

# MINNESOTA DEPARTMENT OF TRANSPORTATION

## CONSTRUCTION PLAN FOR GRADING, RESURFACING & BITUMINOUS SHOULDERS

LOCATED ON T.H. 49-126 FROM 1325 FEET SOUTH OF GRAMSIE ROAD TO 765 FEET NORTH OF GRAMSIE ROAD

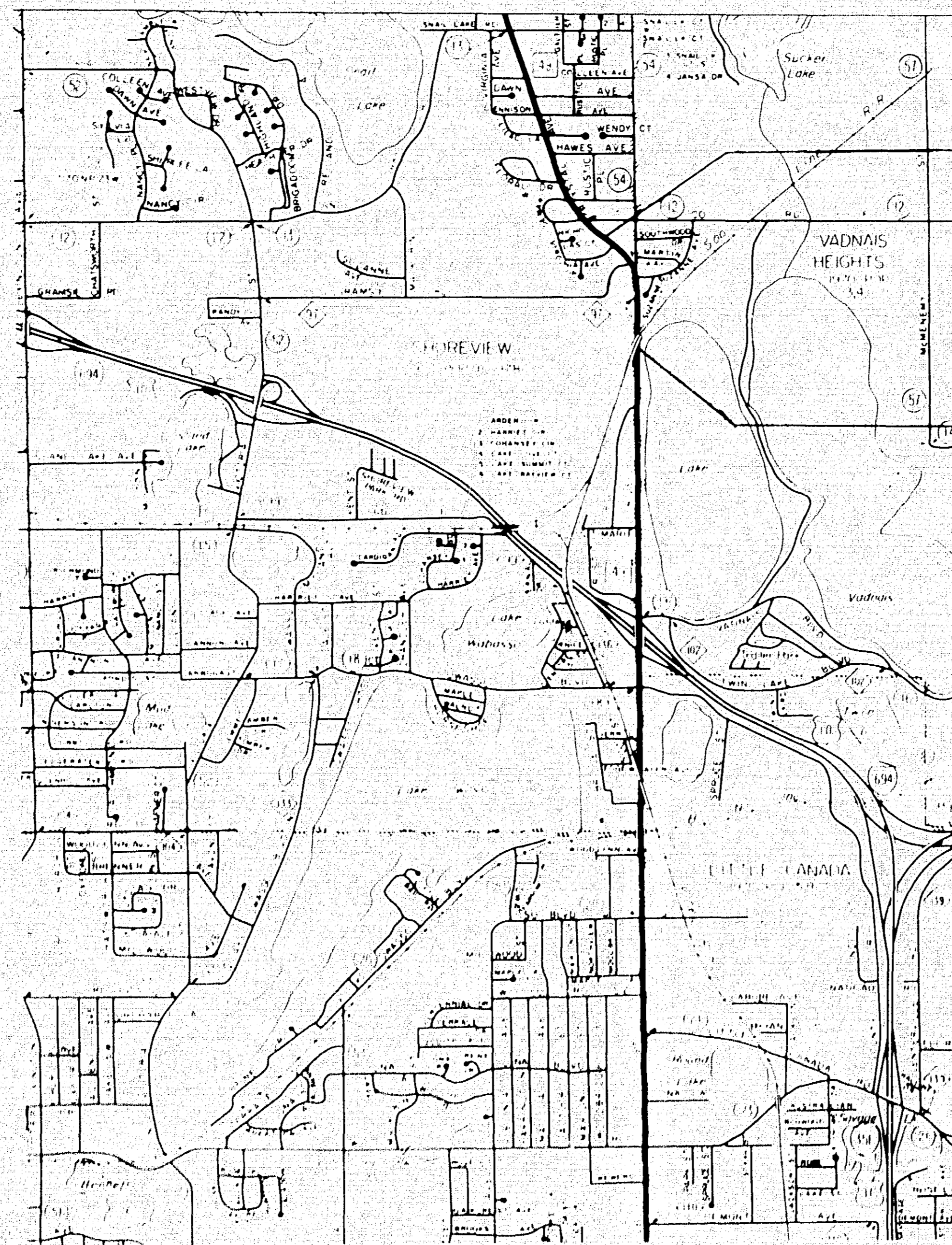
STATE PROJ. NO. 6214-54  
 MINN. PROJ. NO.  
 GROSS LENGTH 2090.06 FEET 0.396 MILES  
 BRIDGES-LENGTH 0.00 FEET 0.00 MILES  
 EXCEPTIONS-LENGTH 0.00 FEET 0.00 MILES  
 NET LENGTH 2090.06 FEET 0.396 MILES  
 MILE POINT TO MILE POINT

STATE PROJ. NO.  
 MINN. PROJ. NO.  
 GROSS LENGTH FEET MILES  
 BRIDGES-LENGTH FEET MILES  
 EXCEPTIONS-LENGTH FEET MILES  
 NET LENGTH FEET MILES  
 MILE POINT TO MILE POINT

NOTE: Length and Description based on T.H. 49

### EQUATIONS

P.O.T. 264+58.06 = P.C. 0+00



DUE TO THE LENGTH IN TIME THAT HAS ELAPSED SINCE THE PROJECT WAS COMPLETED AND THE CHANGE IN PERSONNEL, THE FINAL QUANTITIES WILL BE THE ONLY ENTRIES MADE ON THE FINAL PLANS.

FED. PROJ. NO. STATE FUNDS

### GOVERNING SPECIFICATIONS

THE 1978 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" SHALL GOVERN.

### INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES STANDARD PLATES
3	UTILITIES, TABULATIONS
4,5	TYPICALS
6	EXISTING TOPOGRAPHY
7	BIT. REMOVAL
8	PLAN CONSTRUCTION
9	DRAINAGE
10	PROFILES, SUPERELEVATIONS
11-16	SUZANNE, BIKE PATH CROSS SECTIONS

THIS PLAN CONTAINS 16 SHEETS

I HEREBY CERTIFY THAT THE FINAL REVISIONS OF THIS PLAN WERE MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

*A. H. Hines*  
 DATE 1/9/82 REG. NO. 11931

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE April 26, 1982 REG. NO. 10453 ENGR. Gary P. Orlick  
 DESIGN SQUAD L JOHNSON

- Right of Way Approval: *J. J. Dornier* 5-19-82, DIRECTOR OF RIGHT OF WAY OPERATIONS
- Recommended for Approval: *John E. Sandell* 4/26/82, DISTRICT ENGINEER
- Recommended for Approval: *Raymond K. Kenow* 5/7/82, TRANSPORTATION ENGINEER
- Recommended for Approval: *John A. Hauer* 5-19-1982, CHIEF OF TRANSPORTATION SERVICES
- Recommended for Approval: 19
- Approved: 5-19-1982 *John A. Hauer*, CHIEF OF TRANSPORTATION SERVICES

DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 APPROVED  
 DIVISION ADMINISTRATOR DATE

I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, OF THIS PLAN WERE MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE REG. NO.

91834 25 June 1982

SCALES

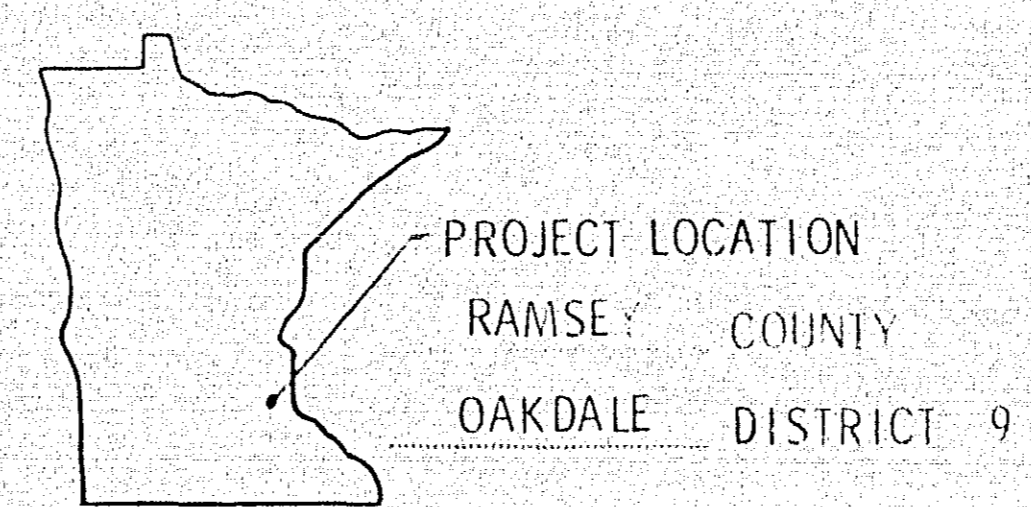
PLAN	50'
PROFILE	
INDEX MAP	2000'
GENERAL LAYOUT	

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

DESIGN DESIGNATION

ADT (Current Year) 1982 = 10,000  
 ADT (Future Year) 2002 = 15,800  
 DHV (Design Hr. Vol.) = 1.690  
 D (Directional Distr.) = 53.47 %  
 T (Heavy Commercial) = 2 %

Design Speed 45 MPH  
 Based on STOPPING Sight Distance  
 Height of eye 3.75' Height of object 0.5'  
 Design Speed not achieved at:  
 STA. TO STA. MPH  
 STA. TO STA. MPH



FOR PLANS AND UTILITIES SEE LOCAL AGENCY RECORDS  
 STATE PROJ. NO. AREA JOB  
 S.P. 6214-54

STATE PROJ. NO. 6214-54 (T.H. 49-126)

SHEET NO. 1 OF 16 SHEETS

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
201.501	Mobilization	Lump Sum	1	0.22
<b>203.503 (F)</b>	<b>FIELD LAB TYPE D (F)</b>			0.22
2051.501	Maintenance and Restoration of Haul roads	Lump Sum	1	0.22
2104.501	REMOVE PIPE CULVERT	Lin. Ft.	47	175
2104.501	Remove Conc. Median	Lin. Ft.	40	33
2104.501	Remove Conc. Curb & G. Hd.	Lin. Ft.	46	30
2104.505	Remove Bit. Pavement	Sq. Yd.	1406	1,496
2104.505	Remove Conc. Flume	Sq. Yd.	45	128
2104.521	Salvage Pipe Sewer	Lin. Ft.	16	24
2105.501	Common Excavation (P)	Cu. Yd.	307	367
2105.507	Subgrade Excavation (P)	Cu. Yd.	1999	1,999
2105.522	Select Granular Borrow (L.V.)	Cu. Yd.	3280	3,473
2105.523	Common Borrow (L.V.)	Cu. Yd.	599	1,063
2105.525	Topsoil Borrow (L.V.)	Cu. Yd.	266	240
2211.501	Aggregate Base, Class 5	Ton	287	277
2331.504	Bituminous Material for Mixture	Ton	195	128.3
2331.516	Shoulder Mixture	Ton	90	105
2331.510	Binder Course Mixture	Ton	790	617
2331.514	Base Course Mixture	Ton	3332	1,975
2331.531	Temporary Lane Markings	Road Sta.	63	47
0331.003	Sawing Bit. Pavement Surface	Lin. Ft.	215	190
<b>2357.502 (F)</b>	<b>BIT. MATERIAL FOR TACK COAT (F)</b>	<b>Gal. (F)</b>	<b>639 (F)</b>	<b>697</b>
2361.504	Asphalt Cement	Ton	31	34.2
2361.508	Wearing Course Mixture	Ton	445	534
2503.511	12" R.C. Pipe Sewer	Lin. Ft.	58	59
2503.511	15" R.C. Pipe Sewer	Lin. Ft.	30	33
2501.515	12" R.C. Pipe Aprons	Each	1	1
2506.507	Construct Catch Basins, Design C or G	Lin. Ft.	6	6.3
2506.516	Casting Assemblies	Each	2	2
2521.511	2" Bituminous Walk	Sq. Ft.	616	400
2531.501	Concrete Curb and Gutter, Design B024	Lin. Ft.	2589	2,253
2531.503	Concrete Median	Sq. Yd.	484	421
2545.501	Bituminous Curb	Lin. Ft.	918	924
2545.521	3" Rigid Steel Conduit	Lin. Ft.	219	204
2545.521	4" Rigid Steel Conduit	Lin. Ft.	299	307
2545.553	Pull Boxes	Each	14	14
2575.505	Sodding	Sq. Yd.	3792	4,624
0575.607	Commercial Fertilizer, Analysis 15-20-20 (1)	Pound	240	311

(1) APPLIED AT THE RATE OF 300 \*\* / ACRE

CONSTRUCTION NOTES

The Contractor shall obtain from the utility companies, the exact location of any under ground utilities he may encounter on this project.

Strip topsoil from all areas to be disturbed by construction for reuse as slope dressing.

Bituminous material from the bituminous removal areas shall be disposed of outside the Right of Way by the Contractor.

Top of "grading grade" is defined as the bottom of the bituminous base or aggregate base.

Unsuitable grading material shall be defined as none granular soils.

Unsuitable material shall be removed from upper 3 ft. of the "grading grade" of any new embankment construction.

Suitable grading material shall consist of granular soils.

Compaction of bituminous material shall be by the method of "Ordinary Compaction".

Embankment construction shall be by the "Specified Density" method.

Subcut shall be backfilled to within 1 ft. of the grading grade with suitable grading material. The upper 1' of the "grading grade" shall be backfilled with select granular material meeting the requirements of 3149.2B.

STANDARD PLATES

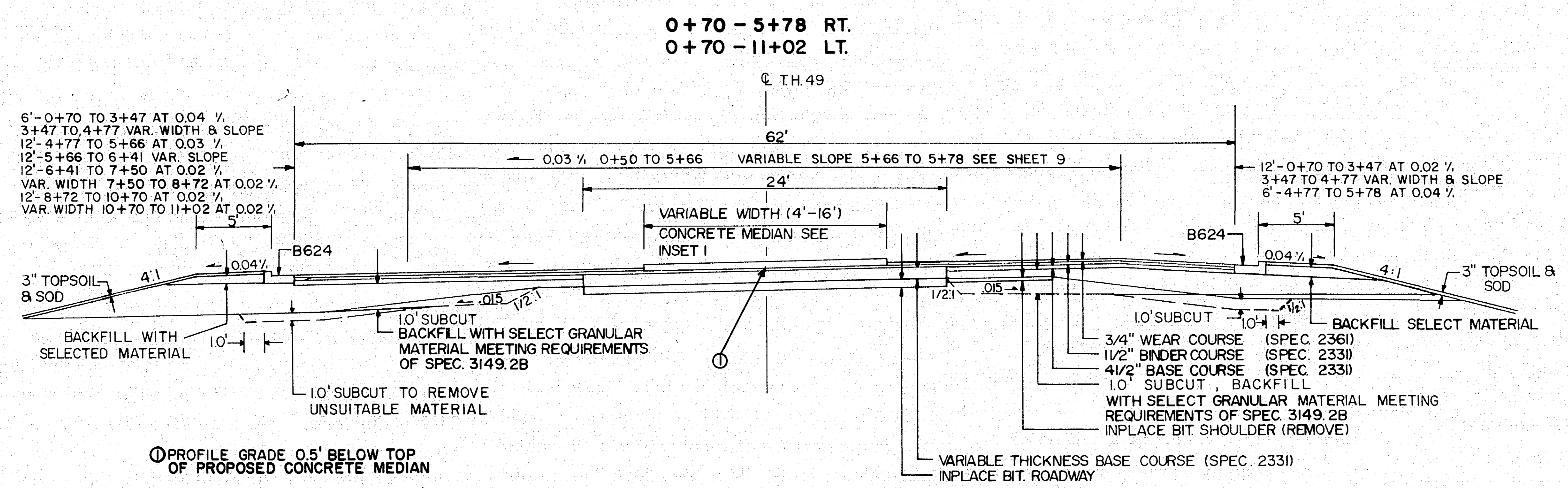
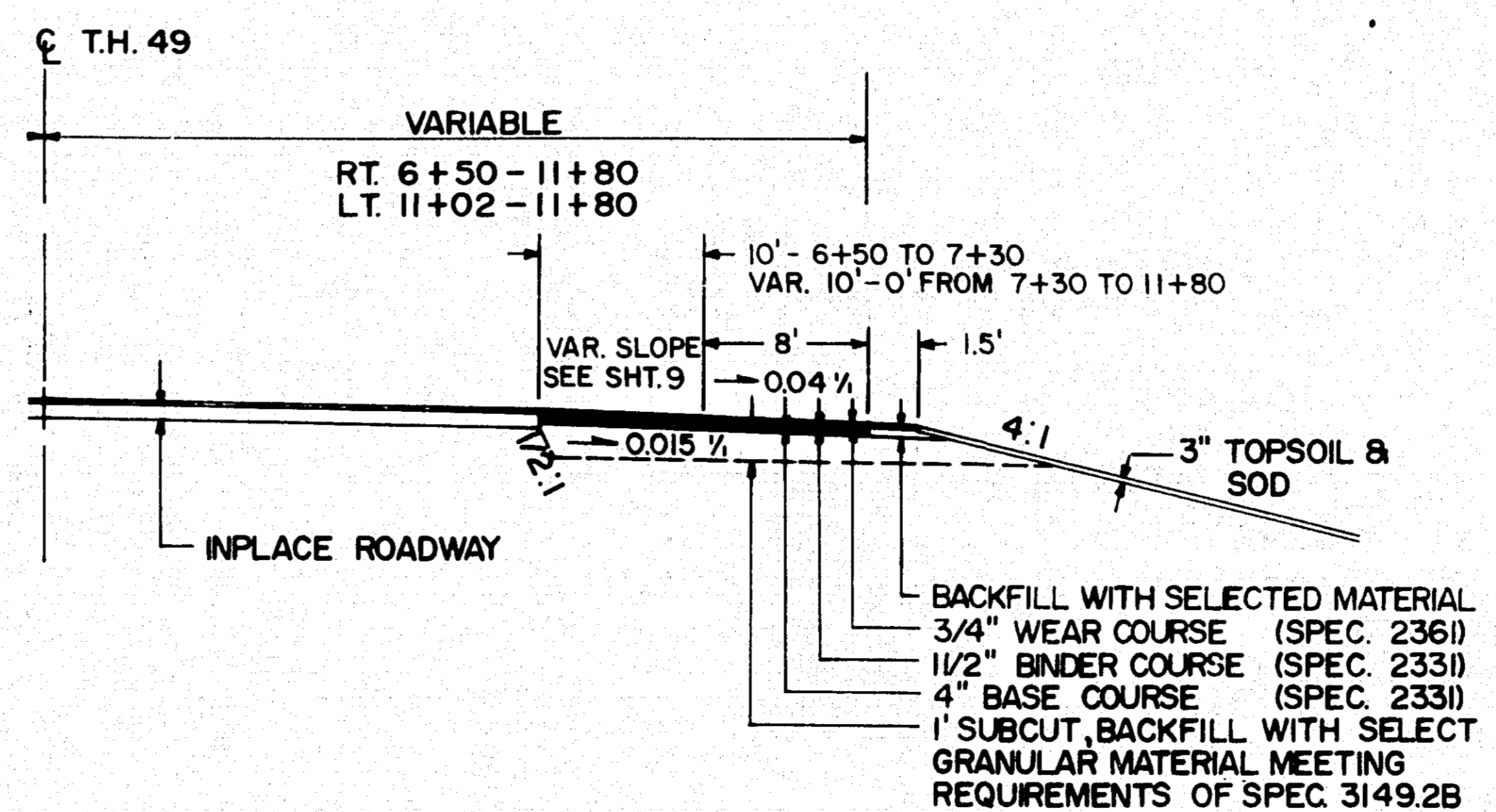
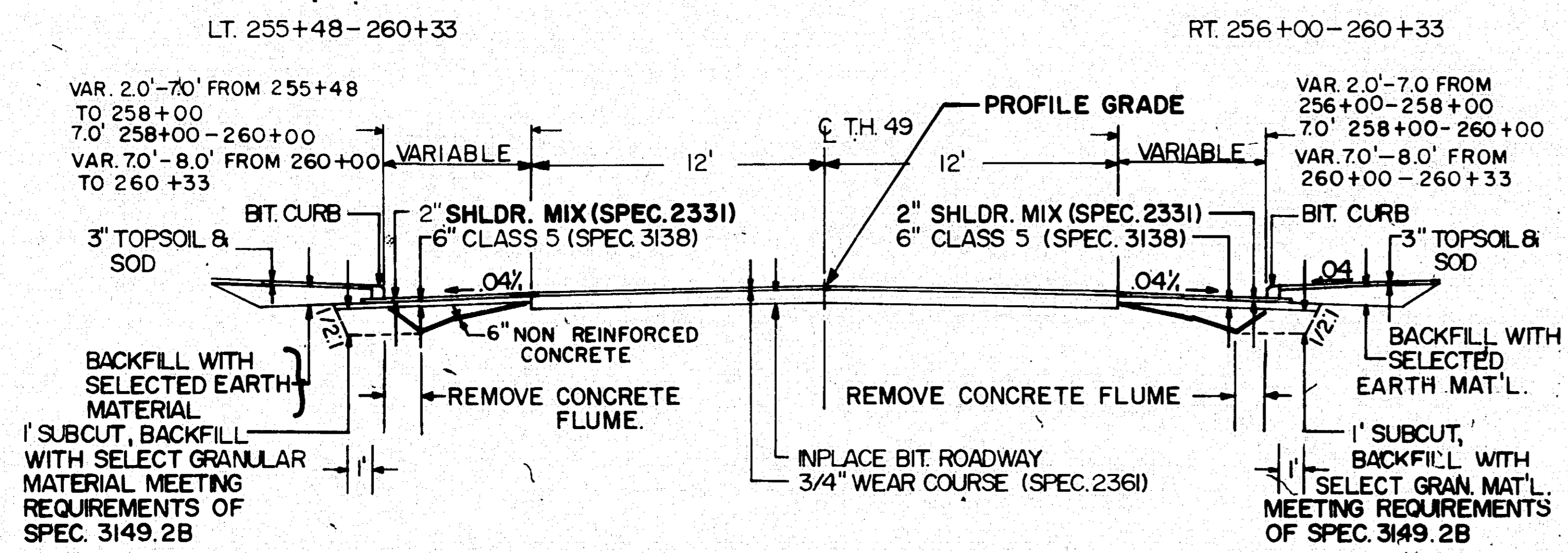
PLATE NO.	DESCRIPTION
0003A	SPECIFICATIONS REFERENCE TO STANDARD PLATES
3000I	REINFORCED CONCRETE PIPE
3100F	CONCRETE APRON
3145A	CONCRETE PIPE JOINT TIES
4002D	MANHOLE OR CATCH BASIN
4006K	MANHOLE OR CATCH BASIN
4010E	CONC. SHORT CONE & ADJUSTING RING
4129D	CATCH BASIN FRAME CASTING
4152B	CATCH BASIN GRATE CASTING
4160C	CURB BOX CASTING FOR CATCH BASIN
7065C	BITUMINOUS CURB
7100E	CONCRETE CURB AND GUTTER
7036C	PEDESTRIAN CURB RAMP
7111E	INSTALLATION OF CATCH BASIN CASTINGS
8000H	STANDARD BARRICADES
8117F	PRECAST CONCRETE HANDHOLE
9102C	SODDING AT CULVERT ENDS
4010D	PRECAST CONCRETE BASE

ESTIMATED QUANTITIES  
STANDARD PLATES

State Proj. No. 1021454 (10-49-100)

Sheet No. 2 of 16 Sheets





① PROFILE GRADE 0.5' BELOW TOP OF PROPOSED CONCRETE MEDIAN

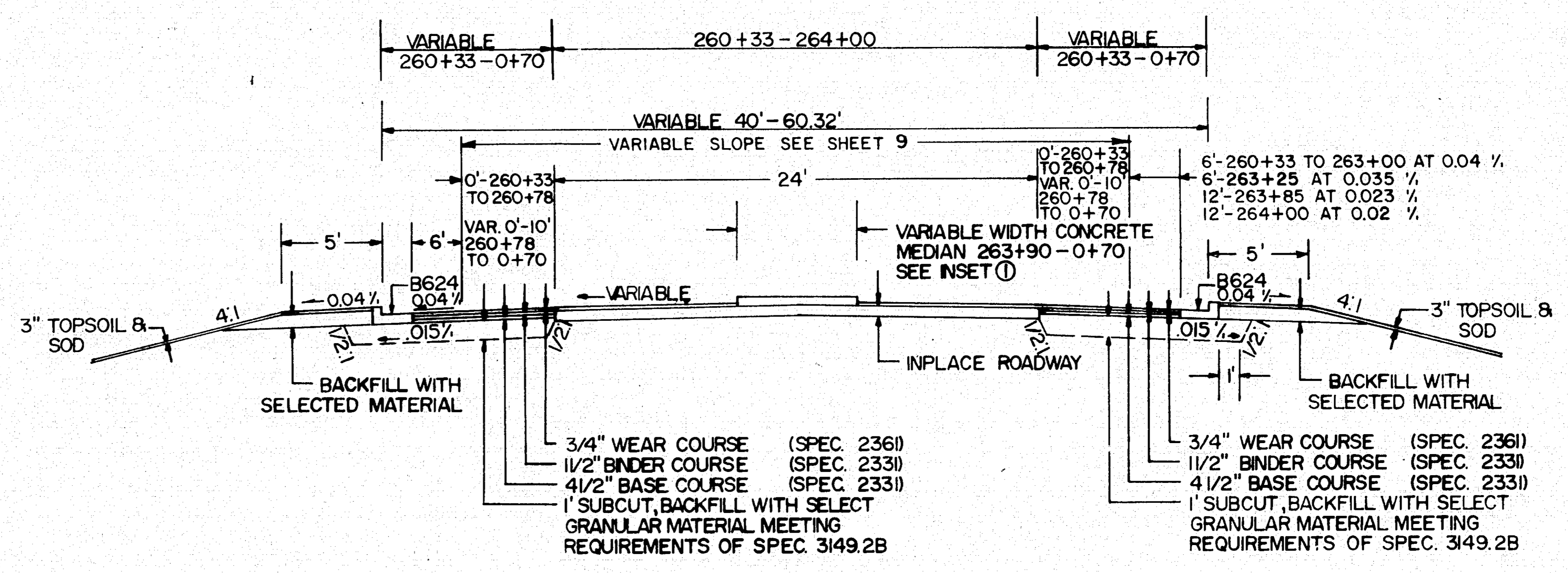
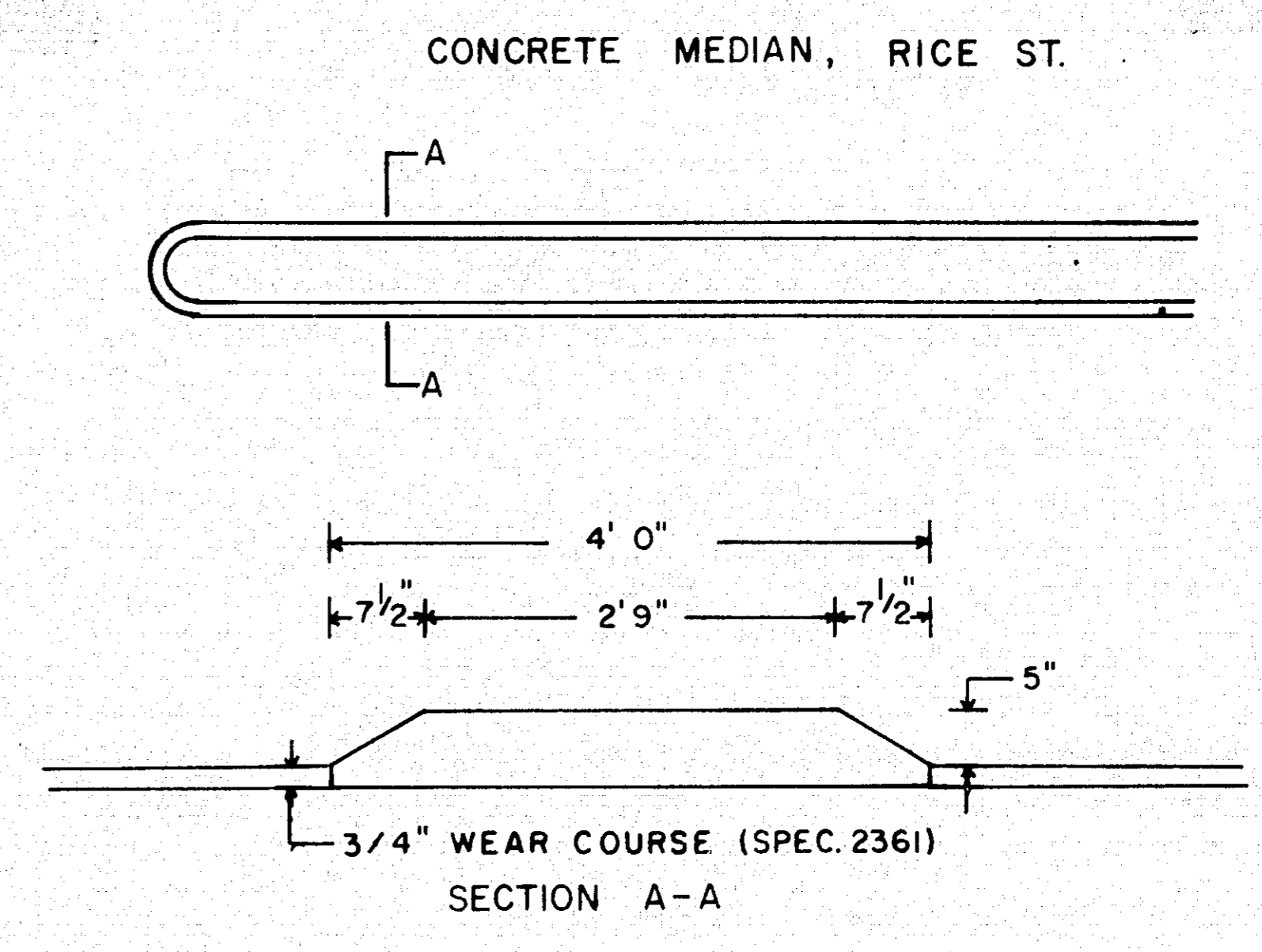
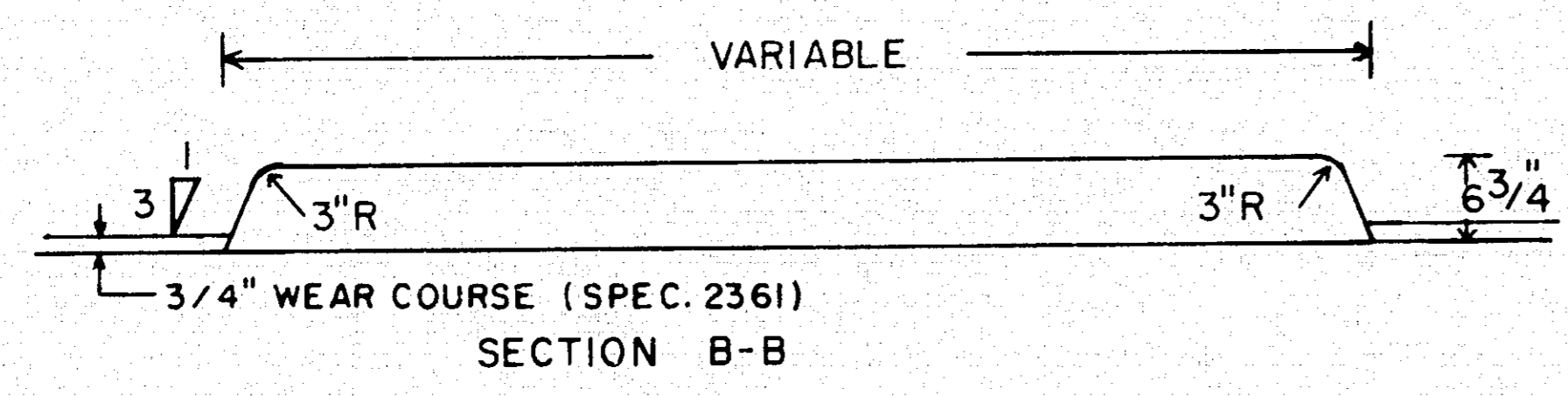
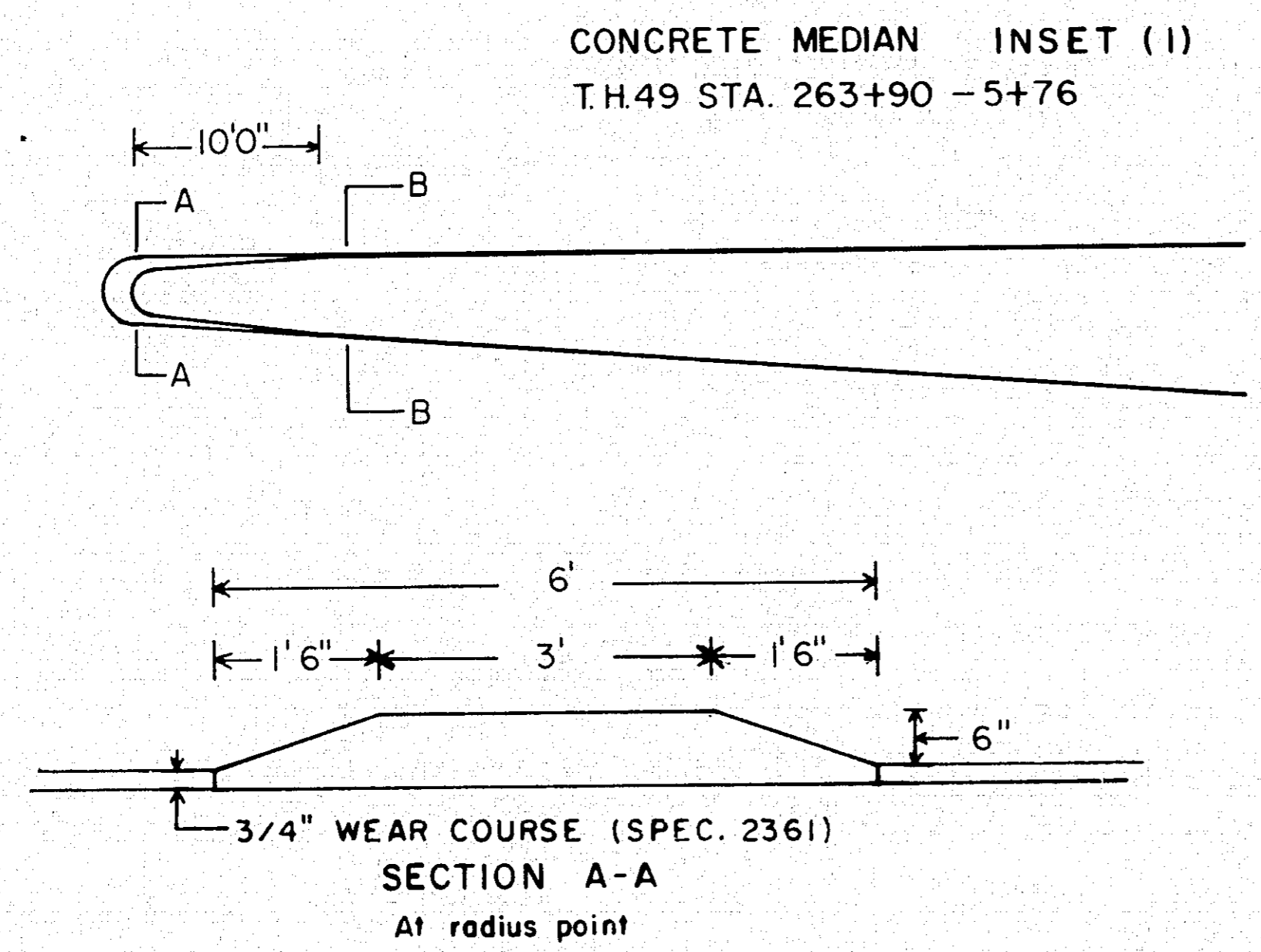
TYPICALS

State Proj. No. 6214-54 (T.H. 49-126)

Sheet No. 4 of 16 Sheets

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW, DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO FILED PROCEDURES FOR THIS DOCUMENT.

Agency/Authority	Doc. No.	Microfilmer Signature	Date
DOT Road Design	Tan Hayes	Sue Peltier	2-11-87



TYPICALS

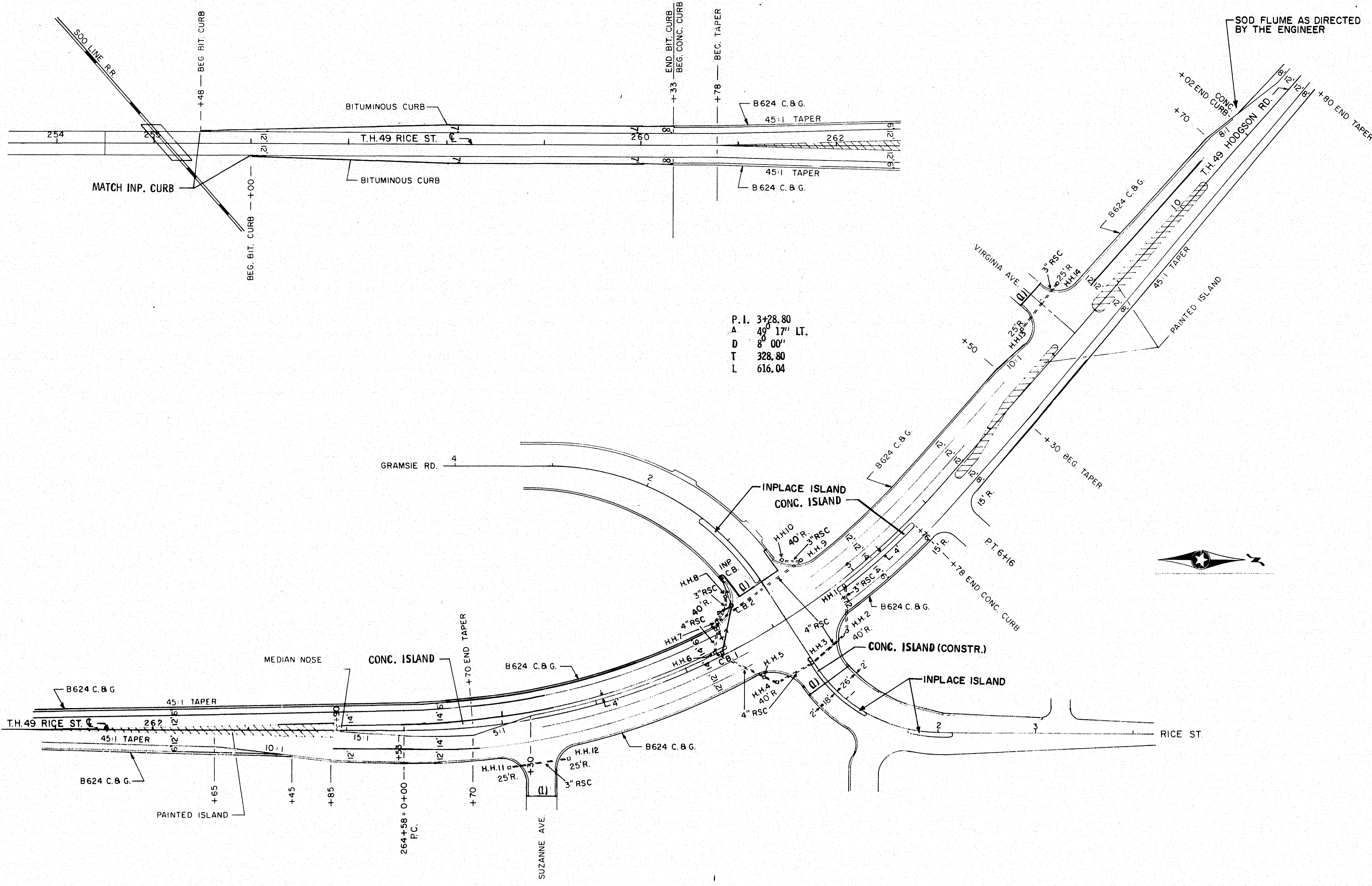
State Proj. No. 6214-54 (T.H. 49=126)

Sheet No. 5 of 16 Sheets

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW, DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO FILED PROCEDURES FOR THIS DOCUMENT.

Agency/Authority	Doc. I.D.	Microfilm Signature	Date
DOT Road Design Tom Noyes	387	Sue Pelton	2-11-87





P. I. 3+28.80  
 A 49' 17" LT.  
 D 8' 00"  
 T 328.80  
 L 616.04

(1) BIT. SAW-CUT

PLANNED CONSTRUCTION

State Proj. No. 6214-54 (T.H.49=126) Sheet No. 7 of 16 Sheets

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW, DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO FILED PROCEDURES FOR THIS DOCUMENT.

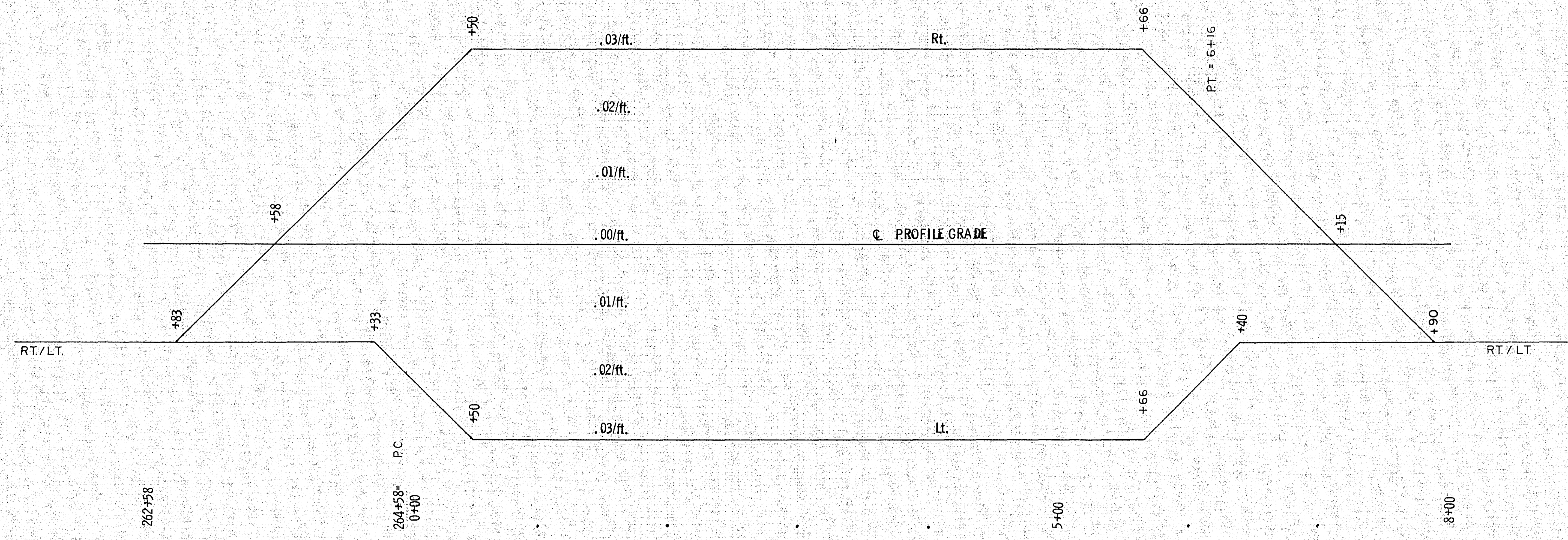
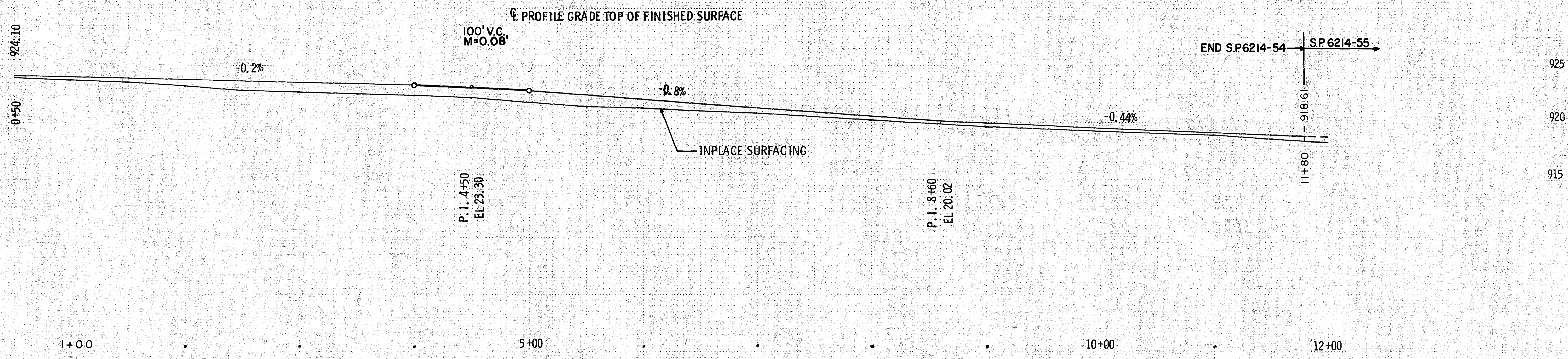
Agency/Authority	Doc. I.D.	Microfilmer Signature	Date
DOT Road Design Tom Noyes	387	Sue Veltien	2-11-87





BM ELEV. 911.31  
 SPK. PP. LT. 260+16

NOTE: 255+48  
 TO 0+50 ADD  
 .06 TO PRESENT  
 C. ROADWAY ELEV.  
 FOR FINISHED  
 C. ELEV.



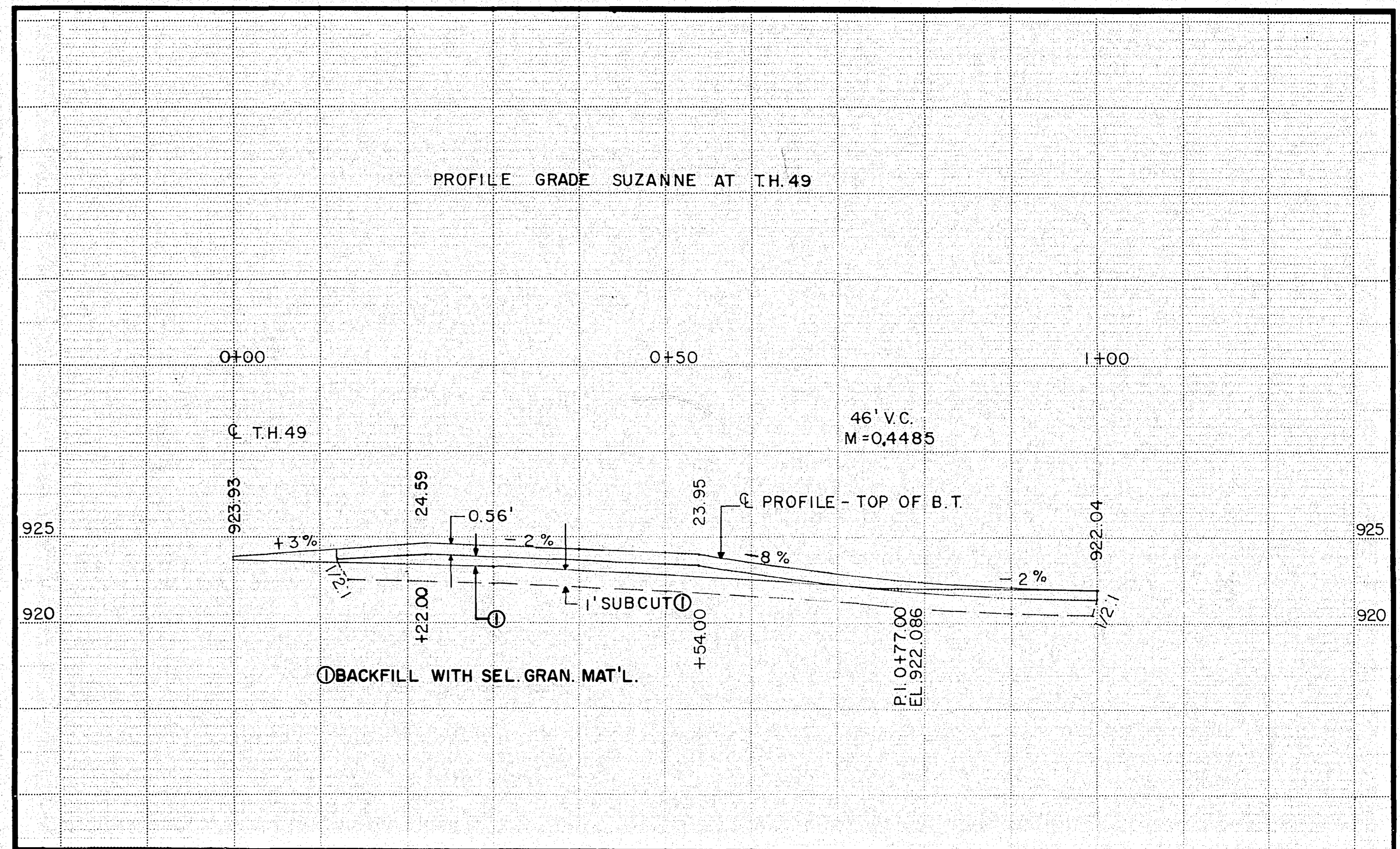
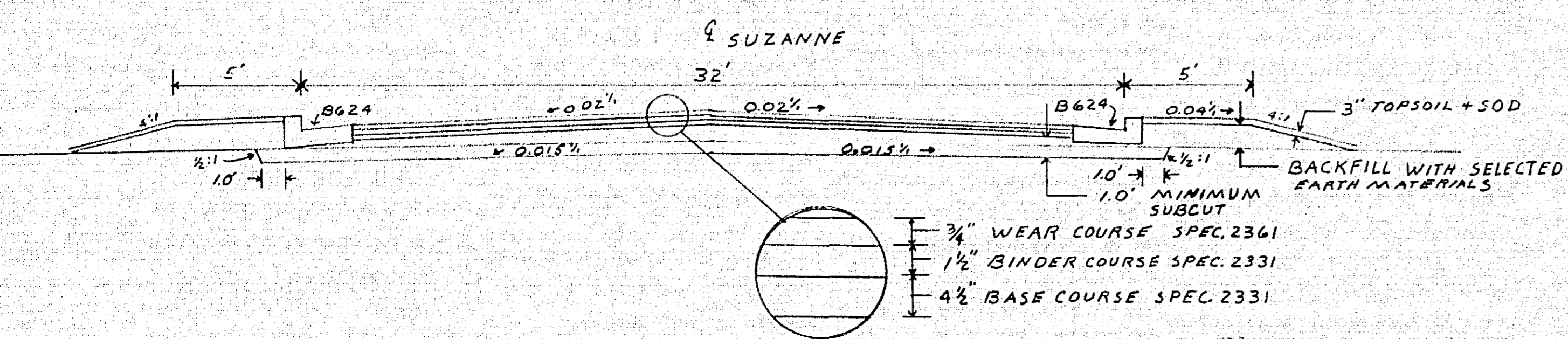
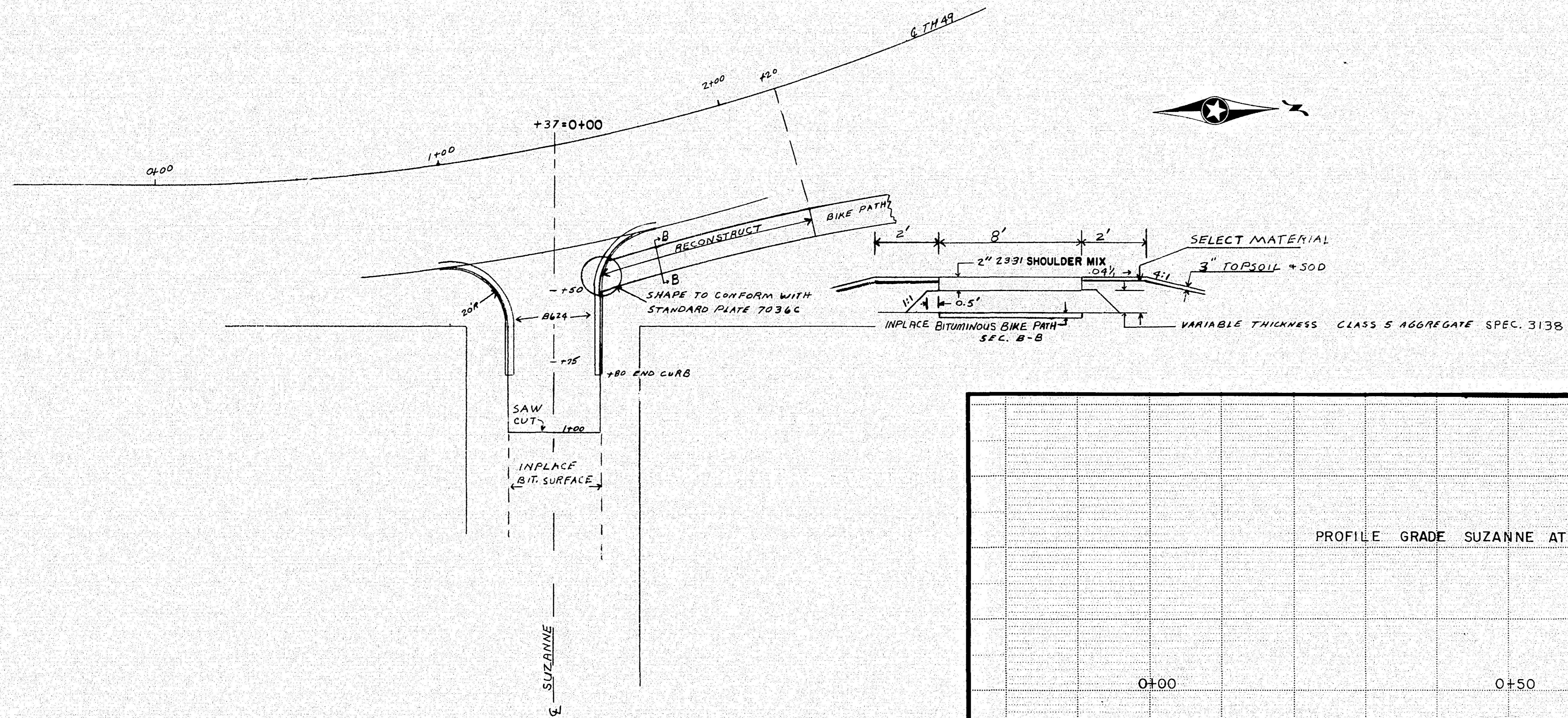
PROFILES  
 SUPERELEVATIONS

State Proj. No. 6214-54 (T.H. 49-126)

Sheet No. 9 of 16 Sheets

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW, DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO FILED PROCEDURES FOR THIS DOCUMENT.

Agency/Activity	Doc. ID	Microfilm Signature	Date
DOT Road Design Tom Hayes	287	Sue Yelton	2-11-87



SUZANNE ST. & BIKE PATH

State Proj. No. 6214-54 (T.H. 49-126)

Sheet No. 10 of 16 Sheets

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW, DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROGRAPHIC SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO FILED PROCEDURES FOR THIS DOCUMENT.

Agency/Authority: DOT Road Design  
 Doc. I.D.: 287  
 Date: 2-11-87

Microfilm Signature: Sue Pelton