

INDEX OF SHEETS

| | |
|--------------------------|---|
| 1. | Title |
| 2. | Typical |
| 3-4 | Quantity Sheets |
| 5 | Drainage |
| 6-7 | Earthworks |
| 8-10 | R.O.W. Detail Sheets |
| 11-15 | Blank |
| 16-19 | Layouts |
| ROADWAY STANDARDS | |
| 20 | A-61 Slopes in Solid Rock Excavation |
| 21 | B-5 Typical Slope Rounding |
| 22 | B-11 Underdrain in Shattered Rock Subgrade |
| 23 | D-2 Underdrain |
| 24 | D-3 Treated Gutters |
| 25 | D-4 Metal End Sections Flushing Basins |
| 26 | D-5 Drop Inlets |
| 27 | D-11 Cast Iron Grate Type A |
| 28 | D-16 Cast Iron Grate Type B |
| 29 | E-2 Approach Signs Road Construction |
| 30 | E-6 On Project Construction Signs |
| 31 | E-7 Barricades |
| 32 | E-7a Woodway Barricades |
| 33 | G-1 Standard Steel Beam Guard Rail |
| 34 | G-4 Steel Beam Guard Rail w/ Wood Posts Type II |
| 35 | G-4 Wood Marker Posts |
| 36 | J-1 Boundary Markers |
| 37 | T-1 Temporary Erosion Control Details |
| 38 | T-2 Temporary Erosion Control Details |
| 39 | Blank |
| 40. | Banking Tables |
| 41-59 | Mainline Cross Sections |
| 60-61 | Approach 100+00 Lt. Sections |
| 62-63 | Approach 100+00 Lt. Sections |
| 17 | Multi-Purpose Trail Typical |
| 19 | Approach Typical |
| 42 | MS Detail with Stone Fill, Type II |

RECOR PLANS-MATERIALS
 GROTON RS 0217 (I)
 CONTRACTOR - S.G. PHILLIPS, WAITSFIELD, VT.
 CONTRACT DATED - 29 AUGUST 1977
 CONSTRUCTION BEGAN - 1 SEPTEMBER 1977
 CONSTRUCTION COMPLETED - 22 NOVEMBER 1977
 CONSTRUCTION ACCEPTED - 25 NOVEMBER 1977

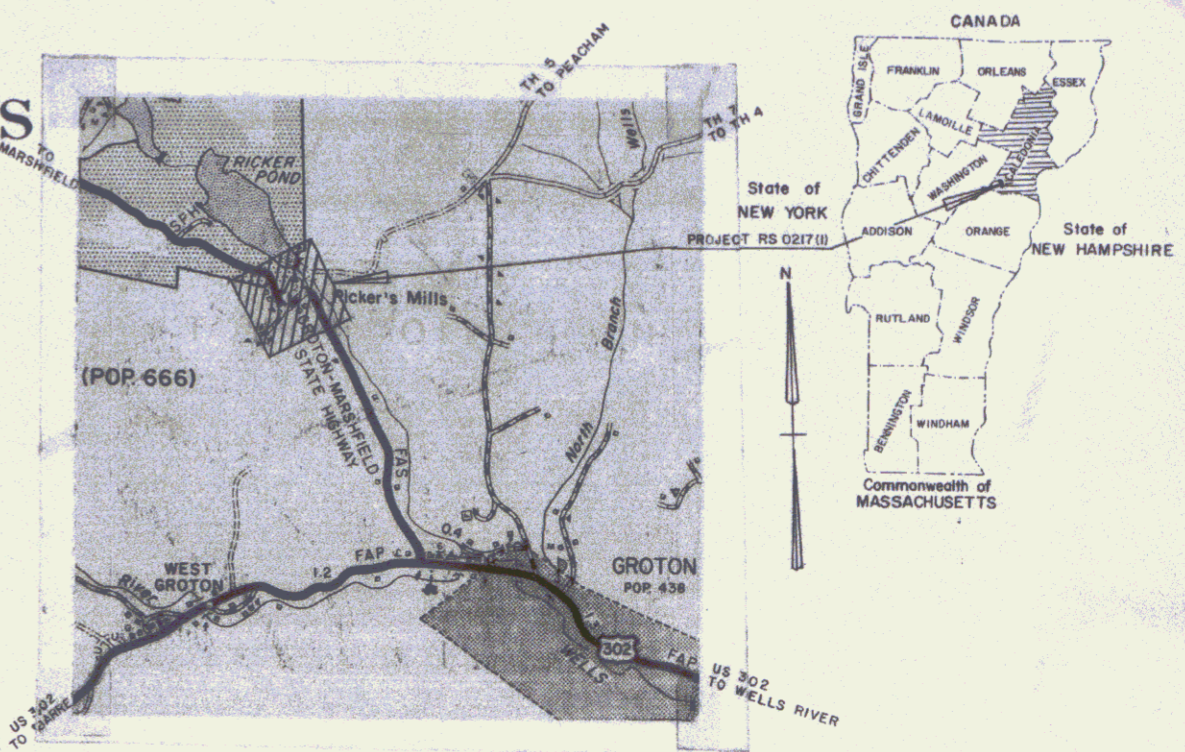
RESIDENT ENGINEER - FRED JORDAN
 REINFORCING STEEL - AUBURN STEEL COMPANY, INC., AUBURN, N.Y.
 GRAVEL FOR SHOULDERS, SUBBASE OF GRAVEL, GRANULAR BACKFILL FOR STRUCTURES - CLARK PITS, GROTON, VT.
 SUBBASE OF DENSE GRADED CRUSHED ROCK - PEPINI CORPORATION, NEWBURY, VT.
 BITUMINOUS CONCRETE PAVEMENT - COOLEY ASPHALT, WEBSTERVILLE, VT.
 CONCRETE - LAWRENCE, WOODSVILLE, N.H.
 GRANULAR BORROW, SAND CUSHION - CLARK PIT, GROTON, VT.
 ASPHALT - B.P. OIL, CANADA
 CGMP, MES, UNDERDRAIN, CARRIER PIPE, FLUSHING BASINS - NOTHEASTERN CULVERT CORP, WESTMINSTER, VT.
 RCP - S.T. GRISWOLD & CO., INC., WILLISTON, VT.
 CAST IRON GRATES WITH FRAMES - NEENAH FOUNDRY CO., NEENAH, WISC.

RECORD PLANS - FRED JORDAN

**STATE OF VERMONT
 DEPARTMENT OF HIGHWAYS**



FEDERAL AID SECONDARY
PROPOSED IMPROVEMENT
TOWN OF GROTON
 COUNTY OF CALEDONIA
 GROTON MARSHFIELD STATE HIGHWAY
VT 232



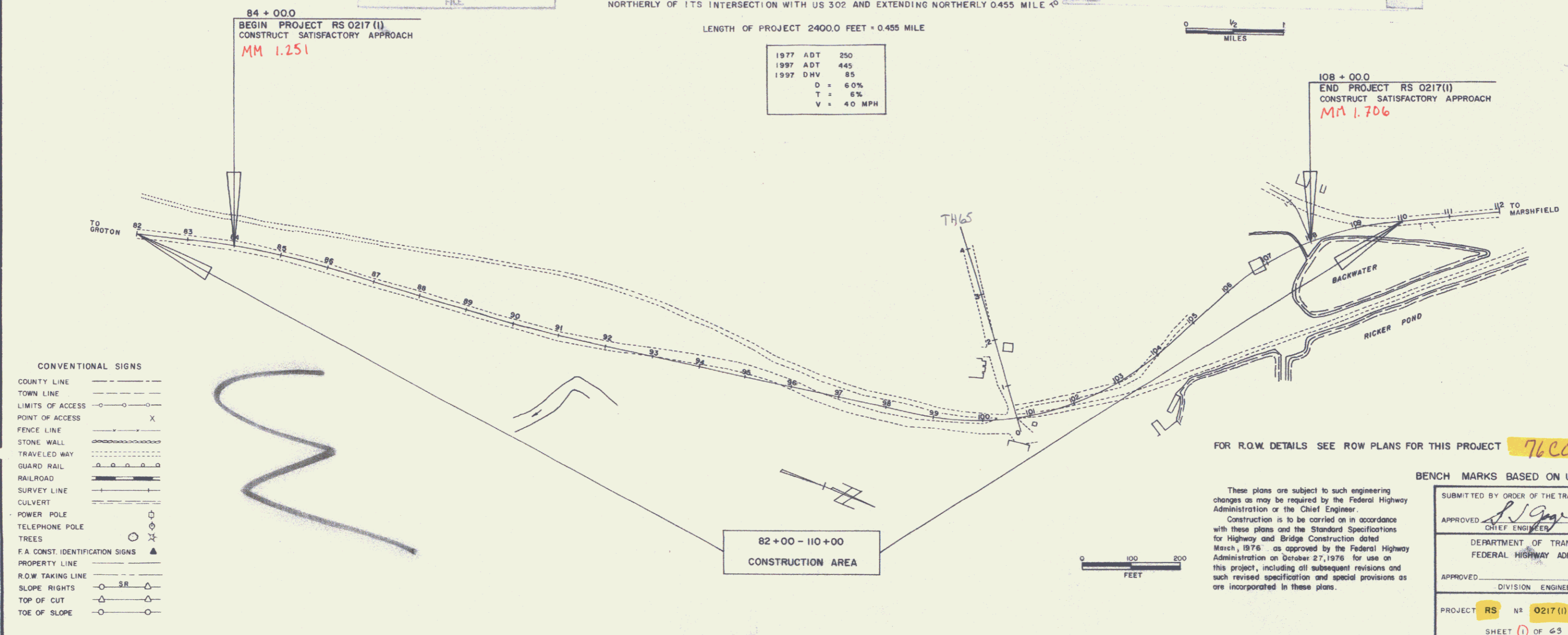
BEGINNING AT A POINT IN GROTON-MARSHFIELD HIGHWAY APPROXIMATELY 1.5 MILES NORTHERLY OF ITS INTERSECTION WITH US 302 AND EXTENDING NORTHERLY 0.455 MILE TO

84 + 00.0
 BEGIN PROJECT RS 0217 (I)
 CONSTRUCT SATISFACTORY APPROACH
 MM 1.251

LENGTH OF PROJECT 2400.0 FEET = 0.455 MILE

| | |
|----------|--------|
| 1977 ADT | 250 |
| 1997 ADT | 445 |
| 1997 DHV | 85 |
| D | 6.0% |
| T | 8% |
| V | 40 MPH |

108 + 00.0
 END PROJECT RS 0217 (I)
 CONSTRUCT SATISFACTORY APPROACH
 MA 1.706



CONVENTIONAL SIGNS

| | |
|----------------------------------|-----|
| COUNTY LINE | --- |
| TOWN LINE | --- |
| LIMITS OF ACCESS | --- |
| POINT OF ACCESS | X |
| FENCE LINE | --- |
| STONE WALL | --- |
| TRAVELED WAY | --- |
| GUARD RAIL | --- |
| RAILROAD | --- |
| SURVEY LINE | --- |
| CULVERT | --- |
| POWER POLE | ⊕ |
| TELEPHONE POLE | ⊕ |
| TREES | ○ |
| F.A. CONST. IDENTIFICATION SIGNS | ▲ |
| PROPERTY LINE | --- |
| R.O.W. TAKING LINE | --- |
| SLOPE RIGHTS | SR |
| TOP OF CUT | △ |
| TOE OF SLOPE | ○ |

FOR R.O.W. DETAILS SEE ROW PLANS FOR THIS PROJECT **76C066**

BENCH MARKS BASED ON USGS ELEV.

These plans are subject to such engineering changes as may be required by the Federal Highway Administration or the Chief Engineer.

Construction is to be carried on in accordance with these plans and the Standard Specifications for Highway and Bridge Construction dated March, 1976 as approved by the Federal Highway Administration on October 27, 1976 for use on this project, including all subsequent revisions and such revised specification and special provisions as are incorporated in these plans.

SUBMITTED BY ORDER OF THE TRANSPORTATION BOARD
 APPROVED: *[Signature]* DATE 7/18/77
 CHIEF ENGINEER

DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____ DATE _____
 DIVISION ENGINEER

PROJECT RS NO 0217 (I)
 SHEET 1 OF 63 SHEETS

D-10 SRS 12/17/70

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RIGHT-OF-WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

| PARCEL NO. | GRANTOR | SHEET NO. | BEGINNING STATION | ENDING STATION | TAKING | REM. | RIGHTS | TITLE TAKEN | DATE | TOWN OR CITY RECORDED | BK. | PG. | REMARKS |
|------------|--|-----------|--|-----------------------------------|--------|-----------|--|-------------|------|-----------------------|-----|-----|--|
| 1A | TOWN OF GROTON - LESSOR RICKER, MILTON B. - LESSEE | 6 | 85+85 LT | 88+88 LT | 0.14A± | | | | | | | | |
| 1B | | 6 | 82+00 LT | 88+47 LT | 0.35A± | | ALL R.T.&I. | | | | | | HIGHWAY EASEMENT |
| | | | 82+00 LT | 88+88 LT | | 2813.51A± | | | | | | | |
| 2A | TOWN OF GROTON - LESSOR NEEDHAM, IDA A. - LESSEE LANGEVIN, BERNICE W. - LESSEE | 6 | 82+00 RT 83+88 RT | 88+38 RT | 0.4A± | | DRAINAGE (P) | | | | | | |
| 2B | | 6 | 82+00 RT | 88+35 RT | 0.35A± | | ALL R.T.&I. | | | | | | HIGHWAY EASEMENT |
| | | | 82+00 RT | 88+38 RT | | 9.25A± | | | | | | | |
| 3A | PEACOCK ACADEMY, INC. - LESSOR RESUE, ROBERT H. & AGNES W. - LESSEES | 6 | 88+47 LT 87+85 LT 87+85 LT | 95+18 LT 88+20 LT | 0.8A± | | ALL R.T.&I. ALL R.T.&I. | | | | | | SEPTIC TANK SEWER LINE |
| 3B | | 6, 7 | 88+35 RT 88+10 RT 83+00 RT 87+00 RT 88+87 RT 88+45 RT 100+00 RT 100+00 LT 100+53 RT 100+75 RT 101+00 RT 101+07 RT | 98+87 RT 88+75 RT 100+45 RT | 1.14A± | | DRAINAGE (P) DRAINAGE (P) DRAINAGE (P) SLOPE (P) (955 S.F.±) ALL R.T.&I. CULVERT & DRAINAGE (P) ALL R.T.&I. DRIVE (T) DRAINAGE (P) SLOPE (P) (1225 S.F.±) | | | | | | FOUNDATION EXACT LOCATION & SIZE OF PIPES UNKNOWN MAIL BOXES DRIVE 30', GRAVEL, N.P. 1.57 DRIVE RELEASE DATE: DRIVE PERMIT DATE: |
| | (PARCEL 3C ON NEXT SHEET) | | | 102+30 RT | | | | | | | | | |

TABLE OF REVISIONS

| REVISION NO. | SHEET NO. | DESCRIPTION OF REVISION | DATE | MADE BY | APPROVED BY |
|--------------|-----------|---|----------|---------|-------------|
| 1 | 7 | PARCEL #5 RESUE ADDED SLEEVE AT STA 100+15.14 - 100+140 RT PER C.O.# 3810 | 10-8-76 | KDP | WS |
| 2 | 5,7 | ADD NEW PARCEL 89 - TOWN OF GROTON. INVOLVES TAKING ALL R.T.&I. TO T.H. 16 WHICH IS A CLASS A HIGHWAY. PER C.O.# 3866 | 12-21-76 | NBB | WS |
| 3 | 5,7 | CHANGED PROPERTY LINE BETWEEN PARCELS 3C AND 4A. PER C.O.# 3867 | 12-21-76 | NBB | WS |

MADE BY: RD BEAL DATE: 8-4-76
CHECKED BY: _____ DATE: _____

DR. RT. - DRAINAGE RIGHT
DIT. RT. - DITCHING RIGHT
CH. RT. - CHANNEL RIGHT
DRIVE RT. - DRIVE RIGHT
CUL. RT. - CULVERT RIGHT
D - DEMOLITION OR REMOVAL
W - WATER SOURCES

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

LEGEND

SR - SR - SLOPE RIGHTS
P - P - PROPERTY LINE
-Δ- Δ - TOP OF CUT
-O- O - TOE OF SLOPE

APPROVED: Thomas P. Mayo DATE: 8-12-76
CHIEF OF PLANS & SPEC.

PROJECT: GROTON
NO. SO217 (1)
ROW SHEET 8 OF 63

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RIGHT-OF-WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

| PARCEL NO. | GRANTOR | SHEET NO. | BEGINNING STATION | ENDING STATION | TAKING | REM. | RIGHTS | TITLE TAKEN | DATE | TOWN OR CITY RECORDED | BK. | PG. | REMARKS |
|------------|--|-----------|--|-----------------------------------|--------|-----------|---|-------------|------|-----------------------|-----|-----|---------------------------|
| 1A | TOWN OF GROTON - LESSOR RICKER, MILTON B. - LESSEE | 6 | 85+85 LT | 88+80 LT | 0.14A± | | | | | | | | |
| 1B | | 6 | 82+00 LT | 88+47 LT | 0.35A± | | ALL R.T.&I. | | | | | | HIGHWAY EASEMENT |
| | | | 82+00 LT | 88+80 LT | | 2013.51A± | | | | | | | |
| 2A | TOWN OF GROTON - LESSOR NEEDHAM, IDA A. - LESSEE LANGEVIN, DENNICE N. - LESSEE | 6 | 82+00 RT 83+88 RT | 88+38 RT | 0.4A± | | DRAINAGE (P) | | | | | | |
| 2B | | 6 | 82+00 RT | 88+35 RT | 0.35A± | | ALL R.T.&I. | | | | | | HIGHWAY EASEMENT |
| | | | 82+00 RT | 88+38 RT | | 0.25A± | | | | | | | |
| 3A | PEACHAM ACADEMY, INC. - LESSOR RESUE, ROBERT B. & AGNES W. - LESSEES | 6 | 88+47 LT 87+85 LT 87+85 LT | 95+18 LT 98+20 LT | 0.8A± | | ALL R.T.&I. ALL R.T.&I. | | | | | | SEPTIC TANK SEWER LINE |
| 3B | | 6, 7 | 88+35 RT 88+10 RT 93+00 RT 97+00 RT 98+87 RT 98+45 RT 100+00 RT 100+00 LT 100+53 RT 100+75 RT 101+00 RT 101+07 RT | 98+87 RT 98+75 RT 100+45 RT | 1.14A± | | DRAINAGE (P) DRAINAGE (P) DRAINAGE (P) SLOPE (P) (955 S.F.±) ALL R.T.&I. CULVERT & DRAINAGE (P) ALL R.T.&I. FOUNDATION EXACT LOCATION & SIZE OF PIPES UNKNOWN MAIL BOXES DRIVE 50', GRAVEL, N.P. 1.57 DRIVE RELEASE DATE: DRIVE PERMIT DATE: DRAINAGE (P) SLOPE (P) (1225 S.F.±) | | | | | | |
| | (PARCEL 3C ON NEXT SHEET) | | | 102+30 RT | | | | | | | | | |

TABLE OF REVISIONS

| REVISION NO. | SHEET NO. | DESCRIPTION OF REVISION | DATE | MADE BY | APPROVED BY |
|--------------|-----------|---|----------|---------|-------------|
| 1 | 7 | PARCEL #3 RESUE ADDED SLEEVE AT STA. 100+15 LT - 100+40 RT PER C.O. # 38.10 | 10-8-76 | LDP | [Signature] |
| 2 | 5,7 | ADD NEW PARCEL #9 - TOWN OF GROTON. INVOLVES TAKING ALL R.T.&I. TO T.H. 16 WHICH IS A CLASS A HIGHWAY. PER C.O. # 326 | 12-21-76 | NBB | [Signature] |
| 3 | 5,7 | CHANGED PROPERTY LINE BETWEEN PARCELS 3C AND 4A. PER C.O. # 326 | 12-21-76 | NBB | [Signature] |

MADE BY: NO BEAL DATE: 8-4-78
CHECKED BY: _____ DATE: _____

DR. RT. - DRAINAGE RIGHT
DIT. RT. - DITCHING RIGHT
CH. RT. - CHANNEL RIGHT
DRIVE RT. - DRIVE RIGHT
CUL. RT. - CULVERT RIGHT
ⓓ - DEMOLITION OR REMOVAL
Ⓜ - WATER SOURCES

PRESENT R.C.W.
--- TAKING WITHOUT ACCESS
--- P --- TAKING WITHOUT ACCESS ALONG PROPERTY LINES
--- TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

LEGEND

SR - SR - SLOPE RIGHTS
P - P - PROPERTY LINE
-Δ- Δ - TOP OF CUT
-O- O - TOE OF SLOPE

APPROVED Thomas P. Mayo DATE 8-12-78
CHIEF OF PLANS & DES.

PROJECT GROTON
NO. SO217 (1)
ROW SHEET 3 OF 8
SHEET 8 OF 63

ROW

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RIGHT-OF-WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

| PARCEL NO. | GRANTOR | SHEET NO. | BEGINNING STATION | ENDING STATION | TAKING | REM. | RIGHTS | TITLE TAKEN | DATE | TOWN OR CITY RECORDED | BK. | PG. | REMARKS |
|------------|---|-----------|---|------------------------|---------|------|------------------------------|-------------|------|-----------------------|-----|-----|--------------------------|
| 3C | | 7 | 100+81 LT | 105+72 RT | 0.9 A± | | | | | | | | |
| 3D | | 6, 7 | 88+34 E | 101+07 RT | 1.4 A± | | ALL R.T. & I. | | | | | | HIGHWAY EASEMENT |
| | | | 95+35 LT 88+36 RT | 105+17 LT 101+07 RT | | | 3.0 A± 10.66 A± | | | | | | |
| 4A | WALSH, LAWRENCE J. & JANE S. | 7 | 105+03 LT 106+88 E 107+50 RT 108+50 RT | 109+42 RT | 0.9 A± | | DRAINAGE (P) DRAINAGE (P) | | | | | | HOUSE |
| 4B | | 7 | 107+50 LT | 109+18 RT | 0.12 A± | | ALL R.T. & I. | | | | | | HIGHWAY EASEMENT |
| | | | 105+17 LT 105+52 RT | 107+70 LT 109+42 RT | | | 51.28 A± 0.7 A± | | | | | | |
| 5 | BATCHELDER, ERNEST R. & DELORES | 7 | 107+70 LT | 109+18 LT | 0.12 A± | | ALL R.T. & I. | | | | | | HIGHWAY EASEMENT |
| | | | 107+70 LT | 109+18 LT | | | 0.10 A± | | | | | | |
| 6A | STATE OF VERMONT - DEPARTMENT OF FORESTS & PARKS | 7 | 109+18 RT | 110+00 RT | 0.02 A± | | | | | | | | 1050 S.F.± |
| 6B | | 7 | 109+18 RT 89+85 RT | 110+00 LT | 0.1 A± | | ALL R.T. & I. | | | | | | HIGHWAY EASEMENT SIDE |

TABLE OF REVISIONS

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

MADE BY: H.B. BEAL DATE: 8-4-76
CHECKED BY: _____ DATE: _____

DR. RT. - DRAINAGE RIGHT
DIT. RT. - DITCHING RIGHT
CH. RT. - CHANNEL RIGHT
DRIVE. RT. - DRIVE RIGHT
CUL. RT. - CULVERT RIGHT
⊙ - DEMOLITION OR REMOVAL
W - WATER SOURCES

PRESENT R.O.W.
/// - /// TAKING WITHOUT ACCESS
-P- -L- -L- TAKING WITHOUT ACCESS ALONG PROPERTY LINES
-P- -L- -L- TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

LEGEND

SR - SR SLOPE RIGHTS
P - L - P PROPERTY LINE
-Δ- Δ - Δ TOP OF CUT
-O- O - O TOE OF SLOPE

APPROVED: James P. Mays DATE: 8-12-76
CHIEF OF PLANS & TITLES

PROJECT: GROTON
NO. 50217(1)
ROW. SHEET 9 OF 8
SHEET 9 OF 63

ROW

4

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
RIGHT-OF-WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

| PARCEL NO. | GRANTOR | SHEET NO. | BEGINNING STATION | ENDING STATION | TAKING | REM. | RIGHTS | TITLE TAKEN | DATE | TOWN OR CITY RECORDED | BK. | PG. | REMARKS |
|------------|--|-----------|-------------------|----------------|--------|------|-------------|-------------|------|-----------------------|-----|-----|--|
| 7 | GREEN MOUNTAIN POWER CORPORATION | | | | | | | | | | | | UTILITY |
| 8 | CONTINENTAL TELEPHONE COMPANY OF VERMONT | | | | | | | | | | | | UTILITY |
| 9 | TOWN OF GROTON | 7 | 100+70 LT | 105+40 LT | | | ALL R.T.&I. | | | | | | TOWN HIGHWAY 16 - CLASS 4 HIGHWAY |
| | RELINQUISHMENT NO. I | | 100+50 LT | 107+73 LT | | | | | | | | | GROTON - MARSHFIELD STATE HWY. (130'±) |
| | MAINTENANCE AGREEMENT AREAS NO. 1 | | 100+50 LT | 100+50 LT | | | | | | | | | GROTON - MARSHFIELD STATE HWY. (45'±) |
| | NO. 2 | | 100+00 LT | 107+73 LT | | | | | | | | | GROTON - MARSHFIELD STATE HWY. (130'±) |

TABLE OF REVISIONS

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

MADE BY: K.D. PERMINS DATE: 8-4-76
CHECKED BY: _____ DATE: _____

DR. RT - DRAINAGE RIGHT
DT. RT - DITCHING RIGHT
CH. RT - CHANNEL RIGHT
DRIVE RT - DRIVE RIGHT
CUL. RT - CULVERT RIGHT
⊙ - DEMOLITION OR REMOVAL
W - WATER SOURCES

----- PRESENT R.O.W.
/// - - - - - TAKING WITHOUT ACCESS
--- P --- L --- TAKING WITHOUT ACCESS ALONG PROPERTY LINES
--- L --- TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

LEGEND

SR - SR SLOPE RIGHTS
P - P PROPERTY LINE
△ - △ TOP OF CUT
○ - ○ TOE OF SLOPE

APPROVED: Thomas V. Mayo DATE: 8-12-76
CHIEF OF PLANS & TITLES

PROJECT: GROTON
NO. 50217 (1)
ROWSHEET 10 OF 63
SHEET 10 OF 63

SPECIAL DITCH
w/ STONE FILL, Type I
L
89+05-90+25

EROSION MATTING
L
95+00-98+00

CONSTRUCT TRAIL
L
95+00-98+00

R.R. RIGHT-OF-WAY PURCHASED PER V.S.A. NO. 239, 1957

HIGHWAY DEPT. TO GIVE 6 MOS. WRITTEN NOTICE TO DEPT. OF FORESTS & PARKS WHEN R.R. ROW NEEDED FOR HIGHWAY PURPOSES - PER AGREEMENT DATED OCT. 30, 1974

Drives are to be constructed with a minimum width of 18 feet and a flare radius of at least 20 feet or as directed by the Resident Engineer.

ALL DRIVES AS INDICATED ON PLANS ARE SUBJECT TO PERMITS PURSUANT TO TITLE 19, SECTION 43, V.S.A.

All existing pavement shall be thoroughly scarified and broken up, payment to be included under the bid price of Common Excavation.

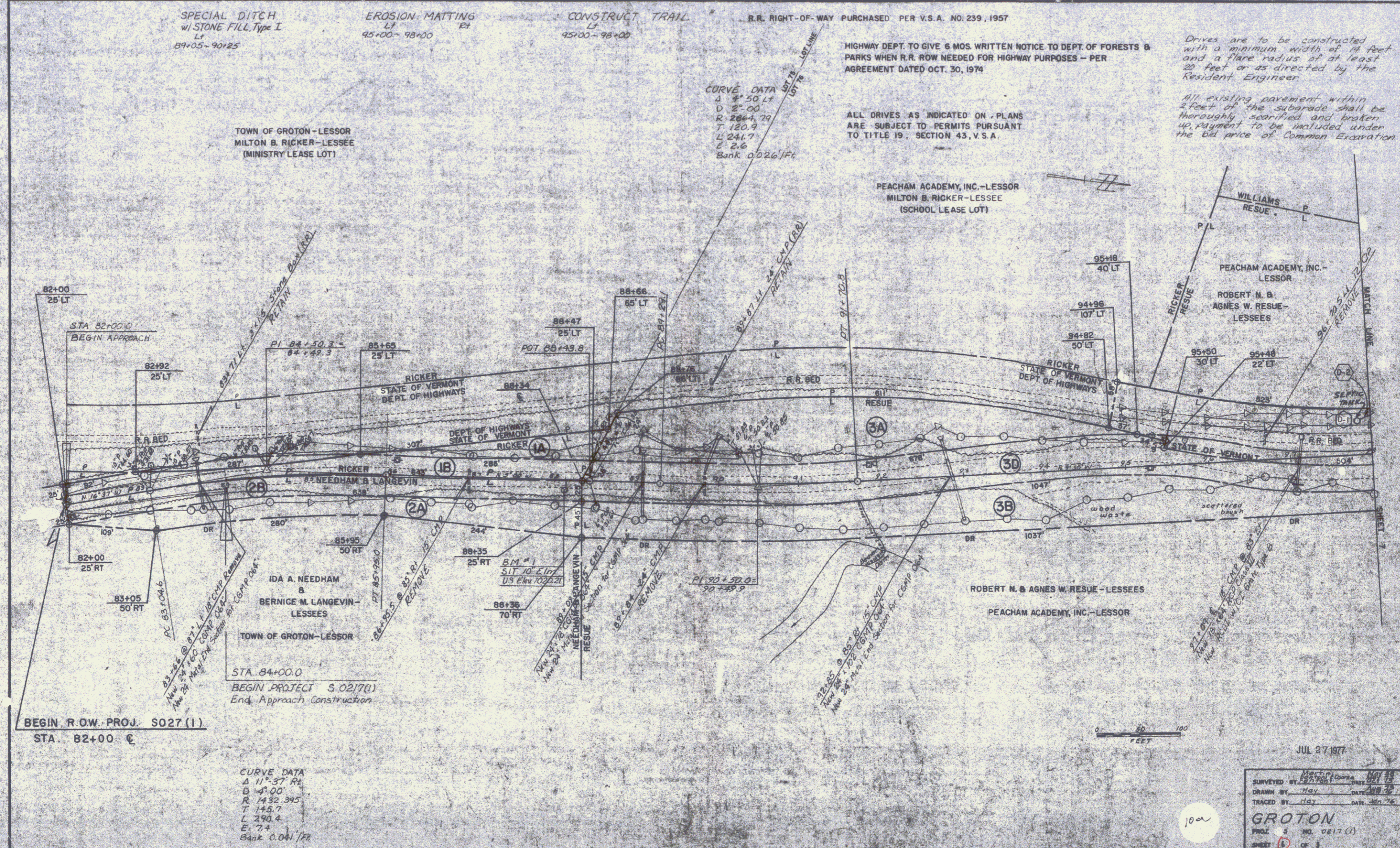
CURVE DATA
Δ 4° 50' LT
D 2'-00
R 286+79
T 120.9
L 241.7
E 2.6
Bank 0.026/ft

TOWN OF GROTON - LESSOR
MILTON B. RICKER - LESSEE
(MINISTRY LEASE LOT)

PEACHAM ACADEMY, INC. - LESSOR
MILTON B. RICKER - LESSEE
(SCHOOL LEASE LOT)

WILLIAMS
RESUE - P/L

PEACHAM ACADEMY, INC. - LESSOR
ROBERT N. B. AGNES W. RESUE - LESSEES



BEGIN R.O.W. PROJ. S027 (1)
STA. 82+00 @

CURVE DATA
Δ 11° 57' Rt
D 4'-00
R 1432.395
T 145.7
L 290.4
E 7.4
Bank 0.041/ft

0 50 100
FEET

JUL 27 1977

| | |
|---------------------|-----------------|
| SURVEYED BY | W. J. H. HARRIS |
| DRAWN BY | May |
| TRACED BY | May |
| GROTON | |
| PROJ. 5 NO. 027 (1) | |
| SHEET 5 OF 5 | |

100

6

