

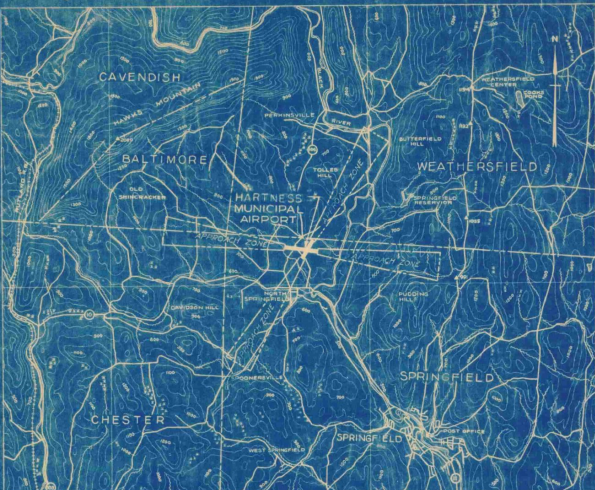
# TOWN OF SPRINGFIELD VERMONT

## INDEX TO CONTRACT DRAWINGS

SHEET NO	TITLE	DATE
1	TITLE SHEET AND LOCATION MAP	AUGUST 30, 1947
2	MASTER PLAN	AUGUST 30, 1947
3	LAYOUT PLAN	AUGUST 30, 1947
4	CLEARING PLAN	AUGUST 30, 1947
5	PAVING, CROSS SECTIONS, TEST PIT DATA, GRADING DISTRIBUTION AND SEEDING PLAN "	AUGUST 30, 1947
6	SSW-NNE LANDING STRIP - PLAN AND PROFILE	AUGUST 30, 1947
7	W-E RUNWAY-PLAN AND PROFILE	AUGUST 30, 1947
8	GRADING AND DRAINAGE PLAN AND DETAILS	AUGUST 30, 1947

INFORMATION DRAWINGS (NOT PART OF THIS CONTRACT)

PLAN TO ACCOMPANY SPONSORS ASSURANCE AGREEMENT	AUGUST 30, 1947
OBSTRUCTION PLAN	AUGUST 30, 1947



Traced from U.S.G.S. Maps

### LOCATION MAP

**LEGEND**

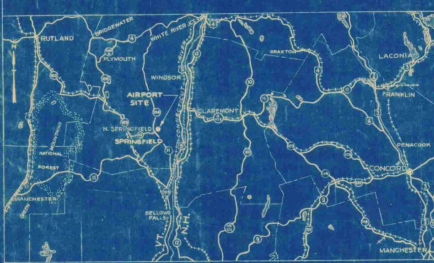
- City or Town Lines
- Approach Roads
- Improved Roads
- Railroads
- C. & G.S. Bench Mark
- Post Office
- Swamp Area
- Brook or Stream
- State Highways
- U.S. Highways

**NOTES**

Latitude 43° 20' 30"  
Longitude 73° 31' 00"  
Datum of 1929  
Elevation 273.8 (highest point in usable landing area)  
Airing distance and direction from Town 3.6 Miles - SW  
Distance by road to Post Office 3.6 Miles

**SCALE IN MILES**

Contour Interval - 100 Feet  
Elevations are based on Mean Sea Level (U.S. Geological Survey)



VICINITY MAP  
SCALE IN MILES

### ESTIMATED QUANTITIES OF MAJOR ITEMS

ITEM	QUANTITY	UNITS
CLEARING	2.9	ACRES
CLEARING AND GRUBBING	2.5	ACRES
TRIMMING SMALLER THAN 2.5'	150	UNITS
TRIMMING LARGER THAN 2.5'	40	UNITS
COMMON EXCAVATION	53,300	CU YDS
SOLID ROCK EXCAVATION	100	CU YDS
BORROW EXCAVATION	500	CU YDS
WATERING (1000 GAL PER UNIT)	130	UNITS
RIPRAP	250	SQ YDS
REINFORCED CONCRETE DRAIN PIPE (24")	380	LIN FT
HEADWALLS	1	UNIT
INLETS	1	UNIT
BITUMINOUS PRIME COAT	7,700	GALS
ALTERNATE A		
MINERAL AGGREGATE FOR BASE COURSE	3,515	TONS
ASPHALT CEMENT FOR BASE COURSE	61,330	GALS
BITUMINOUS SEAL COAT	3,350	GALS
ALTERNATE B		
MIXED IN PLACE BASE COURSE	25,560	SQ YDS
BITUMINOUS MATERIAL FOR BASE COURSE	57,500	GALS
BITUMINOUS SEAL COAT	3,350	GALS
SEAL COAT COVER AGGREGATE	170	TONS
TOPSOIL		
PREPARING GROUND	230	ACRES
TOPSOIL	9,200	CU YDS
SEEDING		
PREPARING GROUND	33.0	ACRES
LIMING & FERTILIZING	33.0	ACRES
SOWING	33.0	ACRES
REPAIRS - TOPSOIL	100	CU YDS
MOWING	33.0	ACRES
REFERTILIZING	33.0	ACRES
RESEEDING	5.0	ACRES
SIGN, SEGMENTED CIRCLE MARKER AND LANDING STRIP INDICATORS	LUMP	SUM
PREPARATION AT SITE, CLEANING UP ETC.	LUMP	SUM
UNDERGROUND ELECTRICAL DUCT		
BANK, CONCRETE ENCASED, TWO-WAY SECTION	212	LIN FT
PAVING EXCAVATION	300	CU YDS

## CONSTRUCTION PLANS FOR

# HARTNESS MUNICIPAL AIRPORT

CLEARING, GRADING, DRAINAGE, TURFING AND PAVING

AUGUST 30, 1947

AS BUILT DRAWINGS  
REFER TO ATTACHED SHEETS TO 4 OF "AS BUILT" DRAWINGS PREPARED BY L.G. BASSO, FEBRUARY 16, 1948 FOR FINAL GRADES AND OTHER AS CONSTRUCTED DETAILS.

ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

CIVIL AERONAUTICS ADMINISTRATION

APPROVED \_\_\_\_\_ DIRECTOR  
DATE \_\_\_\_\_ AIRPORT ENGINEERING SERVICE

APPROVED \_\_\_\_\_ SUPERINTENDENT  
DATE \_\_\_\_\_ AIRPORTS BRANCH

APPROVED \_\_\_\_\_ DISTRICT AIRPORT ENGINEER  
DATE \_\_\_\_\_

VERMONT AERONAUTICS COMMISSION

APPROVED *P. C. Sawyer* CHAIRMAN  
DATE *Sept. 26, 1947*

APPROVED \_\_\_\_\_ DIRECTOR  
DATE \_\_\_\_\_

APPROVED \_\_\_\_\_ ENGINEER  
DATE \_\_\_\_\_

SPRINGFIELD

APPROVED *H. C. Bellings* CHAIRMAN  
DATE *Sept. 23, 1947*  
BOARD OF SELECTMEN

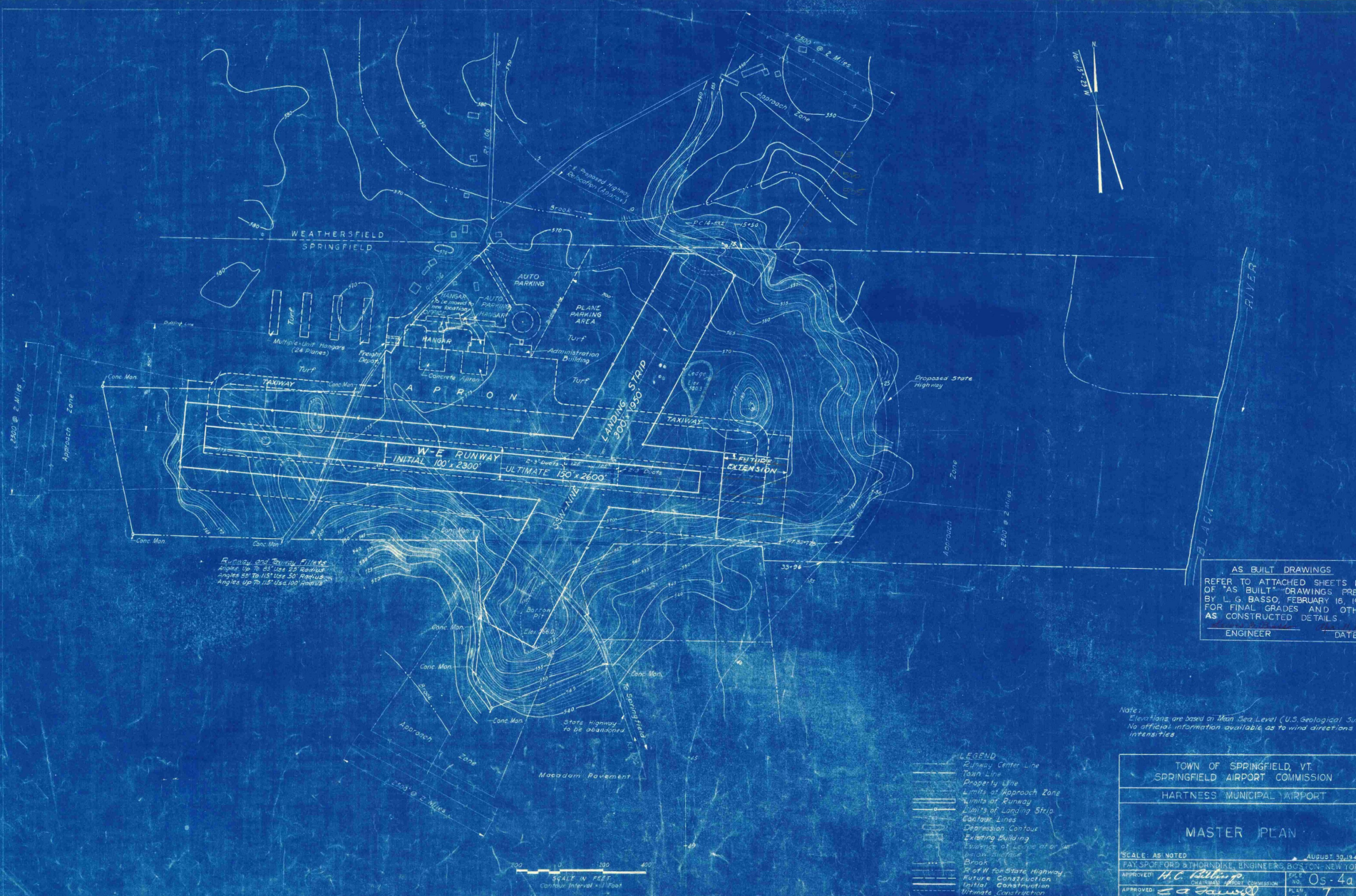
APPROVED *H. C. Bellings* CHAIRMAN AIRPORT COMMISSION  
DATE *Sept. 23, 1947*

PREPARED BY

FAY, SPOFFORD & THORNDIKE, ENGINEERS  
BOSTON - NEW YORK

APPROVED *E. C. Sawwell* PARTNER IN CHARGE  
DATE *SEPT. 16, 1947*

APPROVED *G. J. Smith* AIRPORT ENGINEER  
DATE *Sept. 10, 1947*



Runway and Taxiway Fillets  
 Angles up to 45° over 25' Runway  
 Angles up to 15° over 50' Runway  
 Angles up to 15° over 100' Runway

AS BUILT DRAWINGS  
 REFER TO ATTACHED SHEETS 1 TO 4  
 OF "AS BUILT" DRAWINGS PREPARED  
 BY L. G. BASSO, FEBRUARY 16, 1949  
 FOR FINAL GRADES AND OTHER  
 AS CONSTRUCTED DETAILS

ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

Note:  
 Elevations are based on Mean Sea Level (U.S. Geological Survey)  
 No official information available as to wind directions or  
 intensities

- LEGEND
- Runway Center Line
  - Taxiway Center Line
  - Property Line
  - Limits of Approach Zone
  - Limits of Runway
  - Limits of Landing Strip
  - Contour Lines
  - Depression Contour
  - Existing Building
  - Elevation of Existing Building
  - Proposed Building
  - Proposed Elevation
  - Brook
  - W of W for State Highway
  - Future Construction
  - Initial Construction
  - Ultimate Construction

TOWN OF SPRINGFIELD, VT.  
 SPRINGFIELD AIRPORT COMMISSION

HARTNESS MUNICIPAL AIRPORT

MASTER PLAN

SCALE: AS NOTED AUGUST 30, 1947

FAY SPENCER & THORNDIKE, ENGINEERS, BOSTON-NEW YORK

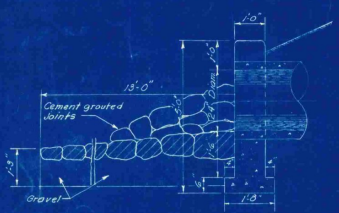
APPROVED: *M. C. [Signature]* PROJECT NO. 05-4a

APPROVED: *[Signature]* PL. NO. 7

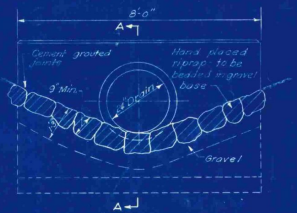
CONTRACT DRAWING SHEET NO. 2 OF 8

100  
 200  
 400

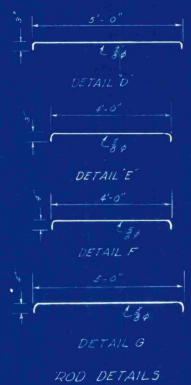
SCALE IN FEET  
 Contour Interval 10' Foot



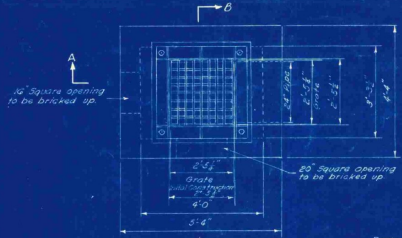
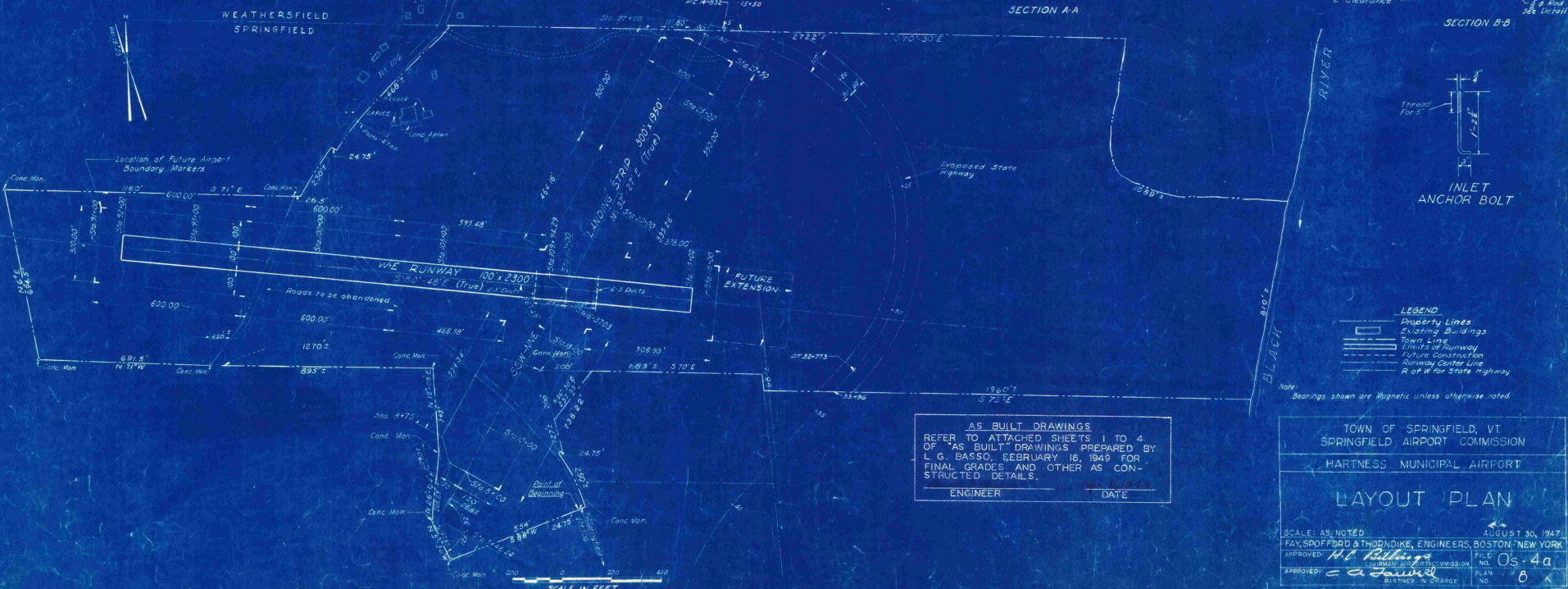
SECTION A-A  
HEADWALL DETAILS  
Scale 1/4" = 1'-0"



ELEVATION



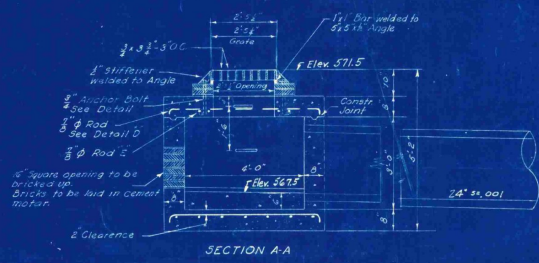
TRENCH DETAIL OF DRAIN  
Scale 1/2" = 1'-0"



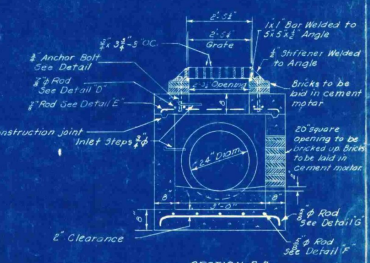
CONSTRUCTION DETAIL  
INLET GRATE  
INITIAL CONSTRUCTION

Drainage Data  
5 Year Storm  
A X C X I Q  
110X40x13-6.9 c.f.s.

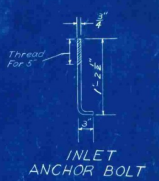
Inlet grate to be designed for a uniform load of 85 lbs. sq. in. of gross area of grate.



SECTION A-A



SECTION B-B



INLET ANCHOR BOLT

- LEGEND
- Property Lines
  - Existing Buildings
  - Town Line
  - Limit of Runway
  - Future Construction
  - Runway Center Line
  - 4' or more State Highway

Note: Bearings shown are Magnetic unless otherwise noted.

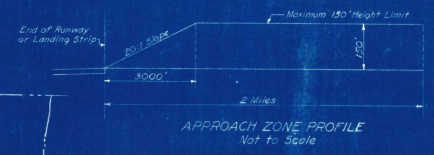
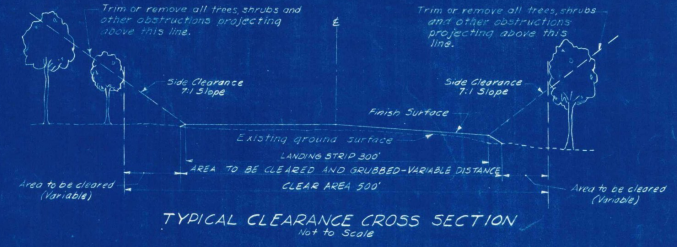
AS BUILT DRAWINGS  
REFER TO ATTACHED SHEETS 1 TO 4  
OF "AS BUILT" DRAWINGS PREPARED BY  
L. G. BASSO, FEBRUARY 16, 1949 FOR  
FINAL GRADES AND OTHER AS CON-  
STRUCTED DETAILS.

ENGINEER DATE

TOWN OF SPRINGFIELD, VT.  
SPRINGFIELD AIRPORT COMMISSION  
HARTNESS MUNICIPAL AIRPORT

LAYOUT PLAN

SCALE: AS NOTED AUGUST 30, 1947  
FAY, SPOFFORD & THORNDIKE, ENGINEERS, BOSTON, NEW YORK  
APPROVED: *L. G. Basso* FILE NO. 05-4a  
APPROVED: *L. G. Basso* COMMISSION NO. 8  
DISTRICT IN CHARGE PLAN NO. 8  
CONTRACT DRAWING SHEET NO. 3 OF 3



Beyond this line trim or remove all shrubs and other obstructions projecting above 20\' slope begins at line A) 20\' slope begins at line B) 20\' slope begins at line C) 20\' slope begins at line D)

WEATHERSFIELD  
SPRINGFIELD

HANOVER  
OFFICE  
CARE CENTER

Beyond this line trim or remove all trees, shrubs and other obstructions projecting above 7:1 slope (Note 7:1 slope begins at line A)

W-E LANDING STRIP  
300' x 2500'

W-E RUNWAY  
100' x 2300'

LANDING STRIP  
300' x 1700'

LANDING STRIP  
300' x 1700'

LANDING STRIP  
300' x 1700'

LANDING STRIP  
300' x 1700'

LANDING STRIP  
300' x 1700'

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300' x 1700'

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300' x 1700'

LANDING STRIP  
300' x 1700'

AS BUILT DRAWINGS  
REFER TO ATTACHED SHEETS 1 TO 4  
OF "AS BUILT" DRAWINGS PREPARED  
BY L. G. BASSO, FEBRUARY 16, 1949  
FOR FINAL GRADES AND OTHER AS  
CONSTRUCTED DETAILS.

ENGINEER	DATE

**LEGEND**

- Town Line
- Runway Center Line
- Property Lines
- Limits of Approach Zone
- Limits of Runway
- Future Runway
- Existing Grasses
- Wooded Area
- Existing Buildings
- Area to be cleared
- Area to be grubbed
- Area to be cleared and grubbed
- Limits of Landing strip
- Evidence of ledge at or just below surface
- Right of Way State Highway
- Future Construction

Note: Areas shown to be cleared are approximate only and exact limits to be located by the Engineer.

TOWN OF SPRINGFIELD, VT.  
SPRINGFIELD AIRPORT COMMISSION  
HARTNESS MUNICIPAL AIRPORT

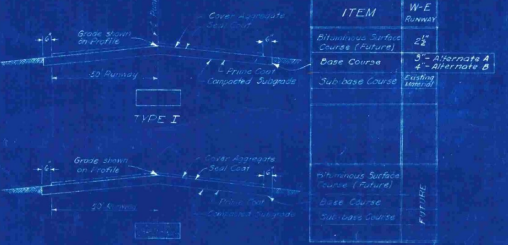
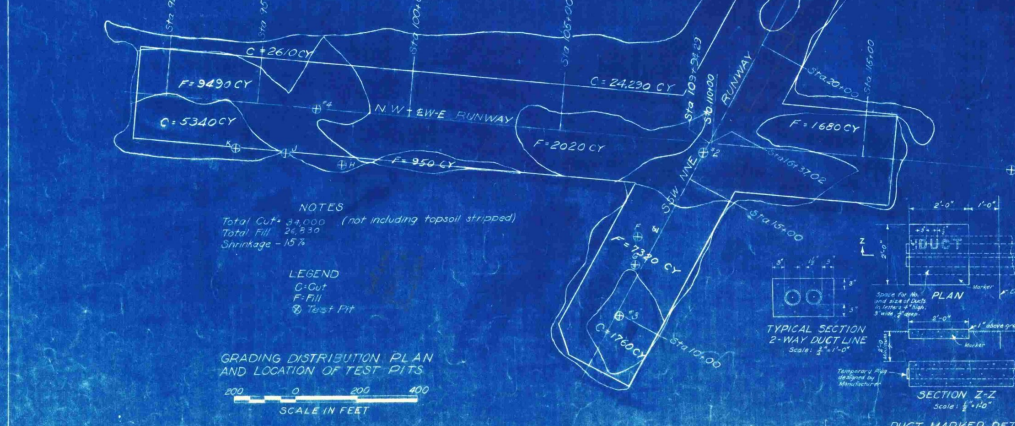
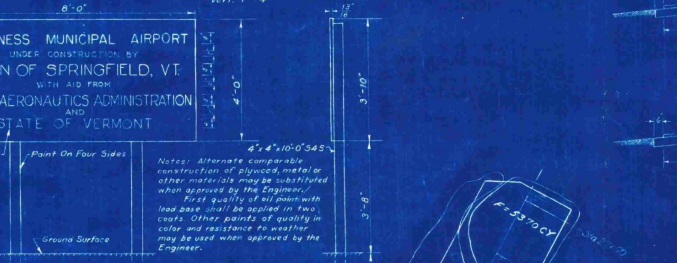
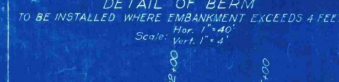
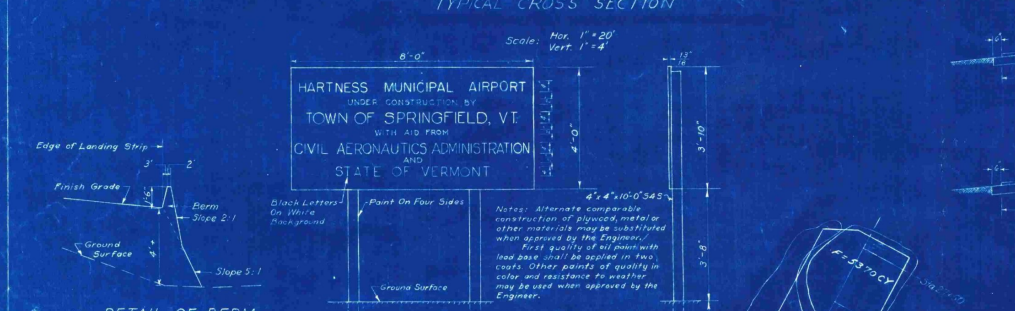
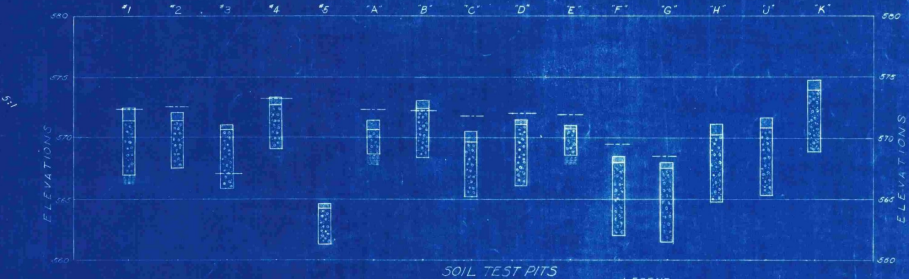
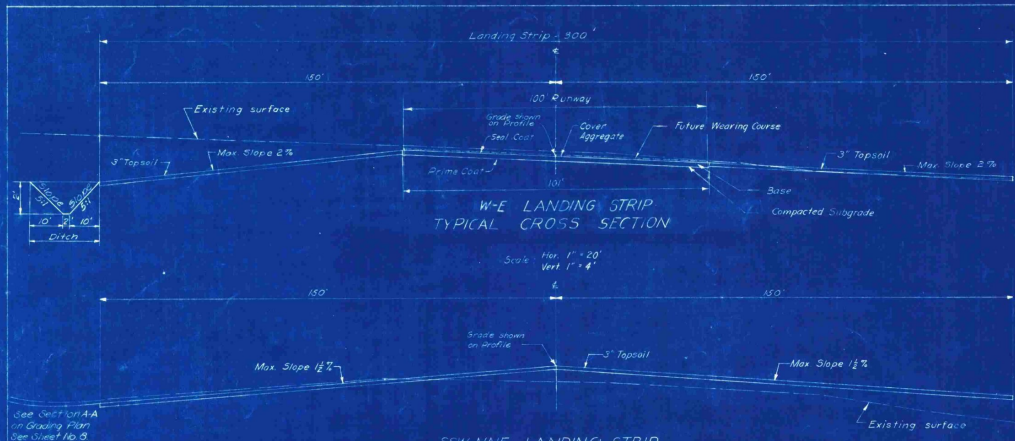
**CLEARING PLAN**

SCALE: AS NOTED  
AUGUST 30, 1947  
RAY, SPICIFORD & THORNDIKE, ENGINEERS, BOSTON-NEW YORK  
APPROVED: *R. C. Bellinger*  
TOWN OF SPRINGFIELD COMMISSION, NO. 05-4a  
APPROVED: *E. J. Lamo* PLAN NO. 9  
DATE: 8-30-47

CONTRACT DRAWING SHEET NO. 4 OF 5



24  
MUNICIPAL  
NO. 9  
NEW



RANGE OF SOIL CONSTANTS FROM LABORATORY TESTS

SOIL GROUP NO. IN LAB.	CLASSIFICATION	SOIL IDENTITY	NO. OF TESTS MADE	LIQUID LIMIT	PLASTICITY INDEX
1	E-1	Gravel and Sand	1	22.7	N.P.

SHRINKAGE LIMIT	SHRINKAGE RATIO	FIELD MOISTURE EQUIVALENT	CALIFORNIA BEARING RATIO	MAX. DENSITY	OPTIMUM MOISTURE
24.7	1.53	25.61	37.0%	109.5 lb/cu ft	16.6

AS BUILT DRAWINGS REFER TO ATTACHED SHEETS 1 TO 4 OF 'AS BUILT' DRAWINGS PREPARED BY L. G. BASSO, FEBRUARY 16, 1949 FOR FINAL GRADES AND OTHER AS CONSTRUCTED DETAILS.

ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

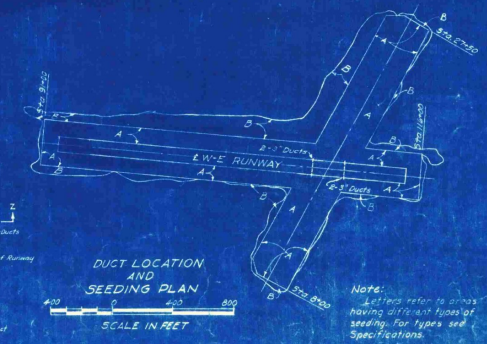
Note: The information obtained from the test pits regarding the character of the material encountered has been recorded in good faith heretofore.

There is no expressed or implied agreement that the character of the material or any other information or data regarding the material can be relied upon to indicate the material to be encountered in the carrying out of the work to be done, and it is understood that conditions affecting the cost or quantity of the work to be done may differ from the test pits, which may be indicated by the data obtained from the test pits.

Test Pits A, B, C, D, E, F, G, H, J and K were made and samples taken, Oct 15, 1945.

Test Pits 1, 2, 3, 4 and 5 were made and samples taken June 12, 1947.

Elevations are based on Mean Sea Level (U. S. Geological Survey).



TOWN OF SPRINGFIELD, VT.  
SPRINGFIELD AIRPORT COMMISSION

HARTNESS MUNICIPAL AIRPORT

PAVING, CROSS SECTIONS, TEST PIT DATA, GRADING DISTRIBUTION AND SEEDING PLAN

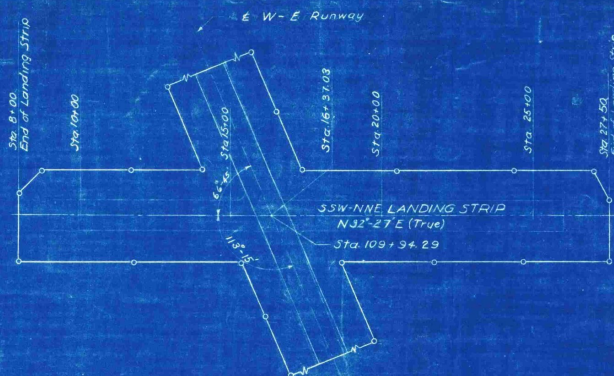
SCALE AS NOTED

FAY, SPENCER & BROWNLEE ENGINEERS, BOSTON-NEW YORK

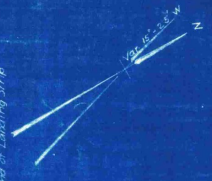
APPROVED: *[Signature]* TITLE: 05-44

APPROVED: *[Signature]* TITLE: 10

CONTRACT DRAWING SHEET NO. 5 OF 8



PLAN



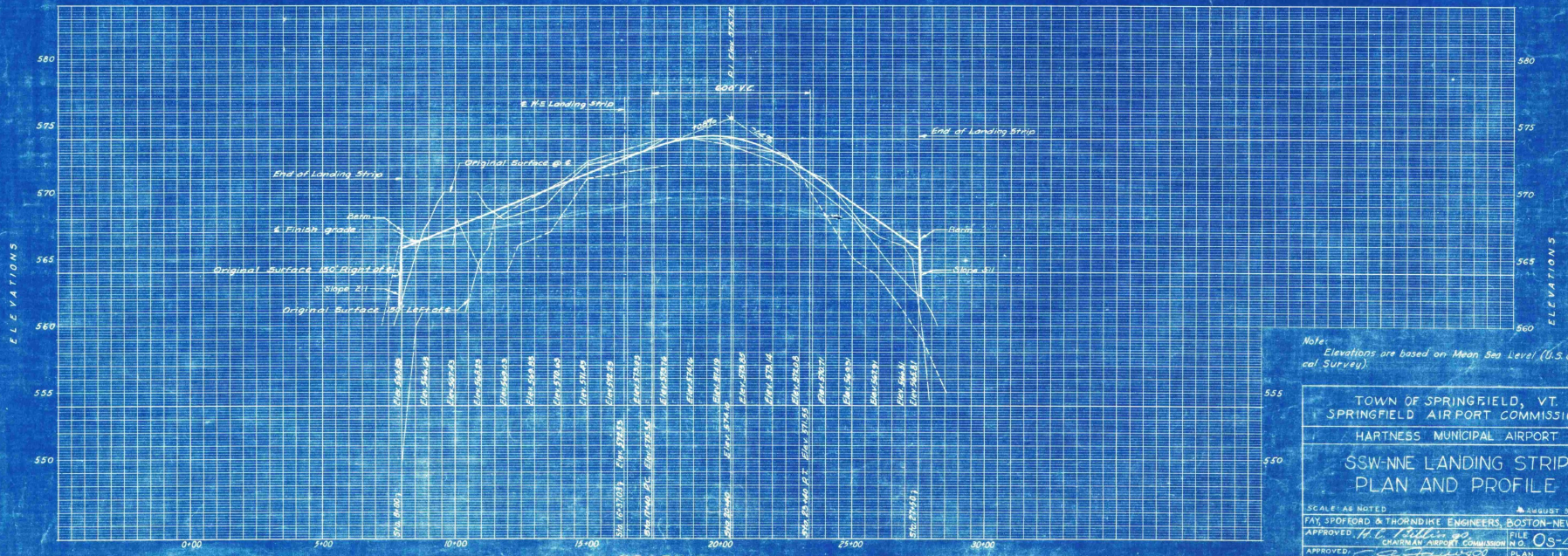
Key Plan

AS BUILT DRAWINGS  
 REFER TO ATTACHED SHEETS 1 TO 4  
 OF "AS BUILT" DRAWINGS PREPARED BY  
 L. G. BASSO, FEBRUARY 16, 1949 FOR  
 FINAL GRADES AND OTHER AS  
 CONSTRUCTED DETAILS.

ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

LEGEND

- Finish Grade E
- Original Surface @ E
- Original Surface 150' Left of E
- Original Surface 150' Right of E
- Limits of Landing Strip



PROFILE  
 Scale: Hor. 1" = 200'  
 Vert. 1" = 4'

Note: Elevations are based on Mean Sea Level (U.S. Geological Survey).

TOWN OF SPRINGFIELD, VT.  
 SPRINGFIELD AIRPORT COMMISSION  
 HARTNESS MUNICIPAL AIRPORT

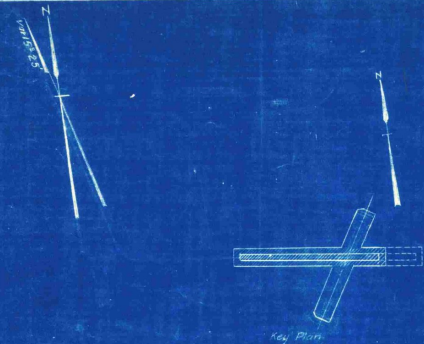
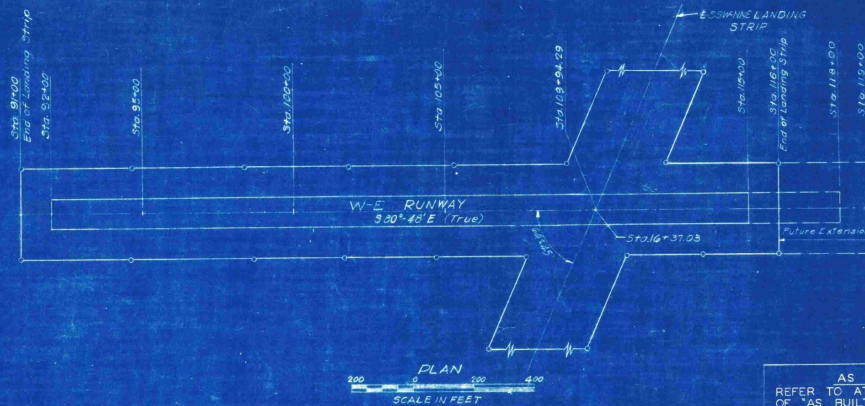
SSW-NNE LANDING STRIP  
 PLAN AND PROFILE

SCALE AS NOTED      AUGUST 30, 1947

FAY, SPOFFORD & THORNDIKE ENGINEERS, BOSTON-NEW YORK

APPROVED: *H. C. Thorne* FILE NO. OS-4a  
 CHAIRMAN AIRPORT COMMISSION

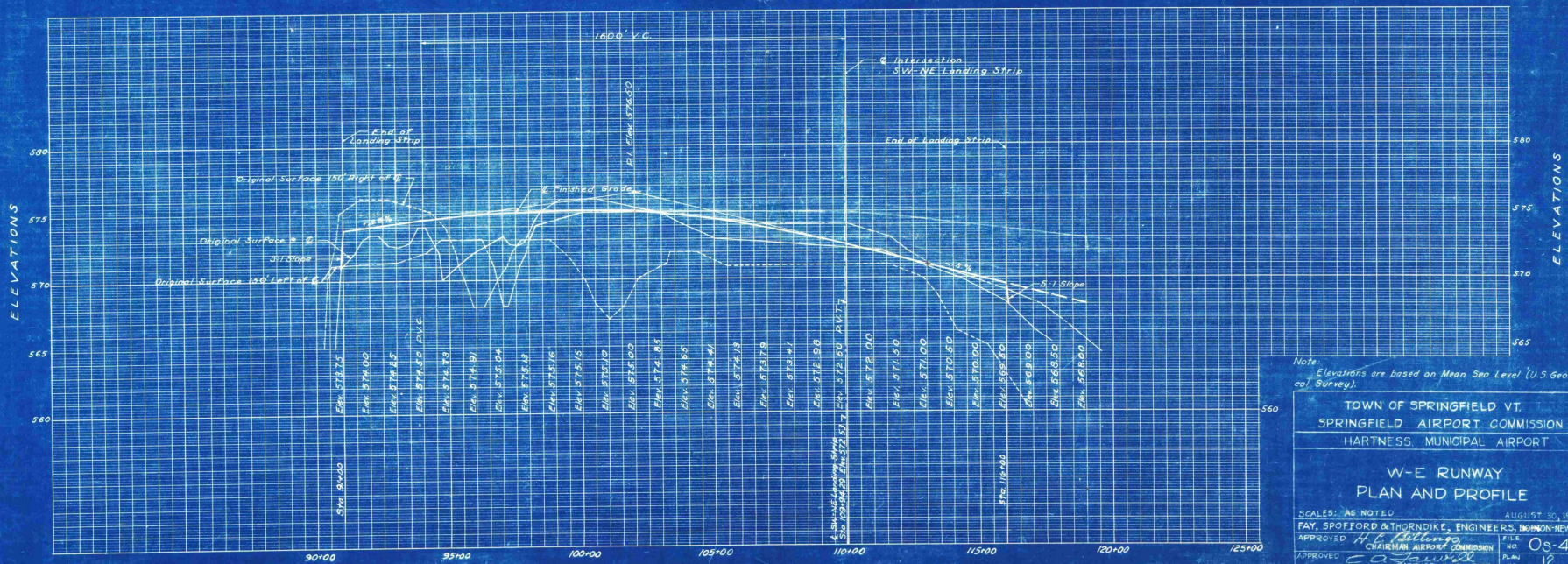
APPROVED: *L. G. Basso* PLAN NO. 11  
 PARTNER IN CHARGE



AS BUILT DRAWINGS  
 REFER TO ATTACHED SHEETS 1 TO 4  
 OF "AS BUILT" DRAWINGS PREPARED  
 BY L. G. BASSO, FEBRUARY 16, 1949 FOR  
 FINAL GRADES AND OTHER AS  
 CONSTRUCTED DETAILS.

ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

- LEGEND
- Finished Grade
  - Original Surface @ 0'
  - Original Surface 150' Left of C
  - Original Surface 150' Right of C
  - Future Finished Grade
  - Limits of Landing Strip



PROFILE  
 Scale: Hor. 1" = 200'  
 Vert. 1" = 4'

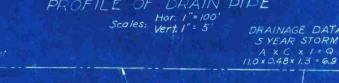
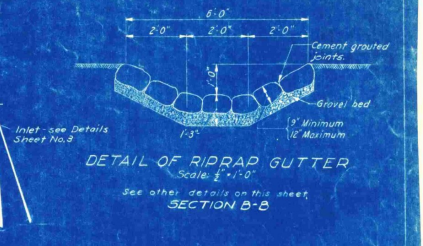
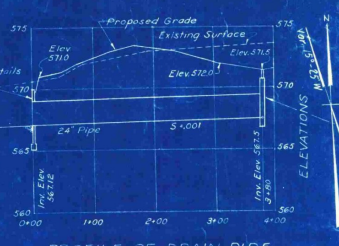
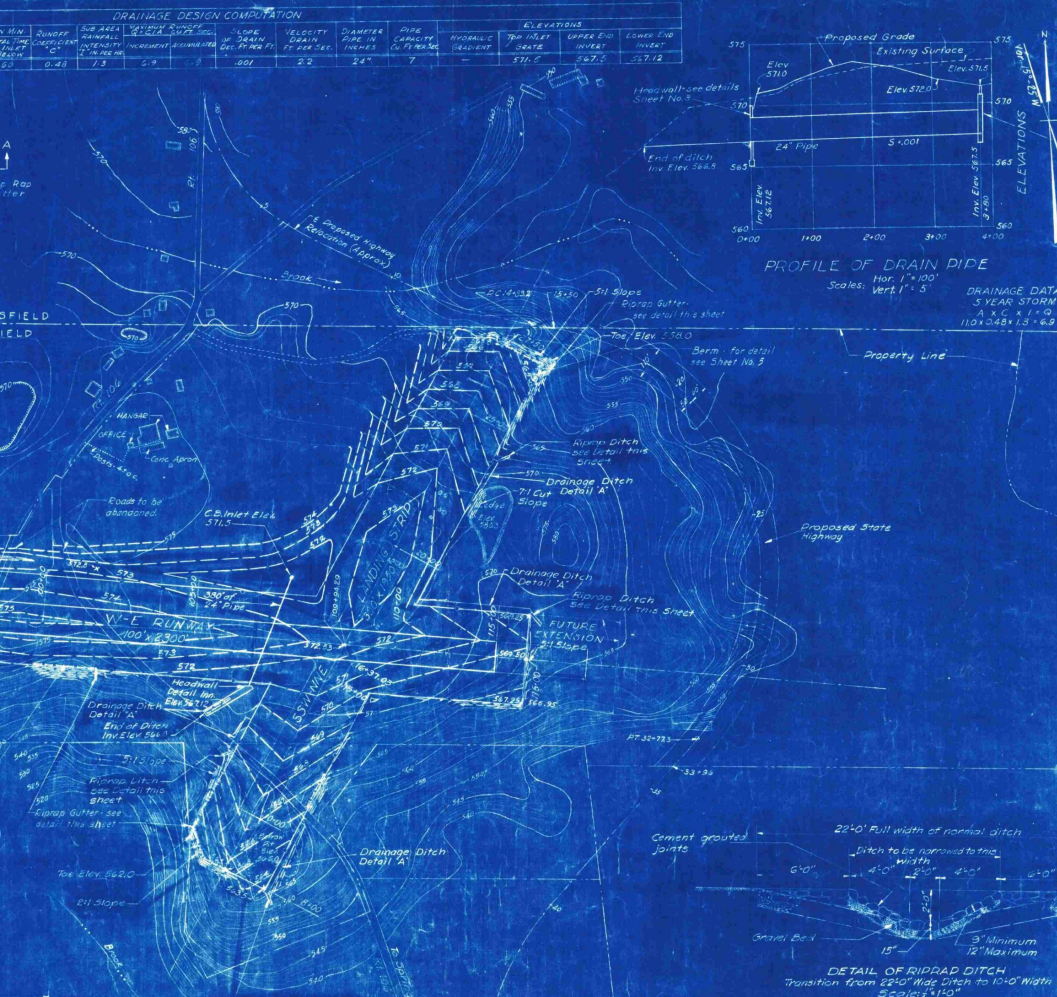
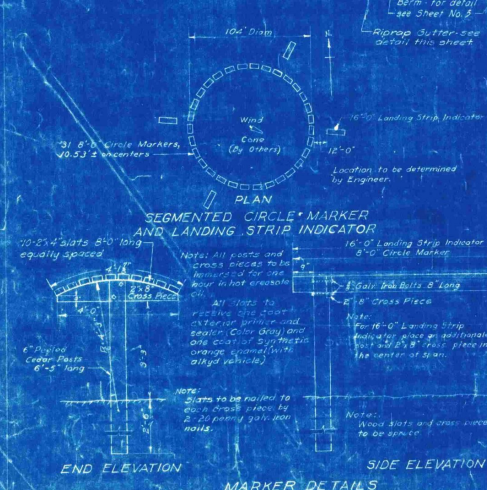
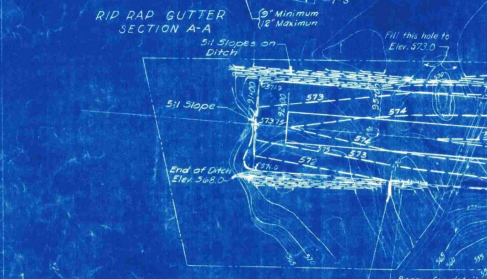
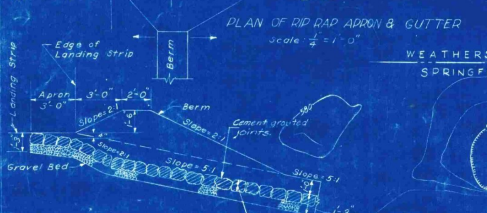
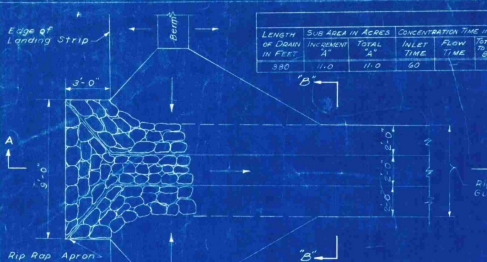
Note:  
 Elevations are based on Mean Sea Level (U.S. Geological Survey).

TOWN OF SPRINGFIELD VT.  
 SPRINGFIELD AIRPORT COMMISSION  
 HARTNESS MUNICIPAL AIRPORT

W-E RUNWAY  
 PLAN AND PROFILE

SCALE: AS NOTED AUGUST 30, 1947  
 FAY, SPOFFORD & THORNDIKE, ENGINEERS, BOSTON-NEW YORK  
 APPROVED: *[Signature]* TITLE: \_\_\_\_\_  
 CHAIRMAN AIRPORT COMMISSION NO. OS-4a  
 APPROVED: *[Signature]* PARTNER IN CHARGE NO. 12  
 CONTRACT DRAWING SHEET 7 OF 8

LENGTH OF DRAIN IN FEET	SUB AREA IN ACRES	CONCENTRATION TIME IN MIN.		RUNOFF COEFFICIENT	SUB AREA CONTRIBUTING DRAINAGE			SLOPE OF DRAIN IN PER CENT	VELOCITY IN FT PER SEC.	DIAMETER OF PIPE IN INCHES	PIPE CAPACITY IN CFS PER INCH	HYDRAULIC RADIANT	ELEVATIONS		
		INLET	TO INLET		TO INLET	INLET	UPPER END						LOWER END		
380	11.0	45	60	0.48	7.3	0.9	1.8	.001	3.2	24"	7	—	576.5	576.5	571.2



**AS BUILT DRAWINGS**  
REFER TO ATTACHED SHEETS 1 TO 4 OF "AS BUILT" DRAWINGS PREPARED BY L.G. BASSO, FEBRUARY 16, 1949 FOR FINAL GRADES AND OTHER AS CONSTRUCTED DETAILS.

ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

- LEGEND**
- Runway Center Line
  - Runway Line
  - Property Line
  - Limits of Runway
  - Existing Contour Lines
  - Proposed Contour Lines
  - Depression Contour
  - Existing Building
  - Elevation of Land at or near ground surface
  - Berm
  - Road
  - Part of New State Highway
  - Proposed Construction
  - Limits of Landing Strip

TOWN OF SPRINGFIELD, VT.  
SPRINGFIELD AIRPORT COMMISSION

HARTNESS MUNICIPAL AIRPORT

**GRADING AND DRAINAGE PLAN AND DETAILS**

SCALE AS NOTED AUGUST 30, 1947

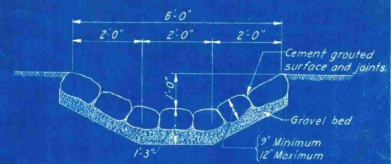
FAY, SPOFFORD & THORNDIKE ENGINEERS BOSTON, NEW YORK

APPROVED: *[Signature]* TITLE: *[Title]*

APPROVED: *[Signature]* TITLE: *[Title]*

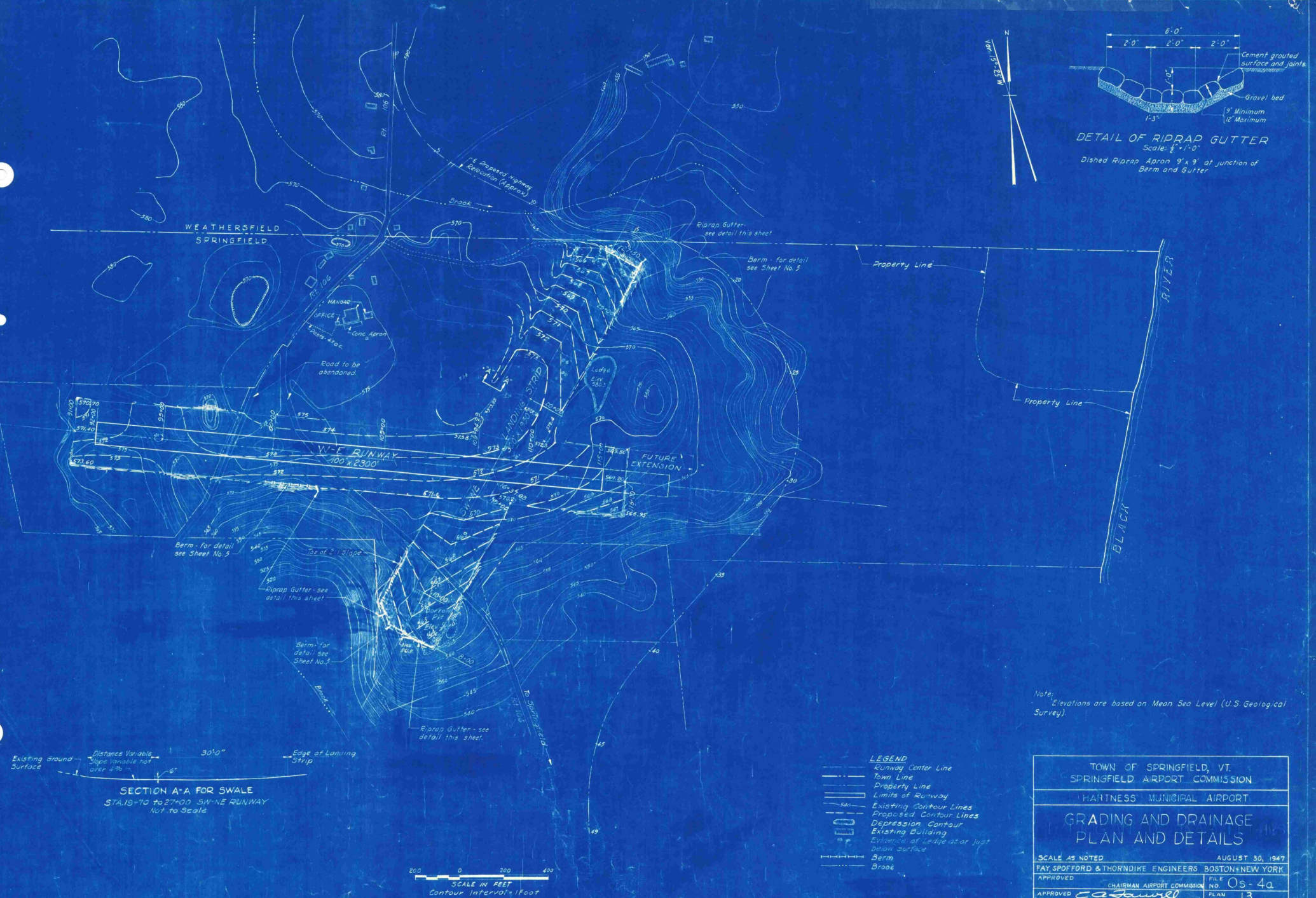
APPROVED: *[Signature]* TITLE: *[Title]*

CONTRACT DRAWING SHEET 8 OF 8



**DETAIL OF RIPRAP GUTTER**  
 Scale:  $\frac{1}{2}$ " = 1'-0"  
 Dished Riprap Apron 9' x 9' at junction of Berm and Gutter

WEATHERSFIELD  
 SPRINGFIELD



Berm - for detail see Sheet No. 3

Slope of 2:1 Slope

Riprap Gutter - see detail this sheet

Berm - for detail see Sheet No. 3

Riprap Gutter - see detail this sheet

Existing ground surface - Distance Variable - Slope Variable not over 4% - 30' x 6" - Edge of Landing Strip

**SECTION A-A FOR SWALE**  
 STA. 18+70 to 27+00 SW-NE RUNWAY  
 Not to Scale



- LEGEND**
- Runway Center Line
  - Town Line
  - Property Line
  - Limits of Runway
  - Existing Contour Lines
  - Proposed Contour Lines
  - Depression Contour
  - Existing Building
  - Evidence of Ledge at or just below surface
  - Berm
  - Brook

Note: Elevations are based on Mean Sea Level (U.S. Geological Survey).

TOWN OF SPRINGFIELD, VT.	
SPRINGFIELD AIRPORT COMMISSION	
HARTNESS MUNICIPAL AIRPORT	
<b>GRADING AND DRAINAGE PLAN AND DETAILS</b>	
SCALE AS NOTED	AUGUST 30, 1947
FAY SPOFFORD & THORNDIKE ENGINEERS BOSTON & NEW YORK	FILE NO. 0s-4a
APPROVED	CHAIRMAN AIRPORT COMMISSION
APPROVED <i>C. A. Duval</i>	PARTNER IN CHARGE
PLAN NO. 13	

TOWN OF SPRINGFIELD  
VERMONT

INDEX AS CONSTRUCTED DRAWINGS

SHEET NO	TITLE
1	TITLE SHEET
2	PROPERTY BOUNDS AND DEVELOPMENT
3	SSW-NNE LANDING STRIP PROFILE PLAN
4	COMPLETED GRADING AND DRAINAGE ELEVATIONS

AS CONSTRUCTED PLANS  
FOR

HARTNESS MUNICIPAL AIRPORT

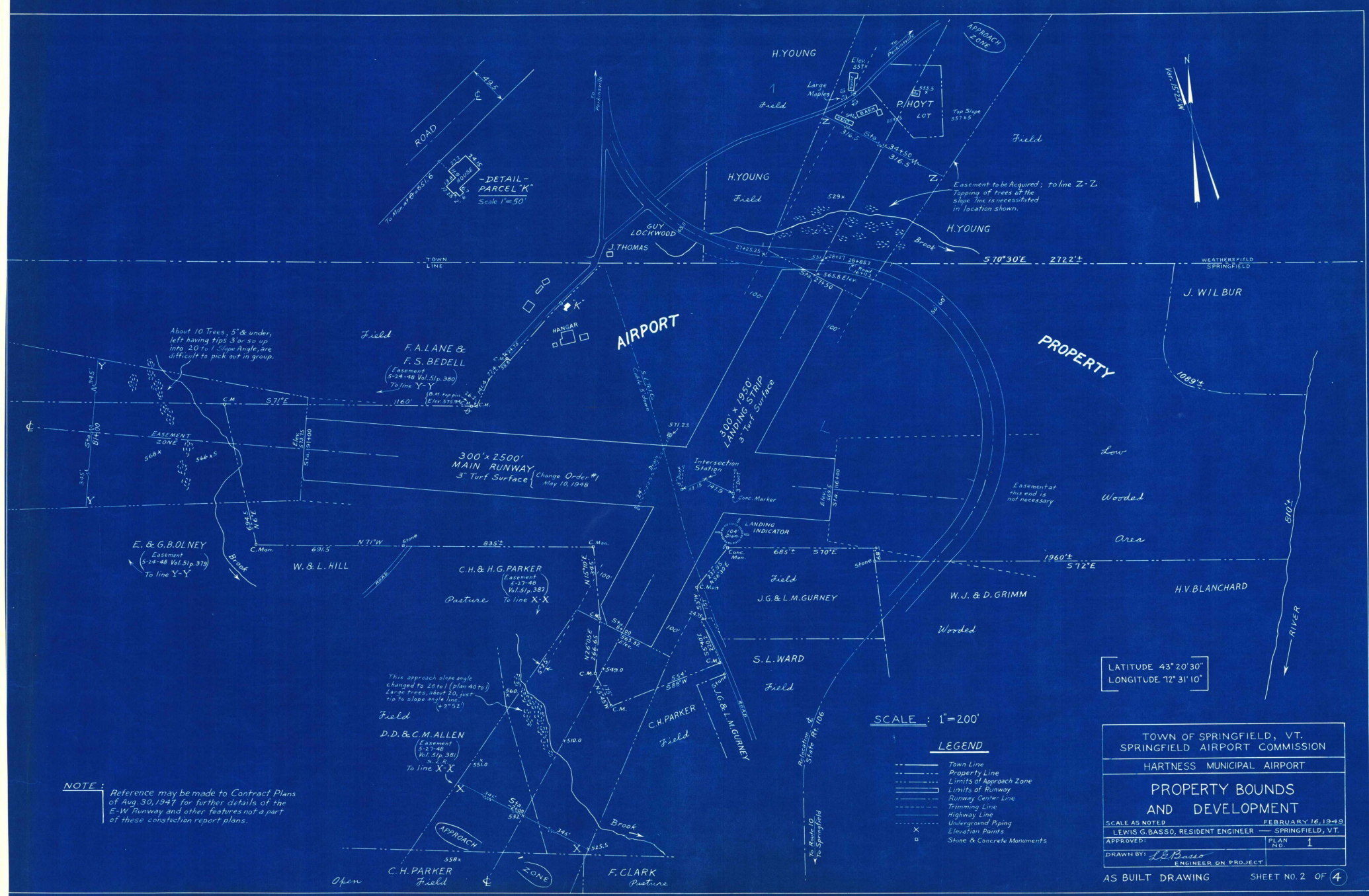
CONSTRUCTION PERIOD APRIL 15—JULY 10

FEBRUARY 16, 1949

SPRINGFIELD  
AIRPORT COMMISSION

TITLE SHEET

PLANS BY: *L. L. Passo*  
ENGINEER ON PROJECT.



NOTE: Reference may be made to Contract Plans of Aug. 30, 1947 for further details of the E-W Runway and other features not a part of these construction report plans.

SCALE : 1" = 200'

**LEGEND**

- Town Line
- Property Line
- - - - Limits of Approach Zone
- - - - Limits of Runway
- Runway Center Line
- Trimming Line
- Highway Line
- - - - Underground Piping
- x     Elevation Points
- o     Stone & Concrete Monuments

LATITUDE 43° 20' 30"  
LONGITUDE 72° 31' 10"

TOWN OF SPRINGFIELD, VT.	
SPRINGFIELD AIRPORT COMMISSION	
HARTNESS MUNICIPAL AIRPORT	
<b>PROPERTY BOUNDS AND DEVELOPMENT</b>	
SCALE AS NOTED	FEBRUARY 16, 1949
LEWIS G. BASSO, RESIDENT ENGINEER     SPRINGFIELD, VT.	
APPROVED:	PLAN NO. 1
DRAWN BY: <i>L.G. Basso</i> ENGINEER ON PROJECT	
AS BUILT DRAWING	SHEET NO. 2 OF 4



