

**STANDARD SPECIFICATIONS FOR
RAILROAD & CANAL
CONSTRUCTION: FOR THE USE OF
CONTRACTORS AND CIVI
ENGINEERSS. RAINROADS. CANALS**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649509522

Standard Specifications for Railroad & Canal Construction: For the Use of Contractors and Civil Engineers. Rainroads. Canals by John A. Yates

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Cover @ 2017

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JOHN A. YATES

**STANDARD SPECIFICATIONS FOR
RAILROAD & CANAL
CONSTRUCTION: FOR THE USE OF
CONTRACTORS AND CIVIL
ENGINEERS. RAILROADS. CANALS**

STANDARD SPECIFICATIONS

FOR

RAILROAD & CANAL CONSTRUCTION.

FOR THE USE OF

CONTRACTORS AND CIVIL ENGINEERS.

RAILROADS:

FORM FOR CONTRACTS, AGREEMENTS, RIGHT-OF-WAY AND LEASE,
WITH SPECIFICATIONS FOR CLEARING, CLOSE CUTTING,
GRUBBING, GRADING, TUNNELING, MASONRY,
PILING, FOUNDATIONS, TIMBER WORK,
FENCING, TRACK-LAYING, BAL-
LASTING, TIES, RAILS,
ETC.

CANALS:

FORM FOR CONTRACT; ALSO SPECIFICATIONS FOR SECTION OF
CANAL, CULVERTS, LOCKS, WASTE WIERS, AQUEDUCTS,
DAMS AND HIGHWAY BRIDGES.

COMPILED BY

JOHN A. YATES, *C. E.*

CHICAGO:

THE RAILWAY AGE PUBLISHING COMPANY,

1886.



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PREFACE.

For the compilation of the following Specifications I am indebted to several members of the profession who, by their courtesy, have assisted me in obtaining the material herein contained and by the presentation of which they unite in hoping some benefit to others may be derived.

A large portion of this work has been originated by several of my colleagues. The number is so great I cannot give them individually personal recognition, yet I desire to express to them my appreciation of their intelligence and ability, feeling confident that they will derive satisfaction in knowing that their efforts have benefited their professional brethren and others.

Considerable difficulty is experienced at times in forming an Article of Agreement, with its accompanying Specifications, which shall be so worded as to be thoroughly understood by the Companies, Engineers and Contractors and leave no latitude for future cavil or complaints. In view of this I have, after careful examination of the forms in use on the several trunk lines, made a selection from their Agreements and Specifications, which in my opinion covers all questions that may arise during the progress of the work of con-

PREFACE.

struction. This is especially so in the forms for Agreements. Should the material appear too voluminous, it is at the option of the Engineer to curtail it if he desire.

The second form being more concise, may be considered by some adequate and possibly more satisfactory.

Full information on this subject is essential to an Engineer, and while Specifications have been presented creditably before they have generally been compiled with other matters, making the material too limited to answer all requirements.

To the young and inexperienced Engineer, who has had a difficulty in obtaining some established form or precedent, I am confident of rendering some service. To the older member of the profession who may consider himself fully informed a careful examination of this work may give suggestions not at present contained in his papers.

The Canal Specifications are adapted from those in use on the New York state canals, and contain information on Forms for Agreements, Specifications for masonry foundations, etc, sufficient to make them applicable to other public works.

JNO. A. YATES.

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