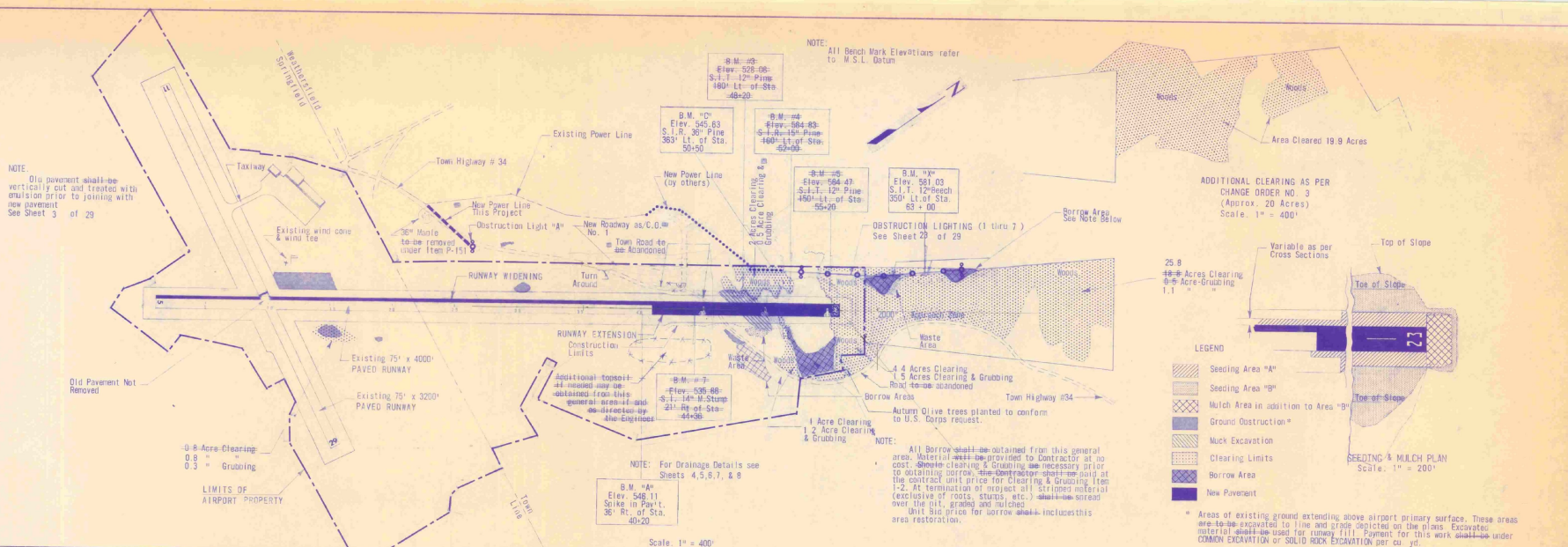


PLAN
 DRAWN BY: []
 CHECKED BY: []
 DATE: []

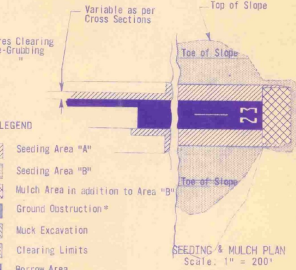
PROFILE
 DRAWN BY: []
 CHECKED BY: []
 DATE: []

NOTE: Old pavement shall be vertically cut and treated with emulsion prior to joining with new pavement. See Sheet 3 of 29.

NOTE: All Bench Mark Elevations refer to W.S.L. Datum.



ADDITIONAL CLEARING AS PER CHANGE ORDER NO. 3 (Approx. 20 Acres) Scale: 1" = 400'

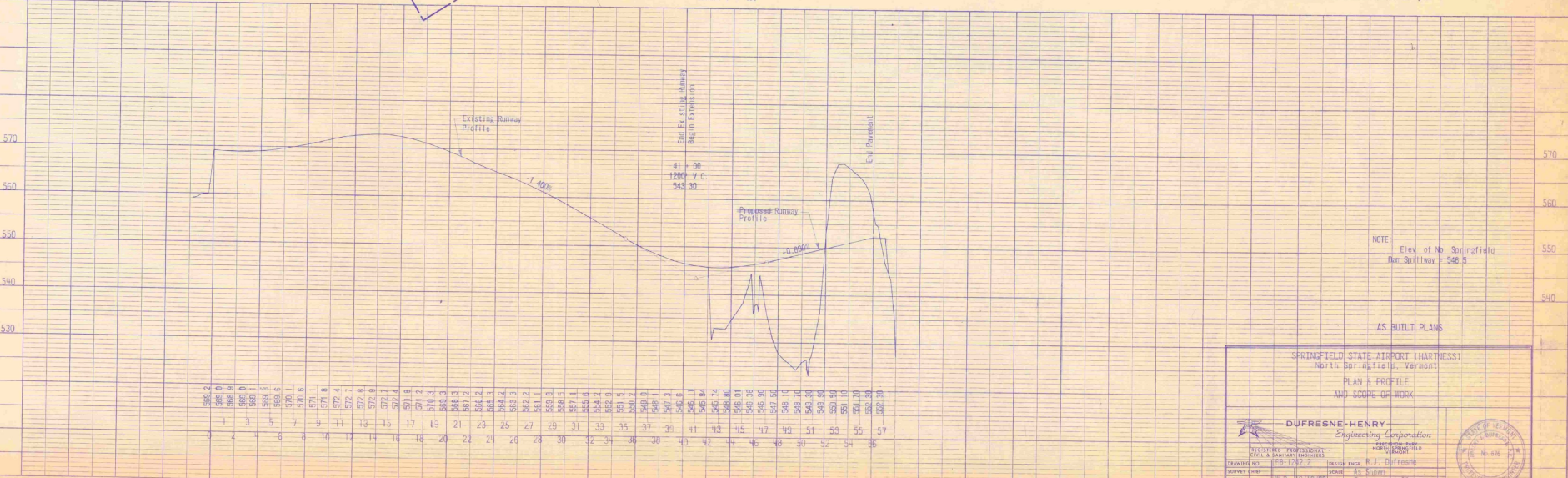


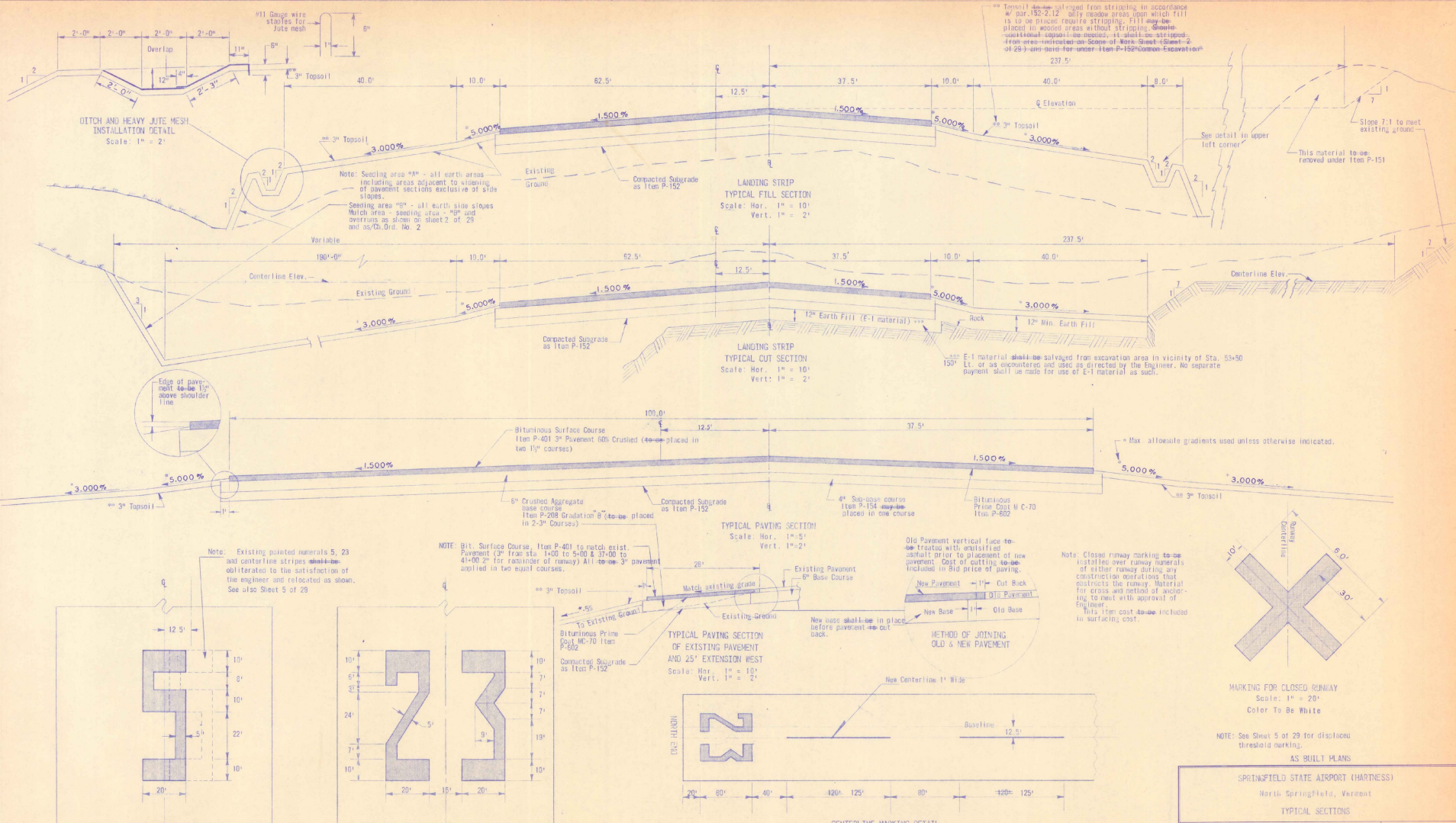
- LEGEND**
- Seeding Area "A"
 - Seeding Area "B"
 - Mulch Area in addition to Area "A"
 - Ground Obstruction
 - Muck Excavation
 - Clearing Limits
 - Borrow Area
 - New Pavement

NOTE: All Borrow shall be obtained from this general area. Material shall be provided to Contractor at no cost. Before clearing & grubbing use necessary order to obtaining borrow, the Contractor shall be paid at the contract unit price for Clearing & Grubbing, Item 1-2. At termination of project all stripped material (exclusive of rocks, stumps, etc.) shall be spread over the cut, grade and finished.

NOTE: For Drainage Details see Sheets 4, 5, 6, 7, & 8.

Scale: 1" = 400'





SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont

TYPICAL SECTIONS

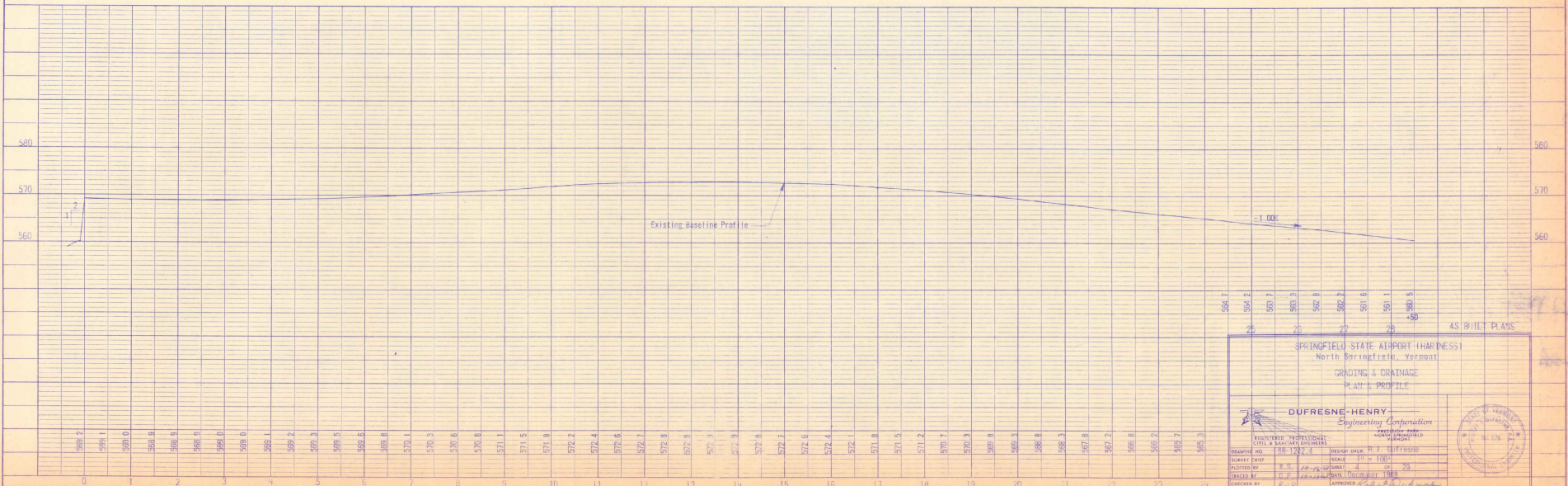
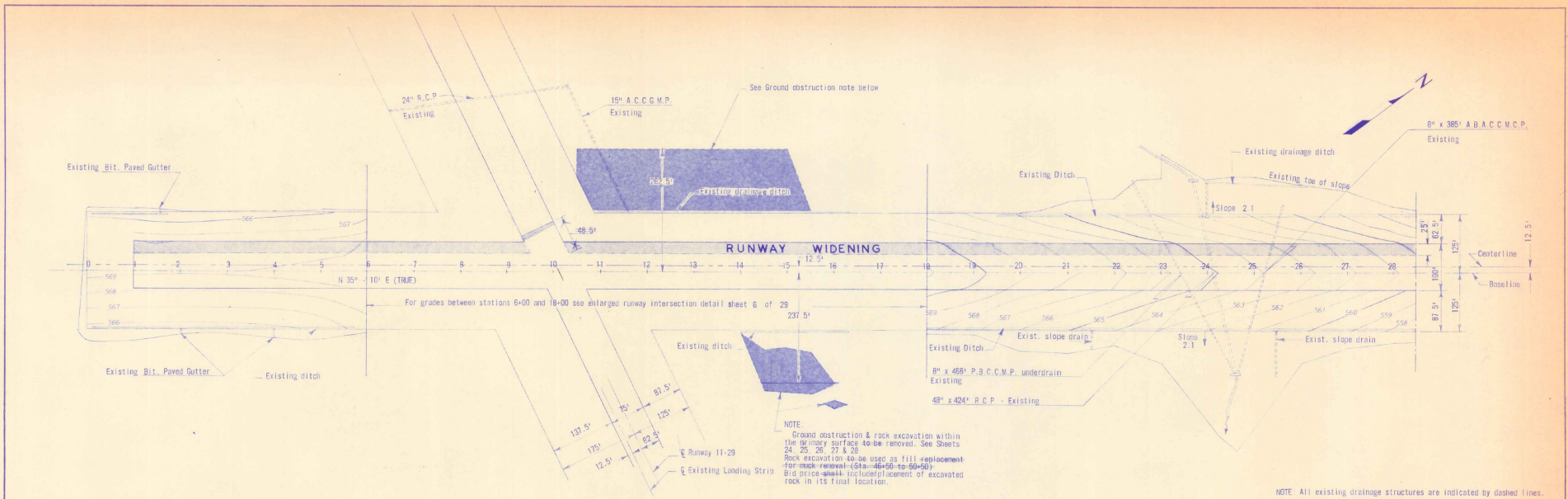
DUPRESNE-HENRY
Engineering Corporation
REGISTERED PROFESSIONAL
CIVIL & SURVEY ENGINEERS

DRAWING NO. 108-1222-3 DESIGNER: R. J. Dupresne
CHECKED BY: J. B. 10-28-51 SCALE: As Shown
NOTED BY: J. B. 10-28-51 DATE: December 1951
PROJECT NO. 108-111-5-55 APPROVED BY: J. B. Dupresne

STATE OF VERMONT
REGISTERED PROFESSIONAL ENGINEER
No. 538

PLAN
 DRAWN BY: [blank]
 CHECKED BY: [blank]
 DATE: [blank]

PROFILE
 DRAWN BY: [blank]
 CHECKED BY: [blank]
 DATE: [blank]



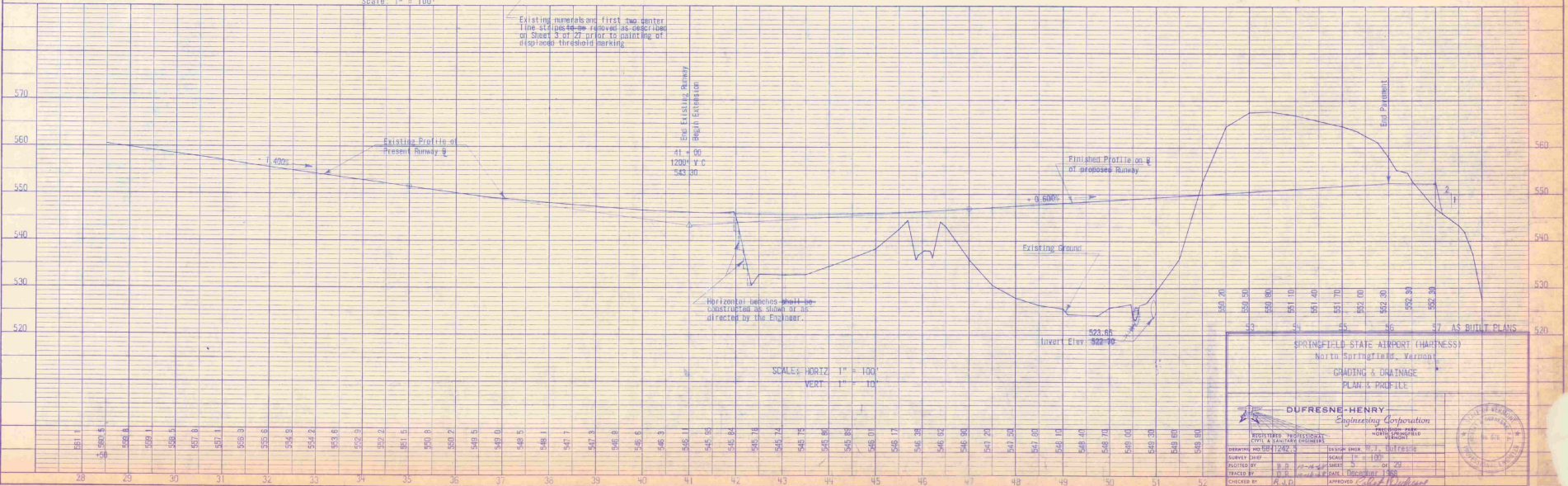
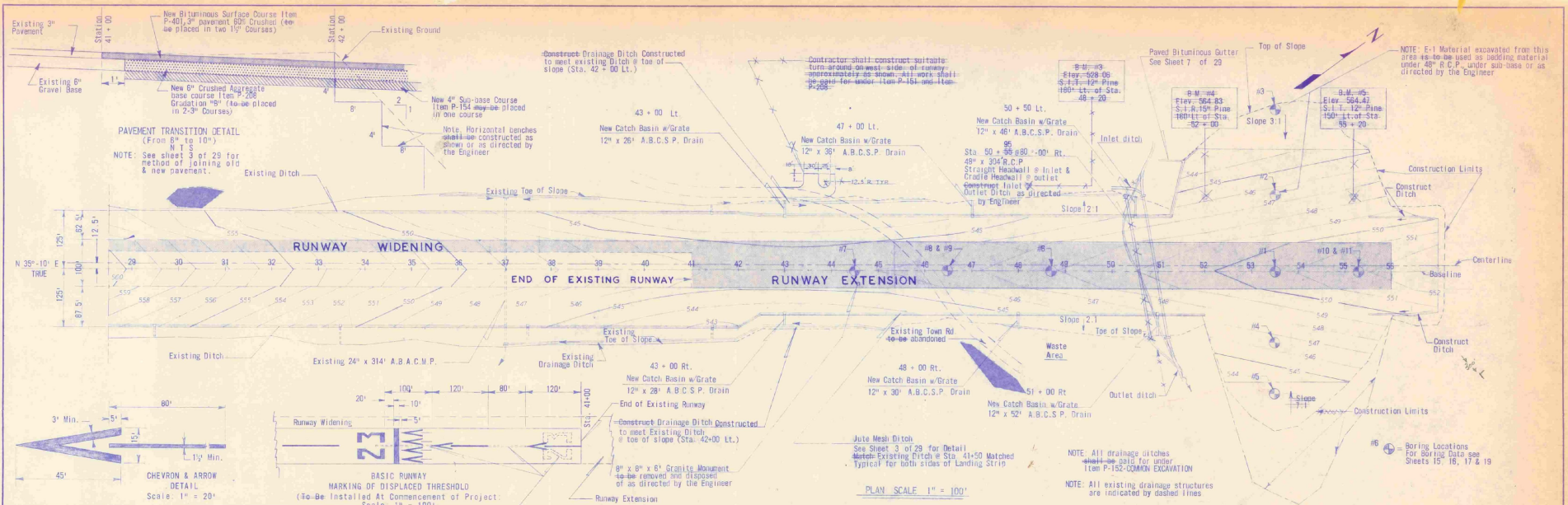
SPRINGFIELD STATE AIRPORT (HARNESSE)
 North Springfield, Vermont
 GRADING & DRAINAGE
 PLAT 1, PROFILE

DUFRESNE-HENRY
 Engineering Corporation
 REGISTERED PROFESSIONAL
 CIVIL & MECHANICAL ENGINEERS
 Vt. License No. 12022
 State of Vermont
 Survey Date: 8-7-58
 Project No.: 28-42 (HARNESSE)
 Sheet No.: 23
 Checked by: R.C.P.
 Approved: [Signature]

AS BUILT PLANS

PLAN
 DRAWN BY: [Blank]
 CHECKED BY: [Blank]
 DATE: [Blank]

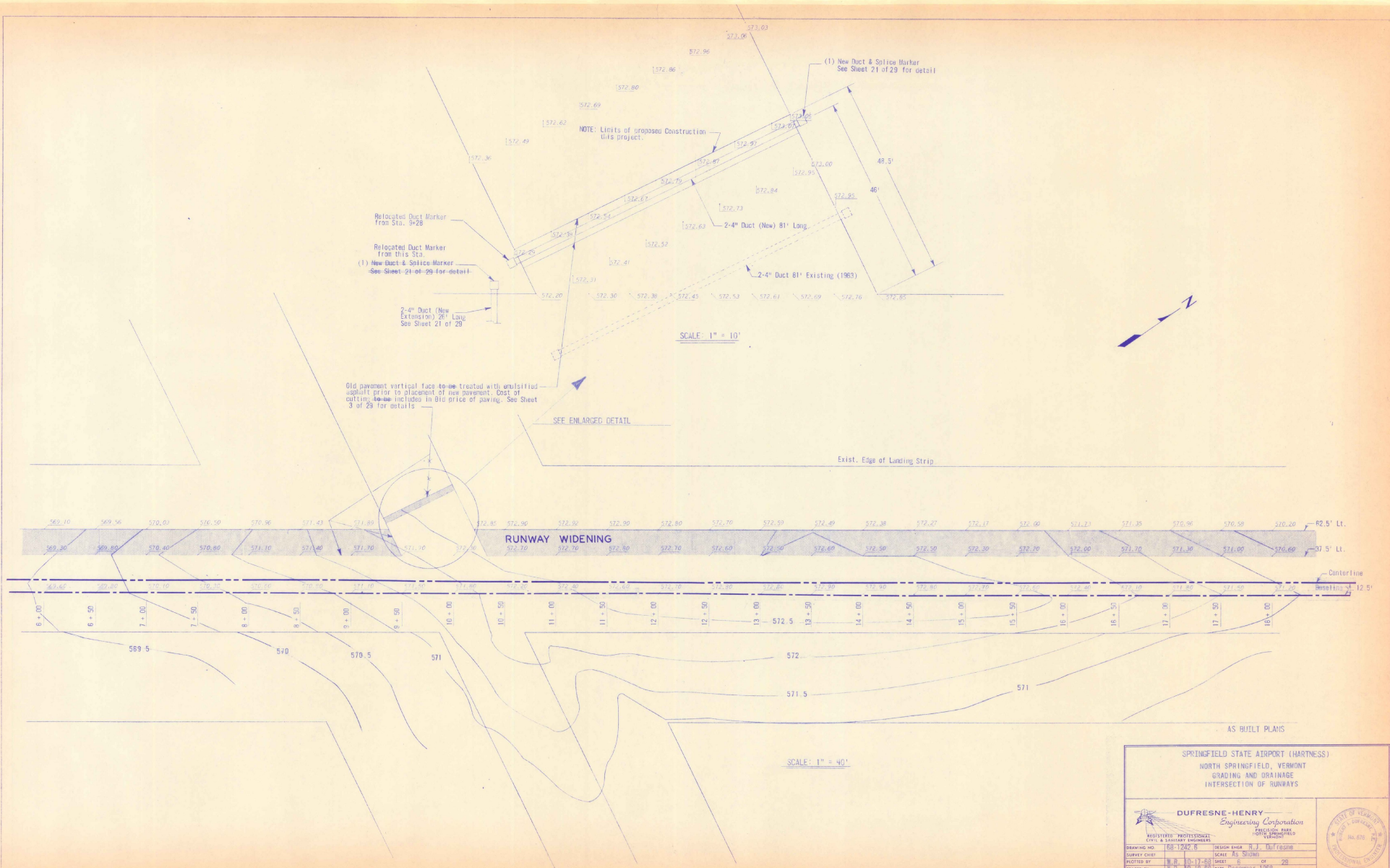
PROFILE
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 CHECKED BY: [Blank]
 DATE: [Blank]



SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 GRADING & DRAINAGE
 PLAN & PROFILE

DUFRESNE HENRY
 Engineering Corporation

DESIGNED BY: R. J. BIFFERS
 SCALE: 1" = 100'
 DRAWN BY: [Blank]
 CHECKED BY: [Blank]
 DATE: [Blank]



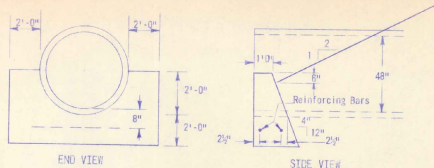
SPRINGFIELD STATE AIRPORT (HARTNESS)
 NORTH SPRINGFIELD, VERMONT
 GRADING AND DRAINAGE
 INTERSECTION OF RUNWAYS

DUFRESNE-HENRY
 Engineering Corporation

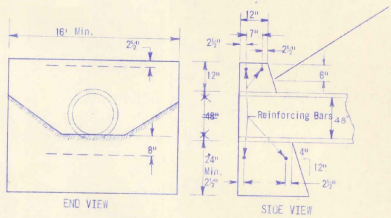
REGISTERED PROFESSIONAL CIVIL & SANITARY ENGINEERS

DRAWING NO. 168-1242-B DESIGN ENGINEER R.J. DUFRESNE
 SURVEY CHIEF SCALE AS SHOWN
 PLOTTED BY H.H. 10-1-68 SHEET 5 OF 20
 TRACKED BY H.H. 10-18-68 DATE DECEMBER 1968
 CHECKED BY J.M.D. APPROVED *[Signature]*

STATE OF VERMONT
 REG. PROFESSIONAL ENGINEER
 NO. 476

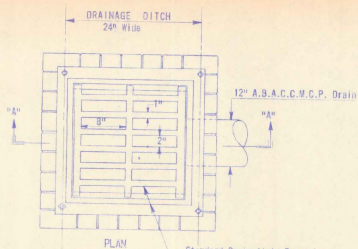


CRADLE CONCRETE HEADWALL DETAIL
CRN = 1.7 c. y.

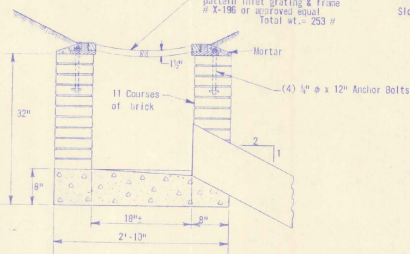


STRAIGHT CONCRETE HEADWALL DETAIL
CRN = 8.0 c. y.

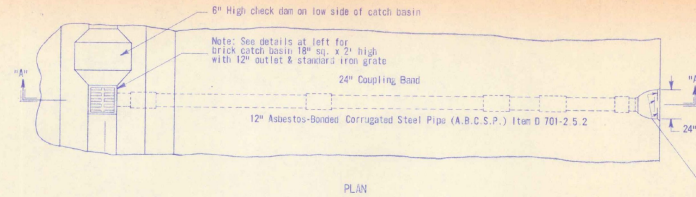
NOTE: All reinforcing steel to be 5/8" diameter deformed bars.



PLAN
Standard Springfield Foundries pattern inlet grating & frame # X-196 or approved equal total wt. = 253 #

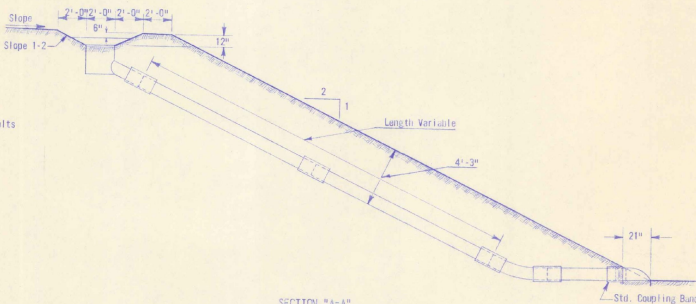


SECTION "A-A"
BRICK CATCH BASIN
Not to Scale



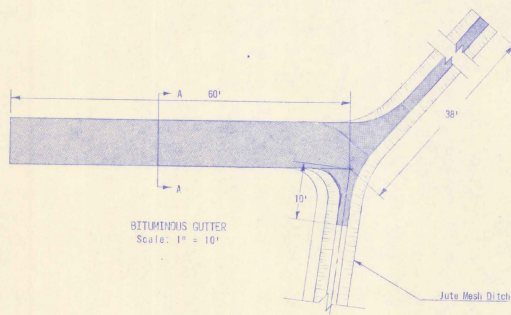
PLAN

18 Ga. Standard metal outlet end section with 4" high metal baffles welded in place as shown.



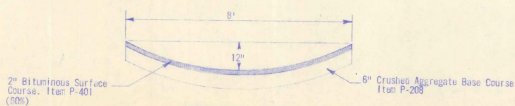
SECTION "A-A"
TYPICAL DRAIN DETAIL
Scale: 1/4" = 1'-0"

Slope Drain Location			
STN.	L1	R1	
43 + 00	26'	28'	
47 + 00	36'	0	
48 + 00	0	30'	
50 + 50	45'	0	
51 + 00	0	50'	



BITUMINOUS GUTTER
Scale: 1" = 10"

NOTE: All ditch cut slopes 2:1. Bituminous gutters shall receive two coats of an asphalt seal tar base sealer such as "Jambite" or "Flint Tar" or equal. Sealer shall be applied after pavement has cured for at least 5 days. Method and rate of application shall be as recommended by the product manufacturer. The cost of this work shall be included in the bid price for "Bituminous Gutter".



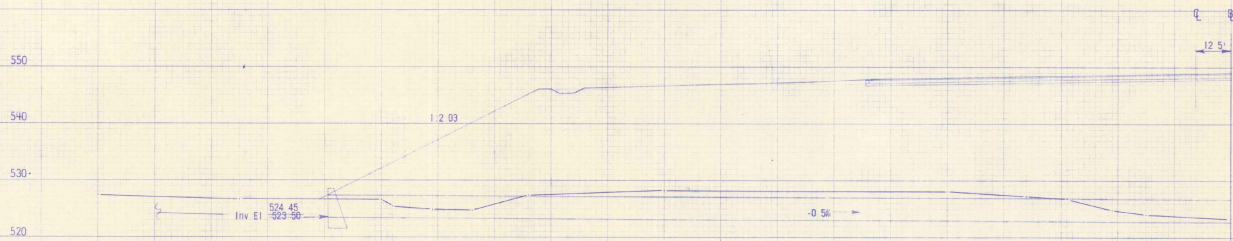
BITUMINOUS GUTTER
SECTION A-A
Scale: 1" = 2'

AS BUILT PLANS

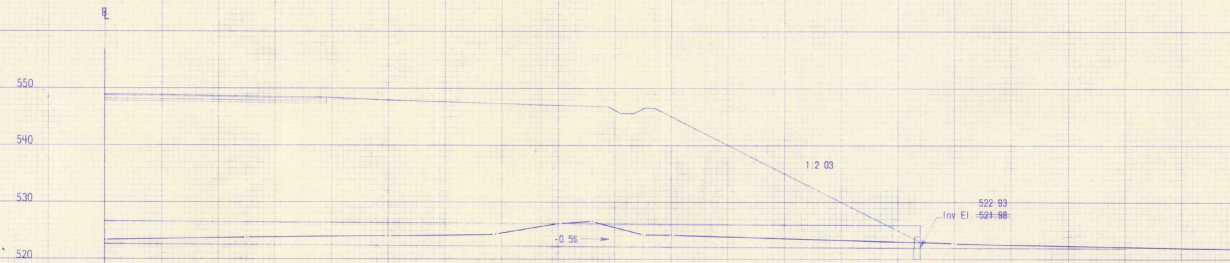
SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont

DRAINAGE DETAILS

DRAWING NO. 55-1257 SURVEY CODE PLOTTED BY CHECKED BY	DESIGN YEAR 1958 SCALE AS SHOWN SHEET 29 DATE 7-30-58	APPROVED <i>[Signature]</i>	



STA 50 + 95
 Slope = 80'-100' Rt
 48" x 304' RCP
 Grade = -0.5%
 St. Headwall at Inlet
 Cr. Headwall at Outlet
 Construct Inlet and Outlet Ditches



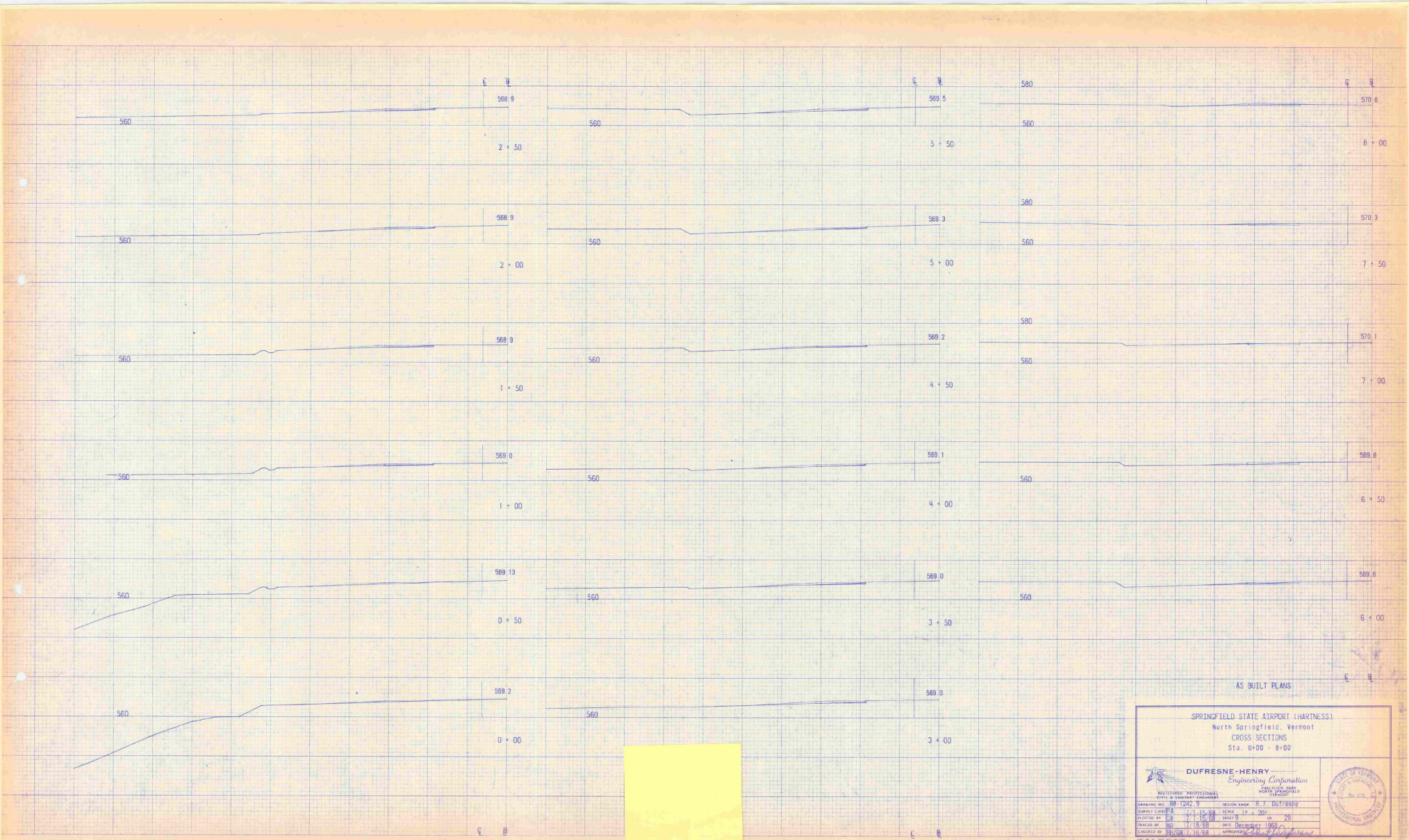
AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 No. Springfield, Vermont
 48" x 304' RCP
 STA 50 + 00

DUFRESNE-HENRY
 Engineering Corporation
 REGISTERED PROFESSIONAL ENGINEERS
 CIVIL & SANITARY ENGINEERS

STATE OF VERMONT
 REGISTERED PROFESSIONAL ENGINEER
 No. 676

DRAWING NO.	88-1242-8	DESIGN ENGINEER	R. J. Duff-Henry
CURVE CENTER	11-25-88	SCALE	1" = 10'
PLOTTED BY	11-25-88	SHEET	8 OF 28
PROJECT NO.	11-25-88	DATE	February, 1988
CHECKED BY	11-25-88	APPROVED	<i>[Signature]</i>



AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont
CROSS SECTIONS
Sta. 0+00 - 8+00

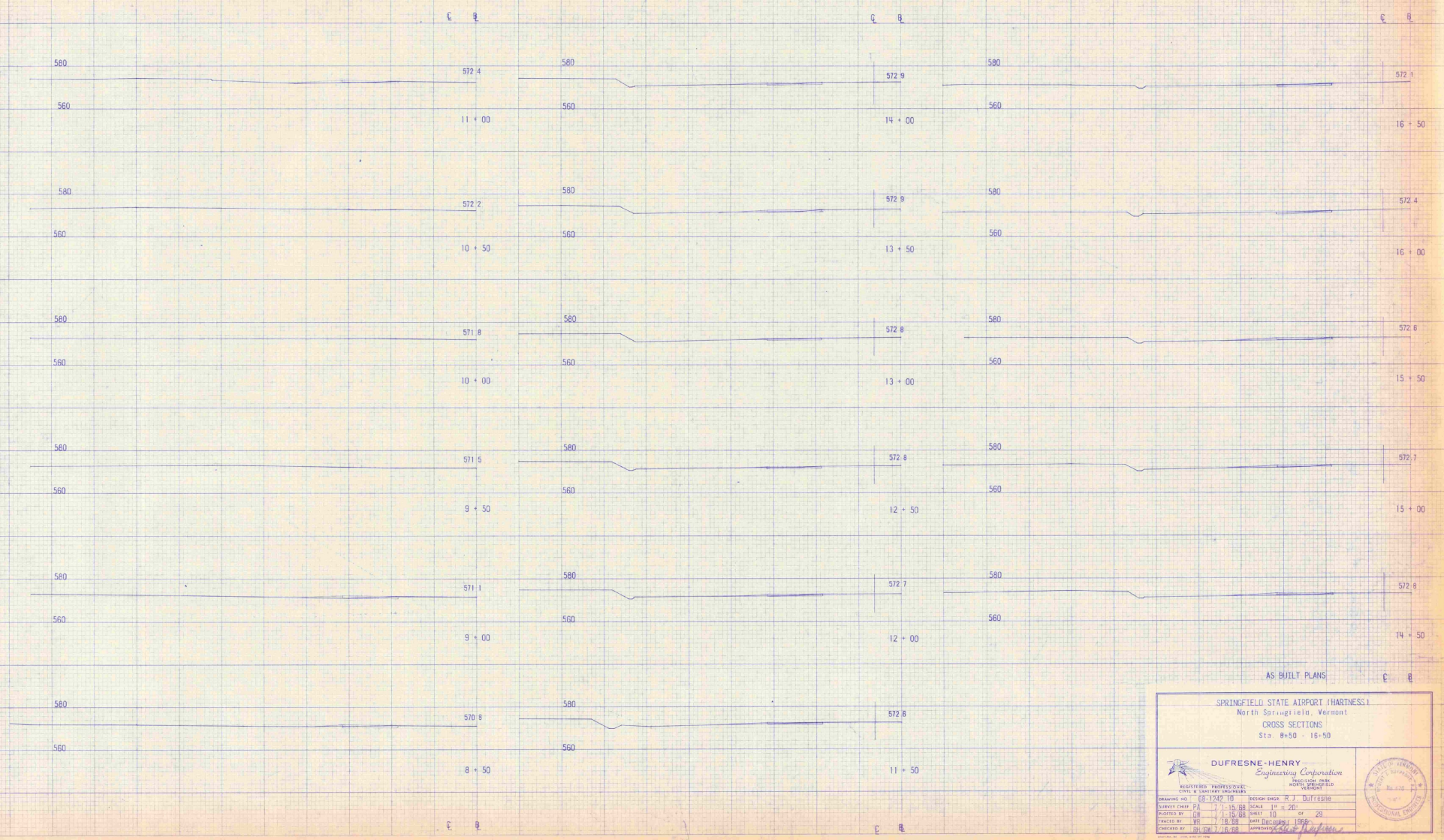
DUFRESNE-HENRY
Engineering Corporation
INCORPORATED

MULTI-TYPE PROFESSIONAL
ENGINEERING CORPORATION

DRAWING NO. 68-1242	DATE 7-15-68	DESIGN ENGINEER R. J. DUFRESNE
CHECKED BY J. H. 7-15-68	SCALE 1" = 20'	
PLOTTED BY J. H. 7-15-68	SHEET 9	OF 28
DESIGNED BY J. H. 7-15-68	DATE 7-15-68	APPROVED BY J. H. 7-15-68
CHECKED BY J. H. 7-15-68		

STATE OF VERMONT
REGISTERED PROFESSIONAL ENGINEER
No. 1274

407,600

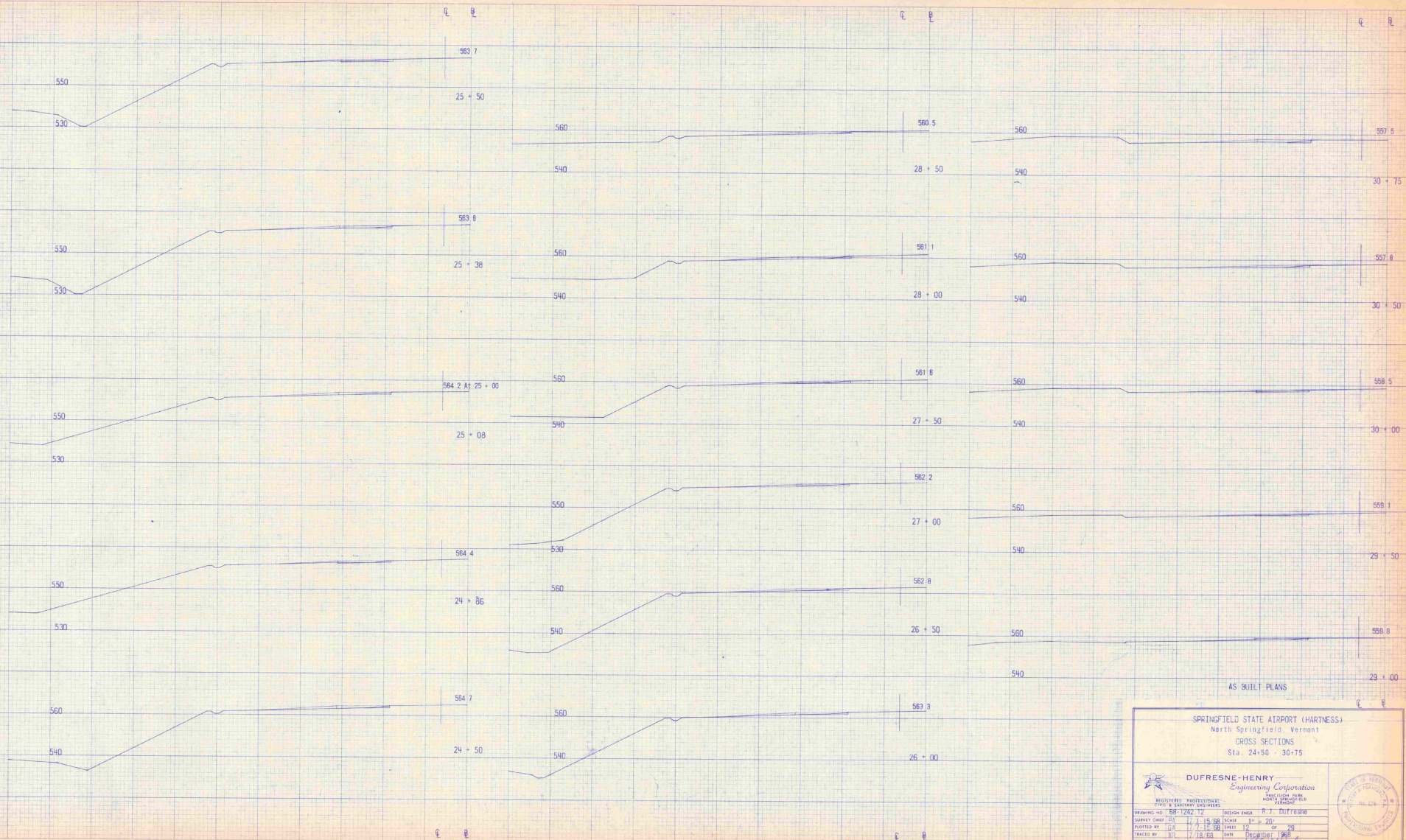


AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARNESS)
 North Springfield, Vermont
 CROSS SECTIONS
 Sta. 8+50 - 18+50

 DUFRESNE-HENRY Engineering Corporation <small>INCORPORATED IN VERMONT</small>		
<small>REGISTERED PROFESSIONAL ENGINEERS CIVIL & SURVEYING ENGINEERS VERMONT LICENSE NO. 10000</small>		
<small>DRAWING NO. 05-1942-10</small>	<small>DESIGN SHEET NO. 3</small>	
<small>SURVEY CHIEF P.A.</small>	<small>SCALE 1" = 20'</small>	
<small>DRAWN BY G.H.</small>	<small>CHECKED BY G.H.</small>	
<small>DATE 7/18/68</small>	<small>DATE 7/18/68</small>	

Approved: D. J. Duff



AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield Vermont
 CROSS SECTIONS
 Sta. 24+50 - 30+75

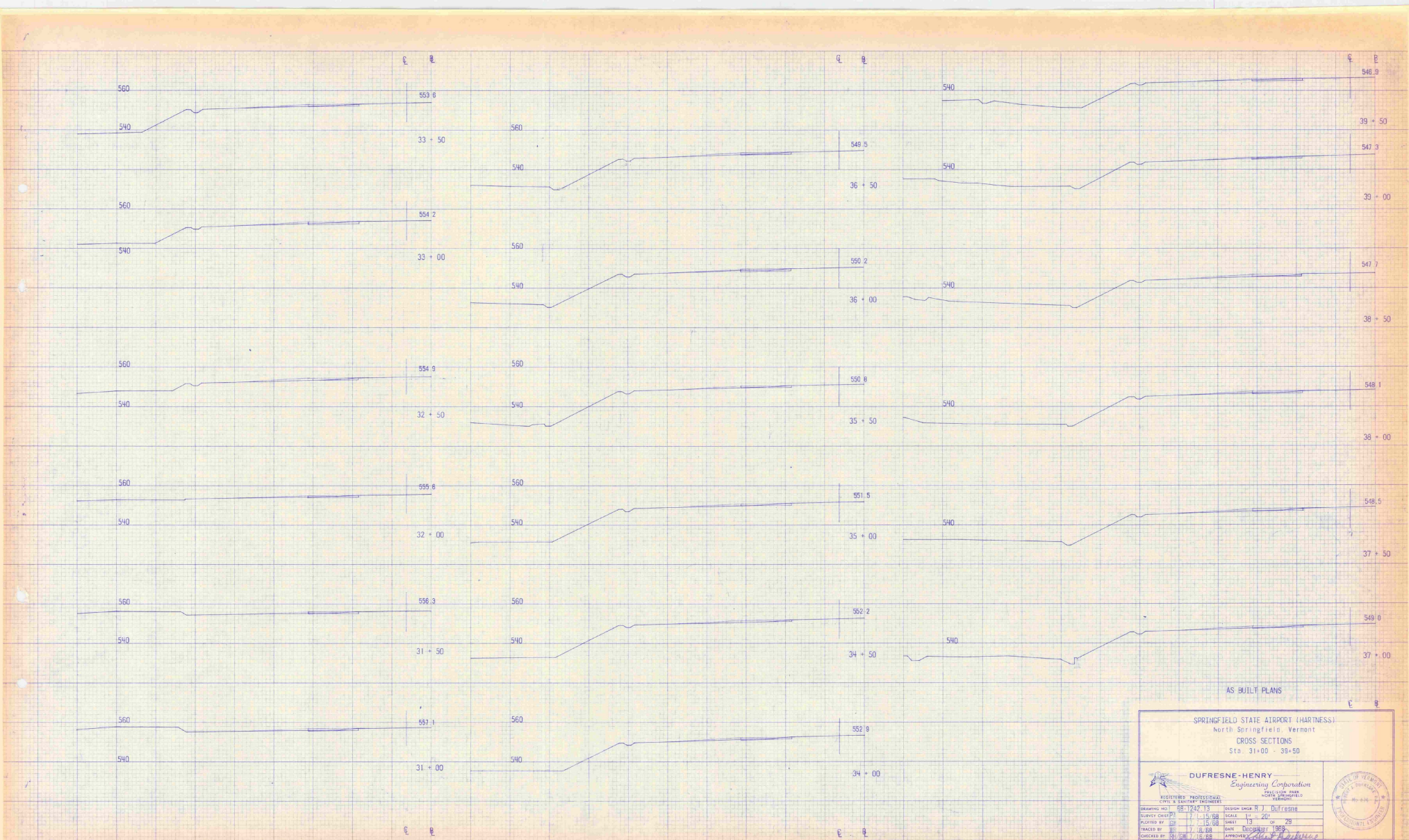
DUFRESNE-HENRY
 Engineering Corporation

REGISTERED PROFESSIONAL ENGINEER & SURVEYOR VERMONT

DESIGNER: R. J. DUFRESNE
 SURVEYOR: J. A. HENRY
 CHECKED BY: J. A. HENRY


DATE: 11/15/68
 SCALE: 1" = 20'
 SHEET: 12 OF 26
 DATE: 11/18/68
 DRAWN BY: J. A. HENRY

VERMONT PROFESSIONAL ENGINEER



AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont
CROSS SECTIONS
Sta. 31+00 - 36+50

DUPRESNE-HENRY Engineering Corporation		
REGISTERED PROFESSIONAL CIVIL & SANITARY ENGINEERS		
DESIGNED BY	RE: 1242-13	DESIGN DRAW NO.
SURVEY CHECKED BY	12-15-68	SCALE
PLOTTED BY	12-15-68	SHEET
TRACED BY	12-15-68	DATE
CHECKED BY	12-15-68	APPROVED

E 8

540
520
540
520
540
520
540
520
540
520
540
520

545.84
42 + 00
545.85
41 + 96
545.86
41 + 50
546.11
40 + 98
546.3
40 + 50
546.8
40 + 00

Begin Runway Extension at Sta. 41+00

AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont
CROSS SECTIONS
Sta. 40+00 - 42+00

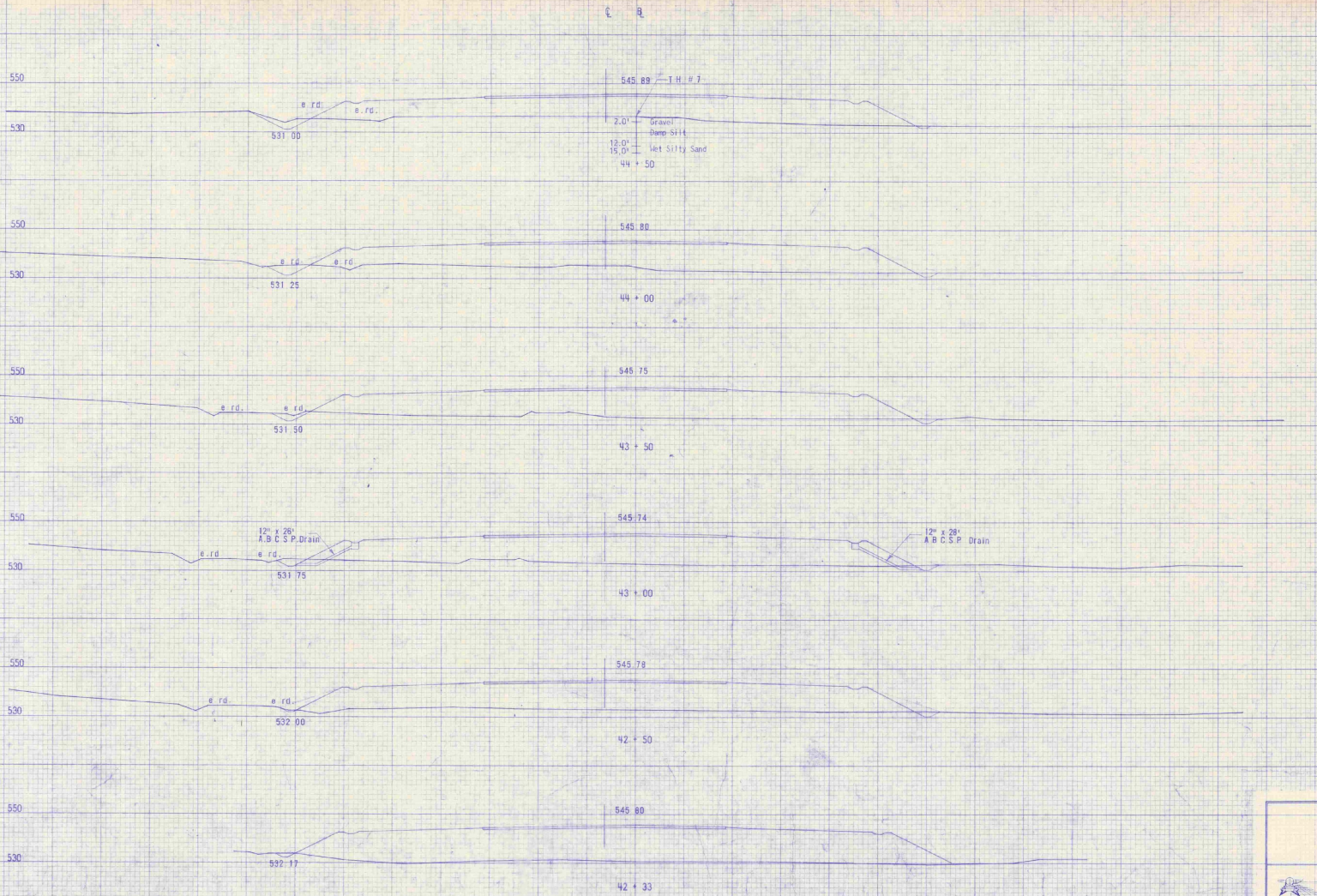
DUFRESNE-HENRY
Engineering Corporation
CIVIL ENGINEERS
100 STATE STREET
SPRINGFIELD, VERMONT

DESIGNED BY: J. J. Dufresne
DRAWN BY: J. J. Dufresne
CHECKED BY: J. J. Dufresne
DATE: 7/18/68

SCALE: 1" = 20'
SHEET: 14 OF 29
DATE: December 1968




G 8

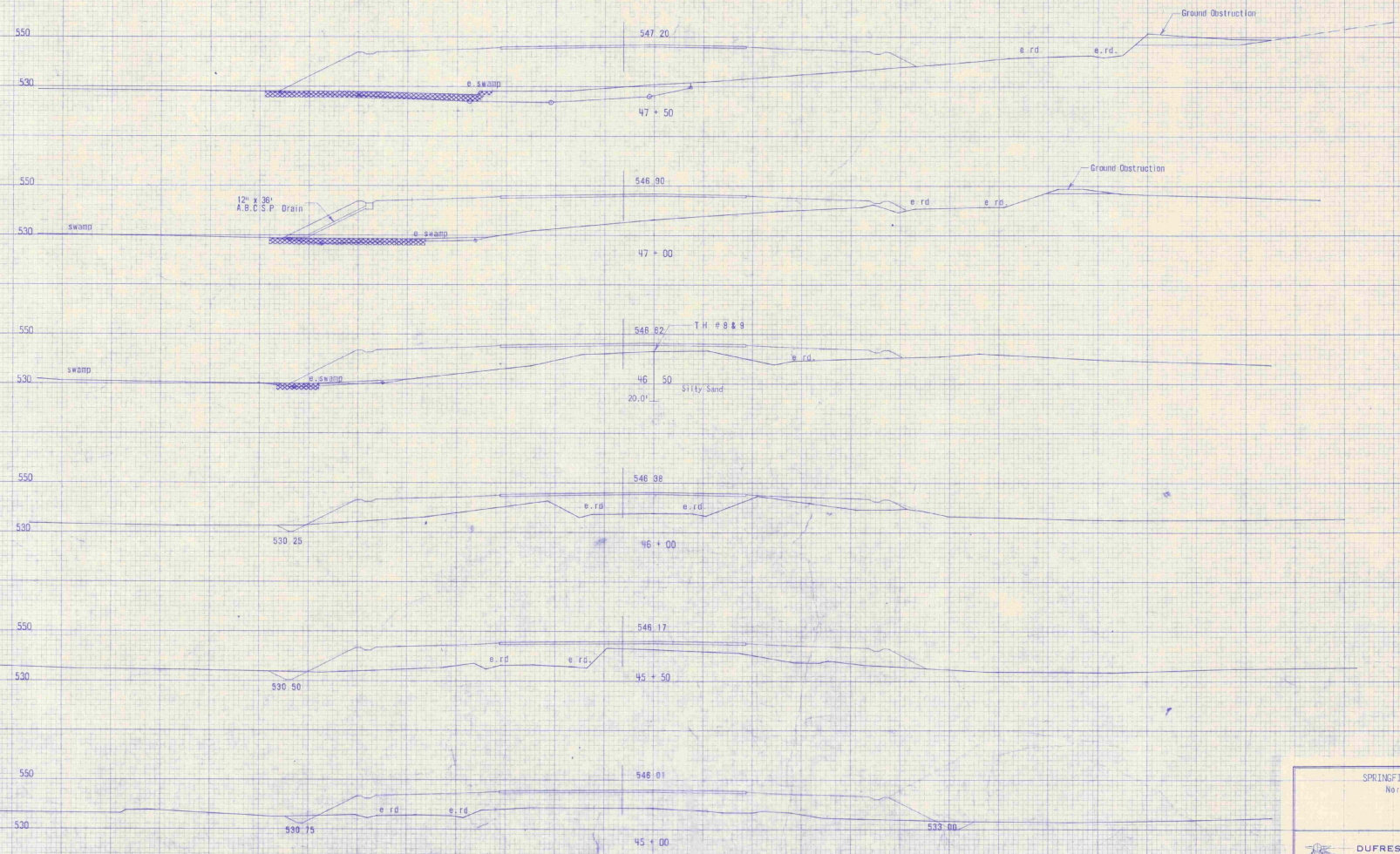


AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield Vermont
CROSS SECTIONS
Sta. 42+32 - 44+50

 DUFRESNE-HENRY Engineering Corporation CIVIL ENGINEERS AND ARCHITECTS		
DRAWING NO. 68-1262-15 DATE 7-1-68 PLACED BY G.H. CHECKED BY B.L.S.	DESIGN ENGINEER R.J. DUFRESNE SCALE 1" = 20' SHEET 15 OF 25 DATE 7-1-68	PROJECT NO. 68-1262-15 APPROVED BY [Signature]

E 4

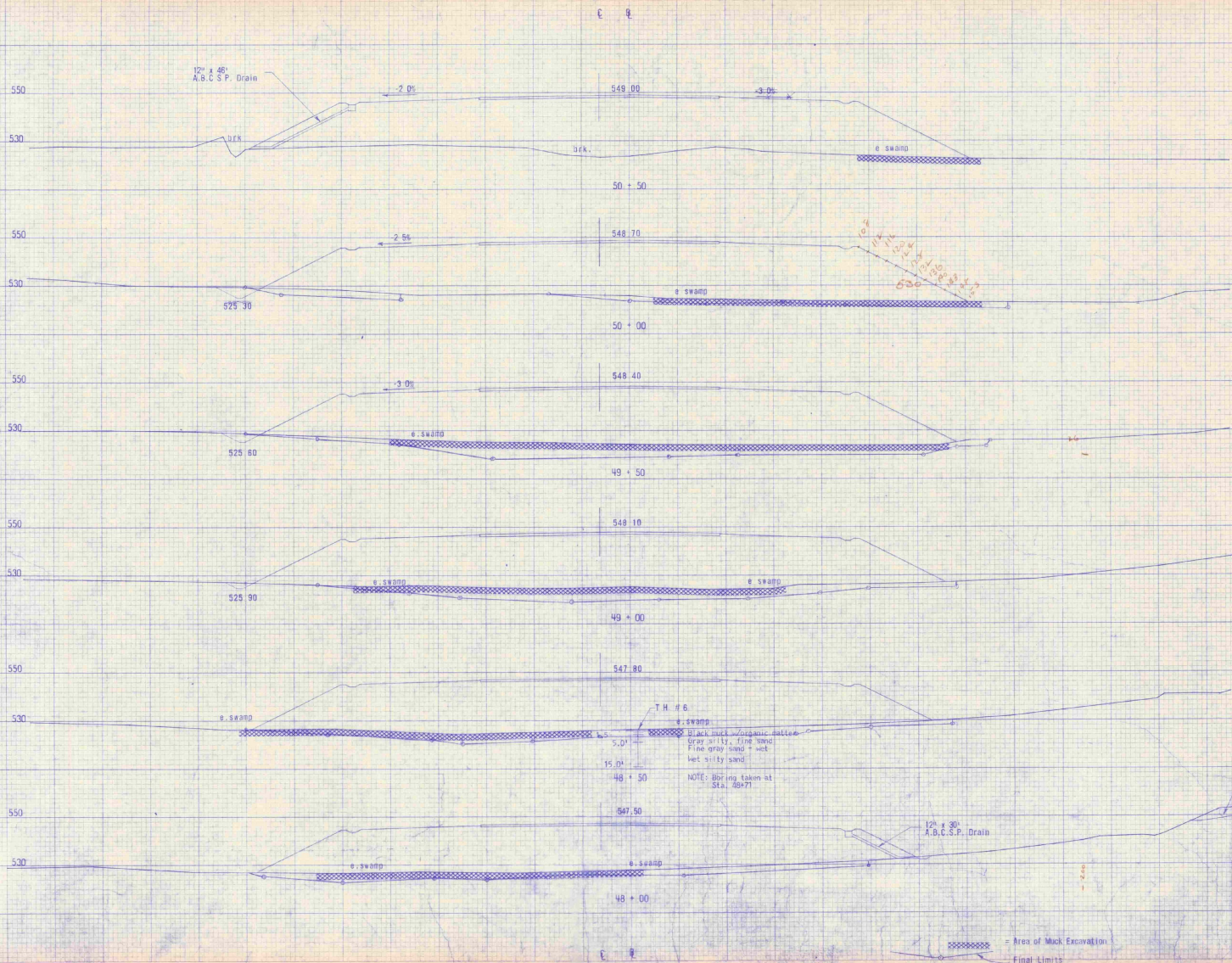


AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTIONS
 Sta. 45+00 - 47+50

DUFRESNE-HENRY Engineering Corporation		
REGISTERED PROFESSIONAL ENGINEER STATE OF VERMONT		
PROJECT NO. 58-1242-16	DESIGN ENGINEER R. J. DUFRESNE	
DESIGN CHECKED BY 17-11-58	DRAWN BY 16	
CHECKED BY 17-18-58	DATE DECEMBER 1958	
CONCEIVED BY 17-18-58	APPROVED BY <i>[Signature]</i>	

Area of Muck Excavation
 Final Limits



E E

12" x 45"
A.B.C.S.P. Drain

Handwritten note in orange ink: 50' x 30' A.B.C.S.P. Drain

T.H. # 6
 5.0' Black muck / organic matter
 Gray silt, fine sand
 Fine gray sand + wet
 wet silty sand
 NOTE: Boring taken at
 Sta. 48+71

12" x 30"
A.B.C.S.P. Drain

Area of Muck Excavation
 Final Limits

AS BUILT PLANS

SPRINGFIELD STATE AIRPORT - (HARTNESS) -
 North Springfield, Vermont
 CROSS SECTIONS
 Sta. 48+00 - 50+50

DUFRESNE-HENRY
 Engineering Corporation

REGISTERED PROFESSIONAL ENGINEER
 STATE OF VERMONT
 No. 1000

DRAWING NO. 100-1242-17 DESIGN ENGINEER R. J. DUFRESNE
 SURVEY CHECKED BY 7/1-15/68 SCALE 1" = 20'
 PLOTTED BY 8/1-15/68 SHEET 11 OF 25
 TRACED BY 8/1-15/68 DATE DICTATED 1968
 CHECKED BY 8/1-15/68 APPROVED [Signature]

STATE OF VERMONT
 REGISTERED PROFESSIONAL ENGINEER
 R. J. DUFRESNE

C R

580
560
540
560
540
570
550
530
550
530
510

-1.0%

-1.0%

-1.0%

559.50
53 + 00
559.20
52 + 50
549.90
52 + 00
549.80
51 + 50
549.30
51 + 00

NOTE SEE SHEET 18A OF 29 FOR RIGHT HALF OF THESE SECTIONS

-1.5%

-2.0%

-3.0%

12" x 50" A.B.C.S.P. Drain

D.F.K.

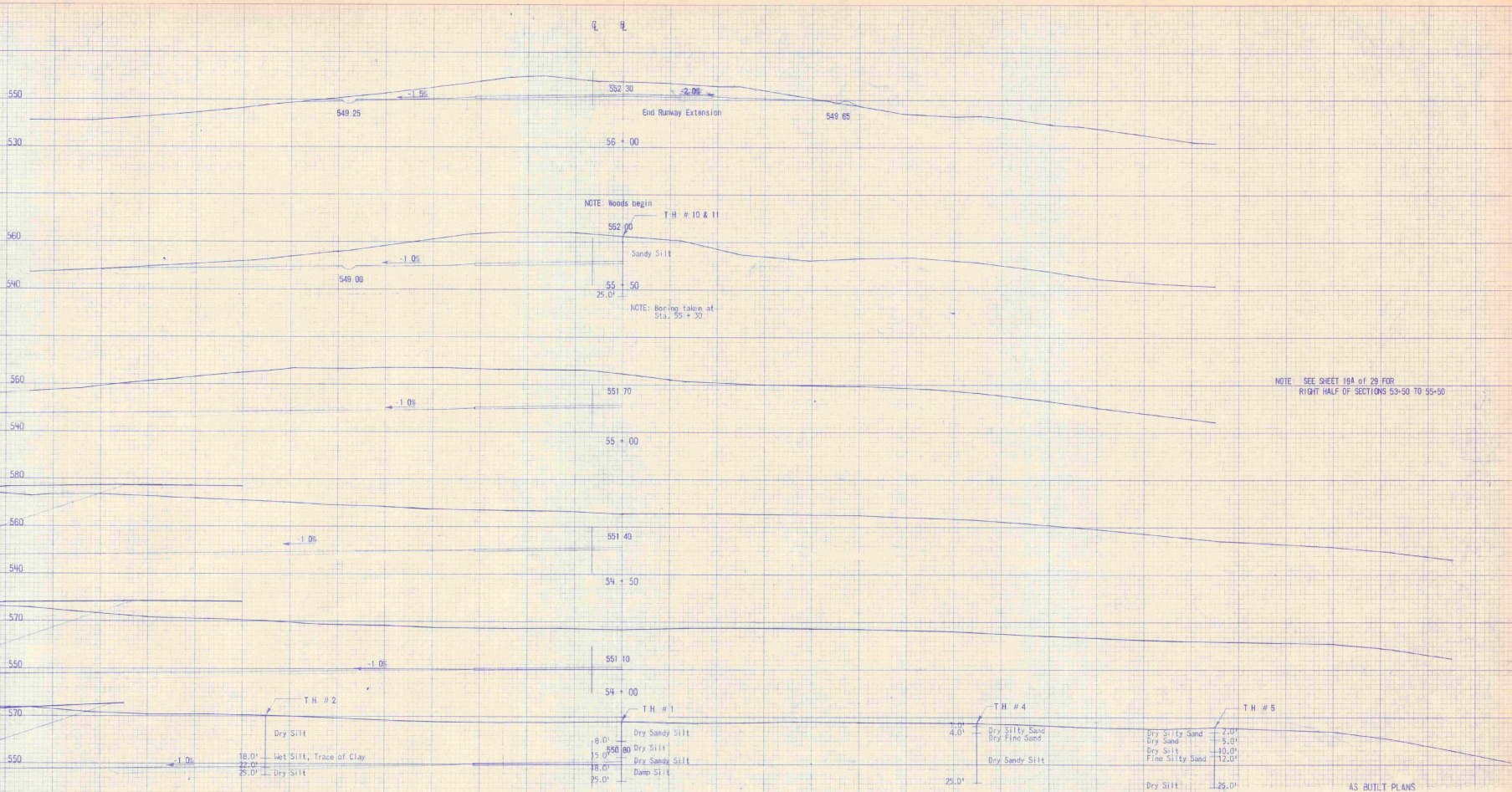
AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont
CROSS SECTIONS
Sta. 51+00 - 53+00

DUFRESNE-HENRY
Engineering Corporation
INCORPORATED
100 STATE STREET
SPRINGFIELD, VERMONT



DESIGNED BY: H.E. DUFFRENE
CHECKED BY: H.E. DUFFRENE
DATE: 7-18-58
SCALE: 1" = 20'
SHEET: 18 OF 29
APPROVED: [Signature]



NOTE: SEE SHEET 19A OF 29 FOR RIGHT HALF OF SECTIONS 53+50 TO 55+50

AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont

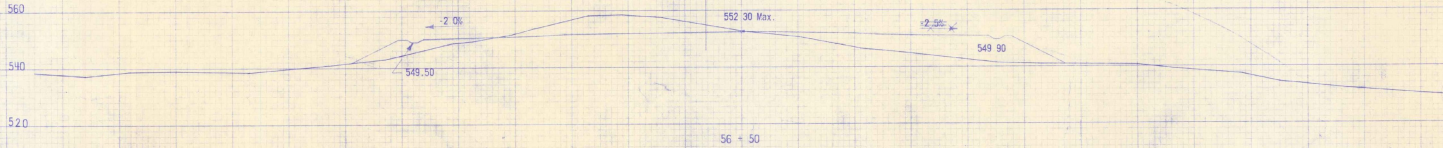
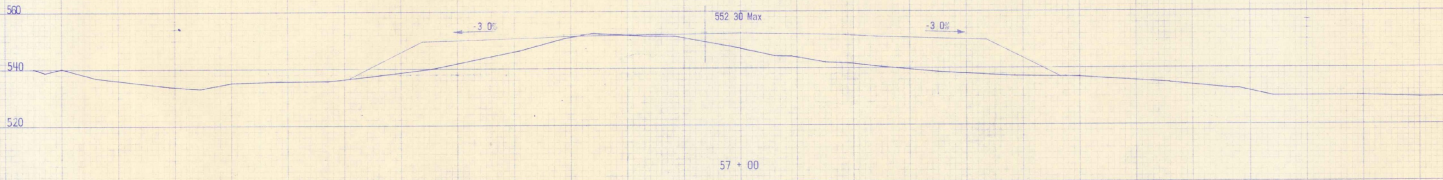
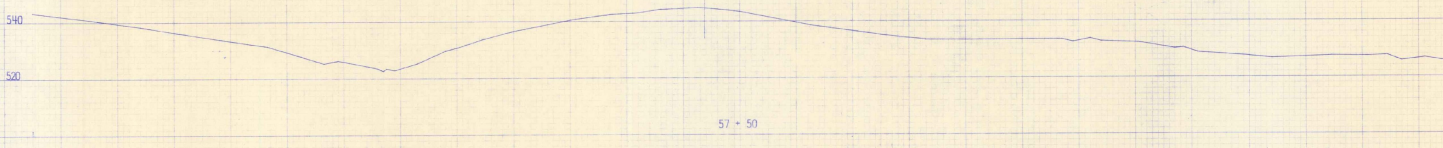
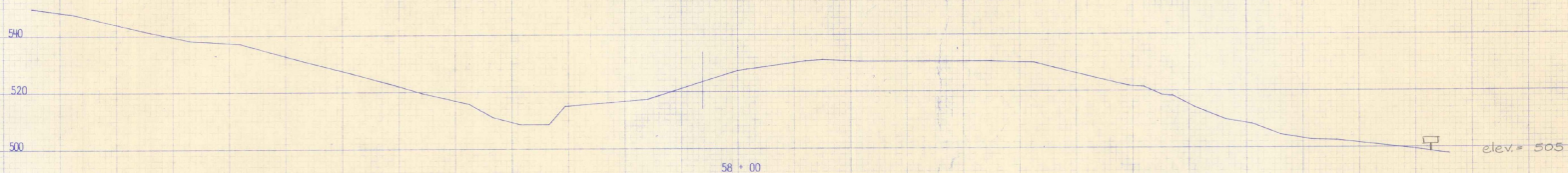
CROSS SECTIONS
 Sta. 53+50 - 56+00

DUPRESNE-HENRY
 Engineering Corporation

REGISTERED PROFESSIONAL
 CIVIL & SANITARY ENGINEERS
 VERMONT STATE NO. 1216

DESIGNED BY	TH 1222/15	DESIGN ENGINEER	R. J. O'LEARY
SURVEY CHECK	PA 7/1/58	SCALE	1" = 20'
PLOTTED BY	GH 7/1/58	SHEET	19 OF 29
TRACED BY	WB 7/18/68	DATE	December 1968
CHECKED BY	RL 1/31/78	APPROVED	<i>[Signature]</i>

STATE OF VERMONT
 PROFESSIONAL ENGINEER
 No. 1216



AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTIONS
 Sta. 56+50 - 58+00

DUFRESNE-HENRY
 Engineering Corporation

REGISTERED PROFESSIONAL ENGINEER
 CIVIL & SURVEYING ENGINEER
 DESIGN ENGINEER: N. J. DUFRESNE

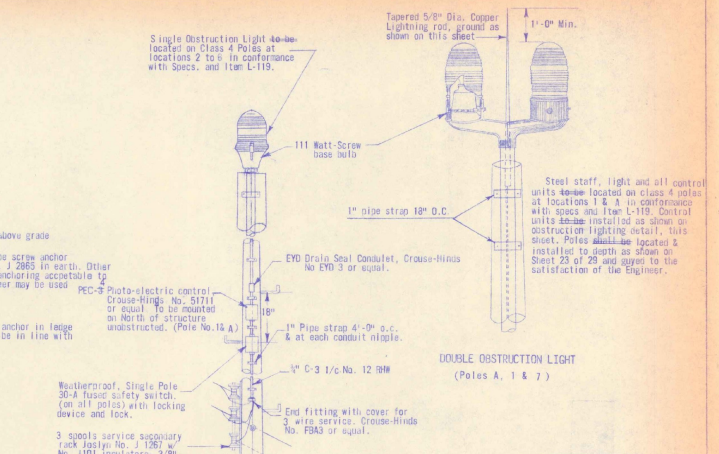
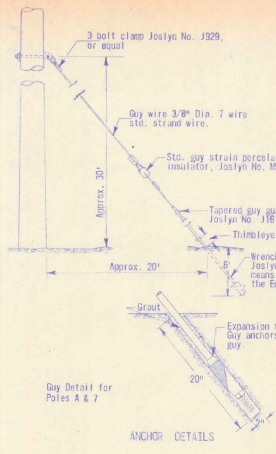
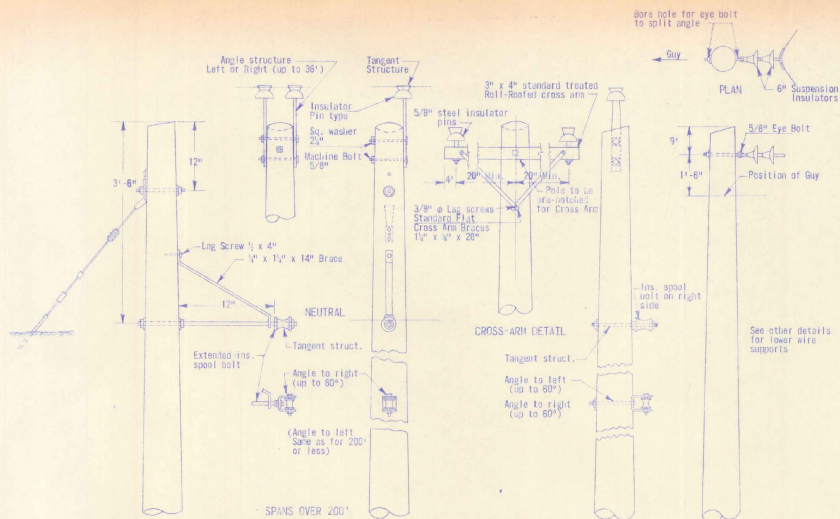
DATE: 11/15/88
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]

DATE: 11/15/88
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]

DATE: 11/16/88
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]

SCALE: 1" = 20'
 SHEET: 20 OF 29
 DATE: December 1988

STATE OF VERMONT
 PROFESSIONAL ENGINEER
 No. 0234



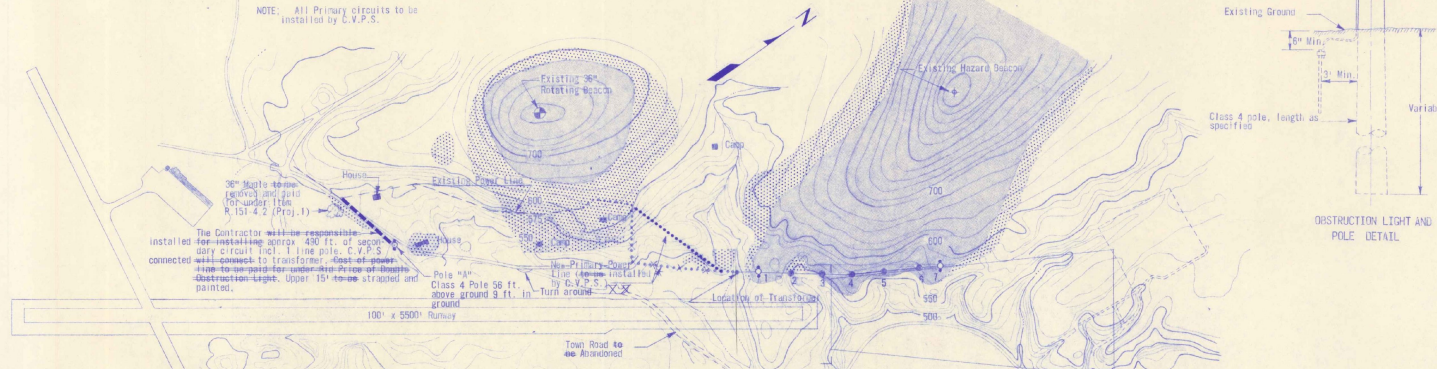
TYPICAL POWER POLES (Class 4)
For Detail of Obstruction Light Poles See Right Side of This Sheet

SPANS OVER 200'

SPANS 200' or Less

POLE FOR 36° to 60° Change in Direction

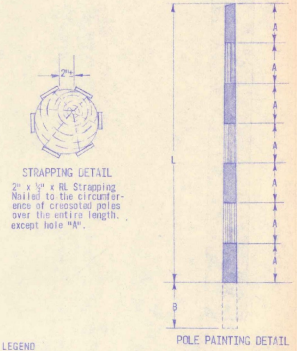
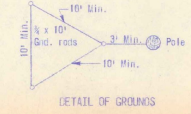
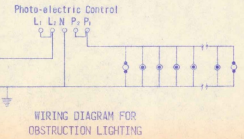
NOTE: All Primary circuits to be installed by C.V.P.S.



LAYOUT SHOWING AREAS OF OBSTRUCTIONS AND LOCATIONS OF OBSTRUCTION LIGHTS
Scale: 1" = 400'

- LEGEND:
- Areas of Ground Extending Above Limitations of part 77
 - Areas Having Trees and/or Buildings Extending Above Limitations of part 77
 - Double Obstruction Light
 - Single Obstruction Light

NOTE: For Ground Obstruction Limitations, see sheets 24 thru 29.



LEGEND

- A = 1/7 L (L=Length of Strapped Portion of Pole) (4 Straps At Least 2'-0")
- White (TP - 102)
- International Orange (TP - 95A)

NOTE:

For dimensions "L" and "B" See Sheet 23 of 29

General notes:

Vertical Strapping shall be 2" x 1/2" x 1/2" Finished Lumber.

All obstruction lights shown on sheet 23 of 29 shall be provided with all necessary appurtenant equipment in accordance with details on this sheet and the specifications.

AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont

OBSTRUCTION LIGHTING
and
POWER POLE DETAILS

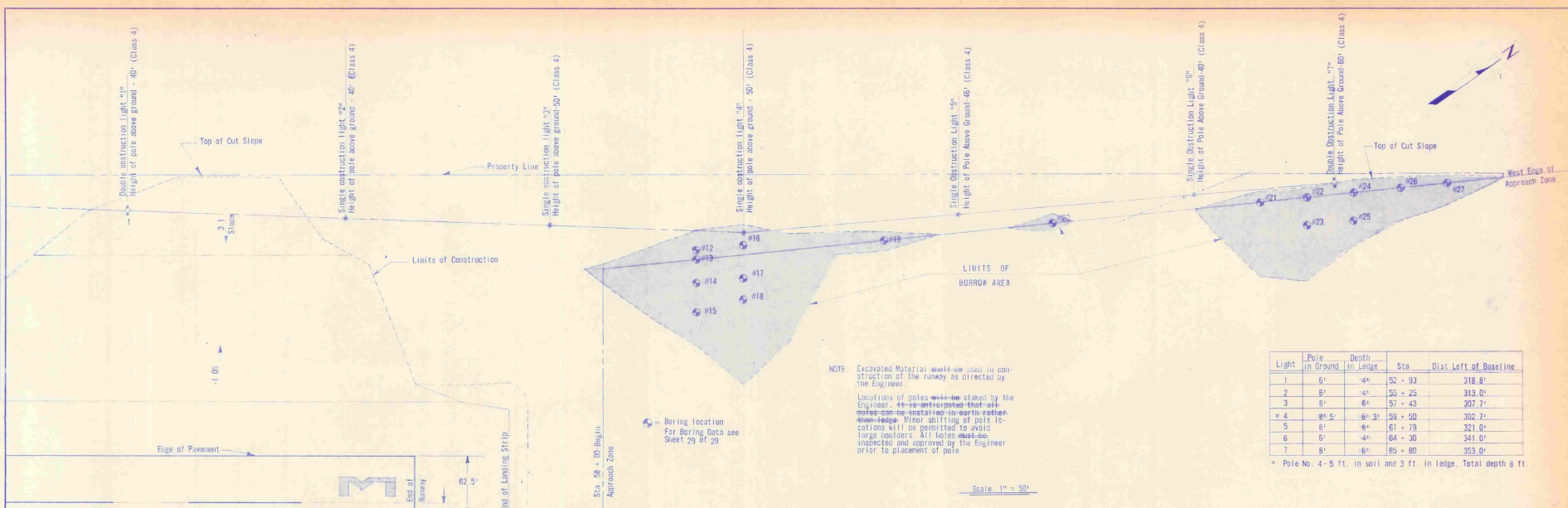
DUFRESNE-HENRY
Engineering Corporation
INCORPORATED
100 W. MOUNTAIN ST.
MONTPELIER, VERMONT

DATE: 10-1-58
DRAWING NO: 58-1249-22
DESIGNER: H. J. Dufresne
CHECKED BY: W. B. (P-B-88) Sheet 23 of 29
TRACED BY: W. B. (P-B-88) DATE: December 1958
CHECKED BY: G. L. (P-B-88) DATE: December 1958

STATE OF VERMONT
REGISTERED PROFESSIONAL ENGINEER
No. 676

PLAN
 DRAWN BY: []
 CHECKED BY: []
 DATE: []

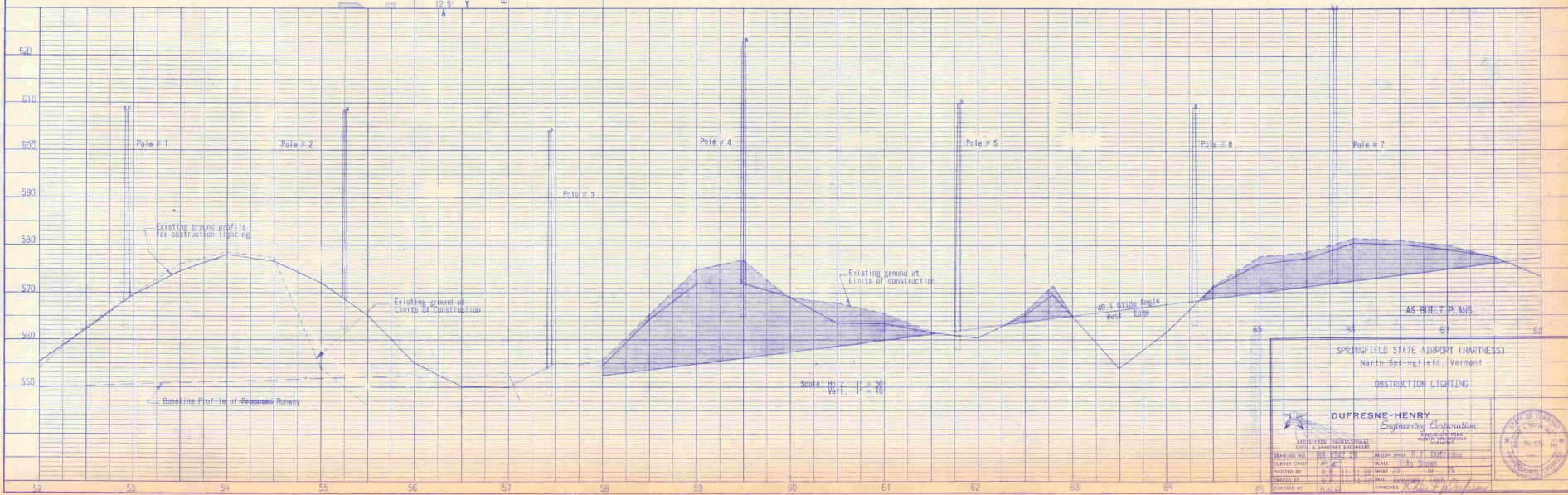
PROFILE
 DRAWN BY: []
 CHECKED BY: []
 DATE: []



NOTE: Excavated material shall be used in construction of the runway as directed by the Engineer.
 Locations of poles shall be staked by the Engineer. Where unobstructed, that pole may be installed in earth rather than ledge. Minor shifting of pole locations will be permitted to avoid large boulders. All poles shall be inspected and approved by the Engineer prior to placement of pole.

Light	Pole in Ground	Depth in Ledge	Sta.	Dist. Left of Baseline
1	9'	4"	52 + 93	318.0'
2	8'	4"	55 + 25	318.0'
3	9'	6"	57 + 43	307.2'
4	8'-5"	6'-3"	59 + 50	302.2'
5	8'	6"	61 + 79	321.0'
6	8'	4"	64 + 30	341.0'
7	8'	6"	65 + 80	353.0'

* Pole No. 4 - 5 ft. in soil and 3 ft. in ledge. Total depth 8 ft.



Scale: Horiz. 1" = 50'
 Vert. 1" = 10'

AS-BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont

OBSTRUCTION LIGHTING

DUPRESNE-HENRY
 Engineering Corporation

REGISTERED PROFESSIONAL ENGINEERS
 CIVIL & SANITARY ENGINEERS

DESIGNED BY: []
 CHECKED BY: []
 DATE: []

APPROVED BY: []
 DATE: []

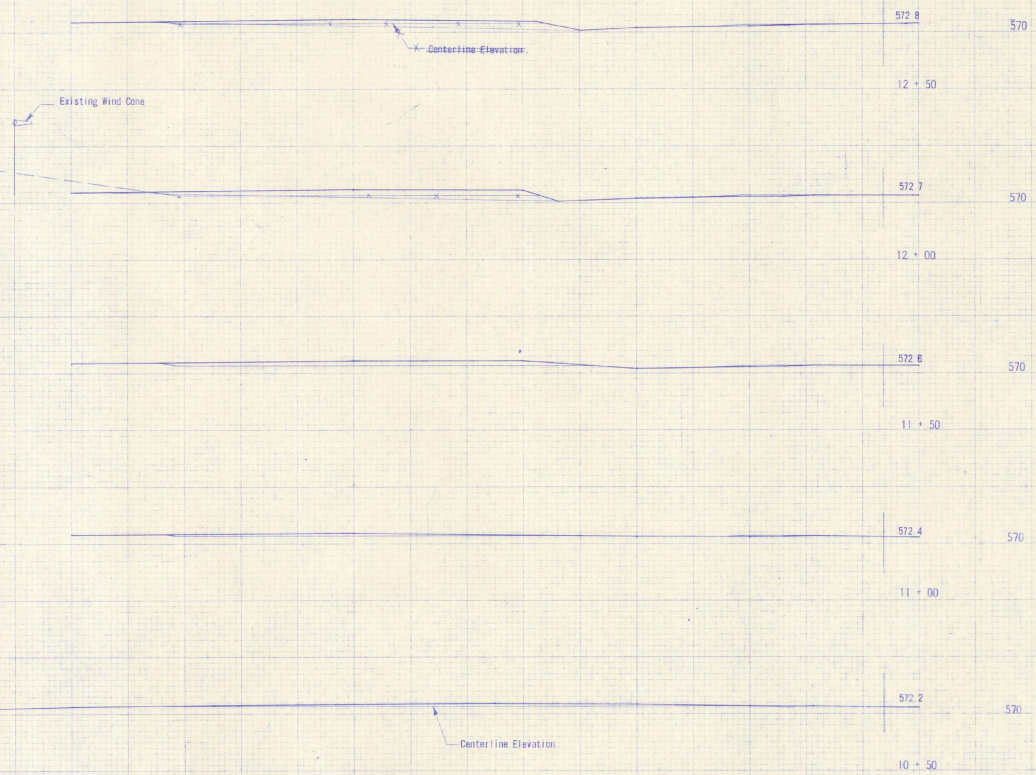
SCALE: AS SHOWN

PROJECT NO. []

CHECKED BY: []

APPROVED BY: []

E B



E B

AS BUILT PLANS

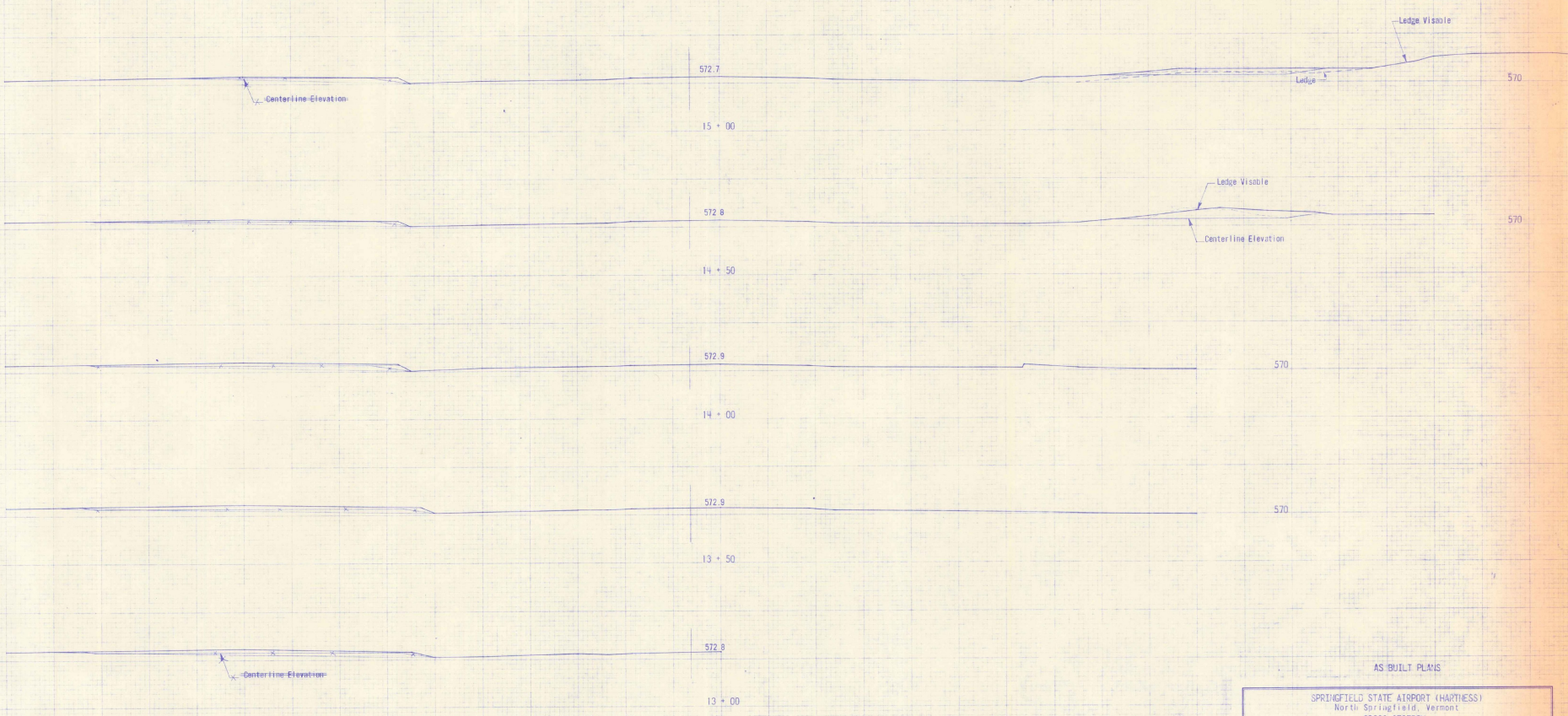
SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont
CROSS SECTION
GROUND OBSTRUCTION REMOVAL
RUNWAY

DUFRESNE-HENRY
Engineering Corporation
REGISTERED PROFESSIONAL ENGINEERS

DRAWING NO.	DS-1262-24	DESIGNER	R. J. DUFFESIRE
SURVEY DATE	11-5-58	SCALE	1" = 20'
PLACED BY	H. S. 8-22-58	SHEET	24 OF 28
CHECKED BY	H. S. 8-24-58	DATE	10/20/58
DATE	11-8-58	APPROVED	<i>[Signature]</i>

STATE OF VERMONT
REGISTERED PROFESSIONAL ENGINEER
No. 676

C B



AS BUILT PLANS

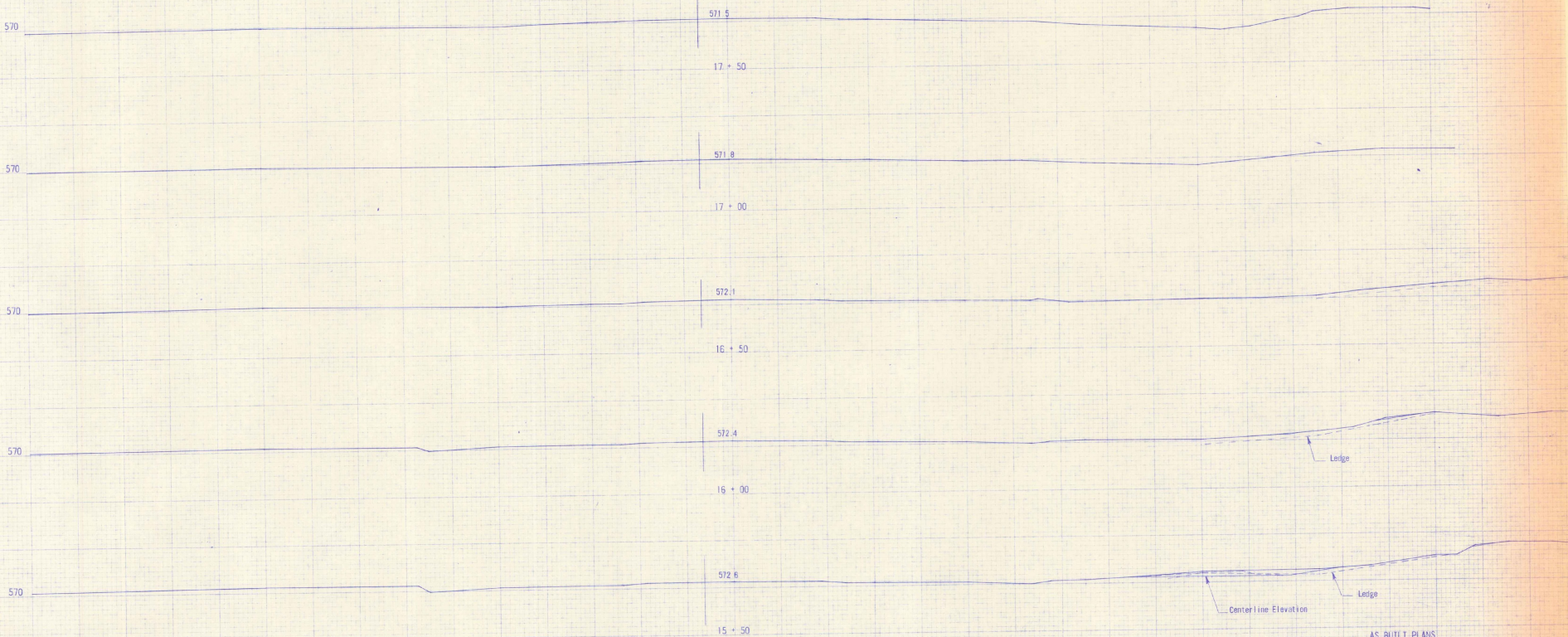
SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTION
 GROUND OBSTRUCTION REMOVAL
 RUNWAY

DUFRESNE-HENRY
 Engineering Corporation
 INCORPORATED
 CIVIL & SANITARY ENGINEERS

DRAWING NO.	FD-1247-25	DESIGN ENGR.	R. J. DUFRESNE
CHECKED BY	P. E. B. 15-88	SCALE	1" = 20'
DESIGNED BY	W. R. B. 22-88	SHEET	25 OF 28
TRACED BY	W. R. B. 24-88	DATE	December, 1989
CHECKED BY	W. R. B. 25-88	APPROVED	<i>[Signature]</i>

STATE OF VERMONT
 PROFESSIONAL ENGINEER
 No. 827

CE



AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTION
 GROUND CONSTRUCTION REMOVAL
 RUNWAY

DUFRESNE-HENRY
 Engineering Corporation
 REGISTERED PROFESSIONAL ENGINEERS
 CIVIL & SURVEY ENGINEERS

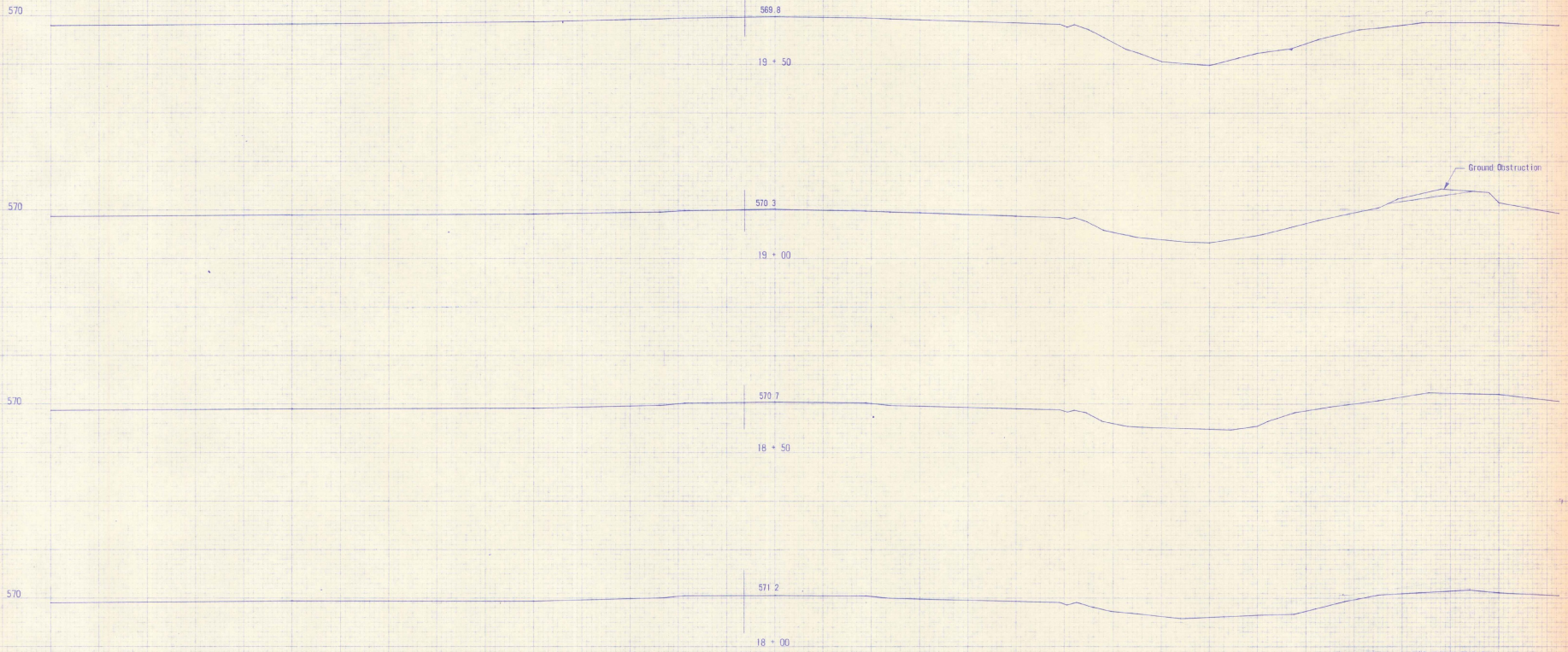
DESIGNER: R. J. DUFRESNE
 CHECKED BY: R. J. DUFRESNE
 DATE: 12-23-88

DRAWING NO.	BB 1222 28	DESIGN ENGINEER	R. J. DUFRESNE
SURVEY CODE	H. E. 88-15-88	SCALE	1" = 20'
PROJECT BY	H. D. 18-22-88	SHEET	26 OF 28
TRACED BY	H. D. 18-24-88	DATE	December, 1988
CHECKED BY	H. D. 18-23-88	APPROVED	<i>R. J. Dufresne</i>

STATE OF VERMONT
 PROFESSIONAL ENGINEER

CE

C B



AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
North Springfield, Vermont

CROSS SECTION
GROUND OBSTRUCTION REMOVAL
RUNWAY

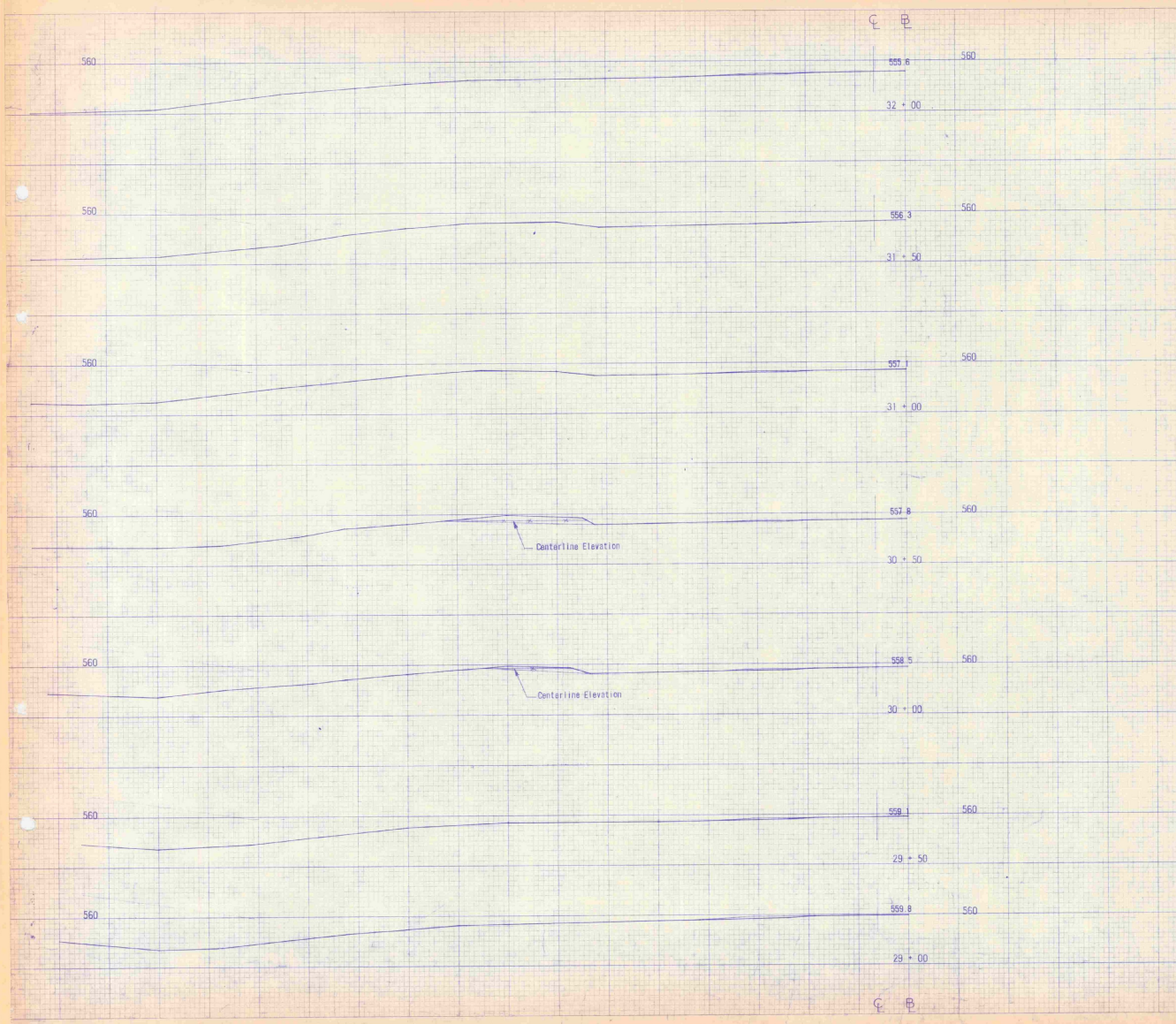
DUPRESNE-HENRY
Engineering Corporation

REGISTERED PROFESSIONAL
CIVIL & SANITARY ENGINEERS
VERMONT STATE BOARD OF ENGINEERS

DRAWING NO. 186-1282-01 DESIGN ENGINE E. J. McLeskey
 SURVEY CHIEF P. E. B. B. 10-58 SCALE 1" = 20'
 PLOTTED BY H. R. B. 22-58 SHEET 21 OF 29
 CHECKED BY H. K. B. 23-58 DATE September 1958
 APPROVED *[Signature]*

VERMONT STATE BOARD OF ENGINEERS
REGISTERED PROFESSIONAL ENGINEERS

C B



EARTHWORK SHEET

VC	% GRADE	STATION	GRADES			CORR V.C.	DIST	TOTAL EXCAVATION		MUCK EXCAVATION		EMBANKMENT		BASE	
			ELEVATION ON TANGENT	ELEVATION ON CURVES				AREA	CU YDS	AREA	CU YDS	AREA	CU YDS	AREA	CU YDS
		41	543.30	546.11	-2.81	50									
	+50	543.60	545.95	-2.35	50										
		42	543.90	545.84	-1.94	50				0		2415			
	+50	544.20	545.78	-1.58	50					2609		4744			
		43	544.50	545.74	-1.24	50					2515	4585			
	+50	544.80	545.75	-0.95	50						2437	4389			
		44	545.10	545.80	-0.70	50					2303	4036			
	+50	545.40	545.88	-0.48	50						2056	3545			
		45	545.70	546.01	-0.31	50					1773	3056			
	+50	546.00	546.17	-0.17	50						1527	2682			
		46	546.30	546.38	-0.08	50					1370				
	+25					25			0			2733			
	+50	546.60	546.62	-0.02	25				80	28	1611				
		47	546.90		0	50			117	194	2806	3805			
	+50	547.20			50				492	565	6098				
		48	547.50			50			698	1103	9378	8322			
	+50	547.80			50				798	1386	5693	9908			
		49	548.10			50			1018	1682	6667	11074			
	+50	548.40			50				1267	2116	6722	12026			
		50	548.70			50			148	1310	5572	11383			
	+50	548.00			50				452	555	5886	10608			
		51	548.30			50		0		418	9776				
	+50	548.60			50		176	163			2520	6860			
		52	548.90			50		2960	2904		119	2445			
	+50	550.20			50		7338	9536			0	110			
		53	550.50			50		10851	18887						
	+50	550.80			50		11369	20668							
		54	551.10			50		10929	20647						
	+50	551.40			50		9464	18882							
		55	551.70			50		5688	14011						
	+50	552.00			50		2390	7462			0	19			
		56	552.30			50		1079	3212			21	19		
	+50	552.30			50		340	1314			736	701			
		57	552.30			50		0	315		1747	2296			
	+35				35						0	1133			

HARTNESS EARTHWORK SUMMARY

Total Earth & Rock	(A) 122,306 c.y.
Total Rock	766 c.y.
Total Earth	121,540 c.y.
Planimeted Fill	128,653 c.y.
Less Factored Rock (1.5)	149 c.y.
Net Plan Fill	127,504 c.y.
Fact. = 1.25	x 1.25
Factored Fill	159,380 c.y.
Less Avail. Fill	121,540 c.y.
Require	(B) 37,840 c.y.

NOTE

(A) A summary of 6156 c.y. of Earth & Rock for the first 4000' has been added to this figure of which 687 c.y. is Rock.

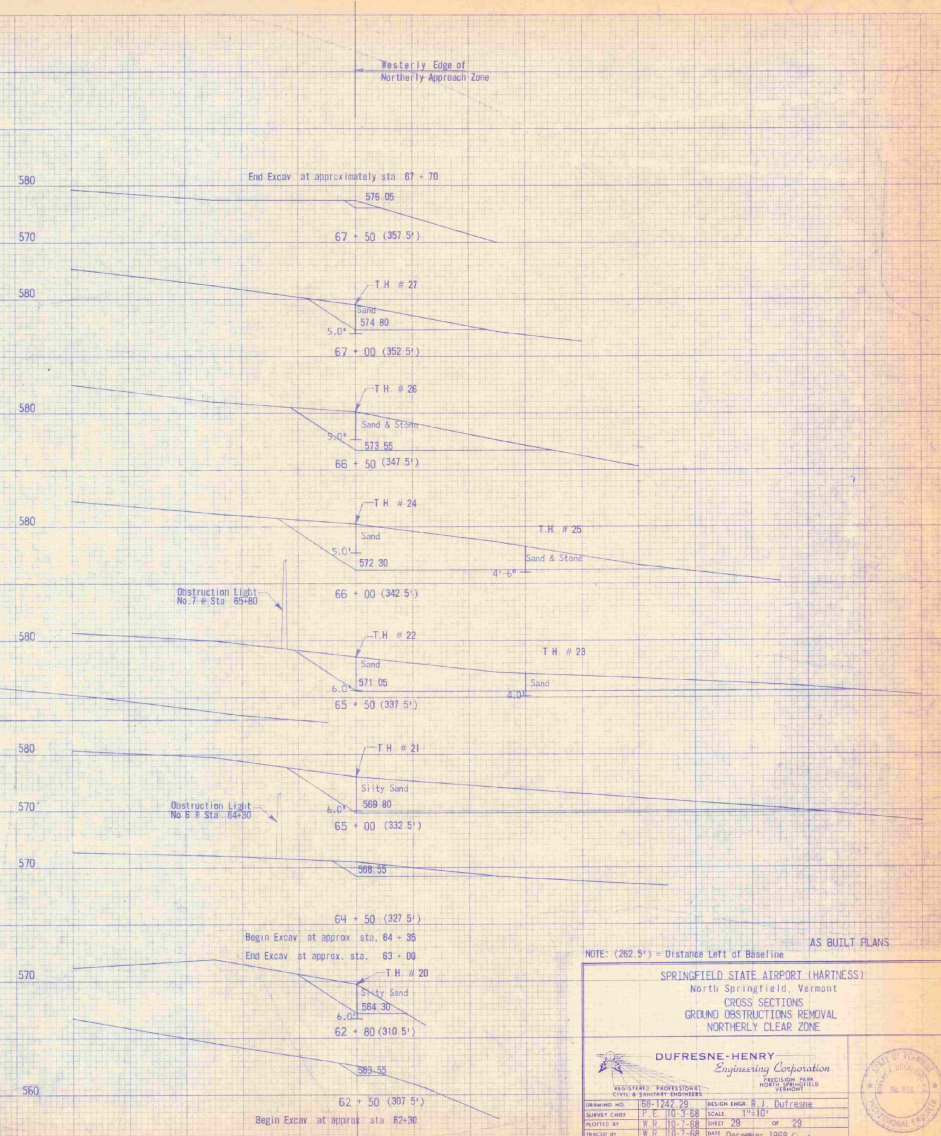
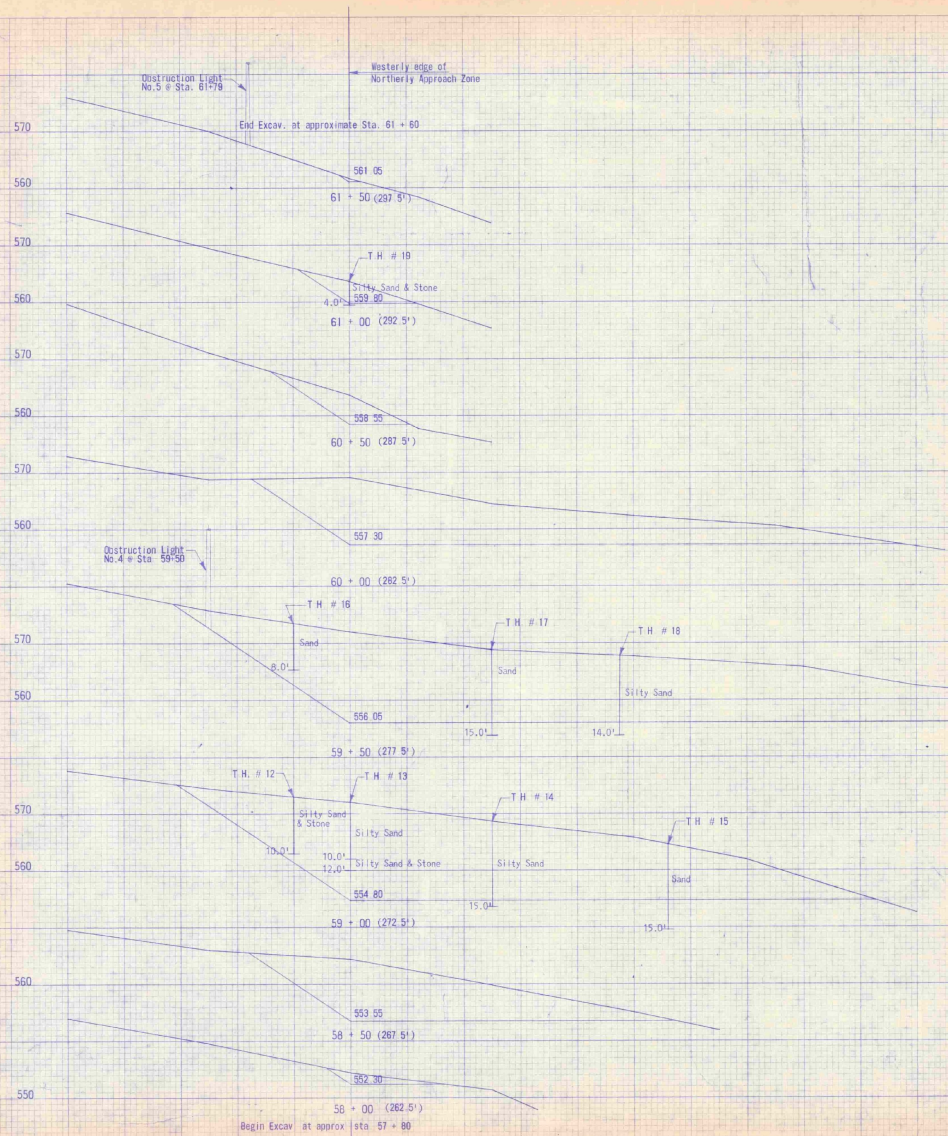
(B) Total Ballon used was 48,307 b.y. A variation of 10.87 c.y. due to loss from washouts caused by rain.

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTION
 GROUND OBSTRUCTION REMOVAL
 RUNWAY & EARTHWORKS

DUFRESNE-HENRY
 Engineering Corporation
 CIVIL & LANDSCAPE ARCHITECTS

DRAWING NO. 66-1242-28 DESIGN ENGINEER R.J. Dufresne
 CHECKED BY W.R. 10-15-68 SCALE 1" = 20'
 PLOTTED BY W.R. 10-22-68 SHEET 28 OF 29
 MADE BY H.R. 10-24-68 DATE Dec. 1963
 CHECKED BY H.R. 11-23-68 APPROVED

Earthworks Revised 10-7-69 G.D.



NOTE: (262.5') = Distance Left of Baseline

AS BUILT PLANS

SPRINGFIELD STATE AIRPORT (HARTNESS)
 North Springfield, Vermont
 CROSS SECTIONS
 GROUND OBSTRUCTIONS REMOVAL
 NORTHERLY CLEAR ZONE

DUFRESNE-HENRY
 Engineering Corporation
 REGISTERED PROFESSIONAL
 CIVIL & SANITARY ENGINEERS

DESIGN ENGINEER: J. Dufresne
 SURVEY CHIEF: P. E. 110-3-88
 SCALE: 1"=10'
 DRAWN BY: P. E. 110-3-88
 SHEET: 20
 OF: 29
 CHECKED BY: R. B. 110-7-88
 DATE: 11/10/88

APPROVED: [Signature]

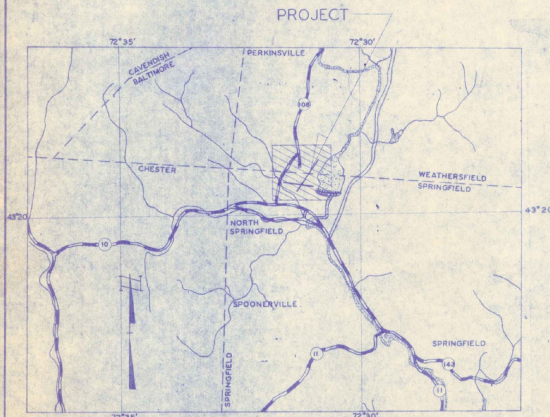
GEOGRAPHIC LOCATION
 LATITUDE 43°20'29"
 LONGITUDE 72°31'18"
 AIRPORT ELEVATION
 575' M.S.L. DATUM
 AIRLINE DISTANCE FROM
 TOWN OF SPRINGFIELD=3.75 MI. NW
 ROAD DISTANCE FROM SPRINGFIELD
 POST OFFICE TO AIRPORT = 5.8 MI.

PLANS FOR EXPANSION OF EXISTING TERMINAL APRON HARTNESS MUNICIPAL AIRPORT

TOWN OF SPRINGFIELD, VERMONT

F.A.A.P. PROJ. NO. 9-43-004-C805

INDEX OF SHEETS	
SHEET	TITLE
1	TITLE PAGE
2	PLAN OF CONSTRUCTION & DETAILS
3	APPENDICES

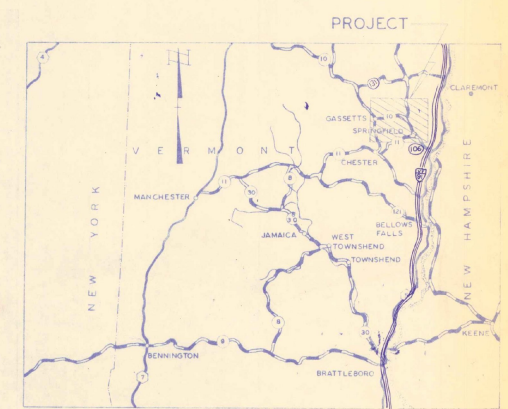


LOCATION MAP



QUANTITIES OF MAJOR ITEMS			
ITEM	DESCRIPTION	UNIT	EST. QUANT./FINAL QUANT.
1	COMMON EXCAVATION	C.Y.	1300 / 1225
2	FINISHED COARSE AGGREGATE	C.Y.	750 / 725
3	BITT. PRIME DIRT	CY	1000 / 950
4	BITT. SURFACE COURSE CLASS 100	TONS	800 / 845
5	10% ASBESTOS-BONDED A.C.C.W.C.P.	A.F.	118 / 118
6	15% ASBESTOS-BONDED A.C.C.W.C.P.	A.F.	328 / 328
7	24% ASBESTOS-BONDED A.C.C.W.C.P.	A.F.	404 / 404
8	BRICK INLET	EA.	4 / 4
9	TYPING	2156	6.2 / 6.2
10	REWORKING	2008	0.2 / 0.2
11	UNDERGROUND ELECTRIC DUCT-400V RAY	L.F.	200 / 200
12	CAUSE TRENCH	L.F.	235 / 235
13	NO. 10 UNDERGROUND CABLE 3000V-IN TRNCH	L.F.	300 / 300
14	NO. 20 UNDERGROUND CABLE 3000V-IN TRNCH	L.F.	340 / 340
15	NO. 12 UNDERGROUND CABLE 600V-IN TRNCH	L.F.	405 / 427
16	NO. 12 UNDERGROUND CABLE 600V-IN EXCT	L.F.	324 / 324
17	NO. 2 UNDERGROUND CABLE 600V-IN EXCT	L.F.	125 / 125

AS BUILT PLANS
 I HEREBY CERTIFY THAT ALL CONSTRUCTION
 REQUIRED BY THIS SET OF DRAWINGS HAS BEEN
 ACCOMPLISHED AS INDICATED HEREIN.
 DUFRESNE-HENRY ENGR. CORP.
 PROJECT ENGINEER
 DATE 11/19/67



VICINITY MAP



DATE	REVISION DESCRIPTION	BY

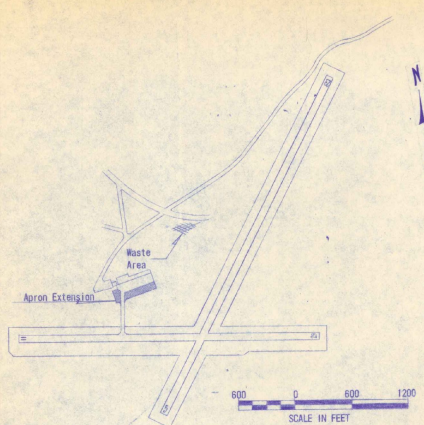
FEDERAL AVIATION ADMINISTRATION
 APPROVED DATE DISTAIPORT ENGR.

VERMONT AERONAUTICS BOARD
 APPROVED DATE COMMISSIONER
 APPROVED DATE ENGINEER

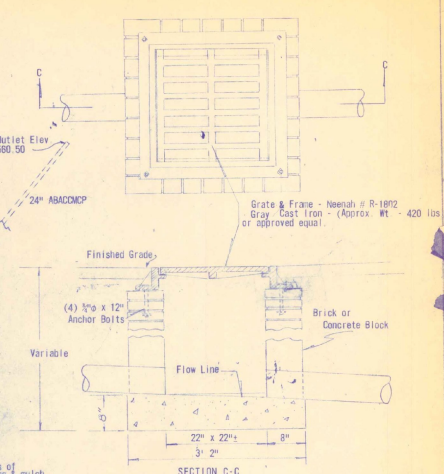
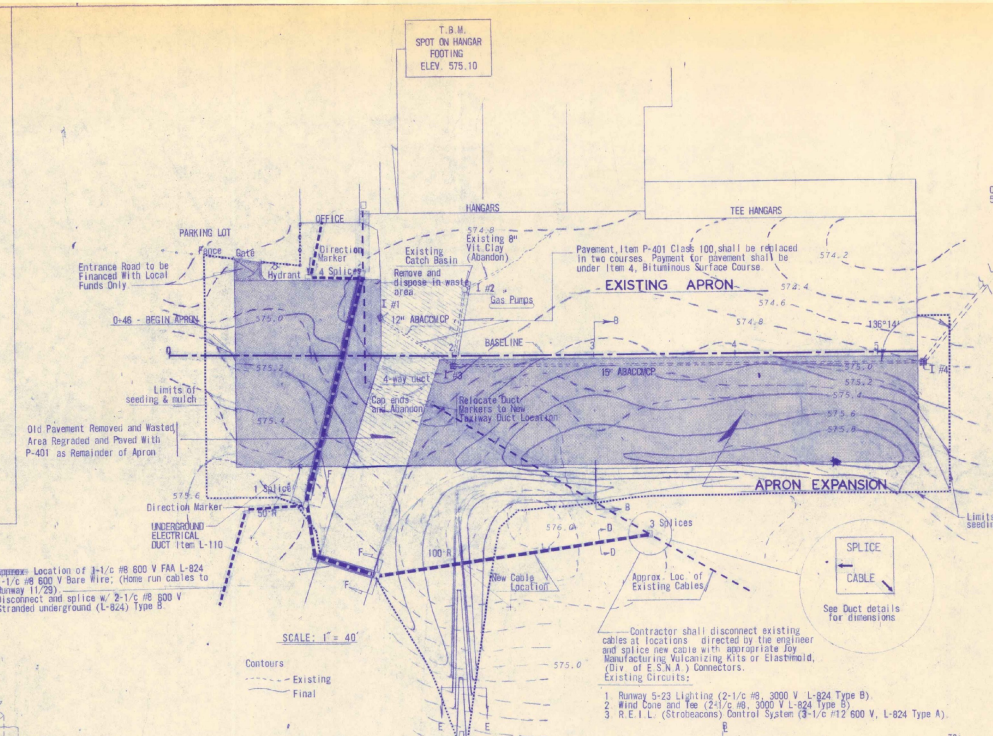
SPRINGFIELD VERMONT
 APPROVED DATE CHAIRMAN, BOARD OF SELECTMEN

HARTNESS MUNICIPAL AIRPORT
 NORTH SPRINGFIELD, VERMONT
 TITLE PAGE

DUFRESNE-HENRY Engineering Corporation
 REGISTERED PROFESSIONAL ENGINEER
 DATE 11-16-1967
 SCALE AS SHOWN SHEET 1 OF 4
 APPROVED Robert J. Dufresne



GENERAL LAYOUT SHOWING SCOPE OF PROJECT

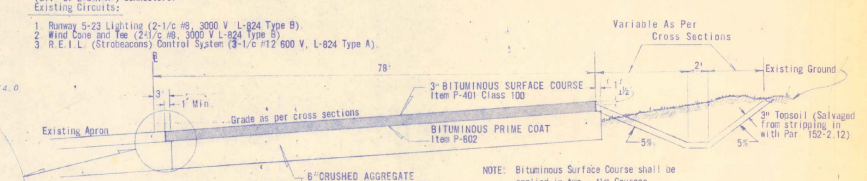


SECTION C-C
BRICK INLET
Not To Scale

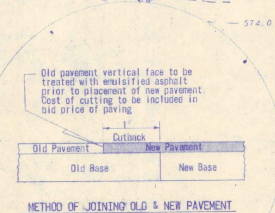
DRAINAGE SCHEDULE

I. No.	Inv. El.*	Grate El.	Dist. To	I. No.-At	(Grade)	Pipe (ABACOMP)
1	570.51	574.60	64'	to 3	1.25%	12"
2	570.39	574.40	54'	to 3	1.25%	12"
3	568.71	574.50	328'	to 4	0.510%	15"
4	568.06	575.00	404'	to out.	1.871%	24"

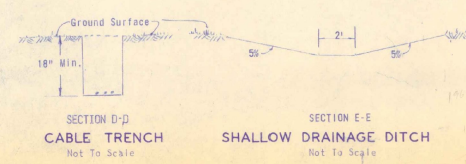
* Center of D.I. - Construct flow line to match pipe gradient



SECTION B-B
APRON TYPICAL
Scale: 1" = 10'-0" Horiz.
1" = 1'-0" Vert.

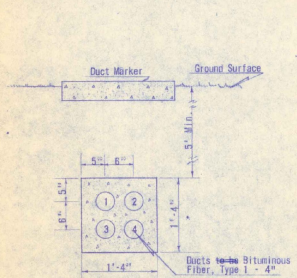


METHOD OF JOINING OLD & NEW PAVEMENT

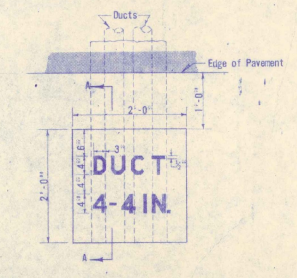


SECTION D-D
CABLE TRENCH
Not To Scale

SECTION E-E
SHALLOW DRAINAGE DITCH
Not To Scale



SECTION Y-F
UNDERGROUND ELECTRICAL DUCT
Scale: 1" = 1'-0"



SECTION A-A
UNDERGROUND ELECTRICAL DUCT MARKER
Scale: 1" = 1'-0"

NOTE:
One end of Duct to be three inches (3") lower than the other end for drainage.
Duct No. 1 shall contain cables to Runway 5-23 and to Wind Tee.
Duct No. 2 shall contain cables to Runway 11-29 (long duct only) and REIL control circuit.
Pull Wires shall be left in Ducts 3 and 4.
Tel. Cable installed in Duct 3 during construction.

2 Duct markers & 1 Direction marker required, cost of these 3 markers is to be included in bid price per lin. ft. of UNDERGROUND ELECTRICAL DUCT

AS BUILT PLANS
I HEREBY CERTIFY THAT ALL CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.
DUFRESNE-HENRY ENGR. CORP.
BY: *[Signature]* PROJECT ENGINEER
DATE: *[Date]*

HARTNESS MUNICIPAL AIRPORT
NORTH SPRINGFIELD, VERMONT
SCOPE OF WORK - DETAILS - TYPICAL SECTIONS

DUFRESNE-HENRY
Engineering Corporation
NEW YORK, NEW HAVEN, BOSTON, CHICAGO, PHOENIX, WASHINGTON, D.C.
DWG. NO. 67-497-2 DRAWN BY: H. CHITSKI DATE: Mar. 16, 1967
SCALE: AS SHOWN SHEET 2 OF 4 CDR. R. J. DUFRESNE
APPROVED: *[Signature]*

GEOGRAPHIC LOCATION
 LATITUDE 43°20' 29"
 LONGITUDE 72°31'18"
 AIRPORT ELEVATION
 575' M.S.L. DATUM
 AIRLINE DISTANCE FROM
 TOWN OF SPRINGFIELD=3.75 MI. NW
 ROAD DISTANCE FROM SPRINGFIELD
 POST OFFICE TO AIRPORT = 5.8 MI.

PLANS FOR EXPANSION OF EXISTING TERMINAL APRON HARTNESS MUNICIPAL AIRPORT

TOWN OF SPRINGFIELD, VERMONT

F.A.A.P. PROJ. NO. 9-43-004-0005

INDEX OF SHEETS	
SHEET	TITLE PAGE
1	TITLE PAGE
2, 3	INDEX OF SHEETS
4, 5	INDEX OF SHEETS

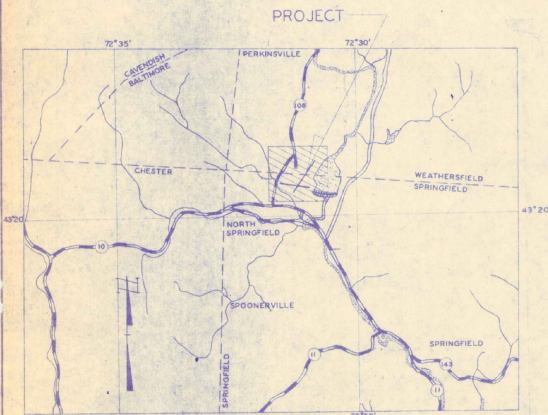
QUANTITIES OF MAJOR ITEMS			
ITEM	DESCRIPTION	UNIT	EST. QUANT. / FINAL QUANT.
1	COMMON EXCAVATION	C.Y.	1200 / 1200
2	CONCRETE CURB, ACCURATE	L.F.	750 / 750
3	GRIP - 1/2" W.C.P.	SAL.	5000 / 5000
4	1/2" SURFACE COURSE CLASS 100	TONS	550 / 550
5	1/2" SUBGRADE	CY	120 / 120
6	1/2" ASPHALT-CONCRETE A.C.C.W.C.P.	L.F.	400 / 400
7	1/2" ASPHALT-CONCRETE A.C.C.W.C.P.	L.F.	400 / 400
8	24" ASPHALT-CONCRETE A.C.C.W.C.P.	L.F.	400 / 400
9	BRICK TILE	EA.	0 / 0
10	TYPING	HR.	0 / 0
11	MILCHING	ACR.	0 / 0
12	UNDERGROUND ELECTRIC DUCT-FOUR WAY	L.F.	100 / 100
13	CABLE TRENCH	L.F.	200 / 200
14	NO. 10 UNDERGROUND CABLE 1000V-IN TRENCH	L.F.	250 / 250
15	NO. 10 UNDERGROUND CABLE 1000V-IN TRENCH	L.F.	250 / 250
16	NO. 12 UNDERGROUND CABLE 1000V-IN TRENCH	L.F.	250 / 250
17	NO. 12 UNDERGROUND CABLE 1000V-IN TRENCH	L.F.	250 / 250

AS BUILT PLANS

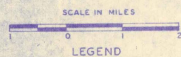
I HEREBY CERTIFY THAT ALL CONSTRUCTION
 REQUIRED BY THIS SET OF DRAWINGS HAS BEEN
 ACCOMPLISHED AS INDICATED HEREIN.

DUFRESNE-HENRY ENGR. CORR.

BY _____ PROJECT ENGINEER
 DATE _____



LOCATION MAP



REVISION		
DATE	DESCRIPTION	BY

FEDERAL AVIATION ADMINISTRATION
 APPROVED _____ DATE _____
 DISTAIRPORT ENGR.

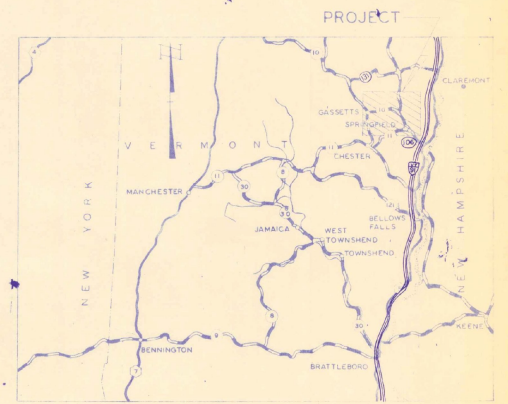
VERMONT AERONAUTICS BOARD
 APPROVED _____ DATE _____
 COMMISSIONER

SPRINGFIELD
 APPROVED _____ DATE _____
 CHAIRMAN, BOARD OF SELECTMEN

HARTNESS MUNICIPAL AIRPORT
 NORTH SPRINGFIELD, VERMONT
 TITLE PAGE

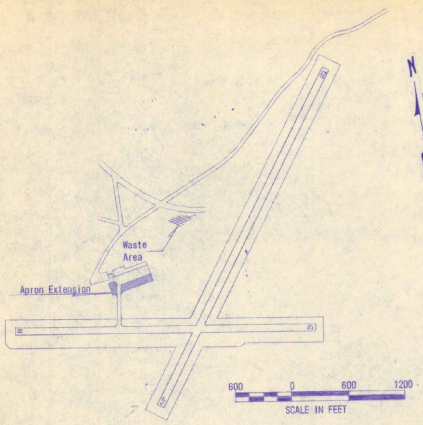
DUFRESNE-HENRY
 Engineering Corporation
 100 W. MAIN ST. SPRINGFIELD, VT. 05156
 PHONE: 87-4871

SCALE: AS SHOWN SHEET NO. 1 OF 1
 DRAWN BY: RACHPARKI
 DATE: JAN. 16, 1967
 CHECKED BY: DUFRESNE
 APPROVED: Robert J. Dufresne

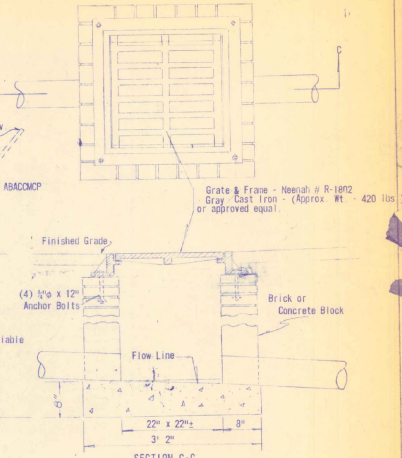
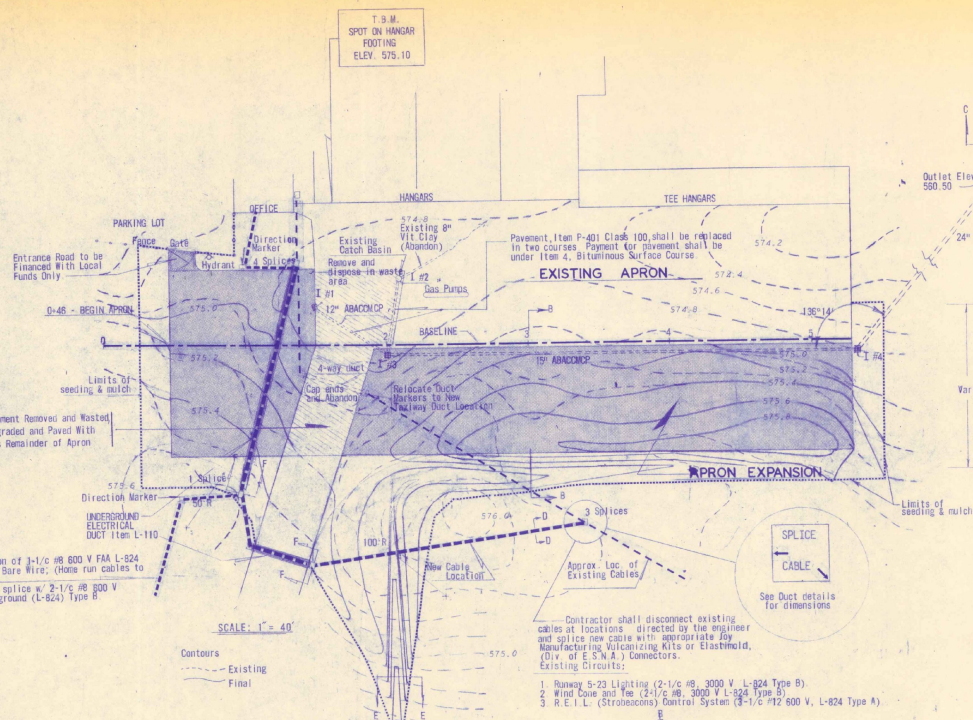


VICINITY MAP

SCALE IN MILES
 NOTE: SYMBOLS SAME AS THOSE WITH LOCATIONS



GENERAL LAYOUT SHOWING SCOPE OF PROJECT

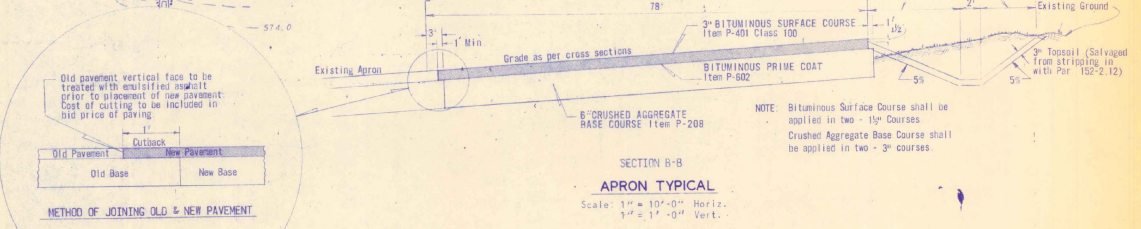


SECTION C-C
BRICK INLET
Not To Scale

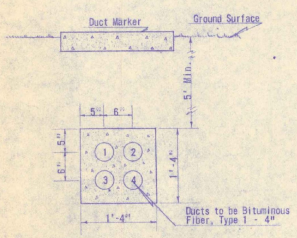
DRAINAGE SCHEDULE

I. No.	Inv. El.*	Grate El.	Dist. To	I. No. - At (Grade)	Pipe (ABAD/CP)
1	570.51	574.60	64'	to 3	1200
2	570.39	574.40	54'	to 3	1200
3	569.77	574.50	328'	to 4	0.800
4	568.06	575.00	404'	to out.	1.875

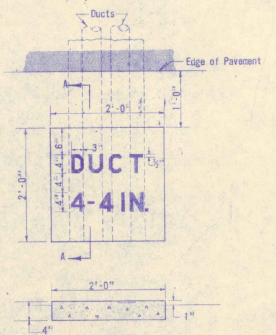
* Center of D. I. - Construct flow line to match pipe gradient



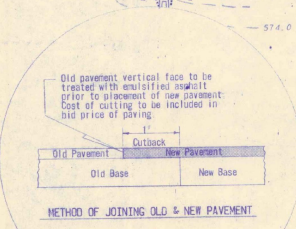
SECTION B-B
APRON TYPICAL
Scale: 1" = 10'-0" Horiz.
1" = 1'-0" Vert.



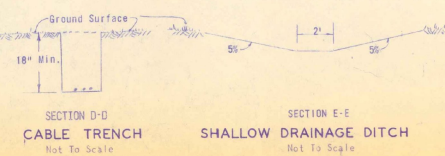
SECTION Y-F
UNDERGROUND ELECTRICAL DUCT
Scale: 1" = 1'-0"



SECTION A-A
UNDERGROUND ELECTRICAL DUCT MARKER
Scale: 1" = 1'-0"



METHOD OF JOINING OLD & NEW PAVEMENT



SECTION D-D
CABLE TRENCH
Not To Scale

SECTION E-E
SHALLOW DRAINAGE DITCH
Not To Scale

NOTE:
One end of Duct to be three inches (3") lower than the other end for drainage.

Duct No. 1 shall contain cables to Runway 5-23 and to Wind Tee.

Duct No. 2 shall contain cables to Runway 11-29 (Along duct only) and RETL control circuit.

Pull Wires shall be left in Ducts 3 and 4.

Tot. Cable installed in Duct 3 during construction.

2 Duct markers & 1 Direction marker required, cost of these 3 markers is to be included in bid price per lin. ft. of UNDERGROUND ELECTRICAL DUCT

AS BUILT PLANS

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

DUPRESNE-HENRY ENGR. CORP.

BY _____ PROJECT ENGINEER

DATE _____

HAGNESS MUNICIPAL AIRPORT
NORTH SPRINGFIELD, VERMONT
SCOPE OF WORK - DETAILS - TYPICAL SECTIONS

DUPRESNE-HENRY
Engineering Corporation
INCORPORATED
1000 WASHINGTON ST.
SPRINGFIELD, VERMONT 05156

ENG. NO. BT-497-2
SCALE: AS SHOWN
DRAWN BY: HATCHETSKY
DATE: MAY 18, 1967
CHECKED BY: J. J. HENRY
DATE: JUNE 1, 1967
APPROVED: _____

**VERMONT AGENCY OF TRANSPORTATION
PLANNING DIVISION**

Vermont Agency of
Transportation
Phase III- Interstate
#090303-01

INITIALS
Hanger 5045

HADNESS
★ 9-43-004-C805 1967
★ 9-43-004-C906 1970