLO	101.972440	0.010050	0.019698
ROCBBS777	100.391711	0.010672	0.020916
ROCBBS843	99.290928	0.011040	0.021638

BMWM15	122.439843	0.011088	0.021731
LOCBCS930	124.329723	0.011061	0.021679
TBM76	157.529133	0.008675	0.017002
ROCCS91	138.700294	0.009756	0.019121
BMWM12	106.136270	0.013122	0.025718
ROCCPL731	96.505265	0.012977	0.025434
ROCBC3S266	154.500600	0.007734	0.015158
LOCBCS391	147.433958	0.007600	0.014896
BMC21	152.338073	0.015051	0.029500
TBM131	132.698074	0.015666	0.030704
BMC11	127.498075	0.015761	0.030892
BMRR1	115.978076	0.015650	0.030673
BM3061	150.518079	0.013754	0.026957
ROCB2CS135	137.047863	0.017364	0.034032
ROCBCS8	139.136861	0.017418	0.034138
BMWM24	137.515439	0.017380	0.034065
BM68J17A	194.866750	0.013892	0.027228
BMWM14	170.564797	0.012023	0.023565
BMH13	189.773231	0.009967	0.019535
BMWM16	181.612547	0.010487	0.020555
BM3060	128.180625	0.011108	0.021772
BMWBR3	26.704299	0.013215	0.025901
LOCBGS52	39.125191	0.014416	0.028254
ROCBCS31	88.978423	0.009036	0.017711
BMWM18	101.579975	0.010634	0.020843
ROCBCS131	137.468639	0.012176	0.023864
BMWM22	142.629471	0.011794	0.023115
BMWM36	120.862934	0.017163	0.033638
BMWM17	71.422934	0.018787	0.036822
LOCBGS1273	35.502934	0.021065	0.041287
LOCBCS220	162.464970	0.008566	0.016788
BMWM27	195.497991	0.009785	0.019178
BMWBR22	161.636412	0.009861	0.019327
BM68J11	158.703273	0.009462	0.018546
BMC22	177.258015	0.008705	0.017062
LOCBCS6A	159.231145	0.007857	0.015399
BMWM23	167.248152	0.012265	0.024038
BMWM13	181.533209	0.014155	0.027743
LOCBCS70	176.993192	0.011420	0.022384
BMFULTON	180.804401	0.012595	0.024685
BM1W	172.504996	0.012849	0.025183
BM68J12	172.314776	0.013375	0.026214
BMRIVLAGOONC	172.905095	0.012812	0.025112
BM13AF	156.356000	0.002510	0.004919
LOCBCS45	99.973074	0.010486	0.020552
SQRNCLO149	108.253113	0.010360	0.020305
BM150MHB	104.448965	0.009940	0.019483
BMWBR6B	65.086820	0.013569	0.026594
BMWBR6A	64.376530	0.013569	0.026595
ROC3S20	45.035283	0.013510	0.026479
BM93A	101.870105	0.009318	0.018262
BM93C	163.122310	0.009379	0.018382
BMEEMERY1934	154.846433	0.011444	0.022429
BM68J18A	25.844111	0.005004	0.009809
RRSPKUP13	25.143837	0.005003	0.009806
BM5240Z	123.499843	0.011455	0.022451
BM85AE	32.604248	0.017529	0.034355

Adjusted Observations and Residuals

Adjusted Coordinate Observations (FeetUS)
(Stations with Partially Fixed Coordinate Components)

Station	Component	Adj Coordinate	Residual	StdErr	StdRes	File:Line
BM8074	Elev	154.908884	-0.011116	0.010000	1.1	1:11
BMWBR20	Elev	138.778205	-0.016795	0.020000	0.8	1:14
BM85AQ	Elev	43.291142	0.011142	0.010000	1.1	1:22

Adjusted Differential Level Observations (FeetUS)

From	To	Elev Diff	Residual	StdErr	StdRes	File:Line
BM85AQ	BM85AR	-13.872142	0.017858	0.009310	1.9	1:231
BM85AQ	BM9033	-1.943142	-0.003142	0.009358	0.3	1:232
BM9033	BM85AQ	1.943142	0.003142	0.009364	0.3	1:233
BM85AR	BM85AQ	13.872142	0.002142	0.009226	0.2	1:234
BM85AQ	BMG12	-10.029934	0.000066	0.005371	0.0	1:235
BMG12	BM100	-18.349859	0.000141	0.007855	0.0	1:236
BM100	BM101	-5.040000	0.000000	0.006724	0.0	1:237
BM101	BM100	5.040000	-0.000000	0.006738	0.0	1:238
BM100	BMG13	20.950146	0.000146	0.008002	0.0	1:239
BMG13	BMHYD1	-21.551956	-0.001956	0.006539	0.3	1:240
BMHYD1	BM9033	27.038460	0.008460	0.009626	0.9	1:241
BMG13	BM9033	5.486504	0.006504	0.011637	0.6	1:242
BMHYD1	BM102	28.647410	-0.002590	0.004347	0.6	1:243
BM102	BM156	-9.967550	-0.007550	0.007422	1.0	1:244
BM156	BMWM1	-23.423694	-0.003694	0.005191	0.7	1:245
BMWM1	BM105	-1.831753	-0.011753	0.009260	1.3	1:246
BM105	BMWM19	8.304506	-0.005494	0.007354	0.7	1:247
BMWM19	BM9033	25.309541	-0.010459	0.006162	1.7	1:248
BMWM1	BM103	4.600000	0.000000	0.007263	0.0	1:249
BM103	BM104	-4.724990	-0.004990	0.010418	0.5	1:250
BM104	BMHYD2XCUT	6.388889	-0.001111	0.004916	0.2	1:251
BMHYD2XCUT	BM103	-1.663899	-0.003899	0.009210	0.4	1:252
BM103	BMWM1	-4.600000	0.000000	0.007273	0.0	1:253
BM9033	BM107	-31.062180	-0.012180	0.009474	1.3	1:254
BM107	BM108	20.494047	-0.015953	0.010843	1.5	1:255
BM108	BMG14	-6.964120	-0.014120	0.010102	1.4	1:256
BMG14	LOCCPL165	-3.666811	-0.006811	0.007016	1.0	1:257
LOCCPL165	BMWM19	-4.110478	-0.010478	0.008702	1.2	1:258
BM108	BM109	13.130046	0.000046	0.005725	0.0	1:259
BM109	BM110	66.357661	-0.002339	0.007314	0.3	1:260
BM110	BMG16	-5.591133	-0.001133	0.005090	0.2	1:261
BMG16	ROCBGS305	-42.383354	-0.003354	0.009449	0.4	1:262
ROCBGS305	BMW4	19.688715	-0.001285	0.005847	0.2	1:263
BMW4	ROCBGS972	-1.793417	-0.003417	0.009537	0.4	1:264
ROCBGS972	BMWM26	-9.431124	-0.001124	0.005470	0.2	1:265
BMWM26	BM111	-24.982858	-0.002858	0.008721	0.3	1:266
BM111	LOCBGS1217	8.359117	-0.000883	0.004847	0.2	1:267
LOCBGS1217	BMG17	-11.661237	-0.001237	0.005738	0.2	1:268
BMG17	BM112	24.345547	-0.004453	0.009847	0.5	1:269
BM112	BM113	29.837804	-0.002196	0.006915	0.3	1:270
BM113	BMW6	-11.794683	-0.004683	0.007580	0.6	1:271
BMW6	BMG15	-6.126498	-0.006498	0.008930	0.7	1:272
BMG15	BM114	-2.193076	-0.003076	0.006517	0.5	1:273
BM114	BM115	-50.336604	-0.006604	0.009548	0.7	1:274
BM115	ROCBBS641	19.898312	-0.001688	0.006031	0.3	1:275
ROCBBS641	LOCBGS668	3.839244	-0.000756	0.004037	0.2	1:276
LOCBGS668	ROCBGS716	25.489032	-0.000968	0.004568	0.2	1:277
ROCBGS716	BM109	-31.521447	-0.001447	0.005584	0.3	1:278
BM109	BM108	-13.130046	-0.000046	0.006025	0.0	1:279
BM105	BM106	29.456749	-0.003251	0.009574	0.3	1:280
BM106	BMWM19	-21.152244	-0.002244	0.007953	0.3	1:281
BMG15	BM118	11.419284	-0.000716	0.008890	0.1	1:282
BM118	BMG10	-3.230699	-0.000699	0.008779	0.1	1:283
BMG10	BM117GONE	-66.311046	-0.001046	0.008244	0.1	1:284
BM117GONE	BM116	-0.491400	-0.001400	0.009539	0.1	1:285
BM116	BMSTONEPOST	1.650043	0.000043	0.001278	0.0	1:286
BMSTONEPOST	ROCBGS410	37.461927	0.001927	0.008603	0.2	1:287

ROBCS410	ROCGPLAT444	7.140447	0.000447	0.004146	0.1	1:288
ROCGPLAT444	HYDSPINDLE	-15.639429	0.000571	0.004684	0.1	1:289
HYDSPINDLE	ROCGS541	-7.959264	0.000736	0.005318	0.1	1:290
ROCGS541	BM115	-16.569542	0.000458	0.004195	0.1	1:291
BM113	BM122	3.721727	0.001727	0.007663	0.2	1:292
BM122	BMWM28	-27.577281	0.002719	0.009614	0.3	1:293
BMWM28	BMWM25	32.172684	0.002684	0.009552	0.3	1:294
BMWM25	BM121	-16.747899	0.002101	0.007188	0.3	1:295
BM121	BM120	13.823463	0.003463	0.009230	0.4	1:296
BM120	BM119	5.117054	0.007054	0.008990	0.8	1:297
BM119	BMG10	-20.242345	-0.002345	0.007685	0.3	1:298
BMG17	ROBCS1325	-13.659866	0.000134	0.007369	0.0	1:299
ROBCS1325	ROBCS1297	3.810085	0.000085	0.004506	0.0	1:300
ROBCS1297	LOCBS1273	2.900064	0.000064	0.003925	0.0	1:301
ROBCS1325	LOCBS1273	6.710149	0.000149	0.005976	0.0	1:302
LOCBS1273	LOCCPL1189	18.610369	0.000369	0.006644	0.1	1:303
LOCCPL1189	LOCCPL1126	23.240273	0.000273	0.005719	0.0	1:304
LOCCPL1126	ROBCS1080	8.150221	0.000221	0.005141	0.0	1:305
ROBCS1080	LOCBCS49	-2.549174	0.000826	0.009948	0.1	1:306
LOCBCS49	BMWM11	0.010179	0.000179	0.004636	0.0	1:307
BMWM11	BM123	26.130000	-0.000000	0.008948	0.0	1:308
BM123	BMSQRSB123	-0.020000	0.000000	0.001577	0.0	1:309
BMSQRSB123	BM123	0.020000	-0.000000	0.001577	0.0	1:310
BM123	BMWM11	-26.130000	0.000000	0.008698	0.0	1:311
BMWM11	LOCBCSA	16.709438	-0.000562	0.008865	0.1	1:312
LOCBCSA	LOCBCSB	-26.030258	-0.000258	0.006007	0.0	1:313
LOCBCSB	BMWBR10	-2.390218	-0.000218	0.005514	0.0	1:314
BMWBR10	SQRSB844	43.379657	-0.000343	0.006920	0.0	1:315
SQRSB844	BMWM25	-9.680288	-0.000288	0.006349	0.0	1:316
BMWM25	SQRNCLO	-3.000325	-0.000325	0.004204	0.1	1:317
SQRNCLO	ROBCS777	-1.580728	-0.000728	0.005500	0.1	1:318
ROBCS777	ROBCS843	-1.100783	-0.000783	0.005702	0.1	1:319
ROBCS843	BMWM15	23.148915	-0.001085	0.006713	0.2	1:320
BMWM15	LOCBCS930	1.889880	-0.000120	0.002230	0.1	1:321
LOCBCS930	BM124	32.727381	-0.002619	0.010429	0.3	1:322
BM124	TBM76	0.472029	0.012029	0.009364	1.3	1:323
TBM76	BM125	-7.647988	0.002012	0.006255	0.3	1:324
BM125	ROCCS91	-11.180851	-0.000851	0.007400	0.1	1:325
ROCCS91	BM126	-7.770813	-0.000813	0.007230	0.1	1:326
BM126	BM127	-16.841412	-0.001412	0.009548	0.1	1:327
BM127	BMWM12	-7.951799	-0.001799	0.010772	0.2	1:328
BMWM12	ROCCPL731	-9.631005	-0.001005	0.008051	0.1	1:329
ROCCPL731	BMWM11	-13.520832	-0.000832	0.007324	0.1	1:330
BM124	BM128	-19.187803	-0.007803	0.008186	1.0	1:331
BM128	BM129	11.608444	-0.001556	0.003656	0.4	1:332
BM129	ROCBC3S266	5.022854	-0.007146	0.007833	0.9	1:333
ROCBC3S266	BM130	-5.065702	-0.005702	0.006997	0.8	1:334
BM130	BMG4	-1.493580	0.016420	0.010635	1.5	1:335
BMG4	LOCBCS391	-0.507360	0.002640	0.005891	0.4	1:336
LOCBCS391	BMWBR20	-8.655753	0.004247	0.007472	0.6	1:337
BMWBR20	BM125	11.102940	0.002940	0.009288	0.3	1:338
BM127	BMC21	38.250003	0.000003	0.012007	0.0	1:339
BMC21	TBM131	-19.639999	0.000001	0.008728	0.0	1:340
TBM131	BM132	6.190001	0.000001	0.006393	0.0	1:341
BM132	BMC11	-11.390000	0.000000	0.004817	0.0	1:342
BMC11	BMRR1	-11.519999	0.000001	0.006013	0.0	1:343
BMRR1	BM133	35.110001	0.000001	0.008625	0.0	1:344
BM133	BM3061	-0.569999	0.000001	0.008819	0.0	1:345
BM3061	BM134	-40.069999	0.000001	0.007629	0.0	1:346
BM134	BM135	7.351398	0.001398	0.006787	0.2	1:347
BM135	BM126	13.130004	0.000004	0.008002	0.0	1:348
BM134	BM33	35.284811	-0.005189	0.013079	0.4	1:349
BM33	BM34	-5.511047	-0.001047	0.005876	0.2	1:350
BM34	BM30	15.178720	-0.001280	0.006497	0.2	1:351
BM30	BM29	5.518686	-0.001314	0.006582	0.2	1:352
BM29	ROCB2CS135	-23.871386	-0.001386	0.006760	0.2	1:353
ROCB2CS135	ROBCBS8	2.088998	-0.001002	0.005748	0.2	1:354
ROBCBS8	BMWM24	-1.621422	-0.001422	0.006847	0.2	1:355
BMWM24	BM136	24.677514	-0.002486	0.009053	0.3	1:356
BM136	BM137	19.176210	-0.003790	0.011178	0.3	1:357
BM137	BM68J17A	13.497588	-0.002412	0.008917	0.3	1:358

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BM68J17A	BMWM14	-24.301953	-0.001953	0.008023	0.2	1:359
BMWM14	BMH13	19.208434	-0.001566	0.007186	0.2	1:360
BMH13	BMWM16	-8.160684	-0.000684	0.004751	0.1	1:361
BMWM16	BM3060	-53.431922	-0.001922	0.007965	0.2	1:362
BM3060	BM135	-10.381147	-0.001147	0.006153	0.2	1:363
BMG17	BMWBR3	-15.767984	0.002016	0.004692	0.4	1:364
BMWBR3	BM138	35.827447	0.007447	0.009016	0.8	1:365
BM138	LOCBGS52	-23.406555	0.003445	0.006132	0.6	1:366
LOCBGS52	ROCBGS1325	-10.312774	0.007226	0.008882	0.8	1:367
BMG10	ROCBGS31	2.055386	0.005386	0.007585	0.7	1:368
ROCBGS31	BMWM18	12.601552	0.001552	0.007034	0.2	1:369
BMWM18	BM139	17.682513	0.002513	0.008950	0.3	1:370
BM139	BMG9	-5.197192	0.002808	0.009462	0.3	1:371
BMG9	ROCBGS131	23.403343	0.003343	0.010324	0.3	1:372
ROCBGS131	BMWM22	5.160832	0.000832	0.005152	0.2	1:373
BMWM22	BM140	18.842078	0.002078	0.008140	0.3	1:374
BM140	BM130	-12.036652	0.003348	0.010333	0.3	1:375
LOCCPL1189	BMWM36	66.730000	-0.000000	0.010558	0.0	1:376
BMWM36	BMWM17	-49.440000	0.000000	0.007641	0.0	1:377
BMWM17	LOCBGS1273	-35.920000	0.000000	0.009529	0.0	1:378
BMG4	LOCBGS220	14.523652	-0.006348	0.007100	0.9	1:379
LOCBGS220	BMWM27	33.033021	-0.006979	0.007445	0.9	1:380
BMWM27	BMWBR22	-33.861579	-0.011579	0.009589	1.2	1:381
BMWBR22	BM68J11	-2.933138	-0.013138	0.007494	1.8	1:382
BM68J11	BM141	-9.545755	-0.005755	0.006760	0.9	1:383
BM141	BM142	20.595710	-0.004290	0.008764	0.5	1:384
BM142	BM125	-19.872083	-0.012083	0.010935	1.1	1:385
BMH13	BM142	-20.020002	-0.000002	0.007871	0.0	1:386
BM142	BM141	-20.595710	0.004290	0.007651	0.6	1:387
BM141	BM143	31.630262	0.000262	0.009014	0.0	1:388
BM143	BMC22	-3.529766	0.000234	0.008530	0.0	1:389
BMC22	BMG1	-6.309731	0.000269	0.009139	0.0	1:390
BMG1	BM8073	-10.204283	-0.004283	0.005667	0.8	1:391
BM8073	BM93F	19.882000	0.012000	0.009435	1.3	1:392
BM93F	BM8074	-25.717116	0.012884	0.006545	2.0	1:393
BM8074	LOCBGS6A	4.322261	0.002261	0.008965	0.3	1:394
LOCBGS6A	BM142	10.522083	0.002083	0.008606	0.2	1:395
BMG1	BM144	-12.949297	0.020703	0.009109	2.3	1:396
BM144	BMG1	12.949297	0.009297	0.009074	1.0	1:397
BMC22	BMWM23	-10.009862	0.010138	0.012304	0.8	1:398
BMWM23	BMWM13	14.285057	-0.004943	0.009937	0.5	1:399
BMWM13	BMWM23	-14.285057	-0.005057	0.010050	0.5	1:400
BMWM23	LOCBGS70	9.745039	0.005039	0.008674	0.6	1:401
LOCBGS70	BMC22	0.264823	0.004823	0.008486	0.6	1:402
BMWBR22	BM68J11	-2.933138	0.006862	0.007624	0.9	1:403
BM68J11	BMFULTON	22.101128	0.001128	0.010597	0.1	1:404
BMFULTON	BM1W	-8.299406	0.000594	0.010879	0.1	1:405
BMFULTON	BM68J12	-8.489625	0.000375	0.008642	0.0	1:406
BM68J12	BM1W	0.190219	0.000219	0.006607	0.0	1:407
BM1W	BMRIVLAGOONC	0.400099	0.000099	0.003136	0.0	1:408
BMRIVLAGOONC	BMWBR22	-11.268683	0.001317	0.011450	0.1	1:409
BM93F	BM13AF	-24.270000	0.000000	0.002884	0.0	1:410
BM13AF	BM93F	24.270000	-0.000000	0.005098	0.0	1:411
BM93F	BM8074	-25.717116	-0.007116	0.006638	1.1	1:412
SQRNCLO	BM145	2.240343	0.000343	0.007767	0.0	1:413
BM145	BM146	-5.689931	0.000069	0.003473	0.0	1:414
BM146	LOCBGS45	1.450223	0.000223	0.006264	0.0	1:415
LOCBGS45	SQRNCLO149	8.280039	0.000039	0.002613	0.0	1:416
SQRNCLO149	BM120	-6.204785	0.005215	0.010576	0.5	1:417
SQRNCLO149	BM147	19.037539	-0.002461	0.007752	0.3	1:418
BM147	BM148	-2.390424	-0.000424	0.003218	0.1	1:419
BM148	BM150MHB	-20.451263	-0.001263	0.005554	0.2	1:420
BM150MHB	BM124	52.608140	-0.001860	0.006741	0.3	1:421
BMG17	BMWBR6B	22.614537	-0.005463	0.007984	0.7	1:422
BMWBR6B	BMWBR6A	-0.710290	-0.000290	0.001838	0.2	1:423
BMWBR6A	ROC3S20	-19.341247	-0.001247	0.003815	0.3	1:424
ROC3S20	ROCBGS1325	-16.222867	-0.002867	0.005783	0.5	1:425
BM119	BM93A	-5.295277	0.004723	0.006099	0.8	1:426
BM93A	BMG10	-14.947068	0.002932	0.004805	0.6	1:427
BM124	BM93C	6.065206	-0.004794	0.007477	0.6	1:428
BM93C	TBM76	-5.593177	-0.003177	0.006087	0.5	1:429

BM113	BM152	1.570525	0.000525	0.009238	0.1	1:430	NAVD88
BM152	BM151	2.290264	0.000264	0.006554	0.0	1:431	
BM151	BMG16	4.160017	0.000017	0.001702	0.0	1:432	
BMG16	BMEMERY1934	50.169992	-0.000008	0.006528	0.0	1:433	
BMEMERY1934	BM151	-54.330009	-0.000009	0.006785	0.0	1:434	
BM85AR	BM150	2.889330	-0.000670	0.002592	0.3	1:435	
BM150	BM68J18A	-6.464219	-0.004219	0.006502	0.6	1:436	
BM68J18A	RRSPKUP13	-0.700274	-0.000274	0.001657	0.2	1:437	
RRSPKUP13	BM85AR	4.275163	-0.004837	0.006963	0.7	1:438	
BMWM15	BM5240Z	1.060000	0.000000	0.003558	0.0	1:440	
BM5240Z	BMWM15	-1.060000	-0.000000	0.004886	0.0	1:441	
BM144	BM9016	-11.040986	0.009014	0.014395	0.6	1:443	
BM9016	BM144	11.040986	-0.019014	0.014290	1.3	1:444	
BM130	BM9018	20.722102	-0.007898	0.005857	1.3	1:445	
BM9018	BMG4	-22.215682	-0.015682	0.008967	1.7	1:446	
ROCBCS31	BM9024	-49.986423	0.013577	0.014769	0.9	1:448	
BM9024	BM9025	-17.506000	-0.016000	0.013339	1.2	1:449	
BM9025	BM116	-1.365409	0.004591	0.010528	0.4	1:450	
BM106	BMF42	-25.495037	0.004963	0.017093	0.3	1:452	
BMF42	BM85AD	2.689987	-0.010013	0.011739	0.9	1:453	
BM85AD	BMJ42	-4.635040	0.014960	0.015418	1.0	1:454	
BMJ42	BM2	0.412053	0.002053	0.005712	0.4	1:455	
BM2	BM85AE	22.441582	0.011582	0.013566	0.9	1:456	
BM85AE	BM85AD	-18.218596	0.001404	0.004723	0.3	1:457	
BM85AD	BMF42	-2.689987	-0.009987	0.011723	0.9	1:458	
BMF42	BM106	25.495037	0.005037	0.017220	0.3	1:459	

Elapsed Time = 00:00:00

Summary of Unadjusted Input Observations

NAVD88

Number of Entered Stations (FeetUS) = 14

Fixed Stations	Elev	Description
BM8073	160.744000	
BM9033	41.348000	
BM93F	180.626000	
BM9016	146.958000	
BM9018	170.157000	
BM9024	38.992000	
BM9025	21.486000	
BM85AR	29.419000	

Partially Fixed	Elev	Description
	StdErr	
BM8074	154.920000	
	0.010000	
BMWBR20	138.795000	
	0.020000	
BM85AQ	43.280000	
	0.010000	

Free Stations	Elev	Description
BMF42	11.745000	
BMJ42	9.822000	
BM85AD	14.452000	

Unused Stations

Number of Differential Level Observations (FeetUS) = 225

From	To	Elev Diff	StdErr	Length
BM85AQ	BM85AR	-13.890000	0.009310	2335
BM85AQ	BM9033	-1.940000	0.009358	2359
BM9033	BM85AQ	1.940000	0.009364	2362
BM85AR	BM85AQ	13.870000	0.009226	2293
BM85AQ	BMG12	-10.030000	0.005371	777
BMG12	BM100	-18.350000	0.007855	1662
BM100	BM101	-5.040000	0.006724	1218
BM101	BM100	5.040000	0.006738	1223
BM100	BMG13	20.950000	0.008002	1725
BMG13	BMHYD1	-21.550000	0.006539	1152
BMHYD1	BM9033	27.030000	0.009626	2496
BMG13	BM9033	5.480000	0.011637	3648
BMHYD1	BM102	28.650000	0.004347	509
BM102	BM156	-9.960000	0.007422	1484
BM156	BMWM1	-23.420000	0.005191	726
BMWM1	BM105	-1.820000	0.009260	2310
BM105	BMWM19	8.310000	0.007354	1457
BMWM19	BM9033	25.320000	0.006162	1023
BMWM1	BM103	4.600000	0.007263	1421
BM103	BM104	-4.720000	0.010418	2924
BM104	BMHYD2XCUT	6.390000	0.004916	651
BMHYD2XCUT	BM103	-1.660000	0.009210	2285
BM103	BMWM1	-4.600000	0.007273	1425
BM9033	BM107	-31.050000	0.009474	2418
BM107	BM108	20.510000	0.010843	3167
BM108	BMG14	-6.950000	0.010102	2749
BMG14	LOCCPL165	-3.660000	0.007016	1326
LOCCPL165	BMWM19	-4.100000	0.008702	2040
BM108	BM109	13.130000	0.005725	883
BM109	BM110	66.360000	0.007314	1441
BM110	BMG16	-5.590000	0.005090	698
BMG16	ROCBCS305	-42.380000	0.009449	2405
ROCBCS305	BMW4	19.690000	0.005847	921
BMW4	ROCBCS972	-1.790000	0.009537	2450
ROCBCS972	BMWM26	-9.430000	0.005470	806
BMWM26	BM111	-24.980000	0.008721	2049
BM111	LOCBCS1217	8.360000	0.004847	633

LOCBCS1217	BMG17	-11.660000	0.005738	887
BMG17	BM112	24.350000	0.009847	2612
BM112	BM113	29.840000	0.006915	1288
BM113	BMW6	-11.790000	0.007580	1548
BMW6	BMG15	-6.120000	0.008930	2148
BMG15	BM114	-2.190000	0.006517	1144
BM114	BM115	-50.330000	0.009548	2456
BM115	ROCBBS641	19.900000	0.006031	980
ROCBBS641	LOCBCS668	3.840000	0.004037	439
LOCBCS668	ROCBGS716	25.490000	0.004568	562
ROCBGS716	BM109	-31.520000	0.005584	840
BM109	BM108	-13.130000	0.006025	978
BM105	BM106	29.460000	0.009574	2469
BM106	BMWM19	-21.150000	0.007953	1704
BMG15	BM118	11.420000	0.008890	2129
BM118	BMG10	-3.230000	0.008779	2076
BMG10	BM117GONE	-66.310000	0.008244	1831
BM117GONE	BM116	-0.490000	0.009539	2451
BM116	BMSTONEPOST	1.650000	0.001278	44
BMSTONEPOST	ROCBBS410	37.460000	0.008603	1994
ROCBBS410	ROCGPLAT444	7.140000	0.004146	463
ROCGPLAT444	HYDSPINDLE	-15.640000	0.004684	591
HYDSPINDLE	ROCGS541	-7.960000	0.005318	762
ROCGS541	BM115	-16.570000	0.004195	474
BM113	BM122	3.720000	0.007663	1582
BM122	BMWM28	-27.580000	0.009614	2490
BMWM28	BMWM25	32.170000	0.009552	2458
BMWM25	BM121	-16.750000	0.007188	1392
BM121	BM120	13.820000	0.009230	2295
BM120	BM119	5.110000	0.008990	2177
BM119	BMG10	-20.240000	0.007685	1591
BMG17	ROCBBS1325	-13.660000	0.007369	1463
ROCBBS1325	ROCBBS1297	3.810000	0.004506	547
ROCBBS1297	LOCGS1273	2.900000	0.003925	415
ROCBBS1325	LOCGS1273	6.710000	0.005976	962
LOCGS1273	LOCCPL1189	18.610000	0.006644	1189
LOCCPL1189	LOCCPL1126	23.240000	0.005719	881
LOCCPL1126	ROCBBS1080	8.150000	0.005141	712
ROCBBS1080	LOCBBS49	-2.550000	0.009948	2666
LOCBBS49	BMWM11	0.010000	0.004636	579
BMWM11	BM123	26.130000	0.008948	2157
BM123	BMSQRSB123	-0.020000	0.001577	67
BMSQRSB123	BM123	0.020000	0.001577	67
BM123	BMWM11	-26.130000	0.008698	2038
BMWM11	LOCBCSA	16.710000	0.008865	2117
LOCBCSA	LOCBCSB	-26.030000	0.006007	972
LOCBCSB	BMWBR10	-2.390000	0.005514	819
BMWBR10	SQRSB844	43.380000	0.006920	1290
SQRSB844	BMWM25	-9.680000	0.006349	1086
BMWM25	SQRNCLO	-3.000000	0.004204	476
SQRNCLO	ROCBBS777	-1.580000	0.005500	815
ROCBBS777	ROCBBS843	-1.100000	0.005702	876
ROCBBS843	BMWM15	23.150000	0.006713	1214
BMWM15	LOCBCS930	1.890000	0.002230	134
LOCBCS930	BM124	32.730000	0.010429	2930
BM124	TBM76	0.460000	0.009364	2362
TBM76	BM125	-7.650000	0.006255	1054
BM125	ROCCS91	-11.180000	0.007400	1475
ROCCS91	BM126	-7.770000	0.007230	1408
BM126	BM127	-16.840000	0.009548	2456
BM127	BMWM12	-7.950000	0.010772	3126
BMWM12	ROCCPL731	-9.630000	0.008051	1746
ROCCPL731	BMWM11	-13.520000	0.007324	1445
BM124	BM128	-19.180000	0.008186	1805
BM128	BM129	11.610000	0.003656	360
BM129	ROCB3S266	5.030000	0.007833	1653
ROCB3S266	BM130	-5.060000	0.006997	1319
BM130	BMG4	-1.510000	0.010635	3047
BMG4	LOCBCS391	-0.510000	0.005891	935
LOCBCS391	BMWBR20	-8.660000	0.007472	1504
BMWBR20	BM125	11.100000	0.009288	2324

BM127	BMC21	38.250000	0.012007	3884
BMC21	TBM131	-19.640000	0.008728	2052
TBM131	BM132	6.190000	0.006393	1101
BM132	BMC11	-11.390000	0.004817	625
BMC11	BMRR1	-11.520000	0.006013	974
BMRR1	BM133	35.110000	0.008625	2004
BM133	BM3061	-0.570000	0.008819	2095
BM3061	BM134	-40.070000	0.007629	1568
BM134	BM135	7.350000	0.006787	1241
BM135	BM126	13.130000	0.008002	1725
BM134	BM33	35.290000	0.013079	4608
BM33	BM34	-5.510000	0.005876	930
BM34	BM30	15.180000	0.006497	1137
BM30	BM29	5.520000	0.006582	1167
BM29	ROCB2CS135	-23.870000	0.006760	1231
ROCB2CS135	ROCBCS8	2.090000	0.005748	890
ROCBCS8	BMWM24	-1.620000	0.006847	1263
BMWM24	BM136	24.680000	0.009053	2208
BM136	BM137	19.180000	0.011178	3366
BM137	BM68J17A	13.500000	0.008917	2142
BM68J17A	BMWM14	-24.300000	0.008023	1734
BMWM14	BMH13	19.210000	0.007186	1391
BMH13	BMWM16	-8.160000	0.004751	608
BMWM16	BM3060	-53.430000	0.007965	1709
BM3060	BM135	-10.380000	0.006153	1020
BMG17	BMWBR3	-15.770000	0.004692	593
BMWBR3	BM138	35.820000	0.009016	2190
BM138	LOCBGS52	-23.410000	0.006132	1013
LOCBGS52	ROCB2CS1325	-10.320000	0.008882	2125
BMG10	ROCB2CS31	2.050000	0.007585	1550
ROCB2CS31	BMWM18	12.600000	0.007034	1333
BMWM18	BM139	17.680000	0.008950	2158
BM139	BMG9	-5.200000	0.009462	2412
BMG9	ROCB2CS131	23.400000	0.010324	2871
ROCB2CS131	BMWM22	5.160000	0.005152	715
BMWM22	BM140	18.840000	0.008140	1785
BM140	BM130	-12.040000	0.010333	2876
LOCCPL1189	BMWM36	66.730000	0.010558	3003
BMWM36	BMWM17	-49.440000	0.007641	1573
BMWM17	LOCBGS1273	-35.920000	0.009529	2446
BMG4	LOCB2CS220	14.530000	0.007100	1358
LOCB2CS220	BMWM27	33.040000	0.007445	1493
BMWM27	BMWBR22	-33.850000	0.009589	2477
BMWBR22	BM68J11	-2.920000	0.007494	1513
BM68J11	BM141	-9.540000	0.006760	1231
BM141	BM142	20.600000	0.008764	2069
BM142	BM125	-19.860000	0.010935	3221
BMH13	BM142	-20.020000	0.007871	1669
BM142	BM141	-20.600000	0.007651	1577
BM141	BM143	31.630000	0.009014	2189
BM143	BMC22	-3.530000	0.008530	1960
BMC22	BMG1	-6.310000	0.009139	2250
BMG1	BM8073	-10.200000	0.005667	865
BM8073	BM93F	19.870000	0.009435	2398
BM93F	BM8074	-25.730000	0.006545	1154
BM8074	LOCB2CS6A	4.320000	0.008965	2165
LOCB2CS6A	BM142	10.520000	0.008606	1995
BMG1	BM144	-12.970000	0.009109	2235
BM144	BMG1	12.940000	0.009074	2218
BMC22	BMWM23	-10.020000	0.012304	4078
BMWM23	BMWM13	14.290000	0.009937	2660
BMWM13	BMWM23	-14.280000	0.010050	2721
BMWM23	LOCB2CS70	9.740000	0.008674	2027
LOCB2CS70	BMC22	0.260000	0.008486	1940
BMWBR22	BM68J11	-2.940000	0.007624	1566
BM68J11	BMFULTON	22.100000	0.010597	3025
BMFULTON	BM1W	-8.300000	0.010879	3188
BMFULTON	BM68J12	-8.490000	0.008642	2012
BM68J12	BM1W	0.190000	0.006607	1176
BM1W	BMRIVLAGOONC	0.400000	0.003136	265
BMRIVLAGOONC	BMWBR22	-11.270000	0.011450	3532

BM93F	BM13AF	-24.270000	0.002884	224
BM13AF	BM93F	24.270000	0.005098	700
BM93F	BM8074	-25.710000	0.006638	1187
SQRNCLO	BM145	2.240000	0.007767	1625
BM145	BM146	-5.690000	0.003473	325
BM146	LOCBCS45	1.450000	0.006264	1057
LOCBCS45	SQRNCLO149	8.280000	0.002613	184
SQRNCLO149	BM120	-6.210000	0.010576	3013
SQRNCLO149	BM147	19.040000	0.007752	1619
BM147	BM148	-2.390000	0.003218	279
BM148	BM150MHB	-20.450000	0.005554	831
BM150MHB	BM124	52.610000	0.006741	1224
BMG17	BMWBR6B	22.620000	0.007984	1717
BMWBR6B	BMWBR6A	-0.710000	0.001838	91
BMWBR6A	ROC3S20	-19.340000	0.003815	392
ROC3S20	ROCBCS1325	-16.220000	0.005783	901
BM119	BM93A	-5.300000	0.006099	1002
BM93A	BMG10	-14.950000	0.004805	622
BM124	BM93C	6.070000	0.007477	1506
BM93C	TBM76	-5.590000	0.006087	998
BM113	BM152	1.570000	0.009238	2299
BM152	BM151	2.290000	0.006554	1157
BM151	BMG16	4.160000	0.001702	78
BMG16	BMEMERY1934	50.170000	0.006528	1148
BMEMERY1934	BM151	-54.330000	0.006785	1240
BM85AR	BM150	2.890000	0.002592	181
BM150	BM68J18A	-6.460000	0.006502	1139
BM68J18A	RRSPKUP13	-0.700000	0.001657	74
RRSPKUP13	BM85AR	4.280000	0.006963	1306
BMWM15	BM5240Z	1.060000	0.003558	341
BM5240Z	BMWM15	-1.060000	0.004886	643
BM144	BM9016	-11.050000	0.014395	5582
BM9016	BM144	11.060000	0.014290	5501
BM130	BM9018	20.730000	0.005857	924
BM9018	BMG4	-22.200000	0.008967	2166
ROCBCS31	BM9024	-50.000000	0.014769	5876
BM9024	BM9025	-17.490000	0.013339	4793
BM9025	BM116	-1.370000	0.010528	2986
BM106	BMF42	-25.500000	0.017093	7871
BMF42	BM85AD	2.700000	0.011739	3712
BM85AD	BMJ42	-4.650000	0.015418	6404
BMJ42	BM2	0.410000	0.005712	879
BM2	BM85AE	22.430000	0.013566	4958
BM85AE	BM85AD	-18.220000	0.004723	601
BM85AD	BMF42	-2.680000	0.011723	3702
BMF42	BM106	25.490000	0.017220	7988

Listing of Input Data

NAVD88

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[File: Z:\StarNet Projects\WEYMOUTH\WEYMOUTH 2012 LEVELS NAVD88.DAT]
# 2011~2012 TOWN OF WEYMOUTH
# DIFFERENTIAL LEVELS NETWORK
# 3RD ORDER LEVELING PERFORMED WITH
# SOKKIA SDL 30 LEVEL AND BAR CODED
# ALUMINUM LEVEL ROD
#
#
# LIST OF BENCHMARKS WITH PUBLISHED NAVD88 ELEVATIONS
E BM8073 160.744 !
E BM8074 154.920 0.01
E BM9033 41.348 !
E BM93F 180.626 !
E BMWBR20 138.795 0.02
E BM9016 146.958 !
E BM9018 170.157 !
E BM9024 38.992 !
E BM9025 21.486 !
E BMF42 11.745 *
E BMJ42 9.822 *
E BM85AR 29.419 !
E BM85AQ 43.28 0.01
E BM85AD 14.452 *
#
#
# LIST OF APPROXIMATE COORDINATES FOR BENCHMARKS (B.M.)
# .DATA OFF
# .UNITS FEETUS
# .2D
#
# COORDINATES FROM LEICA MTS RTK CS15
#
C H13 2889150. 805005.
# 13AF
# 85AQ
C 85AR 2913865. 802266.
C 85AD 2915162. 819803.
C 85AE 2914773. 820193.
C F42 2916613. 816793.
C F42 2916597. 816803.
C F42 2916587. 816802.
C J42 2915401. 823525.
C BM2 2915014. 822812.
C 3060 2889812. 807076.
C 3061 2890719. 810529.
C 93C 2892940. 803780.
C 93A 2903784. 801894.
C 93F 2883002. 803869.
C 9033 2914431. 806738.
C EMERY1934 2908178. 808017.
C 68J11 2887049. 802069.
# 68J12 -----Now Gone (2012)
C 68J17A 2887354. 806440.
C 68J18A 2913340. 801548.
C 8073 2881558. 804560.
C 8074 2884155. 803846.
C 9016 2874730. 807131.
C 9018 2893122. 798429.
C 9024 2905135. 796376.
C 9025 2906802. 800038.
C 9019 2895950. 793569.
C 9020 2897143. 792308.
C 9021 2899394. 793886.
C 9022 2899471. 795119.
C 9023 2902071. 795330.
C 9026 2909631. 798875.
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C	9027	2912028.	796614.
C	9028	2913304.	794116.
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C	BM100	2915386.	804276.
C	BM101	2915611.	803305.
C	BM102	2917070.	806668.
C	BM103	2918408.	809812.
C	BM104	2919515.	812046.
C	BM105	2915935.	807918.
C	BM106	2915332.	809182.
C	BM107	2915332.	809182.
C	BM108	2909784.	807096.
C	BM109	2908996.	806921.
C	BM110	2907943.	807464.
C	BM111	2905434.	811252.
C	BM112	2904744.	809511.
C	BM113	2904464.	808449.
C	BM114	2905942.	805326.
C	BM115	2908192.	805233.
C	BM116	2907168.	801721.
C	BM118	2904694.	803531.
C	BM119	2902869.	802283.
C	BM120	2900988.	803331.
C	BM121	2899693.	805188.
C	BM122	2899693.	805188.
C	BM123	2896186.	813476.
C	BM124	2894433.	803657.
C	BM125	2891045.	803772.
C	BM126	2890702.	806484.
C	BM127	2892022.	808494.
C	BM128	2893951.	801931.
C	BM129	2893954.	801586.
C	BM130	2916571.	744175.
C	BM131	2889710.	812228.
C	BM132	2888687.	812254.
C	BM133	2888978.	811501.
C	BM134	2890389.	809148.
C	BM135	2890031.	808056.
C	BM136	2883735.	810219.
C	BM137	2886302.	808247.
C	BM138	2903883.	814287.
C	BM139	2900344.	801002.
C	BM140	2895532.	799807.
C	BM141	2886714.	803053.
C	BM142	2887997.	803847.
C	BM143	2884702.	802547.
C	BM144	2879134.	804918.
C	BM145	2898658.	805003.
C	BM146	2898718.	804715.
C	BM147	2896534.	803603.
C	BM148	2896278.	803697.
C	BM149	2898076.	803875.
C	BM150	2913689.	802248.
C	BM151	2907452.	807949.
C	BM152	2906420.	808114.
C	BM153	2895648.	803614.
#	BM156		
C	BMG1	2881082.	803938.
C	BMG4	2891395.	799667.
C	BMG9	2898401.	799751.
C	BMG10	2904279.	801548.
C	BMG11	2915429.	809591.
C	BMG12	2914129.	805277.
C	BMG13	2916517.	805480.
C	BMG14	2911522.	808910.
C	BMG15	2904905.	805581.
C	BMG16	2907521.	807921.
C	BMG17	2904174.	811885.
C	BMG18	2900937.	801548.
C	WBR3	2903820.	812251.
C	WBR6A	2903068.	811256.

C WBR6B 2903153. 811230.
C WBR10 2898299. 808254.
C WBR20 2890374. 801679.
C WBR22 2887277. 800719.
BMW1
C BMW4 2908903. 809176.
C BMW6 2904803. 807646.
BM1W
WM1
C WM11 2896945. 811630.
C WM12 2894529. 810183.
C WM13 2877279. 801031.
C WM14 2888023. 804902.
C WM15 2896298. 805325.
C WM16 2889285. 805472.
C WM17 2901109. 810443.
C WM18 2902364. 800634.
C WM19 2914518. 807742.
C WM22 2896712. 801097.
C WM23 2879535. 801576.
C WM24 2883607. 811787.
C WM25 2898904. 806286.
C WM26 2906696. 809935.
C WM27 2888648. 799391.
C WM28 2900966. 807128.
C WM36 2900220. 810768.
C C11 2888243. 812132.
C C21 2891136. 811974.
C C22 2882794. 802761.
SQRCLO
C BM29 2885174. 809968.
C BM30 2886330. 810056.
C BM33 2887185. 810118.
C BM34 2886828. 810793.
BM150MHB
BMFULTON
BMLAGOONC
SQRCLO149
C BMHYD1 2916693. 806423.
C BMHYD2XCUT 2916514. 805955.
.DATA OFF
C LOCCPL 165 2912644. 808377.
C ROCBCS 305 2908111. 809598.
C ROCBCS 972 2907109. 809554.
C LOCBCS 1217 2904866. 811419.
C ROCBBS 641 2908282. 806097.
C LOCBCS 668 2908464. 806438.
C ROCBGS 716 2908490. 806861.
C BMSTONEPOST 2907154. 801692.
C ROCBCS 410 2907531. 803500.
C ROCGPLAT444 2907758. 803858.
HYDSPINDLE
C ROCGS 541 2908208. 804959.
C ROCBCS 1325 2902859. 812076.
C ROCBCS 1297 2902488. 812136.
C LOCBS 1273 2902244. 812137.
C LOCCPLAT1189 2901179. 812037.
C LOCCPL1126-1128 2900414. 812078.
C ROCBCS 1080 2899869. 811950.
C LOCBCS 49 2897373. 811750.
BMSQRSB 123
LOCBCSA
LOCBCSB
C SQRSB 844 2898691. 807132.
C ROCBCS 777 2897803. 806099.
C ROCBCS 843 2897337. 805386.
C LOCBCS 930 2896334. 805341.
C TBM UP76 2892098. 803780.
C ROCCS 91 2890889. 805183.
C ROCCPL 731 2896078. 810622.
C ROCBC3S 266 2893710. 800013.

C LOCBCS 391 2890890. 800424.
C BMRR1 2887812. 811920.
C ROCB2CS 135 2884963. 811095.
C ROCBCS 8 2884840. 811867.
LOCBGS 52
C ROCBCS 31 2903578. 800368. 88.97
ROCBCS 131
C LOCBGS 1273 2902244. 812137.
C LOCBCS 220 2890093. 799536.
C LOCBCS 6A 2886051. 803935.
C LOCBCS 70 2881173. 802419.
C LOCBCS 45 2898145. 803958.
ROC3S 20
RRSKPUP13
#

.UNITS FEETUS

.DATA ON

.3D

#

VERTICAL ELEVATION OBSERVATIONS BETWEEN B.M.

WITH DISTANCES OF LEVEL SEGMENTS (FEET)

L BM85AQ-BM85AR -13.89 2335
L BM85AQ-BM9033 -1.94 2359
L BM9033-BM85AQ 1.94 2362
L BM85AR-BM85AQ 13.87 2293
L BM85AQ-BMG12 -10.03 777
L BMG12-BM100 -18.35 1662
L BM100-BM101 -5.04 1218
L BM101-BM100 5.04 1223
L BM100-BMG13 20.95 1725
L BMG13-BMHYD1 -21.55 1152
L BMHYD1-BM9033 27.03 2496
L BMG13-BM9033 5.48 3648
L BMHYD1-BM102 28.65 509
L BM102-BM156 -9.96 1484
L BM156-BMWM1 -23.42 726
L BMWM1-BM105 -1.82 2310
L BM105-BMWM19 8.31 1457
L BMWM19-BM9033 25.32 1023
L BMWM1-BM103 4.60 1421
L BM103-BM104 -4.72 2924
L BM104-BMHYD2XCUT 6.39 651
L BMHYD2XCUT-BM103 -1.66 2285
L BM103-BMWM1 -4.60 1425
L BM9033-BM107 -31.05 2418
L BM107-BM108 20.51 3167
L BM108-BMG14 -6.95 2749
L BMG14-LOCCPL165 -3.66 1326
L LOCCPL165-BMWM19 -4.10 2040
L BM108-BM109 13.13 883
L BM109-BM110 66.36 1441
L BM110-BMG16 -5.59 698
L BMG16-ROCBCS305 -42.38 2405
L ROCBCS305-BMW4 19.69 921
L BMW4-ROCBCS972 -1.79 2450
L ROCBCS972-BMWM26 -9.43 806
L BMWM26-BM111 -24.98 2049
L BM111-LOCBCS1217 8.36 633
L LOCBCS1217-BMG17 -11.66 887
L BMG17-BM112 24.35 2612
L BM112-BM113 29.84 1288
L BM113-BMW6 -11.79 1548
L BMW6-BMG15 -6.12 2148
L BMG15-BM114 -2.19 1144
L BM114-BM115 -50.33 2456
L BM115-ROCBBS641 19.90 980
L ROCBBS641-LOCBCS668 3.84 439
L LOCBCS668-ROCBGS716 25.49 562
L ROCBGS716-BM109 -31.52 840
L BM109-BM108 -13.13 978
L BM105-BM106 29.46 2469

L BM106-BMWM19 -21.15 1704
L BMG15-BM118 11.42 2129
L BM118-BMG10 -3.23 2076
L BMG10-BM117GONE -66.31 1831
L BM117GONE-BM116 -0.49 2451
L BM116-BMSTONEPOST 1.65 44
L BMSTONEPOST-ROCBCS410 37.46 1994
L ROCBCS410-ROCGPLAT444 7.14 463
L ROCGPLAT444-HYDSPINDLE -15.64 591
L HYDSPINDLE-ROCGS541 -7.96 762
L ROCGS541-BM115 -16.57 474
L BM113-BM122 3.72 1582
L BM122-BMWM28 -27.58 2490
L BMWM28-BMWM25 32.17 2458
L BMWM25-BM121 -16.75 1392
L BM121-BM120 13.82 2295
L BM120-BM119 5.11 2177
L BM119-BMG10 -20.24 1591
L BMG17-ROCBCS1325 -13.66 1463
L ROCBCS1325-ROCBCS1297 3.81 547
L ROCBCS1297-LOCGS1273 2.90 415
L ROCBCS1325-LOCGS1273 6.71 962
L LOCGS1273-LOCCPL1189 18.61 1189
L LOCCPL1189-LOCCPL1126 23.24 881
L LOCCPL1126-ROCBCS1080 8.15 712
L ROCBCS1080-LOCBCS49 -2.55 2666
L LOCBCS49-BMWM11 0.01 579
L BMWM11-BM123 26.13 2157
L BM123-BMSQRSB123 -0.02 67
L BMSQRSB123-BM123 0.02 67
L BM123-BMWM11 -26.13 2038
L BMWM11-LOCBCSA 16.71 2117
L LOCBCSA-LOCBCSB -26.03 972
L LOCBCSB-BMWBR10 -2.39 819
L BMWBR10-SQRSB844 43.38 1290
L SQRSB844-BMWM25 -9.68 1086
L BMWM25-SQRNCLO -3.00 476
L SQRNCLO-ROCBCS777 -1.58 815
L ROCBCS777-ROCBCS843 -1.10 876
L ROCBCS843-BMWM15 23.15 1214
L BMWM15-LOCBCS930 1.89 134
L LOCBCS930-BM124 32.73 2930
L BM124-TBM76 0.46 2362
L TBM76-BM125 -7.65 1054
L BM125-ROCCS91 -11.18 1475
L ROCCS91-BM126 -7.77 1408
L BM126-BM127 -16.84 2456
L BM127-BMWM12 -7.95 3126
L BMWM12-ROCCPL731 -9.63 1746
L ROCCPL731-BMWM11 -13.52 1445
L BM124-BM128 -19.18 1805
L BM128-BM129 11.61 360
L BM129-ROCBC3S266 5.03 1653
L ROCBC3S266-BM130 -5.06 1319
L BM130-BMG4 -1.51 3047
L BMG4-LOCBCS391 -0.51 935
L LOCBCS391-BMWBR20 -8.66 1504
L BMWBR20-BM125 11.10 2324
L BM127-BMC21 38.25 3884
L BMC21-TBM131 -19.64 2052
L TBM131-BM132 6.19 1101
L BM132-BMC11 -11.39 625
L BMC11-BMRR1 -11.52 974
L BMRR1-BM133 35.11 2004
L BM133-BM3061 -0.57 2095
L BM3061-BM134 -40.07 1568
L BM134-BM135 7.35 1241
L BM135-BM126 13.13 1725
L BM134-BM33 35.29 4608
L BM33-BM34 -5.51 930
L BM34-BM30 15.18 1137

L BM30-BM29 5.52 1167
L BM29-ROCB2CS135 -23.87 1231
L ROCB2CS135-ROCB3CS8 2.09 890
L ROCB3CS8-BMWM24 -1.62 1263
L BMWM24-BM136 24.68 2208
L BM136-BM137 19.18 3366
L BM137-BM68J17A 13.50 2142
L BM68J17A-BMWM14 -24.30 1734
L BMWM14-BMH13 19.21 1391
L BMH13-BMWM16 -8.16 608
L BMWM16-BM3060 -53.43 1709
L BM3060-BM135 -10.38 1020
L BMG17-BMWBR3 -15.77 593
L BMWBR3-BM138 35.82 2190
L BM138-LOCBSGS52 -23.41 1013
L LOCBSGS52-ROCB3CS1325 -10.32 2125
L BMG10-ROCB3CS31 2.05 1550
L ROCB3CS31-BMWM18 12.60 1333
L BMWM18-BM139 17.68 2158
L BM139-BMG9 -5.20 2412
L BMG9-ROCB3CS131 23.40 2871
L ROCB3CS131-BMWM22 5.16 715
L BMWM22-BM140 18.84 1785
L BM140-BM130 -12.04 2876
L LOCCPL1189-BMWM36 66.73 3003
L BMWM36-BMWM17 -49.44 1573
L BMWM17-LOCBSGS1273 -35.92 2446
L BMG4-LOCBSGS220 14.53 1358
L LOCBSGS220-BMWM27 33.04 1493
L BMWM27-BMWBR22 -33.85 2477
L BMWBR22-BM68J11 -2.92 1513
L BM68J11-BM141 -9.54 1231
L BM141-BM142 20.60 2069
L BM142-BM125 -19.86 3221
L BMH13-BM142 -20.02 1669
L BM142-BM141 -20.60 1577
L BM141-BM143 31.63 2189
L BM143-BMC22 -3.53 1960
L BMC22-BMG1 -6.31 2250
L BMG1-BM8073 -10.20 865
L BM8073-BM93F 19.87 2398
L BM93F-BM8074 -25.73 1154
L BM8074-LOCBSGS6A 4.32 2165
L LOCBSGS6A-BM142 10.52 1995
L BMG1-BM144 -12.97 2235
L BM144-BMG1 12.94 2218
L BMC22-BMWM23 -10.02 4078
L BMWM23-BMWM13 14.29 2660
L BMWM13-BMWM23 -14.28 2721
L BMWM23-LOCBSGS70 9.74 2027
L LOCBSGS70-BMC22 0.26 1940
L BMWBR22-BM68J11 -2.94 1566
L BM68J11-BMFULTON 22.10 3025
L BMFULTON-BM1W -8.30 3188
L BMFULTON-BM68J12 -8.49 2012
L BM68J12-BM1W 0.19 1176
L BM1W-BMRIVLAGOONC 0.40 265
L BMRIVLAGOONC-BMWBR22 -11.27 3532
L BM93F-BM13AF -24.27 224
L BM13AF-BM93F 24.27 700
L BM93F-BM8074 -25.71 1187
L SQRNCLO-BM145 2.24 1625
L BM145-BM146 -5.69 325
L BM146-LOCBSGS45 1.45 1057
L LOCBSGS45-SQRNCLO149 8.28 184
L SQRNCLO149-BM120 -6.21 3013
L SQRNCLO149-BM147 19.04 1619
L BM147-BM148 -2.39 279
L BM148-BM150MHB -20.45 831
L BM150MHB-BM124 52.61 1224
L BMG17-BMWBR6B 22.62 1717

L BMWBR6B-BMWBR6A -0.71 91
L BMWBR6A-ROC3S20 -19.34 392
L ROC3S20-ROCBCS1325 -16.22 901
L BM119-BM93A -5.30 1002
L BM93A-BMG10 -14.95 622
L BM124-BM93C 6.07 1506
L BM93C-TEM76 -5.59 998
L BM113-BM152 1.57 2299
L BM152-BM151 2.29 1157
L BM151-BMG16 4.16 78
L BMG16-BMEMERY1934 50.17 1148
L BMEMERY1934-BM151 -54.33 1240
L BM85AR-BM150 2.89 181
L BM150-BM68J18A -6.46 1139
L BM68J18A-RRSPKUP13 -0.70 74
L RRSPKUP13-BM85AR 4.28 1306

L BMWM15-BM5240Z 1.06 341
L BM5240Z-BMWM15 -1.06 643

L BM144-BM9016 -11.05 5582
L BM9016-BM144 11.06 5501
L BM130-BM9018 20.73 924
L BM9018-BMG4 -22.20 2166

L ROCBCS31-BM9024 -50.00 5876
L BM9024-BM9025 -17.49 4793
L BM9025-BM116 -1.37 2986

L BM106-BMF42 -25.50 7871
L BMF42-BM85AD 2.70 3712
L BM85AD-BMJ42 -4.65 6404
L BMJ42-BM2 0.41 879
L BM2-BM85AE 22.43 4958
L BM85AE-BM85AD -18.22 601
L BM85AD-BMF42 -2.68 3702
L BMF42-BM106 25.49 7988

MassHighway Geodetic Data Sheet

NAVD88

Point ID: 24517

Station: 8073

Sketch(s) Available: No

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Data Source NAD27:

Order: -

State Plane Coordinate Zone: 2001

Vertical

Elevation: 48.995 Meters

Datum: NAVD88

Order: 2nd

Elevation: -

Datum: -

Order: -

160.744(E+)

Stamping: -

Marked By: BRASS RIVET IN CONCRETE RETAINING WALL

Description: LOCATED IN THE SOUTH SECTION OF WEYMOUTH, ON TROTTER ROAD WHICH IS THE ACCESS ROAD TO A COAST GUARD DEPOT, AT THE WEYMOUTH NAVAL AIR STATION. THE MARK IS A BRASS RIVET SET NEAR THE NORTHEAST CORNER OF A CONCRETE RETAINING WALL THAT IS ABOUT 2.0 FT ABOVE THE LEVEL OF THE ROAD. THE MARK IS: 16.4 M (53.8 FT) NORTHEAST OF THE NORTHEAST CORNER OF THE GALLAGHERS BUILDING MATERIALS BUILDING, 14.0 M (46.2 FT) WEST OF THE CENTER OF THE NY, NH & H RAILROAD TRACKS, 8.2 M (27.0 FT) SOUTH OF THE CENTER OF TROTTER ROAD, 1.6 M (5.4 FT) SOUTH OF THE NORTHEAST CORNER OF THE RETAINING WALL.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NAVD88

Point ID: 24518

Station: 8074

Sketch(s) Available: No

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Data Source NAD27:

Order: -

State Plane Coordinate Zone: 2001

Vertical

Elevation: 47.220 Meters

Datum: NAVD88

Order: 2nd

Elevation: -

Datum: -

Order: -

154.920 (PT)

Stamping: -

Marked By: BRASS RIVET IN CONCRETE HEADWALL

Description: LOCATED IN THE SOUTH SECTION OF WEYMOUTH, ON ROUTE 18, 0.2 MI. NORTH OF THE MAIN ST. BRIDGE OVER THE RAILROAD, AND 0.1 MI. SOUTH OF THE ENTRANCE TO THE SOUTH WEYMOUTH NAVAL AIR STATION. THE MARK IS A BRASS RIVET SET IN THE NORTH END OF A CONCRETE HEADWALL THAT IS ABOUT 0.5 FT. BELOW THE LEVEL OF THE ROAD. THE MARK IS: 28.4 M (93.3 FT) NORTH OF POLE # 155, 7.8 M (25.5 FT) WEST OF THE CENTER OF ROUTE 18, 5.0 M (16.6 FT) NORTHEAST OF A HYDRANT.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NAVD88

Point ID: 7602

Station: 93 F

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: 422334.01

Easting: 747568.95

Data Source NAD83:

Data Source NAD27: MAGS-ADJ

Order: 3rd

State Plane Coordinate Zone: 2001

Vertical

Elevation: 181.587 Feet

Datum: NGVD29

Order: 2nd

Elevation: 55.055 Meters

Datum: NAVD88

Order: 2nd

180.626 (FT)

Stamping: 93 F

Marked By: MAGS DISK IN CONCRETE MONUMENT AT GRADE

Description: ABOUT 1.25 MI SOUTH OF SOUTH WEYMOUTH, ON THE WEST SIDE OF THE ROUTE 18 (MAIN STREET) BRIDGE OVER THE NYNH&H RAILROAD, 21.2 FT WEST OF THE CENTERLINE, 43.2 FT WEST OF SOUTHEAST END OF GIRDER, 94.3 FT SOUTH OF POLE 29/162, 110.2 FT SOUTH OF CENTERLINE OF BRIDGE OVERPASS, 1.2 FT WEST OF CURB.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NAVD88

Point ID: 10623

Station: WEYMOUTH BACK RIVER 20

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Order: -

Data Source NAD27:

State Plane Coordinate Zone: 2001

Vertical

Elevation: 139.680 Feet

Datum: NGVD29

Order: 2nd

Elevation: 42.305 Meters

Datum: NAVD88

Order: 2nd

138.795 (ET)

Stamping: -

Marked By: CHISELED SQUARE

Description: WEYMOUTH BACK RIVER 20, SOUTH WEYMOUTH, ON THE SOUTH SIDE OF COLUMBIAN STREET, ABOUT 2200 FT WEST OF ROUTE 18 (MAIN STREET), 970 FT EAST OF ROUTE 128 BRIDGE (2.70) OVER THE NYNH&H RAILROAD, ON THE SOUTHEAST CORNER OF THE EAST END OF THE SOUTH ABUTMENT OF THE MILL RIVER BRIDGE.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NAVD88

Point ID: 24578

Station: 9033

Sketch(s) Available: No

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Data Source NAD27:

Order: -

State Plane Coordinate Zone: 2001

Vertical

Elevation: 12.603 Meters

Datum: NAVD88

Order: 2nd

Elevation: -

Datum: -

Order: -

41.348 (FT)

Stamping: -

Marked By: BRASS RIVET IN CONCRETE

Description: LOCATED IN THE NORTH SECTION OF WEYMOUTH, AT THE INTERSECTION OF ROUTE 3A (BRIDGE ST.) AND NORTH ST. THE MARK IS A BRASS RIVET SET IN THE CONCRETE BASE FOR A TRAFFIC LIGHT CONTROL BOX (NOT IN USE) THAT IS ABOUT 0.75 FT ABOVE THE LEVEL OF ROUTE 3A. THE MARK IS: 14.3 M (47.0 FT) NORTH OF THE CENTER OF ROUTE 3A, 7.4 M (24.5 FT) EAST OF A STEEL POST FOR A SIGN "DEPENDABLE CLEANERS", 7.2 M (23.75 FT) WEST OF THE CENTER OF NORTH ST., 7.1 M (23.5 FT) NORTHEAST OF POLE # 64.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S. Survey Ft.)

Northing:

NAD27 (U.S. Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NAVD88

Point ID: 24522

Station: 9016

Sketch(s) Available: No

Quad Name: WEYMOUTH

Town: ABINGTON

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Order: -

Data Source NAD27:

State Plane Coordinate Zone: 2001

Vertical

Elevation: 44.793 Meters

Datum: NAVD88

Order: 2nd

Elevation: -

Datum: -

Order: -

146.958 (FT)

Stamping: -

Marked By: BRASS RIVET IN CONCRETE HEADWALL

Description: LOCATED IN THE NORTHEAST SECTION OF ABINGTON, ON PINE ST., BETWEEN ROUTE 18 (ADAMS ST.) AND WEST ST., AND AT A DOUBLE SET OF RAILROAD TRACKS. THE MARK IS A BRASS RIVET SET IN THE EAST END OF A CONCRETE HEADWALL THAT IS ABOUT 1.0 FT. BELOW THE LEVEL OF THE ROAD. THE MARK IS: 117.3 M (385 FT) EAST OF THE CENTER OF ROUTE 58, 13.0 M (42.6 FT) NORTH OF POLE # 7, 7.9 M (26.0 FT) NORTH OF THE CENTER OF PINE ST., 3.2 M (10.5 FT) WEST OF THE MOST WESTERLY RAIL OF THE TRACKS.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NAVD88

Point ID: 24524

Station: 9018

Sketch(s) Available: No

Quad Name: WEYMOUTH

Town: BRAINTREE

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Order: -

Data Source NAD27:

State Plane Coordinate Zone: 2001

Vertical

Elevation: 51.864 Meters

Datum: NAVD88

Order: 2nd

Elevation: -

Datum: -

Order: -

170.157 (Ft)

Stamping: -

Marked By: BRASS RIVET IN RETAINING WALL

Description: LOCATED IN THE SOUTHEAST SECTION OF BRAINTREE, JUST WEST OF THE BRAINTREE-WEYMOUTH TOWNLINE, EAST OF THE INTERSECTION OF GROVE, WEST AND COLUMBIAN STREETS AND OPPOSITE THE MA STATE LOTTERY BUILDING, AT BUILDING NUMBER 60. THE MARK IS A BRASS RIVET SET IN THE NORTH END OF A CONCRETE RETAINING WALL THAT IS ABOUT 4.75 FEET ABOVE THE LEVEL OF THE ROAD. THE MARK IS: 16.76 M (55.0 FT.) SOUTHEAST OF POLE # 6, 9.75 M (32.0 FT) SOUTH OF A STRAIN POLE, 8.84 M (29.0 FT) EAST OF THE CENTER OF THE ROAD.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NAVD88

Point ID: 24532

Station: 9024

Sketch(s) Available: No

Quad Name: WEYMOUTH

Town: BRAINTREE

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Order: -

Data Source NAD27:

State Plane Coordinate Zone: 2001

Vertical

Elevation: 11.885 Meters

Datum: NAVD88

Order: 2nd

Elevation: -

Datum: -

Order: -

38.992 (Ft)

Stamping: -

Marked By: BRASS RIVET IN RETAINING WALL

Description: LOCATED IN THE EASTERN SECTION OF BRAINTREE, AT THE INTERSECTION OF UNION STREET AND ALEXANDER ROAD. THE MARK IS A BRASS RIVET SET AT THE NORTH END OF A CONCRETE RETAINING WALL THAT IS ABOUT 0.5 FEET ABOVE THE LEVEL OF ALEXANDER ROAD. THE MARK IS: 31.0 M (102.0 FT) SOUTH OF THE CENTER OF UNION STREET, 6.55 (21.5 FT) SOUTHEAST OF THE MOST EASTERLY CORNER OF THE FOUNDATION FOR HOUSE #603, 5.79 M (19.0 FT) WEST OF THE CENTER OF ALEXANDER ROAD, 1.37 M (4.5 FT) SOUTHWEST OF POLE #1.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NAVD88

Point ID: 24534

Station: 9025

Sketch(s) Available: No

Quad Name: WEYMOUTH

Town: BRAINTREE

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Data Source NAD27:

Order: -

State Plane Coordinate Zone: 2001

Vertical

Elevation: 6.549 Meters

Datum: NAVD88

Order: 2nd

Elevation: -

Datum: -

Order: -

21.486 (FT)

Stamping: -

Marked By: DISK IN BRIDGE END CAP

Description: LOCATED IN THE EASTERN SECTION OF BRAINTREE, AT THE ROUTE 53 BRIDGE OVER THE WEYMOUTH FORE RIVER. THE MARK IS A MASS. DPW DISK THAT IS SET IN THE SOUTHEAST CONCRETE END CAP, WHICH HAS THE SEAL MISSING, DATED 1974 AND IS ABOUT 1.0 FEET ABOVE THE LEVEL OF THE ROAD. THE MARK IS 9.44 M (31.0 FT) EAST OF THE CENTER OF ROUTE 53, 4.63 M (15.2 FT) NORTH OF A LIGHTING POLE.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

PROGRAM = datasheet95, VERSION = 7.89.6

1 National Geodetic Survey, Retrieval Date = NOVEMBER 2, 2012

MY2167 *****

MY2167 DESIGNATION - F 42

MY2167 PID - MY2167

MY2167 STATE/COUNTY- MA/PLYMOUTH

MY2167 COUNTRY - US

MY2167 USGS QUAD -

MY2167

*CURRENT SURVEY CONTROL

MY2167

MY2167* NAD 83(1986) POSITION- 42 14 59. (N) 070 54 24. (W) SCALED

MY2167* NAVD 88 ORTHO HEIGHT - 3.580 (meters) 11.75 (feet) ADJUSTED

MY2167

MY2167 GEOID HEIGHT - -27.84 (meters) GEOID12A

MY2167 DYNAMIC HEIGHT - 3.579 (meters) 11.74 (feet) COMP

MY2167 MODELED GRAVITY - 980,373.0 (mgal) NAVD 88

MY2167

MY2167 VERT ORDER - FIRST CLASS II

MY2167

MY2167.The horizontal coordinates were scaled from a topographic map and have

MY2167.an estimated accuracy of +/- 6 seconds.

MY2167.

MY2167.The orthometric height was determined by differential leveling and

MY2167.adjusted by the NATIONAL GEODETIC SURVEY

MY2167.in June 1991.

MY2167

MY2167.The dynamic height is computed by dividing the NAVD 88

MY2167.geopotential number by the normal gravity value computed on the

MY2167.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

MY2167.degrees latitude (g = 980.6199 gals.).

MY2167

MY2167.The modeled gravity was interpolated from observed gravity values.

MY2167

MY2167; North East Units Estimated Accuracy

MY2167;SPC MA M - 888,980. 248,960. MT (+/- 180 meters Scaled)

MY2167

SUPERSEDED SURVEY CONTROL

MY2167

MY2167.No superseded survey control is available for this station.

MY2167

MY2167_U.S. NATIONAL GRID SPATIAL ADDRESS: 19TCG427792(NAD 83)

MY2167

MY2167_MARKER: DB = BENCH MARK DISK

MY2167_SETTING: 36 = SET IN A MASSIVE STRUCTURE

MY2167_SP SET: FOUNDATION

MY2167_STAMPING: F 42 1978

MY2167_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

MY2167

MY2167 HISTORY - Date Condition Report By

MY2167 HISTORY - 1978 MONUMENTED NGS

MY2167

STATION DESCRIPTION

MY2167

MY2167'DESCRIBED BY NATIONAL GEODETIC SURVEY 1978

MY2167'1.1 MI NW FROM HINGHAM.

MY2167'1.1 MILES NORTHWEST ALONG LINCOLN STREET FROM THE POST OFFICE IN

MY2167'HINGHAM, SET IN THE CONCRETE FOUNDATION AND LOADING DOCK AT 211

MY2167'LINCOLN STREET, 226 FEET NORTH OF THE CENTER OF LINCOLN STREET WHICH

MY2167'AT THIS POINT IS ALSO STATE HIGHWAY 3A, AND 1 FOOT WEST OF THE

MY2167'SOUTHWEST CORNER OF THE SHOPPING CENTER.

*** retrieval complete.

Elapsed Time = 00:00:05

MassHighway Geodetic Data Sheet

NAVD88

Point ID: 10604

Station: F 42 1978

Sketch(s) Available: No

Quad Name: WEYMOUTH

Town: HINGHAM

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Order: -

Data Source NAD27:

State Plane Coordinate Zone: 2001

Vertical

Elevation: 3.580 Meters

Datum: NAVD88

Order: 1st

Elevation: -

Datum: -

Order: -

11.745 (Ft)

Stamping: F 42 1978

Marked By: MAGS DISK IN CONCRETE FOUNDATION

Description: ABOUT 1.1 MI NORTHWEST OF POST OFFICE, LOADING DOCK AT 211 LINCOLN STREET, 226 FT NORTH OF CENTERLINE OF ROUTE 3A (LINCOLN STREET), 1 FT WEST OF SOUTHWEST CORNER OF SHOPPING CENTER, ABOUT LEVEL WITH THE STREET. NGS UNADJUSTED ELEV.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```

PROGRAM = datasheet95, VERSION = 7.89.6
1      National Geodetic Survey, Retrieval Date = NOVEMBER 2, 2012
MY2164 *****
MY2164 DESIGNATION - J 42
MY2164 PID - MY2164
MY2164 STATE/COUNTY- MA/PLYMOUTH
MY2164 COUNTRY - US
MY2164 USGS QUAD -
MY2164
MY2164 *CURRENT SURVEY CONTROL
MY2164
MY2164* NAD 83(1986) POSITION- 42 14 46.9 (N) 070 52 54.8 (W) HD_HELD2
MY2164* NAVD 88 ORTHO HEIGHT - 2.994 (meters) 9.822 (feet) ADJUSTED
MY2164
MY2164 GEOID HEIGHT - -27.82 (meters) GEOID12A
MY2164 DYNAMIC HEIGHT - 2.993 (meters) 9.82 (feet) COMP
MY2164 MODELED GRAVITY - 980,373.5 (mgal) NAVD 88
MY2164
MY2164 VERT ORDER - FIRST CLASS II
MY2164
MY2164.The horizontal coordinates were established by autonomous hand held GPS
MY2164.observations and have an estimated accuracy of +/- 10 meters.
MY2164.
MY2164.The orthometric height was determined by differential leveling and
MY2164.adjusted by the NATIONAL GEODETIC SURVEY
MY2164.in June 1991.
MY2164
MY2164.The dynamic height is computed by dividing the NAVD 88
MY2164.geopotential number by the normal gravity value computed on the
MY2164.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
MY2164.degrees latitude (g = 980.6199 gals.).
MY2164
MY2164.The modeled gravity was interpolated from observed gravity values.
MY2164
MY2164; North East Units Estimated Accuracy
MY2164;SPC MA M - 888,618. 251,011. MT (+/- 10 meters HH2 GPS)
MY2164
MY2164 SUPERSEDED SURVEY CONTROL
MY2164
MY2164.No superseded survey control is available for this station.
MY2164
MY2164_U.S. NATIONAL GRID SPATIAL ADDRESS: 19TCG4474678844(NAD 83)
MY2164
MY2164_MARKER: DB = BENCH MARK DISK
MY2164_SETTING: 30 = SET IN A LIGHT STRUCTURE
MY2164_SP_SET: SEAWALL
MY2164_STAMPING: J 42 1978
MY2164_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY
MY2164_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
MY2164+SATELLITE: SATELLITE OBSERVATIONS - November 07, 2011
MY2164
MY2164 HISTORY - Date Condition Report By
MY2164 HISTORY - 1978 MONUMENTED NGS
MY2164 HISTORY - UNK SEE DESCRIPTION GEOCAC
MY2164 HISTORY - 20041204 GOOD GEOCAC
MY2164 HISTORY - 20111107 GOOD GEOCAC
MY2164
MY2164 STATION DESCRIPTION
MY2164
MY2164'DESCRIBED BY NATIONAL GEODETIC SURVEY 1978
MY2164'0.45 MI EAST FROM HINGHAM.
MY2164'0.45 MILE EAST ALONG NORTH STREET TO JUNCTION STATE HIGHWAY 3A AT
MY2164'A ROTARY ON NORTHWEST SIDE OF HINGHAM, SET IN TOP OF AND 145 FEET
MY2164'NORTHEAST OF THE SOUTHWEST CORNER OF CONCRETE SEAWALL, 57.5 FEET
MY2164'NORTHEAST OF THE SOUTHWEST END OF A STEEL GUARD RAIL ALONG SEAWALL
MY2164'AND 54.5 FEET NORTHWEST OF THE NORTHWEST CURB OF THE ROTARY.
MY2164

```


MassHighway Geodetic Data Sheet

NAVD88

Point ID: 10609
Station: J 42 1978
Sketch(s) Available: No

Quad Name: WEYMOUTH
Town: HINGHAM
Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:
Order: -

Data Source NAD27:
State Plane Coordinate Zone: 2001

Vertical

Elevation: 2.994 Meters

Datum: NAVD88

Order: 1st

Elevation: -

Datum: -

Order: -

9.822(Ft)

Stamping: J 42 1978

Marked By: BENCHMARK DISK ON SEAWALL

Description: ON THE NORTHWEST SIDE OF TOWN, AT ROTARY OF ROUTE 3A, 145 FT
NORTHEAST OF SOUTHWEST END OF CONCRETE SEAWALL, 57.5 FT NORTHEAST OF
SOUTHWEST END OF STEEL GUARD RAIL, 54.5 FT NORTHWEST OF NORTHWEST CURB
OF ROTARY, ABOUT LEVEL WITH THE HIGHWAY. NGS UNADJUSTED ELEV.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

PROGRAM = datasheet95, VERSION = 7.89.6

1 National Geodetic Survey, Retrieval Date = NOVEMBER 2, 2012

MY2172 *****

MY2172 DESIGNATION - 85 AR MADPW

MY2172 PID - MY2172

MY2172 STATE/COUNTY- MA/NORFOLK

MY2172 COUNTRY - US

MY2172 USGS QUAD -

MY2172

*CURRENT SURVEY CONTROL

MY2172

MY2172* NAD 83(1986) POSITION- 42 14 34. (N) 070 57 46. (W) SCALED

MY2172* NAVD 88 ORTHO HEIGHT - 8.967 (meters) 29.42 (feet) ADJUSTED

MY2172

MY2172 GEOID HEIGHT - -27.94 (meters) GEOID12A

MY2172 DYNAMIC HEIGHT - 8.965 (meters) 29.41 (feet) COMP

MY2172 MODELED GRAVITY - 980,367.2 (mgal) NAVD 88

MY2172

MY2172 VERT ORDER - FIRST CLASS II

MY2172

MY2172.The horizontal coordinates were scaled from a topographic map and have
MY2172.an estimated accuracy of +/- 6 seconds.

MY2172.

MY2172.The orthometric height was determined by differential leveling and
MY2172.adjusted by the NATIONAL GEODETIC SURVEY

MY2172.in June 1991.

MY2172

MY2172.The dynamic height is computed by dividing the NAVD 88

MY2172.geopotential number by the normal gravity value computed on the

MY2172.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

MY2172.degrees latitude (g = 980.6199 gals.).

MY2172

MY2172.The modeled gravity was interpolated from observed gravity values.

MY2172

MY2172; North East Units Estimated Accuracy
MY2172;SPC MA M - 888,180. 244,340. MT (+/- 180 meters Scaled)

MY2172

SUPERSEDED SURVEY CONTROL

MY2172

MY2172.No superseded survey control is available for this station.

MY2172

MY2172_U.S. NATIONAL GRID SPATIAL ADDRESS: 19TCG380785(NAD 83)

MY2172

MY2172 MARKER: DD = SURVEY DISK

MY2172_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

MY2172_SP_SET: CONCRETE POST

MY2172_STAMPING: 85 AR 30.300

MY2172_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

MY2172+STABILITY: SURFACE MOTION

MY2172_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

MY2172+SATELLITE: SATELLITE OBSERVATIONS ~ August 06, 2010

MY2172

MY2172 HISTORY - Date Condition Report By

MY2172 HISTORY - UNK MONUMENTED MADPW

MY2172 HISTORY - 1978 GOOD NGS

MY2172 HISTORY - 20061009 GOOD GEOCAC

MY2172 HISTORY - 20100806 GOOD PB

MY2172

STATION DESCRIPTION

MY2172

MY2172'DESCRIBED BY NATIONAL GEODETIC SURVEY 1978

MY2172'NORTH WEYMOUTH.

MY2172'IN NORTH WEYMOUTH AT THE JUNCTION OF BRIDGE STREET (STATE HIGHWAY
MY2172'3A) AND BLUFF ROAD, 41.5 FEET SOUTH OF THE CENTER OF BRIDGE STREET,

MY2172'22 FEET WEST OF THE CENTER OF BLUFF ROAD, 82.5 FEET WEST OF THE

MY2172'NORTHWEST CORNER OF A AUTO PARTS HOUSE ON SOUTH SIDE OF BRIDGE

MY2172'STREET, 30 FEET WEST OF THE CENTER OF THE INTERSECTION OF BRIDGE

MY2172'STREET AND BLUFF ROAD, AND 17.6 FEET SOUTH OF A N.E.T. AND T. POLE

MY2172'ON SOUTH SIDE OF BRIDGE STREET. A MASSACHUSETTS DEPARTMENT OF

MY2172'PUBLIC WORKS STANDARD TRAVERSE DISK.

MY2172

STATION RECOVERY (2006)

MY2172

MY2172'RECOVERY NOTE BY GEOCACHING 2006 (NPP)

MY2172'SIDEWALK HAS BEEN CONSTRUCTED AROUND MARK.

MY2172

STATION RECOVERY (2010)

MY2172

29.419(FT)

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

PROGRAM = datasheet95, VERSION = 7.89.6

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1      National Geodetic Survey,   Retrieval Date = NOVEMBER  2, 2012
MY2171 *****
MY2171 DESIGNATION - 85 AQ MADPW
MY2171 PID - MY2171
MY2171 STATE/COUNTY- MA/NORFOLK
MY2171 COUNTRY - US
MY2171 USGS QUAD -
MY2171
MY2171 *CURRENT SURVEY CONTROL
MY2171
MY2171* NAD 83(1986) POSITION- 42 14 33. (N) 070 57 08. (W) SCALED
MY2171* NAVD 88 ORTHO HEIGHT - 13.192 (meters) 43.28 (feet) ADJUSTED
MY2171
MY2171 GEOID HEIGHT - -27.93 (meters) GEOID12A
MY2171 DYNAMIC HEIGHT - 13.188 (meters) 43.27 (feet) COMP
MY2171 MODELED GRAVITY - 980,368.1 (mgal) NAVD 88
MY2171
MY2171 VERT ORDER - FIRST CLASS II
MY2171
MY2171.The horizontal coordinates were scaled from a topographic map and have
MY2171.an estimated accuracy of +/- 6 seconds.
MY2171.
MY2171.The orthometric height was determined by differential leveling and
MY2171.adjusted by the NATIONAL GEODETIC SURVEY
MY2171.in June 1991.
MY2171
MY2171.The dynamic height is computed by dividing the NAVD 88
MY2171.geopotential number by the normal gravity value computed on the
MY2171.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
MY2171.degrees latitude (g = 980.6199 gals.).
MY2171
MY2171.The modeled gravity was interpolated from observed gravity values.
MY2171
MY2171; North East Units Estimated Accuracy
MY2171;SPC MA M - 888,150. 245,210. MT (+/- 180 meters Scaled)
MY2171
MY2171 SUPERSEDED SURVEY CONTROL
MY2171
MY2171.No superseded survey control is available for this station.
MY2171
MY2171_U.S. NATIONAL GRID SPATIAL ADDRESS: 19TCG389785(NAD 83)
MY2171
MY2171_MARKER: DD = SURVEY DISK
MY2171_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
MY2171_SP SET: CONCRETE POST
MY2171_STAMPING: 85 AQ 44.263
MY2171_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
MY2171+STABILITY: SURFACE MOTION
MY2171
MY2171 HISTORY - Date Condition Report By
MY2171 HISTORY - UNK MONUMENTED MADPW
MY2171 HISTORY - 1978 GOOD NGS
MY2171
MY2171 STATION DESCRIPTION
MY2171
MY2171'DESCRIBED BY NATIONAL GEODETIC SURVEY 1978
MY2171'IN NORTH WEYMOUTH.
MY2171'IN NORTH WEYMOUTH, AT THE JUNCTION OF BRIDGE STREET (STATE HIGHWAY
MY2171'3A) AND FAIRLAWN ROAD, 68 FEET EAST OF THE CENTER OF THE JUNCTION,
MY2171'64 FEET EAST OF THE CENTER OF FAIRLAWN ROAD, 28 FEET SOUTH OF THE
MY2171'CENTER OF BRIDGE STREET, AND 29 FEET EAST OF A FIRE HYDRANT OPPOSITE
MY2171'OF PRATT AVENUE. A MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS
MY2171'TRAVERSE DISK.

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*** retrieval complete.
Elapsed Time = 00:00:02

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

PROGRAM = datasheet95, VERSION = 7.89.6

1 National Geodetic Survey, Retrieval Date = NOVEMBER 2, 2012

MY2165 *****

MY2165 DESIGNATION - 85 AD MAGS

MY2165 PID - MY2165

MY2165 STATE/COUNTY- MA/PLYMOUTH

MY2165 COUNTRY - US

MY2165 USGS QUAD -

MY2165

*CURRENT SURVEY CONTROL

MY2165

MY2165* NAD 83(1986) POSITION- 42 14 44. (N) 070 53 43. (W) SCALED

MY2165* NAVD 88 ORTHO HEIGHT - 4.405 (meters) 14.452 (feet) ADJUSTED

MY2165

MY2165 GEOID HEIGHT - -27.84 (meters)

GEOID12A

MY2165 DYNAMIC HEIGHT - 4.404 (meters)

14.45 (feet)

COMP

MY2165 MODELED GRAVITY - 980,372.7 (mgal)

NAVD 88

MY2165

MY2165 VERT ORDER - FIRST CLASS II

MY2165

MY2165.The horizontal coordinates were scaled from a topographic map and have
MY2165.an estimated accuracy of +/- 6 seconds.

MY2165.

MY2165.The orthometric height was determined by differential leveling and

MY2165.adjusted by the NATIONAL GEODETIC SURVEY

MY2165.in June 1991.

MY2165

MY2165.The dynamic height is computed by dividing the NAVD 88

MY2165.geopotential number by the normal gravity value computed on the

MY2165.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

MY2165.degrees latitude (g = 980.6199 gals.).

MY2165

MY2165.The modeled gravity was interpolated from observed gravity values.

MY2165

MY2165; North East Units Estimated Accuracy

MY2165;SPC MA M - 888,520. 249,910. MT (+/- 180 meters Scaled)

MY2165

SUPERSEDED SURVEY CONTROL

MY2165

MY2165.No superseded survey control is available for this station.

MY2165

MY2165_U.S. NATIONAL GRID SPATIAL ADDRESS: 19TCG436787(NAD 83)

MY2165

MY2165_MARKER: DD = SURVEY DISK

MY2165_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

MY2165_SP_SET: CONCRETE POST

MY2165_STAMPING: 85 AD 15.341

MY2165_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

MY2165+STABILITY: SURFACE MOTION

MY2165

MY2165 HISTORY - Date Condition Report By

MY2165 HISTORY - UNK MONUMENTED MAGS

MY2165 HISTORY - 1978 GOOD NGS

MY2165

STATION DESCRIPTION

MY2165

MY2165'DESCRIBED BY NATIONAL GEODETIC SURVEY 1978

MY2165'0.45 MI NW FROM HINGHAM.

MY2165'0.45 MILES NORTHWEST ALONG LINCOLN STREET FROM THE POST OFFICE AT

MY2165'HINGHAM, DIRECTLY IN LINE WITH THE EXTENDED CENTER OF BURDITT AVENUE,

MY2165'18 FEET SOUTHWEST OF THE CENTER OF LINCOLN STREET, 6.0 FEET

MY2165'NORTHWEST OF A FIRE HYDRANT, AND SET BETWEEN TWO DRIVEWAYS. A

MY2165'MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS TRAVERSE DISK.

*** retrieval complete.

Elapsed Time = 00:00:01

Summary of Files Used and Option Settings

=====
Project Folder and Data Files

Project Name 2011-WEYMOUTH-LEVELS
Project Folder Z:\STARNET PROJECTS\WEYMOUTH
Data File List 1. WEYMOUTH 11-2012 LEVELS NGVD29 - FINAL.DAT

Project Option Settings

STAR*NET Run Mode : Adjust with Error Propagation
Type of Adjustment : Lev
Project Units : FeetUS
Input/Output Coordinate Order : North-East
Create Coordinate File : Yes

Instrument Standard Error Settings

Project Default Instrument
Differential Levels : 0.014000 FeetUS / Mile

Adjustment Statistical Summary

=====

Number of Stations	=	175
Number of Observations	=	225
Number of Unknowns	=	165
Number of Redundant Obs	=	60

Observation	Count	Sum Squares of StdRes	Error Factor
Level Data	225	82.112	1.170
Total	225	82.112	1.170

The Chi-Square Test at 5.00% Level Passed
Lower/Upper Bounds (0.821/1.178)

Adjusted Station Information

NGVD29

Coordinate Changes from Entered Provisionals (FeetUS)

Station	dZ
BMH13	-0.000000
BM85AQ	-0.132073
BM85AR	-0.046537
BM3060	-0.000000
BM3061	-0.000000
BMWBR22	-0.000000
BM85AE	-0.103334
BM13AF	-0.000000
BM93F	-0.156167
BM93A	-0.148784
BM93C	-0.000000
BMEERY1934	0.076286
BMWBR3	-0.109161
BMWBR10	-0.123628
BMWBR20	-0.086137
BM68J11	-0.000000
BM68J12	-0.000000
BM68J17A	-0.000000
BM68J18A	-0.000000
BM85AD	-0.115930
BM5240Z	0.025777

Adjusted Elevations and Error Propagation (FeetUS)

Station	Elev	StdDev	95	Description
BMH13	190.600000	0.000000	0.000001	
BM85AQ	44.130927	0.007644	0.014982	
BM85AR	30.253463	0.004873	0.009551	
BM3060	128.992000	0.000000	0.000001	
BM3061	151.350000	0.000000	0.000001	
BMWBR22	162.448000	0.000000	0.000001	
BM85AE	33.443666	0.019536	0.038290	
BM13AF	157.160000	0.000000	0.000001	
BM93F	181.430833	0.002456	0.004813	
BM93A	102.693216	0.011840	0.023206	
BM93C	163.941000	0.000000	0.000001	
BMEERY1934	155.676286	0.012874	0.025233	
BMWBR3	27.530839	0.013841	0.027127	
BMWBR10	72.096372	0.011858	0.023240	
BMWBR20	139.593863	0.008794	0.017236	
BM68J11	159.520000	0.000000	0.000001	
BM68J12	173.120000	0.000000	0.000001	
BM68J17A	195.690000	0.000000	0.000001	
BM68J18A	26.680000	0.000000	0.000001	
BM85AD	15.225070	0.018984	0.037208	
BM5240Z	124.320777	0.010374	0.020332	
BM2	11.002084	0.021850	0.042825	
BM100	15.751276	0.010597	0.020770	
BM101	10.711276	0.011617	0.022769	
BM102	43.796914	0.011250	0.022049	
BM103	15.005436	0.013319	0.026105	
BM104	10.280446	0.015224	0.029839	
BM105	8.573439	0.011428	0.022399	
BM106	38.030120	0.012017	0.023554	
BM107	11.123104	0.011299	0.022146	
BM108	31.613247	0.010947	0.021455	
BM109	44.742267	0.010993	0.021545	
BM110	111.098263	0.011835	0.023195	
BM111	46.601474	0.014181	0.027794	
BM112	67.644659	0.012581	0.024659	
BM113	97.482588	0.011568	0.022672	
BM114	77.368903	0.012595	0.024686	
BM115	27.034143	0.012103	0.023722	
BM116	20.948633	0.013407	0.026277	
BM118	90.978640	0.012503	0.024505	

BM119	107.988374	0.011558	0.022653
BM120	102.870798	0.010771	0.021110
BM121	89.047466	0.010952	0.021465
BM122	101.203280	0.012244	0.023997
BM123	109.937898	0.013517	0.026493
BM124	157.876559	0.005625	0.011025
BM125	150.699155	0.005778	0.011325
BM126	131.748337	0.006966	0.013653
BM127	114.909651	0.009573	0.018764
BM128	138.688521	0.008646	0.016945
BM129	150.296917	0.008957	0.017556
BM130	150.253682	0.009266	0.018162
BM132	139.715370	0.011629	0.022792
BM133	151.918298	0.008213	0.016097
BM134	111.271900	0.005626	0.011026
BM135	118.616925	0.004856	0.009518
BM136	163.016368	0.012153	0.023819
BM137	182.192477	0.008422	0.016506
BM138	63.358153	0.015001	0.029402
BM139	120.082575	0.014281	0.027989
BM140	162.290685	0.012488	0.024477
BM141	149.975076	0.005066	0.009928
BM142	170.571889	0.004926	0.009655
BM143	181.604115	0.008878	0.017400
BM144	158.807323	0.011292	0.022132
BM145	105.034731	0.010509	0.020598
BM146	99.344722	0.010489	0.020559
BM147	128.111358	0.009323	0.018273
BM148	125.720784	0.009097	0.017831
BM150	33.142988	0.004846	0.009497
BM151	101.346244	0.012032	0.023583
BM152	99.055020	0.012351	0.024208
BMG1	171.762266	0.009284	0.018196
BMG4	148.758309	0.008533	0.016725
BMG9	114.885089	0.014533	0.028483
BMG10	87.746222	0.011479	0.022498
BMG12	34.101038	0.009087	0.017810
BMG13	36.701522	0.010564	0.020706
BMG14	24.651821	0.012068	0.023653
BMG15	79.561120	0.012140	0.023794
BMG16	105.506324	0.011995	0.023509
BMG17	43.298859	0.013175	0.025822
BMW4	82.810601	0.014454	0.028329
BMW6	85.687785	0.012330	0.024167
BM29	161.742834	0.013471	0.026402
BM30	156.224183	0.013181	0.025834
BM33	146.556573	0.012148	0.023809
BM34	141.045497	0.012701	0.024894
BMHYD1	15.149558	0.010717	0.021004
BMHYD2XCUT	16.669336	0.015137	0.029669
BM9033	42.188265	0.009058	0.017752
BM156	33.829207	0.012153	0.023820
BMWM1	10.405436	0.012288	0.024083
BMWM19	16.877830	0.010246	0.020081
LOCCPL165	20.986309	0.011795	0.023117
ROCBCS305	63.122186	0.014011	0.027461
ROCBCS972	81.016386	0.014911	0.029226
BMWM26	71.584999	0.014845	0.029096
LOCBCS1217	54.960385	0.013820	0.027087
ROCBBS641	46.933491	0.012005	0.023529
LOCBCS668	50.773199	0.011866	0.023257
ROCBGS716	76.262825	0.011598	0.022732
BM117GONE	21.437253	0.013002	0.025483
BMSTONEPOST	22.598689	0.013416	0.026295
ROCBCS410	60.061227	0.013356	0.026177
ROCGPLAT444	67.201817	0.013210	0.025892
HYDSPINDLE	51.562569	0.012949	0.025380
ROCGS541	43.603539	0.012479	0.024458
BMWM28	73.624370	0.011952	0.023425
BMWM25	105.795445	0.009849	0.019303
ROCBCS1325	29.638632	0.013508	0.026475

ROCBCS1297	33.448601	0.013749	0.026947
LOCBS1273	36.348578	0.013641	0.026735
LOCCPL1189	54.958444	0.013804	0.027055
LOCCPL1126	78.198344	0.013777	0.027002
ROCBCS1080	86.348264	0.013663	0.026779
LOCBS49	83.797963	0.012446	0.024393
BMWM11	83.807898	0.011992	0.023504
BMSQRSB123	109.917898	0.013563	0.026583
LOCBCSA	100.517072	0.012355	0.024216
LOCBCSB	74.486692	0.012179	0.023871
SQRSB844	115.475869	0.010993	0.021545
SQRNCLO	102.794776	0.009766	0.019140
ROCBCS777	101.213654	0.010158	0.019909
ROCBCS843	100.112448	0.010283	0.020155
BMWM15	123.260777	0.009967	0.019535
LOCBCS930	125.150593	0.009896	0.019395
TBM76	158.347688	0.004788	0.009384
ROCCS91	139.518737	0.007367	0.014438
BMWM12	106.958784	0.011871	0.023266
ROCCPL731	97.328299	0.012183	0.023878
ROCBC3S266	155.319556	0.009596	0.018808
LOCBCS391	148.250438	0.008982	0.017605
BMC21	153.162808	0.012020	0.023559
TBM131	133.524475	0.011990	0.023500
BMC11	128.325878	0.011307	0.022161
BMRR1	116.806669	0.010615	0.020805
ROCB2CS135	137.871410	0.013567	0.026591
ROCBCS8	139.960381	0.013506	0.026472
BMWM24	138.338921	0.013229	0.025928
BMWM14	171.390000	0.005353	0.010491
BMWM16	182.435277	0.004080	0.007997
LOCBGS52	39.951536	0.014931	0.029265
ROCBCS31	89.798937	0.012578	0.024653
BMWM18	102.400326	0.013438	0.026338
ROCBCS131	138.288080	0.013926	0.027294
BMWM22	143.448825	0.013611	0.026677
BMWM36	121.688444	0.017379	0.034062
BMWM17	72.248444	0.018985	0.037209
LOCBGS1273	36.328444	0.021242	0.041633
LOCBCS220	163.280584	0.008831	0.017309
BMWM27	196.312091	0.008059	0.015795
BMC22	178.073254	0.009888	0.019381
BM8073	161.561886	0.008500	0.016659
BM8074	155.713306	0.004927	0.009656
LOCBCS6A	160.042977	0.007256	0.014221
BMWM23	168.063392	0.013131	0.025736
BMWM13	182.348448	0.014912	0.029226
LOCBCS70	177.808431	0.012346	0.024198
BMFULTON	181.613515	0.005884	0.011532
BM1W	173.312248	0.005261	0.010311
BMRIVLAGOONC	173.712650	0.005753	0.011276
LOCBCS45	100.794692	0.010037	0.019673
SQRNCLO149	109.074687	0.009894	0.019393
BM150MHB	105.269076	0.008151	0.015976
BMWBR6B	65.913196	0.014126	0.027686
BMWBR6A	65.202896	0.014123	0.027680
ROC3S20	45.861604	0.014051	0.027539
RRSPKUP13	25.979649	0.001633	0.003201
BM9016	147.752286	0.015178	0.029748
BM9018	170.976095	0.009804	0.019215
BM9024	39.803110	0.016198	0.031748
BM9025	22.316513	0.015530	0.030438
BMF42	12.535083	0.017076	0.033468
BMJ42	10.590030	0.021899	0.042921

Adjusted Differential Level Observations (FeetUS)

From	To	Elev Diff	Residual	StdErr	StdRes	File:Line
BM85AQ	BM85AR	-13.877464	0.012536	0.009310	1.3	1:242
BM85AQ	BM9033	-1.942663	-0.002663	0.009358	0.3	1:243
BM9033	BM85AQ	1.942663	0.002663	0.009364	0.3	1:244
BM85AR	BM85AQ	13.877464	0.007464	0.009226	0.8	1:245
BM85AQ	BMG12	-10.029889	0.000111	0.005371	0.0	1:246
BMG12	BM100	-18.349763	0.000237	0.007855	0.0	1:247
BM100	BM101	-5.040000	-0.000000	0.006724	0.0	1:248
BM101	BM100	5.040000	0.000000	0.006738	0.0	1:249
BM100	BMG13	20.950246	0.000246	0.008002	0.0	1:250
BMG13	BMHYD1	-21.551965	-0.001965	0.006539	0.3	1:251
BMHYD1	BM9033	27.038707	0.008707	0.009626	0.9	1:252
BMG13	BM9033	5.486742	0.006742	0.011637	0.6	1:253
BMHYD1	BM102	28.647356	-0.002644	0.004347	0.6	1:254
BM102	BM156	-9.967707	-0.007707	0.007422	1.0	1:255
BM156	BMWM1	-23.423771	-0.003771	0.005191	0.7	1:256
BMWM1	BM105	-1.831997	-0.011997	0.009260	1.3	1:257
BM105	BMWM19	8.304391	-0.005609	0.007354	0.8	1:258
BMWM19	BM9033	25.310435	-0.009565	0.006162	1.6	1:259
BMWM1	BM103	4.600000	0.000000	0.007263	0.0	1:260
BM103	BM104	-4.724990	-0.004990	0.010418	0.5	1:261
BM104	BMHYD2XCUT	6.388889	-0.001111	0.004916	0.2	1:262
BMHYD2XCUT	BM103	-1.663899	-0.003899	0.009210	0.4	1:263
BM103	BMWM1	-4.600000	0.000000	0.007273	0.0	1:264
BM9033	BM107	-31.065161	-0.015161	0.009474	1.6	1:265
BM107	BM108	20.490143	-0.019857	0.010843	1.8	1:266
BM108	BMG14	-6.961426	-0.011426	0.010102	1.1	1:267
BMG14	LOCCPL165	-3.665512	-0.005512	0.007016	0.8	1:268
LOCCPL165	BMWM19	-4.108479	-0.008479	0.008702	1.0	1:269
BM108	BM109	13.129019	-0.000981	0.005725	0.2	1:270
BM109	BM110	66.355996	-0.004004	0.007314	0.5	1:271
BM110	BMG16	-5.591939	-0.001939	0.005090	0.4	1:272
BMG16	ROCBCS305	-42.384138	-0.004138	0.009449	0.4	1:273
ROCBCS305	BMW4	19.688415	-0.001585	0.005847	0.3	1:274
BMW4	ROCBCS972	-1.794215	-0.004215	0.009537	0.4	1:275
ROCBCS972	BMWM26	-9.431387	-0.001387	0.005470	0.3	1:276
BMWM26	BM111	-24.983525	-0.003525	0.008721	0.4	1:277
BM111	LOCBCS1217	8.358911	-0.001089	0.004847	0.2	1:278
LOCBCS1217	BMG17	-11.661526	-0.001526	0.005738	0.3	1:279
BMG17	BM112	24.345801	-0.004199	0.009847	0.4	1:280
BM112	BM113	29.837929	-0.002071	0.006915	0.3	1:281
BM113	BMW6	-11.794803	-0.004803	0.007580	0.6	1:282
BMW6	BMG15	-6.126665	-0.006665	0.008930	0.7	1:283
BMG15	BM114	-2.192217	-0.002217	0.006517	0.3	1:284
BM114	BM115	-50.334760	-0.004760	0.009548	0.5	1:285
BM115	ROCBBS641	19.899348	-0.000652	0.006031	0.1	1:286
ROCBBS641	LOCBCS668	3.839708	-0.000292	0.004037	0.1	1:287
LOCBCS668	ROCBCS716	25.489626	-0.000374	0.004568	0.1	1:288
ROCBCS716	BM109	-31.520559	-0.000559	0.005584	0.1	1:289
BM109	BM108	-13.129019	0.000981	0.006025	0.2	1:290
BM105	BM106	29.456681	-0.003319	0.009574	0.3	1:291
BM106	BMWM19	-21.152290	-0.002290	0.007953	0.3	1:292
BMG15	BM118	11.417520	-0.002480	0.008890	0.3	1:293
BM118	BMG10	-3.232418	-0.002418	0.008779	0.3	1:294
BMG10	BM117GONE	-66.308969	0.001031	0.008244	0.1	1:295
BM117GONE	BM116	-0.488620	0.001380	0.009539	0.1	1:296
BM116	BMSTONEPOST	1.650056	0.000056	0.001278	0.0	1:297
BMSTONEPOST	ROCBCS410	37.462539	0.002539	0.008603	0.3	1:298
ROCBCS410	ROCGPLAT444	7.140589	0.000589	0.004146	0.1	1:299
ROCGPLAT444	HYDSPINDLE	-15.639248	0.000752	0.004684	0.2	1:300
HYDSPINDLE	ROCGS541	-7.959030	0.000970	0.005318	0.2	1:301
ROCGS541	BM115	-16.569397	0.000603	0.004195	0.1	1:302
BM113	BM122	3.720692	0.000692	0.007663	0.1	1:303
BM122	BMWM28	-27.578911	0.001089	0.009614	0.1	1:304
BMWM28	BMWM25	32.171075	0.001075	0.009552	0.1	1:305
BMWM25	BM121	-16.747979	0.002021	0.007188	0.3	1:306

BM121	BM120	13.823332	0.003332	0.009230	0.4	1:307	NGVD29
BM120	BM119	5.117576	0.007576	0.008990	0.8	1:308	
BM119	BMG10	-20.242152	-0.002152	0.007685	0.3	1:309	
BMG17	ROCB2CS1325	-13.660226	-0.000226	0.007369	0.0	1:310	
ROCB2CS1325	ROCB2CS1297	3.809969	-0.000031	0.004506	0.0	1:311	
ROCB2CS1297	LOCBS1273	2.899977	-0.000023	0.003925	0.0	1:312	
ROCB2CS1325	LOCBS1273	6.709946	-0.000054	0.005976	0.0	1:313	
LOCBS1273	LOCCPL1189	18.609866	-0.000134	0.006644	0.0	1:314	
LOCCPL1189	LOCCPL1126	23.239901	-0.000099	0.005719	0.0	1:315	
LOCCPL1126	ROCB2CS1080	8.149920	-0.000080	0.005141	0.0	1:316	
ROCB2CS1080	LOCBS49	-2.550301	-0.000301	0.009948	0.0	1:317	
LOCBS49	BMWM11	0.009935	-0.000065	0.004636	0.0	1:318	
BMWM11	BM123	26.130000	-0.000000	0.008948	0.0	1:319	
BM123	BMSQSRB123	-0.020000	0.000000	0.001577	0.0	1:320	
BMSQSRB123	BM123	0.020000	-0.000000	0.001577	0.0	1:321	
BM123	BMWM11	-26.130000	0.000000	0.008698	0.0	1:322	
BMWM11	LOCBCSA	16.709174	-0.000826	0.008865	0.1	1:323	
LOCBCSA	LOCBCSB	-26.030379	-0.000379	0.006007	0.1	1:324	
LOCBCSB	BMWBR10	-2.390320	-0.000320	0.005514	0.1	1:325	
BMWBR10	SQSRB844	43.379496	-0.000504	0.006920	0.1	1:326	
SQSRB844	BMWM25	-9.680424	-0.000424	0.006349	0.1	1:327	
BMWM25	SQRNCL0	-3.000669	-0.000669	0.004204	0.2	1:328	
SQRNCL0	ROCB2CS777	-1.581122	-0.001122	0.005500	0.2	1:329	
ROCB2CS777	ROCB2CS843	-1.101206	-0.001206	0.005702	0.2	1:330	
ROCB2CS843	BMWM15	23.148329	-0.001671	0.006713	0.2	1:331	
BMWM15	LOCBS930	1.889816	-0.000184	0.002230	0.1	1:332	
LOCBS930	BM124	32.725966	-0.004034	0.010429	0.4	1:333	
BM124	TBM76	0.471129	0.011129	0.009364	1.2	1:334	
TBM76	BM125	-7.648532	0.001468	0.006255	0.2	1:335	
BM125	ROCCS91	-11.180418	-0.000418	0.007400	0.1	1:336	
ROCCS91	BM126	-7.770399	-0.000399	0.007230	0.1	1:337	
BM126	BM127	-16.838686	0.001314	0.009548	0.1	1:338	
BM127	BMWM12	-7.950868	-0.000868	0.010772	0.1	1:339	
BMWM12	ROCCPL731	-9.630485	-0.000485	0.008051	0.1	1:340	
ROCCPL731	BMWM11	-13.520401	-0.000401	0.007324	0.1	1:341	
BM124	BM128	-19.188038	-0.008038	0.008186	1.0	1:342	
BM128	BM129	11.608397	-0.001603	0.003656	0.4	1:343	
BM129	ROCB2CS266	5.022639	-0.007361	0.007833	0.9	1:344	
ROCB2CS266	BM130	-5.065874	-0.005874	0.006997	0.8	1:345	
BM130	BMG4	-1.495374	0.014626	0.010635	1.4	1:346	
BMG4	LOCBS391	-0.507871	0.002129	0.005891	0.4	1:347	
LOCBS391	BMWBR20	-8.656575	0.003425	0.007472	0.5	1:348	
BMWBR20	BM125	11.105292	0.005292	0.009288	0.6	1:349	
BM127	BMC21	38.253156	0.003156	0.012007	0.3	1:350	
BMC21	TBM131	-19.638333	0.001667	0.008728	0.2	1:351	
TBM131	BM132	6.190895	0.000895	0.006393	0.1	1:352	
BM132	BMC11	-11.389492	0.000508	0.004817	0.1	1:353	
BMC11	BMRR1	-11.519209	0.000791	0.006013	0.1	1:354	
BMRR1	BM133	35.111628	0.001628	0.008625	0.2	1:355	
BM133	BM3061	-0.568298	0.001702	0.008819	0.2	1:356	
BM3061	BM134	-40.078100	-0.008100	0.007629	1.1	1:357	
BM134	BM135	7.345024	-0.004976	0.006787	0.7	1:358	
BM135	BM126	13.131412	0.001412	0.008002	0.2	1:359	
BM134	BM33	35.284672	-0.005328	0.013079	0.4	1:360	
BM33	BM34	-5.511075	-0.001075	0.005876	0.2	1:361	
BM34	BM30	15.178685	-0.001315	0.006497	0.2	1:362	
BM30	BM29	5.518651	-0.001349	0.006582	0.2	1:363	
BM29	ROCB2CS135	-23.871423	-0.001423	0.006760	0.2	1:364	
ROCB2CS135	ROCB2CS8	2.088971	-0.001029	0.005748	0.2	1:365	
ROCB2CS8	BMWM24	-1.621460	-0.001460	0.006847	0.2	1:366	
BMWM24	BM136	24.677447	-0.002553	0.009053	0.3	1:367	
BM136	BM137	19.176108	-0.003892	0.011178	0.3	1:368	
BM137	BM68J17A	13.497523	-0.002477	0.008917	0.3	1:369	
BM68J17A	BMWM14	-24.300000	-0.000000	0.008023	0.0	1:370	
BMWM14	BMH13	19.210000	0.000000	0.007186	0.0	1:371	
BMH13	BMWM16	-8.164723	-0.004723	0.004751	1.0	1:372	
BMWM16	BM3060	-53.443277	-0.013277	0.007965	1.7	1:373	
BM3060	BM135	-10.375075	0.004925	0.006153	0.8	1:374	
BMG17	BMWBR3	-15.768020	0.001980	0.004692	0.4	1:375	
BMWBR3	BM138	35.827314	0.007314	0.009016	0.8	1:376	
BM138	LOCBS52	-23.406617	0.003383	0.006132	0.6	1:377	

LOCBSGS52	ROCBCS1325	-10.312903	0.007097	0.008882	0.8	1:378	NGVD29
BMG10	ROCBCS31	2.052716	0.002716	0.007585	0.4	1:379	
ROCBCS31	BMWM18	12.601389	0.001389	0.007034	0.2	1:380	
BMWM18	BM139	17.682249	0.002249	0.008950	0.3	1:381	
BM139	BMG9	-5.197487	0.002513	0.009462	0.3	1:382	
BMG9	ROCBCS131	23.402992	0.002992	0.010324	0.3	1:383	
ROCBCS131	BMWM22	5.160745	0.000745	0.005152	0.1	1:384	
BMWM22	BM140	18.841860	0.001860	0.008140	0.2	1:385	
BM140	BM130	-12.037003	0.002997	0.010333	0.3	1:386	
LOCCPL1189	BMWM36	66.730000	0.000000	0.010558	0.0	1:387	
BMWM36	BMWM17	-49.440000	0.000000	0.007641	0.0	1:388	
BMWM17	LOCBSGS1273	-35.920000	-0.000000	0.009529	0.0	1:389	
BMG4	LOCBCS220	14.522275	-0.007725	0.007100	1.1	1:390	
LOCBCS220	BMWM27	33.031507	-0.008493	0.007445	1.1	1:391	
BMWM27	BMWBR22	-33.864091	-0.014091	0.009589	1.5	1:392	
BMWBR22	BM68J11	-2.928000	-0.008000	0.007494	1.1	1:393	
BM68J11	BM141	-9.544924	-0.004924	0.006760	0.7	1:394	
BM141	BM142	20.596813	-0.003187	0.008764	0.4	1:395	
BM142	BM125	-19.872734	-0.012734	0.010935	1.2	1:396	
BMH13	BM142	-20.028111	-0.008111	0.007871	1.0	1:397	
BM142	BM141	-20.596813	0.003187	0.007651	0.4	1:398	
BM141	BM143	31.629039	-0.000961	0.009014	0.1	1:399	
BM143	BMC22	-3.530861	-0.000861	0.008530	0.1	1:400	
BMC22	BMG1	-6.310988	-0.000988	0.009139	0.1	1:401	
BMG1	BM8073	-10.200380	-0.000380	0.005667	0.1	1:402	
BM8073	BM93F	19.868947	-0.001053	0.009435	0.1	1:403	
BM93F	BM8074	-25.717527	0.012473	0.006545	1.9	1:404	
BM8074	LOCBCS6A	4.329672	0.009672	0.008965	1.1	1:405	
LOCBCS6A	BM142	10.528912	0.008912	0.008606	1.0	1:406	
BMG1	BM144	-12.954943	0.015057	0.009109	1.7	1:407	
BM144	BMG1	12.954943	0.014943	0.009074	1.6	1:408	
BMC22	BMWM23	-10.009862	0.010138	0.012304	0.8	1:409	
BMWM23	BMWM13	14.285057	-0.004943	0.009937	0.5	1:410	
BMWM13	BMWM23	-14.285057	-0.005057	0.010050	0.5	1:411	
BMWM23	LOCBCS70	9.745039	0.005039	0.008674	0.6	1:412	
LOCBCS70	BMC22	0.264823	0.004823	0.008486	0.6	1:413	
BMWBR22	BM68J11	-2.928000	0.012000	0.007624	1.6	1:414	
BM68J11	BMFULTON	22.093515	-0.006485	0.010597	0.6	1:415	
BMFULTON	BM1W	-8.301266	-0.001266	0.010879	0.1	1:416	
BMFULTON	BM68J12	-8.493515	-0.003515	0.008642	0.4	1:417	
BM68J12	BM1W	0.192248	0.002248	0.006607	0.3	1:418	
BM1W	BMRIVLAGOONC	0.400401	0.000401	0.003136	0.1	1:419	
BMRIVLAGOONC	BMWBR22	-11.264650	0.005350	0.011450	0.5	1:420	
BM93F	BM13AF	-24.270833	-0.000833	0.002884	0.3	1:421	
BM13AF	BM93F	24.270833	0.000833	0.005098	0.2	1:422	
BM93F	BM8074	-25.717527	-0.007527	0.006638	1.1	1:423	
SQRNCLO	BM145	2.239954	-0.000046	0.007767	0.0	1:424	
BM145	BM146	-5.690009	-0.000009	0.003473	0.0	1:425	
BM146	LOCBCS45	1.449970	-0.000030	0.006264	0.0	1:426	
LOCBCS45	SQRNCLO149	8.279995	-0.000005	0.002613	0.0	1:427	
SQRNCLO149	BM120	-6.203889	0.006111	0.010576	0.6	1:428	
SQRNCLO149	BM147	19.036671	-0.003329	0.007752	0.4	1:429	
BM147	BM148	-2.390574	-0.000574	0.003218	0.2	1:430	
BM148	BM150MHB	-20.451709	-0.001709	0.005554	0.3	1:431	
BM150MHB	BM124	52.607483	-0.002517	0.006741	0.4	1:432	
BMG17	BMWBR6B	22.614338	-0.005662	0.007984	0.7	1:433	
BMWBR6B	BMWBR6A	-0.710300	-0.000300	0.001838	0.2	1:434	
BMWBR6A	ROC3S20	-19.341293	-0.001293	0.003815	0.3	1:435	
ROC3S20	ROCBCS1325	-16.222971	-0.002971	0.005783	0.5	1:436	
BM119	BM93A	-5.295158	0.004842	0.006099	0.8	1:437	
BM93A	BMG10	-14.946994	0.003006	0.004805	0.6	1:438	
BM124	BM93C	6.064441	-0.005559	0.007477	0.7	1:439	
BM93C	TRM76	-5.593312	-0.003312	0.006087	0.5	1:440	
BM113	BM152	1.572432	0.002432	0.009238	0.3	1:441	
BM152	BM151	2.291224	0.001224	0.006554	0.2	1:442	
BM151	BMG16	4.160080	0.000080	0.001702	0.0	1:443	
BMG16	BMEMERY1934	50.169962	-0.000038	0.006528	0.0	1:444	
BMEMERY1934	BM151	-54.330041	-0.000041	0.006785	0.0	1:445	
BM85AR	BM150	2.889525	-0.000475	0.002592	0.2	1:446	
BM150	BM68J18A	-6.462988	-0.002988	0.006502	0.5	1:447	
BM68J18A	RRSPKUP13	-0.700351	-0.000351	0.001657	0.2	1:448	

RRSPKUP13	BM85AR	4.273814	-0.006186	0.006963	0.9	1:449	NGVD29
BMWM15	BM5240Z	1.060000	0.000000	0.003558	0.0	1:451	
BM5240Z	BMWM15	-1.060000	-0.000000	0.004886	0.0	1:452	
BM144	BM9016	-11.055037	-0.005037	0.014395	0.3	1:454	
BM9016	BM144	11.055037	-0.004963	0.014290	0.3	1:455	
BM130	BM9018	20.722413	-0.007587	0.005857	1.3	1:456	
BM9018	BMG4	-22.217786	-0.017786	0.008967	2.0	1:457	
ROCBCS31	BM9024	-49.995828	0.004172	0.014769	0.3	1:459	
BM9024	BM9025	-17.486597	0.003403	0.013339	0.3	1:460	
BM9025	BM116	-1.367880	0.002120	0.010528	0.2	1:461	
BM106	BMF42	-25.495037	0.004963	0.017093	0.3	1:463	
BMF42	BM85AD	2.689987	-0.010013	0.011739	0.9	1:464	
BM85AD	BMJ42	-4.635040	0.014960	0.015418	1.0	1:465	
BMJ42	BM2	0.412053	0.002053	0.005712	0.4	1:466	
BM2	BM85AE	22.441582	0.011582	0.013566	0.9	1:467	
BM85AE	BM85AD	-18.218596	0.001404	0.004723	0.3	1:468	
BM85AD	BMF42	-2.689987	-0.009987	0.011723	0.9	1:469	
BMF42	BM106	25.495037	0.005037	0.017220	0.3	1:470	

Elapsed Time = 00:00:00

Summary of Unadjusted Input Observations

NGVD29

Number of Entered Stations (FeetUS) = 21

Fixed Stations	Elev	Description
BMH13	190.600000	
BM3060	128.992000	
BM3061	151.350000	
BMWBR22	162.448000	
BM13AF	157.160000	
BM93C	163.941000	
BM68J11	159.520000	
BM68J12	173.120000	
BM68J17A	195.690000	
BM68J18A	26.680000	

Free Stations	Elev	Description
BM85AQ	44.263000	
BM85AR	30.300000	
BM85AE	33.547000	
BM93F	181.587000	
BM93A	102.842000	
BMEMERY1934	155.600000	
BMWBR3	27.640000	
BMWBR10	72.220000	
BMWBR20	139.680000	
BM85AD	15.341000	
BM5240Z	124.295000	

Unused Stations

Number of Differential Level Observations (FeetUS) = 225

From	To	Elev Diff	StdErr	Length
BM85AQ	BM85AR	-13.890000	0.009310	2335
BM85AQ	BM9033	-1.940000	0.009358	2359
BM9033	BM85AQ	1.940000	0.009364	2362
BM85AR	BM85AQ	13.870000	0.009226	2293
BM85AQ	BMG12	-10.030000	0.005371	777
BMG12	BM100	-18.350000	0.007855	1662
BM100	BM101	-5.040000	0.006724	1218
BM101	BM100	5.040000	0.006738	1223
BM100	BMG13	20.950000	0.008002	1725
BMG13	BMHYD1	-21.550000	0.006539	1152
BMHYD1	BM9033	27.030000	0.009626	2496
BMG13	BM9033	5.480000	0.011637	3648
BMHYD1	BM102	28.650000	0.004347	509
BM102	BM156	-9.960000	0.007422	1484
BM156	BMWM1	-23.420000	0.005191	726
BMWM1	BM105	-1.820000	0.009260	2310
BM105	BMWM19	8.310000	0.007354	1457
BMWM19	BM9033	25.320000	0.006162	1023
BMWM1	BM103	4.600000	0.007263	1421
BM103	BM104	-4.720000	0.010418	2924
BM104	BMHYD2XCUT	6.390000	0.004916	651
BMHYD2XCUT	BM103	-1.660000	0.009210	2285
BM103	BMWM1	-4.600000	0.007273	1425
BM9033	BM107	-31.050000	0.009474	2418
BM107	BM108	20.510000	0.010843	3167
BM108	BMG14	-6.950000	0.010102	2749
BMG14	LOCCPL165	-3.660000	0.007016	1326
LOCCPL165	BMWM19	-4.100000	0.008702	2040
BM108	BM109	13.130000	0.005725	883
BM109	BM110	66.360000	0.007314	1441
BM110	BMG16	-5.590000	0.005090	698
BMG16	ROCB305	-42.380000	0.009449	2405
ROCB305	BMW4	19.690000	0.005847	921
BMW4	ROCB305	-1.790000	0.009537	2450
ROCB305	BMWM26	-9.430000	0.005470	806
BMWM26	BM111	-24.980000	0.008721	2049

BM111	LOCBCS1217	8.360000	0.004847	633
LOCBCS1217	BMG17	-11.660000	0.005738	887
BMG17	BM112	24.350000	0.009847	2612
BM112	BM113	29.840000	0.006915	1288
BM113	BMW6	-11.790000	0.007580	1548
BMW6	BMG15	-6.120000	0.008930	2148
BMG15	BM114	-2.190000	0.006517	1144
BM114	BM115	-50.330000	0.009548	2456
BM115	ROCBBS641	19.900000	0.006031	980
ROCBBS641	LOCBCS668	3.840000	0.004037	439
LOCBCS668	ROCBGS716	25.490000	0.004568	562
ROCBGS716	BM109	-31.520000	0.005584	840
BM109	BM108	-13.130000	0.006025	978
BM105	BM106	29.460000	0.009574	2469
BM106	BMWM19	-21.150000	0.007953	1704
BMG15	BM118	11.420000	0.008890	2129
BM118	BMG10	-3.230000	0.008779	2076
BMG10	BM117GONE	-66.310000	0.008244	1831
BM117GONE	BM116	-0.490000	0.009539	2451
BM116	BMSTONEPOST	1.650000	0.001278	44
BMSTONEPOST	ROCBBS410	37.460000	0.008603	1994
ROCBBS410	ROCGPLAT444	7.140000	0.004146	463
ROCGPLAT444	HYDSPINDLE	-15.640000	0.004684	591
HYDSPINDLE	ROCGS541	-7.960000	0.005318	762
ROCGS541	BM115	-16.570000	0.004195	474
BM113	BM122	3.720000	0.007663	1582
BM122	BMWM28	-27.580000	0.009614	2490
BMWM28	BMWM25	32.170000	0.009552	2458
BMWM25	BM121	-16.750000	0.007188	1392
BM121	BM120	13.820000	0.009230	2295
BM120	BM119	5.110000	0.008990	2177
BM119	BMG10	-20.240000	0.007685	1591
BMG17	ROCBBS1325	-13.660000	0.007369	1463
ROCBBS1325	ROCBBS1297	3.810000	0.004506	547
ROCBBS1297	LOCBS1273	2.900000	0.003925	415
ROCBBS1325	LOCBS1273	6.710000	0.005976	962
LOCBS1273	LOCCPL1189	18.610000	0.006644	1189
LOCCPL1189	LOCCPL1126	23.240000	0.005719	881
LOCCPL1126	ROCBBS1080	8.150000	0.005141	712
ROCBBS1080	LOCBS49	-2.550000	0.009948	2666
LOCBS49	BMWM11	0.010000	0.004636	579
BMWM11	BM123	26.130000	0.008948	2157
BM123	BMSQRSB123	-0.020000	0.001577	67
BMSQRSB123	BM123	0.020000	0.001577	67
BM123	BMWM11	-26.130000	0.008698	2038
BMWM11	LOCBCSA	16.710000	0.008865	2117
LOCBCSA	LOCBCSB	-26.030000	0.006007	972
LOCBCSB	BMWBR10	-2.390000	0.005514	819
BMWBR10	SQRSB844	43.380000	0.006920	1290
SQRSB844	BMWM25	-9.680000	0.006349	1086
BMWM25	SQRNCLO	-3.000000	0.004204	476
SQRNCLO	ROCBBS777	-1.580000	0.005500	815
ROCBBS777	ROCBBS843	-1.100000	0.005702	876
ROCBBS843	BMWM15	23.150000	0.006713	1214
BMWM15	LOCBCS930	1.890000	0.002230	134
LOCBCS930	BM124	32.730000	0.010429	2930
BM124	TBM76	0.460000	0.009364	2362
TBM76	BM125	-7.650000	0.006255	1054
BM125	ROCCS91	-11.180000	0.007400	1475
ROCCS91	BM126	-7.770000	0.007230	1408
BM126	BM127	-16.840000	0.009548	2456
BM127	BMWM12	-7.950000	0.010772	3126
BMWM12	ROCCPL731	-9.630000	0.008051	1746
ROCCPL731	BMWM11	-13.520000	0.007324	1445
BM124	BM128	-19.180000	0.008186	1805
BM128	BM129	11.610000	0.003656	360
BM129	ROCBBS3266	5.030000	0.007833	1653
ROCBBS3266	BM130	-5.060000	0.006997	1319
BM130	BMG4	-1.510000	0.010635	3047
BMG4	LOCBCS391	-0.510000	0.005891	935
LOCBCS391	BMWBR20	-8.660000	0.007472	1504

BMWBR20	BM125	11.100000	0.009288	2324
BM127	BMC21	38.250000	0.012007	3884
BMC21	TBM131	-19.640000	0.008728	2052
TBM131	BM132	6.190000	0.006393	1101
BM132	BMC11	-11.390000	0.004817	625
BMC11	BMRR1	-11.520000	0.006013	974
BMRR1	BM133	35.110000	0.008625	2004
BM133	BM3061	-0.570000	0.008819	2095
BM3061	BM134	-40.070000	0.007629	1568
BM134	BM135	7.350000	0.006787	1241
BM135	BM126	13.130000	0.008002	1725
BM134	BM33	35.290000	0.013079	4608
BM33	BM34	-5.510000	0.005876	930
BM34	BM30	15.180000	0.006497	1137
BM30	BM29	5.520000	0.006582	1167
BM29	ROCB2CS135	-23.870000	0.006760	1231
ROCB2CS135	ROCB2CS8	2.090000	0.005748	890
ROCB2CS8	BMWM24	-1.620000	0.006847	1263
BMWM24	BM136	24.680000	0.009053	2208
BM136	BM137	19.180000	0.011178	3366
BM137	BM68J17A	13.500000	0.008917	2142
BM68J17A	BMWM14	-24.300000	0.008023	1734
BMWM14	BMH13	19.210000	0.007186	1391
BMH13	BMWM16	-8.160000	0.004751	608
BMWM16	BM3060	-53.430000	0.007965	1709
BM3060	BM135	-10.380000	0.006153	1020
BMG17	BMWBR3	-15.770000	0.004692	593
BMWBR3	BM138	35.820000	0.009016	2190
BM138	LOCBSGS52	-23.410000	0.006132	1013
LOCBSGS52	ROCB2CS1325	-10.320000	0.008882	2125
BMG10	ROCB2CS31	2.050000	0.007585	1550
ROCB2CS31	BMWM18	12.600000	0.007034	1333
BMWM18	BM139	17.680000	0.008950	2158
BM139	BMG9	-5.200000	0.009462	2412
BMG9	ROCB2CS131	23.400000	0.010324	2871
ROCB2CS131	BMWM22	5.160000	0.005152	715
BMWM22	BM140	18.840000	0.008140	1785
BM140	BM130	-12.040000	0.010333	2876
LOCCPL1189	BMWM36	66.730000	0.010558	3003
BMWM36	BMWM17	-49.440000	0.007641	1573
BMWM17	LOCBSGS1273	-35.920000	0.009529	2446
BMG4	LOCBSGS220	14.530000	0.007100	1358
LOCBSGS220	BMWM27	33.040000	0.007445	1493
BMWM27	BMWBR22	-33.850000	0.009589	2477
BMWBR22	BM68J11	-2.920000	0.007494	1513
BM68J11	BM141	-9.540000	0.006760	1231
BM141	BM142	20.600000	0.008764	2069
BM142	BM125	-19.860000	0.010935	3221
BMH13	BM142	-20.020000	0.007871	1669
BM142	BM141	-20.600000	0.007651	1577
BM141	BM143	31.630000	0.009014	2189
BM143	BMC22	-3.530000	0.008530	1960
BMC22	BMG1	-6.310000	0.009139	2250
BMG1	BM8073	-10.200000	0.005667	865
BM8073	BM93F	19.870000	0.009435	2398
BM93F	BM8074	-25.730000	0.006545	1154
BM8074	LOCBSGS6A	4.320000	0.008965	2165
LOCBSGS6A	BM142	10.520000	0.008606	1995
BMG1	BM144	-12.970000	0.009109	2235
BM144	BMG1	12.940000	0.009074	2218
BMC22	BMWM23	-10.020000	0.012304	4078
BMWM23	BMWM13	14.290000	0.009937	2660
BMWM13	BMWM23	-14.280000	0.010050	2721
BMWM23	LOCBSGS70	9.740000	0.008674	2027
LOCBSGS70	BMC22	0.260000	0.008486	1940
BMWBR22	BM68J11	-2.940000	0.007624	1566
BM68J11	BMFULTON	22.100000	0.010597	3025
BMFULTON	BM1W	-8.300000	0.010879	3188
BMFULTON	BM68J12	-8.490000	0.008642	2012
BM68J12	BM1W	0.190000	0.006607	1176
BM1W	BMRIVLAGOONC	0.400000	0.003136	265

BMRIVLAGOONC	BMWBR22	-11.270000	0.011450	3532
BM93F	BM13AF	-24.270000	0.002884	224
BM13AF	BM93F	24.270000	0.005098	700
BM93F	BM8074	-25.710000	0.006638	1187
SQRNCLO	BM145	2.240000	0.007767	1625
BM145	BM146	-5.690000	0.003473	325
BM146	LOCBCS45	1.450000	0.006264	1057
LOCBCS45	SQRNCLO149	8.280000	0.002613	184
SQRNCLO149	BM120	-6.210000	0.010576	3013
SQRNCLO149	BM147	19.040000	0.007752	1619
BM147	BM148	-2.390000	0.003218	279
BM148	BM150MHB	-20.450000	0.005554	831
BM150MHB	BM124	52.610000	0.006741	1224
BMG17	BMWBR6B	22.620000	0.007984	1717
BMWBR6B	BMWBR6A	-0.710000	0.001838	91
BMWBR6A	ROC3S20	-19.340000	0.003815	392
ROC3S20	ROCBCS1325	-16.220000	0.005783	901
BM119	BM93A	-5.300000	0.006099	1002
BM93A	BMG10	-14.950000	0.004805	622
BM124	BM93C	6.070000	0.007477	1506
BM93C	TEM76	-5.590000	0.006087	998
BM113	BM152	1.570000	0.009238	2299
BM152	BM151	2.290000	0.006554	1157
BM151	BMG16	4.160000	0.001702	78
BMG16	BMEMERY1934	50.170000	0.006528	1148
BMEMERY1934	BM151	-54.330000	0.006785	1240
BM85AR	BM150	2.890000	0.002592	181
BM150	BM68J18A	-6.460000	0.006502	1139
BM68J18A	RRSPKUP13	-0.700000	0.001657	74
RRSPKUP13	BM85AR	4.280000	0.006963	1306
BMWM15	BM5240Z	1.060000	0.003558	341
BM5240Z	BMWM15	-1.060000	0.004886	643
BM144	BM9016	-11.050000	0.014395	5582
BM9016	BM144	11.060000	0.014290	5501
BM130	BM9018	20.730000	0.005857	924
BM9018	BMG4	-22.200000	0.008967	2166
ROCBCS31	BM9024	-50.000000	0.014769	5876
BM9024	BM9025	-17.490000	0.013339	4793
BM9025	BM116	-1.370000	0.010528	2986
BM106	BMF42	-25.500000	0.017093	7871
BMF42	BM85AD	2.700000	0.011739	3712
BM85AD	BMJ42	-4.650000	0.015418	6404
BMJ42	BM2	0.410000	0.005712	879
BM2	BM85AE	22.430000	0.013566	4958
BM85AE	BM85AD	-18.220000	0.004723	601
BM85AD	BMF42	-2.680000	0.011723	3702
BMF42	BM106	25.490000	0.017220	7988

NGVD29

```
[File: Z:\StarNet Projects\WEYMOUTH\WEYMOUTH 11-2012 LEVELS NGVD29 - FINAL.DAT]
## 2011~2012 TOWN OF WEYMOUTH
# DIFFERENTIAL LEVELS NETWORK
# 3RD ORDER LEVELING PERFORMED WITH
# SOKKIA SDL 30 LEVEL AND BAR CODED
# ALUMINUM LEVEL ROD
#
# LIST OF 1ST ORDER BENCHMARKS WITH PUBLISHED NGVD29 ELEVATIONS
#
E BMH13 190.600 !
E BM85AQ 44.263 *
E BM85AR 30.300 *
E BM3060 128.992 !
E BM3061 151.350 !
E BMWBR22 162.448 !
E BM85AE 33.547 *
#
# LIST OF 2ND ORDER BENCHMARKS WITH PUBLISHED NGVD29 ELEVATIONS
#
E BM13AF 157.16 !
E BM93F 181.587 *
E BM93A 102.842 *
E BM93C 163.941 !
E BMEERY1934 155.60 *
E BMWBR3 27.64 *
#E BMWBR6A 65.28 *
E BMWBR10 72.22 *
E BMWBR20 139.68 *
E BM68J11 159.52 !
E BM68J12 173.12 !
E BM68J17A 195.69 !
E BM68J18A 26.68 !
E BM85AD 15.341 *
E BM5240Z 124.295 *
#
#
#
# LIST OF APPROXIMATE COORDINATES FOR BENCHMARKS (B.M.)
#.DATA OFF
.UNITS FEETUS
.2D
#
# COORDINATES FROM LEICA MTS RTK CS15
#
C H13 2889150. 805005.
# 13AF
# 85AQ
C 85AR 2913865. 802266.
C 85AD 2915162. 819803.
C 85AE 2914773. 820193.
C F42 2916613. 816793.
C F42 2916597. 816803.
C F42 2916587. 816802.
C J42 2915401. 823525.
C BM2 2915014. 822812.
C 3060 2889812. 807076.
C 3061 2890719. 810529.
C 93C 2892940. 803780.
C 93A 2903784. 801894.
C 93F 2883002. 803869.
C 9033 2914431. 806738.
C EMERY1934 2908178. 808017.
C 68J11 2887049. 802069.
# 68J12 -----Now Gone (2012)
C 68J17A 2887354. 806440.
C 68J18A 2913340. 801548.
C 8073 2881558. 804560.
```


C 8074	2884155.	803846.
C 9016	2874730.	807131.
C 9018	2893122.	798429.
C 9024	2905135.	796376.
C 9025	2906802.	800038.
C 9019	2895950.	793569.
C 9020	2897143.	792308.
C 9021	2899394.	793886.
C 9022	2899471.	795119.
C 9023	2902071.	795330.
C 9026	2909631.	798875.
C 9027	2912028.	796614.
C 9028	2913304.	794116.
#		
C BM100	2915386.	804276.
C BM101	2915611.	803305.
C BM102	2917070.	806668.
C BM103	2918408.	809812.
C BM104	2919515.	812046.
C BM105	2915935.	807918.
C BM106	2915332.	809182.
C BM107	2915332.	809182.
C BM108	2909784.	807096.
C BM109	2908996.	806921.
C BM110	2907943.	807464.
C BM111	2905434.	811252.
C BM112	2904744.	809511.
C BM113	2904464.	808449.
C BM114	2905942.	805326.
C BM115	2908192.	805233.
C BM116	2907168.	801721.
C BM118	2904694.	803531.
C BM119	2902869.	802283.
C BM120	2900988.	803331.
C BM121	2899693.	805188.
C BM122	2899693.	805188.
C BM123	2896186.	813476.
C BM124	2894433.	803657.
C BM125	2891045.	803772.
C BM126	2890702.	806484.
C BM127	2892022.	808494.
C BM128	2893951.	801931.
C BM129	2893954.	801586.
C BM130	2916571.	744175.
C BM131	2889710.	812228.
C BM132	2888687.	812254.
C BM133	2888978.	811501.
C BM134	2890389.	809148.
C BM135	2890031.	808056.
C BM136	2883735.	810219.
C BM137	2886302.	808247.
C BM138	2903883.	814287.
C BM139	2900344.	801002.
C BM140	2895532.	799807.
C BM141	2886714.	803053.
C BM142	2887997.	803847.
C BM143	2884702.	802547.
C BM144	2879134.	804918.
C BM145	2898658.	805003.
C BM146	2898718.	804715.
C BM147	2896534.	803603.
C BM148	2896278.	803697.
C BM149	2898076.	803875.
C BM150	2913689.	802248.
C BM151	2907452.	807949.
C BM152	2906420.	808114.
C BM153	2895648.	803614.
# BM156		
C BMG1	2881082.	803938.
C BMG4	2891395.	799667.
C BMG9	2898401.	799751.

C BMG10 2904279. 801548.
C BMG11 2915429. 809591.
C BMG12 2914129. 805277.
C BMG13 2916517. 805480.
C BMG14 2911522. 808910.
C BMG15 2904905. 805581.
C BMG16 2907521. 807921.
C BMG17 2904174. 811885.
C BMG18 2900937. 801548.
C WBR3 2903820. 812251.
C WBR6A 2903068. 811256.
C WBR6B 2903153. 811230.
C WBR10 2898299. 808254.
C WBR20 2890374. 801679.
C WBR22 2887277. 800719.
BMW1
C BMW4 2908903. 809176.
C BMW6 2904803. 807646.
BM1W
WM1
C WM11 2896945. 811630.
C WM12 2894529. 810183.
C WM13 2877279. 801031.
C WM14 2888023. 804902.
C WM15 2896298. 805325.
C WM16 2889285. 805472.
C WM17 2901109. 810443.
C WM18 2902364. 800634.
C WM19 2914518. 807742.
C WM22 2896712. 801097.
C WM23 2879535. 801576.
C WM24 2883607. 811787.
C WM25 2898904. 806286.
C WM26 2906696. 809935.
C WM27 2888648. 799391.
C WM28 2900966. 807128.
C WM36 2900220. 810768.
C C11 2888243. 812132.
C C21 2891136. 811974.
C C22 2882794. 802761.
SQRNCLO
C BM29 2885174. 809968.
C BM30 2886330. 810056.
C BM33 2887185. 810118.
C BM34 2886828. 810793.
BM150MHB
BMFULTON
BMLAGOONC
SQRNCLO149
C BMHYD1 2916693. 806423.
C BMHYD2XCUT 2916514. 805955.
.DATA OFF
C LOCCPL 165 2912644. 808377.
C ROCBCS 305 2908111. 809598.
C ROCBCS 972 2907109. 809554.
C LOCBCS 1217 2904866. 811419.
C ROCBBS 641 2908282. 806097.
C LOCBCS 668 2908464. 806438.
C ROCBGS 716 2908490. 806861.
C BMSTONEPOST 2907154. 801692.
C ROCBCS 410 2907531 803500.
C ROCGPLAT444 2907758. 803858.
HYDSPINDLE
C ROCGS 541 2908208. 804959.
C ROCBCS 1325 2902859. 812076.
C ROCBCS 1297 2902488. 812136.
C LOCGS 1273 2902244. 812137.
C LOCCPLAT1189 2901179. 812037.
C LOCCPL1126-1128 2900414. 812078.
C ROCBCS 1080 2899869. 811950.
C LOCBCS 49 2897373. 811750.

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# BMSQRSB 123
# LOCBCSA
# LOCBCSB
C SQRSB 844 2898691. 807132.
C ROCBCS 777 2897803. 806099.
C ROCBCS 843 2897337. 805386.
C LOCBCS 930 2896334. 805341.
C TBM UP76 2892098. 803780.
C ROCCS 91 2890889. 805183.
C ROCCPL 731 2896078. 810622.
C ROCBC3S 266 2893710. 800013.
C LOCBCS 391 2890890. 800424.
C BMRR1 2887812. 811920.
C ROCB2CS 135 2884963. 811095.
C ROCBCS 8 2884840. 811867.
# LOCBGS 52
C ROCBCS 31 2903578. 800368.
# ROCBCS 131
C LOCBGS 1273 2902244. 812137.
C LOCBCS 220 2890093. 799536.
C LOCBCS 6A 2886051. 803935.
C LOCBCS 70 2881173. 802419.
C LOCBCS 45 2898145. 803958.
# ROC3S 20
# RRSFKUP13
#
.UNITS FEETUS
.DATA ON
.3D
#
# VERTICAL ELEVATION OBSERVATIONS BETWEEN B.M.
# WITH DISTANCES OF LEVEL SEGMENTS (FEET)
L BM85AQ-BM85AR -13.89 2335
L BM85AQ-BM9033 -1.94 2359
L BM9033-BM85AQ 1.94 2362
L BM85AR-BM85AQ 13.87 2293
L BM85AQ-BMG12 -10.03 777
L BMG12-BM100 -18.35 1662
L BM100-BM101 -5.04 1218
L BM101-BM100 5.04 1223
L BM100-BMG13 20.95 1725
L BMG13-BMHYD1 -21.55 1152
L BMHYD1-BM9033 27.03 2496
L BMG13-BM9033 5.48 3648
L BMHYD1-BM102 28.65 509
L BM102-BM156 -9.96 1484
L BM156-BMWM1 -23.42 726
L BMWM1-BM105 -1.82 2310
L BM105-BMWM19 8.31 1457
L BMWM19-BM9033 25.32 1023
L BMWM1-BM103 4.60 1421
L BM103-BM104 -4.72 2924
L BM104-BMHYD2XCUT 6.39 651
L BMHYD2XCUT-BM103 -1.66 2285
L BM103-BMWM1 -4.60 1425
L BM9033-BM107 -31.05 2418
L BM107-BM108 20.51 3167
L BM108-BMG14 -6.95 2749
L BMG14-LOCCPL165 -3.66 1326
L LOCCPL165-BMWM19 -4.10 2040
L BM108-BM109 13.13 883
L BM109-BM110 66.36 1441
L BM110-BMG16 -5.59 698
L BMG16-ROCBCS305 -42.38 2405
L ROCBCS305-BMW4 19.69 921
L BMW4-ROCBCS972 -1.79 2450
L ROCBCS972-BMWM26 -9.43 806
L BMWM26-BM111 -24.98 2049
L BM111-LOCBCS1217 8.36 633
L LOCBCS1217-BMG17 -11.66 887
L BMG17-BM112 24.35 2612

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L BM112-BM113 29.84 1288
L BM113-BMW6 -11.79 1548
L BMW6-BMG15 -6.12 2148
L BMG15-BM114 -2.19 1144
L BM114-BM115 -50.33 2456
L BM115-ROCBBS641 19.90 980
L ROCBBS641-LOCBCS668 3.84 439
L LOCBCS668-ROCBGS716 25.49 562
L ROCBGS716-BM109 -31.52 840
L BM109-BM108 -13.13 978
L BM105-BM106 29.46 2469
L BM106-BMWM19 -21.15 1704
L BMG15-BM118 11.42 2129
L BM118-BMG10 -3.23 2076
L BMG10-BM117GONE -66.31 1831
L BM117GONE-BM116 -0.49 2451
L BM116-BMSTONEPOST 1.65 44
L BMSTONEPOST-ROCBBS410 37.46 1994
L ROCBBS410-ROCGPLAT444 7.14 463
L ROCGPLAT444-HYDSPINDLE -15.64 591
L HYDSPINDLE-ROCGS541 -7.96 762
L ROCGS541-BM115 -16.57 474
L BM113-BM122 3.72 1582
L BM122-BMWM28 -27.58 2490
L BMWM28-BMWM25 32.17 2458
L BMWM25-BM121 -16.75 1392
L BM121-BM120 13.82 2295
L BM120-BM119 5.11 2177
L BM119-BMG10 -20.24 1591
L BMG17-ROCBBS1325 -13.66 1463
L ROCBBS1325-ROCBBS1297 3.81 547
L ROCBBS1297-LOCGS1273 2.90 415
L ROCBBS1325-LOCGS1273 6.71 962
L LOCGS1273-LOCCPL1189 18.61 1189
L LOCCPL1189-LOCCPL1126 23.24 881
L LOCCPL1126-ROCBBS1080 8.15 712
L ROCBBS1080-LOCBBS49 -2.55 2666
L LOCBBS49-BMWM11 0.01 579
L BMWM11-BM123 26.13 2157
L BM123-BMSQRSB123 -0.02 67
L BMSQRSB123-BM123 0.02 67
L BM123-BMWM11 -26.13 2038
L BMWM11-LOCBCSA 16.71 2117
L LOCBCSA-LOCBCSB -26.03 972
L LOCBCSB-BMWBR10 -2.39 819
L BMWBR10-SQRSB844 43.38 1290
L SQRSB844-BMWM25 -9.68 1086
L BMWM25-SQRNCLO -3.00 476
L SQRNCLO-ROCBBS777 -1.58 815
L ROCBBS777-ROCBBS843 -1.10 876
L ROCBBS843-BMWM15 23.15 1214
L BMWM15-LOCBCS930 1.89 134
L LOCBCS930-BM124 32.73 2930
L BM124-TBM76 0.46 2362
L TBM76-BM125 -7.65 1054
L BM125-ROCCS91 -11.18 1475
L ROCCS91-BM126 -7.77 1408
L BM126-BM127 -16.84 2456
L BM127-BMWM12 -7.95 3126
L BMWM12-ROCCPL731 -9.63 1746
L ROCCPL731-BMWM11 -13.52 1445
L BM124-BM128 -19.18 1805
L BM128-BM129 11.61 360
L BM129-ROCBBS3S266 5.03 1653
L ROCBBS3S266-BM130 -5.06 1319
L BM130-BMG4 -1.51 3047
L BMG4-LOCBCS391 -0.51 935
L LOCBCS391-BMWBR20 -8.66 1504
L BMWBR20-BM125 11.10 2324
L BM127-BMC21 38.25 3884
L BMC21-TBM131 -19.64 2052

L TBM131-BM132 6.19 1101
L BM132-BMC11 -11.39 625
L BMC11-BMRR1 -11.52 974
L BMRR1-BM133 35.11 2004
L BM133-BM3061 -0.57 2095
L BM3061-BM134 -40.07 1568
L BM134-BM135 7.35 1241
L BM135-BM126 13.13 1725
L BM134-BM33 35.29 4608
L BM33-BM34 -5.51 930
L BM34-BM30 15.18 1137
L BM30-BM29 5.52 1167
L BM29-ROCB2CS135 -23.87 1231
L ROCB2CS135-ROCB2CS8 2.09 890
L ROCB2CS8-BMWM24 -1.62 1263
L BMWM24-BM136 24.68 2208
L BM136-BM137 19.18 3366
L BM137-BM68J17A 13.50 2142
L BM68J17A-BMWM14 -24.30 1734
L BMWM14-BMH13 19.21 1391
L BMH13-BMWM16 -8.16 608
L BMWM16-BM3060 -53.43 1709
L BM3060-BM135 -10.38 1020
L BMG17-BMWBR3 -15.77 593
L BMWBR3-BM138 35.82 2190
L BM138-LOCBS52 -23.41 1013
L LOCBS52-ROCB2CS1325 -10.32 2125
L BMG10-ROCB2CS31 2.05 1550
L ROCB2CS31-BMWM18 12.60 1333
L BMWM18-BM139 17.68 2158
L BM139-BMG9 -5.20 2412
L BMG9-ROCB2CS131 23.40 2871
L ROCB2CS131-BMWM22 5.16 715
L BMWM22-BM140 18.84 1785
L BM140-BM130 -12.04 2876
L LOCCPL1189-BMWM36 66.73 3003
L BMWM36-BMWM17 -49.44 1573
L BMWM17-LOCBS1273 -35.92 2446
L BMG4-LOCBS220 14.53 1358
L LOCBS220-BMWM27 33.04 1493
L BMWM27-BMWBR22 -33.85 2477
L BMWBR22-BM68J11 -2.92 1513
L BM68J11-BM141 -9.54 1231
L BM141-BM142 20.60 2069
L BM142-BM125 -19.86 3221
L BMH13-BM142 -20.02 1669
L BM142-BM141 -20.60 1577
L BM141-BM143 31.63 2189
L BM143-BMC22 -3.53 1960
L BMC22-BMG1 -6.31 2250
L BMG1-BM8073 -10.20 865
L BM8073-BM93F 19.87 2398
L BM93F-BM8074 -25.73 1154
L BM8074-LOCBS6A 4.32 2165
L LOCBS6A-BM142 10.52 1995
L BMG1-BM144 -12.97 2235
L BM144-BMG1 12.94 2218
L BMC22-BMWM23 -10.02 4078
L BMWM23-BMWM13 14.29 2660
L BMWM13-BMWM23 -14.28 2721
L BMWM23-LOCBS70 9.74 2027
L LOCBS70-BMC22 0.26 1940
L BMWBR22-BM68J11 -2.94 1566
L BM68J11-BMFULTON 22.10 3025
L BMFULTON-BM1W -8.30 3188
L BMFULTON-BM68J12 -8.49 2012
L BM68J12-BM1W 0.19 1176
L BM1W-BMRIVLAGOONC 0.40 265
L BMRIVLAGOONC-BMWBR22 -11.27 3532
L BM93F-BM13AF -24.27 224
L BM13AF-BM93F 24.27 700

L BM93F-BM8074 -25.71 1187
L SQRNCLO-BM145 2.24 1625
L BM145-BM146 -5.69 325
L BM146-LOCBCS45 1.45 1057
L LOCBCS45-SQRNCLO149 8.28 184
L SQRNCLO149-BM120 -6.21 3013
L SQRNCLO149-BM147 19.04 1619
L BM147-BM148 -2.39 279
L BM148-BM150MHB -20.45 831
L BM150MHB-BM124 52.61 1224
L BMG17-BMWBR6B 22.62 1717
L BMWBR6B-BMWBR6A -0.71 91
L BMWBR6A-ROC3S20 -19.34 392
L ROC3S20-ROCBCS1325 -16.22 901
L BM119-BM93A -5.30 1002
L BM93A-BMG10 -14.95 622
L BM124-BM93C 6.07 1506
L BM93C-TBM76 -5.59 998
L BM113-BM152 1.57 2299
L BM152-BM151 2.29 1157
L BM151-BMG16 4.16 78
L BMG16-BMEMERY1934 50.17 1148
L BMEMERY1934-BM151 -54.33 1240
L BM85AR-BM150 2.89 181
L BM150-BM68J18A -6.46 1139
L BM68J18A-RRSPKUP13 -0.70 74
L RRSPKUP13-BM85AR 4.28 1306

L BMWM15-BM5240Z 1.06 341
L BM5240Z-BMWM15 -1.06 643

L BM144-BM9016 -11.05 5582
L BM9016-BM144 11.06 5501
L BM130-BM9018 20.73 924
L BM9018-BMG4 -22.20 2166

L ROCBCS31-BM9024 -50.00 5876
L BM9024-BM9025 -17.49 4793
L BM9025-BM116 -1.37 2986

L BM106-BMF42 -25.50 7871
L BMF42-BM85AD 2.70 3712
L BM85AD-BMJ42 -4.65 6404
L BMJ42-BM2 0.41 879
L BM2-BM85AE 22.43 4958
L BM85AE-BM85AD -18.22 601
L BM85AD-BMF42 -2.68 3702
L BMF42-BM106 25.49 7988

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ADJUSTED BENCH MARKS

WEYMOUTH First Order Bench Marks (Continued)H13

In South Weymouth. A U.S.C. & G.S. standard bench mark disk, stamped "H13-M.G.S.-1936-190.600", set in the east end of the first step at the southwest entrance to the Fogg Library. August 1936. Recovered in good condition February 1940. 190.600 feet

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 10625

Station: WEYMOUTH BACK RIVER 22

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Order: -

Data Source NAD27:

State Plane Coordinate Zone: 2001

Vertical

Elevation: 162.448 Feet

Datum: NGVD29

Order: 1st

Elevation: -

Datum: -

Order: -

Stamping: -

Marked By: CHISELED SQUARE

Description: WEYMOUTH BACK RIVER 22, SOUTH WEYMOUTH, ABOUT 2300 FT WEST OF DEPOT, SOUTH OF RANDOLPH STREET, IN THE SOUTHWEST CORNER OF THE WEST END OF THE SOUTH CONCRETE DAM ABUTMENT OF THE MILL RIVER AT WEYMOUTH GREAT POND.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD83/96 (Meters)

Northing:

Latitude (NAD83/96):

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Easting:

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 10589

Station: 3060

Sketch(s) Available: No

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Data Source NAD27:

Order: -

State Plane Coordinate Zone: 2001

Vertical

Elevation: 128.992 Feet

Datum: NGVD29

Order: 1st

Elevation: -

Datum: -

Order: -

Stamping: -

Marked By: MONEL RIVET

Description: ABOUT 0.4 MI EAST OF SOUTH WEYMOUTH SQUARE, 9.9 FT NORTH OF NORTH EDGE OF PAVEMENT, 14.2 FT WEST OF CENTERLINE OF DRIVEWAY TO HOUSE 108 TALBOT STREET, 12 FT SOUTH OF FIRST STEP, SET IN THE SOUTH END ON THE EAST SIDE OF CONCRETE WALK, ABOUT 6 INCHES ABOVE THE HIGHWAY.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 10590

Station: 3061

Sketch(s) Available: No

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Order: -

Data Source NAD27:

State Plane Coordinate Zone: 2001

Vertical

Elevation: 151.350 Feet

Datum: NGVD29

Order: 1st

Elevation: -

Datum: -

Order: -

Stamping: -

Marked By: MONEL RIVET IN BOUND UP 5 INCHES

Description: ABOUT 1.1 MI EAST OF SOUTH WEYMOUTH SQUARE, 30 FT SOUTH OF CENTERLINE OF TALBOT STREET, IN FRONT OF HOUSE 393, 2 FT NORTHWEST OF 12 INCH MAPLE TREE, 55 FT EAST OF CENTERLINE OF DRIVEWAY TO HOUSE 393, 63 FT WEST OF CENTERLINE OF PINE ST.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 7813

Station: 85 AR

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Data Source NAD27:

Order: -

State Plane Coordinate Zone: 2001

Vertical

Elevation: 30.300 Feet

Datum: NGVD29

Order: 2nd

Elevation: -

Datum: -

Order: -

Stamping: 85 A R 30.300

Marked By: MAGS DISK IN CONCRETE MONUMENT DOWN 2 INCHES

Description: NORTH WEYMOUTH, AT THE JUNCTION OF ROUTE 3A (BRIDGE STREET) AND BLUFF ROAD, 41.5 FT SOUTH OF THE CENTER OF ROUTE 3A, 22 FT WEST OF THE CENTER OF BLUFF ROAD, 51.9 FT SOUTHEAST OF THE SOUTHEAST CORNER OF AUTO PARTS STORE, 34.0 FT NORTHEAST OF POLE 79/1, 19.4 FT SOUTHWEST OF POLE 19.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 7812

Station: 85 AQ

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Order: -

Data Source NAD27:

State Plane Coordinate Zone: 2001

Vertical

Elevation: 44.263 Feet

Datum: NGVD29

Order: 1st

Elevation: -

Datum: -

Order: -

Stamping: 85 A Q 44.263

Marked By: MAGS DISK IN CONCRETE MONUMENT AT GRADE

Description: NORTH WEYMOUTH, AT THE JUNCTION OF ROUTE 3A (BRIDGE STREET) AND FAIRLAWN ROAD, 68 FT EAST OF THE CENTERLINE INTERSECTION, 64 FT EAST OF THE CENTERLINE OF FAIRLAWN ROAD, 28 FT SOUTH OF THE CENTERLINE OF ROUTE 3A, 29 FT EAST OF HYDRANT OPPOSITE PRATT ST.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 7548

Station: 13 AF

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: 422525.39

Easting: 747533.43

Data Source NAD83:

Order: 3rd

Data Source NAD27: MAGS-ADJ

State Plane Coordinate Zone: 2001

Vertical

Elevation: 157.160 Feet

Datum: NGVD29

Order: 1st

Elevation: -

Datum: -

Order: -

Stamping: -

Marked By: MAGS DISK IN CONCRETE MONUMENT DOWN 18 INCHES

Description: IN THE SOUTH PART OF TOWN, ON THE WEST SIDE OF THE NYNH&H RAILROAD (PLYMOUTH BRANCH), 13.6 FT WEST OF THE WEST RAIL, ABOUT 120 FT NORTHWEST OF THE CENTER OF ROUTE 18 (MAIN STREET), 78 FT NORTH OF NORTHEAST CORNER OF WEST ABUTMENT, 62.3 FT SOUTHWEST OF NORTHWEST CORNER OF THE EAST ABUTMENT.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 7598

Station: 93 A

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: 443115.72

Easting: 745594.51

Data Source NAD83:

Order: 3rd

Data Source NAD27: MAGS-ADJ

State Plane Coordinate Zone: 2001

Vertical

Elevation: 102.842 Feet

Datum: NGVD29

Order: 2nd

Elevation: -

Datum: -

Order: -

Stamping: 93 A

Marked By: MAGS DISK IN CONCRETE MONUMENT AT GRADE

Description: WEYMOUTH LANDING, ON THE EAST SIDE OF ROUTE 3 (WASHINGTON STREET), 26 FT EAST OF THE CENTERLINE, 42 FT SOUTH OF THE CENTERLINE OF VINE STREET, 11.4 FT WEST OF SOUTHWEST CORNER OF HOUSE 254, 23 FT SOUTHWEST OF THE NORTHWEST CORNER, 13.3 FT SOUTH OF HYDRANT, 20.3 FT NORTH OF 20 INCH ELM TREE.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 7599

Station: 93 C

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: 432270.71

Easting: 747480.19

Data Source NAD83:

Order: 3rd

Data Source NAD27: MAGS-ADJ

State Plane Coordinate Zone: 2001

Vertical

Elevation: 163.941 Feet

Datum: NGVD29

Order: 2nd

Elevation: -

Datum: -

Order: -

Stamping: 93 C

Marked By: MAGS DISK IN CONCRETE MONUMENT AT GRADE

Description: ABOUT 0.75 MI NORTH OF SOUTH WEYMOUTH, ON THE EAST SIDE OF MAIN STREET, 26 FT EAST OF THE CENTERLINE, 1431 FT SOUTH OF MIDDLE STREET, 32.0 FT WEST OF SOUTHEAST CORNER OF HOUSE 616, 30.0 FT SOUTHWEST OF FENCE CORNER, 97.0 FT SOUTHEAST OF POLE 29/70, 60.4 FT NORTHEAST OF POLE 29/71.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD83/96 (Meters)

Northing:

Latitude (NAD83/96):

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Easting:

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 7602

Station: 93 F

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: 422334.01

Easting: 747568.95

Data Source NAD83:

Order: 3rd

Data Source NAD27: MAGS-ADJ

State Plane Coordinate Zone: 2001

Vertical

Elevation: 181.587 Feet

Datum: NGVD29

Order: 2nd

Elevation: 55.055 Meters

Datum: NAVD88

Order: 2nd

Stamping: 93 F

Marked By: MAGS DISK IN CONCRETE MONUMENT AT GRADE

Description: ABOUT 1.25 MI SOUTH OF SOUTH WEYMOUTH, ON THE WEST SIDE OF THE ROUTE 18 (MAIN STREET) BRIDGE OVER THE NYNH&H RAILROAD, 21.2 FT WEST OF THE CENTERLINE, 43.2 FT WEST OF SOUTHEAST END OF GIRDER, 94.3 FT SOUTH OF POLE 29/162, 110.2 FT SOUTH OF CENTERLINE OF BRIDGE OVERPASS, 1.2 FT WEST OF CURB.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 10603

Station: EMERY

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Order: -

Data Source NAD27:

State Plane Coordinate Zone: 2001

Vertical

Elevation: 155.600 Feet

Datum: NGVD29

Order: 2nd

Elevation: -

Datum: -

Order: -

Stamping: -

Marked By: MAGS DISK IN CONCRETE MONUMENT DOWN 2 INCHES

Description: WEYMOUTH HEIGHTS, NEAR THE SOUTHEAST CORNER OF HOUSE 790
COMMERCIAL STREET, 139.8 FT SOUTHEAST OF BRICK STEPS, 23 FT EAST OF
NORTHEAST CORNER OF GARAGE, 32 FT NORTHEAST OF SOUTHEAST CORNER, 22.4
FT EAST OF EAST SIDE OF GARAGE.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 10613

Station: WEYMOUTH BACK RIVER 3

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Data Source NAD27:

Order: -

State Plane Coordinate Zone: 2001

Vertical

Elevation: 27.640 Feet

Datum: NGVD29

Order: 2nd

Elevation: -

Datum: -

Order: -

Stamping: -

Marked By: CHISELED SQUARE

Description: EAST WEYMOUTH, AT THE INTERSECTION OF WATER ST AND COMMERCIAL STREET, ON THE EAST END OF SOUTH RETAINING WALL OF COMMERCIAL ST BRIDGE OVER THE RIVER.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 10618

Station: WEYMOUTH BACK RIVER 10

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Data Source NAD27:

Order: -

State Plane Coordinate Zone: 2001

Vertical

Elevation: 72.220 Feet

Datum: NGVD29

Order: 2nd

Elevation: -

Datum: -

Order: -

Stamping: -

Marked By: CHISELED SQUARE

Description: WEYMOUTH BACK RIVER 10: IN THE CENTER OF TOWN, AT THE WHITMANS POND CULVERT UNDER ROUTE 3 (WASHINGTON STREET), ON THE WEST END OF THE SOUTH RETAINING WALL, 11 FT EAST OF THE WEST END.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 10623

Station: WEYMOUTH BACK RIVER 20

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Order: -

Data Source NAD27:

State Plane Coordinate Zone: 2001

Vertical

Elevation: 139.680 Feet

Datum: NGVD29

Order: 2nd

Elevation: 42.305 Meters

Datum: NAVD88

Order: 2nd

Stamping: -

Marked By: CHISELED SQUARE

Description: WEYMOUTH BACK RIVER 20, SOUTH WEYMOUTH, ON THE SOUTH SIDE OF COLUMBIAN STREET, ABOUT 2200 FT WEST OF ROUTE 18 (MAIN STREET), 970 FT EAST OF ROUTE 128 BRIDGE (2.70) OVER THE NYNH&H RAILROAD, ON THE SOUTHEAST CORNER OF THE EAST END OF THE SOUTH ABUTMENT OF THE MILL RIVER BRIDGE.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 10564

Station: 68 J11

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Data Source NAD27:

Order: -

State Plane Coordinate Zone: 2001

Vertical

Elevation: 159.520 Feet

Datum: NGVD29

Order: 2nd

Elevation: -

Datum: -

Order: -

Stamping: -

Marked By: MONEL RIVET IN GRANITE DOORSILL

Description: ABOUT 0.3 MI SOUTHWEST OF SOUTH WEYMOUTH DEPOT, AT THE HOLLIS ST PUMP HOUSE, SET IN THE NORTH END OF DOOSILL AT NORTHWEST END OF PUMP HOUSE, 102 FT NORTHEAST OF CENTERLINE OF HOLLIS STREET, 32 FT SOUTHEAST OF CENTERLINE OF DRIVEWAY. 68-J11 A....MONEL RIVET IN CONCRETE RETAINING WALL 107 FT NORTHEAST OF NORTHEAST CORNER OF PUMP HOUSE, 155 FT EAST OF NORTHEAST CORNER. ELEV 148.86 FT. 68-J11 B....MONEL RIVET IN LEDGE 90 FT NORTH OF DRIVEWAY IN REAR OF PUMP HOUSE, 84 FT NORTHWEST OF 68-J11 A. ELEV 143.59 FT.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

Point ID: 10565

Station: 68 J12

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values**Horizontal****NAD83 (Meters)**

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Order: -

Data Source NAD27:

State Plane Coordinate Zone: 2001

Vertical

Elevation: 173.120 Feet

Datum: NGVD29

Order: 2nd

Elevation: -

Datum: -

Order: -

Stamping: -

Marked By: MONEL RIVET IN SW CORNER TOP CONCRETE STEP

Description: ABOUT 0.75 MI SOUTHWEST OF SOUTH WEYMOUTH DEPOT, AT THE SOUTH PUMP HOUSE OF GREAT POND, SET ON SOUTHWEST CORNER OF STEP AT MAIN ENTRANCE ON NORTHWEST SIDE OF PUMP HOUSE. 68-J12 A....MONEL RIVET ON THRESHOLD ON WEST SIDE OF NORTH PUMP HOUSE 430 FT NORTH OF 68-J12, 30 FT WEST OF DIRT DRIVE. ELEV 164.99 FT. 68-J12 B....MONEL RIVET ON CONCRETE INTAKE BASIN ON EDGE OF GREAT POND 105 FT NORTHWEST OF 68-J12. ELEV 161.91 FT.

To Reach: -

Converted Values**Horizontal****NAD27 (U.S Survey Ft.)**

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

WEYMOUTH Second Order Bench Marks at Water Supply Units (Continued)Ref. BM 68J-17A

A monel rivet, set in lead, on top of a granite bound, at northwest corner of Reed Avenue and Central Street; 21.7 feet west of center line of Reed Avenue; 25 feet north of center line of Central Street; 400 feet south of BM 68J-17 and 32.9 feet southeast of southeast corner of porch. 195.69 feet

BM 68J-18A

A monel rivet, set in lead, on top of a stone bound, at the northerly intersection of Monatiquot Street and Bluff Road; 19.2 feet east from the center line of Monatiquot Street; 26.9 feet north from center line of Bluff Road and 45.2 feet southeasterly from BM 68J-18. 26.68 feet

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 10598

Station: 5240 Z

Sketch(s) Available: No

Quad Name: WEYMOUTH

Town: WEYMOUTH

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Data Source NAD27:

Order: -

State Plane Coordinate Zone: 2001

Vertical

Elevation: 124.295 Feet

Datum: NGVD29

Order: 2nd

Elevation: -

Datum: -

Order: -

Stamping: 5240 Z

Marked By: MAGS BENCHMARK DISK

Description: SET IN THE NORTHEAST END OF THE NORTH CAPLOG OF THE MIDDLE ST
BRIDGE OVER ROUTE 3.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 7810

Station: 85 AD

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: HINGHAM

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: -

Easting: -

Data Source NAD83:

Order: -

Data Source NAD27:

State Plane Coordinate Zone: 2001

Vertical

Elevation: 15.341 Feet

Datum: NGVD29

Order: 2nd

Elevation: -

Datum: -

Order: -

Stamping: 85 AD 15.341

Marked By: MAGS DISK IN CONCRETE MONUMENT DOWN 1 INCH

Description: ABOUT 0.45 MI NORTHWEST ALONG LINCOLN STREET FROM THE POST OFFICE AT HINGHAM, DIRECTLY IN LINE WITH THE EXTENDED CENTERLINE OF BURDITT AVENUE, 18 FT SOUTHWEST OF THE CENTER OF LINCOLN STREET, 6.0 FT NORTHEAST OF HYDRANT, BETWEEN TWO DRIVEWAYS.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Northing:

NAD83/96 (Meters)

Easting:

Latitude (NAD83/96):

Longitude (NAD83/96):

MassHighway Geodetic Data Sheet

NGVD29

Point ID: 7592

Station: 85 AE

Sketch(s) Available: Yes

Quad Name: WEYMOUTH

Town: HINGHAM

Last Recovery: -

Published Values

Horizontal

NAD83 (Meters)

Northing: -

Easting: -

NAD27 (U.S. Survey Ft.)

Northing: 454103.79

Easting: 763892.69

Data Source NAD83:

Order: 3rd

Data Source NAD27: MAGS-ADJ

State Plane Coordinate Zone: 2001

Vertical

Elevation: 33.547 Feet

Datum: NGVD29

Order: 1st

Elevation: -

Datum: -

Order: -

Stamping: 85 AE 33.547

Marked By: MAGS DISK IN CONCRETE MONUMENT AT GRADE

Description: IN THE CENTRAL PART OF TOWN, ON THE SOUTHWEST SIDE OF LINCOLN STREET, 26 FT SOUTHWEST OF THE CENTERLINE, 207 FT SOUTH OF MYLES ROAD, 107 FT SOUTHEAST OF POLE 51-15, 6.1 FT SOUTH OF POLE 51-14, 68.1 FT NORTHWEST OF POLE 51-13, 27.0 FT SOUTHEAST OF SOUTH PILLAR AT DRIVEWAY.

To Reach: -

Converted Values

Horizontal

NAD27 (U.S Survey Ft.)

Northing:

NAD83/96 (Meters)

Northing:

Latitude (NAD83/96):

NAD27 (U.S Survey Ft.)

Easting:

NAD83/96 (Meters)

Easting:

Longitude (NAD83/96):