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STANDARDS

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E-121	STANDARD SIGN PLACEMENT CONVENTIONAL RAMP	01-23-89
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F-2	CHAIN LINK FENCE (TYPE I)	02-01-79R
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CONVENTIONAL SIGNS

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

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

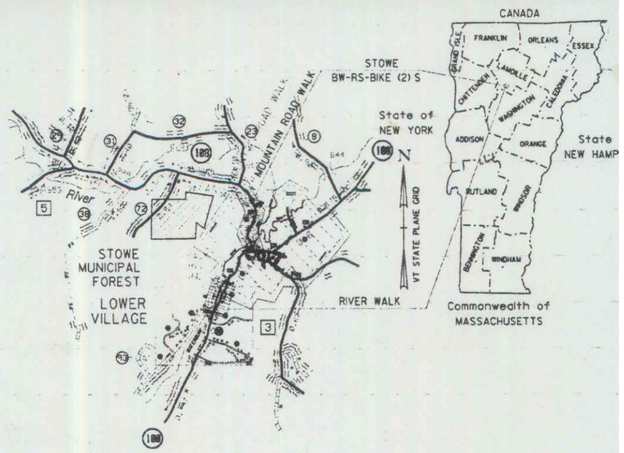
STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT
TOWN OF STOWE
COUNTY OF LAMOILLE

THIS PROJECT SHALL INCLUDE TWO SECTIONS:
STOWE RIVER WALK-(SECTION ONE)- BEGINNING AT A POINT WHICH IS APPROXIMATELY 40' ± WESTERLY OF THE CENTERLINE OF VT. ROUTE 100, AND 65' ± NORTHERLY OF THE STOWE VILLAGE/STOWE TOWN LINE. THE PROJECT CONTINUES SOUTHERLY FOR 1141' (0.216 MI), GENERALLY PARALLELING VT. 100, AND TERMINATES AT ITS INTERSECTION WITH TH#5 IN THE TOWN OF STOWE. THIS WILL BE A DUAL USAGE BIKE/PEDESTRIAN FACILITY.

STOWE MOUNTAIN ROAD WALK-(SECTION TWO)-BEGINNING AT A POINT WHICH IS APPROXIMATELY 0.080 MILE NORTHERLY OF THE VT. ROUTE 108 - VT. ROUTE 100 INTERSECTION IN THE VILLAGE OF STOWE. THE PROJECT CONTINUES NORTHEASTERLY AND CONTIGUOUS WITH THE EASTERLY EDGE OF VT. ROUTE 108 FOR A DISTANCE OF 2400' ± (0.455 MI) THIS FACILITY WILL BE FOR PEDESTRIAN USAGE.

PROJECT AREA MAPS FOR SECTIONS ONE AND TWO ARE SHOWN ON THEIR INDIVIDUAL TITLE SHEETS



Approximately M.P. 2.76 to M.P. 2.97

Vt. Rte 100

RIGHT-OF-WAY DIVISION
TOWN FILE
PERPETUAL
Town of Stowe
(To Be Returned To R.O.W. Division)

TOWN: STOWE
ROUTE: VT100
DATE: 06/30/1992
PROJECT: STP BW RS BIKE(2)S
PIN: 91R208

Note:
These plans are not to be removed from PBT without telling Mr. or Larry.
Larry

AUG 9 1994

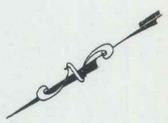
THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE CHIEF ENGINEER.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION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

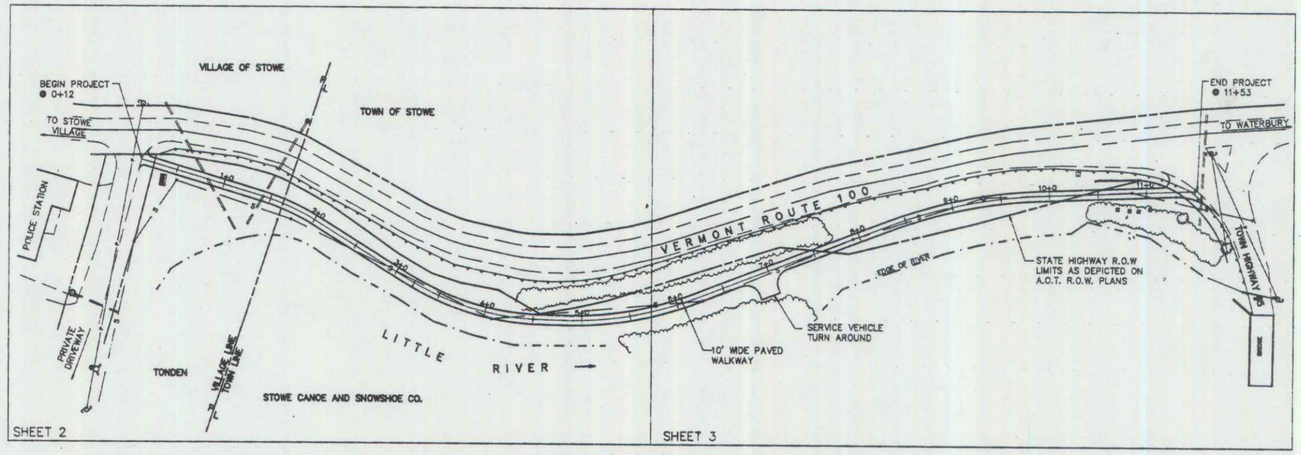
SUBMITTED BY ORDER OF THE STATE TRANSPORTA
APPROVED DATE
DIRECTOR OF ENGINEERING
DEPARTMENT OF TRANSPORTATI
FEDERAL HIGHWAY ADMINISTRATI
APPROVED DATE
DIVISION ADMINISTRATOR
PROJECT STOWE BW-RS BIKE (2) S JUN
SHEET 1 OF 38 SHEE

STOWIT

(1)

TOWN OF STOWE
RIVER WALK





INDEX OF SHEETS

SHEET NUMBER	TITLE
1	TITLE SHEET
2	SITE PLAN 0+00 TO 5+80
3	SITE PLAN 5+80 TO 11+53
4	CENTERLINE PROFILES
5	QUANTITY SUMMARY
6	EARTHWORK AND TYPICAL SECTIONS
7	SECTIONS 0+00 TO 4+50
8	SECTIONS 5+00 TO 10+00
9	SECTIONS 10+25 TO 11+50
10	DETAILS OF RETAINING WALL AT 10+35
11	TIE DETAIL SHEET
12	SIGN LOCATION PLAN
13	TRAFFIC SIGN SUMMARY
14	SIGN DETAIL SHEET
15	CONSTRUCTION APPROACH SIGNING

BIKE PATH DESIGN SPEED = 20 MPH

APPLICABLE A.O.T. STANDARDS

B- 5	SLOPE GRADING, EMBANKMENTS, MUCK
D-15	PRECAST REINFORCED CONCRETE CATCH BASIN WITH C.I. GRATE
E-100	CONSTRUCTION APPROACH SIGNS
E-101	CONSTRUCTION SIGN DETAILS
E-102	CONSTRUCTION SIGN DETAILS
E-108	TRAFFIC CONTROL MISCELLANEOUS DETAILS
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E-107A	BREAKAWAY BARRICADE DETAILS
E-110	MAJOR MAINTENANCE OPERATION LANE CLOSURE
E-160	FLANGED CHANNEL STEEL SIGN POST
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD
F2	CHAIN LINK FENCE, TYPE I
G1d	GUARD RAIL, HEAVY DUTY STEEL BEAM WITH WOOD POSTS, TYPE II
G4	GUIDE POSTS
G14	BREAKAWAY CABLE TERMINAL WITH WOOD POSTS
T-1	TEMPORARY EROSION CONTROL DETAILS

SITE PLAN

GRAPHIC SCALE

(IN FEET)

PROJECT SCOPE:
THIS PROJECT INVOLVES THE CONSTRUCTION OF A 1141 FEET BITUMINOUS CONCRETE SURFACE BICYCLE PATH AND PEDESTRIAN WALKWAY ALONG THE WEST SIDE OF VERMONT ROUTE 100 IMMEDIATELY SOUTH OF THE VILLAGE OF STOWE. A GRAVEL SUBBASE WILL BE PLACED AND THE PATH WILL BE FENCED TO PROTECT BIKERS FROM THE LITTLE RIVER. THE PROJECT WILL CONNECT TOWN HIGHWAY #5 RIVER ROAD WITH A PRIVATE ROADWAY NEAR THE STOWE POLICE STATION.

AUG 9 1994

JUN 30 1992

REVISED 10-25-9

STATE OF VERMONT CHARLES J. GRENIER NO. 5542 REGISTERED PROFESSIONAL ENGINEER

BW-RS-BIKE (2S)

TOWN OF STOWE - RIVER WALK
"TITLE SHEET"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE 9-11-91
DRN BY T.J.M.
SCALE 1"=60'
SHT 2 OF 32

2

VILLAGE OF STOWE

1+25 ● 90° 18" x 30' CSP WITH METAL END SECTIONS ON BOTH ENDS

TOWN OF STOWE 20' WIDE SEWER LINE EASEMENT

TONDEN SHALL DEED TO THE TOWN OF STOWE AN EASEMENT ON LEFT OR EAST SIDE BETWEEN THE PATH CENTERLINE AND THE ROUTE 100 RIGHT OF WAY

CURVE #1
PI ● 1+72.16 BK
= 1+71.80 AHD
INCLUDED ANGLE = 15°09'40" RT

RIM OF 6 EXISTING MANHOLES TO BE RAISED. SEE NOTE ON SHEET 4, ITEM 604.23

BEGIN PATH CONSTRUCTION ● 0+12

REMOVABLE WOOD GUIDE POST IN STEEL SLEEVE AT CENTERLINE OF PATH 0+30 ITEM 621.85(MOD.) INSTALLED ACCORDING TO STD. G14, DETAIL C. ON EACH SIDE OF THE CENTER POST 5' C.C. INSTALL A WOOD GUIDE POST, ITEM 621.85 ACCORDING TO STD. G4

HIGHWAY

R.O.W.

VERMONT ROUTE 100

POLICE STATION

EXISTING SIGN & PLANTER BOX TO REMAIN DO NOT DISTURB

BEGIN CHAIN LINK FENCE, 4 FEET ITEM 620.11 (MOD.) AT 0+56 RT. SEE NOTE ON SHEET 6 EXPLAINING MODIFICATION

PROJECT BENCHMARK #1
SPIKE IN 15" ASH TREE
USGS ELEV. = 697.42

LIMITS OF 50' R.O.W

LIMITS OF 100 YEAR FLOOD

TONDEN HAS AGREED TO DEED TO THE TOWN OF STOWE AN EASEMENT 35' WIDE ON THE RIGHT OR WEST SIDE OF THE PATH CENTERLINE

0+75 RT TO 1+75 RT PLACE GEOTEXTILE FABRIC FOR SILT FENCE, ITEM 649.20 AT THE TOE OF SLOPE AS A TEMPORARY EROSION CONTROL MEASURE

BEGIN CONCRETE BLOCK RETAINING WALL ● 1+52 RT

50' R.O.W. ACROSS STOWE CANOE AND SNOWSHOE COMPANY PROPERTY

PI ● 3+09.80
INCLUDED ANGLE = 2°00'00" LT
NO CURVE NECESSARY

3+46 LT TO 3+54 LT
CONCRETE BLOCK RETAINING WALL

3+50 ● 90° 18" x 20' CSP WITH PRCCB WITH CAST IRON GRATE ON INLET. START TAPERING THE PATH CENTERLINE TO THE RIGHT AT 3+00. CENTERLINE MOVES TO THE RIGHT A MAXIMUM OF 1.5' AT 3+50 TO AVOID THE CATCH BASIN GRATE AND RETURNS TO NORMAL TYPICAL AT 4+00. SEE SECTIONS ON SHEET 7.

TONDEN

STOWE CANOE AND SNOWSHOE CO.

VILLAGE LINE
TOWN LINE

EXISTING 20' R.O.W. FOR SEWER LINE

CURVE #2
PI ● 3+91.33 BK
= 3+88.43 AHD
INCLUDED ANGLE = 28°35'37" LT

END CONCRETE BLOCK RETAINING WALL ● 4+44 RT

BIKE PATH PAVEMENT WIDTH MINIMUM OF 10', WIDER AT POINTS ALONG CURVES. SEE SECTIONS FOR DETAILS

CURVE #3
PI ● 5+52.25 BK
= 5+50.45 AHD
INCLUDED ANGLE = 22°22'38" LT

LITTLE RIVER

MATCHLINE SHEET 2 SHEET 3

SUPERELEVATION TABLE		
STATION	LEFT LANE	RIGHT LANE
0+12	MATCH EXISTING GRADE	MATCH EXISTING GRADE
0+30	+0.02	-0.02
3+00	+0.02	-0.02
3+25	LEVEL	LEVEL
3+50	-0.02	+0.02
6+00	-0.02	+0.02
6+25	LEVEL	LEVEL
6+50	+0.02	-0.02
11+25	+0.02	-0.02
11+53	MATCH EXISTING GRADE	MATCH EXISTING GRADE

CURVE #1
INCLUDED ANGLE = 15°09'40"
RADIUS = 229.18'
TANGENT LENGTH = 30.50'
ARC LENGTH = 60.64'
CHORD LENGTH = 60.47'
EXTERNAL SECANT = 2.02'
DEGREE OF CURVE = 25°00'00"
PC = 1+41.66
PT = 2+02.30

CURVE #2
INCLUDED ANGLE = 28°35'37"
RADIUS = 272.84'
TANGENT LENGTH = 69.53'
ARC LENGTH = 136.16'
CHORD LENGTH = 134.75'
EXTERNAL SECANT = 8.73'
DEGREE OF CURVE = 21°00'00"
PC = 3+21.80
PT = 4+57.96

CURVE #3
INCLUDED ANGLE = 22°22'38"
RADIUS = 356.10'
TANGENT LENGTH = 70.83'
ARC LENGTH = 139.86'
CHORD LENGTH = 138.97'
EXTERNAL SECANT = 6.94'
DEGREE OF CURVE = 16°00'00"
PC = 4+81.42

CONVENTIONAL SIGNS

- CHAIN LINK FENCE
- TRAVELED WAY
- EXISTING GUARD RAIL
- NEW GUARD RAIL
- SURVEY LINE
- CULVERT
- POWER POLE
- TREES (SOFTWOOD)
- TREES (HARDWOOD)
- PROPERTY LINE
- SEWERLINE
- TOE OF FILL SLOPE
- TOP OF CUT SLOPE
- RIGHT OF WAY
- SILT FENCE

SITE PLAN

GRAPHIC SCALE

30 0 15 30 45 60

(IN FEET)

AUG 9 1994

JUN 30 1992

BW-RS-BIKE (23)

5-8-92 - REVISED STOWE CANOE R.O.W.

STATE OF VERMONT CHARLES J. GRENIER NO. 5248 REGISTERED ENGINEER

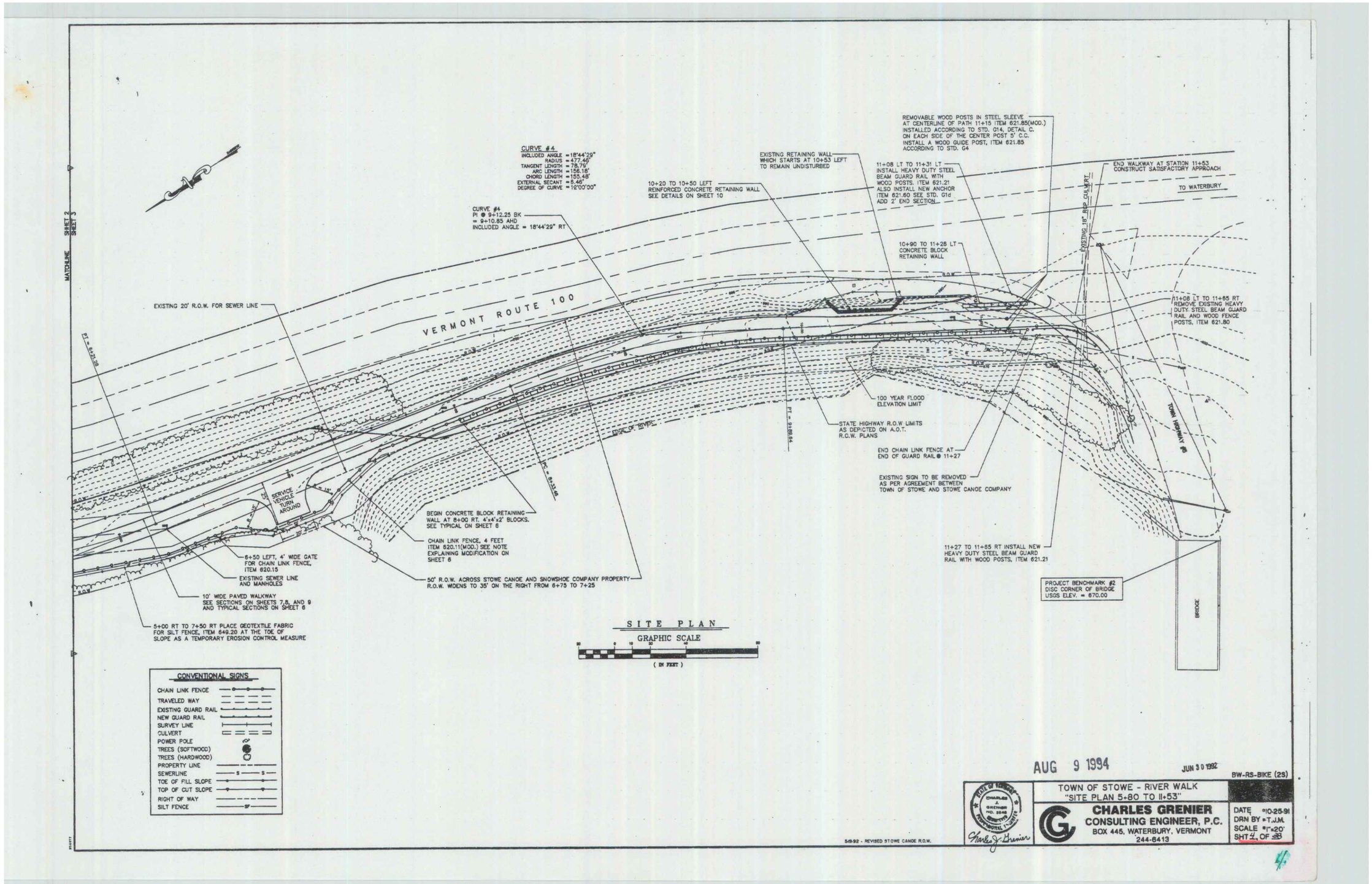
Charles J. Grenier

TOWN OF STOWE - RIVER WALK
"SITE PLAN 0+00 TO 5+80"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE 10-25-91
DRN BY T.J.M.
SCALE 1"=20'
SHT 3 OF 23

3


MATCHLINE SHEET 2 SHEET 3
CURVE #4
INCLUDED ANGLE = 18°44'29"
RADIUS = 477.46'
TANGENT LENGTH = 78.79'
ARC LENGTH = 156.18'
CHORD LENGTH = 155.48'
EXTERNAL SECANT = 6.46'
DEGREE OF CURVE = 12°00'00"
CURVE #4
PI @ 9+12.25 BK
= 9+10.85 AHD
INCLUDED ANGLE = 18°44'29" RT
10+20 TO 10+50 LEFT
REINFORCED CONCRETE RETAINING WALL
SEE DETAILS ON SHEET 10
EXISTING RETAINING WALL
WHICH STARTS AT 10+53 LEFT
TO REMAIN UNDISTURBED
REMOVABLE WOOD POSTS IN STEEL SLEEVE
AT CENTERLINE OF PATH 11+15 ITEM 621.85(MOD.)
INSTALLED ACCORDING TO STD. G14, DETAIL C.
ON EACH SIDE OF THE CENTER POST 5' C.C.
INSTALL A WOOD GUIDE POST, ITEM 621.85
ACCORDING TO STD. G4
11+08 LT TO 11+31 LT
INSTALL HEAVY DUTY STEEL
BEAM GUARD RAIL WITH
WOOD POSTS. ITEM 621.21
ALSO INSTALL NEW ANCHOR
ITEM 621.60 SEE STD. G1d
ADD 2' END SECTION
END WALKWAY AT STATION 11+53
CONSTRUCT SATISFACTORY APPROACH
TO WATERBURY
EXISTING 18" RCP CULVERT
10+90 TO 11+26 LT
CONCRETE BLOCK
RETAINING WALL
11+08 LT TO 11+85 RT
REMOVE EXISTING HEAVY
DUTY STEEL BEAM GUARD
RAIL AND WOOD FENCE
POSTS, ITEM 621.80
EXISTING 20' R.O.W. FOR SEWER LINE
VERMONT ROUTE 100
PT = 8+53.28
EDGE OF RIVER
100 YEAR FLOOD
ELEVATION LIMIT
STATE HIGHWAY R.O.W. LIMITS
AS DEPICTED ON A.O.T.
R.O.W. PLANS
PT = 9+88.64
PC = 8+33.68
END CHAIN LINK FENCE AT
END OF GUARD RAIL @ 11+27
EXISTING SIGN TO BE REMOVED
AS PER AGREEMENT BETWEEN
TOWN OF STOWE AND STOWE CANOE COMPANY
TOWN HIGHWAY #5
SERVICE VEHICLE TURN AROUND
BEGIN CONCRETE BLOCK RETAINING
WALL AT 8+00 RT. 4'x4'x2' BLOCKS.
SEE TYPICAL ON SHEET 8
CHAIN LINK FENCE, 4 FEET
ITEM 620.11(MOD.) SEE NOTE
EXPLAINING MODIFICATION ON
SHEET 8
6+50 LEFT, 4' WIDE GATE
FOR CHAIN LINK FENCE,
ITEM 620.15
EXISTING SEWER LINE
AND MANHOLES
50' R.O.W. ACROSS STOWE CANOE AND SNOWSHOE COMPANY PROPERTY
R.O.W. WIDENS TO 35' ON THE RIGHT FROM 6+75 TO 7+25
11+27 TO 11+85 RT INSTALL NEW
HEAVY DUTY STEEL BEAM GUARD
RAIL WITH WOOD POSTS, ITEM 621.21
PROJECT BENCHMARK #2
DISC CORNER OF BRIDGE
USGS ELEV. = 670.00
BRIDGE
10' WIDE PAVED WALKWAY
SEE SECTIONS ON SHEETS 7,8, AND 9
AND TYPICAL SECTIONS ON SHEET 6
5+00 RT TO 7+50 RT PLACE GEOTEXTILE FABRIC
FOR SILT FENCE, ITEM 649.20 AT THE TOE OF
SLOPE AS A TEMPORARY EROSION CONTROL MEASURE
R.O.W.
CONVENTIONAL SIGNS
CHAIN LINK FENCE
TRAVELED WAY
EXISTING GUARD RAIL
NEW GUARD RAIL
SURVEY LINE
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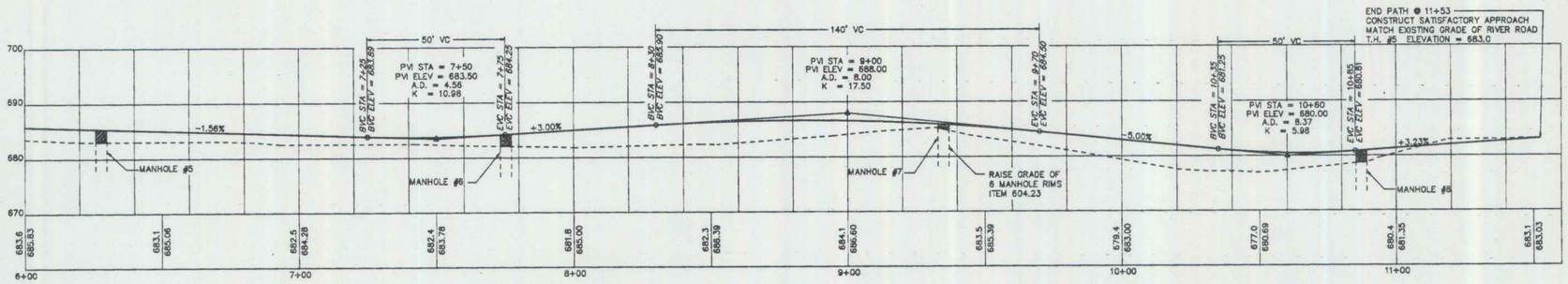
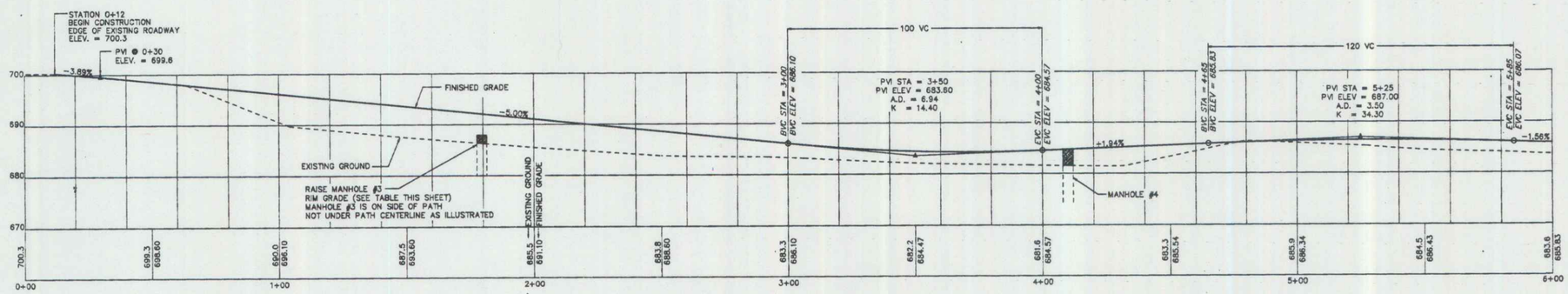
POWER POLE
TREES (SOFTWOOD)
TREES (HARDWOOD)
PROPERTY LINE
SEWERLINE
TOE OF FILL SLOPE
TOP OF CUT SLOPE
RIGHT OF WAY
SILT FENCE
SITE PLAN
GRAPHIC SCALE
(IN FEET)
AUG 9 1994
JUN 30 1992
BW-RS-BIKE (2S)
5-9-92 - REVISED STOWE CANOE R.O.W.
STATE OF VERMONT
CHARLES J. GRENIER
NO. 2546
REGISTERED PROFESSIONAL ENGINEER
Charles J. Grenier
TOWN OF STOWE - RIVER WALK
"SITE PLAN 5+80 TO 11+53"
CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413
DATE 10-25-91
DRN BY T.J.M.
SCALE 1"=20'
SHT 4 OF 35

ITEM 604.23 CHANGING ELEVATION OF SEWER MANHOLE

MANHOLE NUMBER	STATION	EXISTING RIM GRADE	NEW RIM GRADE	DIFFERENCE IN ELEVATION
3	1+78	685.20	687.5	+2.20'
4	4+08	681.13	684.80	+3.67'
5	6+26	682.87	685.33	+2.46'
6	7+93	681.98	684.80	+2.82'
7	9+33	685.65	686.00	+0.35'
8	10+85	678.50	680.80	+2.30'





SCALE: HORIZONTAL

(IN FEET)

SCALE: VERTICAL

(IN FEET)

AUG 9 1994

JUN 30 1992

BW-RS-BIKE (2S)

REVISED 10-25-91

STATE OF VERMONT — CHARLES A. GRENIER NO. 5848 REGISTERED PROFESSIONAL ENGINEER

Charles J. Grenier

TOWN OF STOWE - RIVER WALK
"CENTERLINE PROFILES"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 9-11-91
DRN BY = T.J.M.
SCALE = 1"=20'
SHT 5 OF 38

5

QUANTITY, EARTHWORKS, DRAINAGE AND ITEM DETAIL SHEET

APPROXIMATE SUMMARY OF QUANTITIES

EROSION CONTROL	BRIDGE	ROADWAY	GRAND TOTAL	UNIT	PAY ITEM	PAY ITEM NUMBER	CODE
			210	CY	COMMON EXCAVATION	203.15	14
			1350	CY	GRANULAR BORROW	203.32	15
			20	CY	TRENCH EXCAVATION OF EARTH	204.20	2
			75	CY	STRUCTURE EXCAVATION	204.25	7
			100	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	1
			* 540	CY	SUBBASE OF CRUSHED GRAVEL (COARSE GRADED)	301.25	14
			170	TON	BITUMINOUS CONCRETE PAVEMENT	406.25	10
			48	CY	CONCRETE, CLASS B	501.25	15
			5600	LB	REINFORCING STEEL	507.15	42
			116	LF	DRILLING AND GROUTING DOWELS	507.16	—
			2	GAL	WATER REPELLENT	514.10	—
			0.165	MFBM	NON-STRUCT. LUMBER - TREATED	522.35	
			48	LF	18" CSP .064	601.0016	—
			2	EACH	18" CSPES .064	601.6018	
			240	CY	* DRY RUBBLE MASONRY (MOD.)	602.20	
			6	EACH	CHANGING ELEVATION OF MANHOLE	604.23	—
			1	EACH	CAST IRON GRATE WITH FRAME, TYPE D	604.51	
			5	HOUR	ALL PURPOSE EXCAVATOR, TYPE I	608.25	
			5	HOUR	TRUCK RENTAL	608.31	
			220	CY	STONE FILL, TYPE I	613.10	20
			1100	LF	** CHAIN LINK FENCE 4 FEET (MOD.)	620.11	21
			6	EACH	BRACING ASSY. FOR CHAIN LINK FN. (4 FEET)	620.20	21
			4	LF	GATE FOR CHAIN LINK FENCE, 4 FEET	620.15	—
			75	LF	STEEL BEAM GUARD RAIL	621.20	—
			1	EACH	ANCHOR FOR STEEL BEAM GUARD RAIL	621.60	—
			70	LF	REMOVAL AND DISPOSAL OF GUARD RAIL	621.80	—
			4	EACH	GUIDE POSTS	621.85	—
			2	EACH	GUIDE POSTS (MODIFIED)	621.85	—
			40	HOUR	UNIFORMED TRAFFIC OFFICERS	630.10	—
			40	HOUR	FLAGGERS	630.15	—
			0.50	LS	TESTING EQUIPMENT - CONCRETE	631.16	
			0.50	LS	TESTING EQUIPMENT - BITUMINOUS	631.17	
			0.65	LS	MOBILIZATION	635.10	—
			500	SY	GEOTEXTILE FOR ROADBED SUBGRADE SEPARATOR	649.11	30
			130	SY	GEOTEXTILE FOR SILT FENCE	649.51	14
BASED ON 0.26 AC OF DISTURBED AREA			20	LB	SEED	651.15	—
			125	LB	FERTILIZER	651.18	—
			0.5	TON	AGRICULTURAL LIMESTONE	651.20	—
			0.5	TON	HAY MULCH	651.25	—
			80	CY	TOPSOIL	651.35	H
			55	SF	TRAFFIC SIGNS (TYPE A)	675.20	48
			600	LB	FLANGED CHANNEL SIGN POSTS	675.30	15

DETAILED SUMMARY OF QUANTITIES

QUANTITY	UNIT	PAY ITEM

* SEE NOTES ON SHEET 6

** ESTIMATED 467 FEET OF FENCE WORK IN GROUND WITH 612 FEET DRILLED INTO CONCRETE BLOCK RETAINING WALLS. SEE NOTE EXPLAINING MODIFICATION ON SHEET 6

COLUMN TOTALS

GRADES AND EARTHWORK

V.C.	% GRADE	STATION	GRADES ELEVATION ON TANGENT	GRADES ELEVATION ON V CURVE	V.C. CORR.	DIST. (FT)	TOTAL EXCAV. EARTH & ROCK AREA (SF)	TOTAL EXCAV. EARTH & ROCK VOL. (CY)	ROCK EXCAVATION AREA (SF)	ROCK EXCAVATION VOL. (CY)	EMBANKMENT AREA (SF)	EMBANKMENT VOL. (CY)

COLUMN TOTALS

EARTHWORK SUMMARY

EARTH AND ROCK EXCAVATION	0 CY
SOLID ROCK EXCAVATION	0 CY
EARTH EXCAVATION	191 CY
PLANIMETERED FILL	1161 CY
LESS FACTORED SOLID ROCK	0 CY
LESS DISPLACEMENT OF LARGE STRUCTURES	0 CY
NET PLANIMETERED FILL	1161 CY
FACTOR (0.15 x NET PLANIMETERED FILL)	174 CY
PLANIMETERED FILL INCLUDING FACTOR	1335 CY
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION	191 CY
CHANNEL EXCAVATION (%x CY)	0 CY
UNDERDRAIN EXCAVATION (%x CY)	0 CY
STRUCTURE EXCAVATION (%x CY)	68 CY
TOTAL MATERIAL AVAILABLE FOR FILLS	259 CY
TOTAL FILL	1335 CY
TOTAL MATERIAL FOR FILLS	259 CY
BORROW REQUIRED *	1076 CY
EXCESS EXCAVATION	CY
LESS FACTORED DEDUCTIBLE GRANULAR BORROW	CY
NET EARTH BORROW	CY
NET EXCESS EXCAVATION	CY

* USE GRANULAR BORROW FOR FILLS

UNDERDRAIN AND CARRIER PIPE

STATION TO STATION	TYPE U	TYPE B	P O S	D (IN.)	L (FT)	TRENCH EXC. EARTH (CY)	TRENCH EXC. ROCK (CY)	GRAN. BKF (CY)	FB (EA)	MKR POSTS (EA)
COLUMN TOTALS										

GUARD RAIL, THREE CABLE W/LT. ____ POSTS

STATION TO STATION	P O S	MEASURED LENGTH (FT & IN.)	POST SPACING (FT & IN.)	FACTOR	PAY LENGTH (L.F.)	ANCHORS 62.65 (EA.)	ANCHORS 62.67 (EA.)
COLUMN TOTALS							

GUARD RAIL, BOX BEAM W/ST POSTS

STATION TO STATION	P O S	POST SPACING (FT & IN.)	PAY LENGTH (L.F.)	REMARKS
COLUMN TOTALS				

DRAINAGE STRUCTURES

STATION	POS	SKEW	TYPE IN/OUT	DITCH IN	DITCH OUT	RCP DIA	RCP LIFTI	RCP CL	CSP DIA	CSP LIFTI	CSP THICK	OPTION PIPES D (IN.)	OPTION PIPES L (FT)	OPTION PIPES RCP CL	OPTION PIPES CSP TN	OPTION PIPES CSP TH	RCDI DEPTH	MES. (EA)	PROCB DEPTH (FT)	CONC. CL B (CY)	REINF. STEEL (LB.)	CB GRATE TYPE	CRIM (CY)	TRENCH EXC. EARTH (CY)	TRENCH EXC. ROCK (CY)	ST FILL TYPE	ST FILL (CY.)	GRAN. BKF STRUCT.	MKR POST LT	MKR POST RT	REMARKS
1+23	℄	90°	MES/MES						18	28	.064							2						0	0			0			NO EXCAVATION REQUIRED IN FILL
3+50	℄	90°	RCDI/						18	20	.064						3.0			3.0	173	D		18				12			REMOVING RIPRAP IN TRENCH EXCVTN.
COLUMN TOTALS									48									2		3.0	173	D		18				12			

GUARD RAIL, HEAVY DUTY STEEL BEAM WITH WOOD POSTS, TYPE II

STATION TO STATION		P O S	MEASURED LENGTH (FT & IN.)	POST SPACING (FT & IN.)	FACTOR	PAY LENGTH (L.F.)	ANCHORS 62.65 (EA.)	ANCHORS 62.67 (EA.)	REMARKS
11+08	11+31	LT.	25	6'-3"	1.0	27	1		FIELD CHECK LOCATION PRIOR TO CONSTRUCTION
11+27	11+65	RT.	45	6'-3"	1.0	45			FIELD CHECK LOCATION PRIOR TO CONSTRUCTION
11+08 LT	11+65 RT	—	70	6'-3"					REMOVE THIS 70'± SECTION OF GUARD RAIL
COLUMN TOTALS						72	1		

TYPE OF CONSTRUCTION: ____

STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS		EQUATIONS +	EQUATIONS −	REMARKS

AUG 9 1994

REVISED 10-25-91
REVISED 9-21-91

PROJECT BW-RS-BIKE (2S)

STATE OF VERMONT — CHARLES A. GRENIER NO. 5242 — REGISTERED PROFESSIONAL ENGINEER

Charles Grenier

TOWN OF STOWE - RIVER WALK "QUANTITY SHEET"

CHARLES GRENIER CONSULTING ENGINEER
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 8-23-91
DRN BY = N.A.
SCALE = N.A.
SHT 6 OF 32

JUN 30 1992

6

EARTHWORK SUMMARY

STATION	FINISHED GRADE	DISTANCE	COMMOM EXCAVATION AREA	COMMOM EXCAVATION VOLUME	EMBANKMENT AREA	EMBANKMENT VOLUME	SUBBASE OF CRUSHED GRAVEL AREA	SUBBASE OF CRUSHED GRAVEL VOLUME	STONE FILL TYPE I AREA	STONE FILL TYPE I VOLUME
BOX CUT										
0+12	700.3		30		0		25		0	
		38		50		0		27		0
0+50	698.6		41		0		14		0	
		25		26		14		13		0
0+75	697.35		15		30		14		0	
		25		7		83		13		0
1+00	696.1		0		150		14		0	
		25		5		139		13	BUTT	13
1+25	694.85		10		150		13		29	
		25		5		125		12		24
1+50	693.6		0		120		13		23	
		25		0		72		11		26
1+75	692.35		0		35		11		33	
		25		0		35		11		26
2+00	691.1		0		40		12		24	
		50		0		71		21		24
2+50	688.6		0		37		11		2	
		50		0		52		19		5
3+00	686.1		0		19		10		3	
		50		3		31		19		3
3+50	684.5		3		14		10		0	
		50		3		29		18		2
4+00	684.6		0		17		9		2	
		50		0		24		16		11
4+50	685.5		0		9		8		10	
		50		7		8		19		9
5+00	686.3		8		0		12		0	
		50		7		21		23		0
5+50	686.4		0		23		13		0	
		50		0		53		24		0
6+00	685.8		0		34		13		0	
		50		0		53		24		0
6+50	685.1		0		23		13		0	
		50		0		68		40		0
7+00	684.3		0		50		30		0	
		50		0		52		38		0
7+50	683.5		0		6		11		0	
		50		0		26		20		5
8+00	685.0		0		22		11		5	
		50		0		39		19		17
8+50	686.4		0		20		9		13	
		50		0		31		17		13
9+00	686.6		0		14		9		1	
		33		9		9		11		1
9+33	685.98		15		0		9		0	
		17		7		3		6		0
9+50	685.4		7		8		9		0	
		50		6		39		19		4
10+00	683.0		0		34		11		4	
		27		0		34		11		8
10+27	681.6		0		34		11		12	
		23		0		25		9		9
10+50	680.7		0		25		11		8	
		40		0		22		17		6
10+90	681.0		BACK 0 / AHEAD 27		5		12		0	
		10		10		2		4		0
11+00	681.4		27		5		12		0	
		25		32		2		11		2
11+25	682.1		43		0		12		4	
		5		8		0		2		1
11+30			BACK 43 / AHEAD 0		0		12		4	
		20		5		0		8		3
11+50	683.0		7		0		9		5	
		3		1		0		1		1
11+53	683.0		0		0		0		0	
PROJECT TOTALS				191 CY		1162 CY		516 CY		213 CY

NOTE:
CHARLES GRENIER, CONSULTING ENGINEER, P.C. WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS THAT ARISE FROM THE FAILURE OF THE CONTRACTOR TO FOLLOW THE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THAT THE PLANS CONVEY.

LANDSCAPING SPECIFICATIONS
SEEDING FORMULA, ITEM 651.15

% WT.	LBS./A.	NAME	PUR %	GERM %
37.5	30	CREEPING RED FESCUE	98	85
31.25	25	KENTUCKY BLUE GRASS	85	75
31.25	25	PERENNIAL RYE GRASS	95	90
100.00	80			

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

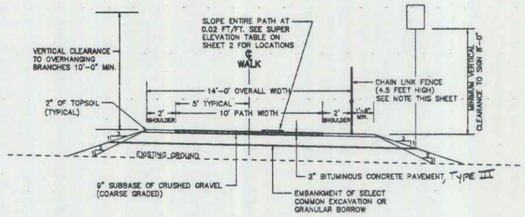
SEED – TO BE APPLIED PER SEEDING FORMULAS DIRECTED BY THE ENGINEER.

FERTILIZER – FORMULA 10–20–10 TO BE USED WITH SEED, APPLIED AT A RATE OF 500 LBS./ACRE.

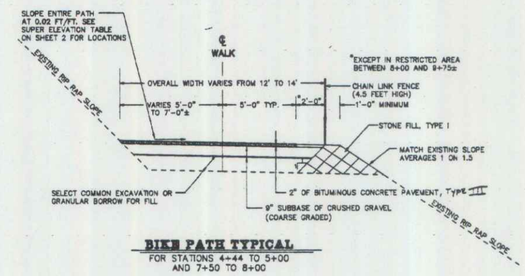
AGRICULTURAL LIMESTONE – TO BE APPLIED AT THE RATE OF 2 TONS/ACRE OR AS DIRECTED BY THE ENGINEER.

HAY MULCH – TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

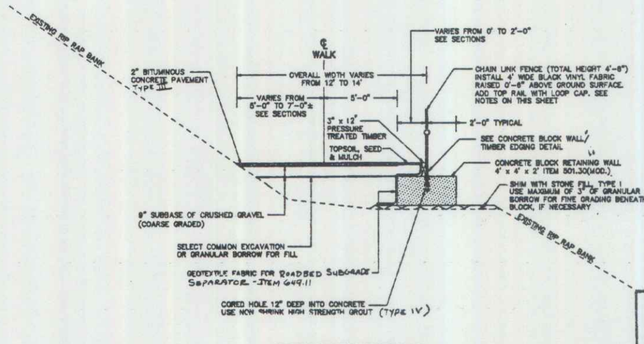
SLOPE ROUNDING – ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B–5.



BIKE PATH TYPICAL
FOR STATION 0+00 TO 1+52± AND 5+00± TO 7+50±



BIKE PATH TYPICAL
FOR STATIONS 4+44 TO 5+00 AND 7+50 TO 8+00



BIKE PATH TYPICAL
FOR SECTIONS 1+52 TO 4+44 AND 8+00 TO 11+20

1. BECAUSE OF THE SHORTAGE OF AVAILABLE TOPSOIL, THE COMMOM EXCAVATION WHICH INCLUDES THE TOPSOIL SHALL BE USED IN THE EMBANKMENT AREAS. NEW TOPSOIL SHALL BE TRUCKED ONTO THE SITE FOR USE ON THE FINISHED SLOPE WITH PAYMENT UNDER ITEM 651.35.

2. THE COST OF TRAFFIC CONTROL IS SUBSIDIARY TO OTHER PAY ITEMS. SEE STANDARDS E100, E101, E102, E106, E107, E107A, AND E110 FOR DETAILS.

3. THE BITUMINOUS CONCRETE PAVEMENT FOR THE PATH SHALL BE PLACED IN ONE 2" THICK LIFT.

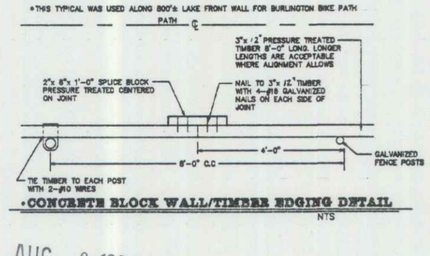
4. ITEM 501.30 CONCRETE, CLASS C SHALL BE MODIFIED AS FOLLOWS:
THE CONCRETE BLOCK RETAINING WALLS SHALL BE CONSTRUCTED WITH LARGE CONCRETE BLOCKS WITH DIMENSIONS OF 4' x 4' x 2', OR 2' x 2' x 4'. A 1" DIMENSION TOLERANCE IS ALLOWED. THESE BLOCKS ARE TO BE CONSTRUCTED OF WASTE CONCRETE FROM AREA SUPPLIERS. THE BLOCKS SHALL BE PLACED WITH THE SMOOTHEST FACE OUTWARD. EACH BLOCK SHALL HAVE LIFTING HOOKS WHICH SHALL BE REMOVED AFTER THE BLOCKS ARE IN PLACE. NO REINFORCING STEEL IS NECESSARY. ALL COSTS ASSOCIATED WITH SUPPLYING, DELIVERING, AND PLACING THE BLOCKS AT THE LOCATION AND GRADE SHOWN ON THE PLANS IS INCLUDED IN THE PER CUBIC YARD COST FOR THIS ITEM. THE EXCAVATION NECESSARY TO SET THE BLOCK WALL SHALL BE INCLUDED IN THE COST OF COMMON EXCAVATION. THE COST OF BACKFILLING AGAINST THE BACK OR BASE OF THE WALLS HAS BEEN INCLUDED IN THE COST OF SUBBASE OF CRUSHED GRAVEL, OR STONE FILL, TYPE I.

ESTIMATED QUANTITY:

1+52 TO 4+44 RIGHT (TOP ROW)	292' x 4' x 2' ÷ 27 =	86.5 CY
1+58 TO 2+82 RIGHT (BOTTOM ROW)	124' x 4' x 2' ÷ 27 =	36.7 CY
3+46 TO 3+54 LEFT	8' x 4' x 2' ÷ 27 =	2.4 CY
3+46 TO 3+54 LEFT	8' x 2' x 2' ÷ 27 =	1.2 CY
8+00 TO 11+20 RIGHT	320' x 4' x 2' ÷ 27 =	94.8 CY
10+90 TO 11+26 LEFT (14 BLOCKS)	14 x 2' x 2' x 4' ÷ 27 =	8.3 CY
	TOTAL =	229.9 CY

ITEM 620.11 CHAIN LINKED FENCE, 4 FEET SHALL BE MODIFIED AS FOLLOWS.

STANDARD F2 SHALL BE FOLLOWED EXCEPT THAT THE POST SPACING SHALL BE 8'–0" CENTER TO CENTER THROUGHOUT THE PROJECT AS OPPOSED TO THE NORMAL SPACING OF 10'–0". THE FENCING MATERIAL SHALL BE BLACK VINYL COATED FABRIC. THE CHAIN LINK FABRIC SHALL MEET THE REQUIREMENTS OF 727.02. IN ADDITION, A 1–5/8" DIAMETER GALVANIZED TOP RAIL SHALL BE INSTALLED THROUGH A LOOP CAP ON TOP OF EACH POST. FROM STATION 1+52 TO 4+44 AND 8+00 TO 11+20 THE FENCING WILL BE INSTALLED BY DRILLING INTO THE CONCRETE BLOCK RETAINING WALL. THE BLOCKS ARE 4' IN LENGTH AND THE POSTS WILL BE 8' ON CENTER. THE POSTS SHALL BE DRILLED IN THE GEOMETRIC CENTER OF EACH OF THE 4' BLOCKS AND SHALL BE VERTICAL. A 2–1/4" MINIMUM DIAMETER HOLE SHALL BE DRILLED INTO EACH CONCRETE BLOCK TO A DEPTH OF 12". THE POST SHALL BE SET INTO THE HOLE AND PACKED WITH A NON SHRINK HIGH STRENGTH GROUT SUCH AS MASTERFLOW 713 (MASTER BUILDERS) OR EQUIVALENT. THE HEIGHT OF THE TOP BAR OF THE FENCE SHALL BE 4'–6" ABOVE THE GROUND SURFACE. A 4' WIDE SHEET OF WIRE FABRIC SHALL BE USED WITH A 6" SPACE AT THE BOTTOM ABOVE THE GROUND SURFACE. ALL COSTS ASSOCIATED WITH SUPPLYING AND INSTALLING THE 3" x 8" PRESSURE TREATED PLANK BETWEEN THE POSTS ON THE CONCRETE BLOCK RETAINING WALLS SHALL BE INCLUDED IN THE COST OF THIS ITEM. SEE DETAIL THIS SHEET. IT HAS BEEN ESTIMATED THAT THERE IS 612 FEET OF FENCING TO BE INSTALLED INTO THE CONCRETE BLOCK WALL AND 467 FEET INTO NORMAL GROUND AND/OR THE EXISTING RIP RAP. THE CONTRACTOR SHALL ALLOW FOR THE DIFFERENCE IN WORK DURING BIDDING.



***CONCRETE BLOCK WALL/TIMBER EDGING DETAIL**
NTS

AUG 9 1994

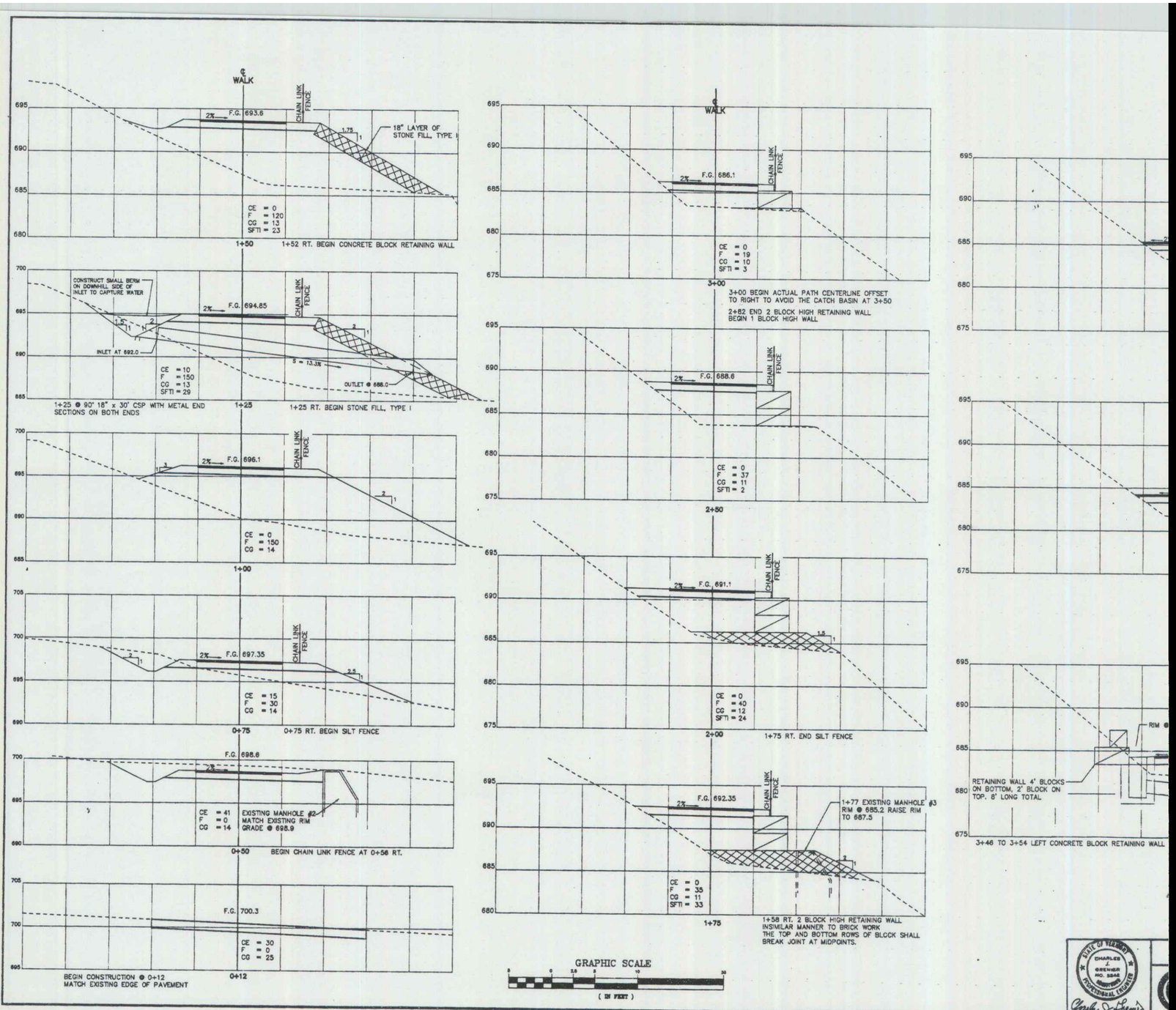
JUN 30 1992

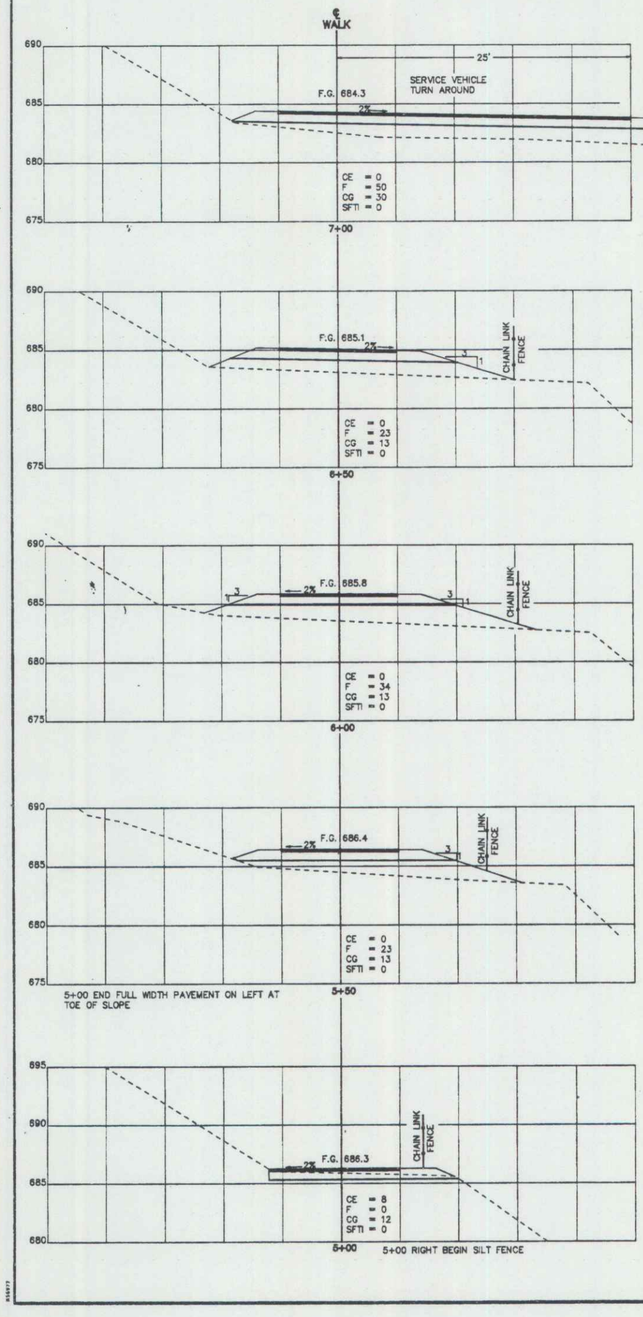
STATE OF VERMONT · CHARLES J. GRENIER NO. 5248 · REGISTERED PROFESSIONAL ENGINEER

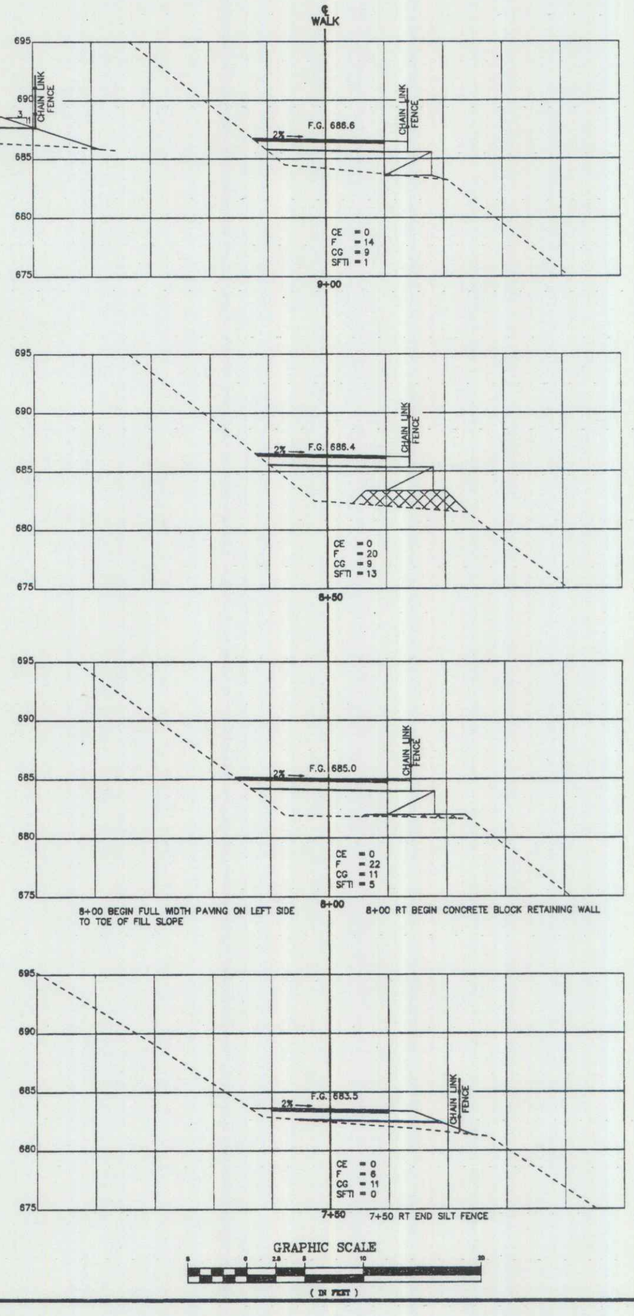
TOWN OF STOWE - RIVER WALK
EARTHWORK & TYPICAL SECTIONS

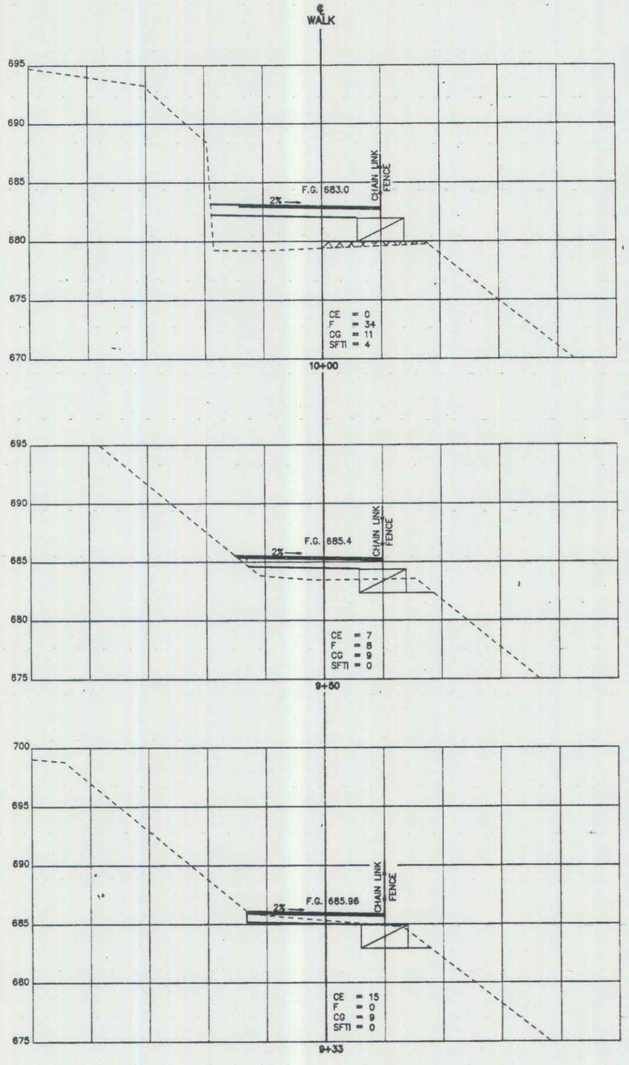
CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-8413

DATE = 10-25-91
DRN BY = T.J.M.
SCALE = A/N
SHT 7 OF 35


℄ WALK
CHAIN LINK FENCE
F.G. 693.6
2%
1.75
1
18" LAYER OF STONE FILL, TYPE I
CE = 0
F = 120
CG = 13
SFTI = 23
1+50
1+52 RT. BEGIN CONCRETE BLOCK RETAINING WALL
CONSTRUCT SMALL BERM ON DOWNHILL SIDE OF INLET TO CAPTURE WATER
F.G. 694.85
INLET AT 692.0
S = 13.3%
OUTLET @ 688.0
CE = 10
F = 150
CG = 13
SFTI = 29
1+25 @ 90° 18" x 30' CSP WITH METAL END SECTIONS ON BOTH ENDS
1+25
1+25 RT. BEGIN STONE FILL, TYPE I
F.G. 696.1
CE = 0
F = 150
CG = 14
1+00
F.G. 697.35
CE = 15
F = 30
CG = 14
0+75
0+75 RT. BEGIN SILT FENCE
F.G. 698.6
CE = 41
F = 0
CG = 14
EXISTING MANHOLE #2
MATCH EXISTING RIM
GRADE @ 698.9
0+50
BEGIN CHAIN LINK FENCE AT 0+58 RT.
F.G. 700.3
CE = 30
F = 0
CG = 25
BEGIN CONSTRUCTION @ 0+12
MATCH EXISTING EDGE OF PAVEMENT
0+12
F.G. 686.1
CE = 0
F = 19
CG = 10
SFTI = 3
3+00
3+00 BEGIN ACTUAL PATH CENTERLINE OFFSET TO RIGHT TO AVOID THE CATCH BASIN AT 3+50
2+82 END 2 BLOCK HIGH RETAINING WALL BEGIN 1 BLOCK HIGH WALL
F.G. 688.6
CE = 0
F = 37
CG = 11
SFTI = 2
2+50
F.G. 691.1
CE = 0
F = 40
CG = 12
SFTI = 24
2+00
1+75 RT. END SILT FENCE
F.G. 692.35
1+77 EXISTING MANHOLE #3 RIM @ 685.2 RAISE RIM TO 687.5
CE = 0
F = 35
CG = 11
SFTI = 33
1+75
1+58 RT. 2 BLOCK HIGH RETAINING WALL INSIMILAR MANNER TO BRICK WORK THE TOP AND BOTTOM ROWS OF BLOCK SHALL BREAK JOINT AT MIDPOINTS.
RETAINING WALL 4' BLOCKS ON BOTTOM, 2' BLOCK ON TOP. 8' LONG TOTAL
3+46 TO 3+54 LEFT CONCRETE BLOCK RETAINING WALL
GRAPHIC SCALE
(IN FEET)
STATE OF VERMONT
CHARLES L. GRENIER
NO. 5848
REGISTERED PROFESSIONAL ENGINEER







GRAPHIC SCALE

0 2.5 5 10 20

(IN FEET)

AUG 9 1994

JUN 30 1992

BW-RS-BIKE (2S)

STATE OF VERMONT CHARLES J. GRENIER NO. 5845 REGISTERED PROFESSIONAL ENGINEER

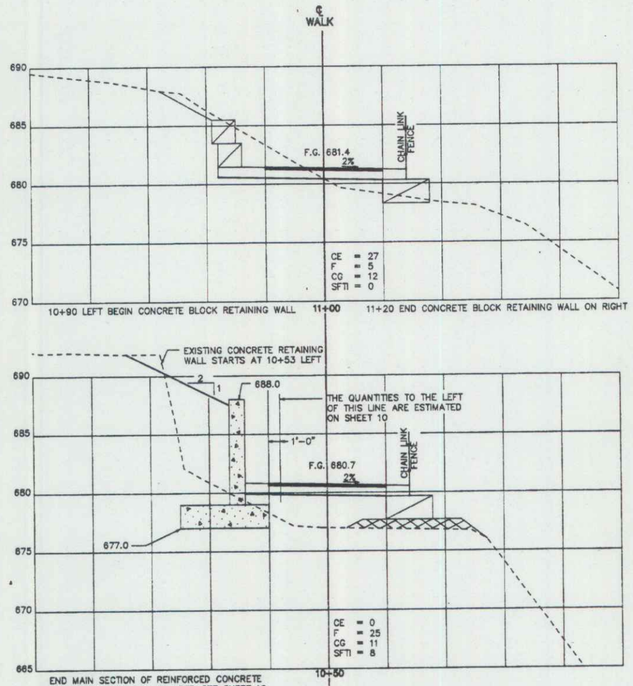
Charles J. Grenier

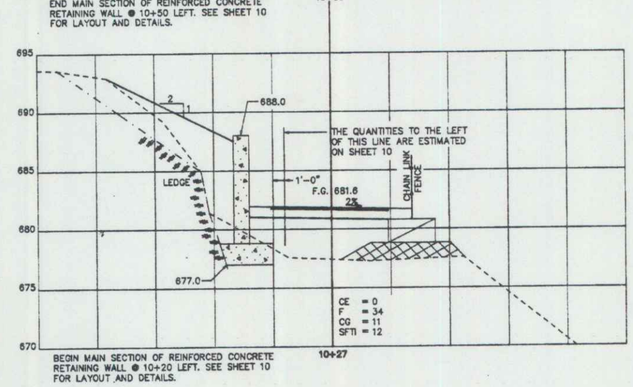
TOWN OF STOWE - RIVER WALK
"SECTIONS 5+00 TO 10+00"

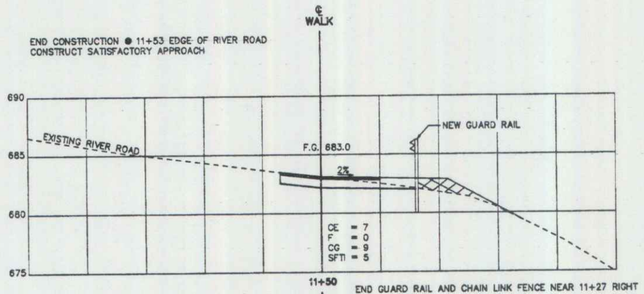
CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

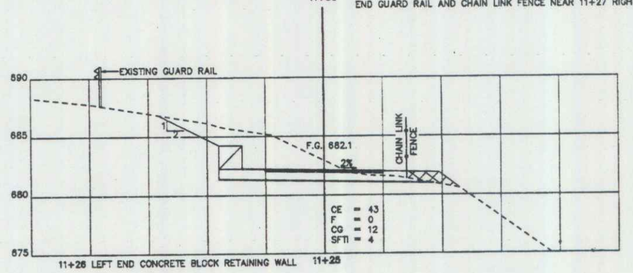
DATE = 10-25-91
DRN BY = T.J.M.
SCALE = 1"=5'
SHT 9 OF 26

9









GRAPHIC SCALE

(IN FEET)

AUG 9 1994

JUN 30 1992

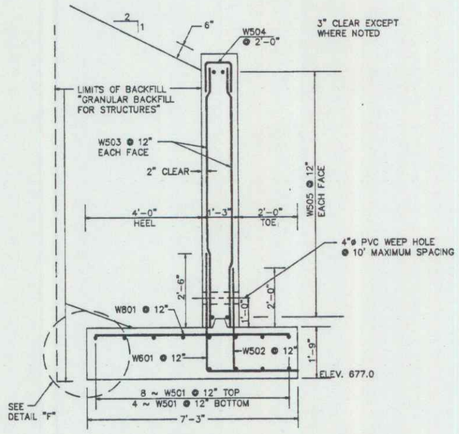
BW-RS-BIKE (2S)

TOWN OF STOWE - RIVER WALK
"SECTIONS 10+25 TO 11+50"

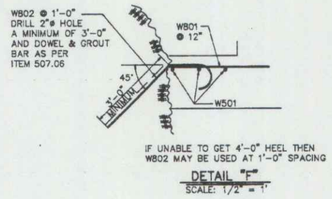
CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE =10-25-91
DRN BY = T.J.M.
SCALE = 1"=5'
SHT 10 OF 30

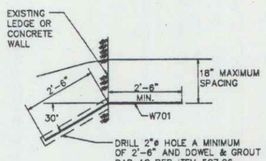
10



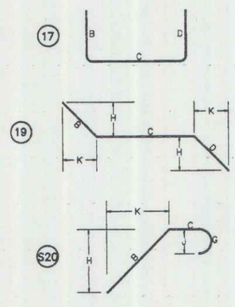
SECTION A – A
WALL TYPICAL
SCALE: 1/2" = 1'



DETAIL "F"
SCALE: 1/2" = 1'



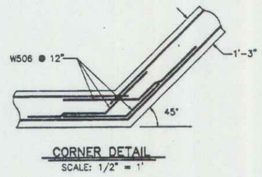
DETAIL "G"
SCALE: 1/2" = 1'



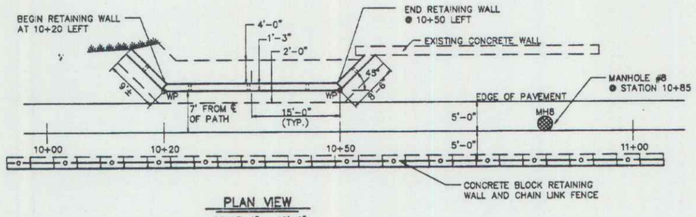
REBAR NOTES

1. ALL REINFORCEMENT FOR CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET – STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M31 (ASTM A 615), GRADE 60.
2. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.

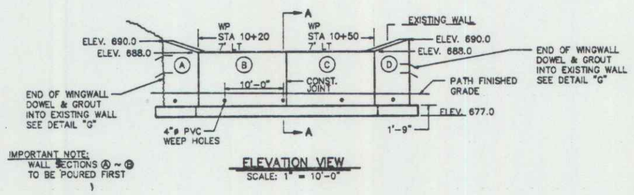
REBAR WEIGHT	
#5	1.043
#6	1.502
#7	2.044
#8	2.670



CORNER DETAIL
SCALE: 1/2" = 1'



PLAN VIEW
SCALE: 1" = 10'-0"



IMPORTANT NOTE:
WALL SECTIONS Ⓐ ~ Ⓓ TO BE POURED FIRST

ELEVATION VIEW
SCALE: 1" = 10'-0"

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED MARCH 1990 AND THE A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1990 AND ITS LATEST REVISIONS.
2. ALL CONCRETE IS TO BE STATE OF VERMONT CLASS "B" WITH 28 DAY STRENGTH OF 3500 PSI.
3. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1" UNLESS OTHERWISE NOTED.
4. ALL CONCRETE SHALL BE CURED AS PER VERMONT AGENCY OF TRANSPORTATION SPECIFICATIONS, SECTION 501.
5. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE.
6. MINIMUM REBAR SPLICE LENGTH 2'-0".

NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	G	H	J	K	TOTAL WEIGHT
		SECTION A											
12	5	10'-0"	AW501	STR									125
10	5	3'-9"	AW502	↑									39
20	5	11'-0"	AW503	↑	▲								229
24	5	10'-0"	AW505	STR	▲								250
10	8	6'-9"	AW801	STR									180
5	5	2'-10"	AW504	17		1'-0"	0'-10"	1'-0"					15
30	5	5'-0"	AW506	19		2'-6"	2'-6"	//		1'-9"		1'-9"	156
10	6	6'-10"	AW601	17		2'-10"	4'-0"	//					102
8	7	5'-0"	AW701	19		2'-6"	2'-6"	//		1'-3"		2'-2"	82
10	8	4'-11"	AW802	S20		3'-0"	1'-0"		0'-11"	2'-1"	0'-8"	2'-1"	131
		SECTION B											
12	5	18'-0"	BW501	STR									225
15	5	3'-9"	BW502	↑									59
30	5	9'-0"	BW503	↑									282
20	5	17'-0"	BW505	↑									355
15	8	6'-9"	BW801	STR									270
8	5	2'-10"	BW504	17		1'-0"	0'-10"	1'-0"					24
15	6	6'-10"	BW601	17		2'-10"	4'-0"	//					154
5	8	4'-11"	BW802	S20		3'-0"	1'-0"		0'-11"	2'-1"	0'-8"	2'-1"	68
		SECTION C											
12	5	18'-0"	CW501	STR									200
15	5	3'-9"	CW502	↑									59
30	5	9'-0"	CW503	↑									282
20	5	15'-0"	CW505	↑									313
15	8	6'-9"	CW801	STR									270
8	5	2'-10"	CW504	17		1'-0"	0'-10"	1'-0"					24
15	6	6'-10"	CW601	17		2'-10"	4'-0"	//					154
2	8	4'-11"	CW802	S20		3'-0"	1'-0"		0'-11"	2'-1"	0'-8"	2'-1"	26
		SECTION D											
12	5	9'-6"	DW501	STR									119
10	5	3'-9"	DW502	↑									39
20	5	10'-6"	DW503	↑									219
24	5	9'-9"	DW505	↑	▲								244
10	8	6'-9"	DW801	STR	▲								180
5	5	2'-10"	DW504	17		1'-0"	0'-10"	1'-0"					15
30	5	5'-0"	DW506	19		2'-6"	2'-6"	//		1'-9"		1'-9"	156
10	6	6'-10"	DW601	19		2'-10"	4'-0"	//					102
8	7	5'-0"	DW701	19		2'-6"	2'-6"	//		1'-3"		2'-2"	82
8	8	4'-11"	DW802	S20		3'-0"	1'-0"		0'-11"	2'-1"	0'-8"	2'-1"	103

▲ = CUT TO FIT IN FIELD

ESTIMATED QUANTITIES

ITEM 204.25	STRUCTURE EXCAVATION	68 CUBIC YARDS
ITEM 204.30	GRANULAR BACKFILL FOR STRUCTURES	87 CUBIC YARDS
ITEM 501.25	CONCRETE, CLASS B	43.5 CUBIC YARDS
ITEM 507.15	REINFORCING STEEL	5331 POUNDS
ITEM 507.16	DRILLING AND GROUTING DOWELS	115 LINEAR FEET
ITEM 514.10	WATER REPELLENT	2 GALLONS

AUG 9 1994

JUN 3 0 1992

BW-RS-BIKE (25)

STATE OF VERMONT CHARLES J. BROWN ENGINEER NO. 5445 REGISTERED PROFESSIONAL ENGINEER
Charles J. Brown

TOWN OF STOWE - RIVER WALK
"DETAILS OF RETAINING WALL AT 10+25"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-8413

DATE • 10-25-91
DRN BY • T.J.M.
SCALE • A/N
SHT 11 OF 25

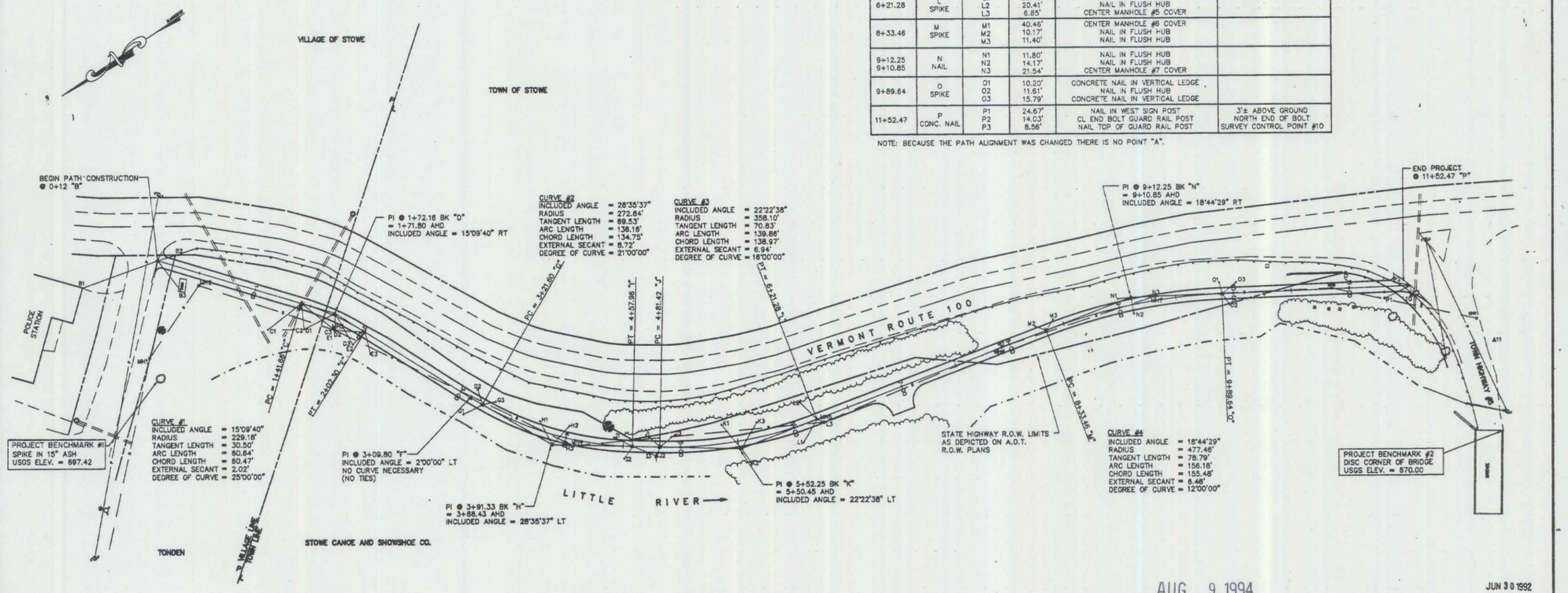
TANGENT LINE BEARINGS

STATION	TIE #	BEARING	DISTANCE
0+12 TO 1+41.66	B TO C	S 50°48'41" W	129.66'
1+41.66 TO 1+72.16 BK 1+71.80 AHD	C TO D	S 50°48'41" W	30.50'
1+72.16 BK TO 2+02.30 1+71.80 AHD	D TO E	S 65°58'21" W	30.50'
2+02.30 TO 3+09.80	E TO F	S 65°58'21" W	107.70'
3+09.80 TO 3+21.80	F TO G	S 63°58'21" W	11.80'
3+21.80 TO 3+91.33 BK 3+88.43 AHD	G TO H	S 63°58'21" W	69.53'
3+91.33 BK TO 4+57.98 3+88.43 AHD	H TO I	S 35°22'44" W	69.53'
4+57.98 TO 4+81.42	I TO J	S 35°22'44" W	23.46'
4+81.42 TO 5+52.25 BK 5+40.45 AHD	J TO K	S 35°22'44" W	70.83'
5+52.25 BK TO 6+21.28 5+50.45 AHD	K TO L	S 13°00'06" W	70.83'
6+21.28 TO 8+33.46	L TO M	S 13°00'06" W	212.18'
8+33.46 TO 9+12.25 BK 9+10.85 AHD	M TO N	S 13°00'06" W	78.79'
9+12.25 BK TO 9+89.64 9+10.85 AHD	N TO O	S 31°44'35" W	78.79'
9+89.64 TO 11+52.47	O TO P	S 31°44'35" W	162.83'

TIE DISTANCE TABLE

STATION	DESC.	TIE #	DISTANCE	DESCRIPTION	REMARKS
0+12	B SPIKE	B1 B2 B3	69.20' 21.37' 33.97'	CORNER BRICK POLICE STATION (9TH ROW) NAIL IN FIRST GUARD RAIL POST NAIL TOP CENTER WEST END SIGN PLANTER	
1+41.66	C SPIKE	C1 C2 C3	31.81' 22.41' 37.11'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB CENTER MANHOLE #3 COVER	
1+72.16 1+71.80	D SPIKE	D1 D2 D3	30.12' 14.44' 31.02'	NAIL IN FLUSH HUB CENTER MANHOLE #3 COVER NAIL IN FLUSH HUB	SAME AS C2 SAME AS C3 AND E1 SAME AS E2
2+02.30	E SPIKE	E1 E2 E3	26.20' 15.16' 19.41'	CENTER MANHOLE #3 COVER NAIL IN FLUSH HUB NAIL IN FLUSH HUB	SAME AS C3 AND D2 SAME AS D3
3+09.80	F SPIKE	F1 F2 F3	– – –	NO TIES NECESSARY	SEE POINT "G" NEARBY
3+21.80	G SPIKE	G1 G2 G3	18.92' 13.89' 11.78'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB NAIL IN FLUSH HUB	
3+91.33 3+88.43	H SPIKE	H1 H2 H3	22.96' 22.19' 18.59'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB CENTER MANHOLE #4 COVER	
4+57.98	I SPIKE	I1 I2 I3	17.74' 12.81' 22.35'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB SPIKE S1 FLUSH	SURVEY CONTROL POINT
4+81.42	J SPIKE	J1 J2 J3	12.64' 8.24' 16.34'	SPIKE FLUSH SPIKE S1 FLUSH SPIKE FLUSH	SAME AS I3
5+52.25 5+50.45	K SPIKE	K1 K2 K3	27.12' 14.15' 26.51'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB NAIL IN FLUSH HUB	
6+21.28	L SPIKE	L1 L2 L3	23.48' 20.41' 6.85'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB CENTER MANHOLE #5 COVER	
8+33.46	M SPIKE	M1 M2 M3	40.46' 10.17' 11.40'	CENTER MANHOLE #6 COVER NAIL IN FLUSH HUB NAIL IN FLUSH HUB	
9+12.25 9+10.85	N NAIL	N1 N2 N3	11.80' 14.17' 21.54'	NAIL IN FLUSH HUB NAIL IN FLUSH HUB CENTER MANHOLE #7 COVER	
9+89.64	O SPIKE	O1 O2 O3	10.20' 11.61' 15.79'	CONCRETE NAIL IN VERTICAL LEDGE NAIL IN FLUSH HUB CONCRETE NAIL IN VERTICAL LEDGE	
11+52.47	P CONC. NAIL	P1 P2 P3	24.67' 14.03' 8.56'	NAIL IN WEST SIGN POST CL END BOLT GUARD RAIL POST NAIL TOP OF GUARD RAIL POST	3'± ABOVE GROUND NORTH END OF BOLT SURVEY CONTROL POINT #10

NOTE: BECAUSE THE PATH ALIGNMENT WAS CHANGED THERE IS NO POINT "A".



SITE PLAN

(IN FEET)

AUG 9 1994

JUN 30 1992

BW-RS-BIKE (2S)

REVISED 10-25-91

STATE OF VERMONT CHARLES J. GRENIER NO. 5848 REGISTERED PROFESSIONAL ENGINEER

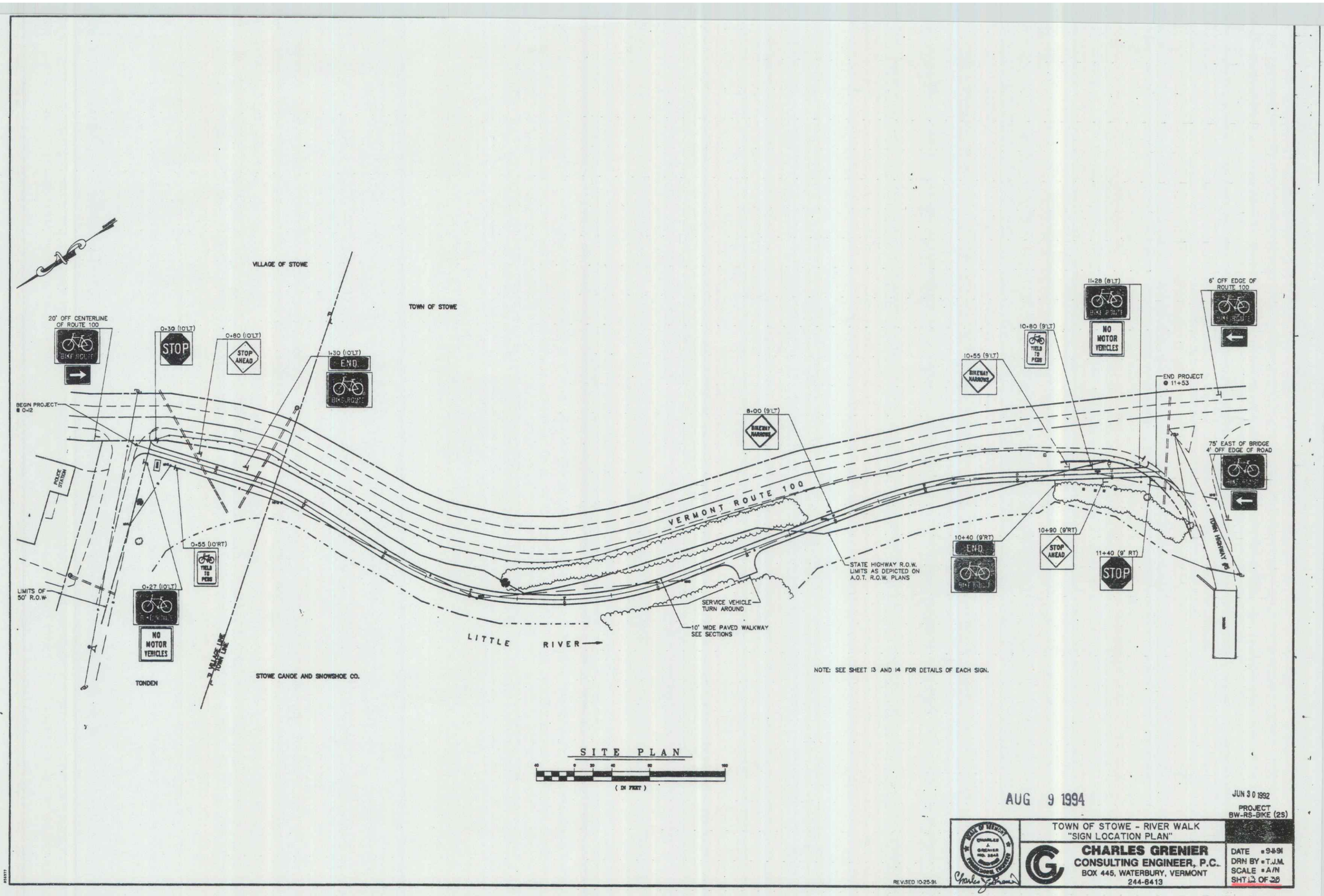
Charles J. Grenier

TOWN OF STOWE - RIVER WALK
"TIE DETAIL SHEET"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 9-5-91
DRN BY = T.J.M.
SCALE = 1"=40'
SHT 12 OF 38

12



NOTE: SEE SHEET 13 AND 14 FOR DETAILS OF EACH SIGN.

SITE PLAN

(IN FEET)

AUG 9 1994

JUN 30 1992

PROJECT BW-RS-BIKE (25)

TOWN OF STOWE - RIVER WALK
"SIGN LOCATION PLAN"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 9-8-94
DRN BY = T.J.M.
SCALE = A/N
SHT 13 OF 28

REVISED 10-25-94

13

TRAFFIC SIGN SUMMARY

STATION	SIGN LEGEND	SIGN DIMENSIONS	NEW SIGNS SF	# OF POSTS	FLANGED CHANNEL LB/FT	REMARKS	PLAN SHEET #	STD SHEET #
-0+32 LT	BIKE ROUTE	24 X 18	3.0	1	3	SEE DETAIL A ON ROUTE 100 SOUTHBOUND, NORTH OF DRIVE TO POLICE STATION	14	
	→	12 X 9	0.8			SEE DETAIL B BELOW PREVIOUS SIGN ON SAME POST	14	
0+27 RT	BIKE ROUTE	24 X 18	3.0	1	3	SEE DETAIL A FACING SOUTHBOUND TRAFFIC	14	
	NO MOTOR VEHICLES	24 X 24	4.0			SEE DETAIL D BELOW PREVIOUS SIGN ON SAME POST	14	
0+30 LT	STOP	18 X 18	2.3	1	3	SEE DETAIL G FACING NORTHBOUND TRAFFIC	14	
0+55 RT	YIELD TO PEDS	12 X 18	1.5	1	3	SEE DETAIL C FACING SOUTHBOUND TRAFFIC	14	
0+80 LT	STOP AHEAD	18 X 18	2.3	1	3	SEE DETAIL H FACING NORTHBOUND TRAFFIC	14	
1+30 LT	END	24 X 6	1.0	1	3	SEE DETAIL E FACING NORTHBOUND TRAFFIC	14	
	BIKE ROUTE	24 X 18	3.0			SEE DETAIL A BELOW PREVIOUS SIGN ON SAME POST	14	
8+00 LT	BIKEWAY NARROWS	18 X 18	2.3	1	3	SEE DETAIL F FACING SOUTHBOUND TRAFFIC	14	
10+40 RT	END	24 X 6	1.0	1	3	SEE DETAIL E FACING SOUTHBOUND TRAFFIC	14	
	BIKE ROUTE	24 X 18	3.0			SEE DETAIL A BELOW PREVIOUS SIGN ON SAME POST	14	

STATION	SIGN LEGEND	SIGN DIMENSIONS	NEW SIGNS SF	# OF POSTS	FLANGED CHANNEL LB/FT	REMARKS	PLAN SHEET #	STD SHEET #
10+55 LT	BIKEWAY NARROWS	18 X 18	2.3	1	3	SEE DETAIL F FACING NORTHBOUND TRAFFIC	14	
10+90 RT	STOP AHEAD	18 X 18	2.3	1	3	SEE DETAIL H FACING SOUTHBOUND TRAFFIC	14	
10+80 LT	YIELD TO PEDS	12 X 18	1.5	1	3	SEE DETAIL C FACING NORTHBOUND TRAFFIC	14	
11+28 LT	BIKE ROUTE	24 X 18	3.0	1	3	SEE DETAIL A FACING NORTHBOUND TRAFFIC	14	
	NO MOTOR VEHICLES	24 X 24	4.0			SEE DETAIL D BELOW PREVIOUS SIGN ON SAME POST	14	
11+40 RT	STOP	18 X 18	2.3	1	3	SEE DETAIL G FACING SOUTHBOUND TRAFFIC	14	
12+20 RT	BIKE ROUTE	24 X 18	3.0	1	3	SEE DETAIL A ON SOUTHSIDE OF RIVER ROAD–T.H.#5 75' EAST OF BRIDGE	14	
	←	12 X 9	0.8			SEE DETAIL B BELOW PREVIOUS SIGN ON SAME POST	14	
12+60 LT	BIKE ROUTE	24 X 18	3.0	1	3	SEE DETAIL A ON ROUTE 100 NORTHBOUND, ACROSS FROM RIVER ROAD INTERSECTION	14	
	←	12 X 9	0.8			SEE DETAIL B BELOW PREVIOUS SIGN ON SAME POST	14	

TOTAL SIGN AREA =	50.2	15	= TOTAL # OF POSTS
		585	= TOTAL POUNDS *

* THE POSTS LENGTHS ARE TO BE DETERMINED IN THE FIELD.
FOR ESTIMATING PURPOSES 13' AVERAGE POST LENGTH WAS USED.
ALL SIGNS ARE TO BE A MINIMUM OF 8' CLEAR ABOVE THE GROUND SURFACE.

AUG 9 1994

JUN 30 1992

PROJECT BW-RS-BIKE (25)

REVISED 10-25-91

TOWN OF STOWE - RIVER WALK
"TRAFFIC SIGN SUMMARY"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 9-8-91
DRN BY = T.J.M.
SCALE = N/A
SHT 14 OF 36

14



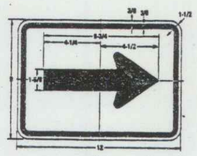
D11-1

SIGN	DIMENSIONS (INCHES)								
	A	B	C	D	E	F	G	H	J	K
STD. & MIN.	24	18	1/2	1-1/2	7	3-1/2	3C	6-1/2	9-1/2	1-1/2
SPECIAL	30	24	5/8	1-7/8	8-3/4	4-3/8	4C	6-7/8	12-1/2	1-1/2

COLORS

LEGEND – WHITE (REFL)
BACKGROUND – GREEN

DETAIL A

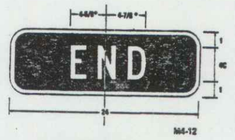


M7-1

COLORS
LEGEND – BLACK (NON-REFL) } WHEN USED w/ M1-6 SIGN
BACKGROUND – WHITE (REFL)

* LEGEND – WHITE } WHEN USED w/D11-1 & M1-6 SIGNS
BACKGROUND – GREEN }

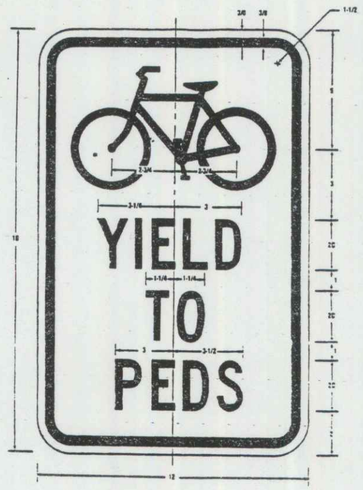
DETAIL B



M6-12

COLORS: LEGEND–WHITE (REFL)
BACKGROUND–GREEN (REFL)
*INCREASE SPACING 100%

DETAIL E



R9-6

COLORS: LEGEND – BLACK (NON-REFL)
BACKGROUND–WHITE (REFL)

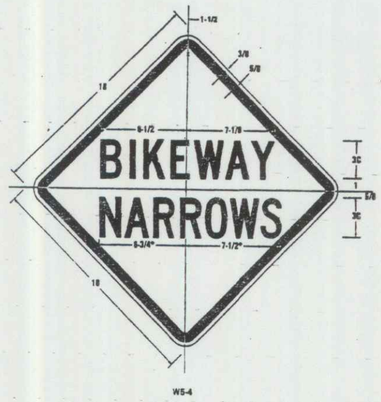
DETAIL C



R5-2

COLORS
LEGEND – BLACK (NON-REFL)
BACKGROUND–WHITE (REFL)

DETAIL D

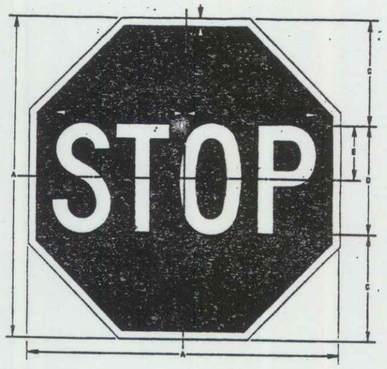


W5-4

COLORS: LEGEND & BORDER – BLACK (NON-REFL)
BACKGROUND – YELLOW (REFL)

*REDUCE SPACING 50%

DETAIL F



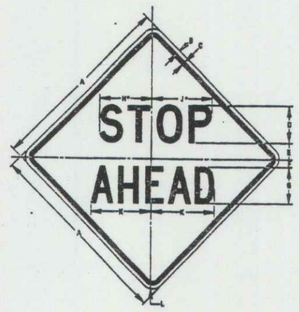
R1-1

SIGN	DIMENSIONS (INCHES)					
	A	B	C	D	E	F
BIKE	18	3/8	6	8C	3	7-3/4
MED.	24	5/8	8	12C	4	10
STD.	30	3/4	10	16C	5	12-1/2
EXPWY.	36	7/8	12	12C	6	15
SPECIAL	48	1-1/8	16	16C	8	20

COLORS

LEGEND – WHITE (REFL)
BACKGROUND – RED (REFL)

DETAIL G



W3-1

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K	L
BIKE	18	3/8	6/8	3C	1-3/4	3/4	3C	4-3/4	5-1/4	5-3/8	1-1/2
MED.	30	1/2	3/4	6C	2-1/2	1-1/4	5C	5	9-7/8	10-1/2	1-7/8
STD.	36	5/8	7/8	7C	3	1-1/2	7C	10-1/2	11-6/16	12-1/4	2-1/4
SPECIAL	48	3/4	1-1/8	9C	4	2	9C	13-1/2	14-13/16	16-3/4	3

COLORS

LEGEND – BLACK (NON-REFL)
BACKGROUND – YELLOW (REFL)

DETAIL H

AUG 9 1994

JUN 3 0 1992

PROJECT
BW-RS-BIKE (2S)

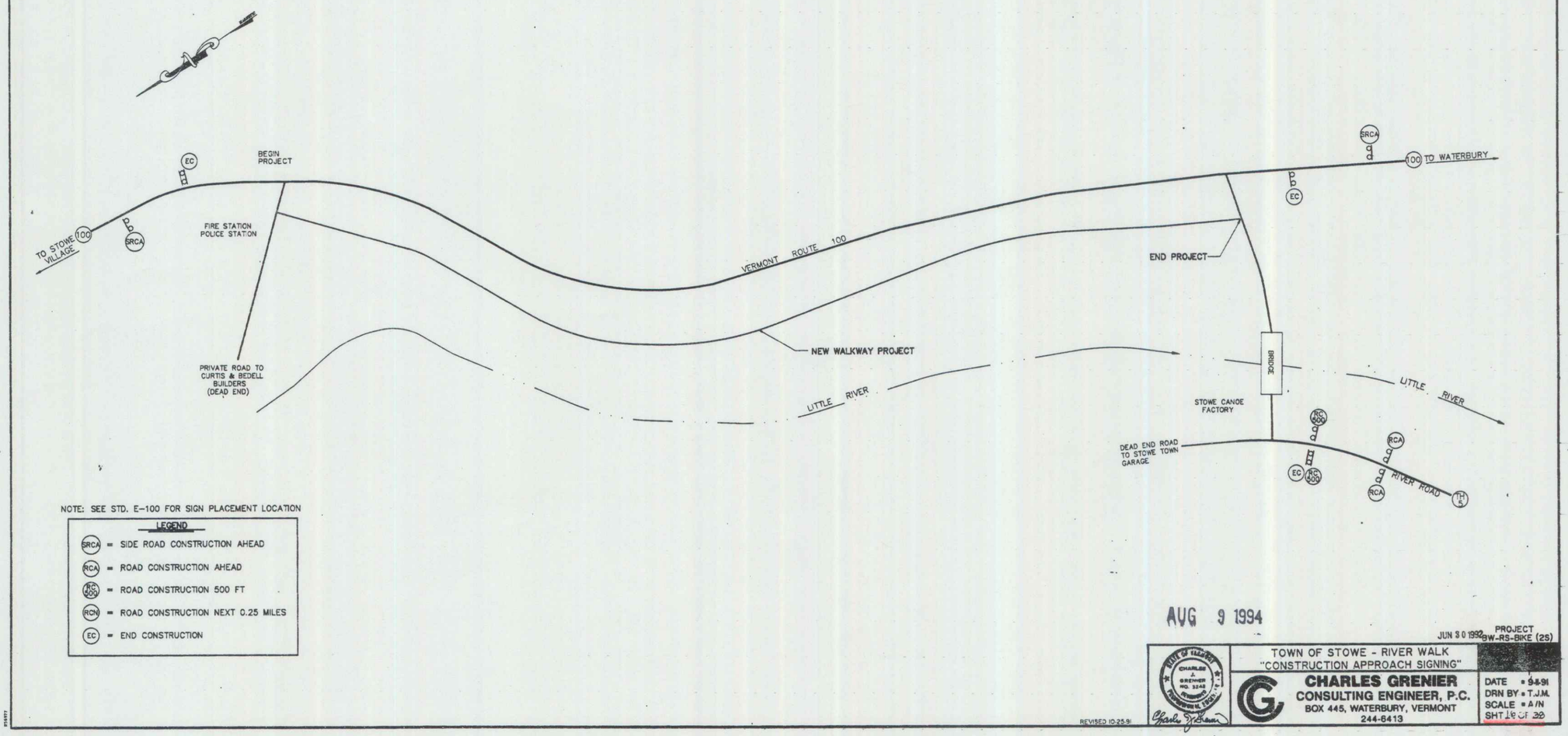
REVISED 10-25-91

TOWN OF STOWE - RIVER WALK
"SIGN DETAIL SHEET"

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE 9-4-91
DRN BY T.J.M.
SCALE A/N
SHT 15 OF 38

15



NOTE: SEE STD. E-100 FOR SIGN PLACEMENT LOCATION

LEGEND

- SRCA = SIDE ROAD CONSTRUCTION AHEAD
- RCA = ROAD CONSTRUCTION AHEAD
- RC 500 = ROAD CONSTRUCTION 500 FT
- RCN = ROAD CONSTRUCTION NEXT 0.25 MILES
- EC = END CONSTRUCTION

AUG 9 1994

JUN 30 1992

PROJECT
BW-RS-BIKE (2S)

TOWN OF STOWE - RIVER WALK
"CONSTRUCTION APPROACH SIGNING"

STATE OF VERMONT
CHARLES A. GRENIER
NO. 3248
REGISTERED ENGINEER

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

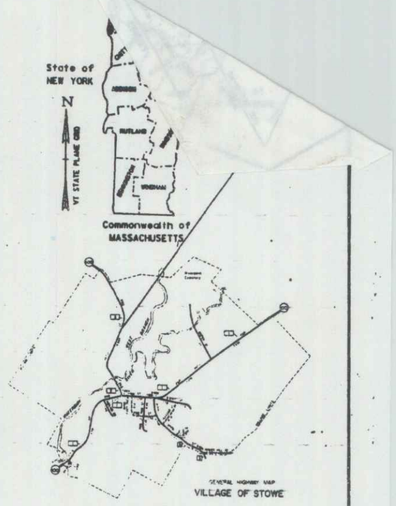
DATE = 5-8-91
DRN BY = T.J.M.
SCALE = A/N
SHT 16 OF 30

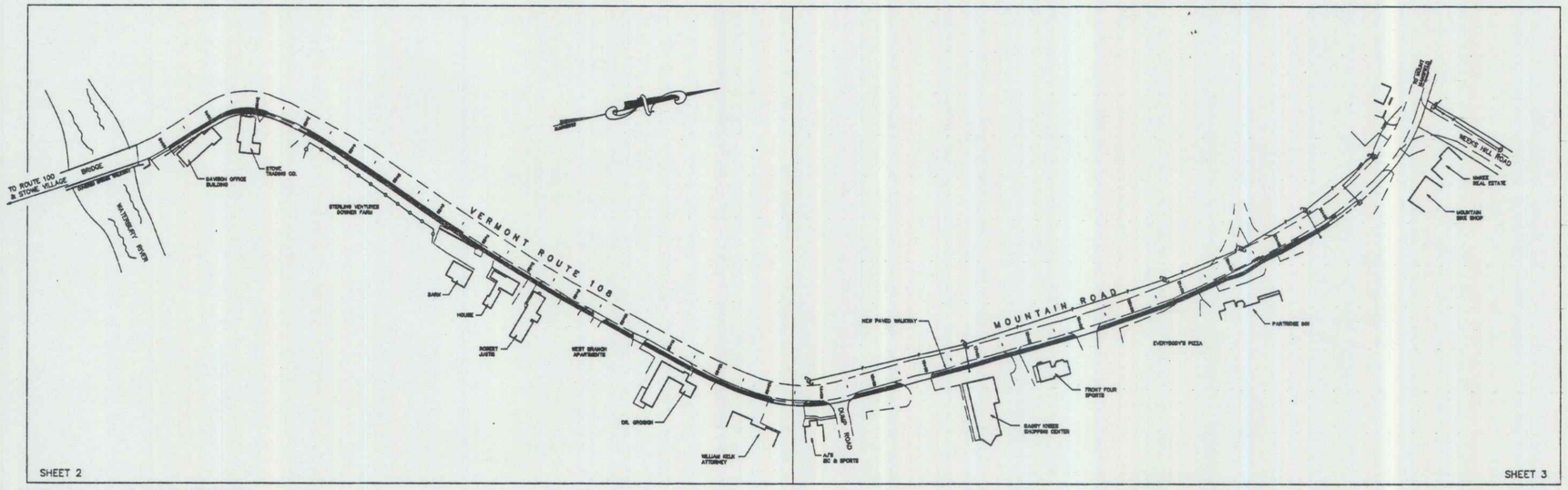
REVISED 10-25-91

16

VILLAGE OF STOWE

MOUNTAIN ROAD WALK





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GRAPHIC SCALE

(IN FEET)

0.49 - 0.58

AUG 9 1994

PROJECT SCOPE:

THIS PROJECT INVOLVES THE CONSTRUCTION OF A BITUMINOUS CONCRETE SIDEWALK ALONG THE EAST SIDE OF VERMONT ROUTE 108 WITHIN THE VILLAGE OF STOWE STARTING AT THE COVERED BRIDGE WALKWAY OVER THE WATERBURY RIVER AND ENDING SOME 2400'± AWAY BEYOND THE PARTRIDGE INN. EXCAVATION AND PLACING A GRAVEL SUBBASE WILL BE REQUIRED.

JUN 30 1992

PROJECT BW-RS-BIKE (29)

REVISED 1-31-92
REVISED 8-4-91
REVISED 8-20-91

STATE OF VERMONT — CHARLES J. GRENIER NO. 5248 — REGISTERED ENGINEER

Charles J. Grenier

"TITLE SHEET"
STOWE MOUNTAIN ROAD WALK

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 8-14-91
DRN BY = T.J.M.
SCALE = 1"=100'
SHT 26 OF 35

17

NEW GUARD RAIL – WORK SUMMARY
CONSTRUCT NEW STEEL BEAM GUARD RAIL, ITEM 621.20 FROM 3+25 TO 8+25, 16" RIGHT OF ROUTE 108, 5'-8" LEFT OF SIDEWALK CENTERLINE, TO FACE OF RAIL. ADD TWO BREAKAWAY CABLE TERMINALS, ITEM 621.50, AT 3+00 TO 3+25, AND 8+25 TO 8+50. REMOVE EXISTING 2 CABLE WOOD POST GUARD RAIL FROM 2+92 TO 8+32 UNDER ITEM 621.60, REMOVAL AND DISPOSAL OF GUARD RAIL.

20 SCALE ENLARGEMENT

8+25 TO 8+50 CONSTRUCT BREAKAWAY CABLE TERMINAL WITH WOOD POSTS

END OF EXISTING GUARD RAIL AT 8+32

RELOCATE SIDEWALK AROUND END OF GUARD RAIL AT 8+50 BY OFFSETTING THE CENTERLINE BY 2'-8" RIGHT. FLARE BACK TO "TIED IN" CENTERLINE AT 8+25 AND AT 8+84 AT THE DRIVEWAY

8+00
8+84
"TIED IN" CENTERLINE
8+50
7+00
CENTERLINE OF VT ROUTE 108
80' LONG CONCRETE BLOCK RETAINING WALL
TOE
PARKING LOT
30" PINE TO BE PROTECTED
BARN

MATCHLINE SHEET 2
SHEET 3

1+25 TO 2+00 SALVAGE EXISTING WOOD RAIL FENCE, SEE NOTE ON SHEET 5

200' OF GRANITE CURBING WITH 7" REVEAL ITEM 616.21

PC 1+13 BEGIN 3' WIDE SIDEWALK

STATION 1+00 END 3' WIDE SIDEWALK, BEGIN TAPER TO 7' WIDE SIDEWALK

CATCH BASIN TYPICAL

0+53 REMOVE 18" ELM STUMP ITEM 201.30

14' FROM CENTERLINE TO FACE OF CURB

EXISTING SIGN AND POST TO REMAIN

BEGIN PROJECT @ 0+00

BRIDGE

WOOD GUARD RAIL

WATERBURY RIVER

PROJECT BENCHMARK #1
BRONZE DISK ON CONCRETE ABUTMENT
SOUTHEAST END OF BRIDGE
ELEV. = 711.83

PARKING LOT

DAVISON OFFICE BUILDING

ROBERT P. DAVISON JR., ESQ.

STONE TRADING CO.

BRUCE GREEN

EXISTING BRICK WALKWAY TO REMAIN

BEGIN SIDEWALK AND CURB AT EDGE OF PAVED PARKING LOT WITH BOX OUT STATION 0+00

CURVE #1
INCLUDED ANGLE = 31°43'33"
RADIUS = 97'
TANGENT LENGTH = 47.05'
ARC LENGTH = 87.57'
CHORD LENGTH = 84.85'
EXTERNAL SECANT = 10.6'
DEGREE OF CURVE = 59°0'

LIMIT OF ASSUMED 3 ROD R.O.W. 24'-6" FROM EXISTING CENTERLINE

PC @ 1+08.55 BK = 1+53.47 AND INCLUDED ANGLE = 31°43'33" RT

END SIDEWALK AND CURB AT STATION 2+00

6'X 14'X 16" TYPICAL

PI @ 2+45.08 INCLUDED ANGLE = 9°25'4" RT NO CURVE REQUIRED

BEGIN SIDEWALK WITH BOX OUT AT 3+67

STATION 3+33.09 INCLUDED ANGLE = 4°4'32" RT NO CURVE REQUIRED

LIGHT POLE TYPICAL

GUIDERAIL

VERMONT ROUTE 108

12' WIDE TEMPORARY CONSTRUCTION EASEMENT (TYPICAL)

TOE OF FILL
LIMITS OF CONSTRUCTION

LIMITS OF CONSTRUCTION ON LEFT SIDE SEE TYPICAL SECTION ON SHEET 5

3+00 TO 8+85 EXISTING BARBED WIRE FENCE TO BE RELOCATED TO A POINT 12' RIGHT OF THE TOE OF SLOPE, AS PER ITEM 105.20 REMOVAL AND RESETTING FENCE, SEE NOTES ON SHEET 5

3+00 TO 3+88 USE STONE FILL, TYPE I ITEM 613.10 ON FILL SLOPE FROM TOP TO BOTTOM, SEE SECTIONS ON SHEET 7

6+49 (13.5' RT) TO 6+70 (9.5' RT) 60' LONG CONCRETE BLOCK RETAINING WALL ITEM 801.30 (MOD.) SEE DETAIL ON SHEET 9

EXTEND EXISTING 15" CMP BY 14'± TO FACE OF RETAINING WALL

STATION 6+63.37 END FULL SIDEWALK TYPICAL WITH BOX OUT INCLUDED ANGLE = 7°48'03" LT NO CURVE REQUIRED

6+70 AND 7+40 ST. 60" PINE STUMPS TO BE REMOVED ITEM 201.31

7+15 BEGIN FULL SIDEWALK TYPICAL WITH BOX OUT

7+84 END FULL SIDEWALK TYPICAL WITH BOX OUT

8+05 BEGIN FULL SIDEWALK TYPICAL WITH BOX OUT

8+08 RT 26" STUMP TO REMAIN

26" OAK TREE TO BE SAVED

STATION 8+44.05 INCLUDED ANGLE = 2°23'37" LT NO CURVE REQUIRED

8+60 END FULL SIDEWALK TYPICAL WITH BOX OUT

8+00 BEGIN FULL SIDEWALK TYPICAL WITH BOX OUT

8+33 END BOX OUT AND FULL SIDEWALK TYPICAL MATCH EXISTING PAVEMENT GRADE AT EDGE OF DRIVEWAY

8+46 BEGIN BOX OUT AND FULL SIDEWALK TYPICAL MATCH EXISTING PAVEMENT GRADE AT EDGE OF DRIVEWAY

10+08 END BOX OUT AND FULL SIDEWALK TYPICAL MATCH EXISTING PAVEMENT GRADE AT EDGE OF DRIVEWAY

10+28 BEGIN BOX OUT AND FULL SIDEWALK TYPICAL MATCH EXISTING PAVEMENT GRADE AT EDGE OF DRIVEWAY

11+33 END FULL SIDEWALK TYPICAL WITH BOX OUT

STATION 11+87.15 INCLUDED ANGLE = 3°12'56" LT NO CURVE REQUIRED

11+88 BEGIN FULL SIDEWALK TYPICAL WITH BOX OUT

STATION 11+98.74 INCLUDED ANGLE = 2°04'48" LT NO CURVE REQUIRED

12+84 END BOX OUT AND FULL SIDEWALK TYPICAL MATCH EXISTING PAVEMENT GRADE AT EDGE OF DRIVEWAY

13+70 TO 13+90 REMOVE AND RESET WOOD FENCE 5' BEHIND SIDEWALK ITEM 605.05

PI #4 13+38.33 BK = 13+51.86 AHD INCLUDED ANGLE = 27°17'29" LT

MOUNTAIN ROAD

HOUSE

BARN

DOWNER FARM
OWNED BY
STERLING VENTURES

FLOOD LIGHT TYPICAL

GRADE DRIVE 10%

SIGN TO REMAIN AS IS

ROBERT & BARBARA EVANS

PRESSURE TREATED POSTS TO BE RESET BEHIND SIDEWALK

WEST BRANCH APARTMENTS

FRANZ, PETER SCHUETZMANN

ALL SIDEWALK RAMPS SHALL MEET ANS HANDICAPPED ACCESSIBLE STANDARDS SEE STANDARD D-3 WHERE APPLICABLE

DR. GROSKIN

STEPHEN & DONNA GROSKIN

WILLIAM GOLK ATTORNEY

IMPORTANT NOTE:
THE 10' WIDE TEMPORARY CONSTRUCTION EASEMENT DOES NOT GIVE THE CONTRACTOR THE RIGHT TO DAMAGE TREES, BUILDINGS, SIGNS, WALKS, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES CAUSED IN THE COURSE OF CONSTRUCTION AND IS REQUIRED TO RESTORE THE PREMISES AS NEAR AS POSSIBLE TO THE CONDITION THEY WERE IN PRIOR TO CONSTRUCTION.

IMPORTANT NOTE:
IN CROSS-HATCHED AREAS THE CONTRACTOR SHALL LOWER THE EXISTING GRADE BETWEEN THE BACK OF THE SIDEWALK AND THE EDGE OF ROUTE 108 BY 2" TO ALLOW EXISTING DRAINAGE PATTERNS THEN PAVE WITH 2" OF BITUMINOUS CONCRETE SIDEWALK, ITEM 618.13 (TYPE II MIX) TYPICAL THROUGHOUT THE PROJECT. PAID AS COMMON EXCAVATION ITEM 203.18 SEE SHEET 5 FOR QUANTITIES

NOTE: EXISTING HANDRAILS SHALL BE REMOVED AND PLACED IN TEMPORARY LOCATIONS AS NECESSARY. THE HANDRAILS SHALL BE REINSTALLED UPGRADED AS DETAILED ON SHEET 13 AND NEAR THEIR ORIGINAL LOCATIONS AT THE MIDPOINT BETWEEN THE EDGE OF ROAD AND EDGE OF SIDEWALK WITHIN THE GRASS STRIP, OR AS DIRECTED BY THE ENGINEER. ITEMS 617.10 AND 617.13. SEE NOTE ON SHEET 6 FOR LOCATIONS.

NOTE: EXISTING ROADWAY SIGNS SHALL BE TEMPORARILY REMOVED, STORED, AND REINSTALLED AS PER ITEM 675.60 ERECTING GALVANIZED STEEL. SEE NOTE ON SHEET 9 FOR LOCATIONS

AT 2+87 CONSTRUCT SIDEWALK OFFSET 3' RIGHT FROM "TIED IN" CENTERLINE

END OF EXISTING GUARD RAIL AT 2+92

3+00 TO 3+25 CONSTRUCT BREAKAWAY CABLE TERMINAL WITH WOOD POSTS. THE END OF THE GUARD RAIL WILL BE 20' OFF ROUTE 108 CENTERLINE.

PI @ 3+33.09 INCLUDED ANGLE FOR TIED IN CENTERLINE 4°4'32" RT

3+00
3+50
4+00
CENTERLINE VT ROUTE 108
TOE
EXISTING EDGE
TEMPORARY CONSTRUCTION EASEMENT
RELOCATE SIDEWALK AROUND END OF GUARD RAIL BREAKAWAY TERMINAL

CONVENTIONAL SIGNS

- FENCE LINE
- STONE WALL
- TRAVELED WAY
- GUARD RAIL
- SURVEY LINE
- CULVERT
- POWER POLE
- TREES (SOFTWOOD)
- TREES (HARDWOOD)
- PROPERTY LINE
- TOP OF CUT
- TOE OF SLOPE
- RIGHT OF WAY
- SLOPE RIGHTS
- TEMPORARY CONSTRUCTION EASEMENT

SITE PLAN
GRAPHIC SCALE
(IN FEET)

REVISED 1-21-92
REVISED 9-4-91

AUG 9 1994

JUN 30 1992

PROJECT
BW-RS-BIKE (2S)

"SITE PLAN 0+00 TO 13+00"
STOWE MOUNTAIN ROAD WALK

STATE OF VERMONT
CHARLES J. GRENIER
No. 5245
REGISTERED PROFESSIONAL ENGINEER

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 8-20-91
DRN BY = T.J.M.
SCALE = 1"=40'
SHT 20 OF 38

18

MATCHLINE SHEET 2
SHEET 3

END PROJECT @ 24+00
CONSTRUCT SATISFACTORY
APPROACH BETWEEN SIDEWALK
AND EDGE OF ROUTE 108

RELOCATE EXISTING "NO PARKING SIGN" @ 21+62 TO A POINT 7' LEFT OF SIDEWALK CENTERLINE

RELOCATE EXISTING "SPEED LIMIT" SIGN AT 20+19 TO A POINT 4.5' LEFT OF SIDEWALK CENTERLINE

VILLAGE OF STOWE

TOWN OF STOWE

VILLAGE/TOWN LINE APPROXIMATE LOCATION

WEEKS HILL ROAD

MOUNTAIN ROAD

VERMONT ROUTE 108

CURVE #3
INCLUDED ANGLE = 33°54'39"
RADIUS = 500.0'
TANGENT LENGTH = 136.56'
ARC LENGTH = 148.74'
CHORD LENGTH = 146.59'
EXTERNAL RADIUS = 14.52'
DEGREE OF CURVE = 11°28'

STATION 23+30.47
INCLUDED ANGLE = 3°09'30" RT
NO CURVE REQUIRED

STATION 20+09.84
INCLUDED ANGLE = 7°11'09" LT
NO CURVE REQUIRED

STATION 19+20.19
INCLUDED ANGLE = 1°26'49" LT
NO CURVE REQUIRED

STATION 14+27.69
INCLUDED ANGLE = 0°58'57" RT
NO CURVE REQUIRED

STATION 30+76.47
INCLUDED ANGLE = 2°29'54" LT
NO CURVE REQUIRED

STATION 33+73.75
INCLUDED ANGLE = 4°18'27" LT
NO CURVE REQUIRED

CURVE #2
INCLUDED ANGLE = 27°37'31"
RADIUS = 200'
TANGENT LENGTH = 123.91'
ARC LENGTH = 155.16'
CHORD LENGTH = 153.64'
EXTERNAL RADIUS = 13.54'
DEGREE OF CURVE = 18°58'

PROJECT BENCHMARK #1
MAG. IN POLE
UNIX ELEV. = 735.53

PROJECT BENCHMARK #2
TOP OF CONCRETE WALK AT CORNER POST OF PORCH
UNIX ELEV. = 744.88

ARTHUR JAMES SHINNERS

A/S SKI & SPORTS

DUMP ROAD

PARKING LOT

BAGGY KNEES SHOPPING CENTER

THE BAGGY KNEES COMPANY, INC.

FRONT FOUR SPORTS

SIGN FOR FRONT FOUR SPORTS TO BE PROTECTED DURING CONSTRUCTION SEE SECTIONS ON SHEET 5 FOR FURTHER DETAILS

STONE MOUNTAIN ROAD ASSOCIATES

JOHN P. MANZAS

PARTRIDGE INN

HERBERT J. HILLMAN, JR.

KNOTT REAL ESTATE

MOUNTAIN BIKE SHOP

TIMBER'S RUSTIC ACCESSORIES

EXISTING FORESTAL TO REMAIN

30" MAPLE TO BE SAVED

CRAIG DRIVE

PAND DRIVE

EXISTING LIGHT POLE TO BE REMOVED BY OWNER

SIGN FOR EVERYBODY'S PIZZA TO REMAIN AND BE PROTECTED. THE CONTRACTOR SHALL CAREFULLY RAISE FILL ON FINISHED SLOPE. SEE SECTIONS ON SHEET 5 FOR FURTHER DETAILS

LIMITS OF CONSTRUCTION

LIMITS OF 3 ROD RIGHT OF WAY 24'-9" FROM EXISTING CENTERLINE

LIMITS OF CONSTRUCTION ON LEFT SIDE SEE TYPICAL SECTION ON SHEET 5

LIMITS OF 2 ROD RIGHT OF WAY

THE VILLAGE WATER & LIGHT DEPARTMENT SHALL BE RESPONSIBLE FOR RELOCATING THE EXISTING GUY POLE AND ANCHOR AT 16+71

THE VILLAGE WATER & LIGHT DEPARTMENT SHALL BE RESPONSIBLE FOR RELOCATING THE EXISTING GUY POLE AND ANCHOR AT 12+39

REMOVE EXISTING CURB PAVEMENT AS PER STD. D-91 AND/OR CUT REMAINING EXISTING CONCRETE CURB TO ACCOMMODATE NEW SIDEWALK AS REQUIRED BY STANDARD D-1

ALL SIDEWALK RAMPS SHALL MEET AND HANDICAPPED ACCESSIBLE STANDARDS SEE STANDARD D-3 WHERE APPLICABLE

13+58 BEGIN BOX CUT AND FULL SIDEWALK TYPICAL MATCH EXISTING PAVEMENT GRADE AT EDGE OF DRIVEWAY

13+83 END BOX CUT AND FULL SIDEWALK TYPICAL MATCH EXISTING PAVEMENT GRADE AT EDGE OF DUMP ROAD

14+00 BEGIN BOX CUT AND FULL SIDEWALK TYPICAL MATCH EXISTING PAVEMENT GRADE AT EDGE OF DUMP ROAD

15+45 END BOX CUT AND FULL SIDEWALK TYPICAL MATCH EXISTING PAVEMENT GRADE AT EDGE OF DRIVEWAY

15+47 BEGIN BOX CUT AND FULL SIDEWALK TYPICAL MATCH EXISTING PAVEMENT GRADE AT EDGE OF DRIVEWAY

17+08 BEGIN FULL SIDEWALK WITH BOX CUT

17+48 END FULL SIDEWALK TYPICAL WITH BOX CUT

18+77 END BOX CUT AND FULL SIDEWALK TYPICAL MATCH EXISTING PAVEMENT GRADE AT EDGE OF DRIVEWAY

19+32 BEGIN BOX CUT AND FULL SIDEWALK TYPICAL MATCH EXISTING PAVEMENT GRADE AT EDGE OF DRIVEWAY

21+87 BEGIN FULL SIDEWALK TYPICAL WITH BOX CUT

22+79 END FULL SIDEWALK TYPICAL WITH BOX CUT

23+05 BEGIN FULL SIDEWALK TYPICAL WITH BOX CUT

23+68 END FULL SIDEWALK TYPICAL WITH BOX CUT

17' WIDE TEMPORARY CONSTRUCTION EASEMENT (TYPICAL)

RELOCATE EXISTING "INTERSECTION APPROACH AND ARROW SIGNS" @ 23+00 TO A POINT 4.5' LEFT OF SIDEWALK CENTERLINE

OUTER BANK TYPICAL

IMPORTANT NOTE:
THE 10' WIDE TEMPORARY CONSTRUCTION EASEMENT DOES NOT GIVE THE CONTRACTOR THE RIGHT TO DAMAGE TREES, BUILDINGS, SIGNS, WALKS, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES CAUSED IN THE COURSE OF CONSTRUCTION AND IS REQUIRED TO RESTORE THE PREMISES AS NEAR AS POSSIBLE TO THE CONDITION THEY WERE IN PRIOR TO CONSTRUCTION.

CONVENTIONAL SIGNS

- FENCE LINE
- STONE WALL
- TRAVELED WAY
- GUARD RAIL
- SURVEY LINE
- CULVERT
- POWER POLE
- TREES (SOFTWOOD)
- TREES (HARDWOOD)
- PROPERTY LINE
- TOP OF CUT
- TOE OF SLOPE
- RIGHT OF WAY
- SLOPE RIGHTS
- TEMPORARY CONSTRUCTION EASEMENT

SITE PLAN
GRAPHIC SCALE
(IN FEET)

REVISED 8-27-92
REVISED 1-31-92
REVISED 9-4-91

AUG 9 1994

JUN 30 1992

PROJECT
BW-RS-BIKE (2S)

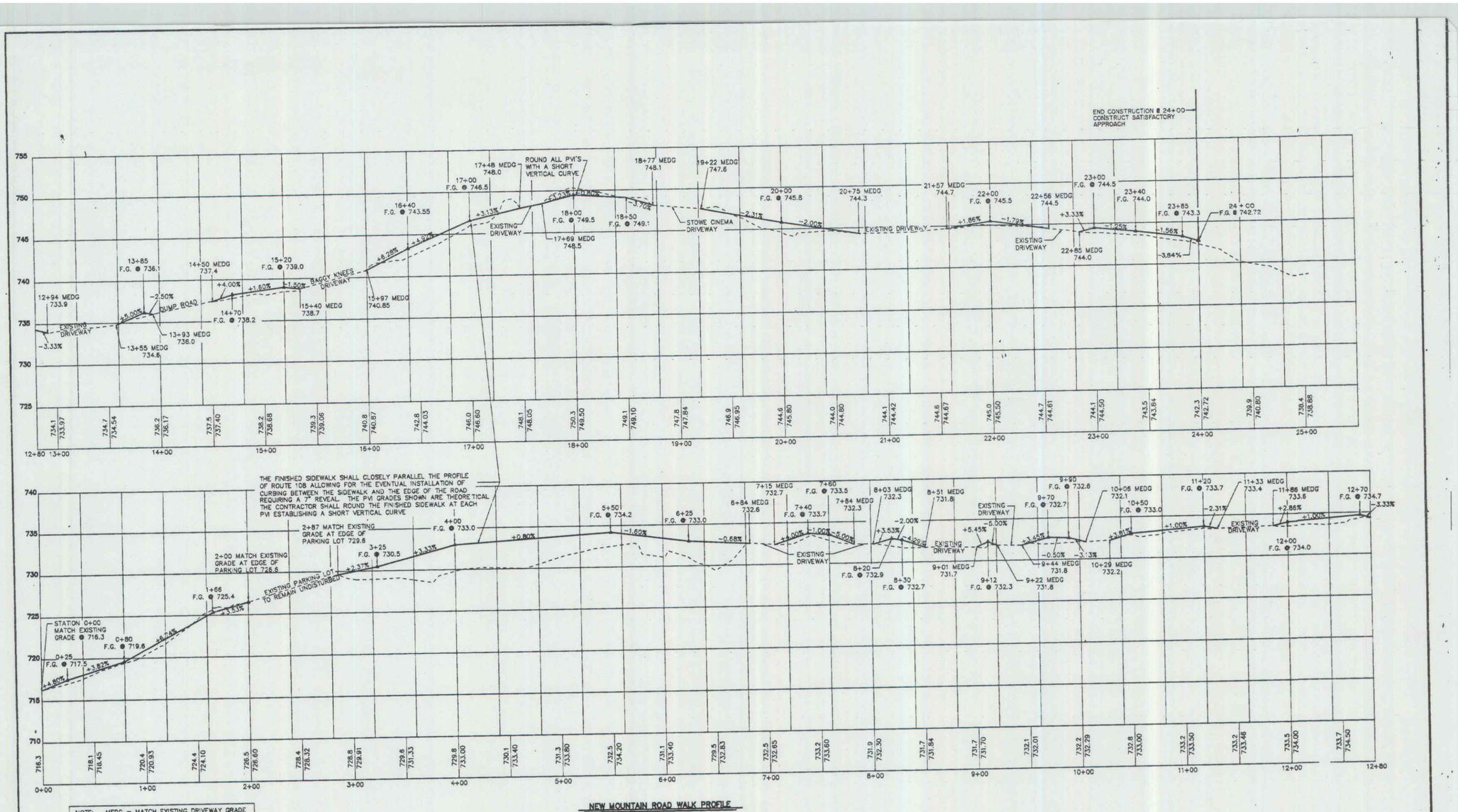
"SITE PLAN 13+00 TO 25+50"
STOWE MOUNTAIN ROAD WALK

STATE OF VERMONT
CHARLES J. GRENIER
NO. 2642
REGISTERED PROFESSIONAL ENGINEER

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 8-20-91
DRN BY = T.J.M.
SCALE = 1"=40'
SHT 25 OF 30

19


END CONSTRUCTION @ 24+00
CONSTRUCT SATISFACTORY APPROACH
ROUND ALL PVI'S WITH A SHORT VERTICAL CURVE
EXISTING DRIVEWAY
BAGGY KNEES DRIVEWAY
STOWE CINEMA DRIVEWAY
EXISTING DRIVEWAY
EXISTING DRIVEWAY
EXISTING

EARTHWORK SUMMARY

STATION	FINISHED GRADE	DISTANCE	COMMOM EXCAVATION AREA	COMMOM EXCAVATION VOLUME	SUBBASE OF GRAVEL AREA	SUBBASE OF GRAVEL VOLUME	EMBANKMENT AREA	EMBANKMENT VOLUME
BOX CUT								
0+00	716.3		10.5		9		0	
		22		8		8		1
0+22	717.4		8		10.5		1	
		22		7		9		1
0+44	718.2		8		10.5		1	
		6		2		2		0
0+50	718.5		8		10.5		1	
		30		8		12		2
0+80	719.6		7		10.5		2.5	
		20		5		8		1
1+00	720.9		7		10.5		0	
		50		21		20		0
1+50	724.1		16		11		0	
		16		9		7		0
1+66	725.4		15		11		0	
		34		18		14		0
2+00	726.8		14		11		0	
BOX CUT								
2+87	729.6		7.5		6.5		0	
		13		2		4		2
3+00	729.9		2		9.5		8	
		50		2		17		31
3+50	731.3		0		8.5		25	
		50		0		17		67
4+00	733.0		0		10		47	
		50		0		17		95
4+50	733.4		0		8.5		56	
		50		0		15		100
5+00	733.8		0		8		52	
		50		2		15		89
5+50	734.2		2.5		8.5		44	
		50		2		46		41
6+00	733.4		0		41		0	
		50		3		63		0
6+50	732.8		3		27.5		0	
		34		8		21		1
6+84	732.6		9		6.5		1	
BOX CUT								
7+15	732.7		7.5		6.5		1.5	
		35		9		8		3
7+50	733.6		6		6.5		2.5	
		34		9		8		2
7+84	732.3		7.5		6.5		0	
BOX CUT								
8+03	732.3		7.5		6.5		0	
		47		12		11		0
8+50	731.8		6		6.5		0	
BOX CUT								
9+00	731.7		7		6.5		0	
		22		6		5		0
9+22	731.8		7		6.5		0	
BOX CUT								
9+44	731.8		7.5		6.5		0	
		6		2		2		0
9+50	732.0		7.5		6.5		0	
		50		14		12		0
10+00	732.3		7.5		6.5		0	
		6		2		2		0
10+06	732.1		7.5		6.5		0	
BOX CUT								
10+29	732.2		7.5		6.5		1	
		21		6		5		1
10+50	733.0		7.5		6.5		1	
		50		14		12		2
11+00	733.5		7.5		6.5		1	
		33		9		8		1
11+33	733.4		7.5		6.5		0	
COLUMN SUBTOTALS				180 CY		368 CY		440 CY

STATION	FINISHED GRADE	DISTANCE	COMMOM EXCAVATION AREA	COMMOM EXCAVATION VOLUME	SUBBASE OF GRAVEL AREA	SUBBASE OF GRAVEL VOLUME	EMBANKMENT AREA	EMBANKMENT VOLUME
BOX CUT								
11+86	733.6		7.5		6.5		0	
		14		3		3		2
12+00	734.0		5		6.5		8	
		50		7		12		15
12+50	734.5		3		6.5		8	
		44		5		11		13
12+94	733.9		3		6.5		8	
BOX CUT								
13+55	734.6		7		6.5		2	
		20		5		5		2
13+75	735.8		7		6.5		2	
		18		5		4		3
13+93	736.0		7		6.5		8	
BOX CUT								
14+50	737.4		9		6.5		0	
		50		13		12		1
15+00	738.7		4.5		6.5		1.5	
		40		7		10		2
15+40	738.7		4.5		6.5		1.5	
BOX CUT								
15+97	740.9		6.5		6.5		0	
		53		9		13		11
16+50	744.0		2.5		6.5		11	
		50		8		12		13
17+00	748.6		4		6.5		3.5	
		48		23		12		3
17+48	748.0		9		6.5		0	
BOX CUT								
17+69	748.5		12		6.5		1	
		31		16		7		2
18+00	749.5		15		6.5		2	
		50		23		12		3
18+50	749.1		10		6.5		1	
		27		10		7		1
18+77	748.1		9		6.5		1	
BOX CUT								
19+22	747.6		8		6.5		3	
		28		8		7		3
19+50	747.0		8		6.5		3	
		50		11		12		19
20+00	745.8		3.5		6.5		18	
		50		8		12		23
20+50	744.8		5		6.5		6.5	
		25		5		6		6
20+75	744.3		5		6.5		6.5	
BOX CUT								
21+57	744.7		4.5		6.5		2.5	
		43		7		10		4
22+00	745.5		4.5		6.5		2.5	
		50		11		12		2
22+50	744.6		7.5		6.5		0	
		6		2		1		0
22+56	744.5		7.5		6.5		0	
BOX CUT								
22+85	744.0		6		6.5		1.5	
		15		3		4		1
23+00	744.5		6		6.5		1.5	
		50		11		12		3
23+50	743.8		6		6.5		1.5	
		50		13		13		2
24+00	742.7		8		8		1	
BOX CUT								
COLUMN #2 SUBTOTALS				211 CY		209 CY		134 CY
COLUMN #1 SUBTOTALS				180 CY		368 CY		440 CY
PROJECT TOTAL				* 391 CY		577 CY		574 CY

* ADD 18 CY FOR DRIVEWAY WORK FOR A TOTAL OF 409 CY
SEE CALCULATIONS ON THIS SHEET

NOTES

1. THE EXISTING MAILBOXES SHALL BE RELOCATED NEAR THEIR ORIGINAL LOCATIONS NEAR THE MIDPOINT BETWEEN THE EDGE OF THE ROAD AND EDGE OF SIDEWALK WITHIN THE GRASS STRIP (5'± LEFT OF THE SIDEWALK CENTERLINE), OR AS DIRECTED BY THE ENGINEER. TEMPORARY RELOCATION MAYBE REQUIRED. PAYMENT AS PER ITEM 617.10 AND 617.12

ITEM 617.10 RELOCATE MAILBOX, SINGLE SUPPORT (TOTAL OF 4)
0+97
7+75
13+66
19+38

ITEM 617.12 RELOCATE MAILBOX, MULTIPLE SUPPORT (TOTAL OF 3)
7+70
10+85
17+35

2. EXISTING ROADWAY SIGNS SHALL BE RELOCATED NEAR THEIR ORIGINAL LOCATION AS DIRECTED BY THE ENGINEER AS PER ITEM 675.60

ITEM 675.60 ERECTING SALVAGED SIGNS (TOTAL OF 3)
20+15
21+92
23+00

3. ITEM 620.50 REMOVAL AND RESETTING FENCE

3+00 TO 5+85 (2 STRAND BARBED WIRE)	=	285'
7+30 TO 7+80 (WOOD RAIL)	=	50'
12+70 TO 12+90 (WOOD RAIL)	=	20'
TOTAL	=	355'

4. ITEM 620.55 REMOVAL OF EXISTING FENCE (WOD.)
A 75' WOOD RAIL FENCE (1+25 TO 2+00) SHALL BE REMOVED, SALVAGED, AND BECOME THE PROPERTY OF THE OWNER, THE STOWE TRADING COMPANY. IF THE OWNER DOES NOT WANT THE FENCE, THE CONTRACTOR SHALL ASSUME POSSESSION.

		STONE FILL, TYPE I	
STATION	DISTANCE	AREA	VOLUME
BUTT		15	
3+50	50		35
4+00		23	
	50		45
4+50		26	
	50		48
5+00		26	
	50		47
5+50		25	
	38		28
5+88 BUTT		15 (EST.)	
		TOTAL	203 CY

EARTHWORK SUMMARY

TOTAL EMBANKMENT = 574 CY
*TOTAL AVAILABLE COMMON EXCAVATION = 409 CY
EARTH BORROW REQUIRED = 165 CY

COMMON EXCAVATION QUANTITIES

ITEM 203.15 ADDITIONAL COMMON EXCAVATION AT DRIVEWAYS:

7+00±	40' x 10' x 2" ÷	(12 x 27)	=	2.5 CY
8+00±	25' x 11' x 2" ÷	(12 x 27)	=	1.5 CY
9+75±	55' x 10' x 2" ÷	(12 x 27)	=	3.5 CY
11+50±	35' x 12' x 2" ÷	(12 x 27)	=	4.0 CY
12+50±	25' x 12' x 2" ÷	(12 x 27)	=	2.0 CY
21+50±	40' x 10' x 2" ÷	(12 x 27)	=	2.5 CY
22+75±	35' x 10' x 2" ÷	(12 x 27)	=	2.0 CY
		TOTAL	=	18 CY

REVISED 1-31-92
REVISED 9-4-91
REVISED 8-20-91

STATE OF VERMONT CHARLES J. GRENIER NO. 5645 REGISTERED PROFESSIONAL ENGINEER
Charles J. Grenier

AUG 9 1994

JUN 30 1992

PROJECT
BW-RS-BIKE (25)

"EARTHWORK SUMMARY"
STOWE MOUNTAIN ROAD WALK

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 8-14-91
DRN BY = T.J.M.
SCALE = A.N.
SHT 31 OF 33

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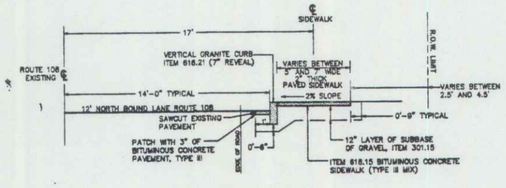
QUANTITY SUMMARY

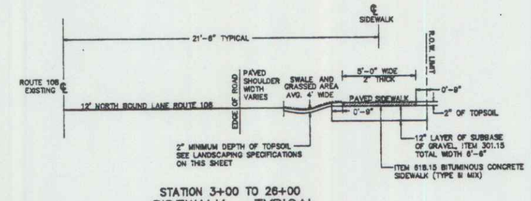
APPROXIMATE SUMMARY OF QUANTITIES

GRAND TOTAL	UNIT	PAY ITEM	PAY ITEM NUMBER	RNDG
1	EACH	REMOVING SMALL STUMPS	201.20	–
2	EACH	REMOVING LARGE STUMPS	201.21	–
420	CY	COMMON EXCAVATION	203.15	11
180	CY	EARTH BORROW	203.30	15
590	CY	SUBBASE OF GRAVEL	301.15	13
39	CY	CONCRETE, CLASS C (MOD.)	501.30	–
14	LF	12" CSP (th=.064")	601.0005	–
210	CY	STONE FILL, TYPE I	613.10	7
200	LF	VERTICAL GRANITE CURB	616.21	–
34	LF	REMOVAL OF EXISTING CURB (MOD.)	616.41	
4	EACH	RELOCATE MAILBOX, SINGLE SUPPORT	617.10	–
3	EACH	RELOCATE MAILBOX, MULTIPLE SUPPORT	617.12	–
170	TON	BITUMINOUS CONCRETE SIDEWALK	618.15	9
355	LF	REMOVAL AND RESETTING FENCE	620.50	–
75	LF	REMOVAL OF EXISTING FENCE	620.55	–
300	LF	STEEL BEAM GUARD RAIL	621.20	–
2	EACH	BREAKAWAY CABLE TERMINAL	621.50	–
340	LF	REMOVAL AND DISPOSAL OF GUARD RAIL	621.80	–
80	HOUR	UNIFORMED TRAFFIC OFFICERS	630.10	–
160	HOUR	FLAGGERS	630.15	–
0.50	LS	TESTING EQUIPMENT - CONCRETE	651.16	–
0.50	LS	TESTING EQUIPMENT - BITUMINOUS	651.17	–
0.35	LS	MOBILIZATION	635.10	
55	SY	GEOTEXTILE FABRIC FOR FILTERS	649.10	–
40	LB	* SEED	651.15	–
250	LB	* FERTILIZER	651.18	–
1	TON	* AGRICULTURAL LIMESTONE	651.20	–
1	TON	* HAY MULCH	651.25	–
140	CY	* TOPSOIL	651.35	7
3	EACH	ERECTING SALVAGED SIGNS	675.60	–

* CALCULATED 0.5 ACRES OF DISTURBED AREA



STATION 0+00 TO 2+00
SIDEWALK TYPICAL
SCALE: 1" = 4'-0"



STATION 3+00 TO 26+00
SIDEWALK TYPICAL
SCALE: 1" = 4'-0"

GENERAL NOTES

1. ITEM 501.30 CONCRETE, CLASS C SHALL BE MODIFIED AS FOLLOWS:

THE CONCRETE BLOCK RETAINING WALL BETWEEN STATION 5+88 TO 6+70 SHALL BE CONSTRUCTED WITH LARGE CONCRETE BLOCKS WITH DIMENSIONS OF 2' x 4' x 4'. A 1" DIMENSION TOLERANCE IS ALLOWED. THESE BLOCKS ARE TO BE CONSTRUCTED OF WASTE CONCRETE FROM AREA SUPPLIERS. THE BLOCKS SHALL BE PLACED WITH THE SMOOTHEST FACE OUTWARD. EACH BLOCK SHALL HAVE LIFTING HOOKS WHICH SHALL BE REMOVED AFTER THE BLOCKS ARE IN PLACE. NO REINFORCING STEEL IS NECESSARY. THE TOP ROW OF BLOCKS SHALL BE OFFSET BY 3" FROM THE BOTTOM ROW. ALL COSTS ASSOCIATED WITH DELIVERING AND PLACING THE BLOCKS AT THE LOCATION AND GRADE SHOWN ON THE PLANS IS INCLUDED IN THE PER CUBIC YARD COST FOR THIS ITEM. THE MINOR AMOUNT OF EXCAVATION NECESSARY TO SET THE BOTTOM ROW OF BLOCKS SHALL ALSO BE INCLUDED IN THE COST OF THIS ITEM. THE COST OF BACKFILLING AGAINST THE BACK OF THE WALL HAS BEEN INCLUDED IN THE COST OF THE SUBBASE OF GRAVEL, ITEM 301.15.

2. THIS PROJECT WILL INVOLVE THE REMOVAL OF LESS THAN 10 CUBIC YARDS OF PAVEMENT NORMALLY PAID AS ITEM 203.28 EXCAVATION OF SURFACES AND PAVEMENTS. BECAUSE OF THE SMALL VOLUME, THIS WORK HAS BEEN INCLUDED IN THE COMMON EXCAVATION QUANTITY. ALL PAVEMENT SHALL BE DISPOSED OF NEAR THE BOTTOM OF THE FILL BETWEEN STATION 3+50 AND 5+50.

3. THE LARGE SIGN AT STATION 18+00 MARKED "FRONT FOUR SPORTS" AND THE SIGN NEAR STATION 20+10 MARKED "EVERYBODY'S PIZZA" SHALL BE PROTECTED BY THE CONTRACTOR AS DETAILED ON THE SITE PLAN AND SECTIONS.

4. THE GUY POLE AND ANCHOR NEAR STATIONS 13+85 AND 18+71 SHALL BE RELOCATED BY THE VILLAGE OF STOWE WATER AND LIGHT DEPARTMENT AND IS NOT THE RESPONSIBILITY OF THE CONTRACTOR.

5. THERE ARE THREE PRESSURE TREATED WOOD POSTS MARKING THE DRIVEWAYS BETWEEN STATION 9+00 AND 10+50. THESE POSTS SHALL BE RESET TO A LOCATION AT LEAST 2' BEHIND THE SIDEWALK. THE COST ASSOCIATED WITH REMOVING AND RESETTING THESE SMALL POSTS SHALL BE INCLUDED IN THE COST OF COMMON EXCAVATION ITEM 203.15.

6. BECAUSE OF THE VERY CONJESTED AREA ALONG ROUTE 108 AND THE LACK OF AN OBVIOUS TOPSOIL STOCKPILE AREA, THE COMMON EXCAVATION WHICH INCLUDES THE TOPSOIL SHALL BE USED IN THE EMBANKMENT AREAS. NEW TOPSOIL SHALL BE TRUCKED ONTO THE SITE FOR USE IN THE FINISHED LANDSCAPING WITH PAYMENT UNDER ITEM 651.35.

7. REMOVAL OF EXISTING CURB, ITEM 616.41 SHALL BE MODIFIED TO REQUIRE THE CUTTING OF THE REMAINING END OF THE EXISTING CURB ON A TAPER AS DETAILED ON STANDARD C1.

8. THE COST OF TRAFFIC CONTROL IS SUBSIDIARY TO OTHER PAY ITEMS. SEE STANDARDS E100, E101, E106, E107, E107A, AND E110 FOR DETAILS.

9. THE BITUMINOUS CONCRETE SIDEWALK SHALL BE PLACED IN ONE 2" THICK LIFT.

LANDSCAPING SPECIFICATIONS

SEEDING FORMULA, ITEM 651.15

% WT.	LBS./A.	NAME	PUR %	GERM %
37.5	30	CREEPING RED FESCUE	98	85
31.25	25	KENTUCKY BLUE GRASS	85	75
31.25	25	PERENNIAL RYE GRASS	95	90
100.00	80			

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

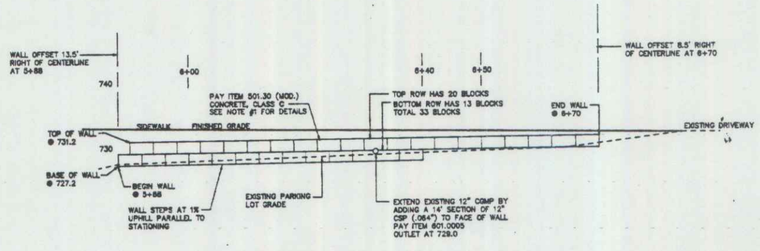
SEED – TO BE APPLIED PER SEEDING FORMULAS DIRECTED BY THE ENGINEER.

FERTILIZER – FORMULA 10-20-10 TO BE USED WITH SEED, APPLIED AT A RATE OF 500 LBS./ACRE.

AGRICULTURAL LIMESTONE – TO BE APPLIED AT THE RATE OF 2 TONS/ACRE OR AS DIRECTED BY THE ENGINEER.

HAY MULCH – TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE OR AS DIRECTED BY THE ENGINEER.

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



LARGE CONCRETE BLOCK RETAINING WALL DETAIL
SCALE: 1" = 10' H & V

QUANTITIES

ITEM 201.20 REMOVING SMALL STUMPS (TOTAL OF 1)
0+93 15" ELM STUMP

ITEM 201.21 REMOVING LARGE STUMPS (TOTAL OF 2)
6+70± 42" STUMP
7+40± 42" STUMP

ITEM 501.30 (MOD.) CONCRETE, CLASS C
THE CONCRETE BLOCK RETAINING WALL BETWEEN 5+88 AND 6+70 HAS A TOTAL OF 33 BLOCKS (2' x 4' x 4'). OR
33 (2 x 4 x 4) ÷ 27 = 39 CY

ITEM 601.0005, 12" CSP (TH = 0.064")
AT 6+32 AN EXISTING 12" METAL CULVERT SHALL BE EXTENDED BY 14' TO ALIGN WITH THE FACE OF NEW RETAINING WALL.

ITEM 616.21 VERTICAL GRANITE CURB
VERTICAL GRANITE CURB SHALL BE USED FROM 0+00 TO 2+00 TO SUPPORT THE EDGE OF THE SIDEWALK AND TO PROTECT PEDESTRIANS
TOTAL = 200 LF

ITEM 618.15 BITUMINOUS CONCRETE SIDEWALK QUANTITIES:
1. STANDARD 5' SIDEWALK 2090' LONG = 10,450 SF
2. 2' WIDER SIDEWALK 1+00 TO 2+00 = 200 SF
3. AREAS BETWEEN SIDEWALK AND EDGE OF ROAD AT DRIVEWAYS:

7+00±	AREA	45' x 5'	=	225
8+00±	AREA	25' x 5'	=	125
9+75±	AREA	55' x 5'	=	275
11+50±	AREA	60' x 5'	=	300
17+50±	AREA	30' x 6'	=	180
19+00±	AREA	55' x 6'	=	330
21+00±	AREA	90' x 5'	=	450
22+75±	AREA	35' x 5'	=	175
		SUBTOTAL	=	2060 SF

4. PATCHING IN FRONT OF GRANITE CURB (3" THICK)
200' x 1' x 3" ÷ 2" = 300 SF

SUBTOTAL = 13,010 SF

TOTAL TONNAGE = $13{,}010 \times \frac{2"}{12"} \times \frac{2}{27}$ = 161 TONS

ITEM 621.20 STEEL BEAM GUARD RAIL
3+25 TO 6+25, OR 300 LF

ITEM 621.50 BREAKAWAY CABLE TERMINAL
3+00 TO 3+25 AND 6+25 TO 6+50, OR A TOTAL OF 2

ITEM 621.80 REMOVAL AND DISPOSAL OF GUARD RAIL
2+92 TO 6+32, OR 340 LF

ITEM 649.10 GEOTEXTILE FABRIC FOR FILTERS
BEHIND RETAINING WALL 5+88 TO 6+70 ESTIMATED 6' x 82' – 9 = 55 SY

REVISED 2-27-92
REVISED 1-31-92
REVISED 9-4-91
REVISED 8-20-91

AUG 9 1994

JUN 30 1992

PROJECT
BW-RS-BIKE (25)

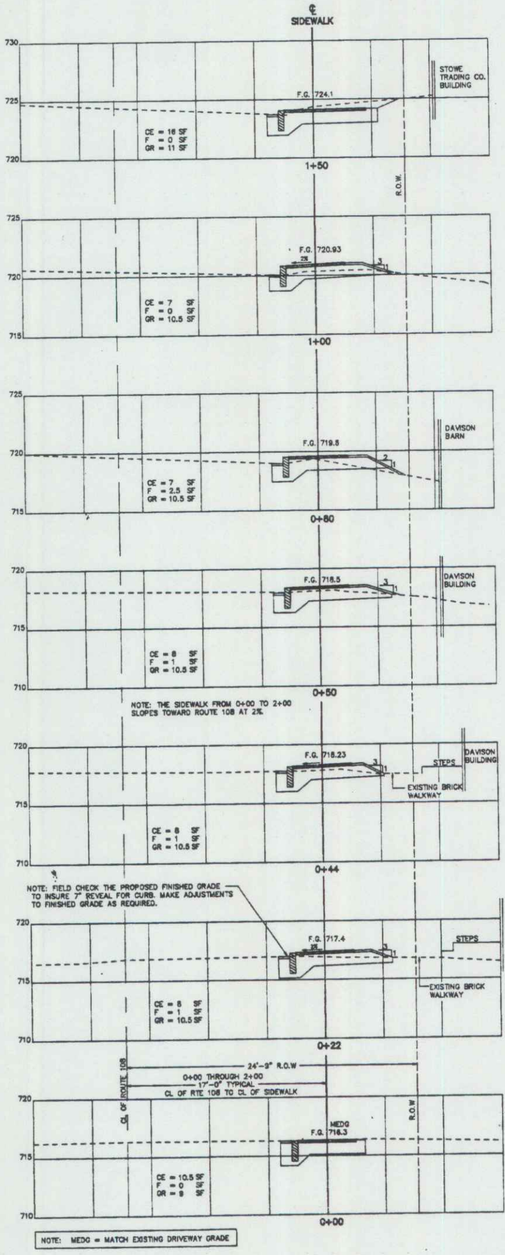
STATE OF VERMONT
CHARLES A. GRENIER NO. 2648 REGISTERED PROFESSIONAL ENGINEER
Charles J. Grenier

"QUANTITY SUMMARY"
STOWE MOUNTAIN ROAD WALK

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 8-14-91
DRN BY = T.J.M.
SCALE = A.N.
SHT 20 OF 35

22



AUG 9 1994

JUN 30 1992

PROJECT
BW-RS-BIKE (2S)

"SECTIONS 0+00 TO 7+15"
STOWE MOUNTAIN ROAD WALK

STATE OF VERMONT
CHARLES J. GRENIER
NO. 5548
REGISTERED PROFESSIONAL ENGINEER

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 8-14-91
DRN BY = T.J.M.
SCALE = 1"=5'
SHT 22 OF 38

REVISED 12-1-92
REVISED 8-20-91

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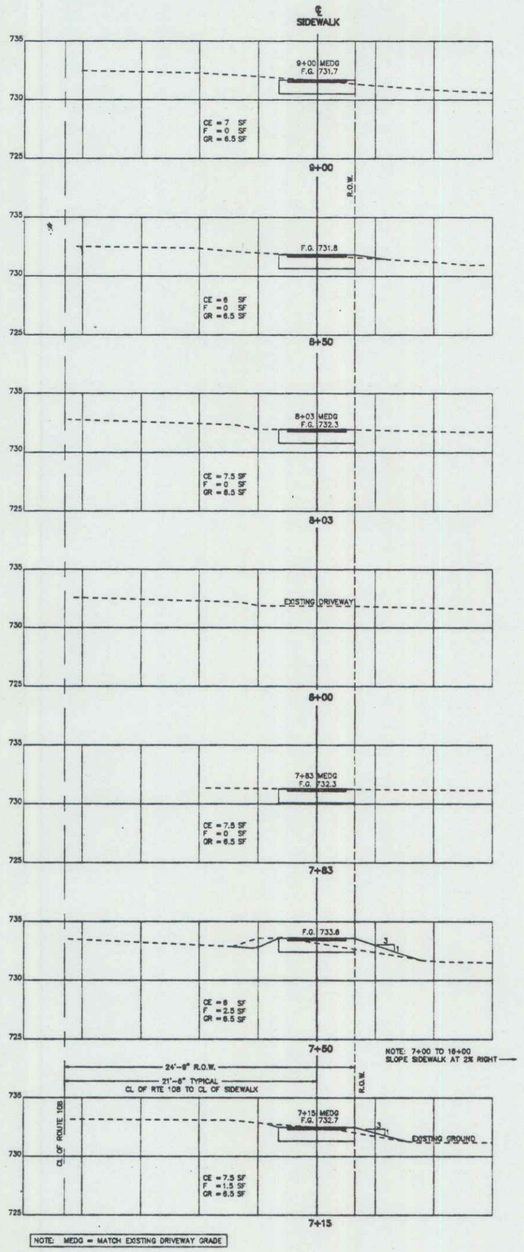

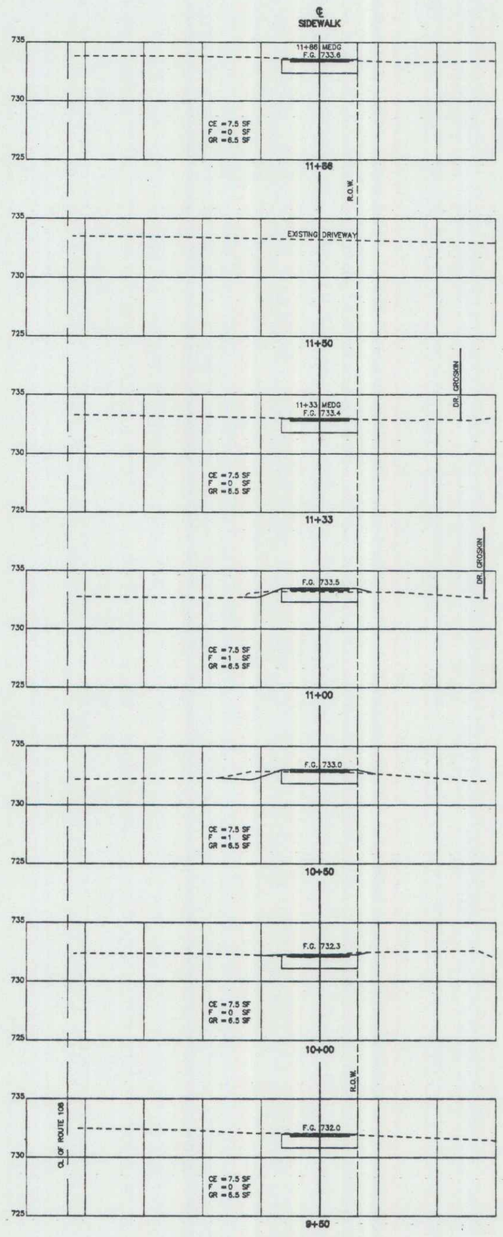

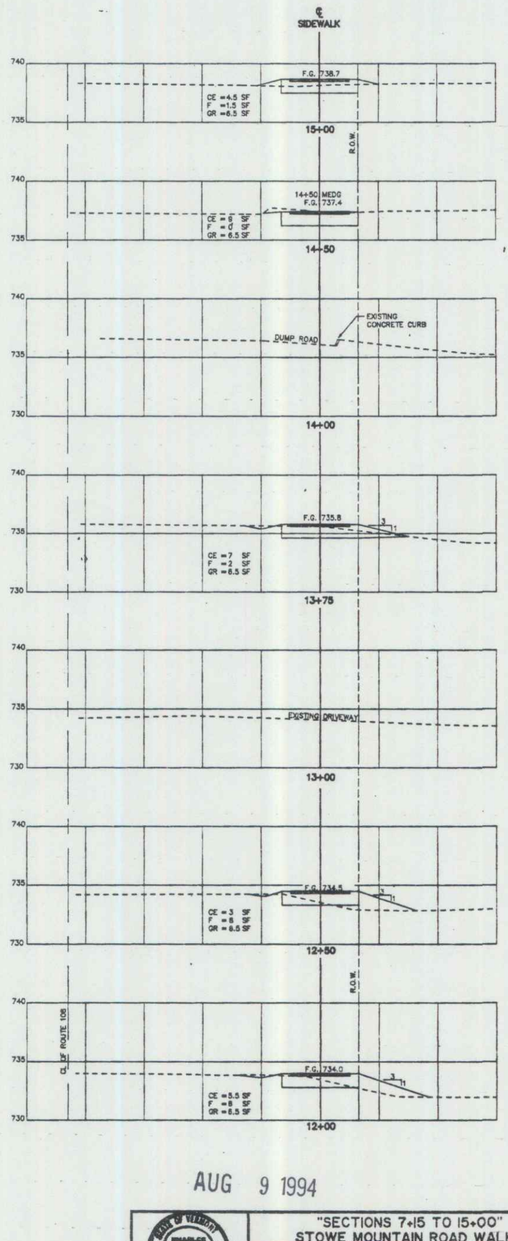

AUG 9 1994

JUN 30 1992
PROJECT
BW-RS-BIKE (2S)

"SECTIONS 7+15 TO 15+00"
STOWE MOUNTAIN ROAD WALK

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 8-14-91
DRN BY = T.J.M
SCALE = 1"=5'
SHT 23 OF 28

REVISED 1-31-92
REVISED 8-20-91

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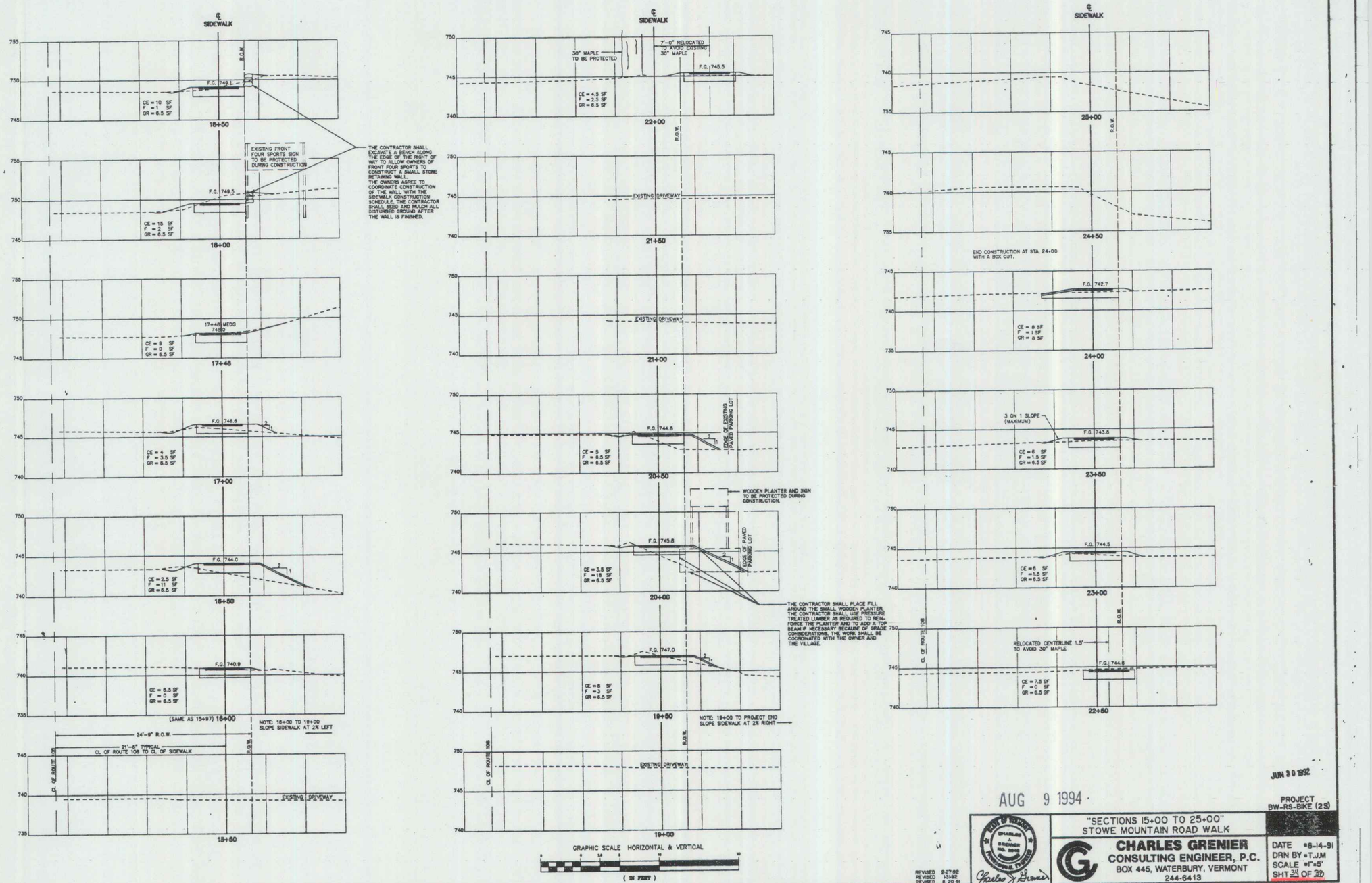
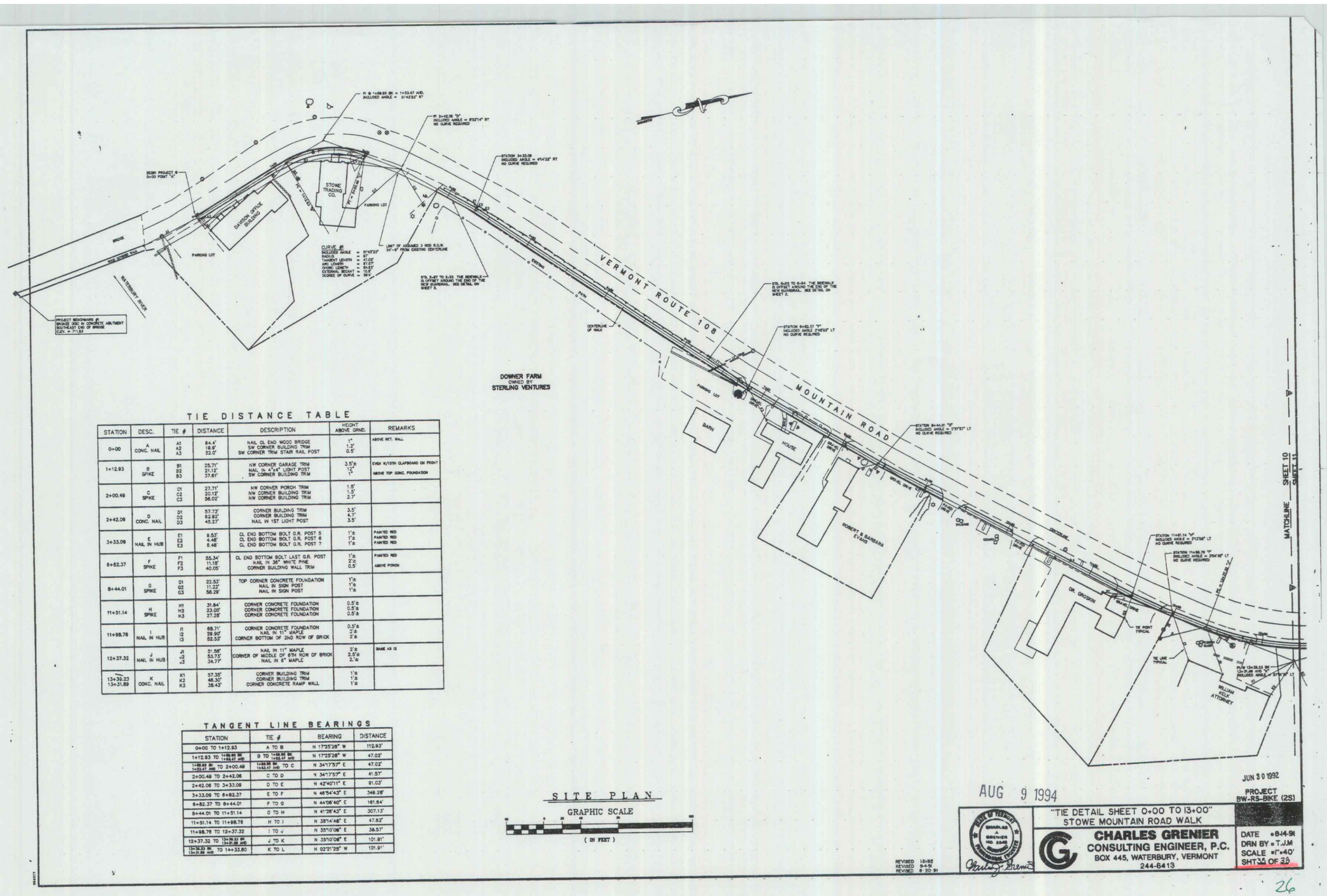

℄ SIDEWALK
755
750
745
740
735
R.O.W.
F.G. 749.1
CE = 10 SF
F = 1 SF
GR = 6.5 SF
18+50
EXISTING FRONT FOUR SPORTS SIGN TO BE PROTECTED DURING CONSTRUCTION
F.G. 749.3
CE = 15 SF
F = 2 SF
GR = 6.5 SF
18+00
17+48 MEDG 742.0
CE = 9 SF
F = 0 SF
GR = 6.5 SF
17+48
F.G. 746.6
CE = 4 SF
F = 3.5 SF
GR = 6.5 SF
17+00
F.G. 744.0
CE = 2.5 SF
F = 11 SF
GR = 6.5 SF
16+50
F.G. 740.9
CE = 6.5 SF
F = 0 SF
GR = 6.5 SF
(SAME AS 15+97) 16+00
24'-9" R.O.W.
21'-6" TYPICAL
CL OF ROUTE 108 TO CL OF SIDEWALK
CL OF ROUTE 108
EXISTING DRIVEWAY
15+50
NOTE: 16+00 TO 19+00 SLOPE SIDEWALK AT 2% LEFT
THE CONTRACTOR SHALL EXCAVATE A BENCH ALONG THE EDGE OF THE RIGHT OF WAY TO ALLOW OWNERS OF FRONT FOUR SPORTS TO CONSTRUCT A SMALL STONE RETAINING WALL.
THE OWNERS AGREE TO COORDINATE CONSTRUCTION OF THE WALL WITH THE SIDEWALK CONSTRUCTION SCHEDULE. THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED GROUND AFTER THE WALL IS FINISHED.
30" MAPLE TO BE PROTECTED
7'-0" RELOCATED TO AVOID EXISTING 30" MAPLE
F.G. 745.5
CE = 4.5 SF
F = 2.5 SF
GR = 6.5 SF
22+00
EXISTING DRIVEWAY
21+50
EXISTING DRIVEWAY
21+00
EDGE OF EXISTING PAVED PARKING LOT
F.G. 744.8
CE = 5 SF
F = 6.5 SF
GR = 6.5 SF
20+50
WOODEN PLANTER AND SIGN TO BE PROTECTED DURING CONSTRUCTION.
F.G. 745.8
CE = 3.5 SF
F = 18 SF
GR = 6.5 SF
20+00
EDGE OF PAVED PARKING LOT
THE CONTRACTOR SHALL PLACE FILL AROUND THE SMALL WOODEN PLANTER. THE CONTRACTOR SHALL USE PRESSURE TREATED LUMBER AS REQUIRED TO REINFORCE THE PLANTER AND TO ADD A TOP BEAM IF NECESSARY BECAUSE OF GRADE CONSIDERATIONS. THE WORK SHALL BE COORDINATED WITH THE OWNER AND THE VILLAGE.
F.G. 747.0
CE = 8 SF
F = 3 SF
GR = 6.5 SF
19+50
NOTE: 19+00 TO PROJECT END SLOPE SIDEWALK AT 2% RIGHT
CL OF ROUTE 108
EXISTING DRIVEWAY
19+00
25+00
END CONSTRUCTION AT STA. 24+00 WITH A BOX CUT.
F.G. 742.7
CE = 8 SF
F = 1 SF
GR = 8 SF
24+00
24+50
3 ON 1 SLOPE (MAXIMUM)
F.G. 743.8
CE = 6 SF
F = 1.5 SF
GR = 6.5 SF
23+50
F.G. 744.5
CE = 6 SF
F = 1.5 SF
GR = 6.5 SF
23+00
CL OF ROUTE 108
RELOCATED CENTERLINE 1.5' TO AVOID 30" MAPLE
F.G. 744.8
CE = 7.5 SF
F = 0 SF
GR = 6.5 SF
22+50
GRAPHIC SCALE HORIZONTAL & VERTICAL
0 5 10 15 20
(IN FEET)
REVISED 2-27-92
REVISED 13-192
REVISED 8 20 91
JUN 30 1992
AUG 9 1994
PROJECT BW-RS-BIKE (2S)
"SECTIONS 15+00 TO 25+00"
STOWE MOUNTAIN ROAD WALK
CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413
DATE 6-14-91
DRN BY T.JM
SCALE 1"=5'
SHT 24 OF 30
25



DOWNER FARM
OWNED BY
STERLING VENTURES

TIE DISTANCE TABLE

STATION	DESC.	TIE #	DISTANCE	DESCRIPTION	HEIGHT ABOVE GRND.	REMARKS
0+00	A CONC. NAIL	A1 A2 A3	64.4' 19.9' 22.0'	NAIL CL END WOOD BRIDGE SW CORNER BUILDING TRIM SW CORNER TRIM STAIR RAIL POST	1" 1.2' 0.5'	ABOVE RET. WALL
1+12.93	B SPIKE	B1 B2 B3	25.71' 21.12' 37.61'	NW CORNER GARAGE TRIM NAIL IN 4"x4" LIGHT POST SW CORNER BUILDING TRIM	3.5'± 12" 1"	EVEN W/5TH CLAPBOARD ON FRONT ABOVE TOP CONC. FOUNDATION
2+00.49	C SPIKE	C1 C2 C3	27.71' 20.12' 56.02'	NW CORNER PORCH TRIM NW CORNER BUILDING TRIM NW CORNER BUILDING TRIM	1.5' 1.5' 2.7'	
2+42.08	D CONC. NAIL	D1 D2 D3	57.73' 82.82' 45.27'	CORNER BUILDING TRIM CORNER BUILDING TRIM NAIL IN 1ST LIGHT POST	3.5' 4.7' 3.5'	
3+33.09	E NAIL IN HUB	E1 E2 E3	9.53' 4.48' 8.48'	CL END BOTTOM BOLT G.R. POST 5 CL END BOTTOM BOLT G.R. POST 6 CL END BOTTOM BOLT G.R. POST 7	1'± 1'± 1'±	PAINTED RED PAINTED RED PAINTED RED
6+82.37	F SPIKE	F1 F2 F3	55.34' 11.18' 40.05'	CL END BOTTOM BOLT, LAST G.R. POST NAIL IN 36" WHITE PINE CORNER BUILDING WALL TRIM	1'± 2'± 0.5'	PAINTED RED ABOVE PORCH
8+44.01	G SPIKE	G1 G2 G3	22.53' 11.22' 58.29'	TOP CORNER CONCRETE FOUNDATION NAIL IN SIGN POST NAIL IN SIGN POST	1'± 1'± 1'±	
11+51.14	H SPIKE	H1 H2 H3	31.64' 23.00' 27.28'	CORNER CONCRETE FOUNDATION CORNER CONCRETE FOUNDATION CORNER CONCRETE FOUNDATION	0.5'± 0.5'± 0.5'±	
11+98.78	I NAIL IN HUB	I1 I2 I3	68.71' 29.90' 52.53'	CORNER CONCRETE FOUNDATION NAIL IN 11" MAPLE CORNER BOTTOM OF 2ND ROW OF BRICK	0.5'± 2'± 2'±	
12+37.32	J NAIL IN HUB	J1 J2 J3	51.56' 53.73' 34.77'	NAIL IN 11" MAPLE CORNER OF MIDDLE OF 6TH ROW OF BRICK NAIL IN 8" MAPLE	2'± 2.5'± 2.'±	SAME AS I2
13+30.23 13+31.89	K CONC. NAIL	K1 K2 K3	57.35' 46.30' 38.43'	CORNER BUILDING TRIM CORNER BUILDING TRIM CORNER CONCRETE RAMP WALL	1'± 1'± 1'±	

TANGENT LINE BEARINGS

STATION	TIE #	BEARING	DISTANCE
0+00 TO 1+12.93	A TO B	N 17°25'26" W	112.93'
1+12.93 TO 1+88.85 BK 1+53.47 AHD	B TO 1+88.85 BK 1+53.47 AHD	N 17°25'26" W	47.02'
1+88.85 BK 1+53.47 AHD TO 2+00.49	1+88.85 BK 1+53.47 AHD TO C	N 34°17'57" E	47.02'
2+00.49 TO 2+42.08	C TO D	N 34°17'57" E	41.57'
2+42.08 TO 3+33.09	D TO E	N 42°40'11" E	91.03'
3+33.09 TO 6+82.37	E TO F	N 46°54'43" E	349.28'
6+82.37 TO 8+44.01	F TO G	N 44°06'40" E	161.64'
8+44.01 TO 11+51.14	G TO H	N 41°28'43" E	307.13'
11+51.14 TO 11+98.78	H TO I	N 38°14'48" E	47.62'
11+98.78 TO 12+37.32	I TO J	N 35°10'08" E	38.57'
12+37.32 TO 13+30.23 BK 13+31.89 AHD	J TO K	N 35°10'08" E	101.91'
13+30.23 BK 13+31.89 AHD TO 14+33.80	K TO L	N 02°21'25" W	101.91'

SITE PLAN

GRAPHIC SCALE

(IN FEET)

REVISED 13-92
REVISED 9-4-91
REVISED 8-30-91

JUN 3 0 1992

AUG 9 1994

PROJECT
BW-RS-BIKE (2S)

"TIE DETAIL SHEET 0+00 TO 13+00"
STOWE MOUNTAIN ROAD WALK

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 8-14-91
DRN BY = T.J.M
SCALE = 1"=40'
SHT 35 OF 38

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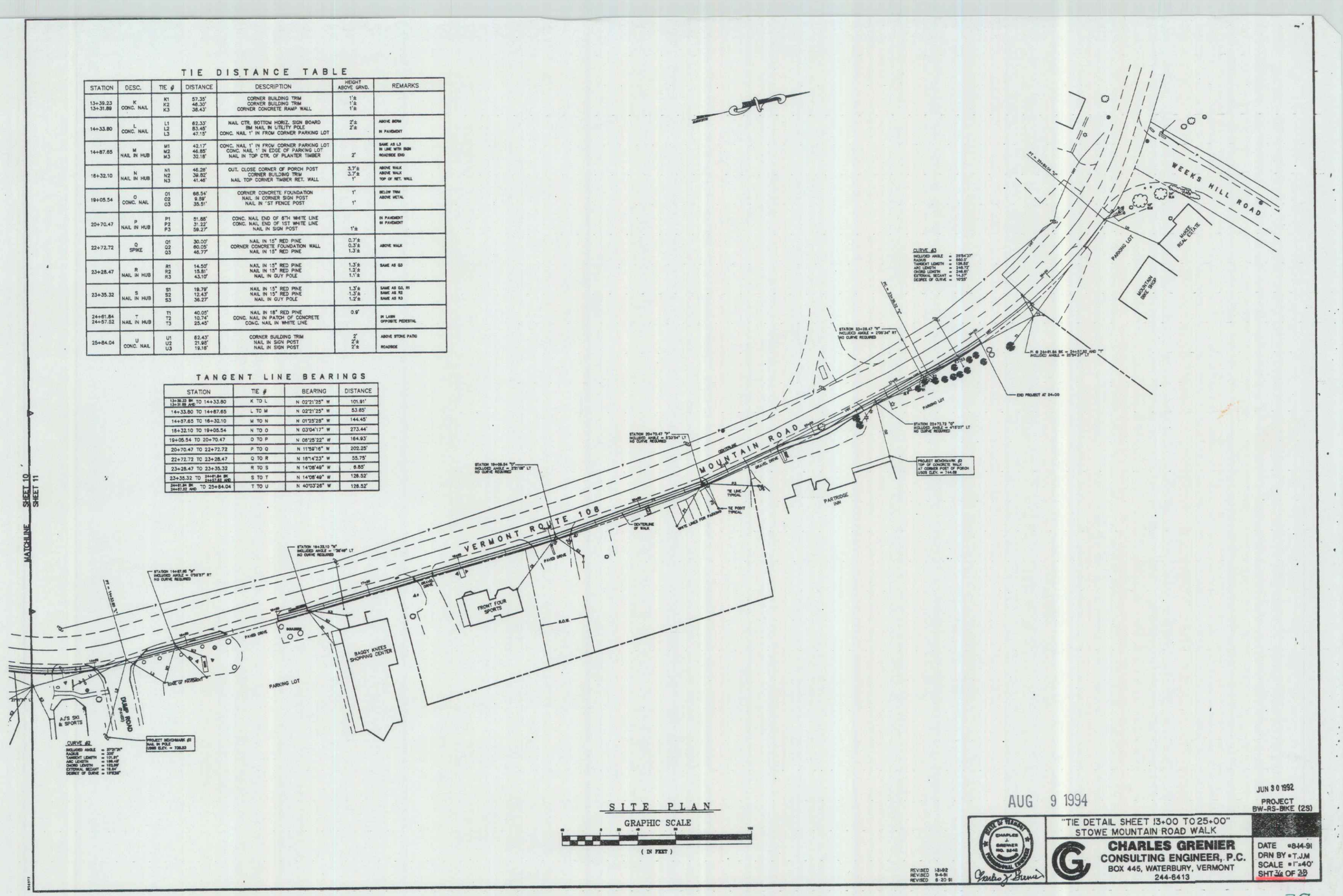
TIE DISTANCE TABLE

STATION	DESC.	TIE #	DISTANCE	DESCRIPTION	HEIGHT ABOVE GRND.	REMARKS
13+39.23 13+31.89	K CONC. NAIL	K1 K2 K3	57.35' 46.30' 38.43'	CORNER BUILDING TRIM CORNER BUILDING TRIM CORNER CONCRETE RAMP WALL	1'± 1'± 1'±	
14+33.80	L CONC. NAIL	L1 L2 L3	62.33' 83.45' 47.15'	NAIL CTR. BOTTOM HORIZ. SIGN BOARD BM NAIL IN UTILITY POLE CONC. NAIL 1' IN FROM CORNER PARKING LOT	2'± 2'±	ABOVE BRIM IN PAVEMENT
14+87.65	M NAIL IN HUB	M1 M2 M3	42.17' 46.85' 32.18'	CONC. NAIL 1' IN FROM CORNER PARKING LOT CONC. NAIL 1' IN EDGE OF PARKING LOT NAIL IN TOP CTR. OF PLANTER TIMBER	 2'	SAME AS L3 IN LINE WITH SIGN ROADSIDE END
16+32.10	N NAIL IN HUB	N1 N2 N3	46.28' 39.80' 41.46'	OUT. CLOSE CORNER OF PORCH POST CORNER BUILDING TRIM NAIL TOP CORNER TIMBER RET. WALL	3.7'± 3.7'± 1'	ABOVE WALK ABOVE WALK TOP OF RET. WALL
19+05.54	O CONC. NAIL	O1 O2 O3	66.34' 9.99' 35.51'	CORNER CONCRETE FOUNDATION NAIL IN CORNER SIGN POST NAIL IN 'ST FENCE POST	1' 1'	BELOW TRIM ABOVE METAL
20+70.47	P NAIL IN HUB	P1 P2 P3	51.88' 31.22' 59.27'	CONC. NAIL END OF 6TH WHITE LINE CONC. NAIL END OF 1ST WHITE LINE NAIL IN SIGN POST	 1'±	IN PAVEMENT IN PAVEMENT
22+72.72	Q SPIKE	Q1 Q2 Q3	30.00' 60.05' 46.77'	NAIL IN 15" RED PINE CORNER CONCRETE FOUNDATION WALL NAIL IN 15" RED PINE	0.7'± 0.3'± 1.3'±	ABOVE WALK
23+28.47	R NAIL IN HUB	R1 R2 R3	14.50' 15.81' 43.10'	NAIL IN 15" RED PINE NAIL IN 15" RED PINE NAIL IN GUY POLE	1.3'± 1.2'± 1.1'±	SAME AS Q3
23+35.32	S NAIL IN HUB	S1 S2 S3	19.79' 12.43' 36.27'	NAIL IN 15" RED PINE NAIL IN 15" RED PINE NAIL IN GUY POLE	1.3'± 1.3'± 1.2'±	SAME AS Q3, R1 SAME AS R2 SAME AS R3
24+61.84 24+57.52	T NAIL IN HUB	T1 T2 T3	40.05' 10.74' 25.45'	NAIL IN 18" RED PINE CONC. NAIL IN PATCH OF CONCRETE CONC. NAIL IN WHITE LINE	0.9'	IN LAWN OPPOSITE PEDESTAL
25+84.04	U CONC. NAIL	U1 U2 U3	62.43' 21.98' 19.18'	CORNER BUILDING TRIM NAIL IN SIGN POST NAIL IN SIGN POST	2' 2'± 2'±	ABOVE STONE PATIO ROADSIDE

TANGENT LINE BEARINGS

STATION	TIE #	BEARING	DISTANCE
13+39.23 BK 13+31.89 AHD TO 14+33.80	K TO L	N 02°21'25" W	101.91'
14+33.80 TO 14+87.65	L TO M	N 02°21'25" W	53.85'
14+87.65 TO 16+32.10	M TO N	N 01°25'28" W	144.45'
16+32.10 TO 19+05.54	N TO O	N 03°04'17" W	273.44'
19+05.54 TO 20+70.47	O TO P	N 08°25'22" W	164.93'
20+70.47 TO 22+72.72	P TO Q	N 11°59'16" W	202.25'
22+72.72 TO 23+28.47	Q TO R	N 16°14'23" W	55.75'
23+28.47 TO 23+35.32	R TO S	N 14°08'49" W	6.85'
23+35.32 TO 24+61.84 BK 24+57.52 AHD	S TO T	N 14°08'49" W	126.52'
24+61.84 BK 24+57.52 AHD TO 25+84.04	T TO U	N 40°03'26" W	126.52'



SITE PLAN

GRAPHIC SCALE

(IN FEET)

JUN 30 1992

AUG 9 1994

PROJECT
BW-RS-BIKE (29)

"TIE DETAIL SHEET 13+00 TO 25+00"
STOWE MOUNTAIN ROAD WALK

REVISED 13-92
REVISED 9-6-91
REVISED 8-20-91

STATE OF VERMONT
CHARLES J. GRENIER
REG. NO. 5445
REGISTERED ENGINEER

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-5413

DATE 8-14-91
DRN BY T.J.M
SCALE 1"=40'
SHT 26 OF 29

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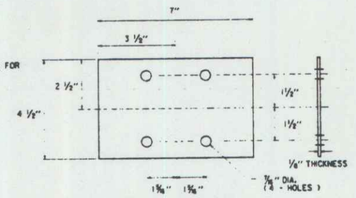
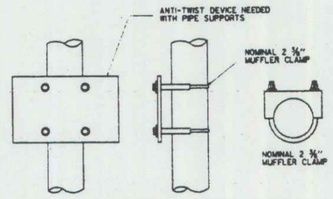
NOTES

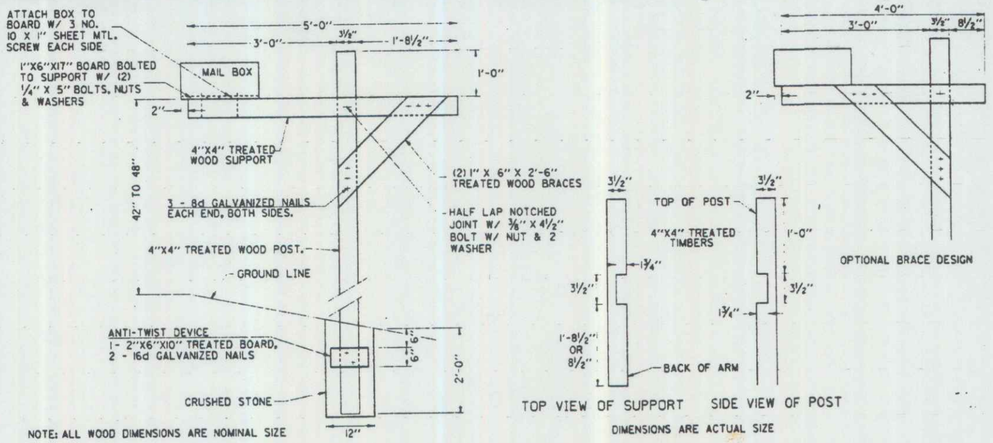
1. ONLY LIGHTWEIGHT MAILBOXES MADE OF LIGHT SHEET METAL OR PLASTIC SHALL BE USED. MAILBOXES SHALL MEET REQUIREMENTS AND APPROVAL OF THE U.S. POSTAL SERVICE.
2. AN ALTERNATE MAILBOX SUPPORT STRUCTURE DESIGN AND CONSTRUCTION MAY BE USED AS LONG AS PROVEN CRASHWORTHY AND MEETS GUIDELINES AS SET OUT IN AASHTO'S "GUIDE FOR ERECTING MAILBOXES ON HIGHWAYS". SUPPORT STRUCTURE SHALL ALSO MEET REQUIREMENTS OF THE U.S. POSTAL SERVICE.
3. MAILBOX TURNOUT SHALL MEET B-17 STANDARD AS SET OUT IN "STATE OF VERMONT AGENCY OF TRANSPORTATION DESIGN STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION".
4. IF THE STANDARD TURNOUT OFFSET CANNOT BE ATTAINED DUE TO RIGHT-OF-WAY CONSTRAINTS OR OTHER REASONS THE TURNOUT SHALL BE MODIFIED AS DIRECTED BY THE ENGINEER.



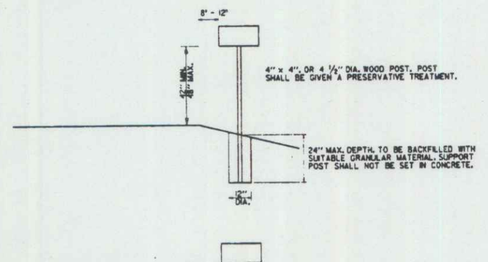
ANTI-TWIST DEVICE DETAIL FOR METAL PIPE

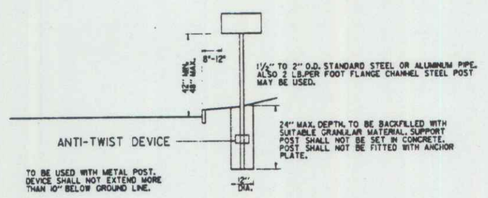


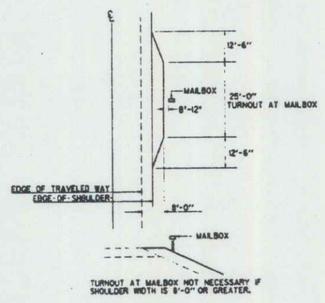
ANTI-TWIST DEVICE ASSEMBLY FOR METAL PIPES
(USED FOR SINGLE AND MULTIPLE INSTALLATIONS)

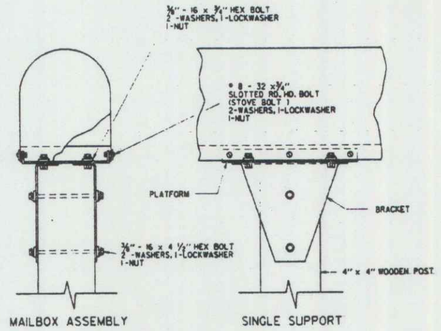


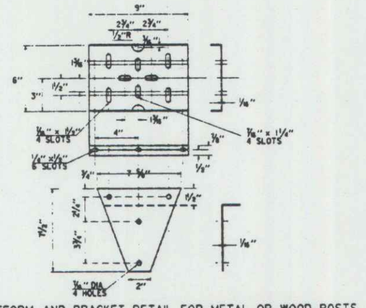
CANTILEVER TYPE MAILBOX SINGLE SUPPORT





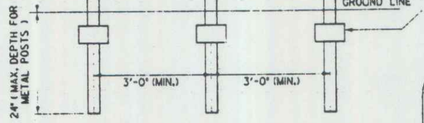




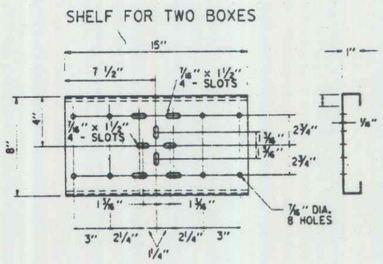


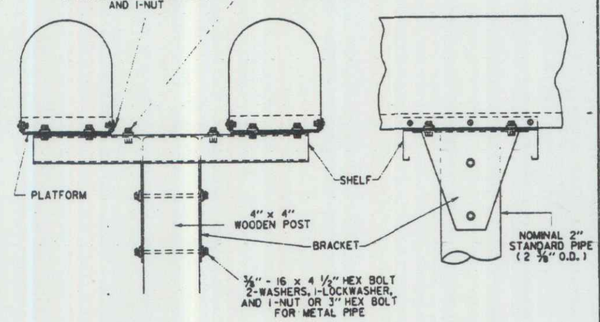
PLATFORM AND BRACKET DETAIL FOR METAL OR WOOD POSTS
(USED FOR SINGLE AND MULTIPLE BOXES)

SINGLE MAILBOX SUPPORT



SPACING FOR MULTIPLE POST INSTALLATION





MULTIPLE MAILBOX SUPPORT

MAILBOX SUPPORT HARDWARE

(SINGLE AND MULTIPLE SUPPORT)

REVISED 8-30-91

AUG 9 1994

JUN 30 1992

PROJECT BW-RS-BIKE (29)

MAILBOX DETAIL SHEET
STOWE MOUNTAIN ROAD WALK

CHARLES GRENIER CONSULTING ENGINEER
BOX 446, WATERBURY, VERMONT
244-6419

DATE = 8-14-91
DRN BY = C.J.G.
SCALE = A/N
SHT 37 OF 38

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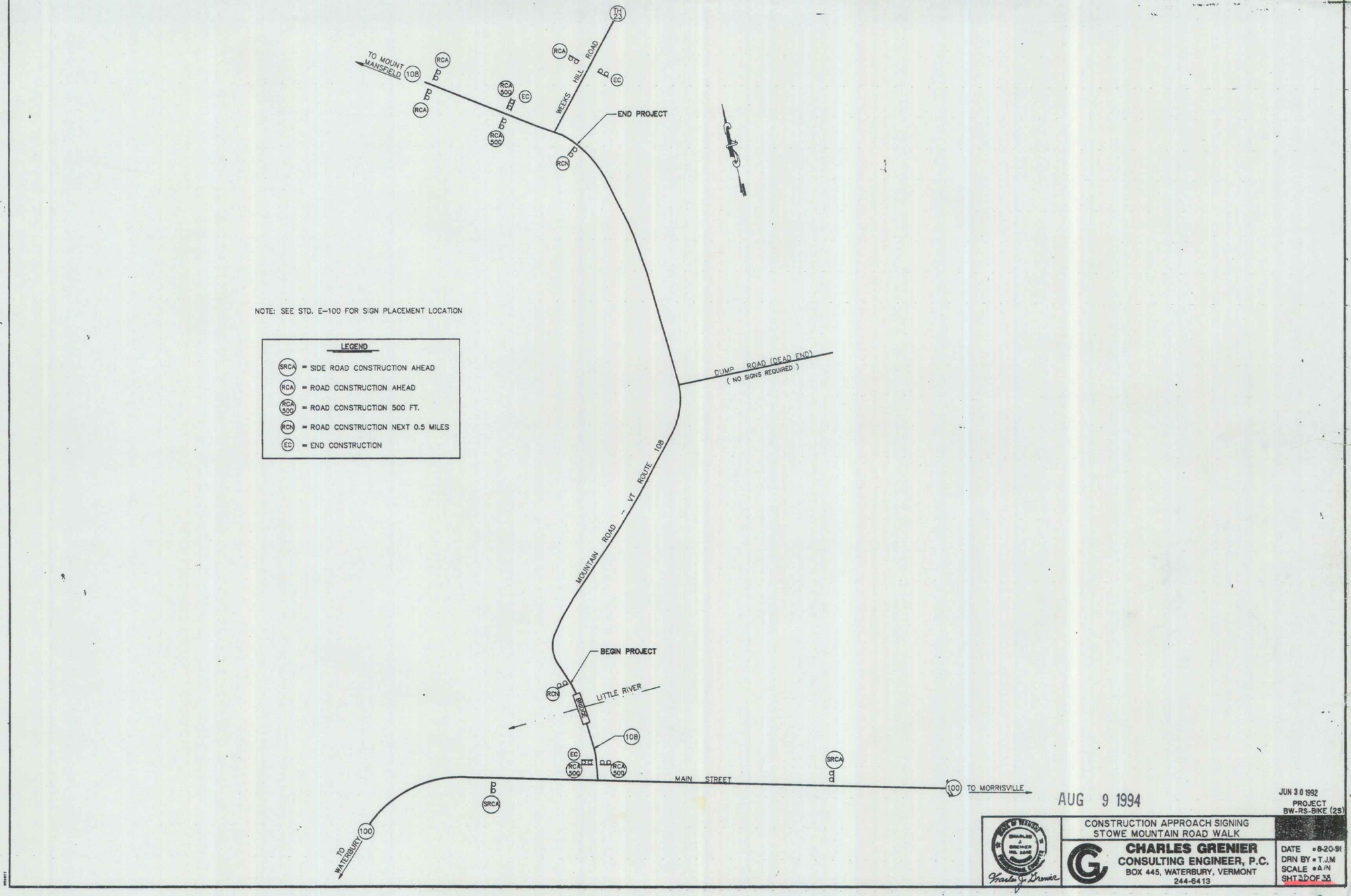

AUG 9 1994

JUN 30 1992

PROJECT
BW-RS-BIKE (25)

CONSTRUCTION APPROACH SIGNING
STOWE MOUNTAIN ROAD WALK

CHARLES GRENIER
CONSULTING ENGINEER, P.C.
BOX 445, WATERBURY, VERMONT
244-6413

DATE = 8-20-91
DRN BY = T.J.M
SCALE = A/N
SHT 2 OF 3 SH

29