

ODOT NEWS



Dan Miller, PE

ODOT, Office of Materials Management

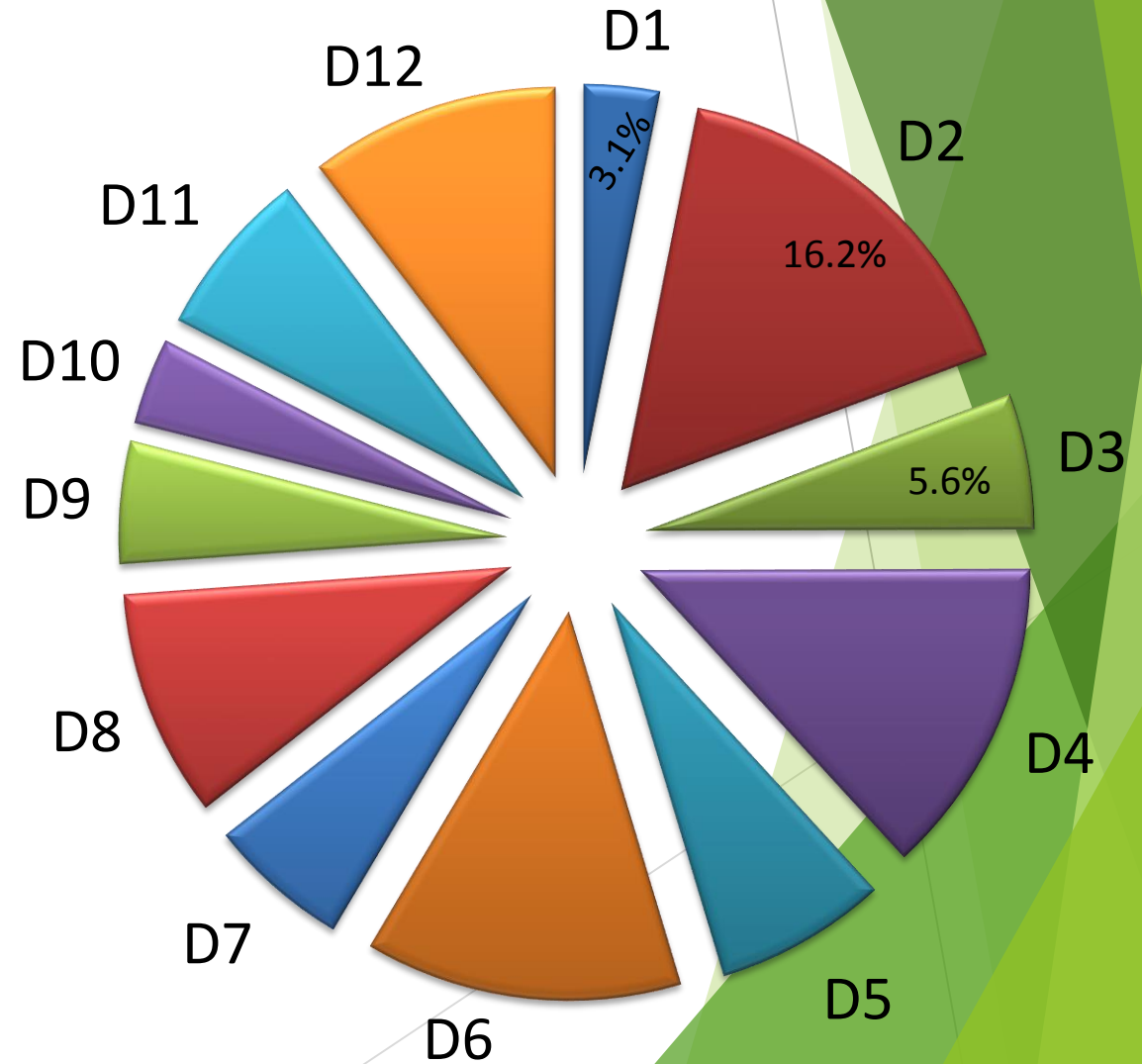
INTRODUCTION

- ❖ 2017 ODOT Construction Projection
- ❖ Update on Design Drawings
- ❖ SWPPPTrack
- ❖ Requirements to become a Certified Precast Supplier
- ❖ Updates to Supplements (1073/1074) and Item 706.05
- ❖ Quarterly Third Party Inspections
- ❖ Issues in the Field

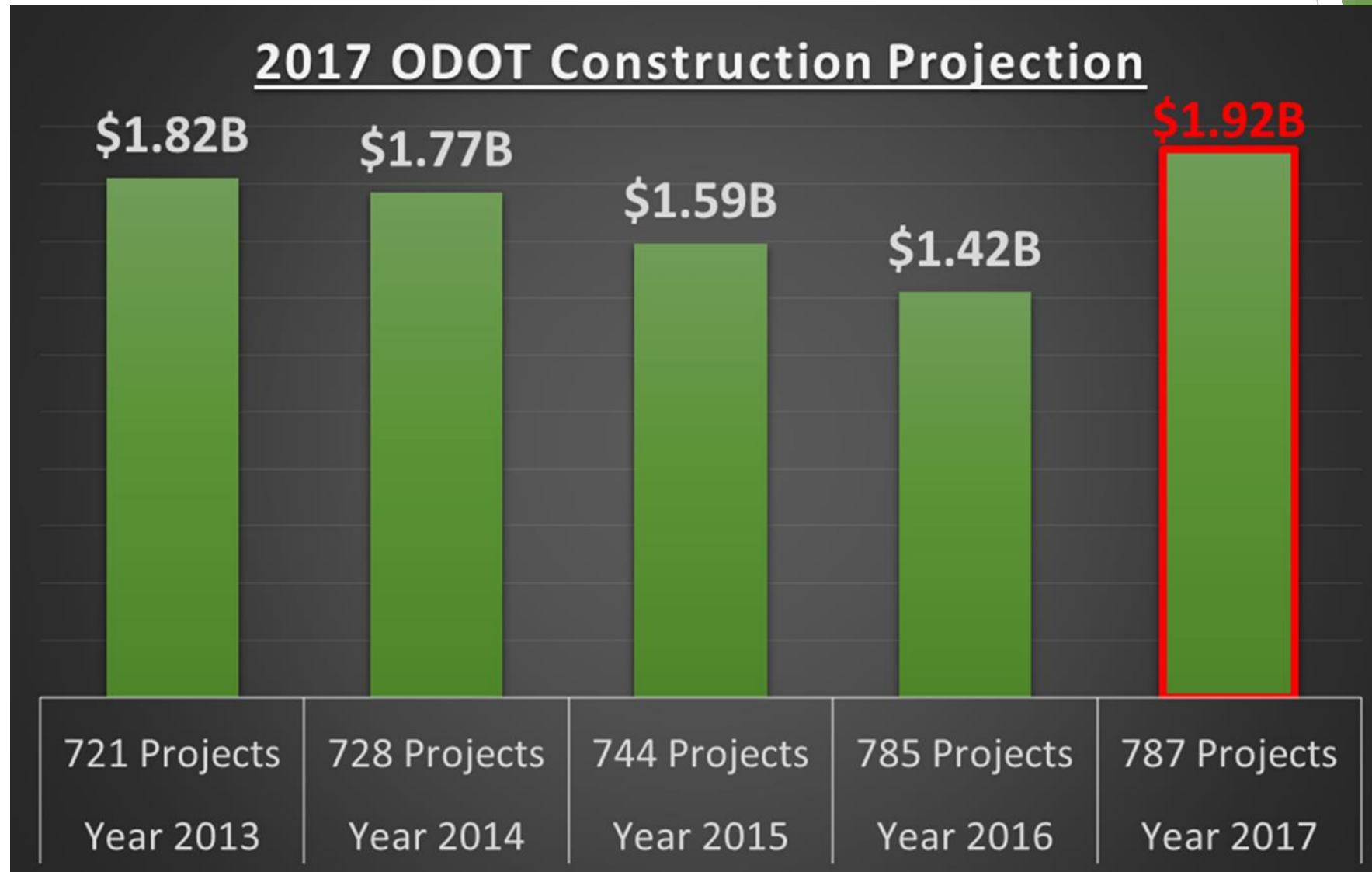
2017 CONSTRUCTION PROJECTION

2016 Construction Estimates

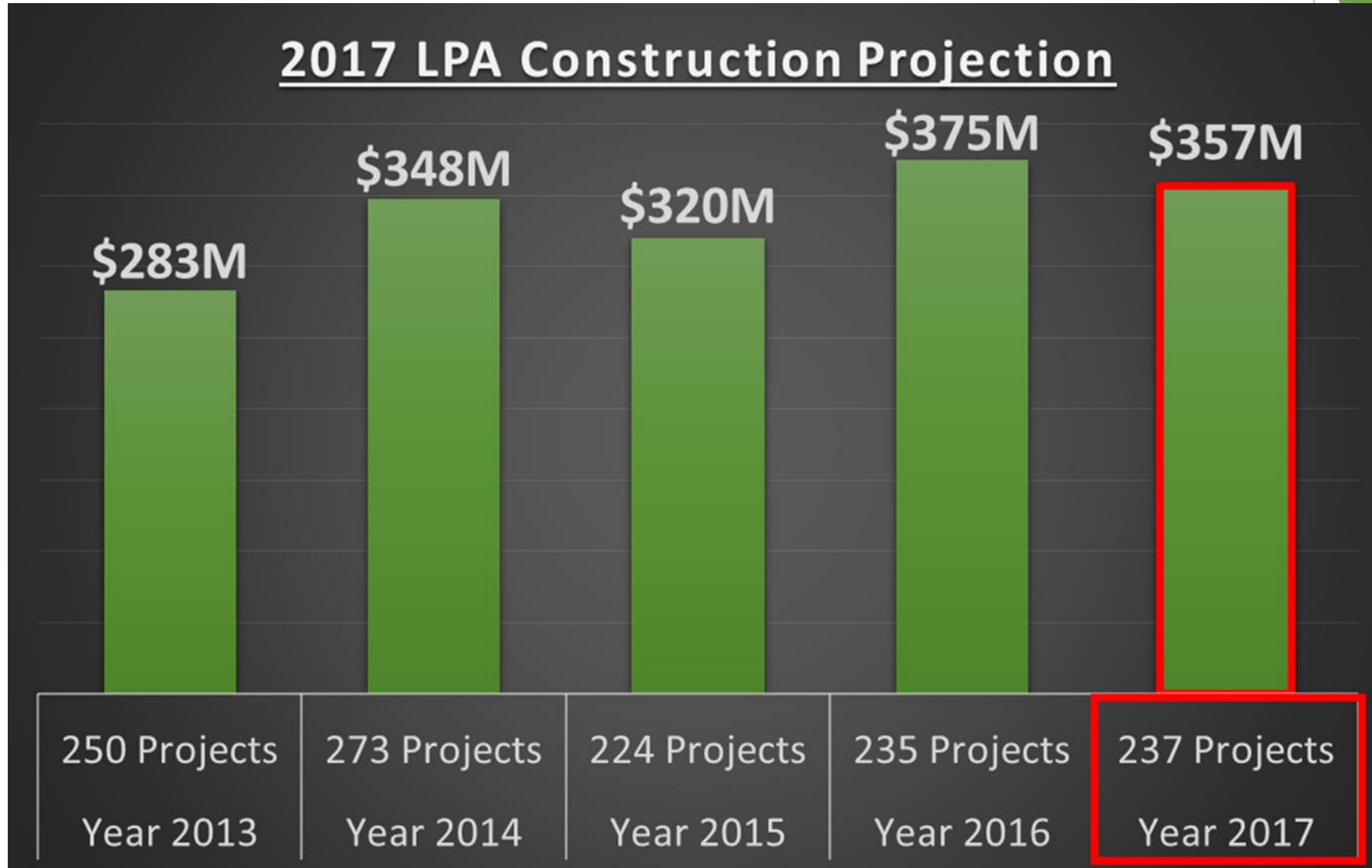
| District | Estimates Paid |
|---------------------------|------------------|
| 1 | \$56,241,274.76 |
| 2 | \$291,519,060.28 |
| 3 | \$101,385,101.60 |
| 4 | \$238,110,760.94 |
| 5 | \$129,209,250.73 |
| 6 | \$237,057,814.64 |
| 7 | \$106,041,946.76 |
| 8 | \$170,625,192.50 |
| 9 | \$91,214,087.39 |
| 10 | \$65,050,047.77 |
| 11 | \$126,868,042.86 |
| 12 | \$187,099,559.35 |
| \$1,800,422,139.58 | |



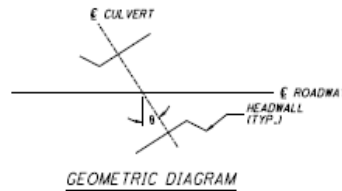
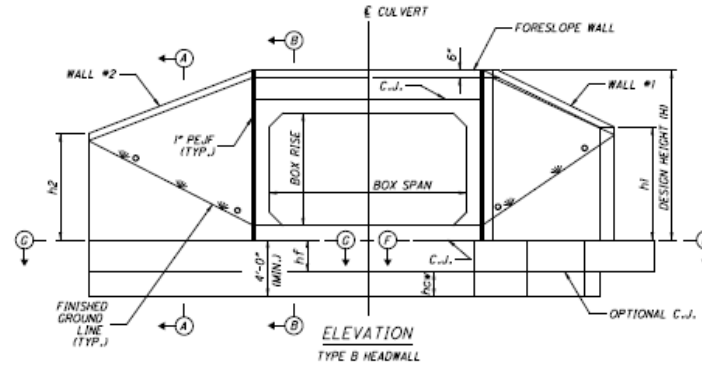
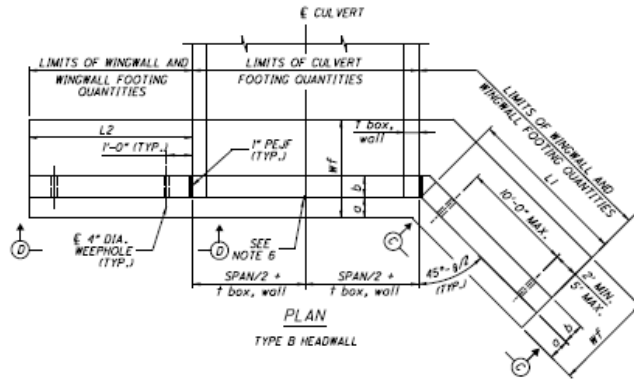
2017 CONSTRUCTION PROJECTION



2017 CONSTRUCTION PROJECTION



UPDATES TO DESIGN DRAWINGS



NOTES

1. FOR SECTIONS A-A, B-B AND F-F AND VIEW C-C, SEE SHEET 6/25
 2. FOR FOOTING DESIGNS, SEE SHEET 6/26
 3. FOR FORESLOPE WALL REINFORCING AND QUANTITIES, SEE SHEET 6/20
 4. POROUS BACKFILL NOT SHOWN FOR CLARITY.
 5. THESE WALLS SHOULD BE USED ONLY FOR WALL CONFIGURATIONS SHOWN IN THESE STANDARDS.
 6. SHOW THE STATION AND OFFSET WITH RESPECT TO THE CENTERLINE OF SURVEY ON THE PLANS.
- INCLUDES FOOTING AND CUTOFF WALL CONCRETE AND REINFORCING WITHIN THE LIMITS OF THE BOX CULVERT PER LINEAR FOOT. TO OBTAIN THE TOTAL QUANTITY, MULTIPLY THIS VALUE/FOOT BY (BOX SPAN + 2x (BOX WALL THICKNESS)).

| | | FOR ALL VALUES OF "B" | | | | | | | | | | | | B = 0' ** | | | | | | | | | | | | B = 15' ** | | | | | | | | | | | | |
|--------------------|----------------|-----------------------|-------|-----------------|-----------------|------------|---|--------------------------------------|----------------|--------------|----------------|--------------|------------------|-----------|--------|-------|------------------|-------|------|------|--------------------------|----------------------------|--------------------------|----------------------------|-------------------------|---------------------------|-------------------------|---------------------------|------------------|------|------------------|----|--------------------------|----------------------------|--------------------------|----------------------------|-------------------------|---------------------------|
| DESIGN HEIGHT H | FOOTING DESIGN | FOOTING DIM. | | | CUTOFF WALL HT. | DIMENSIONS | | WINGWALL REINFORCING (SEE SHEET 6/6) | | | | | WINGWALL LENGTHS | | | | WINGWALL HEIGHTS | | | | WINGWALL CONC. QTY. (cy) | WINGWALL REINF. QTY. (lbs) | WINGWALL CONC. QTY. (cy) | WINGWALL REINF. QTY. (lbs) | CULVERT CONC. QTY. (cy) | CULVERT REINF. QTY. (lbs) | CULVERT CONC. QTY. (cy) | CULVERT REINF. QTY. (lbs) | WINGWALL LENGTHS | | WINGWALL HEIGHTS | | WINGWALL CONC. QTY. (cy) | WINGWALL REINF. QTY. (lbs) | WINGWALL CONC. QTY. (cy) | WINGWALL REINF. QTY. (lbs) | CULVERT CONC. QTY. (cy) | CULVERT REINF. QTY. (lbs) |
| | | WF | hf | h _{cw} | | a | b | "X" BAR SIZE | MAX. SPA. (in) | "Y" BAR SIZE | MAX. SPA. (in) | EXTN. LENGTH | L1 | L2 | h1 | h2 | L1 | L2 | h1 | h2 | | | | | | | | | L1 | L2 | h1 | h2 | | | | | | |
| 6'-6" | 1 | 4'-9" | 1'-6" | 2'-6" | 1'-8" | 1'-0" | 5 | 18 | 5 | 18 | 2'-5" | 7'-1" | 10'-0" | 4'-0" | 6'-6" | 3.89 | 512 | 6.94 | 552 | 0.47 | 25.31 | 8'-3" | 6'-4" | 4'-0" | 4'-9" | 3.05 | 422 | 5.94 | 493 | 0.47 | 25.31 | | | | | | | |
| 7'-6" | 1 | 5'-6" | 1'-6" | 2'-6" | 2'-1" | 1'-0" | 5 | 15 | 5 | 15 | 2'-5" | 8'-6" | 12'-0" | 4'-6" | 7'-6" | 5.34 | 667 | 9.13 | 684 | 0.53 | 28.77 | 9'-11" | 7'-11" | 4'-6" | 5'-6" | 4.05 | 582 | 7.95 | 631 | 0.53 | 28.77 | | | | | | | |
| 8'-6" | 1 | 6'-3" | 1'-6" | 2'-6" | 2'-6" | 1'-0" | 5 | 18 | 5 | 9 | 2'-10" | 9'-11" | 14'-0" | 5'-0" | 8'-6" | 7.02 | 921 | 11.62 | 819 | 0.58 | 30.15 | 11'-6" | 9'-6" | 5'-0" | 6'-3" | 5.63 | 783 | 10.20 | 743 | 0.58 | 30.15 | | | | | | | |
| 9'-6" | 1 | 7'-0" | 1'-6" | 2'-6" | 2'-11" | 1'-0" | 5 | 18 | 5 | 9 | 3'-2" | 11'-4" | 16'-0" | 5'-6" | 9'-6" | 8.93 | 1118 | 14.39 | 1006 | 0.64 | 33.53 | 13'-2" | 11'-1" | 5'-6" | 7'-0" | 7.22 | 960 | 12.76 | 914 | 0.64 | 33.53 | | | | | | | |
| 10'-6" | 1 | 8'-0" | 2'-0" | 2'-0" | 3'-9" | 1'-3" | 5 | 14.5 | 5 | 7.25 | 3'-7" | 12'-9" | 18'-0" | 6'-0" | 10'-6" | 13.88 | 1464 | 21.52 | 1222 | 0.85 | 38.09 | 14'-10" | 12'-8" | 6'-0" | 7'-9" | 11.32 | 1245 | 19.23 | 1109 | 0.85 | 38.09 | | | | | | | |
| 11'-6" | 3 | 9'-0" | 2'-0" | 2'-0" | 4'-1" | 1'-3" | 5 | 14.5 | 5 | 7.25 | 3'-9" | 14'-2" | 20'-0" | 6'-6" | 11'-6" | 16.83 | 1781 | 26.54 | 1569 | 0.93 | 45.09 | 16'-6" | 14'-3" | 6'-6" | 8'-9" | 13.89 | 1535 | 23.91 | 1431 | 0.93 | 45.09 | | | | | | | |
| 12'-6" | 7 | 10'-0" | 2'-0" | 2'-0" | 4'-6" | 1'-3" | 6 | 16 | 6 | 8 | 4'-9" | 15'-7" | 22'-0" | 7'-0" | 12'-6" | 20.07 | 2321 | 32.04 | 2213 | 1.03 | 57.50 | 18'-1" | 15'-10" | 7'-0" | 9'-6" | 16.59 | 2020 | 28.96 | 2019 | 1.03 | 57.50 | | | | | | | |
| 13'-6" | 8 | 11'-3" | 2'-0" | 2'-0" | 4'-10" | 1'-3" | 6 | 12.5 | 6 | 8.25 | 4'-11" | 17'-0" | 24'-0" | 7'-6" | 13'-6" | 23.59 | 2828 | 38.97 | 3149 | 1.13 | 77.35 | 19'-9" | 17'-6" | 7'-6" | 10'-3" | 19.61 | 2587 | 35.52 | 2902 | 1.13 | 77.35 | | | | | | | |

** SEE "GEOMETRIC DIAGRAM"

OFFICE OF STRUCTURAL ENGINEERING
 DESIGN DATA SHEET
 CONCRETE HEADWALLS FOR PRECAST BOX CULVERTS
 3 / 18

UPDATES TO DESIGN DRAWINGS

GENERAL NOTES

DESIGN SPECIFICATIONS: THIS STANDARD DRAWING CONFORMS TO THE LRFD BRIDGE DESIGN SPECIFICATIONS* ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2014, INCLUDING THE 2015 & 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA: THE FOLLOWING DESIGN DATA IS ASSUMED:

INTERNAL ANGLE OF FRICTION OF BACKFILL SOIL, $\phi_i = 30^\circ$
 TOTAL UNIT WEIGHT OF BACKFILL SOIL = 120 PCF
 INTERNAL ANGLE OF FRICTION (DRAINED), FOUNDATION SOIL, $\phi_d = 28^\circ$
 UNDRAINED SHEAR STRENGTH (COHESIVE), FOUNDATION SOIL, $S_u = 1500$ PSF
 UNIT WEIGHT OF CONCRETE = 150 PCF
 SLOPE OF BACKFILL = 2H (TYPE A & B HEADWALLS)
 HEIGHT OF LIVE LOAD SURCHARGE = 2 FT (TYPE C HEADWALLS)

CONCRETE CLASS GC1 - COMPRESSIVE STRENGTH 4000 PSI (FOOTING, WINGWALL AND FORESLOPE WALL)

REINFORCING STEEL - ASTM A615, A615, OR A617
 GRADE 60 MINIMUM YIELD STRENGTH
 60,000 PSI (ALL REINFORCING SHALL BE EPOXY COATED)

PRECAST CONCRETE: AT THE OPTION OF THE CONTRACTOR, PRECAST WINGWALLS MAY BE USED PROVIDED THEY ARE SIZED TO MEET THE SOIL PARAMETERS AND MEET OR EXCEED THE MATERIAL STRENGTHS SPECIFIED HEREIN. THE CONTRACTOR SHALL SUBMIT DESIGNS AND SHOP DRAWINGS TO THE OFFICE OF STRUCTURAL ENGINEERING FOR APPROVAL.

FORESLOPE WALL ANCHOR DOWELS: ANCHOR PER CMS 510 WITH NONSHRINK, NONMETALLIC GROUT CONFORMING TO CMS 705.20 AND TO A DEPTH SPECIFIED ON SHEET 6/8. PAYMENT FOR DOWEL HOLES, GROUT AND INSTALLATION SHALL BE INCLUDED WITH ITEM 511.

THREADED INSERTS OR NON-PROTRUDING MECHANICAL CONNECTORS CAPABLE OF DEVELOPING AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE REINFORCEMENT SHOWN ARE AN ACCEPTABLE ALTERNATIVE TO RESIN BONDING. MAINTAIN A MINIMUM COVER OF 3 INCHES AT THE BOTTOM OF THE CULVERT SLAB. MECHANICAL CONNECTORS SHALL HAVE AN "L-SHAPED" BAR INSIDE THE CULVERT WITH A MINIMUM HORIZONTAL LENGTH OF 12 INCHES. THE DEPARTMENT WILL CONSIDER PAYMENT FOR INSERTS OR MECHANICAL CONNECTORS AS INCIDENTAL TO ITEM 511.

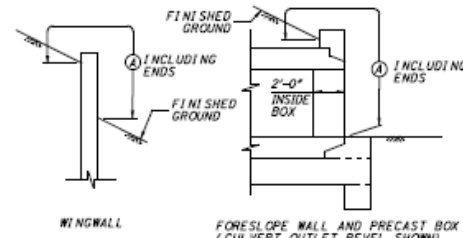
BACKFILL LIMITATION: WHEN THE DESIGN HEIGHT IS GREATER THAN 10 FT, THE BACKFILL BEHIND THE WINGWALLS SHALL NOT BE PLACED HIGHER THAN THE ELEVATION OF THE SOIL ABOVE THE TOE. WHEN THE SOIL ABOVE THE TOE IS AT ITS FINISHED ELEVATION, THE REMAINDER OF THE BACKFILL MAY BE PLACED.

POROUS BACKFILL WITH FILTER FABRIC 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC TYPE A SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEPHOLE.

WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.

PERFORMED EXPANSION JOINT FILLER: PERFORMED EXPANSION JOINT FILLER (PEJF) CONFORMING TO CMS 705.03, 1 INCH THICK, SHALL BE PLACED ABOVE THE FOOTING BETWEEN THE SIDES OF THE BOX CULVERT AND THE ENDS OF THE WINGWALLS. PAYMENT FOR MATERIALS AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 - 1" PERFORMED EXPANSION JOINT FILLER.

SEALING OF FORESLOPE WALL AND WINGWALLS: ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 - SEALING OF CONCRETE SURFACES.



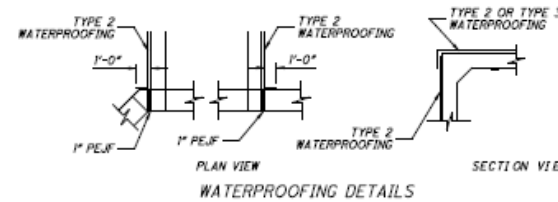
LIMITS OF ITEM 512-SEALING CONCRETE SURFACES

(A) - SEAL ENTIRE CONCRETE SURFACE AREA

WATERPROOFING: TYPE 2 WATERPROOFING, PER CMS 512 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

IF PAVEMENT IS NOT PLACED DIRECTLY ON TOP OF THE CULVERT, TYPE 2 WATERPROOFING, PER CMS 512 AND 711.25 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

IF PAVEMENT IS TO BE USED DIRECTLY ON TOP OF THE CULVERT, TYPE 3 WATERPROOFING, PER CMS 512 AND 711.25 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 3 WATERPROOFING.



BASIS OF PAYMENT: ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO CONSTRUCT THE FOOTING, CUTOFF WALL, WINGWALLS AND FORESLOPE WALL SHALL BE INCLUDED WITH ITEM 511 - CLASS GC1 CONCRETE. RETAINING/WINGWALL INCLUDING FOOTING. PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.

ESTIMATED QUANTITIES

| ITEM | ITEM EXT | TOTAL | UNIT | DESCRIPTION |
|------|----------|-------|---------|---|
| 202 | 11000 | LUMP | | STRUCTURE REMOVED |
| 503 | 11700 | LUMP | | COFFERDAMS, CRIBS, AND SHEETING |
| 503 | 21700 | LUMP | | UNCLASSIFIED EXCAVATION (WINGWALL FOOTING) |
| 509 | 10000 | xx | LB. | EPOXY COATED REINFORCING STEEL |
| 511 | 48010 | xx | CU. YD. | CLASS GC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING |
| 511 | 46510 | xx | CU. YD. | CLASS GC1 CONCRETE, FOOTING |
| 511 | 46510 | xx | CU. YD. | CLASS GC1 CONCRETE, HEADWALL |
| 512 | 10100 | xx | SQ. YD. | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) |
| 512 | 33333 | xx | SQ. YD. | TYPE X MEMBRANE WATERPROOFING |
| 516 | 13600 | xx | SQ. FT. | 1" PERFORMED EXPANSION JOINT FILLER |
| 518 | 21230 | LUMP | | POROUS BACKFILL WITH FILTER FABRIC |
| 601 | 11001 | | SQ. YD. | RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN |
| 611 | 98311 | xx | LN. FT. | XX'-0" SPAN X X'-0" RISE CONDUIT, TYPE A, 705.05, AS PER PLAN |
| 613 | 41200 | | CU. YD. | LOW STRENGTH MORTAR BACKFILL |

NOTE: TOTALS CARRIED TO GENERAL SUMMARY SHEET

OFFICE OF
STRUCTURAL
ENGINEERING

REVISION

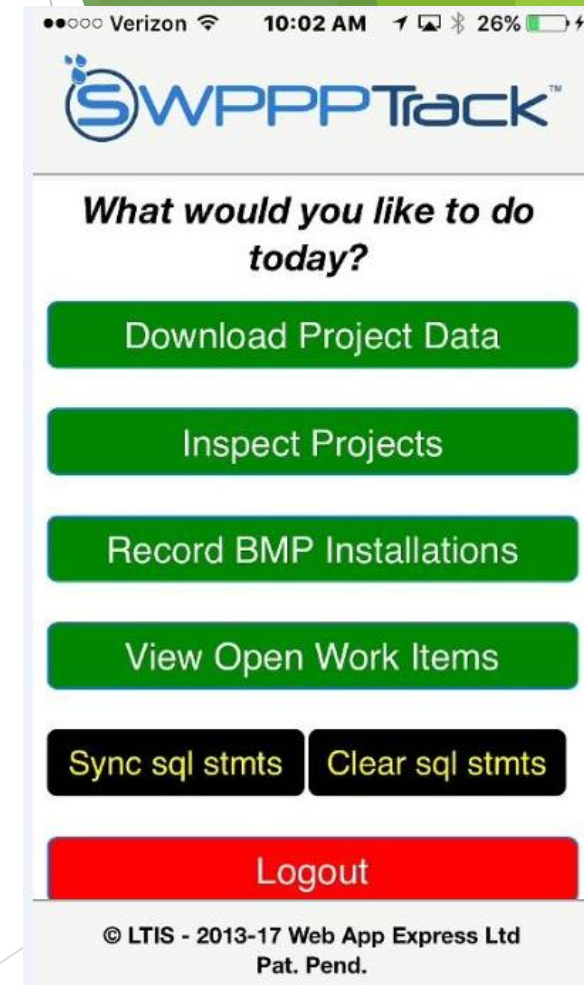
DATE

PLAN SHEET SHEET



SWPPPTrack ROLLOUT

- ❖ Implementation of Mobile Inspection Device for E&S Inspections
 - ❖ Consistent inspections
 - ❖ Improved quality
 - ❖ Easy compliance tracking
 - ❖ Automated reporting



SWPPPTrack ROLLOUT

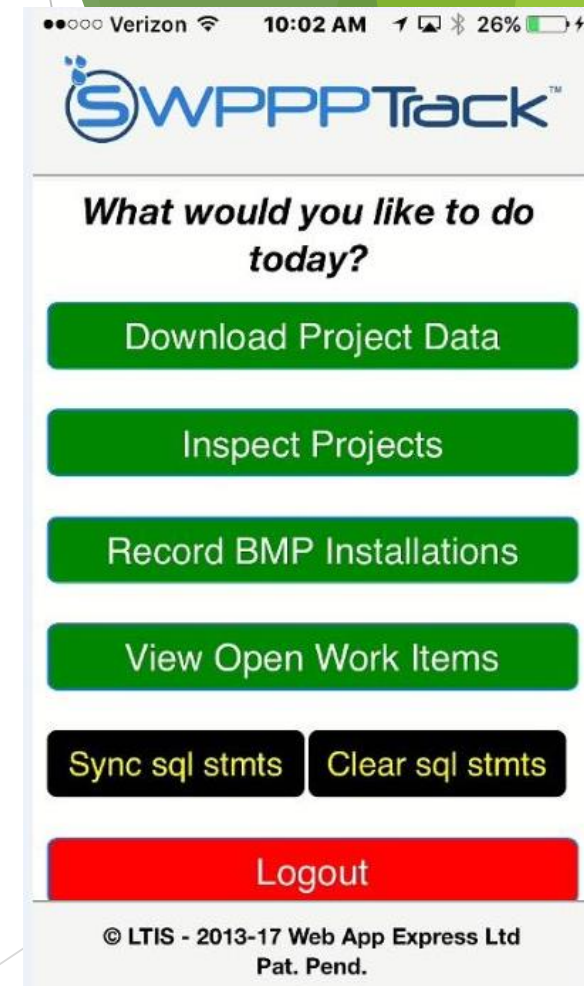
❖ SWPPPTrack Rollout

❖ Require SWPPPTrack on 30 projects in 2017

❖ Statewide beginning in January 2018

❖ Projects not including modified SS832 still require improved implementation

- SWPPP Reviews
- Quality Inspections
- Contract Enforcement



EROSION AND SEDIMENT CONTROL

Closing Maintenance Action



Maintenance Action



- Active Audit®
- Project Add
- Project View/Edit
- SWPPP Statuses
- SWPPP Review
- People
- Inspection Reports
- Corrective Actions
- Maintenance Actions
- Remediated Actions
- Pending NOTs
- Stop Work Orders
- My Profile
- Support Request
- Video Library

[Close Tabs](#)

SWPPP Review Project Name: ALL-117/501-10.76/4.34

| Question Number | Question Text | Yes | No | NA | Comments |
|-----------------|--|-------------------------------------|-------------------------------------|-------------------------------------|--|
| 1 | Has the Contractor filed a Co-Operator's notice to OEPA? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2 | Does the SWPPP list all "Operators" and contain signatures of responsible parties? (Any Contractor or sub who has day to day operational control over sediment and erosion control activities) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3 | Was the plan developed by a P.E./CPESC qualified individual? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 4 | Does the SWPPP list the CECI? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Please add the CECI to the SWPPP. It can not be approved until it contains the CECI. |
| 5 | Does the SWPPP include an existing conditions plan and final buildout plan identifying all discharge points from the project disturbed areas and contractor disturbed areas? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6 | Have drainage tributary areas been identified for all discharge points? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | No drainage areas identified. |
| 7 | Does the SWPPP show appropriate sediment controls at all discharge points? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 8 | Does the SWPPP indicate sequencing of BMP's from existing conditions to final buildout? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 9 | Does the SWPPP show all existing preservation areas, wetlands, waterways within 200 feet of the project? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 10 | Does the SWPPP include all offsite borrow/waste areas? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 11 | Have discharge locations and drainage tributary areas been identified for offsite borrow/waste areas? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 12 | Does the SWPPP include a BMP sequence schedule that aligns with the Contractor's construction sequence? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

Accepted

Accepted as Noted

Not Accepted

Erosion & Sediment Control



CERTIFIED PRECAST RQMTS

- ❖ Letter of Inclusion
- ❖ NPCA or ACPA (Q-Cast) Certified
- ❖ List of items to be Produced
- ❖ Quality Control Plan
- ❖ Quality Control Inspector
 - ❖ ACI Field and Strength Certified
- ❖ Mix Design Developed using ACI 301 Methods
- ❖ Reviewed by OMM Inspectors prior to granting Certification

UPDATES TO S1073/1074 & 706.05

- ❖ Allowance of ACPA (Q-Cast) Program
- ❖ 706.05 Allowance of Carbonate Micro-fines
- ❖ Allows for 20% Addition/Replacement of Cement with Micro-fines (ASTM C1797)
- ❖ Micro-fines are Certified according to Supplement 1016
 - ❖ Currently in the Process of Testing Samples

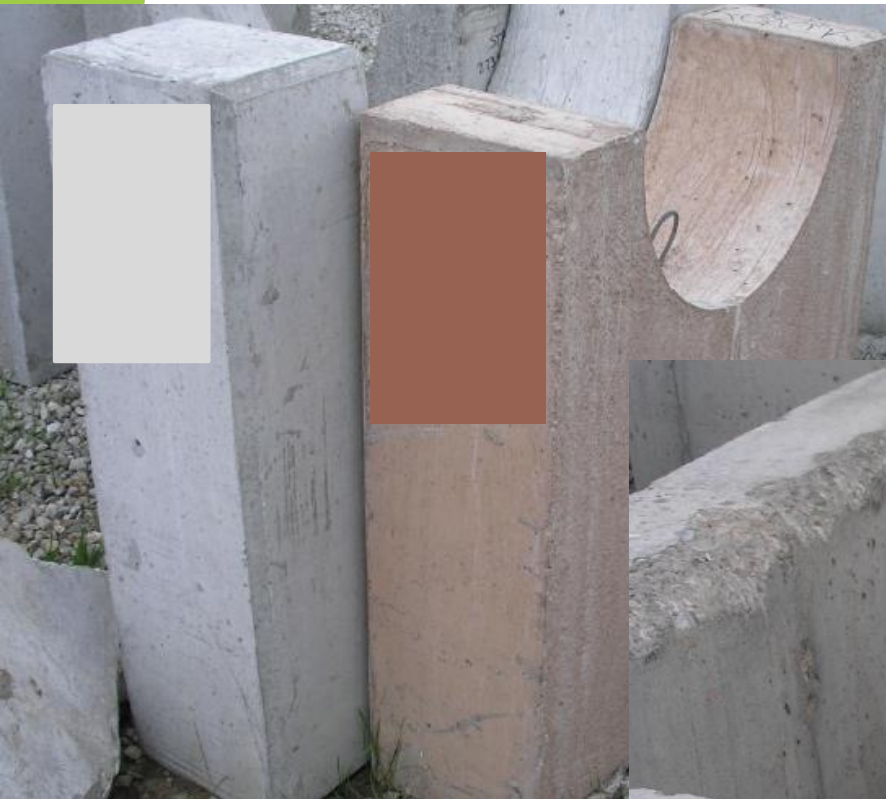
QUARTERLY THIRD PARTY INSPECTION

- ❖ PSI (INTERTEK) is Responsible for Inspection
- ❖ Use Checklist Developed by OMM
- ❖ Verify QC Data
- ❖ Check Equipment Calibrations
- ❖ Monitor Production During their visit (if possible)
- ❖ Review Material Certs for Compliance
- ❖ Submit Report to ODOT and Fabricator
- ❖ ODOT Reviews Findings According to 1073.23 & 1074.10

ISSUES IN THE FIELD



ISSUES IN THE FIELD



ISSUES IN THE FIELD



CONTACT INFORMATION

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<http://www.dot.state.oh.us/Divisions/ConstructionMgt/Materials/Pages/default.aspx>

2016 SPECIFICATIONS



Copies of the 2016 Construction and Material Specifications may be purchased by contacting:

Ohio Department of Transportation
Office of Contracts
1980 West Broad Street, Mail Stop 4110
Columbus, Ohio 43223
Telephone (614) 466-3778, 466-3200

Price: \$5.00 + Shipping + tax
Make checks payable to:
Treasurer of State of Ohio
c/o Department of Transportation

PDF of the entire 2016 Construction & Materials Specification ready for printing: [Click Here](#)

PDF of the entire 2016 Construction & Materials Specification with edits shown: [Click Here](#)

2016 Construction & Materials Specification Designer guidelines: [Click Here](#)

for use on mobile devices, edited sections in each are highlighted yellow:

| | | |
|---|------------|----------------------------|
| PDF of Hyperlinked 2016 C&MS | 1/15/2016 | Click here |
| PDF of Hyperlinked 2016 C&MS with SS800 | 4/15/2016 | Click here |
| PDF of Hyperlinked 2016 C&MS with SS800 | 7/15/2016 | Click here |
| PDF of Hyperlinked 2016 C&MS with SS800 | 10/21/2016 | Click here |
| PDF of Hyperlinked 2016 C&MS with SS800 | 1/20/2017 | Click here |
| PDF of Hyperlinked 2016 C&MS with SS800 | 4/21/2017 | |

- <http://www.dot.state.oh.us/Divisions/ConstructionMgt/OnlineDocs/Pages/2016-Online-Spec-Book.aspx>
- <http://www.dot.state.oh.us/Divisions/ConstructionMgt/OnlineDocs/Pages/ProposalNotesSupplementalSpecificationsandSupplements.aspx>

Questions?