



OHIO DEPARTMENT OF TRANSPORTATION

TED STRICKLAND, OHIO GOVERNOR

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Major Changes in the 2010 Specification Book

Division of Construction Management

2010 C&MS

100 Section Changes



The New 2010 C&MS

- 2010 C&MS published 1/15/10
- Books distributed to Districts 1/27/10
 - More copies are available from the Office of Contracts – (614)466-3778
- First Projects to be awarded June 2010
- SS800 for the 2010 to be published April 2010



Policies and Procedures

- Use current Policy and Procedure for:
 - Change Orders (Interim)
 - Time Extensions
 - Payment for Contract Work
 - Finalization (Use updated C-85 Forms)
- Future rewrite for:
 - Change Orders



2010 C&MS Section 100

Notable Changes

- 102.05 Examination of Bid Documents and Project Site and Submission of PreBid Questions
- 102.07 Duty to Notify of Errors in Bid Documents
- 102.11 Withdrawal of Bids
- 104.02.D Significant Changes in the Character of the Work
- 104.05 Contractor Notification, Continuation of Work, Disputes and Claims



2010 C&MS Section 100

Notable Changes

- 105.06 Superintendent
- 105.19 Value Engineering Change Proposals
- 107.10 Protection and Restoration of Property
- 108.06 Determining a Time Extension to the Completion Date and Payment for Excusable Delays
- 109.05 Changes and Extra Work
- 109.05.C.7 Final Adjustment to Premium for Contract Bond



2010 C&MS Section 100

Notable Changes

- 109.11 Partial Acceptance
- 109.12 Final Acceptance



2010 C&MS Section 100

Detailed Description of Changes



101.03 Definitions

Revised Definitions:

Claims. Disputes that are not settled through Steps 1 and 2 of the Dispute Resolution and Administrative Claim Process and for which the Contractor has documented costs or time incurred as a result of such disputes. The Dispute becomes a Claim when the Contractor submits a Notice of Intent to File a Claim.

Disputes. Disagreements, matters in question and differences of opinion between the Department's personnel and the Contractor that may include a request for additional money and/or time.



101.03 Definitions

Revised Definitions:

Contract Price. The amount of compensation bid by the Contractor for a Contract Item in the Proposal or the amount of compensation established for a Contract Item added or modified pursuant to the Contract Documents.



101.03 Definitions

Revised Definitions:

Plans. The ~~plans, profiles, typical cross-sections, drawings, standard construction drawings, working drawings, and supplemental drawings, approved~~ provided by the Department, ~~or exact reproductions~~ thereof, that show the location, character, dimensions, and details of the Work.



101.03 Definitions

Revised Definitions:

Prebid Question. A written inquiry submitted by a prospective bidder.

Shop Drawings. The drawings provided by the Contractor or Supplier that describe any portion of the Work that will remain in place permanently.



101.03 Definitions

Revised Definitions:

Working Drawings. Stress sheets, shop drawings, erection plans, falsework plans, installation plans, certified drawings, frame work plans, cofferdam plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data that the Contractor is required to submit ~~for acceptance~~.



102.05 Examination of Bid Documents

102.05 Examination of Bid Documents and Project Site and Submission of Work. Prebid Questions. Carefully examine the Bid Documents and perform a reasonable site investigation before submitting a Bid. Submitting a Bid is an affirmative statement that the Bidder has investigated the Project site and is satisfied as to the character, quality, quantities, and the conditions to be encountered in performing the Work. A reasonable site investigation includes investigating the Project site, borrow sites, hauling routes, and all other locations related to the performance of the Work.



102.05 Examination of Bid Documents

When available, the Department will include in the Contract Documents or provide for the Bidder's review at the Department's ~~District or other offices~~ or website, one or more of the following:

- A. Record drawings.
 - B. Available information relative to subsurface exploration, borings, soundings, water levels, elevations, or profiles.
 - C. The results of other preliminary investigations.
- A reasonable site investigation includes a review of these documents.



102.05 Examination of Bid Documents

Should a question arise at any time during the examination of Bid Documents or investigation of the site the Bidder may seek clarification by submitting a Prebid Question. Submit all Prebid Questions in writing via the Department's website. The Department will post a response on its website to all questions submitted before a deadline of 10:00 am four working days prior to the public opening of Bids. Responses to Prebid Questions posted on the Department's website are not revisions to the Bidding Documents and are not binding. The Department is not obligated to respond to, or otherwise act upon, a Prebid Question submitted after this deadline, but reserves the right to act upon any information received.



102.07 Duty to Notify of Errors in Bid Documents

102.07 Duty to Notify of Errors in Bid Documents. Notify the Department of errors and omissions in the Bid Documents. Make notification by submitting a question in the manner described in 102.05. The Contractor's duty to disclose errors and omissions is not only a bidding requirement but is also a legal requirement that cannot be ignored.



102.07 Duty to Notify of Errors in Bid Documents

~~Submit a Prebid Question to the office designated by the Department in the Proposal for receipt of bidding questions and providing information to the Bidder. The Department will determine the manner in which said Prebid Questions are answered and will publish the information on the Department's website. Failure to provide such a Prebid Question~~the required notification prior to the opening of bids shall constitute a waiver by the Contractor and does not obligate the Department for any claim costs based upon any apparent or patent ambiguity arising from insufficient data or obvious errors in the Bid documents. Knowingly withholding information regarding an error or omission in the Bid Documents, or intentionally misrepresenting an item of Work for financial or competitive gain may result in civil or criminal penalties in excess of the value of the item bid.



102.11 Withdrawal of Bids

102.11 Withdrawal of Bids. After Bids are opened, ORC 5525.01 requires that a Bidder identify a mistake in its Bid within 48 hours of the Bid opening. After Bids are opened the Bidder must provide a written request to withdraw a Bid already filed with the Department. Any Bidder for whom a request to withdraw its Bid is approved by the Department will not be permitted to participate in any manner in a contract awarded for that project for which the Bid was withdrawn.



104.02.D Significant Changes in Character of the Work.

D. Significant Changes in Character of the Work. The Engineer may alter the Work as necessary to complete the Project. The Engineer will make appropriate adjustments according to 108.06 and 109.05, if such alterations significantly change the character of the Work.

~~If the alterations or changes in quantities significantly change the character of the Work under the Contract, whether such alterations or changes are in themselves significant changes to the character of the Work or by affecting other Work cause such other Work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the Contract. Before performing significantly changed Work, reach agreement with the Department concerning the basis for the adjustment. If the Contractor disagrees as to whether an alteration constitutes a significant change, use the notification procedures specified in 104.02.G02.05.~~



104.02.D Significant Changes in Character of the Work.

The term “significant change” is defined as follows:

1. when the character of the Work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or
2. when the product of the quantity in excess of the estimated quantity of a contract item and the unit price exceeds the limits set forth in Table 104.02-1. ~~If the increase does not exceed the limits set forth in Table 104.02-1, then the Department will pay for the increased Work at the bid unit price.~~



104.02.D Significant Changes in Character of the Work.

TABLE 104.02-1

Contract Price	Contract Limits
Up to \$500,000	\$25,000
\$500,001 to \$2,000,000	5% of Total Contract Price
Over \$2,000,000	\$100,000

If the decrease in quantity of any unit price Contract Item exceeds 25 percent of the estimated quantity, and the total of all such adjustments for all Contract Items is more than \$400, then after the determination of final quantities according to 109.12.C, the Engineer will adjust the unit prices for the affected Contract item by multiplying the bid unit price by the factor obtained from Table 104.02-2.



104.02.D Significant Changes in Character of the Work.

TABLE 104.02-2

% Decrease	Factor	% Decrease	Factor
25 to 28	1.02	61	1.14
29 to 32	1.03	62	1.15
33 to 35	1.04	63	1.16
36 to 38	1.05	64	1.17
39 to 41	1.06	65	1.18
42 to 44	1.07	66	1.19
45 to 47	1.08	67	1.20
48 to 50	1.09	68	1.21
51 to 53	1.10	69	1.22
54 to 56	1.11	70	1.23
57 to 59	1.12	71	1.24
60	1.13	72 and over	1.25



104.02.D Significant Changes in Character of the Work.

When the increase in quantity or decrease in quantity of any unit price contract item does not exceed the limits set forth in Tables 104.02-1 and 104.02-2, there is no significant change in the character of the work and the change is considered a minor change. Department will pay for minor changes in the Work at the unit bid price.



104.02.E Eliminated Items

E. Eliminated Items. The Department may partially or completely eliminate contract items.

The Department will only make an adjustment to compensate the Contractor for the reasonable cost incurred in preparation to perform ~~the~~ significantly changed work as set forth in 104.02.D or work completely eliminated Work prior to the date of the Engineer's written order ~~eliminating~~ to significantly change or completely eliminate the Work. The adjustment will be determined according to 109.04 and 109.05. Such payment will not exceed the price of the Contract Item.



104.02.G Contractor Notification (2008 CMS) and PN 109

**104.02.G Contractor Notification and
PN 109 - 01/16/2009 - DISPUTE
RESOLUTION AND ADMINISTRATIVE
CLAIM PROCESS**

have been moved to

**104.05 Contractor Notification,
Continuation of Work, Disputes and
Claims.**

See next slides



104.05 Contractor Notification, Continuation of Work, Disputes and Claims

104.05 Contractor Notification, Continuation of Work, Disputes and Claims. Exhaust the Department's Dispute Resolution and Administrative Claim process as set forth below prior to seeking additional compensation or contract time by filing an action in the Ohio Court of Claims. The following procedures do not compromise the Contractor's right to seek relief in the Ohio Court of Claims.

- A. Contractor Initial Oral Notification**
- B. Contractor Written Early Notice**
- C. Continuation of Work**
- D. No Contract Adjustment without Notification**



104.05 Contractor Notification, Continuation of Work, Disputes and Claims

E. Step 1 (On-Site Determination)

F. Step 2 (District Dispute Resolution Committee)

**G. Step 3 (Directors Claims Board Hearing or Alternative
Dispute Resolution)**

H. Interest on Claims



105.02 Plans and Working Drawings

105.02 Plans and Working Drawings. The Plans show details of structures, the lines and grades, typical cross-sections of the Roadway, and the location and design of structures. Keep at least one set of Plans at the Project at all times.

~~When required to control the Work, supplement the Plans with working drawings.~~ Prepare working drawings when required by the Contract Documents and after verifying applicable field and plan elevations, dimensions, and geometries. Where Work consists of repairs, extension, or alteration of existing structures, take measurements of existing structures to accurately join old and new Work.



105.02 Plans and Working Drawings

Unless otherwise indicated, the Department will review working drawing submittals to ensure conformance with the Contract and to provide the Contractor a written response to document the results of its review as follows:

- A. Accepted**
- B. Accepted As Noted**
- C. Not Accepted**



105.04 Coordination of Contract Documents

105.04 Coordination of the Contract Documents. The Contract Documents are those defined in ~~101.01.03~~ 101.01.03. A requirement appearing in one of these documents is as binding as though it occurs in all. The Engineer will resolve discrepancies using the following descending order of precedence:

- A. Addenda.
- B. Proposal and Special Provisions.
- C. Plans.
- D. Supplemental Specifications.
- E. Standard Construction Drawings.
- F. Standard Specifications.

Immediately notify the Engineer upon discovering ~~an~~ any latent error or omission in the Contract Documents.



105.06 Superintendent

105.06 Superintendent. Provide a Superintendent ~~on~~for the Project ~~that is available and responsive at all times that~~and is responsible for all aspects of the Work, irrespective of the amount of subcontract Work. The Superintendent must be capable of reading and understanding the Contract Documents and experienced in the type of Work being performed. The Superintendent shall receive instructions from the Engineer or the Engineer's authorized representatives. The Superintendent shall promptly execute the Engineer's orders or directions and promptly supply the required materials, equipment, tools, labor, and incidentals.



105.16 Borrow and Waste Areas

Perform all engineering necessary to ensure long term stability of all side slopes and foundations of all borrow and waste areas. Furnish a certification by a Registered Engineer attesting to the stability of all borrow and waste areas. All damage resulting from the instability of borrow and waste areas, the removal of borrow materials, the placement of waste materials, or the hauling of material to and from these areas is the sole responsibility of the Contractor. Repairs to approved haul roads will be made in accordance with 105.13.

Environmental impact language moved to **107.10 Protection and Restoration of Property**



105.19 Value Engineering Change Proposals

**PN 103 – 1/7/1998 - VALUE
ENGINEERING CHANGE PROPOSAL -
CONSTRUCTION COSTS**

has been moved to

**105.19 Value Engineering Change
Proposals**



105.19 Value Engineering Change Proposals can't

The Department will not approve VECPs with any of the following characteristics:

- A. Consist only of non-performing items of work contained in the plans.
- B. Include plan errors identified by the Contractor as part of the cost reduction.
- C. The VECP designer/consultant for the Contractor is also the designer of record for ODOT.
- D. Changes the special architectural aesthetic treatments of structures.
- E. Changes the design or thickness of cast-in-place concrete decks.



105.19 Value Engineering Change Proposals can't

- F. Changes the cross section of geometric design features such as, but not limited to, bridge width, vertical clearance, horizontal clearance, shoulder width.
- G. Requires concrete beams to be installed with less than 17' vertical clearance over a state highway.
- H. Changes the design of overhead sign supports and breakaway sign supports.
- I. Changes the type of noise barriers.
- J. Changes the type or buildup of permanent pavement.
- K. Changes prescribed sequence of operations for the work as originally contemplated and/or the method for maintaining traffic.



105.19 Value Engineering Change Proposals con't

- L. Compromises controlling design criteria or would require a design exception as discussed in Volume I, Section 100, of the Location and Design Manual.
- M. Includes cost savings based on revisions of utility relocations or other similar items to be done by other non-contract parties.
- N. Causes additional work, increases the cost, or causes modifications to adjacent projects.



105.19 Value Engineering Change Proposals con't

Engineering and drawing development and implementation costs for the VECP are not recoverable.

The Contractor shall have no claim against the Department for any costs or delays due to the Department's review or rejection of the initial VECP.

If the Department already is considering revisions to the contract which are subsequently proposed as a VECP, the Department may reject the Contractor's initial VECP or portions thereof and may proceed with such revisions without any obligations to the Contractor.



107.10 Protection and Restoration of Property

107.10 Protection and Restoration of Property.

~~Right of Way Monuments are placed at the corners of each parcel of permanent Right of Way. When specified in the plans, the Contractor will construct the Monument Assemblies with the iron pin and Reference Monuments with the iron pin and cap. Right-of-Way Monuments are property boundary monuments set to comply with Ohio Administrative Code~~

~~The Engineer will provide the Contractor with a list of monuments and survey markers that the Contractor is to protect and preserve during the performance of the work and a list of monuments and survey markers that may be destroyed during the performance of the work. When specified in the plans, the contractor will construct the adjustable monument assemblies without the iron pin and cap.~~



107.10 Protection and Restoration of Property con't

Do not create staging areas, store materials and equipment, or borrow or waste materials in areas labeled as an environmental resources areas in the Contract Documents. All properties to be utilized by the Contractor outside the project Right-of-Way must be cleared for all environmental resource impacts prior to the beginning of work. Environmental resources include but may not be limited to:

1. Cultural Resources

- a. Buildings, structures, objects, and sites eligible for or listed on the National Register of Historic Places
- b. Historic or prehistoric human remains, cemeteries, and/or burial sites (pursuant with ORC 2909.05 and 2927.11)



107.10 Protection and Restoration of Property con't

2. Ecological Resources

a. Wetlands

b. Streams

c. Wooded areas with trees to be removed in excess of 8 inches diameter at breast height

3. Public Lands

a. Lands meeting the criteria of 49 U.S.C. 303, 23 CFR 771.135: 4(f).

b. Lands meeting the criteria of 16 U.S.C. 4601-4, 36 CFR 59.1: 6(f).

4. FEMA Mapped 100 year Floodplains

5. Hazardous Waste Areas



107.10 Protection and Restoration of Property con't

All areas proposed to be utilized by the Contractor outside the project construction limits shall be reviewed by environmental contractor(s) that are prequalified by the Department for each environmental resource. Have the consultant(s) certify that the proposed site to be utilized for the contractor will not impact:

Cultural Resources

Ecological Resources

Public Lands

FEMA Mapped 100 year Floodplains

Hazardous Waste Areas



107.10 Protection and Restoration of Property con't

Provide all documentation and the consultant certification to the Office of Environmental Services with a copy to the Engineer.

Should the areas proposed for use by the Contractor outside the project right of way limits contain environmental resources the Contractor is responsible to the Department for all environmental clearances and permits prior to the beginning of work.



108.02 Preconstruction Conference, Partnering and Progress Schedule

~~At or before the conference, Furnish a list of proposed subcontractors and major material suppliers not included in the list submitted at or before the execution of the Contract.~~
preconstruction conference.



108.06 Determining a Time Extension to the Completion Date and Payment for Excusable Delays

A. General. The Department will only extend the Completion Date if an excusable delay, as specified in 108.06.B or 108.06.D, delays Work on the critical path shown on the accepted progress schedule and impacts the Completion Date. The critical path is defined as; the sequence longest path of activities that must be completed on time to ensure that in the project finishes by that determines the Completion Date. project schedule completion date. The activities that make-up the critical path of activities are the “Critical Activities.” Any extension of the Completion Date will be executed by a change order.



108.06 Determining a Time Extension to the Completion Date and Payment for Excusable Delays

Mitigation of any delay, whether caused by the Department, Contractor, third-party or an intervening event, is a shared contract and legal requirement. Mitigation efforts include, but are not limited to, re-sequencing work activities, acceleration, and continuation of work through an otherwise planned shutdown period. The Contractor and Engineer must explore and discuss potential mitigation efforts in a timely manner and ~~must agree upon costs or cost sharing responsibilities prior to their implementation.~~



108.07 Failure to Complete on Time

The Director may stop deducting liquidated damages when:

.....

E. Deemed reasonable and appropriate by the District Deputy Director.



109.01 Measurement of Quantities

109.01 Measurement of Quantities. The Department will measure the quantities of Work and calculate payments based on the method of measurement and basis of payment provisions provided in these Specifications. When the following units of measure are specified, the Department will measure quantities as described below unless otherwise specified in the Contract Documents. The accuracy of individual pay item estimate payments will be one decimal more accurate than the unit of measure denoted for the pay item.



109.03 Scope of Payment

109.03 Scope of Payment. Payment of the Contract Price is full compensation for all resources necessary to complete the Contract Item and maintain the Work. Assume liability for risk, loss, damage, or expense resulting from the Work. The Contract Price and Contract Time shall only be changed by written Change Order or as determined by the Department in writing in accordance with the contract documents.



109.05 Changes and Extra Work

B. Negotiated Prices. ~~Extra Work~~ Negotiated prices for changes and Extra Work shall be comparable to prices that would have resulted from a competitive bid contract. The Engineer and Contractor will negotiate agreed unit or lump sum prices using one or more of the following methods:

1. Original Contract prices for similar work but adjusted for:
 - a. increased or decreased material costs. The prices may be adjusted for the difference specified in the invoiced material cost difference plus fifteen percent (15%) mark up. 109.05.C.3.
 - b. increased or decreased labor costs specified in 109.05.C.2
 - c. increased or decreased equipment costs specified in 109.05.C.4



109.05.C.7 Final Adjustment to Premium for Contract Bond

7. Final Adjustment to Premium for Contract Bonds. The final bond premium amount for the payment and performance bonds will be computed based on the actual final contract value. For the purpose of computing a bond premium adjustment the actual final contract value is defined as the whole sum of money, excluding any bond premium adjustment, which is passed from the department to the contractor as a result of the completion of the Work. If the actual final contract value is different from the original contract value, the premium shall be adjusted accordingly; either by refund of part of the original bond premium by the contractor if the original contract value is larger than the actual final contract value; or by payment of additional bond premium by the department if the original contract value is smaller than the actual final contract value.



109.05.C.7 Final Adjustment to Premium for Contract Bond con't

Additional payment by the department or refund by the contractor will be based on the difference between the invoiced bond premium for the original contract value and the invoiced bond premium for the actual final contract value without any markup. A final bond premium adjustment will not be made when the actual final contract value differs from the original contract value by less than \$ 40,000.00.



109.05.D.2 Allowable Delay Costs

b. Escalated Labor. To receive payment for escalated labor costs, demonstrate that the Department-caused delay forced the Work to be performed during a period when labor costs were higher than planned at the time of Bid. Provide adequate support documentation for the costs, allowances, and benefits specified in 109.05.C.2. The Department will pay wages and fringes with a 5% mark-up to cover administrative costs.

d. Material Escalation or Material Storage. The Department will pay the Contractor for increased material costs or material storage costs due to the delay. Obtain the Engineer's approval before storing materials due to a delay. The Department will pay increased material costs with a 5% mark-up to cover administrative costs.



109.11 Partial Acceptance

109.11 Partial Acceptance. Upon completion of a portion of the Work, the Contractor may request ~~partial~~-acceptance of ~~that a~~a completed portion of the Work.

An inspection may be performed on a completed portion of the project roadway section provided:

- A. All safety items are in place including permanent pavement markings.
- B. Traffic is in its final pattern.
- C. A completed portion of the project constitutes a completed geographic section of the project or a direction of traffic on a divided highway.
- D. Is in accordance with other contract provisions.



109.11 Partial Acceptance con't

An inspection may be performed on a completed bridge provided:

A. All work on the bridge and approaches are complete, including all safety items and permanent pavement markings.

B. The ~~Final Inspector~~ Contractor will not return to the bridge for any work except as allowed in D.

C. Traffic is in its final pattern.

D. Painting of structural steel is either completed or scheduled to be performed.

E. Is in accordance with other contract provisions.



109.11 Partial Acceptance con't

Partial acceptance will relieve the Contractor of maintenance responsibility for the designated portion of the Work. This does not relieve the Contractor of responsibility to correct defective Work or repair damage caused by the Contractor or waive any other remedy to which the Department is entitled at law or in equity.



109.12 Final Acceptance

109.12 Final Acceptance.

A. Final Inspection. The Department will perform a Final Inspection for the ~~express~~sole purpose of relieving the Contractor of maintenance responsibility for the Work.

The Final Inspection shall be a limited visual review of the Work and shall only serve as the Department's verification that the Work is~~appears~~ substantially complete ~~and that final payment is due.~~ Final Inspection does not waive any available rights or remedies of the Department, nor divest the Contractor of any responsibility for compliance with the contract. or liability for damages.



109.12 Final Acceptance con't

Notify the Engineer when the Project is complete and all of the Engineer's punch list items are complete. If the Engineer agrees the Project is complete, then within 10 business days the District Final Inspector will inspect the Work and categorize it as one of the following:

1. Unacceptable or not complete.
2. Substantially complete with punch list items found by the Final Inspector.
3. ~~Acceptable~~ Substantially complete.



109.12 Final Acceptance con't

If the Final Inspector finds the Work substantially complete or substantially complete with punch list items ~~or acceptable~~, then the Contractor's maintenance responsibilities end on the day of the Final Inspection, except for any maintenance related to unfinished punch list items. This does not relieve the Contractor of responsibility to correct defective Work or repair damage caused by the Contractor; or waive any other remedy to which the Department is entitled at law or in equity. The Final Inspector will issue a Final Inspection Report that will document the findings of the inspection and start any warranty period.



109.12 Final Acceptance con't

B. Punch List. The Final Inspector will issue to the Contractor a written punch list of work required as a condition of acceptance. The Final Inspector's punch list will stipulate a reasonable time to complete the required Work. Failure of the Contractor to complete the punch list items by the stipulated time will result in ~~an administrative fee of \$100 per~~ the assessment of fifty percent of the Liquidated Damages according to 108.07 for each Calendar Day for every day beyond the stipulated time the punch list work remains incomplete and beyond the revised Completion Date.



109.12 Final Acceptance con't

C. Finalization. The Contractor shall accept the final quantities as determined by the Engineer or provide a written notice indicating the reason for disagreement within 30 Calendar Days of receiving the Engineer's list of final quantities. The prescribed 30 Calendar Day period can be modified by mutual agreement of the Contractor and the District Construction Engineer. If no notice of disagreement is received, then the final payment will be based on the Engineer's list of final quantities.



109.12 Final Acceptance con't

D. ~~Acceptance and Final Payment~~. Final payment is based on:

1. The agreed final quantities or as determined by the Engineer if agreement is not possible, no compensation for unauthorized work is allowed.
2. ~~Acceptance~~Finding of substantial completion by the Final Inspector.
3. Receipt of acceptable finalization documents.
4. Contractor certification that the Work was performed in accordance with the contract.



109.12 Final Acceptance con't

E. Completion of Contract and Continuation of Contractor's Responsibility. The Contract is complete, except for items covered by the required bonds, when the Contractor receives final payment. The DCE will issue a letter confirming completion of the contract, noting any exception as provided in Items 659 and 661 and any warranty. The date the final payment is approved by the District constitutes acceptance ~~as referenced in~~ for the purpose of ORC 5525.16. ~~Neither Completion of the Contract does not relieve~~ nor substantial completion relieves the Contractor of any responsibilities ~~prescribed by~~ to properly perform or correct the Work or to repair damage or waives any remedies to which the Department is entitled at law or in equity.



Questions?



2010 Structural Specification Changes



Spring 2010



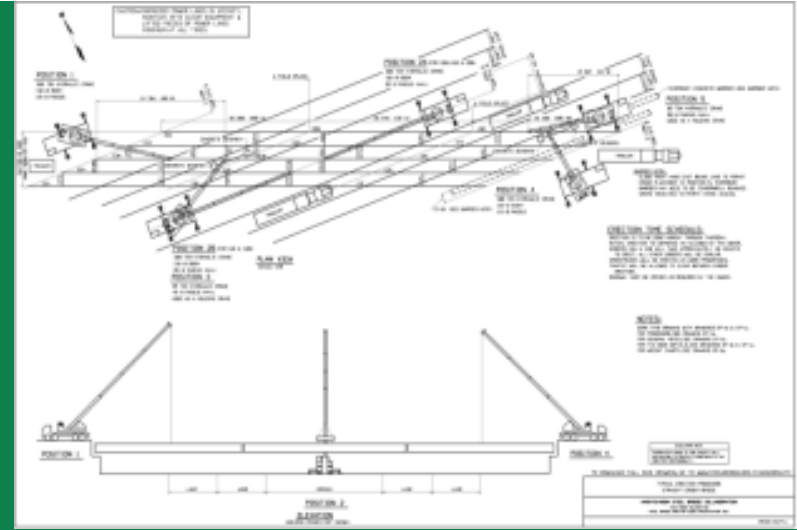
2010 C&MS Specification Training



65

Item 501 Structures-General

- Contractor to submit Erection Procedure per 501.05, & verify beam seat elevations and bearing orientation before setting structural steel and precast concrete beams.
- Contractor must follow this procedure, or submit a new P.E. stamped procedure.
- Use CA-S-20 Checklist



CA-S-20 Erection (Demolition) Procedure Checklist

Name (print clearly): _____
 Project: _____ Bridge (Co, Rt, Section): _____
 Description: _____

Item(s) Inspected: _____

Plan:

- ☐ Contractor's Erection (Demolition) Plan stamped by two PE's.
- ☐ Contractor's Erection (Demolition) Plan accepted by regulatory agencies, Railroads, Coast Guard, U.S. Army Corps of Engineers, etc., if applicable.

Details:

- ☐ Erection (Demolition) sequence for all members.
- ☐ Maintenance of Traffic during erection (demolition) operations.
- ☐ Location of permanent support structures, roads, railroads, waterways, utilities.
- ☐ Member delivery location and orientation for erection.
- ☐ Member removal location and orientation for demolition.
- ☐ Location and radius of each crane during each pick.
- ☐ Location of crane support (barges, mats, etc.) , during each pick.
- ☐ Crane capacities shown for each crane configuration and boom length used.
- ☐ Lifting weights of primary member picks, including all rigging.
- ☐ Rigging weights, capacities, and arrangements for primary member picks.
- ☐ Locations of the centers of gravity and lifting points for primary members.
- ☐ Temporary supports or bracing.
- ☐ Blocking for bridge bearings.

Calculations:

- ☐ Load capacity and stability of crane(s), temporary supports and rigging for each pick and release.
- ☐ Structural adequacy and stability of members for each erection (demolition) step.

Signature: _____ Date: _____

ODOT Form date: 6/1/2004



Item 501 Structures-General

- Procedure should include:
 - Sequence for all members
 - Maintenance of Traffic
 - Permanent features locations
 - Member delivery locations
 - Crane locations & radii
 - Crane capacities, boom lengths
 - Pick weights, including rigging
 - Temporary supports, blocking



Item 501 Structures-General

- If Corrective Work is required, submit Corrective Work Plan, signed, stamped, and dated by a Registered Engineer before beginning corrective work.
- Any associated delays are considered non-excusable.



503 Excavation

Cofferdams and Excavation Bracing

- Design to accommodate a water elevation 3 feet above Ordinary High Water mark elevation shown in the plans.
- It was determined that, on average, Ordinary High Water mark elevation was about 2 feet higher than Normal Pool. Established 3 feet above Ordinary High Water in allocating risk.



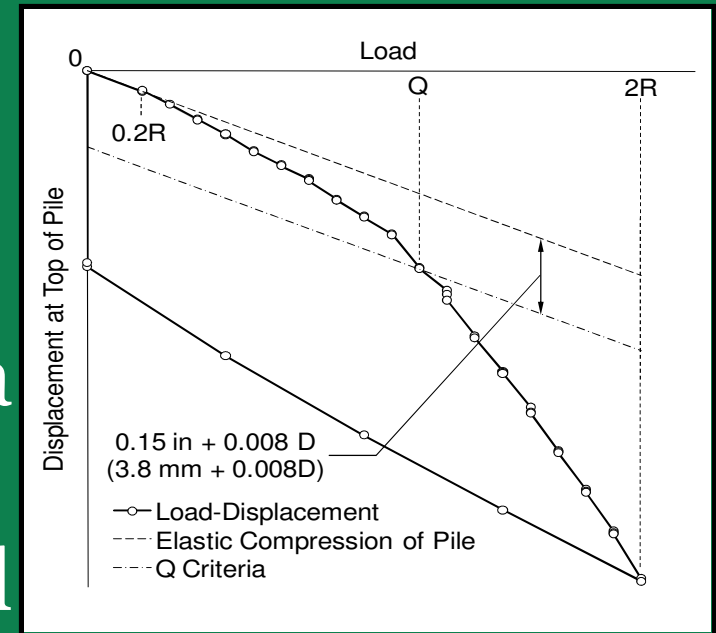
503 Excavation

- Similar to notes for SS 832 for temporary crossings,
Contractor to establish monument upstream of all proposed cofferdams to visually monitor water elevation
- If water elevation exceeds 3 feet above ordinary high water mark and causes a delay to the Project, the Contractor may be granted a time extension for an excusable, non-compensable delay per 108.06B.



506 Static Load Test

- Replaced Load-Settlement Plot as shown.
- If the Contractor changes to a different hammer, the Office of Structural Engineering will determine necessity for additional static load testing.



507 Bearing Piles

- Now specify material for metal shells for Cast-In-Place Piling, (711.03)
- References to notification of the Director were changed to District Geotechnical Engineer
- Determination of Blow Count changed to Determination of Required Driving Criteria based on Item 523 Dynamic Load Test



Item 512 Treating Concrete

Sealing of Concrete Surfaces

- For irregular concrete surfaces, 512.03 gives formulas to determine coverage rates.
- The Department will measure sealing of concrete surfaces by the number of square yards of coated area projected to a **2-dimensional surface**.
- Documentation – New CA-S-21 Form
- New Work Type 57 for Sealing of Concrete Surfaces Contractors
- Contractors are receiving or have received training.



CA-S-21 Sealing of Concrete Surfaces Checklist

Name (print clearly): _____
Project: _____ Bridge (Co, Rt, Section): _____
Description: _____
Item(s) Inspected: _____
Storage:
☐ Thermometer to check for manufacturer's acceptable range
☐ Sealer stored not frozen nor in sun ☐ Shelf life
Submittals made:
☐ Technical and application data ☐ Material Safety Data Sheet
☐ 100 Grit Sandpaper supplied by Contractor for comparison
Equipment for proper preparation:
☐ Correct water blast equipment (7000 psi minimum)
☐ Correct abrasive blast equipment (followed by cleaning)
Equipment mixing and application:
☐ Equipment meets manufacturer's requirements:
Surface Preparation, clean concrete with 100 grit sandpaper texture:
☐ Test site set up ☐ Test all surfaces, (not just vertical)
☐ Surface checked for texture ☐ Acid Test performed if curing compound used
Mixing:
☐ Material used within manufacturer's shelf life ☐ Mix time and pot life marked
☐ Mixed per manufacturer's recommended procedures
Application:
☐ Conditions acceptable ☐ Material applied within pot life
☐ Minimum coating rates met in test sections
 ▪ Epoxy – 120 Ft²/gal, (150 Ft²/gal if authorized)
 ▪ Urethane - 200 Ft²/gal, (even coverage, no skips or sags)
 ▪ Non-Epoxy – 100 Ft²/gal, Decks, 125 Ft²/gal, Vert. Surfaces
Signature: _____ Date: _____

ODOT Form date: 6/1/2004



Item 514 Painting of Structural Steel

Surface Preparation

514.13.D. Containment/Waste Disposal

- Provide Chain of Custody and Test Results to the **District Regulated Waste Engineer, (DRWE)**, for hazardous waste determination.
- **Properly dispose of all waste within 60 days after it is generated.**



Item 515 Prestressed Concrete Bridge Members

- Disallow Nails driven or “Tapcon” screws drilled into prestressed concrete beams to form diaphragms.
- Causes spalling concrete, exposing reinforcing steel and prestressed strands.
- Adding language to **Item 508, Falsework and Forms**, disallowing post-installed anchors in these members.
- Solution: Brace forms externally or use precast tie inserts.



PN 525 Steel Price Adjustment

Simplified: Two categories

Category 1: Structural Steel Members, Levels UF 1, 2, & 3 and Steel H-Piling

- Based on average of lowest & highest 27" to 36" tall wide flange beams from 3 suppliers

Category 2: Structural Steel Members, Levels 4, 5, & 6 and Stay-in-Place casings

- Based on AMM Steel Plate indices.
- Guardrail, traffic & light poles, corrugated metal pipe, expansion joints, bearings, pre-stressed & post tensioning strand, and reinforcing steel eliminated.



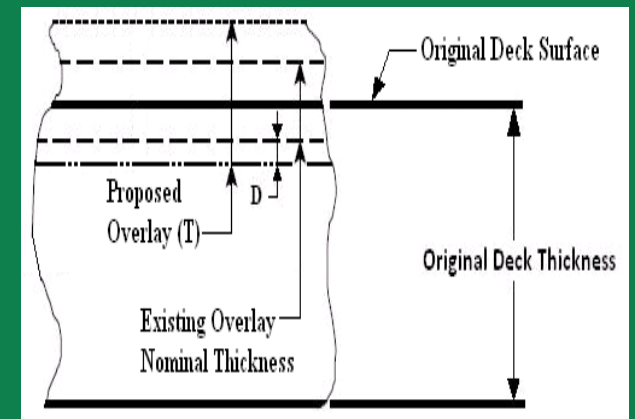
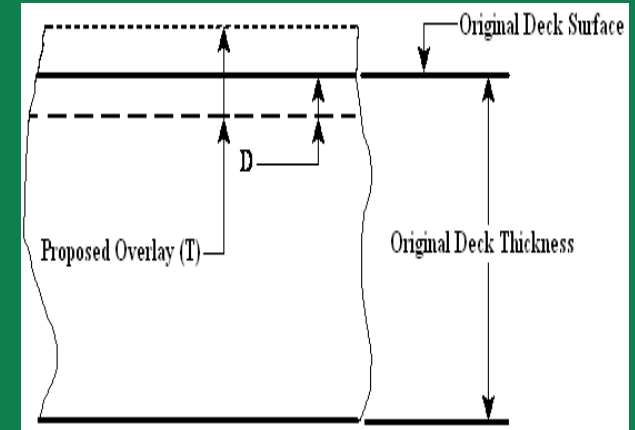
SS 847 and SS 848 Overlay Items

- Trying to simplify and clarify SS 847 – Overlays with Scarification & SS 848- Overlays with Hydro-demolition
- SS 847 doesn't have pay items for Hand Chipping or Removal of Debonded or deteriorated existing variable thickness concrete overlay, which are incidental to Existing Concrete overlay removed___ nominal thickness and - - - Concrete Overlay(variable thickness) items
- SS 848 has these items



SS 847 and SS 848 Overlay Items

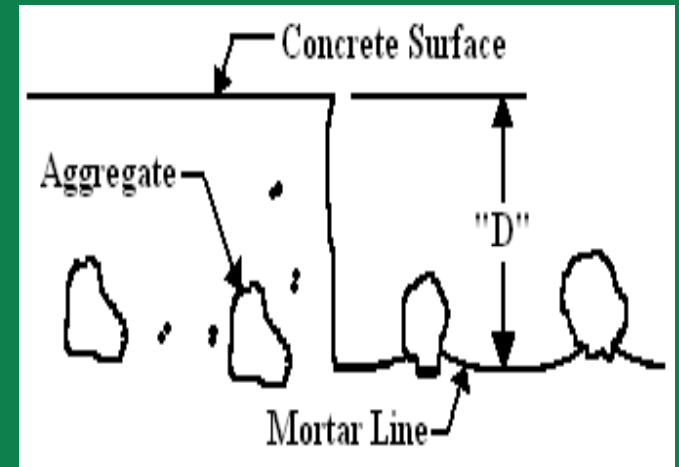
- Existing SS 848 requires removal of at least 1" by Hydro-demolition
- In many cases, much less has been removed than that depth with Hydro-demolition
- The rest has been milled



SS 847 and SS 848 Overlay Items

Supplemental Specification 848.20

- Concrete Removal by Hydro-demolition is intended to remove all unsound concrete by hydro-demolition, not scarification or chipping.
- Remove top surface of concrete deck to depth “D” of 1”, or as specified in the plans.
- These measurements shall be minimum & be taken from the concrete surface, immediately prior to the hydro-demolition removal, to the mortar line.



SS 847 and SS 848 Overlay Items

Supplemental Specification 848.20

Concrete Removal by Hydro-demolition

- May use **conventional scarification** equipment to make an initial pass across the deck **to remove any existing overlay and a maximum of 1/4 inch**, or as specified in the plans, of the existing deck concrete.
- The final 1 inch shall be removed by Hydro-demolition.



SS 847 and SS 848 Overlay Items

- This specification is not necessarily intended to apply to “weekend” overlays, where speed of removal is critical. Variations to this process would have to be specified in an “as per plan” note.
- Left Removal of Debonded Existing Variable Thickness Overlay item and Hand Chipping item in SS 848, and left _____ Concrete overlay(variable thickness) item, as material only
- In SS 847, added Hand Chipping item, and made _____ Concrete overlay (variable thickness) item as material only



2010 C&MS

200 Section Changes



Item 202 - Notable Changes

- Asphalt wearing course on bridges
- Pavement above pipes
- Embankment material that replaces removed pavement



Asphalt wearing course on bridges

- Must be removed before bridge. (202.03)
- Asphalt wearing course removal is not included with lump sum item for structure removal. (202.13)
- *These additions follow ODOT typical practice. However, not all plans showed it this way, which led to confusion.*



Pavement above pipes

- Pavement removal is not included in the pay item for Pipe Removed. (202.14)
- Pay for pavement removal under a pay item for 202 Pavement Removed or 203 Excavation.
- Pay for new pavement above pipe removal under the applicable pavement pay item. *(This is not new; just made it clear)*



Embankment material that replaces removed pavement

- Pay for new embankment material that replaces removed pavement under 203 Embankment pay item, or possibly a 204 Embankment pay item. (202.14)
- *Before, the new soil was incidental to the pavement removal. However some plans included a 203 embankment quantity anyway.*



Embankment material that replaces removed pavement



203, Embankment 204, Subgrade

- Removed \$5,000 threshold for adjusting pay quantities. (203.10 & 204.09)
- *It conflicted with language in 104.02.*



205, Chemically Stabilized Embankment 206, Chemically Stabilized Subgrade

- Both sections rewritten, mostly editorial for clarity. However, significant changes include:
- Sections adequately cover use of lime kiln dust (LKD). (also in 712.04)
- Lime is quick lime only; removed hydrated lime. No need to calculate equivalent quantities of hydrated lime anymore.

2008 8 14



206, Chemically Stabilized Subgrade

- Can fine grade either before or after curing period. (206.05.C)
- Note that April 16, 2010, SS 800 will add, “If fine grading before the curing period, fine grade the same day as mixing, compacting, and shaping.”

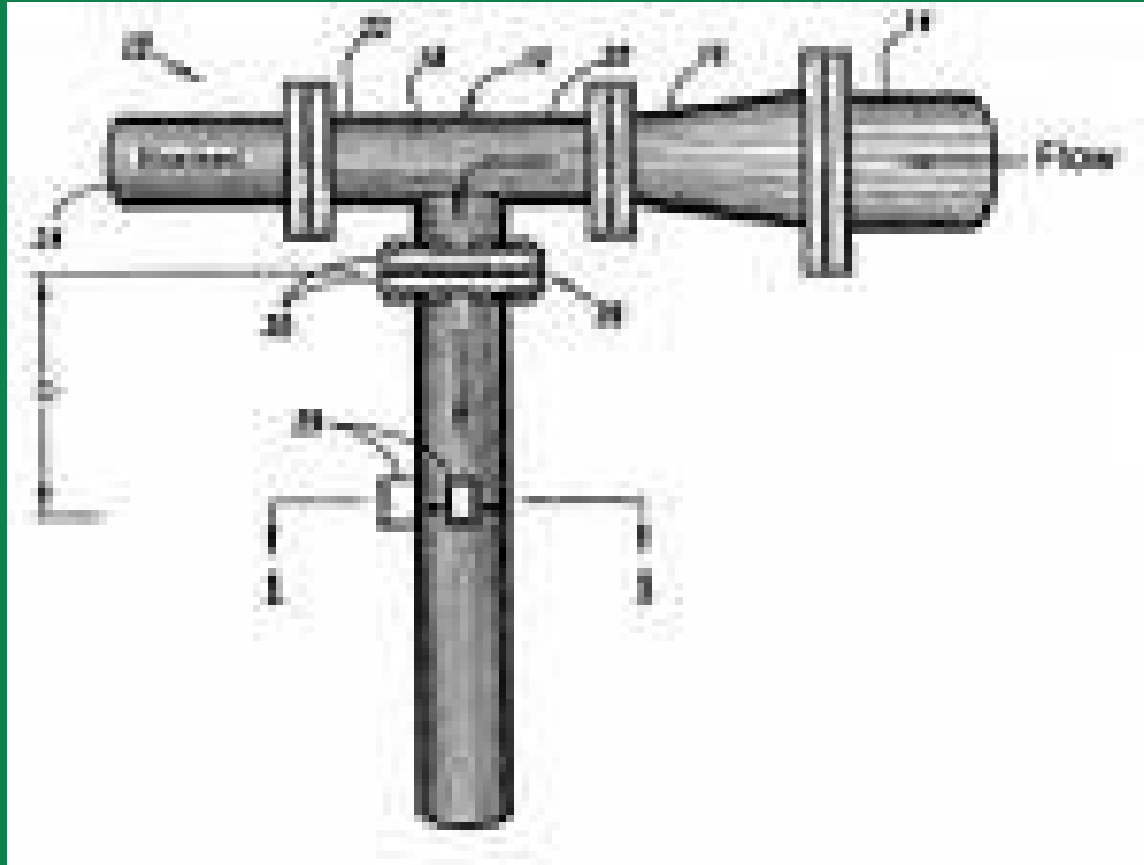


Supplement 1120

Mixture Design for Chemically Stabilized Soils

- New revision coming April 16, 2010. Make sure testing lab uses it.
- Samples supposed to come from within treated area, **but** ODOT may approve getting them from nearby if there is a compelling reason. This may speed things up.





Hydraulics

2010 Summary of revisions



603



- 603.04 - Pre-cast Arch Sections and 3 Sided Flat Top Culverts
 - Shop drawing submittals require more specific information
- 603.9 - Buried Liner Waterproofing Membrane
 - 711.22 QPL material item
 - Standard liner footprint is now described in the specification



603

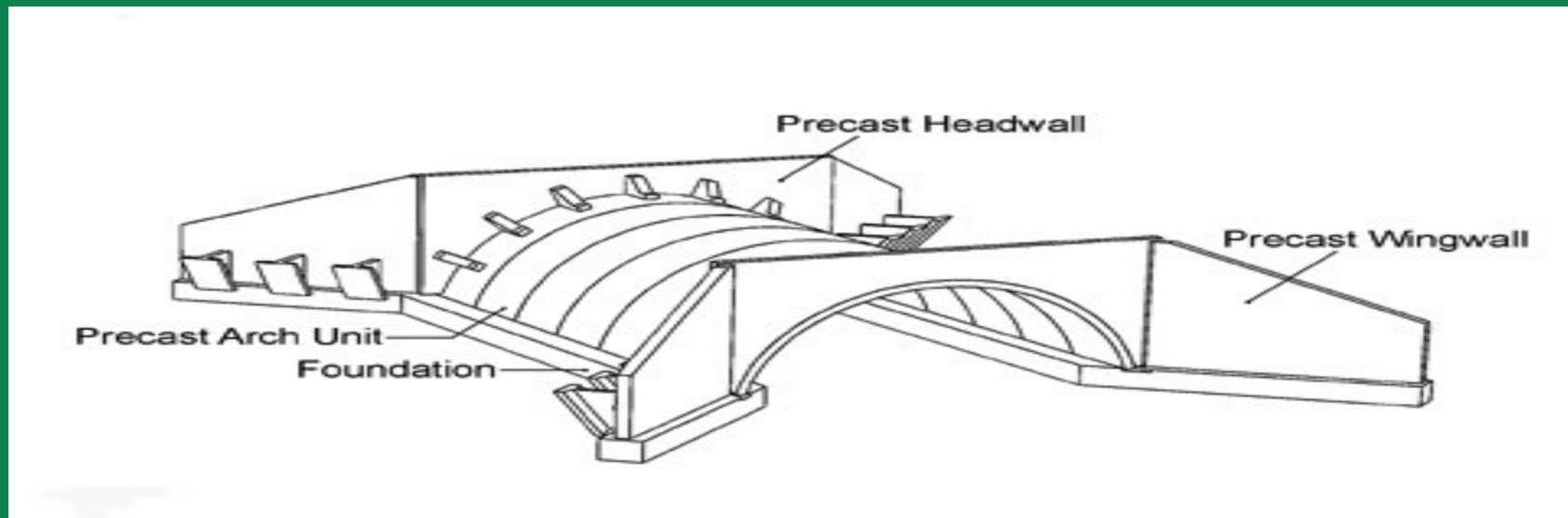
Pipe Culverts Sewers and Drains

- 603.12 Structural Backfill Type 2 (sand)
 - This change was missed in the 2008 C&MS publication. It remained in the SS 800 since 2008
 - Type 2 Structural Backfill can be flood compacted. Compaction confirmation must be demonstrated using the test section method.



603

603.02 Type A Conduits - Culverts **New material specification 706.053** Precast Reinforced Concrete Arches



Post Construction Inspection of Storm Sewers and Drainage Structures

Supplemental Specification 802

- Revisions to the contractor's installation plan are required within 5 days of the change. Revisions require manufacturer's confirmation of the change.
- Inspection documentation requirements now include certification of the installation records.
- Requires a performance survey to confirm the H&V location of the conduit and drainage structures are within the tolerances given.



Proposal Note 603

- PN 603 Makes SS 802 mandatory
 - Pilot Projects using PN 603 requires the use of SS 802 to evaluate the performance based specification
 - About 60 projects in the works
 - All 12 Districts participating



SUPPLEMENTAL SPECIFICATION 834 CONDUIT RENEWAL USING RESIN BASED LINER



- New Specification for rehabilitating existing conduits using a spray-on type polyurethane lining material.



SUPPLEMENTAL SPECIFICATION 841

CONDUIT REHABILITATION USING SPIRAL WOUND PROFILE



- New conduit rehabilitation specification
- The host conduit is lined with an extruded polyvinyl chloride (PVC) profile strip that is spiral wound into the existing conduit
- The extruded PVC profile strip mechanically locks together
- The work includes grouting the interstitial space between the liner and host pipe



SUPPLEMENTAL SPECIFICATION 938

STEEL REINFORCED THERMOPLASTIC RIBBED PIPE



New material specification that allows the use of steel reinforced HDPE in liner applications.



SUPPLEMENTAL SPECIFICATIONS

895 & 995

Manufactured Water Quality Structure

Gives the contractor the option of installing a system configured with one or two manholes.



SUPPLEMENT 1019
CERTIFICATION PROCEDURE FOR
CORRUGATED METAL PIPE
SUPPLEMENT 1066
PLASTIC PIPE ACCEPTANCE PROGRAM

- A dispute resolution process is included in the Supplement to better handle conflicting sample information and certification suspensions.





OHIO DEPARTMENT OF TRANSPORTATION

TED STRICKLAND, OHIO GOVERNOR

JOLENE M. MOLITORIS, ODOT DIRECTOR



2010 Specification Update - Pavements The Ohio Department of Transportation

Item 401 - Notable Changes

- 401.04 - Increased RAP allowed
- 401.05 - Use of WMA allowed
- 401.15 - MTV required for night paving
- 401.20 - BITPAD removed



401.04 Reclaimed Asphalt Concrete Pavement

- Increased % of RAP allowed in most mixes
- Two methods for RAP usage:
 - Method 1, 50% max RAP in 301; 10% max in Heavy Surface Course
 - Method 2, 55% max RAP in 301; 15% max in Heavy Surface Course



401.05 - Mixing Plants

- Allows use of WMA for most mixes
 - 4/16/10 SS800 posting will include 12.5 mm mixtures (Heavy Surface Course)
 - 443 Stone Matrix Asphalt still excluded from WMA production



401.05 -MTV - Night Paving - 2010 C&MS

- 401.15

- Use of MTV added

- Night paving only

- 1-mile continuous paving

- Use on large interstate-type project

- Revision 4/16/10, SS800 posting

- Allows other types of equipment

- Goal: eliminate segregation (Surface use of MTV only.)



401.20 - Bituminous Price Adjustment - Effective 7/17/09

- Index Changes:
 - **Removed** as standard specification 401.20
 - Using on contract-by-contract basis (PN 530 and PN 535)
 - Using one binder type for all price adjustments (PG64-22)
 - Using AWM to establish index
 - Current month's index available at beginning of next month



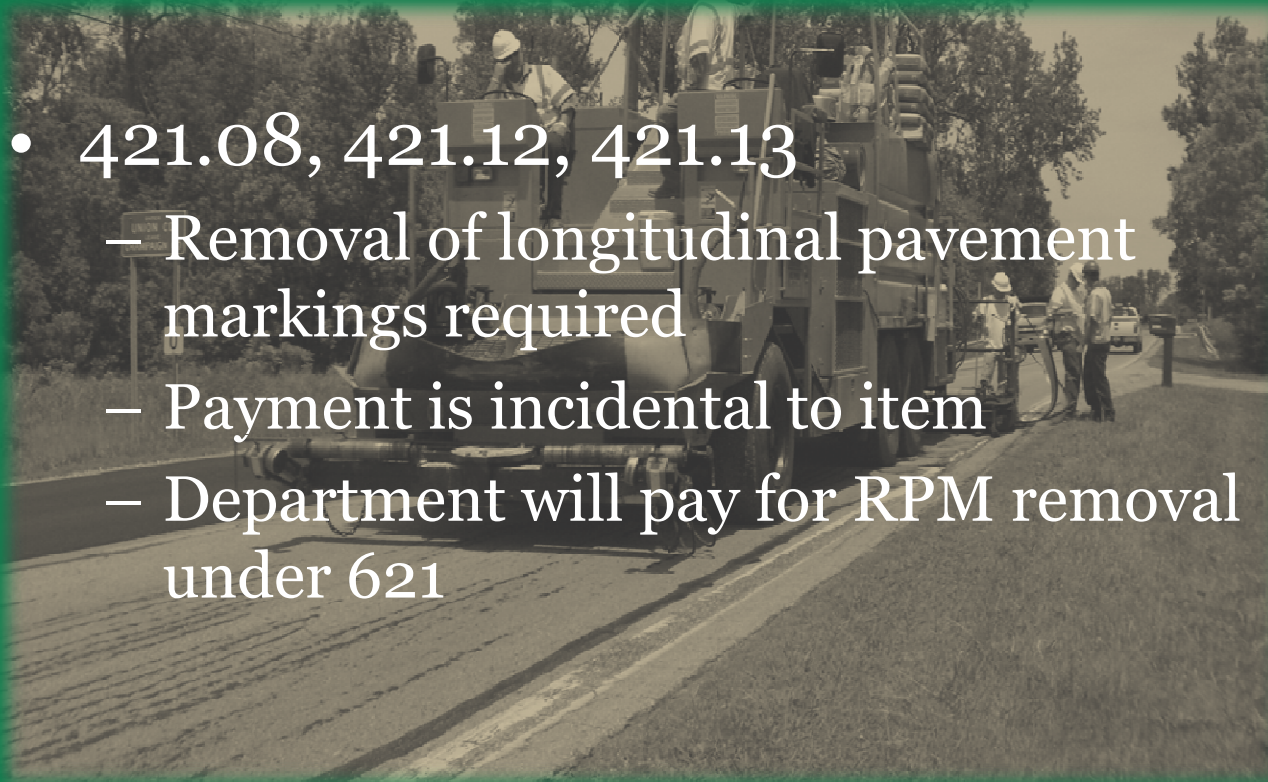
Bituminous Price Adjustment - Effective July 17, 2009

- Index Changes - Continued:
 - Increased triggers
 - 15% on single season projects
 - 10% on multi season projects
 - Applicability of PN based on project quantity



421 - Microsurfacing

- 421.08, 421.12, 421.13
 - Removal of longitudinal pavement markings required
 - Payment is incidental to item
 - Department will pay for RPM removal under 621



422 - Chip Seal

- 422.06 - Surface Preparation
 - Longitudinal Pavement Markings
 - Required to remove/payment incidental to item
 - RPMs:
 - Single Chip Seal - Protect or remove/replace - payment incidental to item
 - Double Chip Seal - Remove - will be measured and paid under 621



422 - Chip Seal

Other Notable Changes

- 422.02 - Sampling and testing requirements revised
- 422.05 - Test strip cannot be waived
- 422.07 - “Target” binder application rate in lieu of “minimum” rate



424 Fine Graded Polymer Asphalt

- 424.07 - Remove RPMs, measure, and pay per 621



448 Asphalt Concrete

- 448.03 - Density
 - Now required on all uniform courses $\geq 1"$
 - Eliminated density testing of 0.75" surface courses



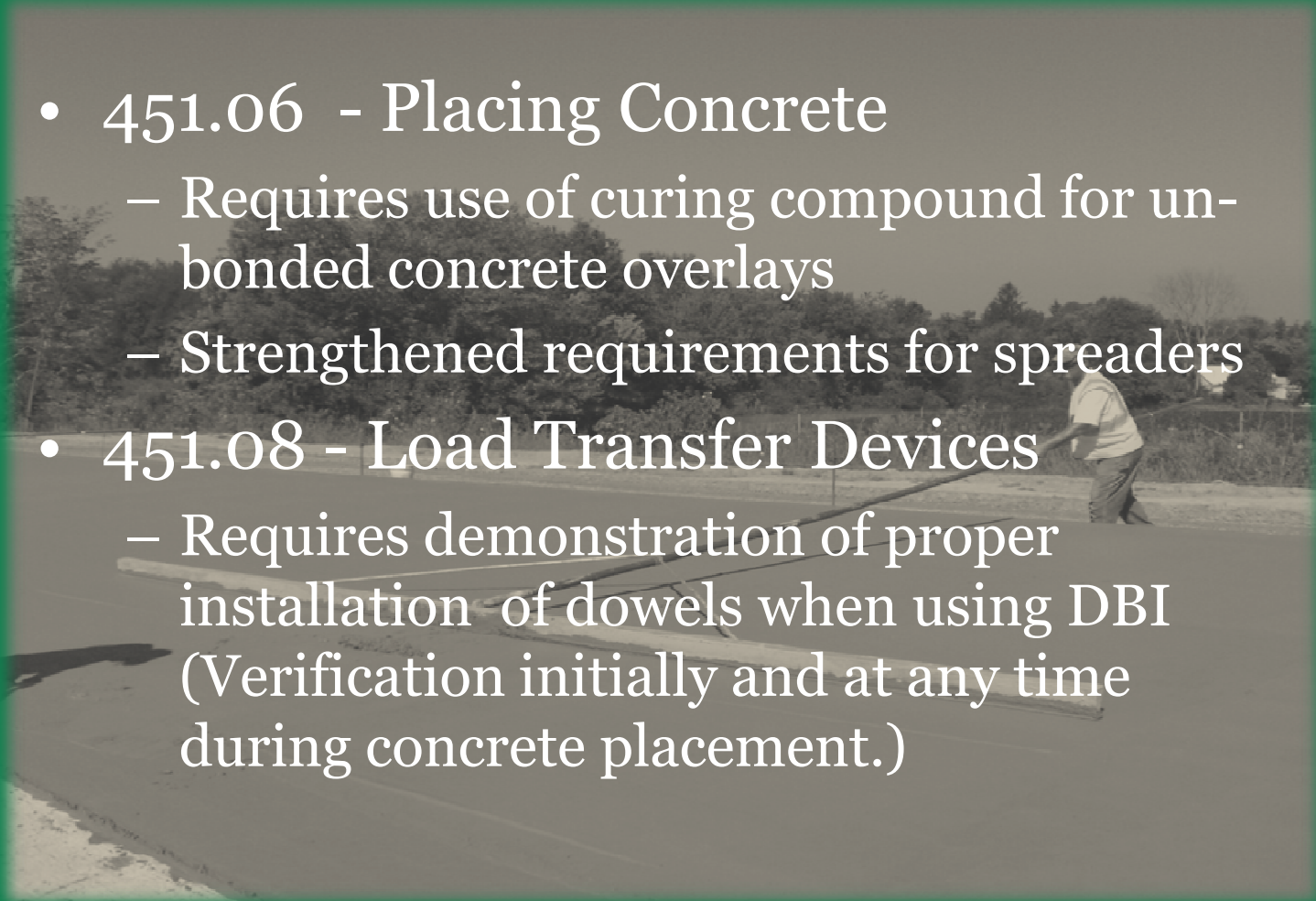
441 Contractor Mix Design and QC

- 441.09 - Tightened requirements for additional QC testing
- 441.10 - Requires detailed startup and approval after production stop
- 441.12 - specifies material failing QC tests is non-specification

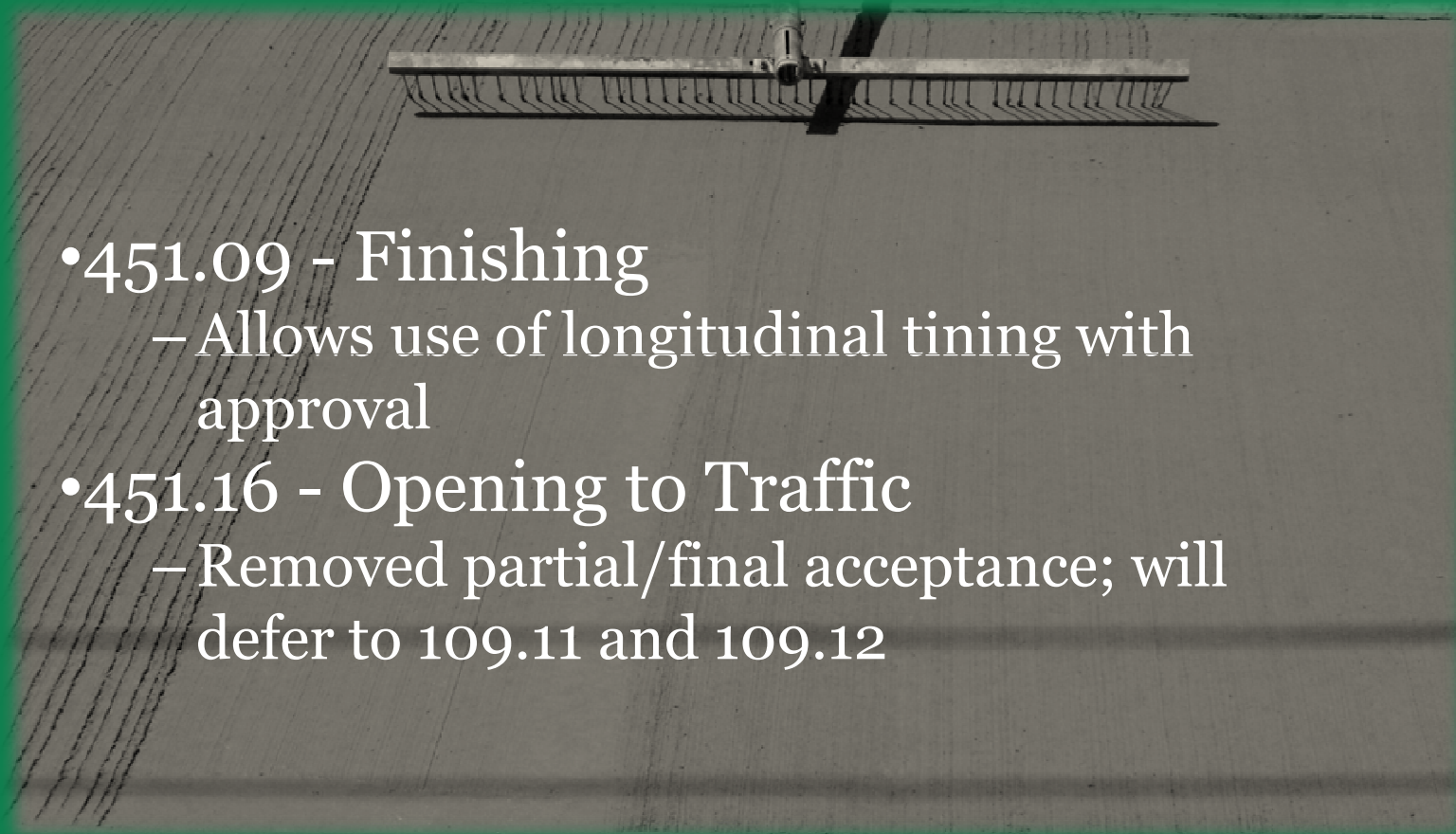


451/452 Rigid Pavement

- 451.06 - Placing Concrete
 - Requires use of curing compound for unbonded concrete overlays
 - Strengthened requirements for spreaders
- 451.08 - Load Transfer Devices
 - Requires demonstration of proper installation of dowels when using DBI (Verification initially and at any time during concrete placement.)



451/452 Rigid Pavement



- 451.09 - Finishing
 - Allows use of longitudinal tining with approval
- 451.16 - Opening to Traffic
 - Removed partial/final acceptance; will defer to 109.11 and 109.12



615 - Roads and Pavements for Maintaining Traffic

- 615.05 - Requires soft subgrade to be prepared per 204
- 615.09/615.10 - Department will measure and pay for undercut per 204



2010 C&MS

Traffic and Roadway Changes



614 Maintaining Traffic

- **Added**
 - **614.055 Surface Condition Signs**
 - Erect a GROOVED PAVEMENT sign 250 feet in advance of any section of roadway where traffic must travel on a planed surface. Ensure these signs are in place before opening the roadway to traffic. Erect these signs on each entrance ramp and at intersections of through roads to warn entering or turning traffic of the conditions. Payment for these signs to be included in Item 614 Maintaining Traffic.



614 Maintaining Traffic

- **614.03 Traffic Control General**
- All temporary traffic control devices shall conform to the Quality Standards for Temporary Traffic Control Devices available at the following address:
<http://www.dot.state.oh.us/Divisions/HighwayOps/Traffic/publications2/qualityguidelines/Pages/default.aspx>



614 Maintaining Traffic

- **611.4.11. G. Conflicting Markings**
 - **Removal and Covering of Markings.**
 - **A. Removal Methods.** Remove the markings so that less than 5% of the line remains visible. Repair damage to the pavement that results in the removal of more than 1/8 inch of pavement thickness. Remove the markings by using methods specified in the below table:
 - **B. Covering Conflicting Markings.** With the Engineer's approval, use removable, non-reflective, preformed blackout tape according to Supplement 1187 to cover conflicting markings. Remove or replace the blackout tape within 15 days of installation.



614 Maintaining Traffic

Type of Pavement		Removal Method	
		grinder ^[1]	sand, shot or water blast
Existing Asphalt	Temporary	Y	Y
	Permanent	N	Y
New Asphalt	Temporary	Y	Y
	Intermediate	Y	Y
	Permanent	N	Y
Existing Concrete	Temporary	Y	Y
	Permanent	N	Y
New Concrete	Temporary	Y	Y
	Permanent	N	Y
Y - method is permitted to be used			
N - method is not permitted to be used			
[1] – when a drum is mounted to a skid steer loader, the drum must be able to accommodate a minimum of 150 teeth			



614 Maintaining Traffic

- **614.16 Basis of Payment.** The Department will make partial payments according to 109.09 and as modified by the following schedule:
 - If the project duration from first day of physical work to original completion date is greater than or equal to 45 calendar days,
 - A. The Department will pay 30 percent of the lump sum amount bid for Maintaining Traffic with the first estimate, but not sooner than 15 days after the start of work at the project site.
 - B. The Department will pay the remaining 70 percent of the lump sum amount bid for Maintaining Traffic according to 109.09.



614 Maintaining Traffic

- Portable Changeable Message Sign
- The pay unit has been changed from “sign month” or “each” to “day”



632 Traffic Signal Equipment

- Furnish and install all equipment necessary to provide complete electrical service to each signal installation as shown on the plans. Make all necessary arrangements with the local electrical power company for connections to establish electrical service. Charges made by the power company for establishing of the account, extension of company facilities, connection of customer equipment to the power company facilities and energy will be borne by the maintaining agency.



641 Pavement Marking

- **641.02,**
- Any materials delivered without a TE-24 and applied without laboratory approval will be removed. Laboratory tested materials not meeting specifications will be removed from the project site.
- **641.06,**
- Do not start marking operations until the Engineer or the Engineer's representative has approved the layout and premarking lines.



642 Traffic Paint

- Removed the alkyd paint and replaced with Type 1A (cold weather)
- Type 1 A can be placed at temperatures (air and pavement) between 35 degrees and 50 degrees



Questions?

