

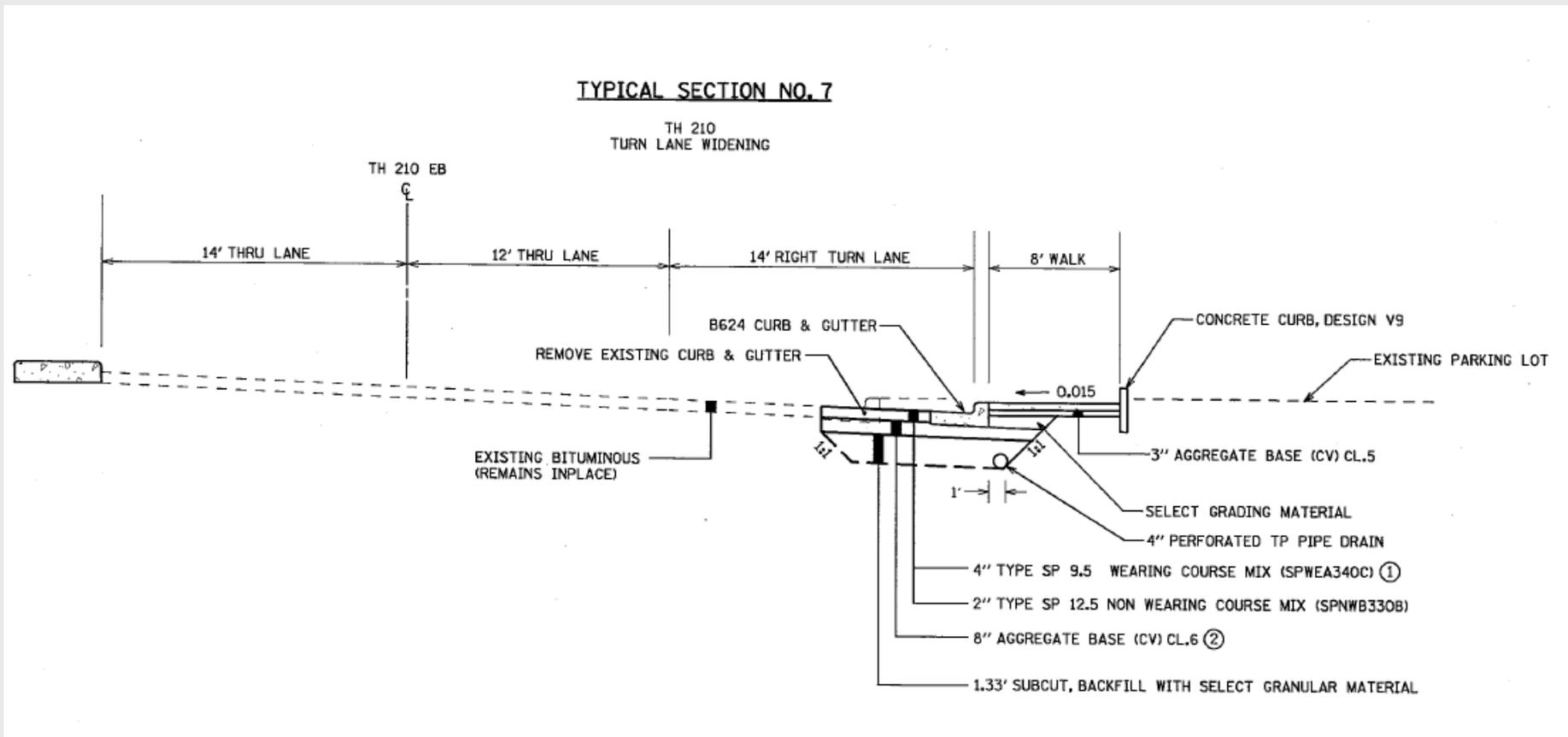
PLAN PRESENTATION BASICS TYPICALS

Project Design Services Unit

JUNE 2019

TYPICALS

In this section you will be introduced to the basic parts of the typical sheets.

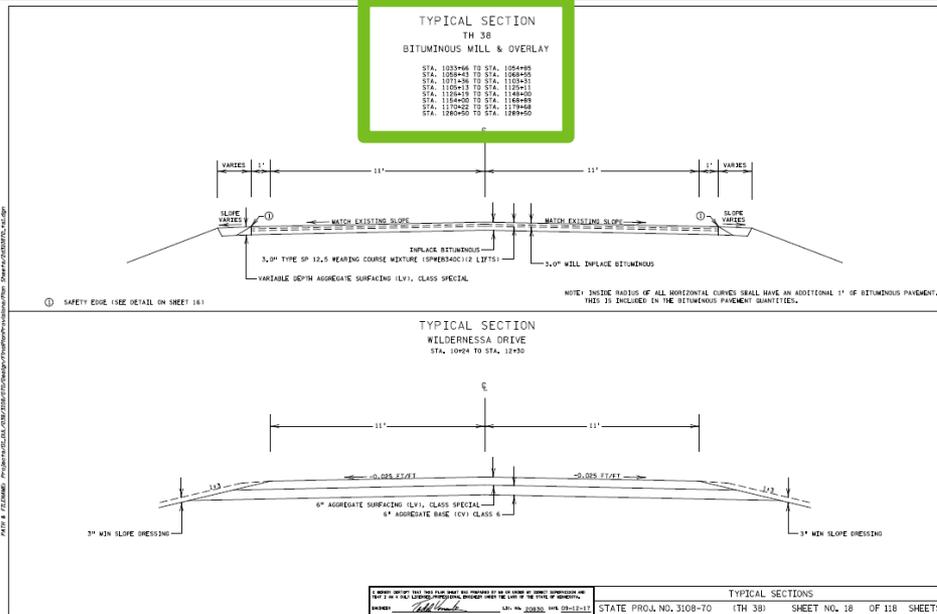


TYPICALS

Typicals should be kept general and may include more than one segment of the project. You don't need an individual typical when one will do for many locations.

TYPICAL SECTION TH 38 BITUMINOUS MILL & OVERLAY

- STA. 1033+66 TO STA. 1054+85
- STA. 1058+43 TO STA. 1068+55
- STA. 1071+36 TO STA. 1103+31
- STA. 1105+13 TO STA. 1125+11
- STA. 1126+19 TO STA. 1148+00
- STA. 1154+00 TO STA. 1168+89
- STA. 1170+22 TO STA. 1179+68
- STA. 1280+50 TO STA. 1289+50



Make sure there are no gaps in the stationing (e.g. all areas are covered)

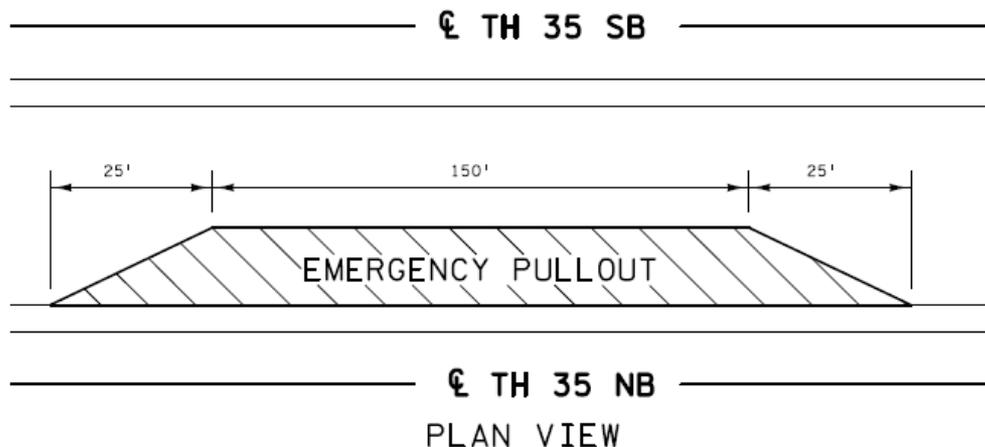
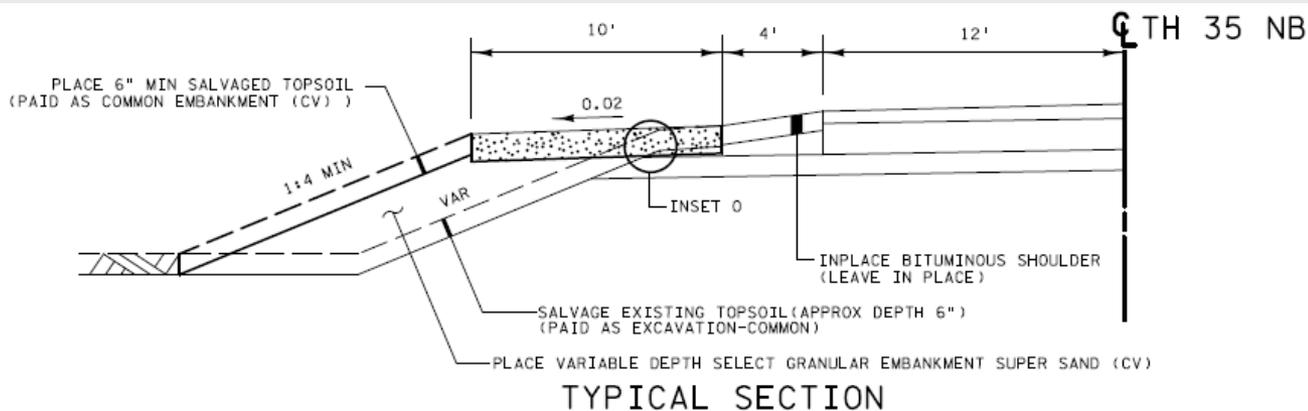
TYPICALS

Typicals come after the tabulations and before the design details in the plan and include....

- Roadway label and/or stationings
- Inplace and proposed sections
- Mainline sections
- Shoulder sections
- Turn lanes sections
- Median sections
- Ditch sections
- Entrances
- Subcuts
- Maximum rollover criteria
- Roadway slopes
- Side slopes
- Slope dressing depth
- Depth and material placed
- Profile grade location
- Retaining walls (limits of structure excavation and backfill types)
- Various types of excavations

TYPICALS

There should be a typical for unique situations as well as temporary and bypass locations.

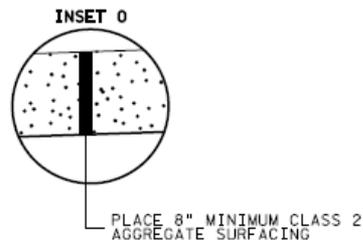


EMERGENCY PULLOUT DETAIL

STA 398+00 TO STA 400+00

NOTES:

ALL CROSS SLOPES ARE IN FEET PER FOOT
SUBGRADE PREPARATION SHALL BE INCIDENTAL.

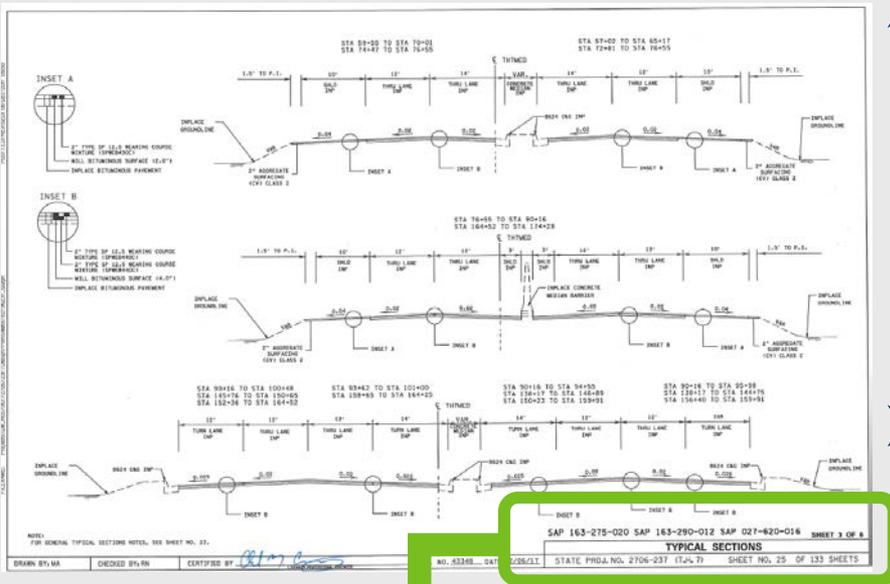


A partial typical is acceptable

PROJECT NUMBER(S)

The project number(s) should be shown in the bottom right corner of the plan sheet. It should include the (TH #) but not the legislative number.

- When there are multiple project numbers as a minimum the PRIME SP number should be shown. It is optional to show all of the SP numbers. The main thing it to be consistent.
- ALL State Aid project numbers must also be shown on every sheet in the bottom right corner.



SAP 163-275-020 SAP 163-290-012 SAP 027-620-016

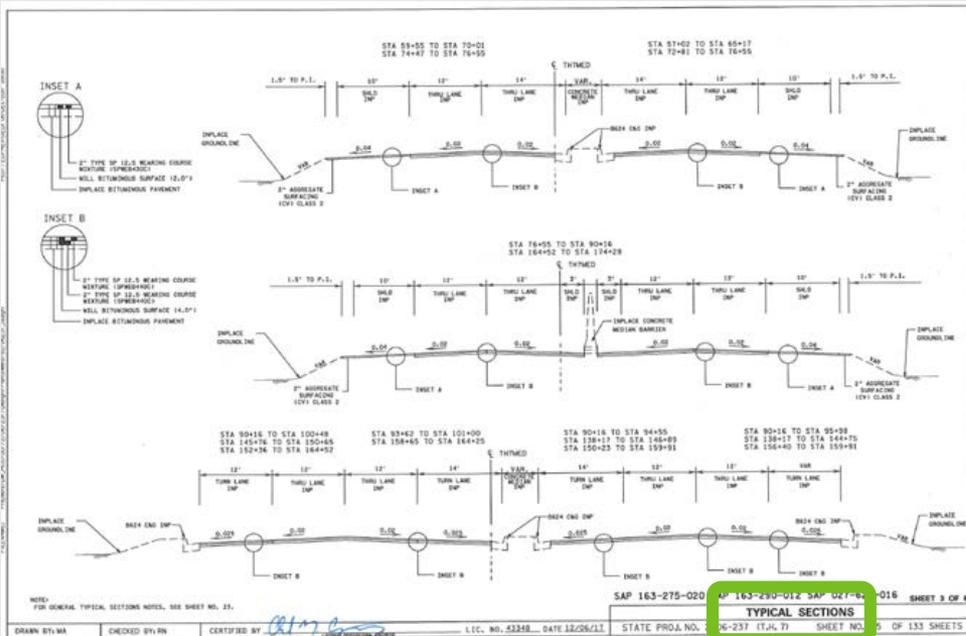
SHEET 3 OF 6

TYPICAL SECTIONS

STATE PROJ. NO. 2706-237 (T.H. 7) SHEET NO. 25 OF 133 SHEETS

TYPICAL SHEET LABEL

The sheet label should be shown in the bottom right corner of the plan sheet. Above the SP # and SHEET number.



Some designers like to label the sheet sequence. (e.g. Sheet 3 of 6). This is optional.

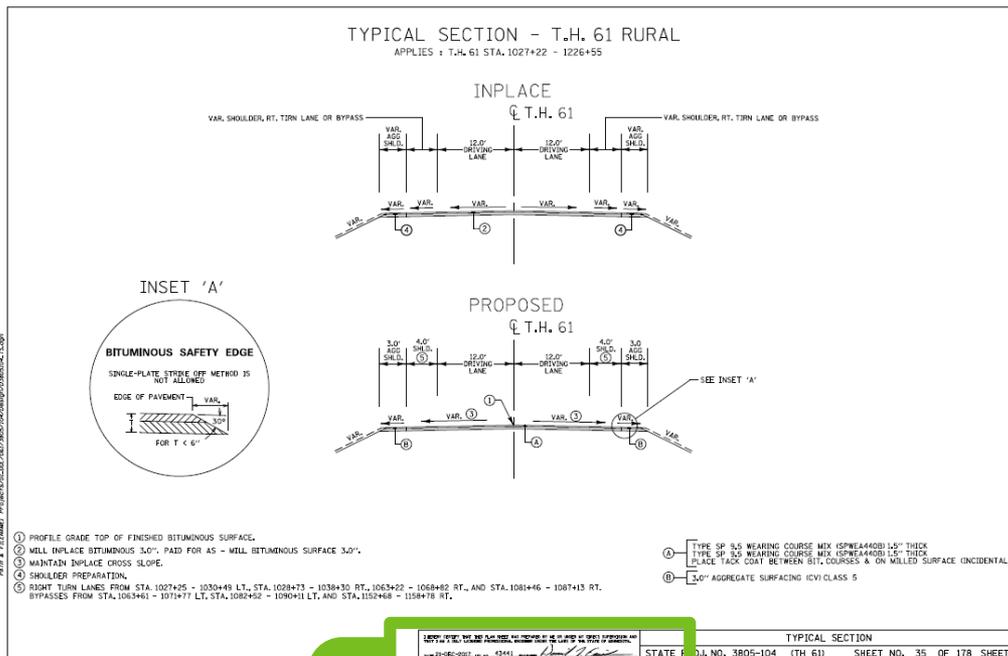
SAP 163-275-020 SAP 163-290-012 SAP 027-620-016 SHEET 3 OF 6

TYPICAL SECTIONS

STATE PROJ. NO. 2706-237 (T.H. 7) SHEET NO. 25 OF 133 SHEETS

SHEET SIGNATURE

Each typical sheet must be signed. This is typically located in the bottom center of the sheet just left of the SP #.



This will include the Design Engineers (same person who signed the plan title sheet). It will include....

- Printed name
- Signature
- License Number
- Date

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

DATE 21-DEC-2017 LIC. NO. 43441 ENGINEER Daniel J. Erickson
 DANIEL J. ERICKSON

SHEET SIGNATURE (Continued)

A different signature block will be used if these are signed by an Engineer different than the one who signed the title sheet. This will require the Board of AELSLAGID signature language which includes ...

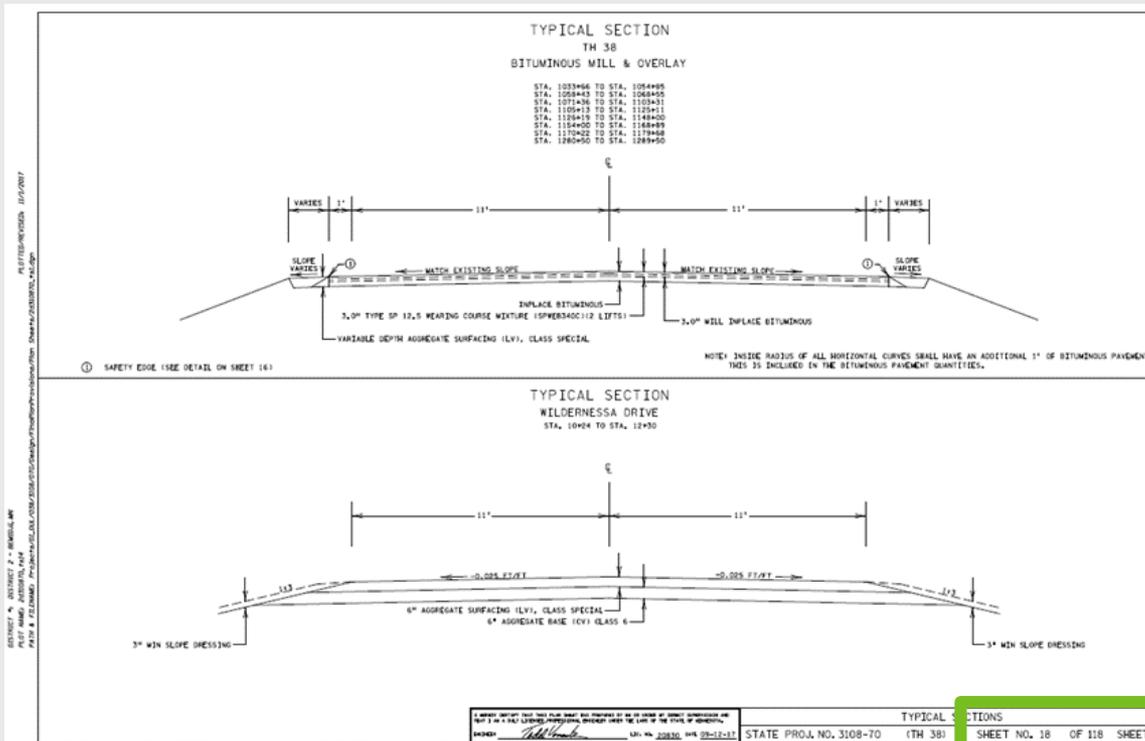
- the certified by language
- Printed name
- Signature
- License number
- Date

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

DATE 21-DEC-2017 LIC. NO. 43441 ENGINEER *Daniel J. Erickson*
DANIEL J. ERICKSON

SHEET NUMBER

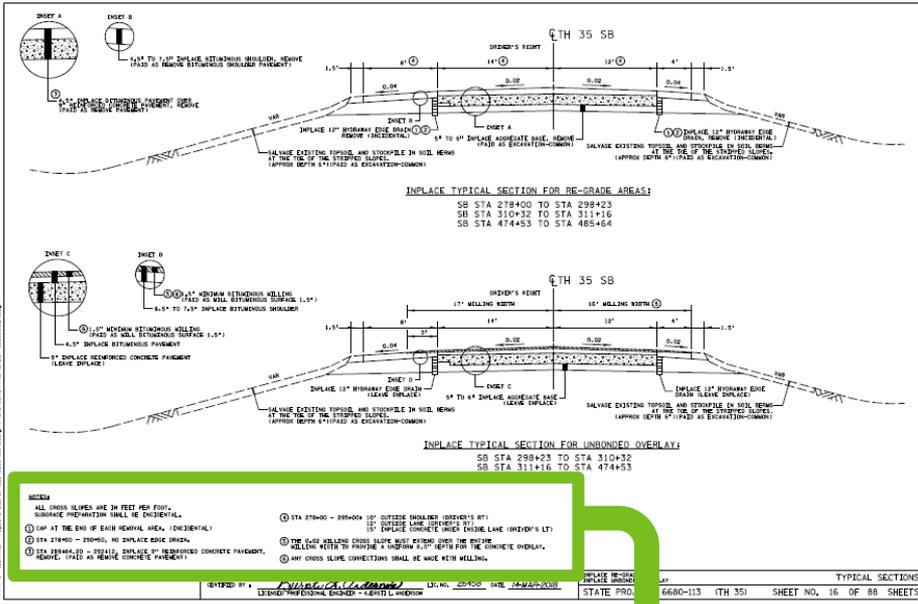
The sheet number is shown in the bottom right corner of the plan sheet.



TYPICALS – NOTES

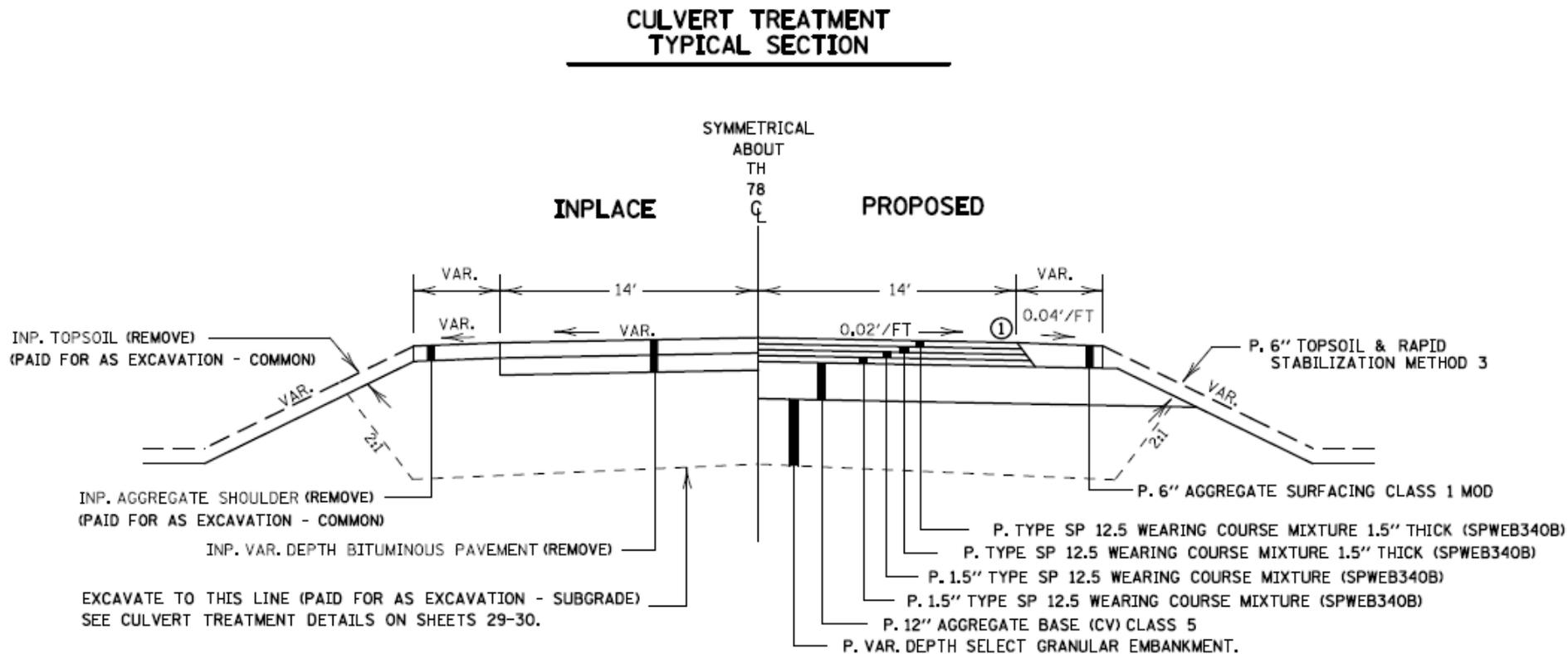
All typical notes should be accounted for.

- The note should be clear, understandable
- The note should be necessary, don't have more notes than you need.
- If something can be handled by a note rather than another typical is should be used.



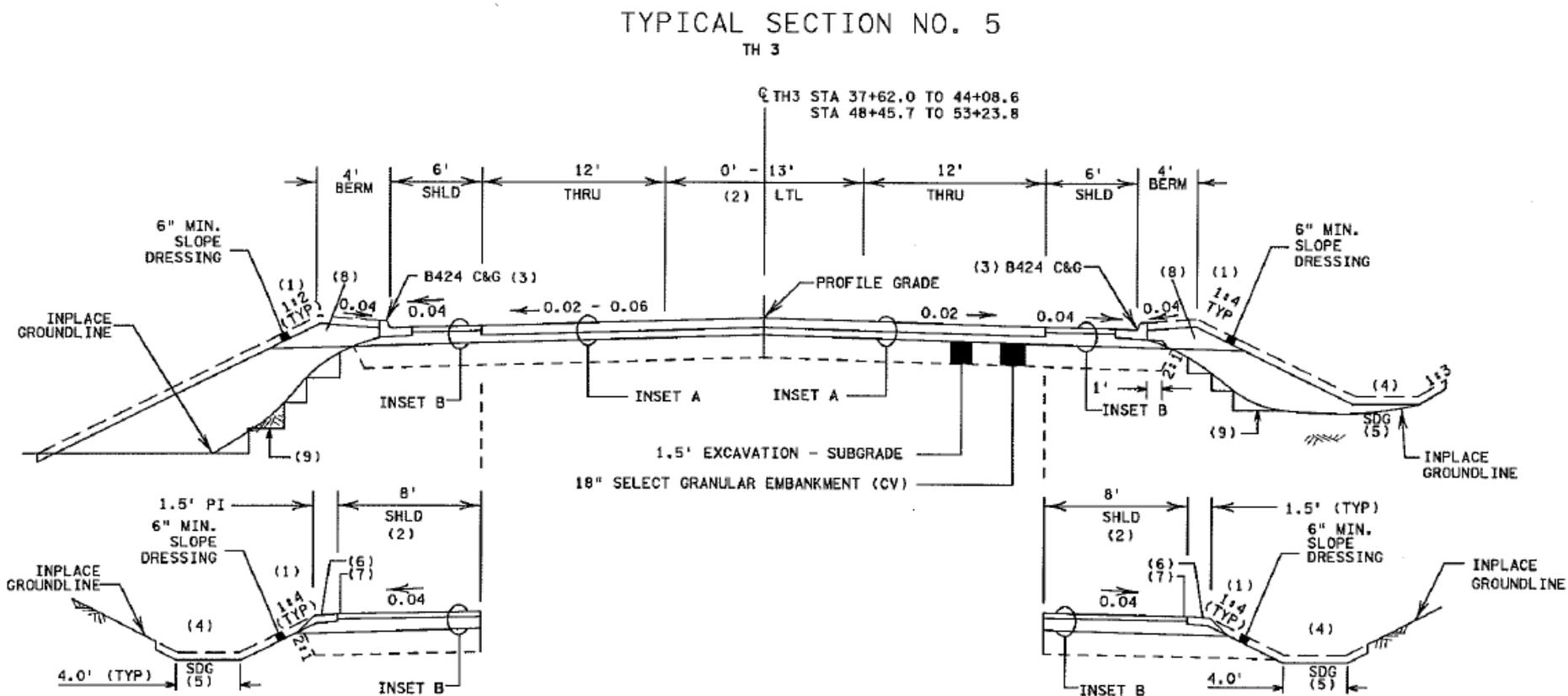
TYPICALS

One variation for showing the typical is to show both inplace and proposed as one typical as shown below.



TYPICALS

One variation when there are only minor differences is to continue the variations below the main portion as shown below.



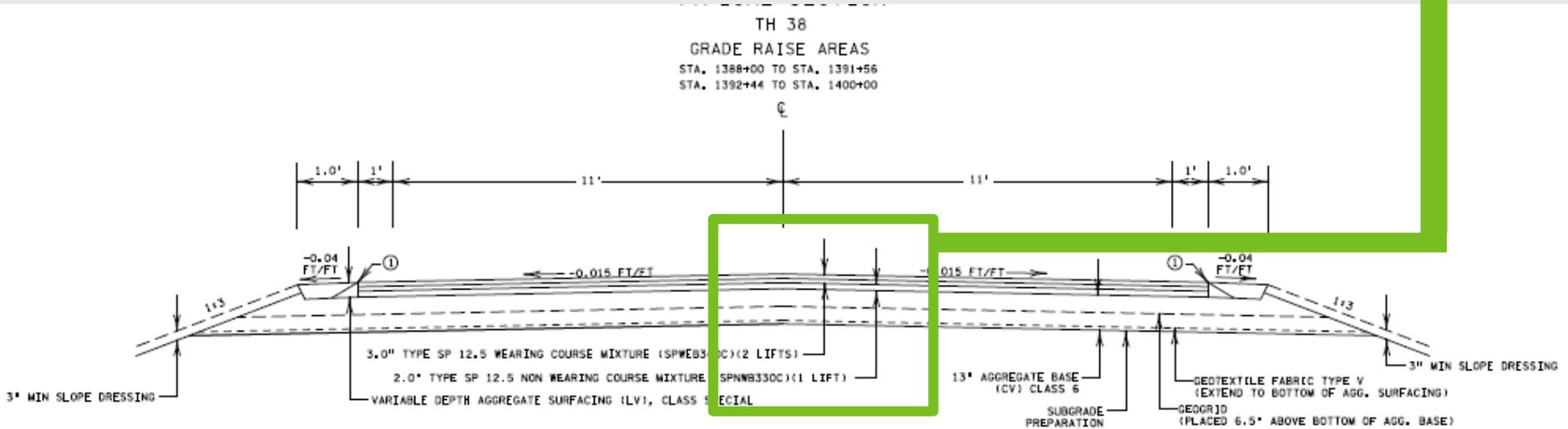
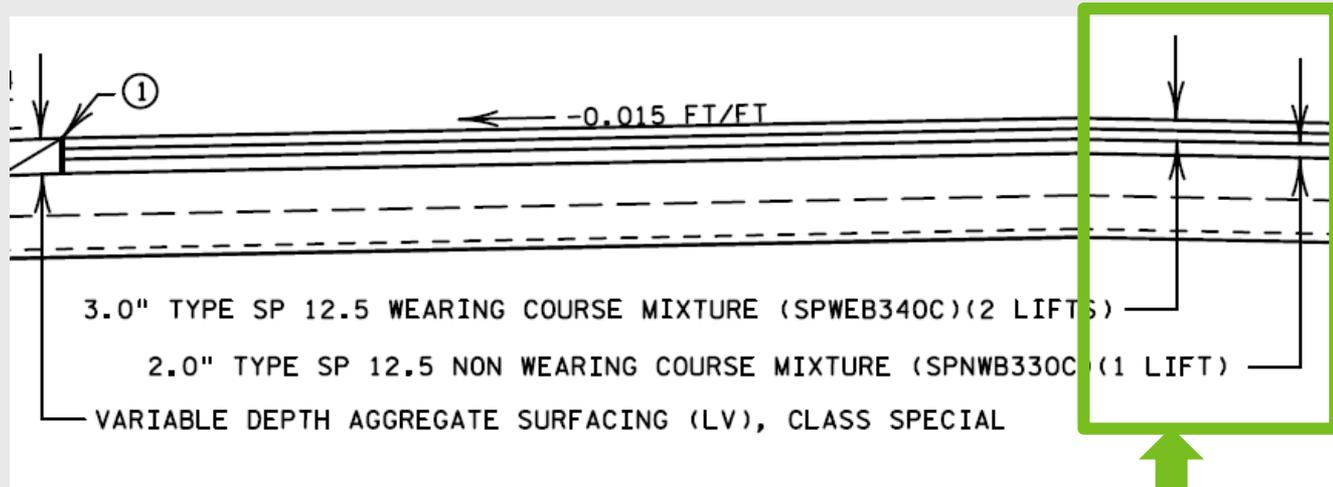
TYPICALS

The typicals can be labelled several different ways (see next several slide).

- Just be sure to be consistent on how you show them in the plan.
- All layers should be shown and match the pay item descriptions.
- The bituminous layer should include the mix designation in parenthesis.

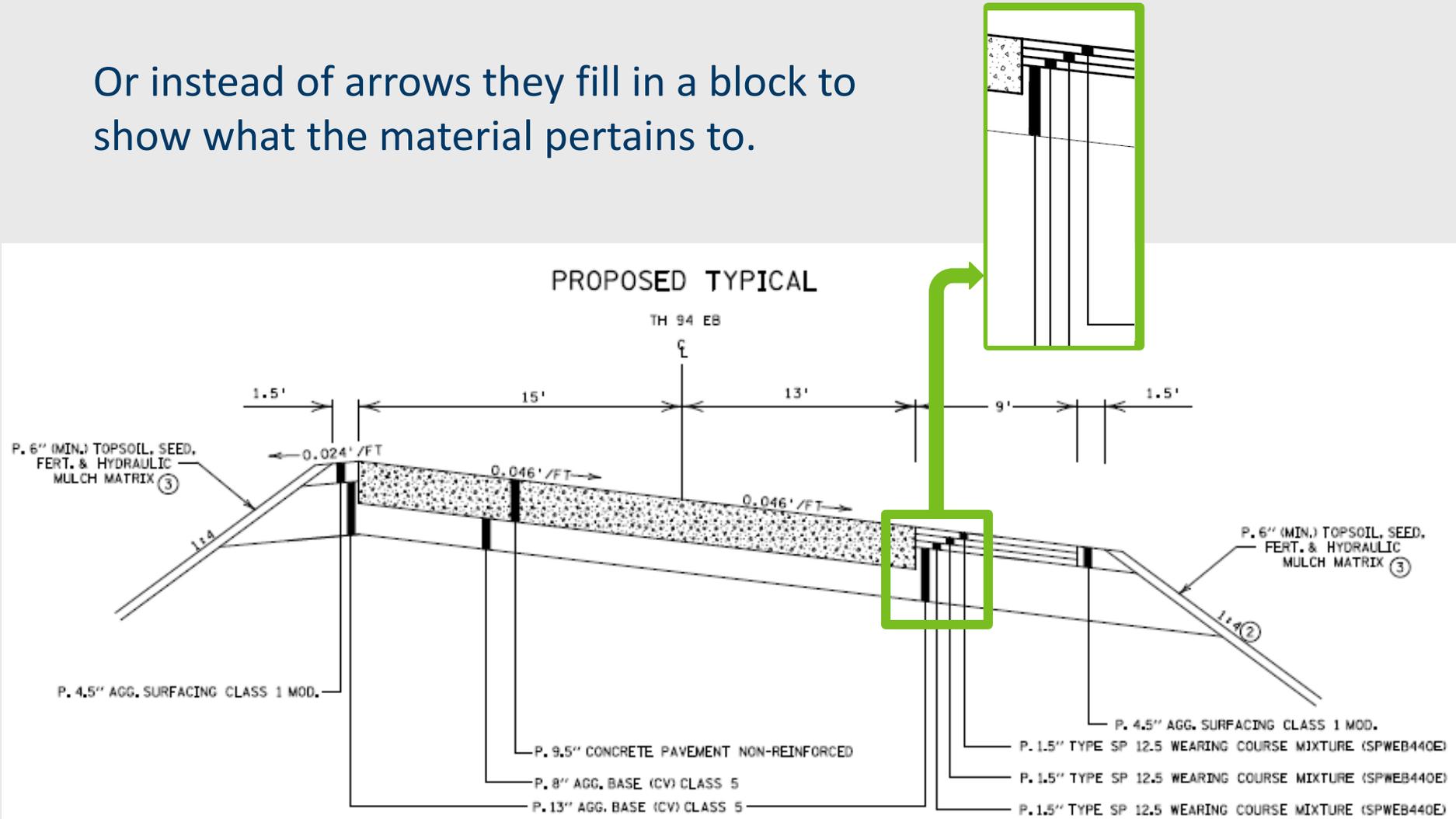
TYPICALS

One option for showing what is being placed is to label them with leader lines.



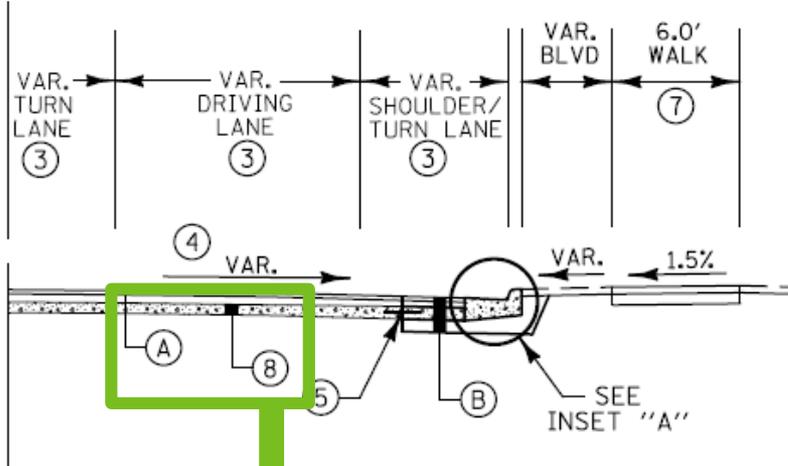
TYPICALS

Or instead of arrows they fill in a block to show what the material pertains to.



TYPICALS

☉ T.H. 61

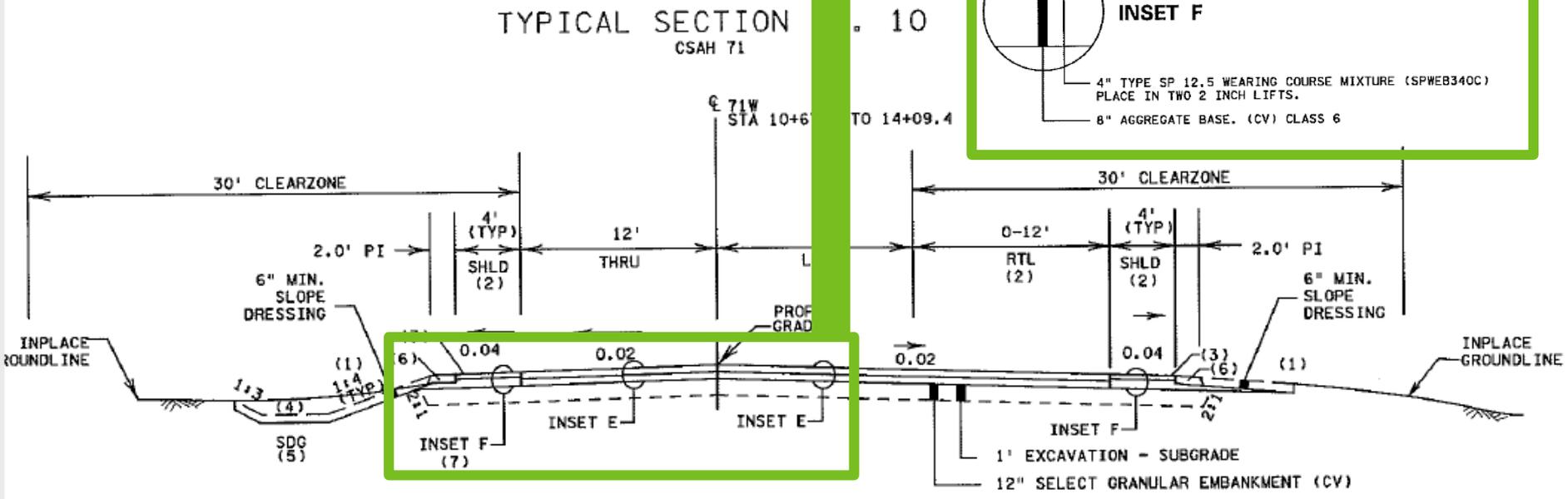
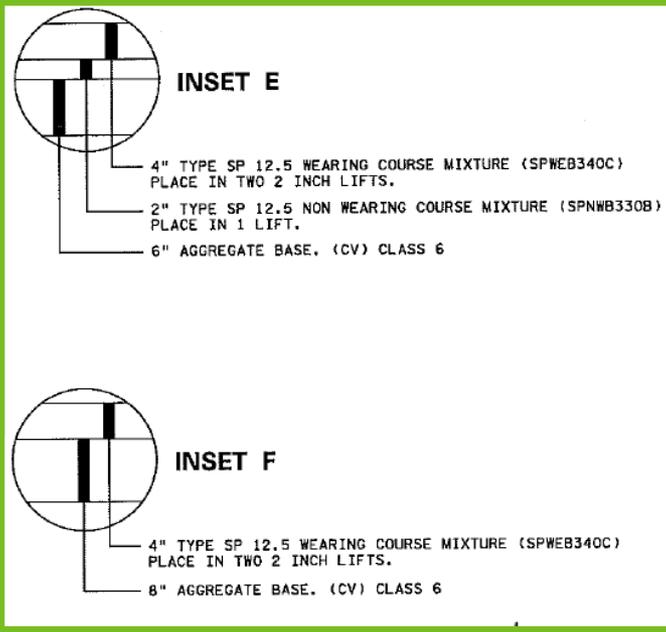


The use of insets is also an option.
It can be shown this way.

- (A) TYPE SP 9.5 WEARING COURSE MIX (SPWEA440B) 2.0" THICK
PLACE TACK COAT ON MILLED SURFACE (INCIDENTAL)
- (B) TYPE SP 9.5 WEARING COURSE MIX (SPWEA440B) 2.0" THICK
TYPE SP 9.5 WEARING COURSE MIX (SPWEA440B) 1.5" THICK
TYPE SP 9.5 WEARING COURSE MIX (SPWEA440B) 1.5" THICK
PLACE TACK COAT BETWEEN BIT. COURSES & ON NEW CONCRETE SURFACE (INCIDENTAL)
CONCRETE PAVEMENT 6.0"
6.0" AGGREGATE BASE (CV) CLASS 5

TYPICALS

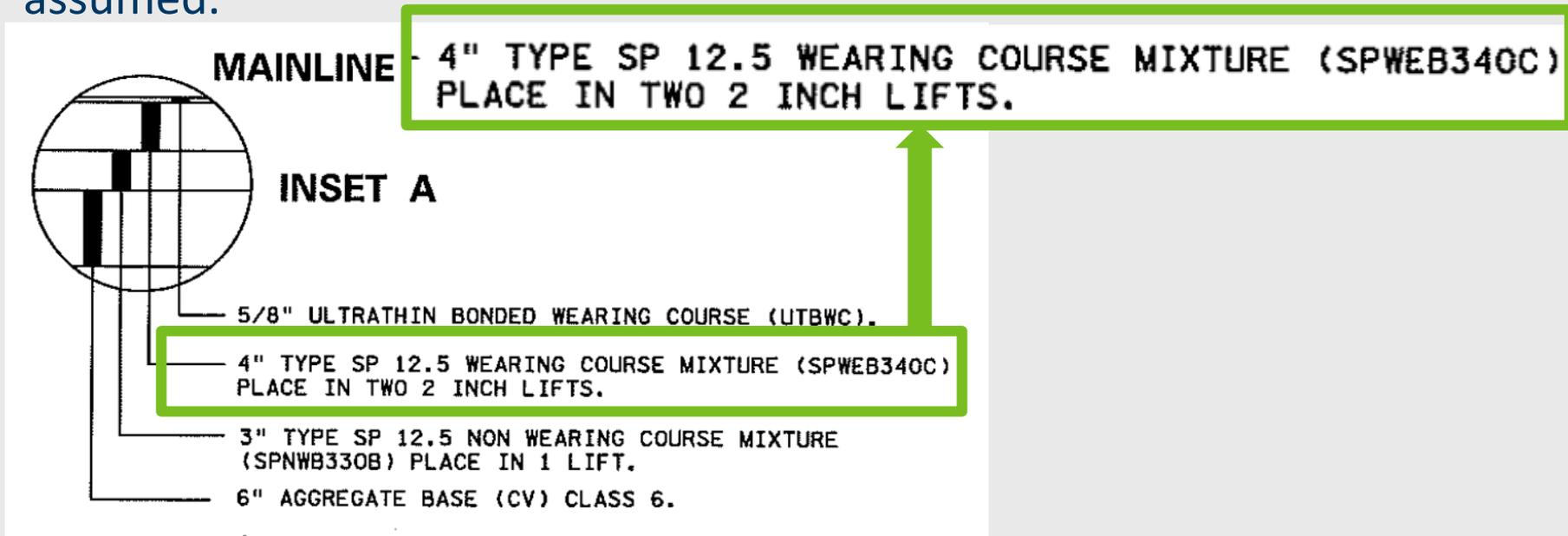
The use of insets is also an option.
It can be shown this way.



TYPICALS

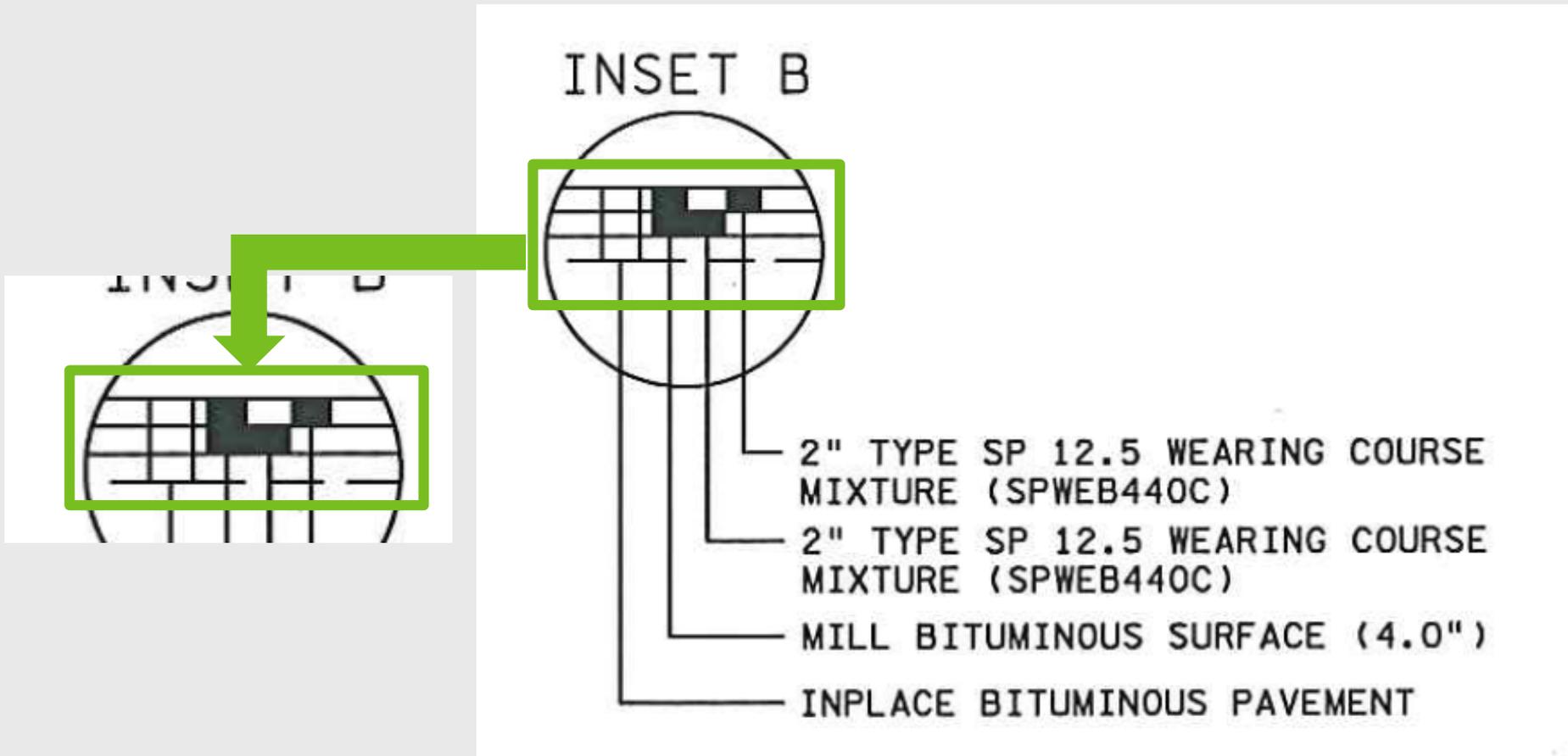
The bituminous material reference should...

- Include the full description.
- Only have a space between the “non” and “wearing” for non wearing description
- Include the mix designation
- The number/depth of applications (lifts). If none are listed one lift is assumed.



TYPICALS

A filled in box implies new material and an empty box implies inplace material.



TYPICALS - SLOPES

The slopes should be shown on the typical.

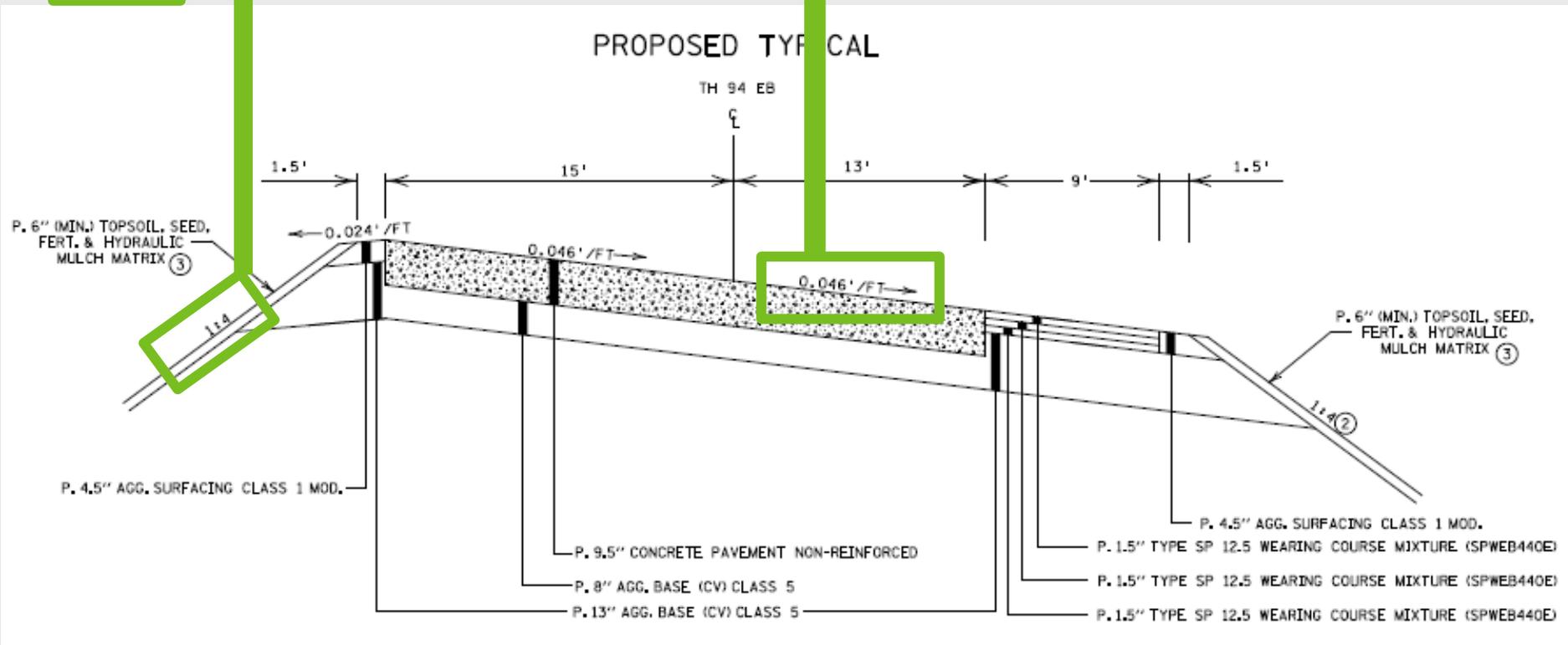


Should always be shown as rise:run.



It should always include units or a general note stating the units.

It should always have a zero in front of a blank decimal number.



QUESTIONS????

Any questions contact us ANYTIME:

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