

To:

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New York State
Department of
Transportation

EI

**ENGINEERING 08-002
INSTRUCTION**

Title: **HIGHWAY DESIGN MANUAL CHAPTER 21 REVISED PLAN SHEET GUIDANCE**

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Approved:

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1/23/08
Date

ADMINISTRATIVE INFORMATION:

- Effective Date: This Engineering Instruction (EI) is effective upon signature as outlined in the Implementation section.
- Superseded Issuances: This EI supersedes Highway Design Manual Chapter 21 Section 21.2.2.1 Item C, Section 21.2.2.4 Items A through E, and Chapter 21 Appendix E.

PURPOSE: The purpose of this Engineering Instruction is to announce standard plan sheets that accommodate professional seals and signatures, and to provide information regarding other revisions to standard plan sheets and proposal sheets.

TECHNICAL INFORMATION:

The following outlines changes that have occurred to specific sheets:

1. **Sheet Border** – The sheet border has been revised to accommodate professional seals. The total number of sheets has been removed from each sheet and is now located on the Index and Abbreviation sheet. Title block information has been relocated along the bottom edge to provide a more uniform work area.
2. **Title Sheet** – Two notes, which shall be included on each sealed document (once per document) have been added as a result of EI 08-001:

CONTRACT PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH NYSDOT POLICIES AND GUIDELINES AND THE FINAL DESIGN REPORT APPROVED ON __/__/__.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

The total number of sheets and the Standard Sheet list have been relocated to the Index and Abbreviation sheet. The words "Office of Engineering" have been removed. The cell NSCCPN (sheet, cover, consultant project note) was superseded by EI 08-001 and has been removed from the cell library.

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3. **Index and Abbreviations Sheet** – The total number of sheets has been added to this sheet. The sheet has been placed on a revised sheet border and reorganized. The Standard Sheet list has been added.
4. **Legend Sheets** - These sheets have been placed on a revised sheet border.
5. **Earthwork Summary Sheets** – These sheets have placed on a revised sheet border.
6. **Sign Data Sheet** - The sheet has been placed on a revised sheet border. Outdated notes have been removed from the sheet.
7. **Proposal Title Sheet** – The sheet has been revised to include a note referencing the latest approved standard sheets. The list of Standard Sheets has been removed and should be included for Proposal Only projects on a separate sheet within the proposal. The words “Office of Engineering” have been removed from the sheet.
8. **Proposal Professional Seal Sheet** – The sheet has been added to accommodate including professional seals in Proposal Only contracts. For Proposal Only projects, due to the limited drawing space available, Professional Seals and Signatures shall be included by including a single sheet containing the professional seal and signature of the person responsible for its production and a description of their professional work. Every proposal sheet does not have to be individually sealed.
9. **Drawings requiring more than one professional seal** – Two additional cells have been added to the cell library for use when more than one professional is responsible for the production of a particular sheet:
 - NSSP_P – Sheet, Stamp, Prepared By, Proposed
 - NSSA_P - Sheet, Stamp, Altered By, Proposed
10. **Sheet Border without Seals** – This sheet has been added to provide a standard sheet border format for plans that do not require a professional seal, such as Abstract Request Maps.

New Guidance – Additional guidance is located on pages 3-8 of this EI.

IMPLEMENTATION: The sheets should be used for all projects requiring professional seals as stated in EI 08-001. For projects with lettings before September 1, 2008, the previously released sheets may be used with professional seals placed as close to the left bottom corner as possible on these sheets. The new title sheet with notes added as a result of EI 08-001 should be used for all projects which contain plan sheets with professional seals.

DISTRIBUTION: Working copies of the proposal pages and plan sheets should be obtained from the nym_sheet.cel cell library (metric) or the nyu_sheet.cel cell library (U.S. Customary), which are available through LANDesk (on the Department's network) by downloading the CADD Resources and Settings Package (Department staff) or by accessing the Department's Public Website at

<https://www.nysdot.gov/portal/page/portal/main/business-center/engineering/cadd-info/configurations>

and choosing CADD Settings/Resource Files (for Consultants).

CONTACT: General questions regarding this EI should be addressed to Norm Schips of the Design Quality Assurance Bureau at (518) 485-8611 or via e-mail at nschips@dot.state.ny.us. Technical questions should be addressed to Susan Andrews of the Design Services Bureau at (518) 457-6685 or via e-mail at sandrews@dot.state.ny.us.

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21.2.2.1

C. Plan Sheet Format

The blank plan sheet border provides a common format for the plans. Except for the title sheet, all plan sheets follow this same format which provides for the placement of project related information common to the set of plans - sheet borders, title block (bottom of sheet), and left margin text. All plan sheets are provided with a top margin of 0.3"; right and bottom margins of 0.2" and left margin 1". Standard plan sheets are provided as cells, and these cells should be used to prepare the plans. Working copies of these cells should be obtained from the `nyu_sheet.cel` cell library (U.S. Customary) or the `nym_sheet.cel` cell library (metric) which are available through LANDesk (on the Department's network) by downloading the CADD Resources and Settings Package (Department staff) or by accessing the Department's Public Website at

<https://www.nysdot.gov/portal/page/portal/main/business-center/engineering/cadd-info/configurations> and choosing CADD Settings/Resource Files (for Consultants).

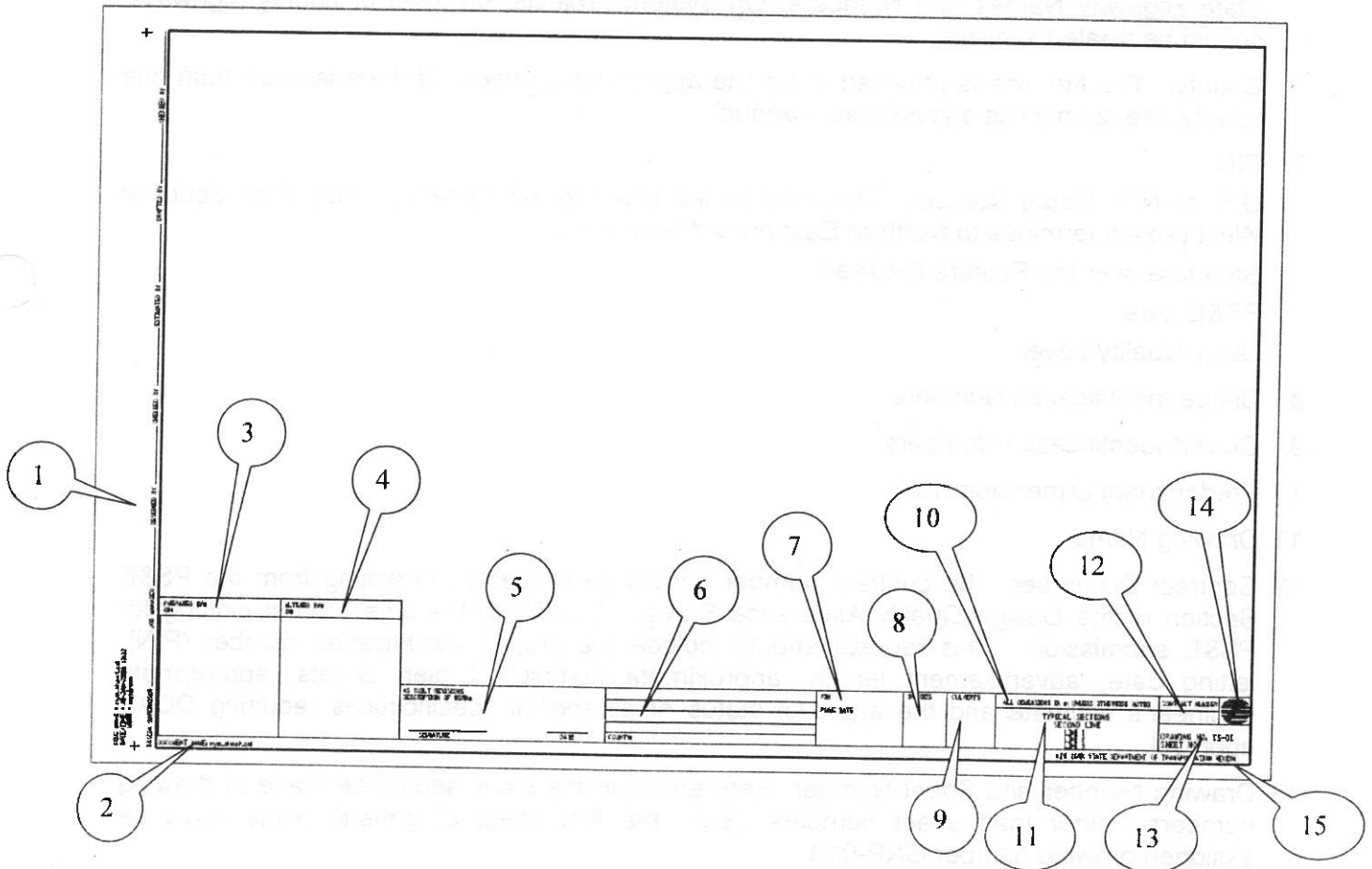


Figure – Standard Plan Sheet Border

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The standard plan sheet border contains the following items:

1. Left border area. This area should be used by the Regions and Main Office Divisions to aid in their quality control efforts by identifying project staff to answer questions and provide plan review confirmation.
2. Document Name.
3. Prepared By Professional Seal block. This area is to accommodate the professional seal of the professional responsible for the production of the sheet.
4. Altered By Professional Seal block. This area is to accommodate the professional seal should the plan sheet be altered.
5. As Built Revisions. This area is to accommodate a description of any As Built Revisions, and the Signature of the Approver of the As Built. Refer to the Manual of Uniform Record Keeping for more information regarding As Builts.
6. State Highway Name and State Highway Number. Four lines are provided to accommodate State Highway Names and Numbers. Off system projects, on town or county highways, should be treated similarly.

County. The fifth line is provided to list the applicable counties. If there is more than one county, the county line should read "various".
7. PIN
U.S. or N.Y. Route Number. This may be left blank for off system project (from South or West project terminus to North or East project terminus).
Structure over the Feature Crossed.
PS&E date.
Utility Quality Level.
8. Bridge Identification Numbers.
9. Culvert Identification Numbers.
10. Predominant Dimension Note.
11. Drawing Name.
12. Contract D number. The contract number should be requested in writing from the PS&E Section of the Design Quality Assurance Bureau (DQAB) at the time of final plotting for PS&E submission. This request should include the project identification number (PIN), letting date, advertisement length, approximate number of plan sheets, approximate engineer's estimate and the approval status of all special specifications requiring DQAB approval.
13. Drawing Number and Sheet Number. References in the plans should be made to drawing numbers, rather than sheet numbers. (e.g., the first sheet of general plans could be assigned drawing number GNP-01.)
14. In the space provided, consultants may replace the DOT logo in the lower right of the sheet with their own identifying logo.
15. Region Number.

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21.2.2.4 Final Plans, Design Phase VI - Final Plans, Specifications and Estimate Submission

The final plans should be organized and sealed as follows:

Sheet	Professional Seal Required
Title Sheet	No
Index and Abbreviations	No
Typical Sections	Yes
Estimate of Quantities	No
Legend Sheets	No
General Notes	Yes
Plan Small Scale - Major Construction or Reconstruction 1"=100' B size (1:1000 metric B size)	Yes
Profile Small Scale - Major Construction or Reconstruction 1"=100'H, 1"=20'V B size (1:1000H, 1:200V metric B size)	Yes
Traffic Control Plan	Yes
Plan and Table of Highway Maintenance Jurisdiction	No
Miscellaneous Tables	Yes
Miscellaneous Details	Yes
Earthwork Summary Sheets	No
Special Plans	Yes
General Plans – 1"=40' B size (1:500 metric B size) or larger	Yes
Profile – 1"=40'H 1"=10'V B size (1:500H 1:100V metric B size) or larger	Yes
Signs and Sign Structures Plans	Yes
Traffic Signal Plans	Yes
Lighting Plans	Yes
Landscape Plans	Yes
Pavement Marking Plans	Yes
Utility and Drainage Plans	Yes
Large Culvert Details	Yes
Retaining Walls	Yes
Bridge Plans	Yes

Sections 21.2.2.4 A through 21.2.2.4 Y provide guidance regarding the preparation of these plan sheets.

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A. Title Sheet

A title sheet shall be prepared for all projects. The title sheet should be prepared by starting with an empty DGN file and placing the NSC (sheet, cover) cell using the Place Plan Sheet command. The NSC cell and the Place Plan Sheet command working with ProjectWise attributes, to automatically update title block information. The following items provided on the title sheet:

1. A contract title. The following are examples to aid in providing a contract title:

Parking Lot Construction in The Town Of Warwick

Replacement of Signs on Various Routes

*Structural Steel Repair on Route 97 Bridge over Delaware River
S. H. 5671 in Hancock*

*Pile Repair
Wantagh State Parkway Bridge over Sloop Channel
S. H. 9511*

*Traffic Signals & Overhead Sign Installation
At Various Locations in Region 3*

*Pier Protection Replacement/Rehabilitation on Route 440
S. H. WSE 67-1 in New York City*

*Reconstruction of Route 16 Including Replacement of 3 Bridges
in the City of Buffalo*

*Replacement of Route 244 Bridges over Genesee River and Feathers Creek
and the Greenwich Street Bridge over Phillips Creek
S.H. 1559*

2. County.
3. Contract Number (a contract number should be obtained from the PS&E Section of DQAB at the time of final plotting for PS&E submission).
4. Indication of Federal Funding. For Federally funded projects, the phrase "F.A. Project" should be provided to indicate federal participation.
5. Signatures. An approval signature indicating that the procedural steps prerequisite to PS&E transmittal have been accomplished, and that the project design is consistent with established standards, policies, and regulations is required on the title sheet. This approval signature shall be by the Regional Director (or, pursuant to current Official Order, their authorized designee), and with a co approval signature by the Regional Design Engineer when the Regional Director is not a professional engineer licensed in New York State and any portion of the contract plans were prepared by Department design staff. Additionally, the Regional Director may require the signatures of the Regional Design Engineer and other Group Directors to signify their recommendation for approval of the plans. Signature blocks not used should be removed from the title sheet.

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Plan title sheet signatures of approval by the County or local government Executive signify local approval in general terms of the project undertaking, pursuant to applicable statutory requirements. (The signature of another official, e.g., City Engineer, does not suffice to signify approval unless specific resolution or statute confers this approval authority.) The Executive's signature of approval should be required for all projects funded in part by county or local government monies, for all projects where local road use patterns are significantly affected either during construction (detours) or following construction completion, and for all projects for which there will be county or local maintenance of some constructed or reconstructed facet of the project following construction completion.

Similarly, signature(s) of approval by the N.Y.S. Thruway Authority are needed when Thruway funding is included in the contract.

If a consultant has designed all or part of the project, the responsible person must sign the title sheet (individual's name, signature, PE license number, name of firm represented). If the consultant designed only a portion of the project, a note indicating the work performed should be shown with their signature (Example: Structures designed by _____). Consultants shall include the professional seal of the person responsible for the production and include their consultant firm name on each individual plan sheet they prepare.

The Federal Highway Administration signature block shall not appear on the title sheet. When required for Federal-aid projects, FHWA's PS&E approval is obtained by DQAB in letter form.

6. Location Map. A location map, 8" wide by 4½" high (480mm by 230mm) maximum size on B size paper shall be provided above the words "PROJECT LOCATION". Maps in MicroStation format are available for copy out through ProjectWise which can be attached as reference; the section of map that contains the project area can then be clipped to fit in the area provided on the title sheet cell. Since the map is labeled "NOT TO SCALE" it is not necessary to provide a scale for the map. Text imported from the maps shall be changed to the appropriate text height/width of the plot scale used for the title sheet.

The project location shall be shown on the map indicating the contract limits (by station and reference marker or circle the site location for contracts such as bridge replacement), and the Federal-aid project limits (where more than one project or combination State-funded and Federal-aid work is involved) on the map, if practical. A short statement of approximate project location, in terms which would enable one to locate the project with an ordinary road map, should be provided in the space below the words "PROJECT LOCATION".

7. Title Block (lower right corner). There are four lines for contract information; a fifth may be added if necessary. The route number, State Highway names and numbers, and county should be included in this block (or State Highway numbers only when improvements are being made at numerous locations).
8. Index Sheet Reference. Indicate, in the block provided, the sheet number where the index is located.

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B. Index and Abbreviations Sheet

An index and abbreviations sheet shall be provided for all projects. The standard index and abbreviation sheet is available as a cell, NSIA. The index can be specific (indicating categories of details shown on each sheet; e.g., Sheet 44 - Drainage Details; Sheet 175 - Structure No. 5, Bar List) or general (indicating plan categories; e.g., Sheets 4-10 - Typical Sections; Sheets 210-230 - Structure No. 3, Route 66 over Erie Canal). The total number of sheets and the list of applicable standard sheets should be included on the Index and Abbreviations Sheet. The list of standard sheets which are applicable to items of work in the contract should be placed on the Index and Abbreviations Sheet. The list is provided as cell, NSCSSL.

C. Typical Sections

Typical sections should be prepared for all projects. The standard typical section border is available as a cell, NSTS. Two columns for item numbers, descriptions, and units, followed by a single column for notes are provided on the bottom of the sheet. All text in the lower blocks is placed using data entry fields. Refer to Chapters 3 and 9 for guidance regarding what should be shown on these sheets.

D. Estimate of Quantities Sheets

The Estimate of Quantities Sheet shall be provided for all projects. To assist in organizing the contract plans and determining the total number of sheets, a blank plan sheet border should be printed out and provided for each estimate of quantities sheet anticipated. DQAB will add the estimate of quantities plan sheet(s) utilizing the Engineer's Estimate provided at the time of Final PS&E submission. To determine how many plan sheets will be needed to accommodate the estimate of quantities, use an estimate of 66 pay items per sheet of plans. Regions shall include these sheet numbers in the index and "total sheets" numbering.

E. Legend Sheets

Legend Sheets shall be provided for every project. The legend sheets should be prepared by starting with an empty design file and placing the NSLEGL and NSLEGP (sheet, legend, line and sheet, legend point) cells using the Place Plan Sheet command. These sheets should be provided for all projects and include standard symbols shown on the plans. A separate legend block should be placed on plan sheets which contain feature symbology not included on the standard legend sheets.