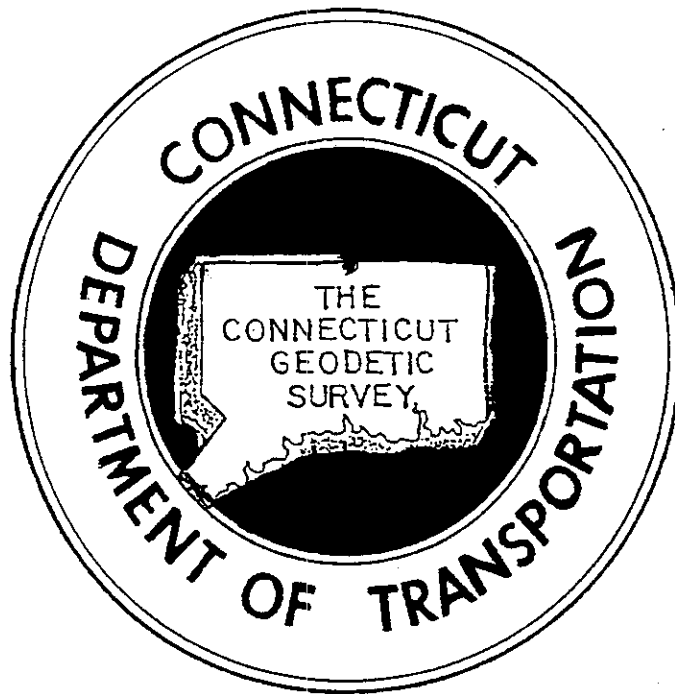


CONNECTICUT
GEODETIC SURVEY
CALIBRATION BASE LINE



COLCHESTER / LEBANON

PUBLISHED BY
CONNECTICUT DEPARTMENT OF TRANSPORTATION
CENTRAL SURVEYS

1994

COLCHESTER - LEBANON

EDM BASE LINE

STANDARD OPERATING PROCEDURES

Location: Connecticut Route 2 (Eastbound lane) at the Colchester-Lebanon Town Line

This calibrated base line was set and calibrated by guidelines set forth by the National Geodetic Survey and the results of this calibration are published by the Connecticut Geodetic Survey.

Because of the location of the base line, on a limited access highway, the following guidelines must be strictly adhered to when using this site.

1. A permit must be obtained for use of this base line by completing the enclosed permit applications and forwarding them to the Permits Section located in District 2, Norwich, CT (telephone 823-3230).
2. Orange safety vests will be worn by all personnel at all times while at the base line site.
3. Safety signs (Surveyors on Pavement) must be located prior to the base line to warn oncoming traffic.
4. Vehicles must be parked far enough from the travel portion of the road as not to impede traffic flow or vehicle sight line.
5. At no time must the turnarounds that are posted for "Authorized Persons Only" be used for turn around purposes. All vehicles must go to the next interchange and use the interchanges for purposes of reversing travel.
6. The continued use of this base line by all personnel will depend on strict adherence to procedures outlined above.

Date:

PMT-1 Rev. 5/91
State of Connecticut
Department of Transportation
APPLICATION FOR PERMIT
Printed on Recycled or Recovered Paper

This form must be filled out completely. Mail or deliver to:
CONNDOT, District 2, Permit Section
171 Salem Turnpike
Norwich, CT 06360

Fee: (for DOT use)

N/A

LOCATION OF PROPOSED WORK:

(a) Town: Colchester (b) Route: 2 (c) Street Name & No. _____
(d) (Circle One) N. (S) E. W. side of Highway. (e) Located Between Utility Poles No. _____ & No. _____
(f) Distance and direction from nearest intersecting road. 2.12 Miles (N. S. (E) W.) of Chestnut Hill St. (R)

Application is hereby made to: (Describe fully & include sketch or attach plans) USE OF A CALIBRATED ELECTRONIC DISTANCE METER (EDM) RANGE LOCATED ON ROUTE 2 (SOUTHBOUND)



← CONN ROUTE 2 WESTBOUND

CONN. ROUTE 2 EASTBOUND →

▲ CTGS 6508

▲ CTGS 6509

▲ CTGS 6510

▲ CTGS 6511

■ RAN B 3559

LEBANON TOWN
COLCHESTER LINE

Name of Surety Company & amount of Bond

N/A

Party to whom Bond is issued:

Print Name N/A

Signed _____ Phone _____

Party to whom Insurance is issued:

Print Name _____

Signed _____ Phone _____

Approximate Time Required

Desired Starting Date

Complete Plans and Specifications must be submitted for major encroachment permits. On other work a careful sketch shall be shown in space above or on back side of application.

Permit to be issued to:

Name _____

& _____

Address _____

Town _____ ZIP _____

The owner of the property for whom this work is being performed agrees to accept all future maintenance responsibility for the work specified in the permit.

Print Owner's Name N/A

Address _____

Signed _____ Phone _____

CERTIFICATE OF INSURANCE

This is to certify that the Insurance Company named herein has issued to the named insured the policies listed below, that these policies are written in accordance with the Insurance Company's standard policies and endorsements, except as indicated below or as noted in the attachments hereto, which policies and endorsements will be made available to the Department of Transportation upon request, that they provide coverages and limits of liability shown with respect to the hazards indicated, that they are in force on this date, that all deductible amounts are indicated below, and that this Certificate is furnished in accordance with and for the purpose of satisfying the requirements of the Department of Transportation in connection with the award and performance of any contract or agreement, or the issuance of any permit or authorization by the Transportation Commissioner or duly authorized agent. The Insurance Company agrees to investigate and defend the insured against all claims for damages, even if groundless.

✓ NAME OF INSURED _____
✓ ADDRESS _____ CITY _____ STATE _____

Hazards	Policy Number	Effective Date	Expiration Date	Coverages and Limits of Liability	
				Bodily Injury Liability and Property Damage Liability	
				All Persons/All Damages Each Accident or Occurrence	AGGREGATE
✓ *A Protective Liability for and in the name of the State of Conn. (1) See Below					
*B Contractor's Public Liability					
*C Contractor's Protective Liability					
*D Contractual Liability (1) (2) See Below					
E Completed Operations Liability					
F Explosion, Collapse, or Underground Damage Liability					
G Automobile Liability Owned Automobiles Hired Automobiles Non-owned Automobiles					
H Railroad Liability					
I					
J Valuable Papers and Records	xxxxxx	xxxxxx	xxxxxx	Possession	All Other
Valuable Papers and Records					
K **Workers' Compensation				Statutory	Coverages and Limits

* State of Connecticut is Named As Additional Insured
** Compensation Commissioner's Certificate shall be supplied herewith by self-insured party.

Check This certificate is issued in accordance with the terms of:

Construction Contracts Maintenance Work (by Purchase Order) Demolition Contracts

Permit Work No. _____ Lease Agreement Rights of Way Agree No. _____

Engineering Project No. _____ Other Specify & including all operations incidental thereto.

PARTY FOR NOTICE Bureau: _____ Unit: _____ Title: _____

(1) It is agreed that the herein named Insurance Company waives governmental immunity as a defense and will not use the defense of governmental immunity in the adjustment of claims or in the defense of any suit brought against the State, and it is further agreed that the Insurance Company will bill premiums and audit charges earned under the protective liability policy to the above named insured.

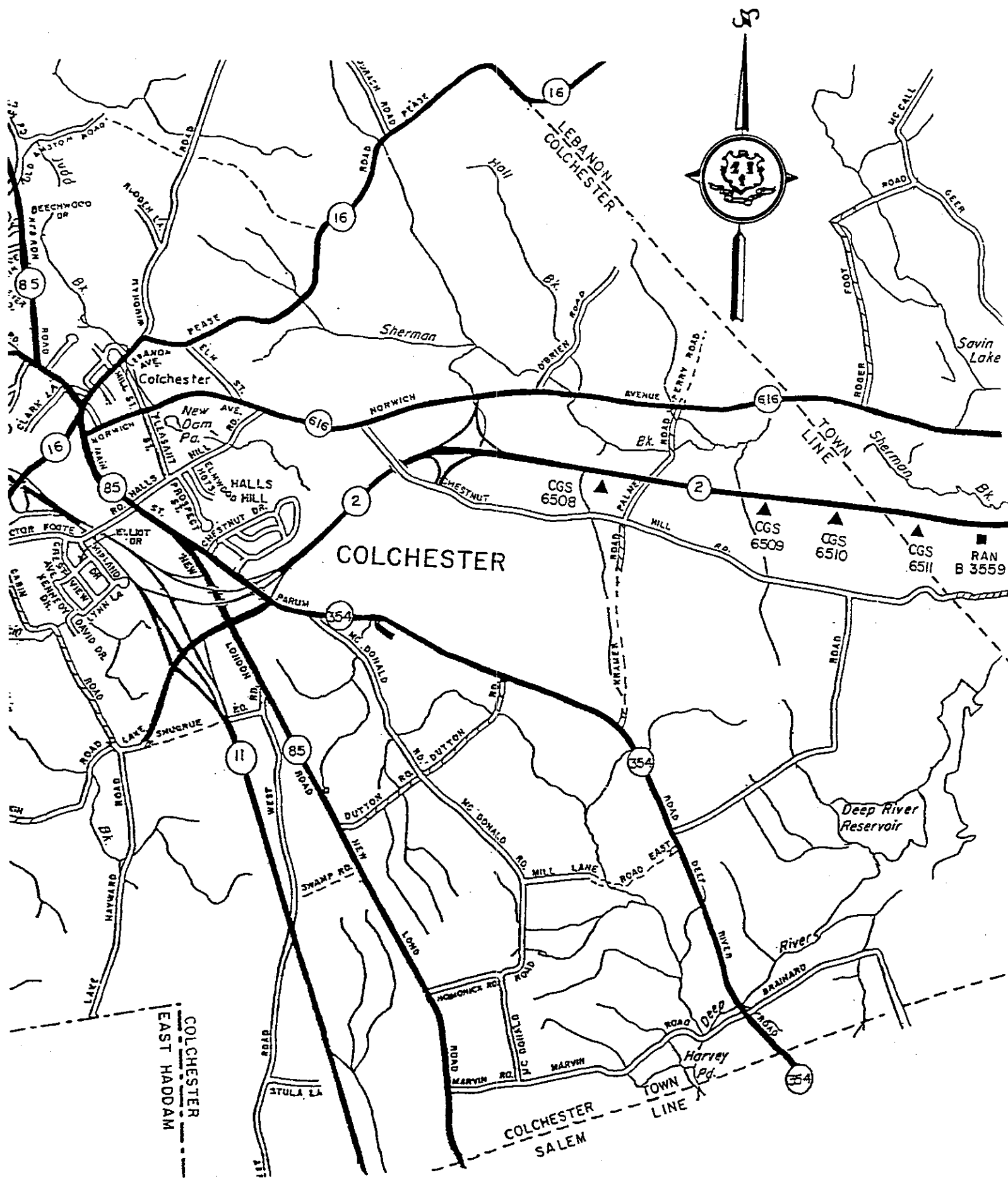
(2) LIABILITY - The insured shall at all times indemnify and save harmless the State of Connecticut, the Department of Transportation, and their respective officers, agents, and employees, on account of any and all claims, damages, losses, litigation, expenses, counsel fees, and compensation arising out of injuries (including death) sustained by or alleged to have been sustained by the officers, agents, and employees of said State or Department or of the insured, his subcontractors, or materialmen, and from injuries (including death) sustained by or alleged to have been sustained by the public, any or all persons on or near the work, or by any other person or property, real or personal (including property of said State or Department) caused in whole or in part by the acts, omissions, neglect of the Insured, including but not limited to any neglect in safeguarding the work or through the use of unacceptable materials in constructing the work, of the contractor or permittee, any subcontractor, materialman, or anyone directly or indirectly employed by them or any of them while engaged in the performance of the contract, or agreement, or work under a permit, including the entire elapsed time from the date ordered to start work or the actual start whichever occurs first until the completion as certified by the Department of Transportation.

IN THE EVENT OF ANY RESTRICTIVE AMENDMENT TO, ANY CHANGE IN, CANCELLATION OF OR FAILURE TO RENEW ANY ONE OR MORE OF SAID POLICIES, THE _____ (Insurance Company) SHALL GIVE NOT LESS THAN THIRTY DAYS WRITTEN NOTICE TO THE PARTY FOR NOTICE TO WHOM THIS CERTIFICATE IS ISSUED OF SUCH AMENDMENT, CHANGE, CANCELLATION, OR FAILURE TO RENEW.

✓ DATED THIS _____ DAY OF _____ 19 _____

ISSUED TO DEPARTMENT OF TRANSPORTATION
DOCUMENTS PROCESSING
24 WOLCOTT HILL ROAD, WETHERSFIELD, CONNECTICUT 06109

✓ _____ (INSURANCE COMPANY)
✓ _____ (ADDRESS)
✓ _____ (AGENCY)
✓ _____ (ADDRESS)
✓ _____ (AUTHORIZED AGENT'S NAME & SIGNATURE)



COLCHESTER
EAST HADDAM

COLCHESTER
SALEM

COLCHESTER

LEBANON
COLCHESTER

Savin Lake

Deep River Reservoir

Harvey

Rivers

Sherman

Bk.

TOWN LINE

Sherman

RAN B 3559

CGS 6509

CGS 6510

CGS 6511

CGS 6508

2

2

616

616

16

85

354

354

11

85

16

16

16

5

8

16

8

8

8

8

8

8

8

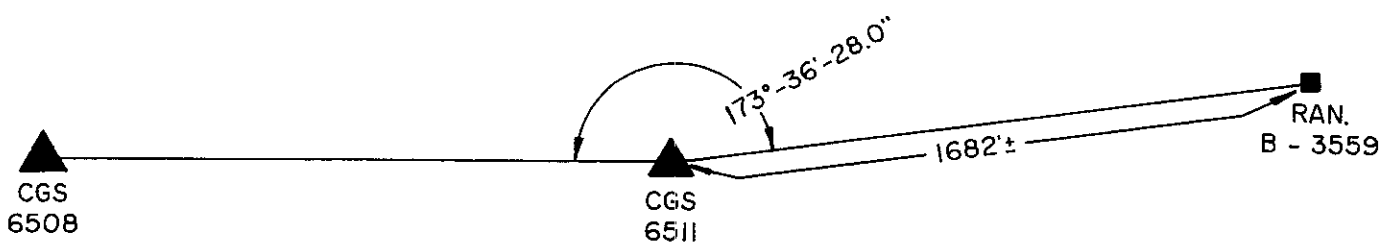
8

8

55



ANGULAR BASELINE RANGE



TOWN Lebanon **CONNECTICUT** **GEODETIC SURVEY** **STATION** Random B-3559

DATE SET December 1993 **QUADRANGLE** 410721 Norwich **ORDER OF ACCURACY** Horizontal

DATE DESCRIBED December 1993 **U.S.G.S MAP** Fitchville **Vertical**

COMPUTATION VOLUME BOOKS G-2 **R.O.W. MAP** 70-08 Sheet 3

1927 NORTH AMERICAN DATUM (N.A.D.27)

STATE PLANE COORDINATES (FEET)

X =
Y =
DATE:

STATE PLANE COORDINATES (FEET)

NORTHING =
EASTING =
DATE:

(METERS)

(METERS)

(METERS)

(METERS)

GEOGRAPHIC POSITION

LAT.
LONG.
ϕ =
DATE:

GEOGRAPHIC POSITION

LAT.
LONG.
ϕ =
DATE:

GEOGRAPHIC POSITION

LAT.
LONG.
ϕ =
DATE:

GEOGRAPHIC POSITION

LAT.
LONG.
ϕ =
DATE:

OBJECT

DISTANCE FT.

DIRECTION

PLANE AZIMUTH (0°South)

OBJECT

DISTANCE FT.

DIRECTION

PLANE AZIMUTH (0°North)

CTGS 6511	± 1,682.32	00 00 00	
RP 1	21.16	143 35 02	
RM 1	64.60	177 46 01	
RM 2	21.95	261 02 56	

ELEV. 1929 NATIONAL GEODETIC VERTICAL DATUM(NG.V.D 29)

ELEV. 1988 NORTH AMERICAN VERTICAL DATUM(N.A.V.D 88)

FEET METERS	FEET METERS
DATE:	DATE:

METRIC CONVERSION FACTOR USING THE U.S. SURVEY FOOT (Meter equals(Exactly) 39.37 inches P - Indicates Preliminary Value	FEET METERS	FEET METERS
	DATE:	DATE:

TOWN Lebanon

STATION Random B-3559

DESCRIPTION: The Station Mark is a standard CHD Boundary bronze disk, stamped B-3559, set into the top of a reinforced concrete post which is flush with the surface of the ground.
 To reach the station from the intersection of Chestnut Hill Road and CT Route 2 in Colchester, proceed east on CT Route 2 for 3.34 miles (entering Lebanon) to the station on the right (south).
 The station is located 157.0 feet east of the eastern anchor point of a wire rope guide fence, 64.6 feet west of a 6 inch red cedar tree, 36.5 feet south of the painted center line of CT Route 2 (eastbound) and 22.0 feet north of a red cedar tree.

RM 1: East of Station: A drill hole in a railroad spike driven into a 6 inch cedar tree at a height of 21 inches above the ground. It is located 221.5 feet east of the east end of a wire rope guide fence, 44.0 feet south of the painted center line of CT Route 2 (eastbound) and 19.7 feet south of the south edge of the pavement.

RM 2: South of Station: A drill hole in a railroad spike driven into a 6 inch cedar tree at a height of 10 inches above the ground. It is located 157.0 feet east of the east end of a wire rope guide fence, 58.5 feet south of the painted center line of CT Route 2 (eastbound) and 12.4 feet south of the south edge of the pavement.

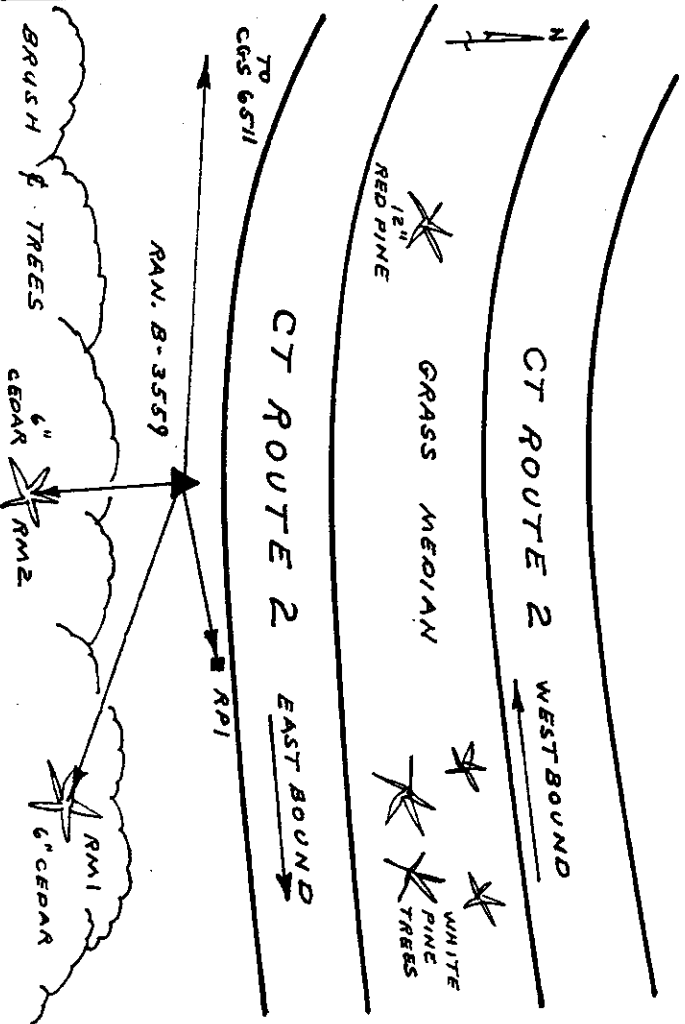
RP 1: Northeast of Station: A drill hole in the top of a 3/4 inch square steel pin driven 1 inch below the surface of the ground. It is located 26.5 feet south of the painted center line of Ct Route 2 (eastbound), 48.0 feet northwest of the 6 inch cedar tree mentioned in RM 1, 2.1 feet south of the south edge of the pavement and 175.5 feet east of the east end of a wire rope guide fence.

NOTES: Random B-3559 is included in this range for angular measurement only.

The distance given from B-3559 to CGS 6511 is approximate and not to be used for calibration purposes. The distance given from B-3559 to RM 2 is a slope distance.

RECOVERY NOTES		
DATE	ORGANIZATION	CONDITION
12/15/93	CTGS	Good

SKETCH



TOWN Colchester

STATION 6508

DESCRIPTION: The Station Mark is a standard CTGS brass disk, stamped 6508, set into the top of a square reinforced concrete post which is recessed 2 inches below the surface of the ground. The underground mark is a standard CTGS brass disk, stamped 6508, set into an irregular mass of concrete which is 5 feet below the surface of the ground.

To reach the station from the intersection of CT. Route 2 (eastbound) and Chestnut Hill Road (exit 21), proceed east on CT. Route 2 for 2.12 miles to the station on the right. The station is located 49.0 feet northwest of a grey birch tree, 26.5 feet southwest of the centerline of CT. Route 2 (eastbound), and 4.5 feet southwest of the south edge of the bituminous pavement.

RP 1: Southeast of Station - A drill hole in the top of a 3/4 inch square steel pin driven 1 inch below the ground. It is located 29.2 feet west of a 4 inch grey birch tree, 40.5 feet south of the painted centerline of CT. Route 2 (eastbound), and 18.5 feet south of the south edge of the bituminous pavement.

RP 2: South of Station - A drill hole in the top of a 3/4 inch square steel pin driven 1 inch below the ground. It is located 46.4 feet west of a 4 inch grey birch tree, 45.5 feet south of the centerline of CT. Route 2 (eastbound), and 23.5 feet south of the bituminous pavement.

RP 3: Southwest of Station - A drill hole in the top of a 3/4 inch square steel pin driven 1 inch below the ground. It is located 67.4 feet west of a 4 inch grey birch tree, 34.5 feet south of the centerline of CT. Route 2 (eastbound), and 12.5 feet south of the bituminous pavement.

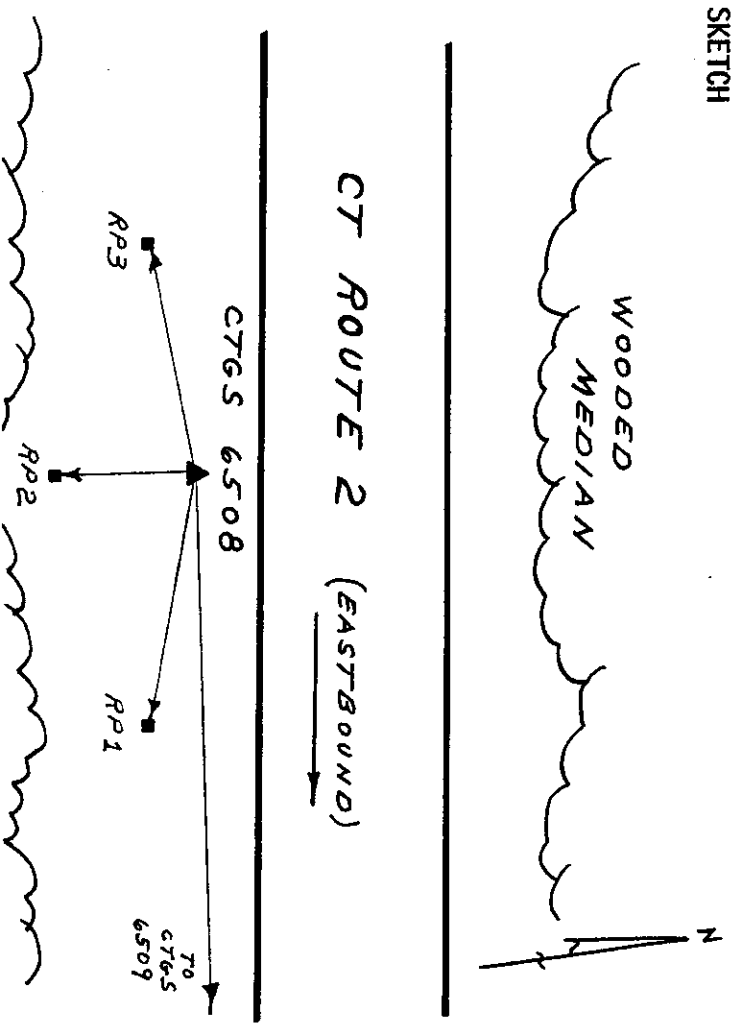
NOTES: All baseline measurements are not corrected for sea level or scale factors.

METRIC CONVERSION CONSTANTS

1 Meter = 3.28083333333 Feet
 1 Foot = 0.3048006096 Meter

RECOVERY NOTES		
DATE	ORGANIZATION	CONDITION
8/17/92	CTGS	Good

SKETCH



DESCRIPTION: The Station Mark is a standard CTGS brass disk, stamped 6509, set into the top of a square reinforced concrete post which is recessed 4 inches below the surface of the ground. The underground mark is a standard CTGS brass disk, stamped 6509, set in an irregular mass of concrete which is 5 feet below the surface of the ground.

To reach the station from the intersection of CT, Route 2 (eastbound) and Chestnut Hill Road (exit 21), proceed east on CT, Route 2 for 2.22 miles to the station on the right (south).

The station is located 93.5 feet northwest of an 8 inch red pine tree, 27.5 feet south of the centerline of CT, Route 2 (eastbound), and 5.4 feet south of the south edge of the bituminous pavement.

RM 1: Northwest of Station - A drill hole in a hex head brass bolt in a 1/4 inch hole set into the top center of a TYPE C concrete catch basin. It is located 117.6 feet northwest of an 8 inch red pine tree, 23.0 feet south of the centerline of CT, Route 2 (eastbound), and 91.0 feet southeast of a 10 inch pine tree.

RP 1: South of Station - A drill hole in the top of a 3/4 inch square steel pin driven 1 inch below the surface of the ground. It is located 81.5 feet northwest of an 8 inch red pine tree, 42.0 feet south of the centerline of CT, Route 2 (eastbound), and 19.5 feet south of the south edge of the bituminous pavement.

RP 2: Southwest of Station - A drill hole in the top of a 3/4 inch square steel pin driven 1 inch below the surface of the ground. It is located 113.5 feet northwest of an 8 inch red pine tree, 37.0 feet south of the centerline of CT, Route 2 (eastbound), and 14.0 feet south of the south edge of the bituminous pavement.

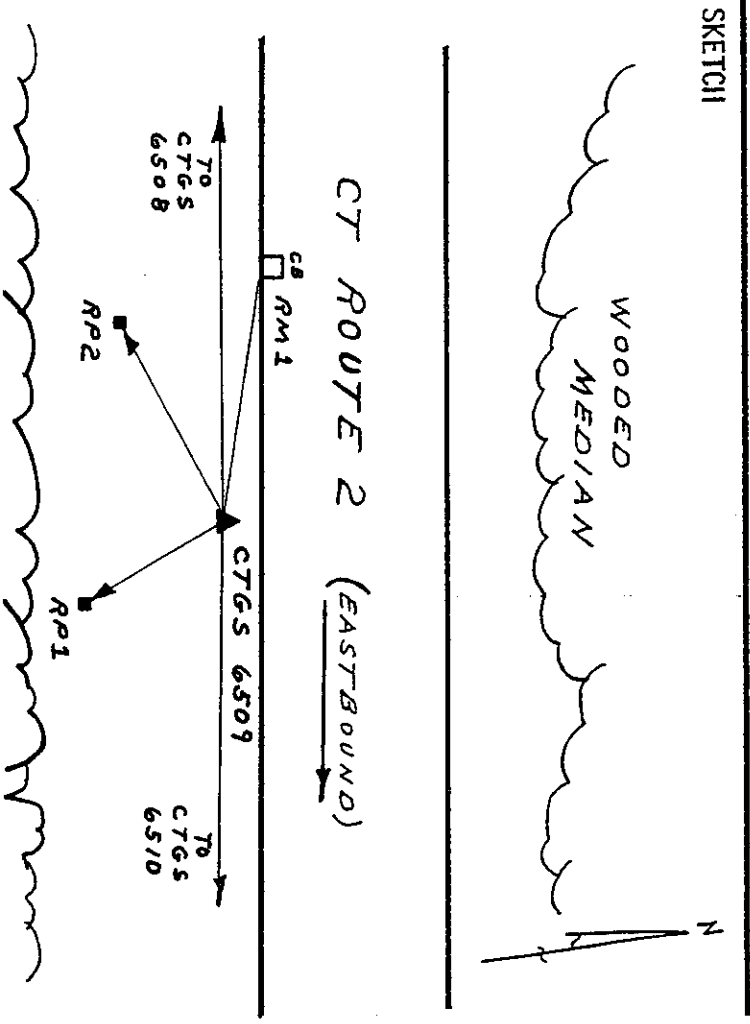
NOTES: All baseline measurements are not corrected for sea level or scale factors.

METRIC CONVERSION CONSTANTS

1 Meter = 3.280833333333 Feet
 1 Foot = 0.3048006096 Meter

RECOVERY NOTES		
DATE	ORGANIZATION	CONDITION
8/17/92	CTGS	Good

SKETCH



TOWN Colchester

STATION 6510

DESCRIPTION: The Station Mark is a standard CTGS brass disk, stamped 6510, set into the top of a square reinforced concrete post which is recessed 4 in. below the surface of the ground. The underground mark is a standard CTGS brass disk, stamped 6510, set into an irregular mass of concrete which is 5 ft. below the surface of the ground.
 To reach the station from the intersection of CT. Route 2 (eastbound) and Chestnut Hill Road (exit 21), proceed east on CT. Route 2 for 2.62 miles to the Colchester/Lebanon Town Line and the station on the right (south).
 The station is located 52.9 ft. northwest of the north support post for a sign reading "Lebanon Town Line", 30.0 feet south of the centerline of CT. Route 2 (eastbound), and 7.8 ft. south of the south edge of the bituminous pavement.

RM 1: Southeast of Station - A drill hole in a hex head brass bolt in a 1/4 in. hole set into the north side of the concrete base support of a sign reading "Lebanon Town Line". It is located 224.5 ft. east of the extended centerline of a gravel emergency crossover road, 46.0 ft. south of the centerline of CT. Route 2 (eastbound), and 22.9 ft. south of the south edge of the bituminous pavement.

RP 1: South of Station - A drill hole in the top of a 3/4 in. square iron pin driven 1 in. below the surface of the ground. It is located 173.0 ft. east of the extended centerline of a gravel emergency crossover road, 47.0 ft. south of the centerline of CT. Route 2 (eastbound), and 24.2 ft. south of the south edge of the bituminous pavement.

RP 2: Southwest of Station - A drill hole in the top of a 3/4 in. square steel pin driven 1 in. below the surface of the ground. It is located 150.0 ft. east of the extended centerline of a gravel emergency crossover road, 37.5 ft. south of the centerline of CT. Route 2 (eastbound), and 14.5 ft. south of the south edge of the bituminous pavement.

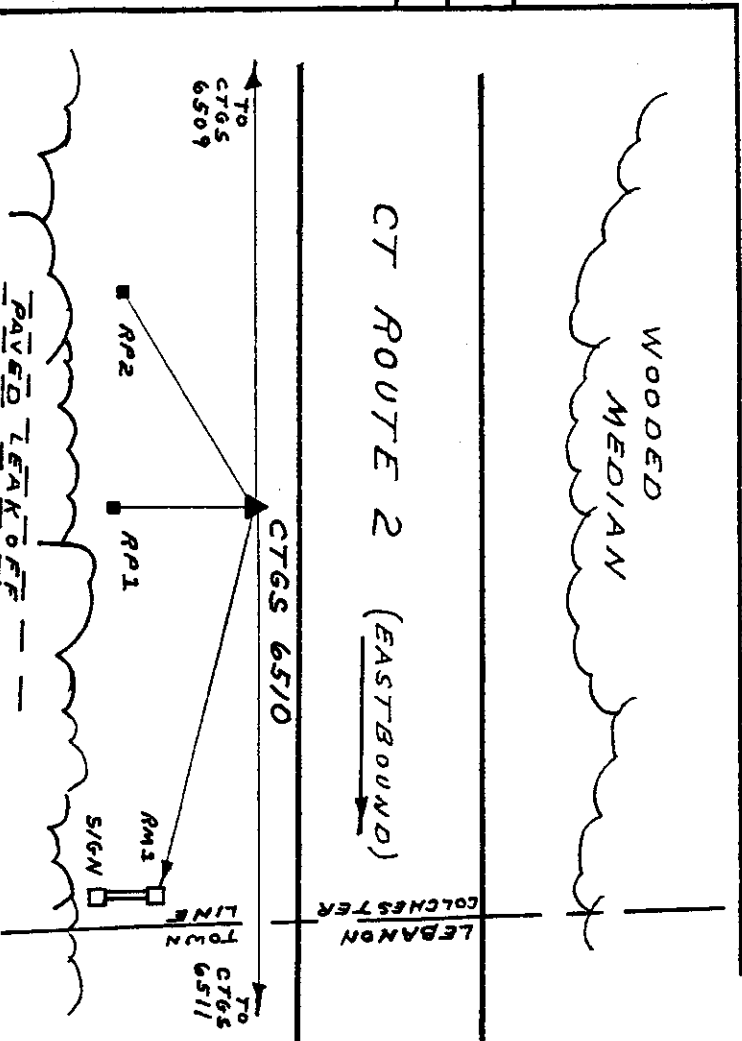
NOTES: All baseline measurements are not corrected for sea level or scale factors.

METRIC CONVERSION CONSTANTS

1 Meter = 3.28083333333 Feet
 1 Foot = 0.3048006096 Meter

RECOVERY NOTES

Date	Organization	Condition
8/20/92	CTGS	Good



TOWN Lebanon

STATION 6511

DESCRIPTION: The Station Mark is a standard CTGS brass disk, stamped 6511, set into the top of a square reinforced concrete post which is recessed 4 in. below the surface of the ground. The underground mark is a standard CTGS brass disk, stamped 6511, set into an irregular mass of concrete 5 ft. below the surface of the ground.

To reach the station from the intersection of CT. Route 2 (eastbound) and Chestnut Hill Road (exit 21) in Colchester, proceed east on CT. Route 2 for 3.0 miles (0.38 mi. east of the Colchester/Lebanon Town Line) to the station on the right (south).

The station is located 171.5 ft. west of a wire guide rail anchor, 32.0 ft. south of the centerline of CT. Route 2 (eastbound), and 8.5 ft. south of the south edge of the bituminous pavement.

RP 1: Southeast of Station - A drill hole in the top of a 3/4 in. square steel pin driven 1 in. below the surface of the ground. It is located 150 ft. west of the anchor for a wire rope rail, 41.0 ft. south of the centerline of CT. Route 2, and 17.5 ft. south of the south edge of the bituminous pavement.

RP 2: South of Station - A drill hole in the top of a 3/4 in. square steel pin driven 1 in. below the surface of the ground. It is located 171.5 ft. west of the anchor for a wire rope rail, 47.5 ft. south of the centerline of CT. Route 2, and 24.0 ft. south of the south edge of the bituminous pavement.

RP 3: Southwest of Station - A drill hole in the top of a 3/4 in. square steel pin driven 1 in. below the surface of the ground. It is located 188.5 ft. west of the anchor for a wire rope rail, 41.0 ft. south of the centerline of CT. Route 2, and 18.0 ft. south of the south edge of the bituminous pavement.

NOTES: All baseline measurements are not corrected for sea level or scale factors.

METRIC CONVERSION CONSTANT

1 METTER = 3.28083333333 Feet
1 Foot = 0.3048006096 Meter

RECOVERY NOTES		
DATE	ORGANIZATION	CONDITION
8/20/93	CTGS	Good

SKETCH

