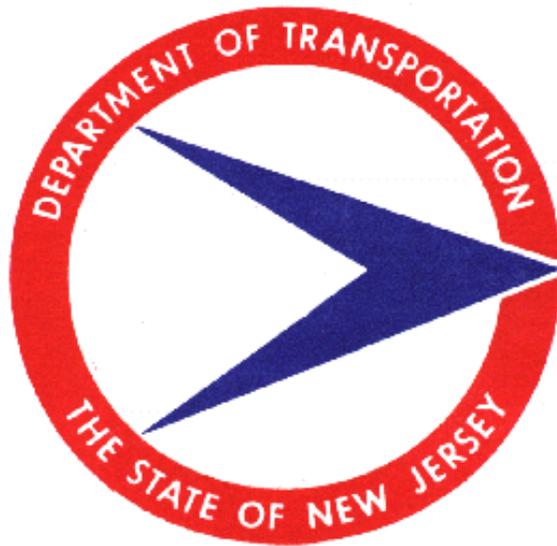


Working Drawing Procedure



June 2007

**Prepared by
Structural Engineering &
Construction Services**

1.0 Working Drawing Procedure

1.1 General

There are two primary types of working drawings, those requiring "APPROVAL" and those requiring "CERTIFICATION".

Certified WDs

Working drawings that require CERTIFICATION typically apply to the fabrication of items of work. Examples of working drawings which require Certification are erection plans, temporary cofferdams, and other items that would commonly be considered the Contractor's means and methods for constructing the project, such as stay-in-place forms and rebar coupling devices.

The process for CERTIFICATION of working drawings allows for certification or conditional certification of the working drawings. Conditional certification of working drawings is given when corrections are limited and the drawings fundamentally satisfy the contract. Examples of limited corrections include sporadic, minor dimensional errors and shop notes not fully consistent with the specifications that can be easily corrected on the drawings by the Design Unit, as well as format inconsistencies. This conditional approval allows the Contractor to order materials and perform the work, but the Contractor must submit revised working drawings incorporating the noted comments within thirty calendar days to receive a "CERTIFIED" stamp

Approved WDs

The working drawings that require APPROVAL are for those items of work which are not fabrication related and for items that were presented in the contract documents as "conceptual plans" for which the contractor is required to complete the final design. Examples of working drawings which require Approval are Modular Expansion Joint Assembly and Composite Piles. An example of a "conceptual plan" is a proprietary wall.

The responsibility of the Contractor shall be according to the Standard Specifications, Section 105.05, including the Submission Category Table 105.05.

The working drawings requiring APPROVAL must be approved in their entirety with no exceptions.

The review and processing of working drawings will be the responsibility of the designated Design Unit. The Design Unit shall be the designer that prepared the contract documents, either a Consultant firm or in-house design unit, with one exception. The exception is that on Consultant designed projects, Traffic Signal & Safety Engineering (TSSE) will be the designated review unit on all working drawings related to electrical work. Therefore, the Contractor shall submit electrical working drawings directly to TSSE on consultant designed projects and to the Engineering Documents (ED) on in-house designed projects. The Project Manager, Resident Engineer and ED shall be copied on all working drawing correspondence.

1.2 Processing Steps

1.2.1 Project Manager

Within five working days of receiving notice of Award of Contract for a Project, complete and submit [Attachment 1](#) entitled "Working Drawing Input Data" and a copy of the award letter to the Engineering Documents Unit (EDU).

1.2.2 Engineering Document Unit

Upon receipt of the "Working Drawing Input Data" form, establish a project file and complete the appropriate Contractor Procedure form letter, either [Attachment 2](#) for consultant designed projects or [Attachment 3](#) for in-house designed projects and mail the letter "return receipt requested" to the Contractor. The letter shall be completed by inserting the following:

- Date of the letter
- The contractor's address and contact person
- Route and Contract Number
- Federal Project Number
- D.P. Number
- UPC Number
- Design Consultant's address and contact person (Attachment 2) or EDU's address and contact person (Attachment 3)
- The name, address and contact person for involved railroad(s) and other agencies
- Signature of EDU's representative

Send copies of the Contractor Procedure form letter to the following:

- On Consultant designed projects, the Consultant, Traffic Signal & Safety Engineering, Movable Bridge Engineering Group (if a movable bridge is included) ITS Engineering and/or other project specific ITS related unit (if ITS work is included) and Landscape and Urban Design (if street/park furniture or architectural finishes are included)
- On in-house design projects, the in-house designated review units
- Project Manager
- Resident Engineer
- Regional Construction Engineer

The Design Unit, consultant or in-house, and the Resident Engineer, shall upon receipt of the copy of the Contractor Procedure form letter, establish a file for the working drawings.

1.2.3 Contractor

Submit final working drawings that require approval directly to the unit named in the Contractor Procedure Form letter. The submission shall include working drawings using the appropriate plan sheet format, either [Sample A or B](#), and calculations on the appropriate calculation sheet, either [Sample C or D](#).

1.2.4 Designer Review

If received by the Consultant Designer, they are to review according to the Approved and Certified procedures below.

If received by EDU, they shall distribute the working drawings as follows:

In-House Distribution Chart

In-house Design Units	Type of Working Drawing
Structural Design	Bridge and Structural Items
Geometrics Design	Roadway Items Guide Rail and Safety Features
Traffic Signal & Safety Engineering	Electrical, Sign Face Layout
ITS Engineering	Electrical/ITS items

Other ITS related units as specified for project	Electrical/ITS items
Movable Bridge Engineering Group	Electrical/Mechanical (Movable Bridges)
Landscape and Urban Design	Street and Park Furniture Architectural Finishes

A copy of the transmittal letter for each submission shall be sent to the Resident Engineer and the Project Manager. On movable bridge projects, and projects with ITS facilities, a copy of all transmittal letters between the consultant and contractor for each subcontractor shall also be sent to the Department's Movable Bridge Engineering Group and ITS Engineering and/or other project specific ITS related unit, respectively.

1.2.4.1 APPROVED Working Drawings

The Design Unit will review and coordinate the satisfactory resolution of all comments, and make a recommendation to approve the working drawings to the State Transportation Engineer by signing and affixing a stamp indicating "RECOMMENDED FOR APPROVAL" (Attachment 4, [Stamp A](#)).

ITS Landscape and Movable Bridge reviewed by a consultant send to that unit for concurrence before submitting to STE

The State Transportation Engineer will review the recommendation, and where warranted, approve the working drawings by a signature and affixing a stamp indicating "APPROVED" signature/date, State Transportation Engineer (Attachment 4, [Stamp B](#)). The approved working drawings shall be returned to the Design Unit for final processing and distribution according to Section 1.2.6.

If the State Transportation Engineer does not agree with the "Recommendation For Approval," the working drawings will be returned to the EDU with a transmittal letter detailing the reason(s) for not approving. EDU will transmit unapproved working drawings to the Design Unit and copies of the transmittal letter shall be sent to the Resident Engineer, Project Manager. The Design Unit will coordinate the resolution of the comments and resubmit the working drawings for approval as described above.

1.2.4.2 CERTIFIED Working Drawings

The Design Unit(s) shall review the working drawings for conformance with design concepts as well as resolve comments from railroads and agencies. The working drawings will be designated either for certification by indicating "CERTIFIED" or "CERTIFIED AS NOTED" or rejection by indicating "REVISE AND RESUBMIT" by affixing a stamp (Attachment 4, [Stamp C](#)).

Working drawings that are stamped "CERTIFIED" or "CERTIFIED AS NOTED" shall continue to be processed according to [Section 1.2.6](#).

The certification, "CERTIFIED AS NOTED" is to be used only when corrections are limited and the drawings fundamentally satisfy the contract. Examples of limited corrections include sporadic, minor dimensional errors, shop notes that are not fully consistent with the specifications but can be easily corrected on the drawings by the Design Unit and format inconsistencies. Working drawings certified as "CERTIFIED AS NOTED" permit the Contractor to order materials and perform the work, but the Contractor must submit the required number of revised working drawings to the Design Unit incorporating the noted comments within thirty calendar days to receive a stamp designated "CERTIFIED". The

Contractor's transmittal letter must clearly identify the working drawings that previously received a conditional "CERTIFIED AS NOTED". Revisions that have been incorporated should be noted and that the submission is for certification. If certification is warranted, the Design Unit shall stamp the working drawings "CERTIFIED" and follow Step 6 for distribution.

Working drawings shall not be rejected unless the drawings cannot be certified due to nonconformance or poor quality, such as legibility, lack of adequate dimensions, details and or notes, contradictory information or other problems that may lead to significant shop errors. The Design Unit shall return working drawings that are rejected by stamping, "REVISE AND RESUBMIT", directly to the Contractor. A transmittal letter detailing the reason(s) for rejection shall be included with the returned working drawings. A copy of the transmittal letter shall be sent to the Resident Engineer, Project Manager and EDU. These drawings shall be revised, approved and resubmitted by the Contractor, until certification is given.

1.2.5 Contractor Response

Any working drawing that receives a conditional "**CERTIFIED AS NOTED**", shall be revised accordingly and resubmitted to the Design Unit according to the Standard Specifications, [Section 105.05](#).

Correct and approve all working drawings that were stamped "**REVISE AND RESUBMIT**" due to non-conformity and resubmit them according to the Standard Specifications, [Section 105.05](#).

1.2.6 Distribution Design Unit

1.2.6.1 If an In-House Design, the Unit(s) shall retain one copy for file and send all other copies (minimum of five (5) copies) of the approved/certified (including certified as noted) working drawings to EDU for distribution as per the list below.

1.2.6.2 If an Consultant Design, the Consultant, after approval or certification of the working drawings for sign legends and locations, movable bridges, ITS facilities, and street/park furniture and architectural finishes, shall submit the drawings to Traffic Signal & Safety Engineering, Movable Bridge Engineering Group, ITS Engineering, or Landscape and Urban Design, respectively for their concurrence. These units will have one week to review and submit a letter of concurrence to the Consultant Design Unit.

The Consultant Design Unit shall distribute the working drawings after approval/certification (including certified as noted) and when required, the letter of concurrence (for signage, movable bridges, ITS facilities or furniture/finishes) is received as per the list below.

1.2.6.3 Distribution

The accepted working drawings shall be distributed as follows:

- One copy to the Resident Engineer
- Two copies to the Bureau of Materials
- One copy to the Design unit's file (consultant design only)
- One copy to the Engineering Documents Unit
- Remaining copies to the Contractor

1.2.7 Contractor

Prior to completion of the project, submit the final drawings according to the Standard Specifications, [Section 105.05](#). An additional set of the mylars are required for each railroad and agency, as well as the Department's Movable Bridge Engineering Group when applicable.

Before submittal, indicate the pay item number to which the drawing applies on the working drawing.

The Contractor shall notify the subcontractors of the working drawing content requirements and approval/certification procedure so the processing of working drawings can proceed with reasonable promptness.

1.2.8 Resident Engineer

The Resident Engineer shall forward (1) complete set of the approved original mylars and required copies to the Engineering Documents Unit for archival purposes, and forward the remaining copies to railroads and agencies, if required.

1.3 Addresses

Use the following addresses only when directed by this procedure:

Engineering Documents Unit
Attn: Working Drawing Unit,
NJDOT
PO Box 600
1035 Parkway Avenue
Trenton, NJ 08625-0600

Traffic Signal & Safety Engineering
NJDOT
PO Box 613
1035 Parkway Avenue
Trenton, NJ 08625-0613

Movable Bridge Engineering
100 Daniels Way
Freehold, NJ 07728

Geotechnical Engineering Unit
NJDOT
PO Box 615
1035 Parkway Avenue
Trenton, NJ 08625-0615

Bureau of Materials
NJDOT
PO Box 600
1035 Parkway Avenue
Trenton, NJ 08625-0600

For FedEx/ Express Mail use the following address:
Bureau of Materials

NJDOT
Thiokal BLDG # 2
930 Lower Ferry Road
Trenton, NJ 08628-3501

Landscape and Urban Design
NJDOT
PO Box 600
1035 Parkway Avenue
Trenton, NJ 08625-0600

Structural Design
NJDOT
PO Box 615
1035 Parkway Avenue
Trenton, NJ 08625-0600

Geometric Design
NJDOT
PO Box 600
1035 Parkway Avenue
Trenton, NJ 08625-0600

ITS Engineering and/or other project specific ITS related unit
NJDOT
PO Box 600
Trenton, NJ 08625-0600

Superseded

Attachment 1

Working Drawing Input Data

To: Engineering Documents Unit
From: _____, Project Manager
Date: _____ Phone: _____

General Project Information

Route: _____ Contract Number: _____
Date of Award: _____ Section Number: _____
Municipality: _____ County: _____
Construction Job Number: _____ DP Number: _____
Federal Project Number: _____ UPC Number: _____
Specifications Used (Date): _____ English: _____ Metric: _____

Structure Name (s)/Number (s): _____

Movable Bridge Review: Yes ___ No ___	Landscape Review: Yes ___ No ___
Contact Person: _____	Contact Person: _____
Telephone (s): _____	Telephone (s): _____
Its Facilities Review: Yes ___ No ___	Structures Review: Yes ___ No ___
Contact Person: _____	Contact Person: _____
Telephone (s): _____	Telephone (s): _____
Design Unit: In-House _____	Consultant _____

Design Unit Information

Company: _____
Address: _____
Contact Person _____ Telephone (s): _____ Fax: _____
Type of Mail Service: Us Mail _____ Other (Indicate Name) _____
Account Number: _____

Contractor Information

Contractor: _____
Address: _____
Contact Person _____ Telephone (s): _____ Fax: _____
Type of Mail Service: Us Mail _____ Other (Indicate Name) _____
Account Number: _____
Notify Contractor by Phone for Pick-Up: _____

Resident Engineer Information

Resident Engineer: _____
Address: _____
Telephone (s): _____ Fax: _____

Railroads and Agencies Information

Railroad Agency/Agencies	Contact Persons	Telephone
_____	_____	_____
_____	_____	_____
_____	_____	_____

Attachment 2

Contractor Procedure Form Letter for Consultant Designed Projects

Special Instructions or Comments: _____

Date: _____

Contractor: _____

Address: _____

Attention: _____

Re: Working Drawings

Route: _____

Contract Number: _____, Federal Project No.: _____

D.P. No: _____, UPC Number: _____

Dear Mr./Mrs./Ms.: _____

For this project, as it was designed by a Consultant Designer, you are required to submit, approved, working drawings to the following units:

All bridge and roadway working drawings including only ITS for electrical:

Consultant Designer: _____

Address: _____

All electrical working drawings (other than movable bridges & ITS facilities):

Manager
Traffic Signal & Safety Engineering
NJDOT, PO Box 613
1035 Parkway Avenue
Trenton, New Jersey 08625
Phone No. (609) 530-2600
Fax No. (609) 530-4567

Please submit any Working Drawings as per the current NJDOT *Standard Specifications*, the *Final Design Submission Guidelines*, Structural Plan Development section, and the *Capital Project Procedures*, which can be accessed via the internet at our web site at <http://www.state.nj.us/transportation/eng>.

In order to expedite this process you shall indicate in the transmittal letter of each submission your preferred method of receiving returned working drawings. Indicate either US mail or an express mail service or pick up by your staff.

Should there be any questions regarding the information and/or procedures contained herein, call (609) 530-5587.

Sincerely,

Working Drawing Unit
Engineering Documents Unit

Attachments

c: Project Manager
Resident Engineer
Design Unit

Superseded

Attachment 3

Contractor Procedure Form Letter for In-House Designed Projects

Date: _____

Contractor: _____

Address: _____

Attention:

Re: Working Drawings

Route: _____

Contract Number: _____, Federal Project No.: _____

D.P. No.: _____, UPC Number: _____

Dear Mr./Mrs./Ms.: _____

For this project, as it was designed by our NJDOT Design Unit, you are required to submit, approved, working drawings to the Department's Engineering Documents Unit (EDU) for in-house distribution at the following address:

Engineering Documents Unit
Attention: Working Drawing Unit
NJDOT, P.O. Box 600
1035 Parkway Avenue
Trenton, New Jersey 08625
Phone No. (609) 530-5587
Fax No. (609) 530-6626

Please submit any Working Drawings as per the current NJDOT *Standard Specifications*, the *Final Design Submission Guidelines*, Structural Plan Development section, and the *Capital Project Procedures*, which can be accessed via the internet at our web site at <http://www.state.nj.us/transportation/eng>.

In order to expedite this process you shall indicate in the transmittal letter of each submission your preferred method of receiving returned working drawings. Indicate either US mail or an express mail service or pick up by your staff.

Should there be any questions regarding the information and/or procedures contained herein, call (609) 530-5587.

Sincerely,

Working Drawing Unit
Engineering Documents Unit

Attachments

c: Project Manager
Resident Engineer
Design Units

Superseded

Attachment 4

Working Drawing Stamps

Stamp A

(Design Organization)

The designer, according to NJDOT standard specifications, has reviewed this drawing, which the contractor developed as the final design of conceptual plans presented in the contract documents, for general conformance with NJDOT design standards and hereby recommends approval to the engineer.

Recommended for approval

Date: _____

Signature: _____

This does not relieve the contractor from compliance with requirements of the contract documents.

Stamp B

Approved

Signature: _____

Date: _____

State Transportation Engineer

For N.J.D.O.T.
Use only

Stamp C

(Design Organization)

This drawing has been reviewed by the designer for general conformance with the design concept of the project according to njdot standard specifications.

- Certified**
- Certified as noted**
- Revise and resubmit**

Date: _____

Signature: _____

This does not relieve the contractor from compliance with requirements of the contract documents.

Superseded