

# MINNESOTA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR GRADING, BITUMINOUS MILL & UNBONDED CONCRETE OVERLAY, LIGHTING AND BRIDGE #66817.

LOCATED ON TH 35 SB FROM 0.1 MILES SOUTH OF TH 21 TO 0.1 MILES NORTH OF RICE CSAH 9

STATE PROJ. NO. 6680-113  
GROSS LENGTH 20593.43 FEET 3.900 MILES  
BRIDGES-LENGTH 281.00 FEET 0.053 MILES  
EXCEPTIONS-LENGTH FEET MILES  
NET LENGTH 20593.43 FEET 3.900 MILES  
REF. POINT .058+00.863 TO REF. POINT.062+00.769

NOTE: LENGTH OF PROJECT BASED ON TH 35 SB ALIGNMENT.



FED. PROJ. NO. NHPP. I350(124)

## GOVERNING SPECIFICATIONS

THE 2008 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
STANDARD SPECIFICATIONS FOR CONSTRUCTION SHALL GOVERN.

## INDEX

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16-23	TYPICAL SECTIONS
24-33	CONSTRUCTION PLANS
34	PROFILES
35-44	DESIGN DETAILS
45-88	STANDARD PLANS
D1-D8	DRAINAGE PLANS
S1-S28	SIGNING PLANS
T1-T10	TRAFFIC CONTROL PLANS
ST1-ST2	PAYEMENT MARKING PLANS
L1-L2	LIGHTING PLANS

THIS PLAN CONTAINS 138 SHEETS

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

# PLAN PRESENTATION BASICS TITLE SHEET

Project Design Services Unit

June 2019

# THE BASICS OF THE TITLE SHEET

In this section you will be introduced to the basic parts of the title sheet. This is required for ALL MnDOT let plans.

Title sheets should be printed on Vellum not bond or mylar paper. This allows central office to edit the sheet if necessary so that the district does not have to re-route it for signatures should revisions be needed after submittal.

# GOVERNING SPECS

This defines the governing specifications for the project and should be the current spec year (fill in the 20XX).

FED. PROJ. NO. NHPP I350(124)

**GOVERNING SPECIFICATIONS**  
 THE 20XX EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
 "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

MINNESOTA DEPARTMENT OF TRANSPORTATION  
 CONSTRUCTION PLAN FOR GRADING, BITUMINOUS MILL & UNBONDED CONCRETE OVERLAY, LIGHTING AND BRIDGE #66817.  
 LOCATED ON TH 35 SB FROM 0.1 MILES SOUTH OF TH 21 TO 0.1 MILES NORTH OF RICE CASH 9.

STATE PROJ. NO. 6680-113  
 GROSS LENGTH 20593.43 FEET 3.900 MILES  
 BRIDGES-LENGTH 28100 FEET 0.533 MILES  
 EXCEPTIONS-LENGTH FEET MILES  
 NET LENGTH 20593.43 FEET 3.900 MILES  
 REF. POINT 056+00.869 TO REF. POINT 062+05.749  
 NOTE LENGTH OF PROJECT BASED ON TH 35 SB ALIGNMENT.

BRIDGE #66817  
 LENGTH = 281'-00"

TH 35 SB STA 485+44.00  
 SP 062+00.749

END SP 6680-113 (TH 35)

TH 35 SB STA 278+00.00  
 SP 061+00.868

BEGIN SP 6680-113 (TH 35)

EQUATIONS  
 STA 282+94.22 BR- 282+94.22 BR  
 STA 292+02.34 BR- 292+02.34 BR  
 STA 324+07.89 BR- 324+07.89 BR  
 STA 449+37.40 BR- 449+37.40 BR  
 STA 456+24.76 BR- 456+24.76 BR  
 STA 462+33.36 BR- 462+33.36 BR

WARNING!  
 HIGH-PRESSURE GAS  
 LINE CROSSING.

DESIGN DESIGNATION  
 Design Year 2018  
 Design Speed 55 MPH  
 Design Type 2018  
 Design Type 2018  
 Design Type 2018  
 Design Type 2018  
 Design Type 2018

PROJECT LOCATION  
 COUNTY & RICE  
 DISTRICT & 6

FED. PROJ. NO. NHPP I350(124)  
 GOVERNING SPECIFICATIONS  
 THE 20XX EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
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109-110	TRAFFIC CONTROL PLANS
111-112	PAYMENT MARKING PLANS
113-114	LIGHTING PLANS

THIS PLAN CONTAINS 138 SHEETS

I HEREBY CERTIFY THAT THIS PLAN 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.

PRINT NAME: KURTZ ANDERSON  
 LICENSE # 3458  
 DATE: 3/11/18  
 SIGNATURE: *Kurtz Anderson*  
 DESIGN SCHOOL: MATTHEW KIMMEL, FET EDOL, JOHN KERRON

RECOMMENDED FOR APPROVAL: *[Signature]* 3/11/18  
 RECOMMENDED FOR APPROVAL: *[Signature]* 3/14/18  
 RECOMMENDED FOR APPROVAL: *[Signature]* 3/14/18  
 RECOMMENDED FOR APPROVAL: *[Signature]* 3/14/18  
 RECOMMENDED FOR APPROVAL: *[Signature]* 4/10/18  
 DATE OF LAST REVISION: 4/10/18  
 APPROVED: 4/10/18  
 STATE PROJ. NO. 6680-113 (TH 35 = 390) SHEET NO. 1 OF 88 SHEETS

It is located in the top right corner under the federal project number and above the index.

# FUNDING

FED. PROJ. NO. NHPP I350(124)

GOVERNING SPECIFICATIONS

Funding is shown in the top right corner of the plan above the governing specifications.

➤ If Federally funded include the Federal Project Number in the top right corner of the sheet.

➤ If State funded include the words "STATE FUNDS"

➤ If unknown leave it blank and CO Plan Review will add it when it is known.

MINNESOTA DEPARTMENT OF TRANSPORTATION  
CONSTRUCTION PLAN FOR GRADING, BITUMINOUS MILL & UNBONDED CONCRETE OVERLAY, LIGHTING AND BRIDGE #66817.  
LOCATED ON TR 35 SB FROM 0.1 MILES SOUTH OF TR 21 TO 0.1 MILES NORTH OF RISE CS&N

STATE PROJ. NO. 6680-113  
BRIDGE LENGTH 285.00 FEET 0.853 MILES  
EXCEPTED LENGTH 0.000 FEET 0.000 MILES  
NET LENGTH 285.00 FEET 0.853 MILES  
REF. POINT: 556+00.00 TO REF. POINT: 056+00.00  
NOTE: LENGTH OF PROJECT BASED ON TR 35 SB ALIGNMENT.

TR 35 SB STA 486+00.00  
END SP 6680-113 (TH 35)  
BRIDGE MARKER  
LENGTH = 281.00'  
TR 35 SB STA 486+00.00  
TR 35 SB STA 486+00.00  
BEGIN SP 6680-113 (TH 35)  
TR 35 SB STA 274+00.00  
BY 054+00.00

EQUATIONS  
TR 35 SB  
STA 486+00.00  
STA 486+00.00

WARNING!  
HIGH-PRESSURE GAS  
LINE CROSSING.

FOR PLANS AND UTILITIES SYMBOLS SEE TECHNICAL MANUAL.  
STATE PROJ. NO. CHARGE IDENTIFIER  
6680-113

DESIGN DESIGNATION  
2018 TR 35 SB  
ADT Current Year 2018 35,300 Design Speed 70 MPH  
ADT Future Year 2038 35,300 Based on Light Traffic  
Div. Design W. Side 3.5' Height of object 3.5'  
0 (d) and (d) 1' X Design Speed not achieved etc.  
1 Heavy Commercial 10.5' X 37.4'

PROJECT LOCATION  
COUNTY + ROAD  
DISTRICT + 6

FED. PROJ. NO. NHPP I350(124)  
GOVERNING SPECIFICATIONS

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22-23	SIGNING PLANS
24-25	TRAFFIC CONTROL PLANS
26-27	PAVEMENT MARKING PLANS
28-29	LIGHTING PLANS

THIS PLAN CONTAINS 328 SHEETS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
LICENSE # 2088  
DATE: 3/11/18  
DESIGNER: [Signature]

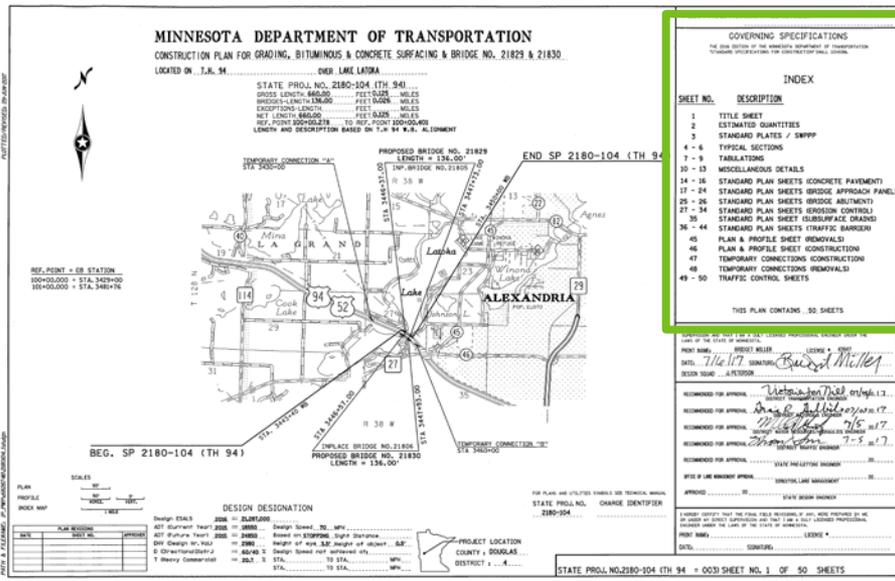
RECOMMENDED FOR APPROVAL: [Signature] 3/14/18  
RECOMMENDED FOR APPROVAL: [Signature] 3/19/18  
RECOMMENDED FOR APPROVAL: [Signature] 3/11/18  
RECOMMENDED FOR APPROVAL: [Signature] 3/11/18  
RECOMMENDED FOR APPROVAL: [Signature] 4/10/18  
DATE: 4/10/18  
APPROVED: [Signature]

STATE PROJ. NO. 6680-113 (TH 35 + 390) SHEET NO. 1 OF 88 SHEETS

# INDEX OF SHEETS

This contains the sheet descriptions for the plan.

- Is located below the governing specifications and above the signatures.
- Sheet numbers and descriptions match what is in the plan.
- It is preferred that the sheet numbers all be numbers not lettered sheets if possible.



**INDEX**

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14 - 16	STANDARD PLAN SHEETS (CONCRETE PAVEMENT)
17 - 24	STANDARD PLAN SHEETS (BRIDGE APPROACH PANEL)
25 - 26	STANDARD PLAN SHEETS (BRIDGE ABUTMENT)
27 - 34	STANDARD PLAN SHEETS (EROSION CONTROL)
35	STANDARD PLAN SHEET (SUBSURFACE DRAINS)
36 - 44	STANDARD PLAN SHEETS (TRAFFIC BARRIER)
45	PLAN & PROFILE SHEET (REMOVALS)
46	PLAN & PROFILE SHEET (CONSTRUCTION)
47	TEMPORARY CONNECTIONS (CONSTRUCTION)
48	TEMPORARY CONNECTIONS (REMOVALS)
49 - 50	TRAFFIC CONTROL SHEETS

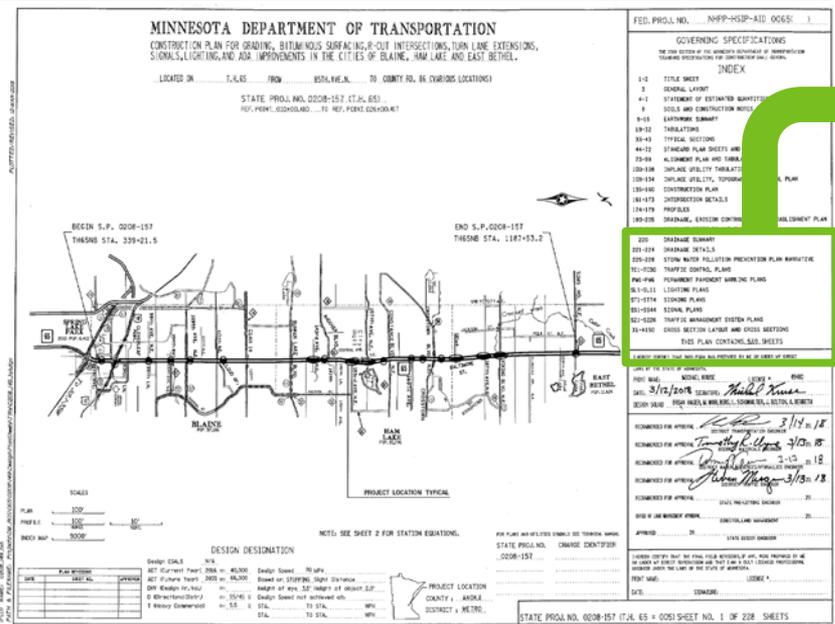
**THIS PLAN CONTAINS 50 SHEETS**

# INDEX OF SHEETS

➤ There can be lettered sheets but these must following the number sheets. You cannot mix and match. In other words you CANNOT have sheets 1-50 then PM1-PM5 then back to 51-100.

101-173	INTERSECTION DETAILS
174-179	PROFILES
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206-219	DRAINAGE PROFILES AND TABULATIONS
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221-224	DRAINAGE DETAILS
225-228	STORM WATER POLLUTION PREVENTION PLAN NARRATIVE
TC1-TC30	TRAFFIC CONTROL PLANS
PM1-PM6	PERMANENT PAVEMENT MARKING PLANS
SL1-SL11	LIGHTING PLANS
ST1-ST74	SIGNING PLANS
SS1-SS45	SIGNAL PLANS
SZ1-SZ26	TRAFFIC MANAGEMENT SYSTEM PLANS
X1-X150	CROSS SECTION LAYOUT AND CROSS SECTIONS

**THIS PLAN CONTAINS 570 SHEETS**



Typically the following are used if using lettered sheets (they follow the special provision labels)...

- ❖ TC TRAFFIC CONTROL PLANS
- ❖ PM PAVEMENT MARKING PLANS
- ❖ SL LIGHTING PLANS
- ❖ ST SIGNING PLANS
- ❖ SS SIGNAL PLANS
- ❖ SZ TRAFFIC MANAGEMENT SYSTEM PLANS
- ❖ X or XS CROSS SECTIONS PLANS

# INDEX OF SHEETS

- Cross sections come last.
- There is a plan sheet total note and it's phrased as...THIS PLAN CONTAINS XXX SHEETS

FED. PROJ. NO. NHPP-HSIP-AID 0065(306)

## GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION 'STANDARD SPECIFICATIONS FOR CONSTRUCTION' SHALL GOVERN.

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100-108	INPLACE UTILITY TABULATIONS
109-134	INPLACE UTILITY, TOPOGRAPHY & REMOVAL PLAN
135-160	CONSTRUCTION PLAN
161-173	INTERSECTION DETAILS
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TC1-TC30	TRAFFIC CONTROL PLANS
PM1-PM6	PERMANENT PAVEMENT MARKING PLANS
SL1-SL11	LIGHTING PLANS
ST1-ST74	SIGNING PLANS
SS1-SS45	SIGNAL PLANS
521-5226	TRAFFIC MANAGEMENT SYSTEM PLANS
X1-X150	CROSS SECTION LAYOUT AND CROSS SECTIONS

THIS PLAN CONTAINS 570 SHEETS

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
CONSTRUCTION PLAN FOR GRADING, BITUMINOUS SURFACING, B-CUT INTERSECTIONS, TURN LANE EXTENSIONS, SIGNALS, LIGHTING, AND AIR IMPROVEMENTS IN THE CITIES OF BLAINE, HAM LAKE AND EAST BETHEL.

LOCATED ON T.J. 65 FROM 157A N.E.N. TO COUNTY RD. 85 (VARIOUS LOCATIONS)

STATE PROJ. NO. 0208-157 (T.J. 65)  
REF. POINT 020805430 TO REF. POINT 020120047

BEGIN S.P. 0208-157  
TH95NB STA. 339+21.5

END S.P. 0208-157  
TH95NB STA. 1187+53.2

**GOVERNING SPECIFICATIONS**  
THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION 'STANDARD SPECIFICATIONS FOR CONSTRUCTION' SHALL GOVERN.

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109-134	INPLACE UTILITY, TOPOGRAPHY & REMOVAL PLAN
135-160	CONSTRUCTION PLAN
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225-228	STORM WATER POLLUTION PREVENTION PLAN NARRATIVE
TC1-TC30	TRAFFIC CONTROL PLANS
PM1-PM6	PERMANENT PAVEMENT MARKING PLANS
SL1-SL11	LIGHTING PLANS
ST1-ST74	SIGNING PLANS
SS1-SS45	SIGNAL PLANS
521-5226	TRAFFIC MANAGEMENT SYSTEM PLANS
X1-X150	CROSS SECTION LAYOUT AND CROSS SECTIONS

THIS PLAN CONTAINS 570 SHEETS

**DESIGN DESIGNATION**

Design ESALS	14
ADT Current Year	2086
ADT Future Year	2035
DM (Design Flow)	3545
DM (National Std)	3545
DM (Ivey Standard)	3545

Design Speed: 70 MPH  
Based on STOPPING Sight Distance  
Height of eye: 5.0' height of object: 2.0'

PROJECT LOCATION  
COUNTY: ANOKA  
DISTRICT: METRO.

STATE PROJ. NO. 0208-157 (T.J. 65) OF 228 SHEETS



# INDEX OF SHEETS

- List any added sheets.
  - ❖ Added sheets should be alpha numbered sheets as we NEVER, EVER renumber a plan after it is submitted to CO for review.

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23-35B, 36-36A, 37-48	STANDARD PLAN SHEETS
49	ALIGNMENT TABULATION
50 - 51	INPLACE TOPOGRAPHY, R/W & REMOVALS
52 - 53	PLANNED CONSTRUCTION
54	PROFILES
55 - 56	EROSION CONTROL
57 - 59	SWPPP & WATER RESOURCE NOTES
T1 - T21	TRAFFIC CONTROL PLAN
X1 - X17	CROSS SECTION

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
CONSTRUCTION PLAN FOR GRADING, BITUMINOUS SURFACING, AND BR. 69137

LOCATED ON TH 37 FROM TH 53 AT TH 53  
LOCATED ON TH 53 FROM 0.41 MI. SOUTH OF SOUTH JCT TH 37 TO 0.04 MI. NORTH OF SOUTH JCT TH 37

STATE PROJ. NO. 6917-144 (TA 53) STATE PROJ. NO. 6917-54 (TA 37)  
GROSS LENGTH 1787.82 FEET 0.007 MILES GROSS LENGTH 706.02 FEET 0.254 MILES  
BRIDGE LENGTH 0 FEET 0 MILES BRIDGE LENGTH 706.02 FEET 0.254 MILES  
EXCEPTIONS-LENGTH 0 FEET 0 MILES EXCEPTIONS-LENGTH 0 FEET 0 MILES  
NET LENGTH 1787.82 FEET 0.007 MILES NET LENGTH 706.02 FEET 0.254 MILES  
REF. POINT 05950+434.70 REF. POINT 05950+434.70 REF. POINT 05950+434.70 REF. POINT 05950+434.70  
LENGTH BASED ON 50 TH 53 ALIGNMENT

FED. PROJ. NO. NRP-STP 0953 01  
GOVERNING SPECIFICATIONS  
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49 ALIGNMENT TABULATION  
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52 - 53 PLANNED CONSTRUCTION  
54 PROFILES  
55 - 56 EROSION CONTROL  
57 - 59 SWPPP & WATER RESOURCE NOTES  
T1 - T21 TRAFFIC CONTROL PLAN  
X1 - X17 CROSS SECTION

THIS PLAN CONTAINS 181 SHEETS

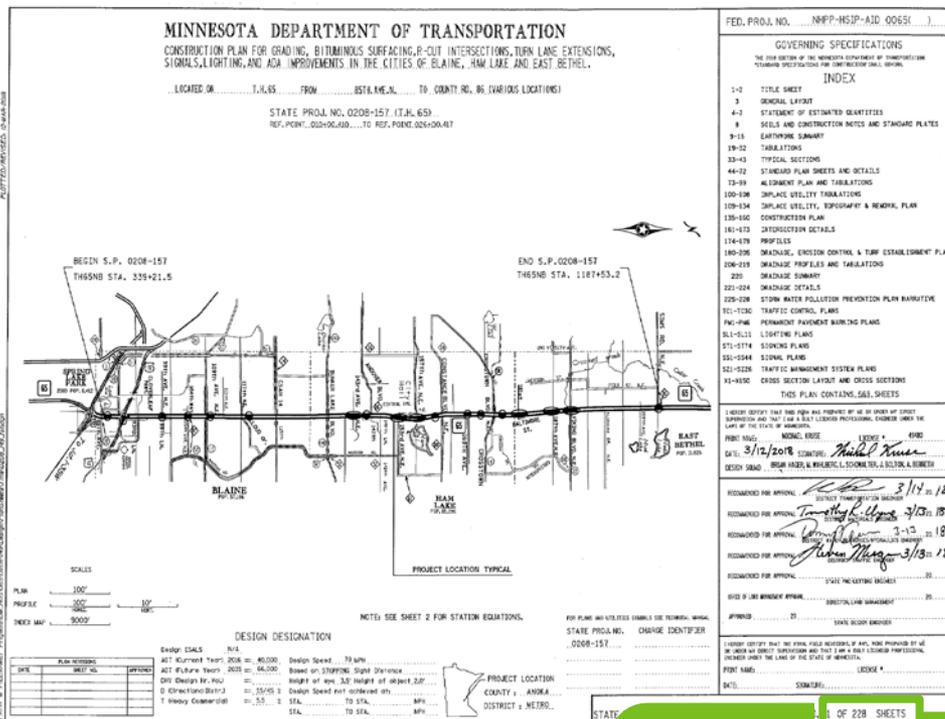
DESIGNATION  
DESIGNER: [Signature]  
CHECKER: [Signature]  
DATE: 9/21/17

STATE PROJ. NO. 6917-144 (TH 53 + 01)  
STATE PROJ. NO. 6917-54 (TH 37 + 216) SHEET NO. 1 OF 59 SHEETS

- ❖ The plan CAN have added alpha sheets before it is submitted to CO for review.
- ❖ It should be shown in the index similar to 23-35B, 36-36A, 37-48.

# INDEX OF SHEETS

➤ The last numerical sheet is shown in the bottom right corner of the plan.



FED. PROJ. NO. NHPH-HSIP-AID 0065(306)

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
'STANDARD SPECIFICATIONS FOR CONSTRUCTION' SHALL GOVERN.

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ST1-ST74	SIGNING PLANS
SS1-SS45	SIGNAL PLANS
SZ1-SZ26	TRAFFIC MANAGEMENT SYSTEM PLANS
X1-X150	CROSS SECTION LAYOUT AND CROSS SECTIONS

THIS PLAN CONTAINS 570 SHEETS



# SIGNATURE BLOCK – PROCESS “B”

The signature block is placed below the Project Engineer signature as shown in the previous slide.

- District Transportation Engineer
- District Engineers of areas that had input in the plan such as...
  - ❖ District Traffic Engineer
  - ❖ District Materials Engineer
  - ❖ District Hydraulics Engineer
  - ❖ State Aid (usually two signature blocks)

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
 CONSTRUCTION PLAN FOR: GRAVING, BITUMINOUS SURFACING, ADA IMPROVEMENTS, LIGHTING AND SIGNAL SYSTEM  
 LOCATED ON: TH 10 FROM WEST OF CSAR 1 TO 454' EAST OF CSAR 7

STATE PROJ. NO. 0303-70  
 CHARGE IDENTIFIER: T2A22B

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
 GOVERNING SPECIFICATIONS  
 FOR THE DESIGN OF THE ROADWAY, STRUCTURES, UTILITIES, AND SIGNALS

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30 - 31	CONSTRUCTION PLANS
32 - 33	INTERSECTION DETAILS
34 - 35	DRAINAGE
36 - 37	TURF ESTABLISHMENT
38 - 39	LIGHTING SYSTEM
40 - 41	TRAFFIC CONTROL SIGNAL SYSTEM

THIS PLAN CONTAINS 55 SHEETS

I HEREBY CERTIFY THAT THIS PLAN 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: 12/17/17 SIGNATURE: [Signature]

DESIGN SQUAD: BEN GREJSEN

FOR PLANS AND UTILITIES SYMBOLS SEE TECHNICAL MANUAL

STATE PROJ. NO. 0303-70 CHARGE IDENTIFIER T2A22B

STATE AID PROJ. NO. 003-607-023 STATE PROJ. NO. 03031-70 (TH 10 = 2) SHEET NO. 1 OF 37 SHEETS

I HEREBY CERTIFY THAT THIS PLAN 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.

PRINT NAME: BRIDGET MILLER LICENSE # 43947

DATE: SIGNATURE:

DESIGN SQUAD: BEN GREJSEN

RECOMMENDED FOR APPROVAL	DISTRICT TRANSPORTATION ENGINEER	20
RECOMMENDED FOR APPROVAL	DISTRICT MATERIALS ENGINEER	20
RECOMMENDED FOR APPROVAL	DISTRICT WATER RESOURCES/HYDRAULICS ENGINEER	20
RECOMMENDED FOR APPROVAL	DISTRICT TRAFFIC ENGINEER	20
RECOMMENDED FOR APPROVAL	STATE PRE-LETTING ENGINEER	20
OFFICE OF LAND MANAGEMENT APPROVAL	DIRECTOR, LAND MANAGEMENT	20
APPROVED	STATE DESIGN ENGINEER	20

FOR PLANS AND UTILITIES SYMBOLS SEE TECHNICAL MANUAL

STATE PROJ. NO. 0303-70 CHARGE IDENTIFIER T2A22B

STATE AID PROJ. NO. 003-607-023 STATE PROJ. NO. 03031-70 (TH 10 = 2) SHEET NO. 1 OF 37 SHEETS

I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, WERE 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.

PRINT NAME: BRIDGET MILLER LICENSE # 43947

DATE: SIGNATURE:

# SIGNATURE BLOCK – PROCESS “B” (Continued)

The following signature blocks will be included at the end and will be left blank for Central Office Signatures...

- State Pre-Letting Engineer
- Director of Land Management (this leads with...OFFICE OF LAND MANAGEMENT APPROVAL)
- State Design Engineer

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
CONSTRUCTION PLAN FOR GRADING, BITUMINOUS SURFACING, ADA IMPROVEMENTS, LIGHTING AND SIGNAL SYSTEM  
LOCATED ON TH 10 FROM 830 WEST OF CS&T 7 TO 464' EAST OF CS&T 7

STATE PROJ. NO. 0301-70  
GROSS LENGTH 38940 FEET 0.248 MILES  
BRIDGE LENGTH FEET MILES  
EXCEPTIONS LENGTH FEET MILES  
NET LENGTH 32940 FEET 0.246 MILES  
REF. POINT 32+06.887 TO REF. POINT 32+06.282  
LENGTH AND DESCRIPTION BASED ON TH 10 EB ALIGNMENT

FED. PROJ. NO. HSP 03190041  
GOVERNING SPECIFICATIONS  
MINNESOTA DEPARTMENT OF TRANSPORTATION  
TRAFFIC CONTROL SYSTEM FOR CONSTRUCTION OF ROADWAYS

**INDEX**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
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13 - 26	STANDARD PLAN SHEETS
27	SWPPP SHEET
28 - 29	REMOVAL & UTILITY SHEETS
30 - 31	CONSTRUCTION PLANS
32 - 33	INTERSECTION DETAILS
34 - 35	DRAINAGE
36 - 37	TURF ESTABLISHMENT
56.1 - 56.6	LIGHTING SYSTEM
55.1 - 55.2	TRAFFIC CONTROL SIGNAL SYSTEM

THIS PLAN CONTAINS 55 SHEETS

I HEREBY CERTIFY THAT THIS PLAN 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.

PRINT NAME: BRIDGET MILLER LICENSE # 43947

DATE: SIGNATURE:

DESIGN SQUAD BEN GREISEN

RECOMMENDED FOR APPROVAL DISTRICT TRANSPORTATION ENGINEER 20

RECOMMENDED FOR APPROVAL DISTRICT MATERIALS ENGINEER 20

RECOMMENDED FOR APPROVAL DISTRICT WATER RESOURCES/HYDRAULICS ENGINEER 20

RECOMMENDED FOR APPROVAL DISTRICT TRAFFIC ENGINEER 20

RECOMMENDED FOR APPROVAL STATE PRE-LETTING ENGINEER 20

OFFICE OF LAND MANAGEMENT APPROVAL DIRECTOR, LAND MANAGEMENT 20

APPROVED 20 STATE DESIGN ENGINEER

STATE AID PROJ. 003-607-023  
STATE PROJ. NO. 0301-70 TH 10 = 2 SHEET NO. 1 OF 37 SHEETS

I HEREBY CERTIFY THAT THIS PLAN 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.

PRINT NAME: BRIDGET MILLER LICENSE # 43947

DATE: SIGNATURE:

DESIGN SQUAD BEN GREISEN

RECOMMENDED FOR APPROVAL DISTRICT TRANSPORTATION ENGINEER 20

RECOMMENDED FOR APPROVAL DISTRICT MATERIALS ENGINEER 20

RECOMMENDED FOR APPROVAL DISTRICT WATER RESOURCES/HYDRAULICS ENGINEER 20

RECOMMENDED FOR APPROVAL DISTRICT TRAFFIC ENGINEER 20

RECOMMENDED FOR APPROVAL STATE PRE-LETTING ENGINEER 20

OFFICE OF LAND MANAGEMENT APPROVAL DIRECTOR, LAND MANAGEMENT 20

APPROVED 20 STATE DESIGN ENGINEER



# CONSTRUCTION PLAN FOR...

This is a description of all the major types of work for the project. Such as....

- Grading
- Alternate Bituminous or Concrete surfacing
- Bituminous and/or Concrete surfacing
- Mill, Overlay, Surfacing, CPR, Reclamation
- Lighting, Signals, TMS, RWIS
- Walls
- ADA Improvements
- Bridges, Box Culverts

# CONSTRUCTION PLAN FOR...

## (Continued)

It does NOT include....

- ❖ Drainage
- ❖ Signing
- ❖ Striping
- ❖ Sidewalks
- ❖ Culvert Repairs
- ❖ Guardrail
- ❖ Rumble Strips/StripEs
- ❖ Erosion Control
- ❖ Landscaping

Unless these are the ONLY types of work being done on the plan.

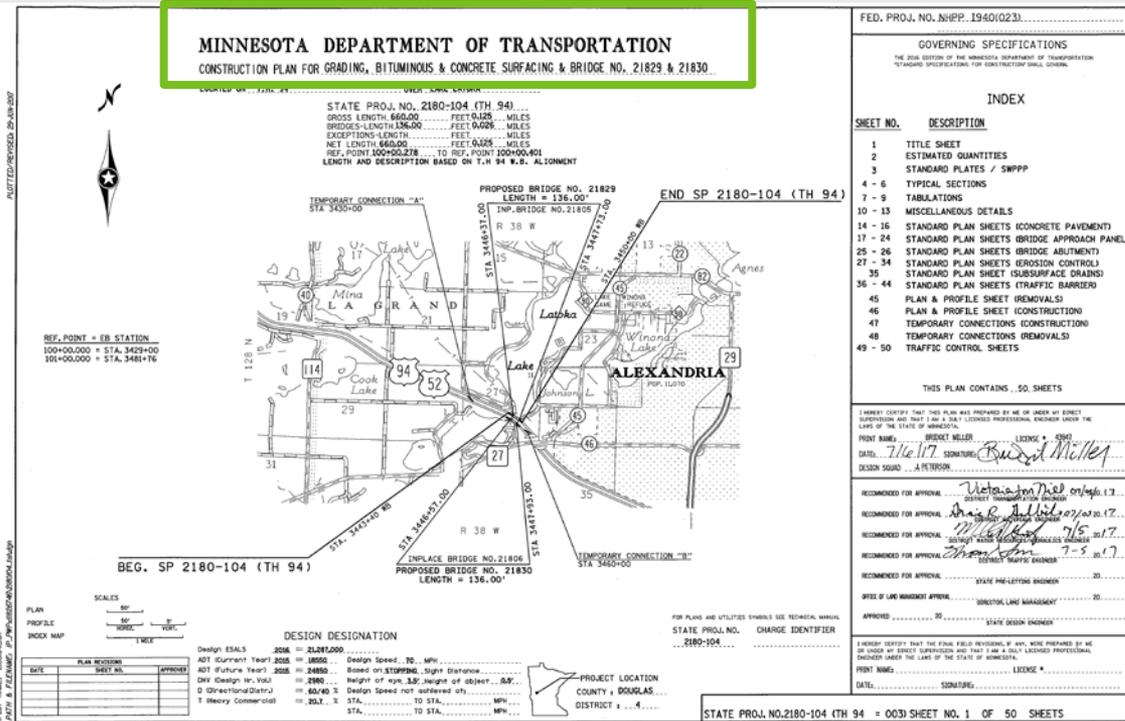
# CONSTRUCTION PLAN FOR... (Continued)

It is located at the top center of the title sheet.

## MINNESOTA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR GRADING, BITUMINOUS & CONCRETE SURFACING & BRIDGE NO. 21829 & 21830

MINNESOTA DEPARTMENT OF TRANSPORTATION  
CONSTRUCTION PLAN FOR GRADING, BITUMINOUS & CONCRETE SURFACING & BRIDGE NO. 21829 & 21830



- Grading is listed first (if applicable)
- Bridges are listed last (if applicable)

# LOCATED ON....

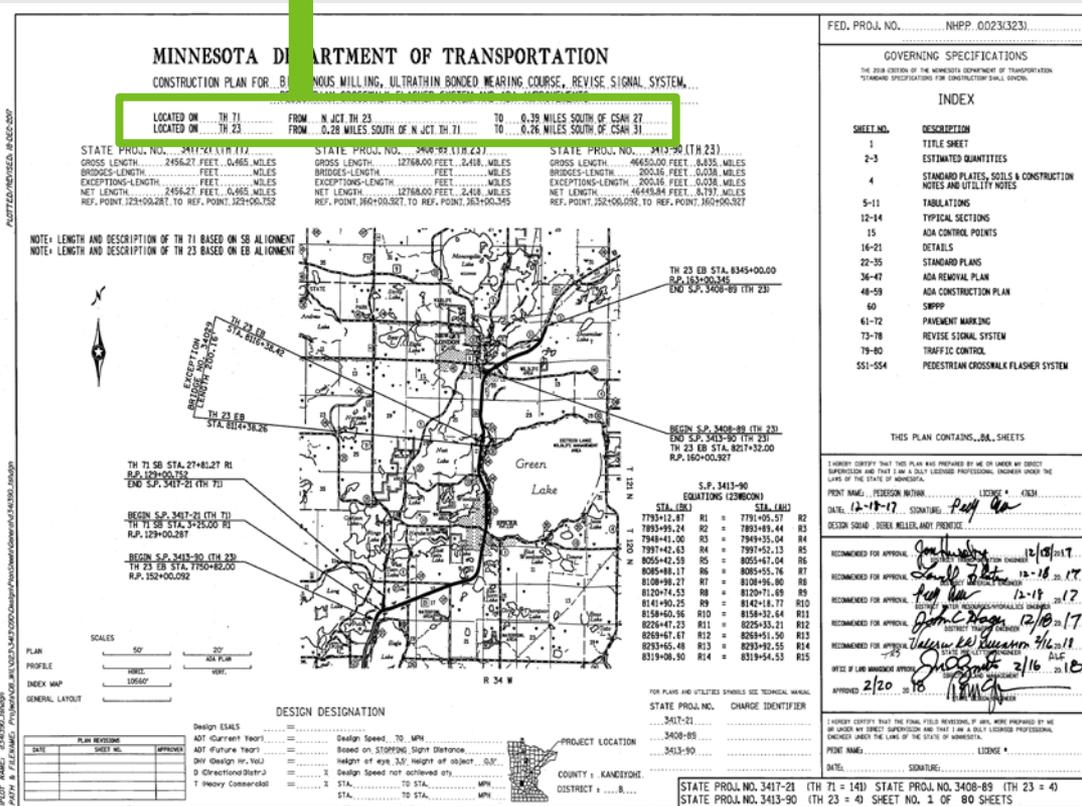
The description of the project location should reflect the beginning and ending location of the project.

- This should include...
  - ❖ The TH number,
  - ❖ A cross road or water feature name of where the project begins and where the project ends.
- If there is more than one TH then more than one line of information should be included.
- It should NOT use reference points, bridge numbers, or city limits as location descriptions.
- The location it references should be shown and readable on the index map.
- Do NOT include City/County names as they should be shown in the index map instead.

# LOCATED ON... (Continued)

CONSTRUCTION PLAN FOR BITUMINOUS MILLING, ULTRATHIN BONDED WEARING COURSE, REVISE SIGNAL SYSTEM,  
PEDESTRIAN CROSSWALK FLASHER SYSTEM AND ADA IMPROVEMENTS

LOCATED ON TH 71 FROM N. JCT. TH 23 TO 0.39 MILES SOUTH OF CSAH 27  
 LOCATED ON TH 23 FROM 0.28 MILES SOUTH OF N. JCT. TH 71 TO 0.26 MILES SOUTH OF CSAH 31



- LOCATED ON is located just below the CONSTRUCTION PLAN FOR line and above the length blocks.
- JCT should NOT be used for intersections, it is only used if it is an EWNS junction as in a shared/split roadway.

# LENGTH BLOCKS

STATE PROJ. NO. 1921-94 (TH 3)  
 GROSS LENGTH 9712.48 FEET 1.839 MILES  
 BRIDGES-LENGTH FEET MILES  
 EXCEPTIONS-LENGTH FEET MILES  
 NET LENGTH 9712.48 FEET 1.839 MILES  
 REF. POINT 038+00.297 TO REF. POINT 040+00.180

STATE PROJ. NO. 1916-26 (TH 149)  
 GROSS LENGTH 1941.50 FEET 0.368 MILES  
 BRIDGES-LENGTH FEET MILES  
 EXCEPTIONS-LENGTH FEET MILES  
 NET LENGTH 1941.50 FEET 0.368 MILES  
 REF. POINT 000+00.000 TO REF. POINT 000+00.376

STATE AID PROJ. NO. 019-671-005 (CSAH 71)  
 GROSS LENGTH 861.60 FEET 0.163 MILES  
 BRIDGES-LENGTH FEET MILES  
 EXCEPTIONS-LENGTH FEET MILES  
 NET LENGTH 861.60 FEET 0.163 MILES  
 REF. POINT TO REF. POINT

STATION EQUATION: NBTH3 1843+37.90 (BK) = TH3 14+84.52 (AH)  
 NOTE: LENGTH BASED ON TH3NB AND ON TH3 ALIGNMENTS.

NOTE: LENGTH BASED ON TH149 ALIGNMENT.

NOTE: LENGTH BASED ON 71E AND 71W ALIGNMENTS.

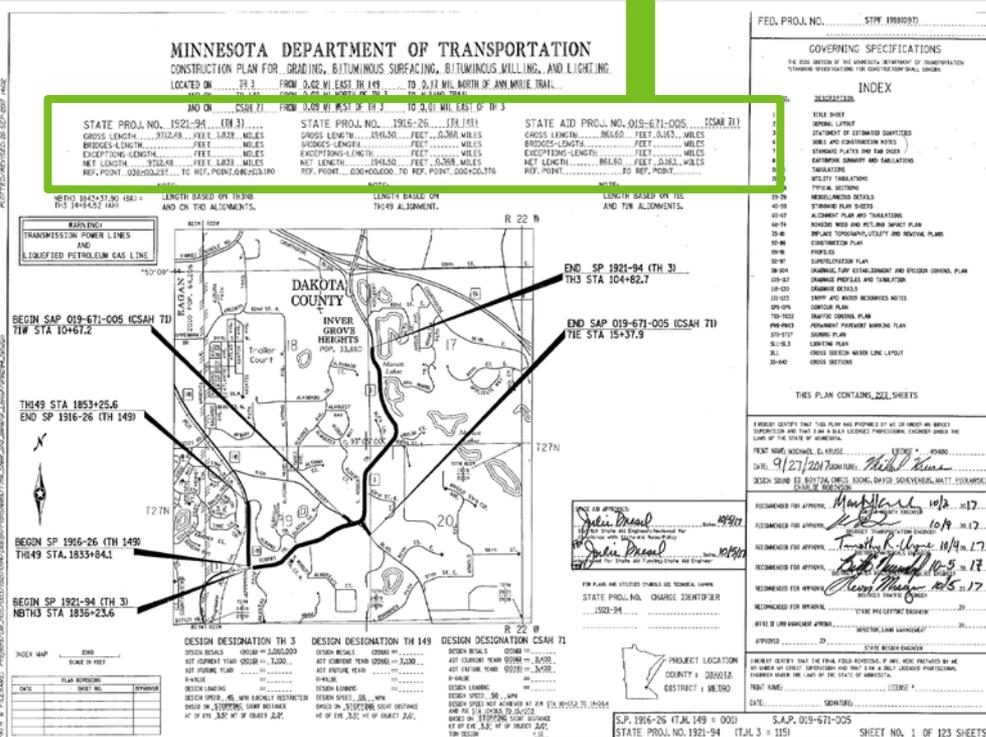
Each plan should contain a length block for each SP number.

➤ It should be centered below the LOCATED ON line and above the index map.

# LENGTH BLOCKS (Continued)

STATE PROJ. NO. **1921-94 (TH 3)**  
 GROSS LENGTH 9712.48 FEET 839 MILES  
 BRIDGES-LENGTH FEET MILES  
 EXCEPTIONS-LENGTH FEET MILES  
 NET LENGTH 9712.48 FEET  
 REF. POINT Q38+00.297 TO REF. POINT Q40+00.180

STATE PROJ. NO. **1916-26 (TH 149)**  
 GROSS LENGTH 1941.50 FEET 0.368 MILES  
 BRIDGES-LENGTH FEET MILES  
 EXCEPTIONS-LENGTH FEET MILES  
 NET LENGTH 1941.50 FEET 0.368 MILES  
 REF. POINT Q00+00.000 TO REF. POINT Q00+00.376



➤ The length block should include the SP number and if more than one roadway applies then the TH should also be listed with the SP in parenthesis.

# LENGTH BLOCKS (Continued)

➤ If the roadway is divided it should include a note below the length block which states...THE PROJECT LENGTH AND DESCRIPTION IS BASED ON XX ROADWAY ALIGNMENT.

STATE PROJ. NO. 2180-104 (TH 94)  
 GROSS LENGTH 660.00 FEET 0.125 MILES  
 BRIDGES-LENGTH 136.00 FEET 0.026 MILES  
 EXCEPTIONS-LENGTH FEET MILES  
 NET LENGTH 660.00 FEET 0.125 MILES  
 REF. POINT 100+00.278 TO REF. POINT 100+00.401  
 LENGTH AND DESCRIPTION BASED ON T.H 94 W.B. ALIGNMENT

MINNESOTA DEPARTMENT OF TRANSPORTATION  
 CONSTRUCTION PLAN FOR GRADING, BITUMINOUS & CONCRETE SURFACING & BRIDGE NO. 21829 & 21830  
 LOCATED ON T.H. 94 OVER LAKE LAITKA

STATE PROJ. NO. 2180-104 (TH 94)  
 GROSS LENGTH 660.00 FEET 0.125 MILES  
 BRIDGES-LENGTH 136.00 FEET 0.026 MILES  
 EXCEPTIONS-LENGTH FEET MILES  
 REF. POINT 100+00.278 TO REF. POINT 100+00.401  
 LENGTH AND DESCRIPTION BASED ON T.H. 94 W.B. ALIGNMENT

PROPOSED BRIDGE NO. 21829  
 LENGTH = 136.00'  
 END SP 2180-104 (TH 94)

PROPOSED BRIDGE NO. 21830  
 LENGTH = 136.00'

DESIGN DESIGNATION  
 Design ES&S 2018 = 21.281.000  
 ADT (current year) 2018 = 1850 Design Speed 70 MPH  
 ADT (future year) 2018 = 2480 Based on STOPPING Sight Distance  
 OVR (design hr. val.) 2018 = 2980 Height of eye 5.5 ft, height of object 4.5 ft  
 @ (directional dist.) = 60/40 Design Speed not adjusted etc.  
 T (heavy Commercial) = 20.7 % STA. TO STA. MPH  
 % STA. TO STA. MPH

PROJECT LOCATION  
 COUNTY : DOUGLAS  
 DISTRICT : 4

STATE PROJ. NO. 2180-104 (TH 94 = 003) SHEET NO. 1 OF 50 SHEETS

GOVERNING SPECIFICATIONS  
 THE 2008 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
 STANDARD SPECIFICATIONS FOR CONSTRUCTION SHALL APPLY.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
3	STANDARD PLATES / SWPPP
4 - 6	TYPICAL SECTIONS
7 - 9	TABULATIONS
10 - 13	MISCELLANEOUS DETAILS
14 - 16	STANDARD PLAN SHEETS (CONCRETE PAVEMENT)
17 - 24	STANDARD PLAN SHEETS (BRIDGE APPROACH PANEL)
25 - 26	STANDARD PLAN SHEETS (BRIDGE ABUTMENT)
27 - 34	STANDARD PLAN SHEETS (EROSION CONTROL)
35	STANDARD PLAN SHEET (SUBSURFACE DRAINS)
36 - 44	STANDARD PLAN SHEETS (TRAFFIC BARRIERS)
45	PLAN & PROFILE SHEET (REMOVALS)
46	PLAN & PROFILE SHEET (CONSTRUCTION)
47	TEMPORARY CONNECTIONS (CONSTRUCTION)
48	TEMPORARY CONNECTIONS (REMOVALS)
49 - 50	TRAFFIC CONTROL SHEETS

THIS PLAN CONTAINS .50 SHEETS

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

PROJECT NAME: BRIDGE MILLER LICENSE # 6847  
 DATE: 7/16/17 SIGNATURE: Bruce Miller  
 DESIGN SEAL: J. PETERSON

RECOMMENDED FOR APPROVAL: Victoria Nielson 7/17  
 RECOMMENDED FOR APPROVAL: [Signature] 7/17  
 RECOMMENDED FOR APPROVAL: [Signature] 7/17  
 RECOMMENDED FOR APPROVAL: [Signature] 7-5-17  
 RECOMMENDED FOR APPROVAL: STATE HIGHWAY ENGINEER 20

OFFICE OF LAW ENFORCEMENT: STATE LAW ENFORCEMENT 20  
 APPROVED: STATE DESIGN ENGINEER

Do NOT add this note if the roadway is NOT divided.



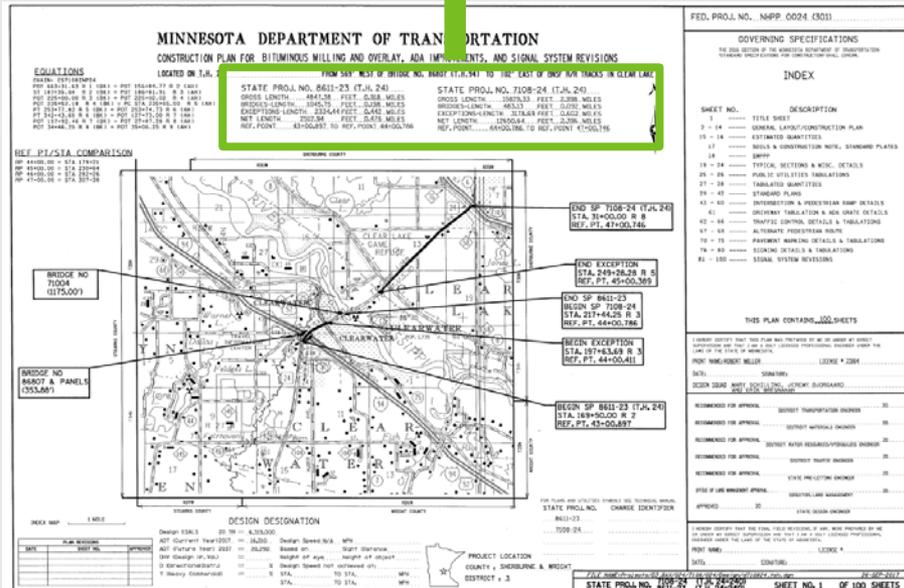
# LENGTH BLOCKS (Continued)

STATE PROJ. NO. 8611-23 (T.H. 24)  
 GROSS LENGTH 4847.38 FEET 0.918 MILES  
 BRIDGES-LENGTH 1045.75 FEET 0.198 MILES  
 EXCEPTIONS-LENGTH 2334.44 FEET 0.442 MILES  
 NET LENGTH 2512.94 FEET 0.476 MILES  
 REF. POINT 43+00.89 TO REF. POINT 44+00.786

STATE PROJ. NO. 7108-24 (T.H. 24)  
 GROSS LENGTH 15829.33 FEET 2.998 MILES  
 BRIDGES-LENGTH 483.13 FEET 0.092 MILES  
 EXCEPTIONS-LENGTH 3178.69 FEET 0.602 MILES  
 NET LENGTH 12650.64 FEET 2.396 MILES  
 REF. POINT 44+00.786 TO REF. POINT 47+00.746

The length block should also include...

- The exception length, if any. If a bridge is an exception then it should be included in both the bridge length AND the exception length.
- The net length should be the difference between the gross length and the exception length.



# LENGTH BLOCKS (Continued)

STATE PROJ. NO. 1916-26 (TH 149)  
 GROSS LENGTH 1941.50 FEET 0.368 MILES  
 BRIDGES-LENGTH FEET MILES  
 EXCEPTIONS-LENGTH FEET MILES  
 NET LENGTH 1941.50 FEET 0.368 MILES  
 REF. POINT 000+00.000 TO REF. POINT 000+00.376

- Do NOT put zero's or NA in the length block but rather leave them blank if they don't apply.
- The FEET length should be one less decimal place than the MILES length.
- The beginning and ending reference points also need to be included at the end of the length block and need to follow the reference point format (e.g. XXX+XX.XXX).

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
 CONSTRUCTION PLAN FOR ROADWAY, SIGNALING, FENCING, BITUMINOUS MILLING, AND LIGHTING

LOCATED ON TH 3 FROM 0.42 MI EAST W/ END ON IN L&L FROM 0.42 MI NORTH OF TO 21.71 MI NORTH OF ANN MARIE TRAIL TO ALBRO TRAIL

STATE PROJ. NO. 1916-26 (TH 149)	STATE PROJ. NO. 1986-26 (TH 191)	STATE PROJ. NO. 005-671-000 (CS4H TH)
GROSS LENGTH 1941.50 FEET 0.368 MILES	GROSS LENGTH 1941.50 FEET 0.368 MILES	GROSS LENGTH 1941.50 FEET 0.368 MILES
BRIDGES-LENGTH FEET MILES	BRIDGES-LENGTH FEET MILES	BRIDGES-LENGTH FEET MILES
EXCEPTIONS-LENGTH FEET MILES	EXCEPTIONS-LENGTH FEET MILES	EXCEPTIONS-LENGTH FEET MILES
NET LENGTH 1941.50 FEET 0.368 MILES	NET LENGTH 1941.50 FEET 0.368 MILES	NET LENGTH 1941.50 FEET 0.368 MILES
REF. POINT 000+00.000 TO REF. POINT 000+00.376	REF. POINT 000+00.000 TO REF. POINT 000+00.376	REF. POINT 000+00.000 TO REF. POINT 000+00.376

**GOVERNING SPECIFICATIONS**  
 THE ROAD DESIGN OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
 "MINNESOTA PROJECT MANUAL" (MPM) 2007 EDITION

**INDEX**

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1	TITLE SHEET
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3	PLAN VIEW OF PROPOSED ROADWAY
4	PROPOSED ROADWAY CROSS SECTION
5	PROPOSED ROADWAY AND SIDEWALK
6	PROPOSED ROADWAY AND SIDEWALK
7	PROPOSED ROADWAY AND SIDEWALK
8	PROPOSED ROADWAY AND SIDEWALK
9	PROPOSED ROADWAY AND SIDEWALK
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98	PROPOSED ROADWAY AND SIDEWALK
99	PROPOSED ROADWAY AND SIDEWALK
100	PROPOSED ROADWAY AND SIDEWALK

**DESIGNATION TH 3**  
 DESIGN DESIGNATION TH 349  
 DESIGN DESIGNATION CS4H TH 71

**PROJECT LOCATION**  
 COUNTY + DISTRICT

**DATE** 9/27/2017  
**DATE** 9/27/2017  
**DATE** 9/27/2017  
**DATE** 9/27/2017

**STATE PROJ. NO. 1916-26 (TH 149)**  
**STATE PROJ. NO. 1986-26 (TH 191)**  
**STATE PROJ. NO. 005-671-000 (CS4H TH)**

**SHEET NO. 1 OF 123 SHEETS**



# INDEX MAP

This is used to identify the location of the project(s).

It is centered on the title sheet below the length blocks and to the left of the index/signatures.

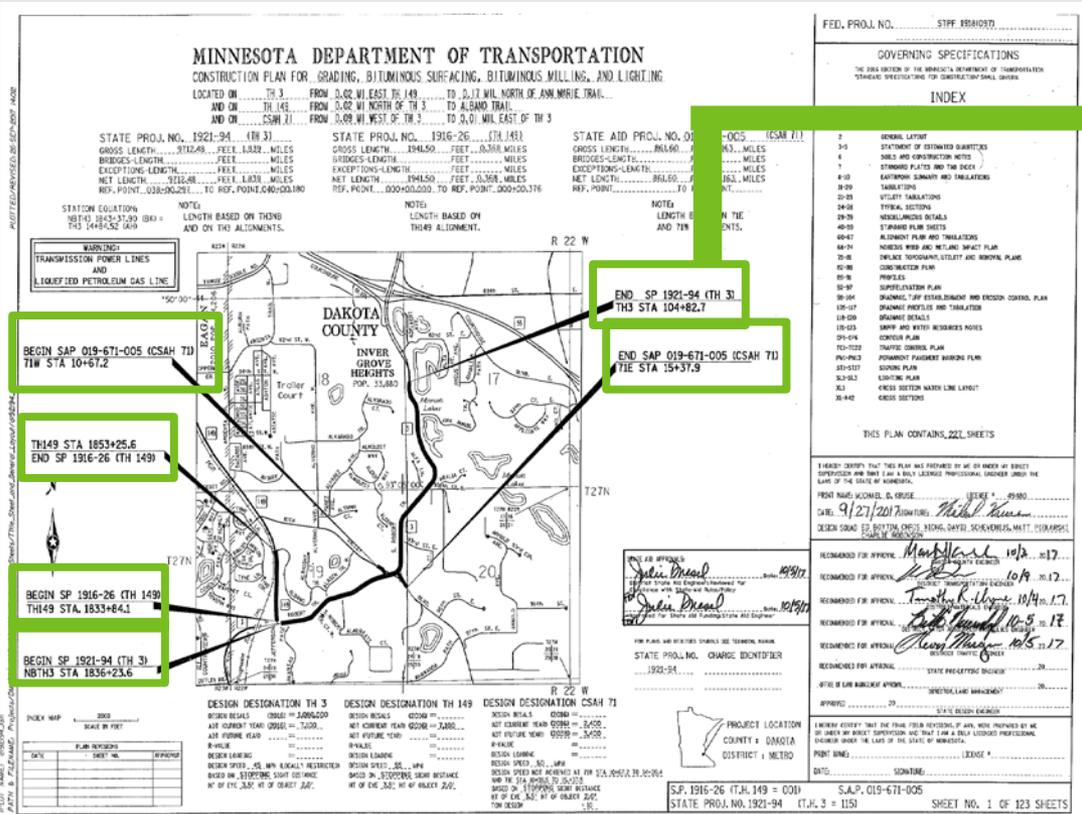
Judgment should be exercised regarding the project map size.

In many cases the maps are too small in scale, while on others, too much area not related to the project is shown. By limiting the project map to the project itself and adjacent area, larger scale maps can often be utilized.



# INDEX MAP (Continued)

➤ The Index Map should label all SP#s, with Beginning/Ending stationings



END SP 1921-94 (TH 3)  
TH3 STA 104+82.7

Pay attention to what side of the leader line you place the begin/end on. See the design scene chapter 1 for more information.



# INDEX MAP (Continued)

The Index Map should label all exceptions.

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
CONSTRUCTION PLAN FOR GRADING, BITUMINOUS MILL AND OVERLAY

LOCATED ON I-49 FROM SW 5.37 ED TO N 10 TH 78

REF. POINT	STATION	STATE PROJ. NO.	STATE PROJ. NO.	STATE PROJ. NO.
1+00.00	208434	2614-09	2612-09	2108-05
2+00.00	205489			
3+00.00	306124			
4+00.00	305372			
5+00.00	401026			
6+00.00	89439			
7+00.00	138460			
8+00.00	191451			
9+00.00	244332			
10+00.00	296483			
11+00.00	79402			
12+00.00	131470			
13+00.00	184469			
14+00.00	236475			
15+00.00	289482			
16+00.00	343422			
17+00.00	396421			
18+00.00	447485			
19+00.00	500499			
20+00.00	554410			
21+00.00	607432			

**STATE PROJ. NO. 2614-09**  
GROSS LENGTH 23062.21 FEET 4.357 MILES  
EXCEPTIONS LENGTH 132.88 FEET 0.0024 MILES  
NET LENGTH 22929.33 FEET 4.3546 MILES  
REF. POINT 2614-09-001 TO REF. POINT 2614-09-00176

**STATE PROJ. NO. 2612-09**  
GROSS LENGTH 10736.50 FEET 2.032 MILES  
EXCEPTIONS LENGTH FEET MILES  
NET LENGTH 10736.50 FEET 2.032 MILES  
REF. POINT 2612-09-001 TO REF. POINT 2612-09-00176

**STATE PROJ. NO. 2108-05**  
GROSS LENGTH 10618.00 FEET 2.058 MILES  
EXCEPTIONS LENGTH FEET MILES  
NET LENGTH 10618.00 FEET 2.058 MILES  
REF. POINT 2108-05-001 TO REF. POINT 2108-05-00176

**STATE PROJ. NO. 5612-11**  
GROSS LENGTH 8773.00 FEET 16.100 MILES  
EXCEPTIONS LENGTH FEET MILES  
NET LENGTH 8773.00 FEET 16.100 MILES  
REF. POINT 5612-11-001 TO REF. POINT 5612-11-00176

**EQUATIONS**

209+19.85	209417.64	ft
237+03.00	237444.06	ft
254+33.84	254424.25	ft
278+01.00	278411.00	ft
291+00.70	312486.14	ft
317+04.80	317480.00	ft
405+09.60	60434.95	ft
427+04.00	107401.21	ft
445+44.40	14540.28	ft
484+53.38	196414.80	ft
513+67.62	213467.12	ft
528+50.14	226494.01	ft
583+59.33	283496.32	ft
598+00.00	294484.00	ft
629+10.00	329400.00	ft
652+01.70	349484.86	ft
682+07.00	362471.29	ft
689+60.00	369487.83	ft
616+29.77	318430.18	ft
644+83.78	349487.76	ft
674+83.64	474492.92	ft
618+27.04	318430.62	ft

**INDEX**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2 - 5	GENERAL LAYOUT
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8 - 10	TYPICAL SECTIONS
11 - 13	TABULATIONS
14 - 15	DRAINAGE TABULATIONS
16 - 19	UTILITY TABULATIONS
20 - 21	ALIGNMENT TABULATIONS
22 - 33	MISCELLANEOUS DETAILS
34 - 44	STANDARD PLAN SHEETS
45	SWPPP SHEET
46 - 48	CONSTRUCTION PLAN SHEETS
49 - 86	TRAFFIC CONTROL SHEETS

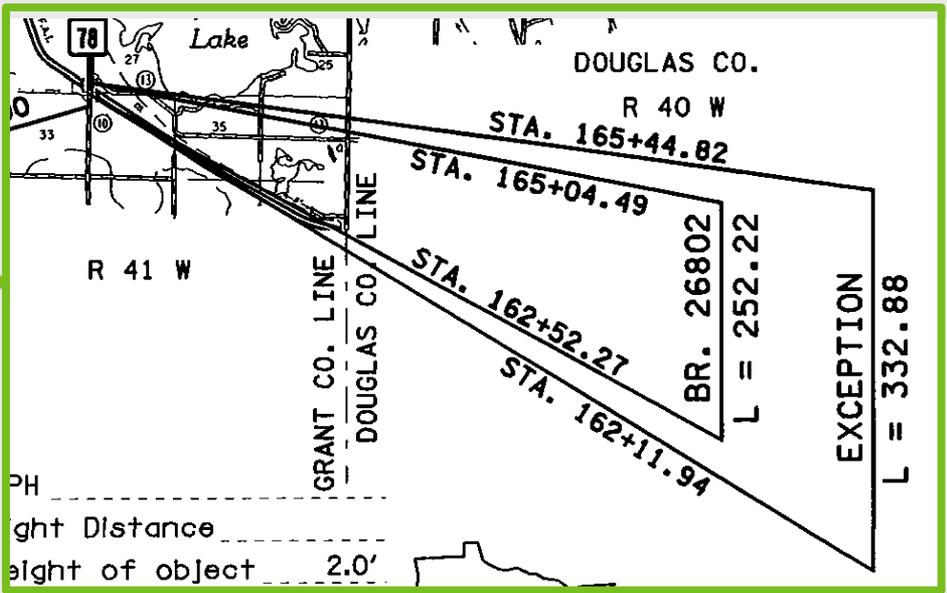
THIS PLAN CONTAINS THE FOLLOWING SHEETS:

LEGEND (VERIFY THAT THIS PLAN HAS BEEN PREPARED BY AN ENGINEER OR ARCHITECT REGISTERED IN THE STATE OF MINNESOTA AND THAT THE SEAL OF THE REGISTERED PROFESSIONAL ENGINEER OR ARCHITECT IS ON THE PLAN.)

DESIGNER: *2/15/17* CONTRACTOR: *2/15/17* DATE: *2/15/17*

APPROVED: *[Signature]* DATE: *2/15/17*

STATE PROJ. NO. 2614-09 ITH 78 1 BRD  
STATE PROJ. NO. 2612-09 ITH 78 1 BRD  
STATE PROJ. NO. 5612-11 ITH 78 1 BRD SHEET NO. 1 OF 86 SHEETS



# INDEX MAP (Continued)

The Index Map should label all major roadways.

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
CONSTRUCTION PLAN FOR GRADING, BITUMINOUS MILL & OVERLAY

LOCATED ON ..... TH. 28 ..... FROM ..... TH. 75 ..... TO 510' E. OF 810M. ME. ....

STATE PROJ. NO. 0606-11 (TH 28) ..... STATE PROJ. NO. 7503-39 (TH 28) .....

DESIGNATION: 1.0 3

**GRACEVILLE**

28

TH 28

REF. POINT	STATION
23+00.00	= 25+45
24+00.00	= 28+22
25+00.00	= 31+05
26+00.00	= 33+56
27+00.00	= 36+45
28+00.00	= 39+00
29+00.00	= 41+85
30+00.00	= 44+81
31+00.00	= 47+98
32+00.00	= 51+38
33+00.00	= 55+17
34+00.00	= 59+30

DESIGN DESIGNATION

Design: EXALS ..... 099, 01 = J205,000 .....

ADT: Current Year: 1000, 1000 ..... Design Speed: 70 WPM .....

ADT Future Year: 1000, 1000 ..... based on 100% ADT ..... sight distance: .....

DB: (Design W. Val) = 100 ..... Height of eye: 5.50, Height of object: 5.50 .....

D: (Design W. Val) = 500.00 ..... Design Speed not corrected: 0% .....

F: (Heavy Commercial) = 5.0 ..... STA ..... TO STA ..... WPM .....

STA ..... TO STA ..... WPM .....

STATE PROJ. NO. 7503-39 (TH 28 = 028)

STATE PROJ. NO. 0606-11 (TH 28 = 028) SHEET NO. 1 OF 47 SHEETS

# INDEX MAP (Continued)

The Index Map should label all Bridges.

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
CONSTRUCTION PLAN FOR GRADING, BITUMINOUS & CONCRETE SURFACING & BRIDGE NO. 21829 & 21830.  
LOCATED ON T.H. #4 OVER LAKE LABOKA

STATE PROJ. NO. 2180-104 (TH 94) ...  
DESIGN LENGTH 866.00 FEET 0.125 MILES  
PROPOSED LENGTH 136.00 FEET 0.250 MILES  
EXCEPTIONS NONE FEET 0.000 MILES  
NET LENGTH 730.00 FEET 1.375 MILES  
REF. POINT 00+00.000 TO REF. POINT 100+00.000  
LENGTH IN DESCRIPTION BASED ON T.H. #4 R.R. ALIGNMENT

FED. PROJ. NO. MHP 1940023  
GOVERNING SPECIFICATIONS  
THE DESIGN OF THIS PROJECT IS THE PROPERTY OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
YOUR USE OF THIS PROJECT IS LIMITED TO THE PROJECT FOR WHICH IT WAS DESIGNED

**INDEX**

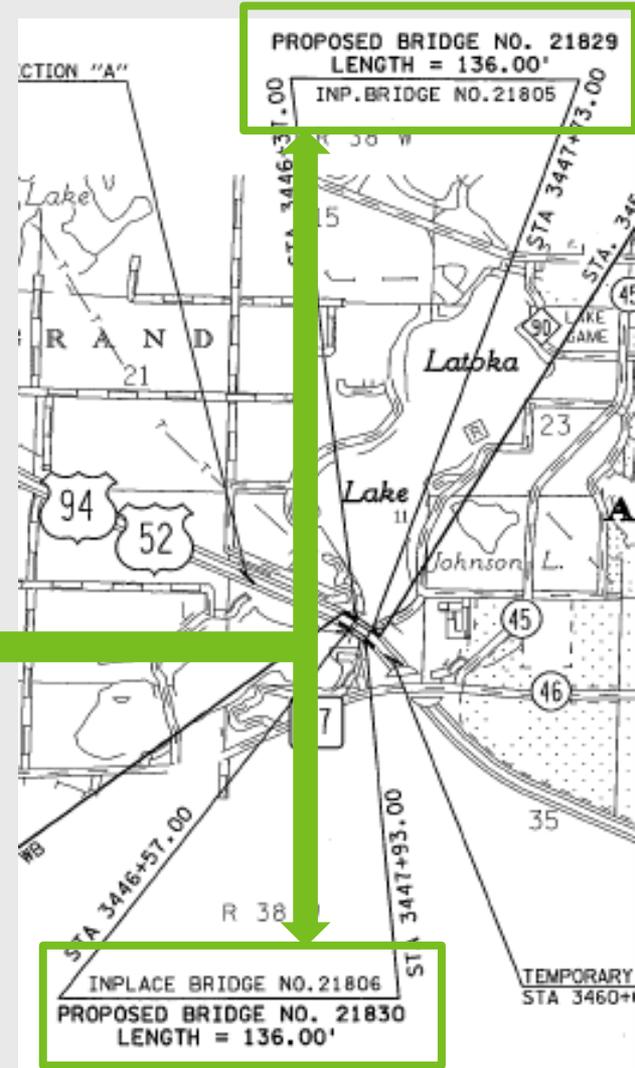
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES
3	STANDARD PLATES / SWPPP
4 - 6	TYPICAL SECTIONS
7 - 9	TABULATIONS
10 - 13	MISCELLANEOUS DETAILS
22 - 34	STANDARD PLAN SHEETS (EROSION CONTROL)
35	STANDARD PLAN SHEET (SUBSURFACE GRADING)
36 - 44	STANDARD PLAN SHEETS (TRAFFIC MARKINGS)
45	PLAN & PROFILE SHEET (REMOVALS)
46	PLAN & PROFILE SHEET (CONSTRUCTIONS)
47	TEMPORARY CONNECTIONS (CONSTRUCTIONS)
48	TEMPORARY CONNECTIONS (REMOVALS)
49 - 50	TRAFFIC CONTROL SHEETS

THIS PLAN CONTAINS 50 SHEETS

DESIGNED BY: *Michael Miller*  
CHECKED BY: *Brian Miller*  
DATE: 11/17/17  
DESIGN SCALE: 1"=20'

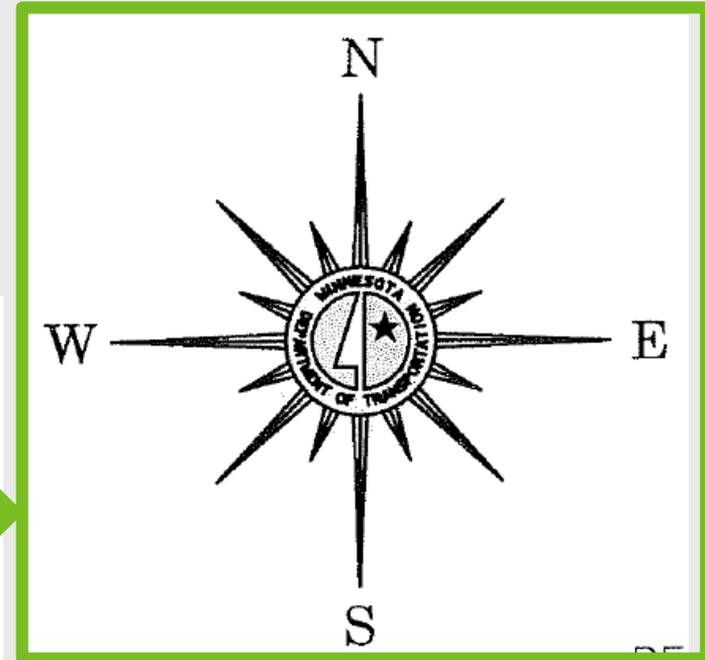
FOR PLANS AND UTILITIES SYMBOLS SEE TECHNICAL MANUAL  
STATE PROJ. NO. CHARGE IDENTIFIER  
2180-104

STATE PROJ. NO. 2180-104 (TH 94) = 0031 SHEET NO. 1 OF 50 SHEETS



# INDEX MAP (Continued)

➤ The Index Map should include a north arrow.



**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
 CONSTRUCTION PLAN FOR BITUMINOUS MILLING & SURFACING,  
 STABILIZED FULL DEPTH RECLAMATION & ADA IMPROVEMENTS  
 LOCATED ON T.H. 15 FROM T.H. 55 TO T13' NORTH OF CSAH 136

**PIT DATA**  
 COUNTY: STEARNS  
 SOURCE: N&T 2006  
 OWNER: MNDOT  
 LOCATION: SW 1/4 SW 1/4, SEC. 12 T12N R29W  
 MATERIAL: AVAILABLE AGGREGATE AND GRANULAR BORROW

**STATE PROJ. NO. 7303-50**  
 GROSS LENGTH: 62,219.85 FEET (11.784 MILE)  
 BRIDGES: LENGTH FEET MILE  
 EXCEPTIONS: LENGTH FEET MILE  
 NET LENGTH: 62,219.85 FEET (11.784 MILE)  
 REF. POINT: 132+00.886 TO REF. POINT: 144+00.663

**DESIGN DESIGNATION**  
 Design ESALS 2040 = 3,398,000  
 ADT Current Year 2020 = 7,270 Design Speed: 50 MPH  
 ADT Future Year 2040 = 9,340 Based on: Sight Distance  
 Design Height of eye: height of object  
 Design Speed not achieved etc.  
 (Theory Commercial) X STA. To STA. MPH  
 STA. To STA. MPH

**DESIGNATION**  
 Design ESALS 2040 = 3,398,000  
 ADT Current Year 2020 = 7,270 Design Speed: 50 MPH  
 ADT Future Year 2040 = 9,340 Based on: Sight Distance  
 Design Height of eye: height of object  
 Design Speed not achieved etc.  
 (Theory Commercial) X STA. To STA. MPH  
 STA. To STA. MPH

**WARNING!**  
 HIGH VOLTAGE OVERHEAD ELECTRIC  
 115KV TRANSMISSION LINE CROSSING  
 WITHIN PROJECT LIMITS

**WARNING!**  
 HIGH PRESSURE GAS TRANSMISSION  
 LINE CROSSING WITHIN PROJECT  
 LIMITS

**WARNING!**  
 HIGH VOLTAGE OVERHEAD ELECTRIC  
 115KV TRANSMISSION LINE CROSSING  
 WITHIN PROJECT LIMITS

**END S.P. 7303-50**  
 STA 888+77.00 R 7  
 R.P. 132+00.886

**BEGIN S.P. 7303-50**  
 STA 888+77.00 R 7  
 R.P. 132+00.886

**END S.P. 7303-50**  
 STA 781+00.00 R 27  
 R.P. 144+00.663

**T.H. 15 (LINTHIS) EQUATIONS**  
 S10 889+77.30 RT (BK) = S10 160+54.20 RB (AH)  
 S10 168+51.62 RB (BK) = S10 181+50.36 RB (AH)  
 S10 203+02.37 RB (BK) = S10 203+00.22 R10 (AH)  
 S10 257+50.77 R10 (BK) = S10 257+51.00 R11 (AH)  
 S10 282+74.88 R11 (BK) = S10 282+74.98 R12 (AH)  
 S10 301+10.80 R12 (BK) = S10 301+11.12 R13 (AH)  
 S10 325+05.94 R13 (BK) = S10 325+05.80 R14 (AH)  
 S10 380+73.06 R14 (BK) = S10 380+72.41 R15 (AH)  
 S10 408+58.89 R15 (BK) = S10 408+58.63 R16 (AH)  
 S10 428+66.93 R16 (BK) = S10 428+66.07 R17 (AH)  
 S10 460+91.05 R17 (BK) = S10 460+90.98 R18 (AH)  
 S10 523+71.20 R18 (BK) = S10 523+70.26 R19 (AH)  
 S10 541+45.58 R19 (BK) = S10 541+45.55 R20 (AH)  
 S10 551+86.47 R20 (BK) = S10 551+86.40 R21 (AH)  
 S10 580+26.49 R21 (BK) = S10 580+70.88 R22 (AH)  
 S10 620+18.50 R22 (BK) = S10 619+60.32 R23 (AH)  
 S10 663+17.70 R23 (BK) = S10 663+51.30 R24 (AH)  
 S10 690+72.80 R24 (BK) = S10 700+00.15 R25 (AH)  
 S10 709+61.90 R25 (BK) = S10 709+61.61 R26 (AH)  
 S10 737+05.13 R26 (BK) = S10 737+05.00 R27 (AH)

**FED. PROJ. NO. NHPP 00153081**

**GOVERNING SPECIFICATIONS**  
 THE 2008 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
 STANDARD SPECIFICATIONS FOR CONSTRUCTION SHALL GOVERN.

**INDEX**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	GENERAL LAYOUT
4-5	ESTIMATED QUANTITIES & STANDARD PLATES
6	SOILS & CONSTRUCTION NOTES
7-8	TYPICAL SECTIONS
9-11	PUBLIC UTILITIES
12-16	TABULATED QUANTITIES
17	ALIGNMENT TABULATIONS

**REF. POINT/STATION COMPARISON**

REF. POINT	STATION	COMPARISON
133+00.00	895+04.00	T13+TC2A, TC3+TC11
134+00.00	208+36.00	
135+00.00	261+48.00	
136+00.00	314+13.00	
137+00.00	367+17.00	
138+00.00	420+00.00	
139+00.00	472+70.00	
140+00.00	525+33.00	
141+00.00	577+98.00	
142+00.00	631+57.00	
143+00.00	684+19.00	
144+00.00	746+00.00	

**THIS PLAN CONTAINS 117 SHEETS**

I HEREBY CERTIFY THAT THIS PLAN 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.

**PRINT NAME: ROBERT MILLER**  
**DATE: 9/14/2018**  
**DESIGN: SQUAD ROGER THOMPSON, STEVE BENNETT, BRAD BISHOP, KARL MARTIN**

**RECOMMENDED FOR APPROVAL:** [Signature] ADE 9/30/2018  
**RECOMMENDED FOR APPROVAL:** [Signature] 8/30/2018  
**RECOMMENDED FOR APPROVAL:** [Signature] 9/6/2018  
**RECOMMENDED FOR APPROVAL:** [Signature] 8/14/2018

**OFFICE OF LAND MANAGEMENT:** DIRECTOR/LAND MANAGEMENT 20  
**APPROVED:** 20 STATE DESIGN ENGINEER

I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, WERE 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.

**PRINT NAME:** \_\_\_\_\_ **LICENSE #:** \_\_\_\_\_  
**DATE:** \_\_\_\_\_ **SIGNATURE:** \_\_\_\_\_

**DESIGN DESIGNATION**  
 Design ESALS 2040 = 3,398,000  
 ADT Current Year 2020 = 7,270 Design Speed: 50 MPH  
 ADT Future Year 2040 = 9,340 Based on: Sight Distance  
 Design Height of eye: height of object  
 Design Speed not achieved etc.  
 (Theory Commercial) X STA. To STA. MPH  
 STA. To STA. MPH

**PROJECT LOCATION**  
 COUNTY: STEARNS  
 DISTRICT: 03 BAXTER

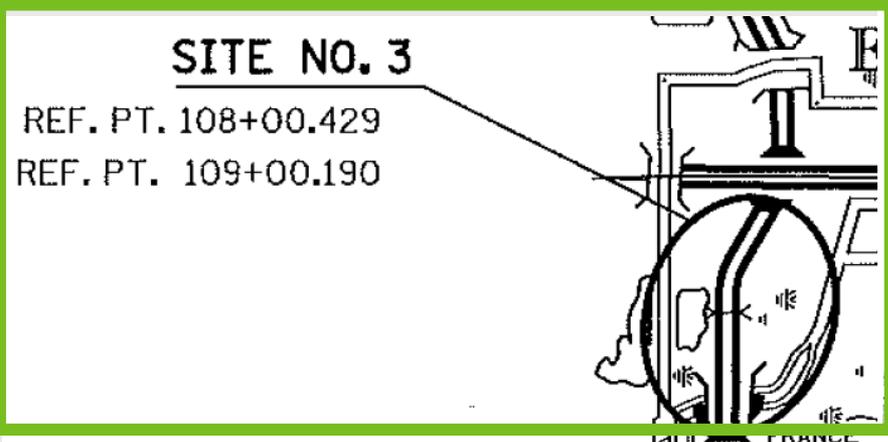
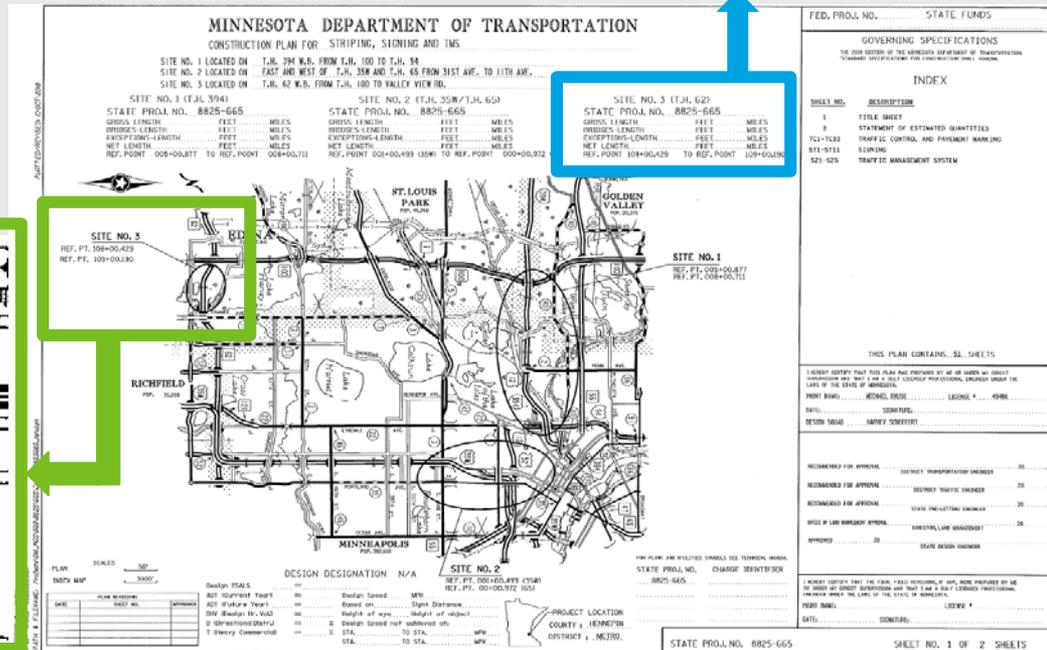
**STATE PROJ. NO. 7303-50 (T.H. 15 = 024) SHEET NO. 1 OF 88 SHEETS**

# INDEX MAP – SPORADIC SPOT LOCATIONS

These are typically signing, lighting, signal, and/or culvert repair projects.

- Label each location where work is being performed. Include the reference point
- Label major roadways
- Label major Cities
- Include a north arrow

<b>SITE NO. 3 (T.H. 62)</b>		
STATE PROJ. NO.	8825-665	
GROSS LENGTH	FEET	MILES
BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	FEET	MILES
REF. POINT	108+00.429	TO REF. POINT 109+00.190



# EXCEPTIONS

A project typically runs from point A to point B along a specified alignment. Sometimes there are gaps where no work is being done. These gaps are typically considered an EXCEPTION if they are over 50 feet long. For example there is a 2 mile long overlay section but there is a 500 foot section where no work is being done. If in the 500 foot gap there is only...

- Striping then it is NOT considered an exception.
- Signing then it IS considered an exception.
- Culvert then it is NOT considered an exception.
- Guardrail then it is NOT considered an exception.

Exception limits should be shown in the plan, as a minimum, on the index map, general layout, and construction plan views.

# EXCEPTIONS (Continued)

A bridge is NOT an exception if there are bridge sheets either in the plan or submitted separately to be advertised with the plan. This typically requires a bridge sub-contractor to perform the work.

When there is work on the bridge such as guardrail or striping only, the bridge would be considered an exception as it does not require a bridge contractor to perform this work.

When the work is primarily off the roadway such as high tension cable, signing, snow fence, landscaping, etc. and it skips the bridge. The bridge would NOT be shown as an exception.

A box culvert is not considered a bridge when it comes to the length block and/or exceptions.

# EXCEPTIONS (Continued)

The exception should be shown in both the length block and the index map.

STATE PROJ. NO. 4710-27  
 GROSS LENGTH 62301.05 FEET 11.799 MILES  
 BRIDGES-LENGTH 2093.00 FEET 38.899 MILES  
 EXCEPTIONS-LENGTH 205.00 FEET 0.379 MILES  
 NET LENGTH 62096.05 FEET 11.761 MILES  
 REF. POINT 145+00.126 TO REF. POINT 156+00.897

MINNESOTA DEPARTMENT OF TRANSPORTATION  
 CONSTRUCTION PLAN FOR... GRADINGS, BILUMINOUS MULLINGS, ULTRATHIN BONDED WEARING COURSE AND ADA IMPROVEMENTS  
 LOCATED ON... TH. 22... FROM... 113<sup>RD</sup> NORTH OF TH. 42... TO... 5<sup>TH</sup> SOUTH OF TH. 55...

STATE PROJ. NO. 4710-27  
 GROSS LENGTH 62301.05 FEET 11.799 MILES  
 BRIDGE-LENGTH 2093.00 FEET 38.899 MILES  
 EXCEPTIONS-LENGTH 205.00 FEET 0.379 MILES  
 NET LENGTH 62096.05 FEET 11.761 MILES  
 REF. POINT 145+00.126 TO REF. POINT 156+00.897

WARNING!  
 TRANSMISSION LINE CROSSING  
 69 KV AND 400 KV

S.P. 4710-27  
 EQUATIONS (2MP22)

STA. (L&R)	R1	=	STA. (L&R)	R2
24402.38	R1	=	13461.33	R2
58429.50	R2	=	58433.18	R3
129475.46	R3	=	129470.41	R4
173423.84	R4	=	173425.83	R5
276479.95	R5	=	276482.83	R6
309479.14	R6	=	309485.08	R7
351464.77	R7	=	351480.32	R8
399425.58	R8	=	399414.80	R9
533416.40	R9	=	533418.56	R10
585422.30	R10	=	585423.17	R11

DESIGN DESIGNATION

PROJECT LOCATION

STATE PROJ. NO. 4710-27 (TH 22 = 22) SHEET NO. 1 OF

GOVERNING SPECIFICATIONS

INDEX

SHEET NO.	DESCRIPTION
1	TITLE
2-9	GENERAL
10-11	ESTIMATE
12	STANDARD AND SPECIFICATIONS
13-22	TABULAR
23-26	TYPICAL
27	DRIVE
28	ADA C
29-35	DETAIL
36-56	STANDARD
57-61	CONSTRAINTS
62-67	ADA B
68-73	ADA C
74	STORM
75-76	SMPS
97-99	APPENDICES
10-16	TRAFFIC
X1-X3	CROSS SECTIONS

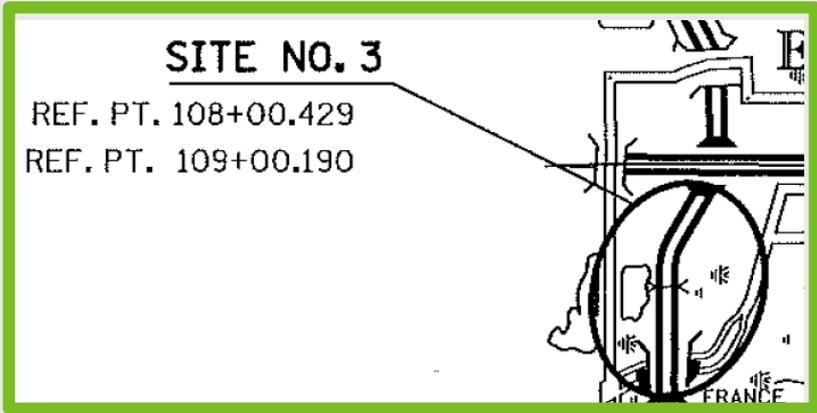
EXCEPTION  
 BRIDGE NO. 47007  
 LENGTH 205.00'

STA. 369+13.00 RB  
 STA. 367+08.00 RB

# EXCEPTIONS (Continued)

Sometimes a stand alone project does not run along a continuous line but rather is sporadic as in a signal or culvert project. In these cases no length is stated in the length block, and no exceptions are listed. Rather the index map will show each location with a reference point.

SITE NO. 3 (T.H. 62)		
STATE PROJ. NO.	8825-665	
GROSS LENGTH	FEET	MILES
BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	FEET	MILES
REF. POINT	108+00.429	TO REF. POINT 109+00.190



MINNESOTA DEPARTMENT OF TRANSPORTATION  
CONSTRUCTION PLAN FOR STRIPING, SIGNING AND TMS

SITE NO. 1 LOCATED ON T.H. 394 W.B. FROM T.H. 100 TO T.H. 94  
SITE NO. 2 LOCATED ON EAST AND WEST OF T.H. 358 AND T.H. 65 FROM 31ST AVE. TO 11TH AVE.  
SITE NO. 3 LOCATED ON T.H. 42 W.B. FROM T.H. 100 TO VALLEY VIEW RD.

STATE PROJ. NO. 8825-665	STATE PROJ. NO. 8825-665	STATE PROJ. NO. 8825-665
GROSS LENGTH	FEET	MILES
BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	FEET	MILES
REF. POINT 008+00.877	TO REF. POINT 008+00.711	REF. POINT 008+00.429

ST. LOUIS PARK  
GOLDEN VALLEY  
MINNEAPOLIS  
RICHFIELD

SITE NO. 1 REF. PT. 108+00.877  
SITE NO. 2 REF. PT. 008+00.711  
SITE NO. 3 REF. PT. 108+00.429  
REF. PT. 109+00.190

MINNESOTA DEPARTMENT OF TRANSPORTATION  
STATE PROJ. NO. 8825-665  
SHEET NO. 1 OF 2 SHEETS

# EQUATIONS

The equations that pertain to the project limits should be included on the title sheet. The back equation is always listed before the ahead equation as it pertains to the previous section (left).

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
CONSTRUCTION PLAN FOR... GRADING... ALUMINUMS MILLING... ULTRAHAIR, BONDED, WEARING COURSE AND ADA IMPROVEMENTS.  
LOCATED ON... TH 22... FROM... 1/4 MILE NORTH OF TH 12... TO... 1/4 MILE SOUTH OF TH 53...

STATE PROJ. NO. 4710-27  
GROSS LENGTH 6220.00 FEET 11.790 MILES  
BRIDGE LENGTH 250.00 FEET 0.453 MILES  
EXCEPTED LENGTH 225.00 FEET 0.413 MILES  
NET LENGTH 5745.00 FEET 10.324 MILES  
REF. POINT 1955501.00 TO REF. POINT 1364500.00

**WARNING!**  
TRANSMISSION LINE CROSSING  
65 KV AND 400 KV

**S.P. 4710-27  
EQUATIONS (INP22)**

STA. (BK)		STA. (AH)	
2440.36	R1	1347.39	R2
5849.50	R2	5849.50	R3
10949.46	R3	12940.41	R4
17942.84	R4	17942.84	R5
27679.35	R5	27642.93	R6
30539.14	R6	30545.08	R7
351464.77	R7	351460.30	R8
399425.98	R8	399414.00	R9
533416.40	R9	533418.56	R10
585425.30	R10	585423.17	R11

DESIGN DESIGNATION  
Design Speed: 55 MPH  
ADT Current Year: ...  
ADT Future Year: ...  
TR Design %: 100  
D (diversion/dist): ...  
T Heavy Commercial: ...

STATE PROJ. NO. 4710-27 (TH 22 - 22) SHEET NO. 1 OF 86 SHEETS

**S.P. 4710-27  
EQUATIONS (INP22)**

STA. (BK)		STA. (AH)	
24+40.36	R1	=	13+47.39 R2
56+29.50	R2	=	96+33.16 R3
129+19.46	R3	=	129+20.41 R4
173+23.84	R4	=	173+25.83 R5
276+79.95	R5	=	276+82.93 R6
303+39.14	R6	=	303+45.08 R7
351+64.77	R7	=	351+80.32 R8
399+09.98	R8	=	399+14.80 R9
533+16.40	R9	=	533+18.56 R10
585+22.30	R10	=	585+23.17 R11

# REVISION BLOCK

The revision block is used when sheets are revised after the plan is signed.

PLAN REVISIONS		
DATE	SHEET NO.	APPROVER
4-19-18	1,164,166,TC7	T.R.S.

- It is typically located in the bottom left corner of the title sheet.
- Make sure you leave the left column large enough to enter a full date.

MINNESOTA DEPARTMENT OF TRANSPORTATION  
 UNIFORM SURFACING, R-CUT INTERSECTIONS, TURN LANE EXTENSIONS,  
 AND INTERSECTIONS IN THE CITIES OF BLAINE, HAM LAKE, AND EAST BETHEL.

NO. 0208-157 (T.H. 65)  
 FROM POINT 0208-157 TO REF. POINT 026320.417

BEGIN S.P. 0208-157  
 TH65NB STA. 339+21.5

END S.P. 0208-157  
 TH65NB STA. 1187+53.2

BLAINE  
 HAM LAKE  
 EAST BETHEL

DESIGN DESIGNATION  
 Design Speed = 70 MPH  
 Based on 57000000 Significance  
 Height of eye 4.5 Height of object 2.0  
 Design Speed not achieved at  
 STA. To STA. MPH  
 STA. To STA. MPH

PROJECT LOCATION TYPICAL

NOTE: SEE SHEET 2 FOR STATION EQUATIONS.

FOR PLANS AND UTILITIES SYMBOLS SEE TECHNICAL MANUAL  
 STATE PROJ. NO. 0208-157 CHARGE IDENTIFIER  
 .0208-157

PROJECT LOCATION  
 COUNTY : ANOKA  
 DISTRICT : METRO.

STATE PROJ. NO. 0208-157 (T.H. 65 = 005) SHEET NO. 1 OF 228 SHEETS

MINNESOTA DEPARTMENT OF TRANSPORTATION  
 GOVERNING SPECIFICATIONS  
 INDEX

FED. PROJ. NO. MHP-HSIP-AID 00651

1-2 TITLE SHEET  
 3 GENERAL LAYOUT  
 4-7 STATEMENT OF ESTIMATED QUANTITIES  
 8 SCHEDULES AND CONSTRUCTION NOTES AND STANDARD PLATES  
 9-18 EARTHWORK SUMMARY  
 19-32 TABULATIONS  
 33-43 TYPICAL SECTIONS  
 44-72 STANDARD PLAN SHEETS AND DETAILS  
 73-99 ALIGNMENT PLAN AND TABULATIONS  
 100-108 IMPLACE UTILITY TABULATIONS AND REMOVAL PLAN  
 109-134 IMPLACE UTILITY, TOPOGRAPHY & REMOVAL PLAN  
 135-160 CONSTRUCTION PLAN  
 161-173 INTERSECTION DETAILS  
 174-179 PROFILES  
 180-205 DRAINAGE, EROSION CONTROL, & TURF ESTABLISHMENT PLAN  
 206-215 DRAINAGE PROFILES AND TABULATIONS  
 220 DRAINAGE SUMMARY  
 221-224 DRAINAGE DETAILS  
 225-228 STORM WATER POLLUTION PREVENTION PLAN NARRATIVE  
 701-703D TRAFFIC CONTROL PLANS  
 PM1-PM6 PERMANENT PAVEMENT MARKING PLANS  
 SL1-SL11 LIGHTING PLANS  
 ST1-ST74 SIGNING PLANS  
 SS1-SS44 SIGNAL PLANS  
 ST1-SST6 TRAFFIC MANAGEMENT SYSTEM PLANS  
 XI-XI50 CROSS SECTION LAYOUT AND CROSS SECTIONS

THIS PLAN CONTAINS 663 SHEETS

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

PRINT NAME: MICHAEL BRIDGE LICENSE NO. 61493  
 DATE: 3/12/2018 SIGNATURE: *Michael Br...*  
 DESIGN SEAL: BEAN BRIDGE & ASSOCIATES, INC. 12000 W. DENA, SUITE 100, BETHEL

RECOMMENDED FOR APPROVAL: *[Signature]* 3/14/18  
 RECOMMENDED FOR APPROVAL: *[Signature]* 3/13/18  
 RECOMMENDED FOR APPROVAL: *[Signature]* 3-13-18  
 RECOMMENDED FOR APPROVAL: *[Signature]* 3/13/18

RECOMMENDED FOR APPROVAL: STATE TRAFFIC ENGINEER  
 STATE OF LAND MANAGER APPROVAL: STATE LAND MANAGER  
 APPROVED: STATE DESIGN ENGINEER

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

PRINT NAME: SIGNATURE: LICENSE #  
 DATE:

# SCALES

The scale is sometimes used for the various plan sheets.

## SCALES

PLAN	100'	20'
PROFILE	HORIZ.	VERT.
INDEX MAP	10560'	
GENERAL LAYOUT	500'	

- It is typically located in the bottom left corner of the title sheet.
- Make sure it includes units (e.g. feet, miles, etc.)

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
 CONSTRUCTION PLAN FOR...GRADING, ALTIMINOUS MILLING, ULTRAHIGH BONDED WEARING COURSE AND ADA IMPROVEMENTS,  
 LOCATED ON .....TH. 22..... FROM .....JULY. NORTH OF TH. 12..... TO .....ST. SOUTH OF TH. 55.....

STATE PROJ. NO. ....4710-27.....  
 GROSS LENGTH.....46280.06 FEET.....11.099 MILES  
 BRIDGES-LENGTH.....228.00 FEET.....5.832 MILES  
 EXCEPTIONS-LENGTH.....228.00 FEET.....5.832 MILES  
 NET LENGTH.....46052.06 FEET.....11.061 MILES  
 REF. POINT 158+99.128 TO REF. POINT 358+00.007

**WARNING!**  
 TRANSMISSION LINE CROSSING  
 69 KV AND 400 KV

S.P. 4710-27  
 EQUATIONS (ENR22)

STA. (BL)	R1	STA. (AB)	R2
24440.36	R1 = 13447.39	R2	
58425.50	R2 = 58425.16	R3	
129419.46	R3 = 129420.41	R4	
179425.84	R4 = 179425.83	R5	
278428.55	R5 = 278428.55	R6	
303435.14	R6 = 303435.08	R7	
351464.77	R7 = 351463.32	R8	
398409.58	R8 = 398414.80	R9	
533416.40	R9 = 533418.56	R10	
585423.30	R10 = 585423.17	R11	

PLAN 100' 20'  
 PROFILE HORIZ. VERT.  
 INDEX MAP 10560'  
 GENERAL LAYOUT 500'

DESIGN DESIGNATION

DATE SHEET NO. APPROVED

DESIGN SPEED 60 MPH  
 BASED ON 100 FT. SIGHT DISTANCE  
 HEIGHT OF EYE 5.5' HEIGHT OF OBJECT 4.25'  
 DESIGN SPEED NOT DEVELOPED AT:  
 STA. .... TO STA. .... MPH  
 STA. .... TO STA. .... MPH

PROJECT LOCATION  
 COUNTY : ...MEeker...  
 DISTRICT : ...8...

STATE PROJ. NO. 4710-27 (TH 22 = 22) SHEET NO. 1 OF 86 SHEETS

FED. PROJ. NO. ....S.I.P.F. 4710(113).....

**GOVERNING SPECIFICATIONS**  
 THE JOB OFFICE OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
 STANDARD SPECIFICATIONS FOR CONSTRUCTION SHALL APPLY.

**INDEX**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-9	GENERAL LAYOUT
10-11	ESTIMATED QUANTITIES
12	STANDARD PLATES, CONSTRUCTION AND UTILITY NOTES
13-22	TABULATIONS
23-26	TYPICAL SECTIONS
27	DRIVEWAY DESIGN TABULATION
28	ADA CONTROL POINT TABLES
29-35	DETAILS
36-56	STANDARD PLANS
57-61	CONSTRUCTION, UTILITY AND EROSION CONTROL PLAN
62-67	ADA REMOVAL PLAN
68-73	ADA CONSTRUCTION PLAN
74	STORM SEWER PLAN
75-76	SWPPP
77-80	NWI MAP
81-84	PAVEMENT MARKINGS
85-86	TRAFFIC CONTROL
91-93	GROSS SECTIONS

THIS PLAN CONTAINS 86 SHEETS

I HEREBY CERTIFY THAT THIS PLAN 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.

PRINT NAME: ..... LICENSE #.....  
 DATE: ..... SIGNATURE: .....  
 DESIGN: .....  
 DESIGNER: .....  
 CHECKER: .....  
 APPROVED: .....  
 DATE: ..... SIGNATURE: .....  
 DESIGNER: .....  
 CHECKER: .....

# MINI MINNESOTA

- The Mini Minnesota shows the approximate location of the project
- All counties where the project is located. Cannot state “various counties”, must list them all.
- The District where the project is located

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
 CONSTRUCTION PLAN FOR BITUMINOUS MILLING & SURFACING,  
 STABILIZED FULL DEPTH RECLAMATION & ADA IMPROVEMENTS  
 LOCATED ON T.W. 15 FROM T.H. 55 TO 713' NORTH OF CSAN 136

**FED. PROJ. NO. WAPP 00533081**  
**GOVERNING SPECIFICATIONS**  
 THE 2008 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
 STANDARD SPECIFICATIONS FOR CONSTRUCTION SHALL GOVERN.

**INDEX**

SHEET NO.	DESCRIPTION
0-1	GENERAL LAYOUT
0-2	ESTIMATED QUANTITIES & STANDARD PLATES
0-3	SOILS & CONSTRUCTION NOTES
0-4	TYPICAL SECTIONS
0-5	PUBLIC UTILITIES
0-6	TABULATED QUANTITIES
0-7	ALIGNMENT TABULATIONS
0-8	NOISE ANALYSIS DETAILS
0-9	STANDARD PLAN SHEETS
0-10	CONSTRUCTION PLAN
0-11	DRAINAGE PROFILES & TABULATIONS
0-12	PLAN DETAIL SHEETS
0-13	ADA DETAILS
0-14	SBPP PLAN AND MAP
0-15	TURF ESTABLISHMENT & EROSION CONTROL
0-16	TRAFFIC CONTROL & DETOUR PLANS
0-17	PAVEMENT MARKING PLANS
0-18	SIGNAL PLANS

**THIS PLAN CONTAINS 187 SHEETS**

**DESIGNATION**

NO.	CHANGE DESCRIPTION
1	...
2	...
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**PROJECT LOCATION**  
 COUNTY : STEARNS  
 DISTRICT : D3 BAXTER

It is typically located at the bottom portion of the title sheet.

**PROJECT LOCATION**  
 COUNTY : STEARNS  
 DISTRICT : D3 BAXTER

# CHARGE IDENTIFIER

The charge identifier is the number that the project design work is charged to on timesheets.

FOR PLANS AND UTILITIES SYMBOLS SEE TECHNICAL MANUAL

STATE PROJ. NO.

CHARGE IDENTIFIER

5619-11

T45736

2108-05

2612-09

2614-09

**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
CONSTRUCTION PLAN FOR GRADING, BITUMINOUS MILL, AND OVERLAY

LOCATED ON T.H. 78 FROM 50P. S. OF EB TH 84 TO IN 210

STATE PROJ. NO. 2614-09  
GROSS LENGTH 23062.25 FEET 4.307 MILES  
BRIDGES-LENGTH 252.22 FEET 0.048 MILES  
EXCEPTING-LENGTH 336.88 FEET 0.008 MILES  
NET LENGTH 22673.15 FEET 4.294 MILES  
REF. POINT 0+000.00 TO REF. POINT 0+000.00

STATE PROJ. NO. 5619-11  
GROSS LENGTH 61775.90 FEET 11.700 MILES  
BRIDGES-LENGTH FEET MILES  
EXCEPTING-LENGTH FEET MILES  
NET LENGTH 61775.90 FEET 11.700 MILES  
REF. POINT 0+000.00 TO REF. POINT 21+000.00

STATE PROJ. NO. 2108-09  
GROSS LENGTH 3848.50 FEET 0.074 MILES  
BRIDGES-LENGTH FEET MILES  
EXCEPTING-LENGTH FEET MILES  
NET LENGTH 3848.50 FEET 0.074 MILES  
REF. POINT 0+000.00 TO REF. POINT 0+000.00

STATE PROJ. NO. 2612-09  
GROSS LENGTH 1078.50 FEET 0.020 MILES  
BRIDGES-LENGTH FEET MILES  
EXCEPTING-LENGTH FEET MILES  
NET LENGTH 1078.50 FEET 0.020 MILES  
REF. POINT 0+000.00 TO REF. POINT 0+000.00

STATE PROJ. NO. 2614-09  
GROSS LENGTH 1078.50 FEET 0.020 MILES  
BRIDGES-LENGTH FEET MILES  
EXCEPTING-LENGTH FEET MILES  
NET LENGTH 1078.50 FEET 0.020 MILES  
REF. POINT 0+000.00 TO REF. POINT 0+000.00

QUANTITIES

209+19.85 BK	=	209+17.64 BK
237+43.09 BK	=	237+44.46 BK
284+31.84 BK	=	284+44.23 BK
291+90.79 BK	=	291+91.02 BK
312+06.12 BK	=	312+08.14 BK
317+14.49 BK	=	317+08.80 BK
420+09.09 BK	=	420+08.14 BK
107+04.14 BK	=	107+20.23 BK
148+14.08 BK	=	148+04.14 BK
196+51.18 BK	=	196+14.80 BK
213+41.62 BK	=	213+07.12 BK
226+50.14 BK	=	226+54.03 BK
283+19.25 BK	=	283+06.32 BK
308+20.25 BK	=	308+04.74 BK
293+14.08 BK	=	293+00.72 BK
250+27.70 BK	=	249+04.56 BK
262+27.03 BK	=	262+11.29 BK
284+06.05 BK	=	284+03.83 BK
318+29.77 BK	=	318+30.16 BK
345+13.08 BK	=	345+07.16 BK
474+81.64 BK	=	474+32.32 BK
618+27.48 BK	=	618+21.82 BK

DESIGNATION

Design 534.5 2015 = 209,000 Design Speed 55 MPH  
All Curves: 2005 = 2000 based on TRIPPOLE Sign Database  
All Future: 2005 = 2000  
Design by: [Signature]  
Date: 8/15/17  
Scale: 1" = 40'

CHARGE IDENTIFIER: T45736

- It is located at the bottom portion of the title sheet between the mini Minnesota and the signatures.
- It is written in pencil as it is erased before the plan goes out for bids.

# PROJECT NUMBERS

The title sheet should include ALL the project numbers in the plan.

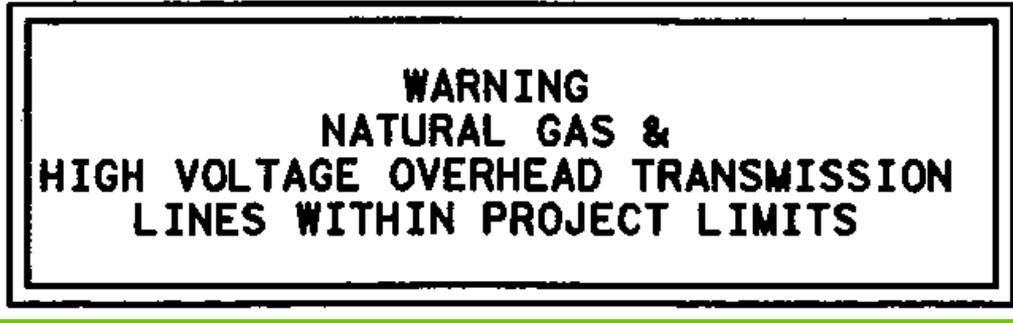
- Show the project number along with T.H. number, followed by the primary statutory route number, (T.H. 94=392) This should be shown for all SP's even if the TH and Legislative numbers are the same.
- Sometimes there are multiple Legislative Routes on the same roadway. These can change over the course of a route and over time. When in doubt use the statutory route number that represents the greatest extent of the highway route or the lower number.
- When there are multiple project numbers the PRIME SP number should be shown on the bottom.
- Make sure to also include all State Aid project numbers.





# WARNING LABELS

If there is a petroleum or high-pressure gas line in the vicinity of the project, include a warning note on the title sheet of the plan. (e.g. **WARNING! PETROLEUM PIPELINE CROSSING**). Contact the CO utility office for exact wordage.



**MINNESOTA DEPARTMENT OF TRANSPORTATION**  
CONSTRUCTION PLAN FOR GRADING, BITUMINOUS MILL AND OVERLAY

LOCATED ON T.H. 78 FROM 500' S. OF ETH 34 TO TR 210 STATE PROJ. NO. 2614-09 STATE PROJ. NO. 2612-09 STATE PROJ. NO. 8-05

REF. POST.	STATION	STATE PROJ. NO. 2614-09	STATE PROJ. NO. 2612-09	STATE PROJ. NO. 8-05
1+00.00	208+34	GROSS LENGTH 2306.23 FEET 4.307 MILES	GROSS LENGTH 1073.50 FEET 2.002 MILES	GROSS LENGTH 1961 FEET 2.998 MILES
2+00.00	209+88	BRIDGES-LENGTH 332.68 FEET 0.643 MILES	BRIDGES-LENGTH 107.50 FEET 0.203 MILES	BRIDGES-LENGTH 1961 FEET 2.998 MILES
3+00.00	205+24	EXCEPTIONS-LENGTH 332.68 FEET 0.643 MILES	EXCEPTIONS-LENGTH 107.50 FEET 0.203 MILES	EXCEPTIONS-LENGTH 1961 FEET 2.998 MILES
4+00.00	203+72	NET LENGTH 2073.56 FEET 4.294 MILES	NET LENGTH 1073.50 FEET 2.002 MILES	NET LENGTH 1961 FEET 2.998 MILES
5+00.00	401+26	REF. POINT 90+00.000 TO REF. POINT 04+00.000	REF. POINT 04+00.573 TO REF. POINT 04+00.796	REF. POINT 04+00.796 TO REF. POINT 04+00.796
6+00.00	89+38	STATE PROJ. NO. 5619-11	GROSS LENGTH 8173.90 FEET 15.000 MILES	GROSS LENGTH 1961 FEET 2.998 MILES
7+00.00	138+60	BRIDGES-LENGTH 191+51	BRIDGES-LENGTH 107.50 FEET 0.203 MILES	BRIDGES-LENGTH 1961 FEET 2.998 MILES
8+00.00	191+51	EXCEPTIONS-LENGTH 244+32	EXCEPTIONS-LENGTH 107.50 FEET 0.203 MILES	EXCEPTIONS-LENGTH 1961 FEET 2.998 MILES
9+00.00	244+32	NET LENGTH 8173.90 FEET 15.000 MILES	NET LENGTH 1073.50 FEET 2.002 MILES	NET LENGTH 1961 FEET 2.998 MILES
10+00.00	296+83	REF. POINT 04+00.000 TO REF. POINT 04+00.000	REF. POINT 04+00.573 TO REF. POINT 04+00.796	REF. POINT 04+00.796 TO REF. POINT 04+00.796
11+00.00	79+20			
12+00.00	131+70			
13+00.00	184+49			
14+00.00	236+70			
15+00.00	289+80			
16+00.00	343+02			
17+00.00	395+21			
18+00.00	447+80			
19+00.00	500+99			
20+00.00	554+50			
21+00.00	607+32			

**QUANTITIES**

209+19.85 BK	=	209+17.64 AH
237+43.09 BK	=	237+44.46 AH
256+25.84 BK	=	256+24.25 AH
291+90.79 BK	=	291+91.02 AH
312+06.13 BK	=	312+08.14 AH
374+14.49 BK	=	373+80.80 AH
400+06.09 BK	=	400+04.85 AH
107+04.14 BK	=	107+20.21 AH
140+04.08 BK	=	140+02.29 AH
196+53.14 BK	=	196+14.80 AH
223+05.25 BK	=	223+08.12 AH
226+50.14 BK	=	226+54.01 AH
283+05.25 BK	=	283+08.32 AH
308+20.25 BK	=	308+04.74 AH
129+10.49 BK	=	129+00.72 AH
205+07.70 BK	=	205+04.06 AH
262+07.03 BK	=	262+11.29 AH
288+08.25 BK	=	288+08.83 AH
316+23.77 BK	=	316+30.16 AH
346+03.09 BK	=	346+07.16 AH
474+85.64 BK	=	474+92.92 AH
618+07.69 BK	=	618+26.62 AH

**DESIGNATION**

Design STALS 2005 = 22.00% Design Speed 55 mph  
 2011 Current Year 2005 = 100% Based on STOPPING Sight Distance  
 2011 Future Year 2005 = 100% Weight of new SV. Weight of old SV = 0%  
 2011 Design MC Vol = 150 Design Speed not entered at 55 mph  
 2011 Design MC Vol = 150 Design Speed not entered at 55 mph  
 2011 Design MC Vol = 150 Design Speed not entered at 55 mph  
 2011 Design MC Vol = 150 Design Speed not entered at 55 mph

**DESIGNATION**

Design STALS 2005 = 22.00% Design Speed 55 mph  
 2011 Current Year 2005 = 100% Based on STOPPING Sight Distance  
 2011 Future Year 2005 = 100% Weight of new SV. Weight of old SV = 0%  
 2011 Design MC Vol = 150 Design Speed not entered at 55 mph  
 2011 Design MC Vol = 150 Design Speed not entered at 55 mph  
 2011 Design MC Vol = 150 Design Speed not entered at 55 mph  
 2011 Design MC Vol = 150 Design Speed not entered at 55 mph

The note is usually bold, larger font, and/or double outlined to draw attention to it.

# QUESTIONS????

Any questions contact us ANYTIME:

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**Jane Krebsbach @ 651-366-3183**  
**[jane.krebsbach@state.mn.us](mailto:jane.krebsbach@state.mn.us)**