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Chapter 2 – 2018 SPEC BOOK CHANGES

The new 2018 Spec Book was published online on August 24, 2017. See the section in the Design Scene Chapter 2 titled “2018 SPEC BOOK” for specifics on

- When plans need to follow the 2018 Spec Book, and
- Changes to the basic pay item numbering convention.

This article will highlight other changes/errors in the new 2018 Spec Book as it relates to putting a plan together (2### Spec Numbers) as we know them so far.

- The following items have been added to TRNS*PRT as a result of the 2018 SPEC BOOK.....

Item Number	Short Description	Unit Name
2104.502	REMOVE REFERENCE LOCATION SIGN	EACH
2104.502	SALVAGE REFERENCE LOCATION SIGN	EACH
2215.509	CEMENT	TON
2215.509	AGGREGATE BASE	TON
2215.509	BITUMINOUS MATERIAL FOR MIXTURE	TON
2390.504	COLD-IN-PLACE RECYCLED/COLD CENTRAL PLANT RECYCLING	SQ YD
2515.502	CONCRTE ARMOR UNITS A-36	EACH
2515.504	CONCRTE ARMOR UNITS A-34	SQ YD
2515.504	CONCRTE ARMOR UNITS A-36	SQ YD
2564.502	INSTALL REFERENCE LOCATION SIGN	EACH
2564.508	STRUCTURAL STEEL-POSTS FOR OH SIGNS (D)	POUND
2564.508	STRUCTURAL STEEL-TRUSSES FOR OH SIGNS (D)	POUND
2564.508	STRUCTURAL STEEL-WALKWAY SUPPORT FOR OH SIGNS (D)	POUND
2564.508	STRUCTURAL STEEL-PANEL MOUNT POST FOR OH SIGNS (D)	POUND
2564.508	STRUCTURAL STEEL-WALKWAY GRATING FOR OH SIGNS (D)	POUND
2573.502	WHEEL WASH OFF	EACH
2575.504	FLEXIBLE CONCRETE GEOGRID MAT	SQ YD
2575.504	TEMPORARY GEOTEXTILE COVERING	SQ YD
2577.502	ROOT WAD	EACH
2577.507	ROOT RAP	CU YD

- Several items have been added to the 2018 Spec Book resulting in the tail number changing from the .6## series to the .5## series. Some of them are...

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2016 Spec Item #	2018 Spec Item #	Description	Units
2564.602	2564.502	INSTALL MARKER	EACH
2564.602	2564.502	INFILTRATION AREA MARKER X3-6A	EACH
2564.602	2564.502	INSTALL DELINEATOR	EACH
2118.607	2118.507	AGGREGATE SURFACING (CV) FROM STOCKPILE	CU YD
2118.607	2118.507	AGGREGATE SURFACING (CV) CLASS #	CU YD
2105.604	2105.504	GEOTEXTILE FABRIC TYPE #	SQ YD

- Under Spec 2545 the descriptions have changed as follows...
 - ❖ UNDERGROUND WIRE 1 COND NO 0 changed to UNDERGROUND WIRE 1/C 0 AWG .
 - ❖ DIRECT BURIED LIGHTING CABLE 4 COND NO 2 changed to DIRECT BURIED LIGHTING CABLE 4 COND 2 AWG .
 - ❖ OVERHEAD LIGHT CABLE 1 COND NO 3/0 changed to OVERHEAD LIGHTING CALBE 1/C 3/) AWG .

- Under Spec 2564 the whole description was changed as follows....

2016 Spec Item #	2016 Spec Description	2018 Spec Item #	2018 Spec Description	Units
2564.550/00301	DELINEATOR TYPE X3-1	2564.502/00301	RIGHT OF WAY MARKER TYPE X3-1	EACH

- Under Spec 2582 the word “EPOXY” was changed to “MULTI COMP”.
- Page 98, ITEM 2105.604 GEOTEXTILE FABRIC TYPE # and Page 413 item 2511.504 GEOTEXTILE FILTER TYPE #...the Roman numeral (I, II, III, etc.) for the type has been replaced with the Alpha character (1, 2, 3, etc.).
- Spec 2106 EXCAVATION AND EMBANKMENT-COMPACTED VOLUME METHOD...
 - ❖ Page 99, Spec 2106.1A.7...Topsoil excavation is included in the Excavation-Common item and is NOT paid for separately. See design scene article in Chapter 4 on how this is handled.
 - ❖ Page 108, Spec 2106.5K...Note 2, when using this item the plan should contain a note stating how it is modified.
- Page 128, Spec 2215...
 - ❖ Item 2105.509 CEMENT should be item 2215.509
 - ❖ Item 2211.509 AGGREGATE BASE CLASS # should be 2215.509 AGGREGATE BASE.

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- Page 210, Spec 2360 PLANT MIXED ASPHALT PAVEMENT... Item 2106.509 TYPE SP* NON-WEARING COURSE MIXTURE should not have a dash between non and wearing it should be a space (e.g. Non Wearing)
- Page 232, Spec 2390 COLD-IN-PLACE RECYCLED (CIR) BITUMINOUS AND COLD CENTRAL PLANT RECYCLING (CCPR) BITUMINOUS...
 - ❖ Item 2105.509 CEMENT should be item 2215.509.
 - ❖ Item 2211.509 AGGREGATE BASE, CLASS # is in the wrong spec., it should be 2215.509 AGGREGATE BASE.
- Page 433, Spec 2533 CONCRETE MEDIAN BARRIERS...THE * NOTE SHOULD INCLUDE “OR PLAN”.
- Page 451 & 453, Item 2545.501 LIGHTING SYSTEM by LUMP SUM...
 - ❖ Now includes the removal/salvage and disposal of the miscellaneous structures, conduit, wiring, and lighting equipment from the existing system.
 - ❖ If any of this system is being salvaged the designer still needs to include a pay item for 2104.601 HAUL SALVAGED MATERIAL by LUMP SUM and note what is being hauled.
 - ❖ If the lighting system is owned by the city/county the Feds won't pay for the removal/salvage but will pay for the new/installation. **Contact the MnDOT Agreements section on how to show this in the SEQ.**
- Page 501, Spec 2565 TRAFFIC CONTROL SIGNALS...the typical unit of SIGNAL SYSTEM has been changed to just “SYSTEM”.
- Page 521, Spec 2573 STORM WATER MANAGEMENT ...Item 2573.504 SEDIMENT TRAP EXCAVATION should be item 2573.507 and move down one on the list to stay in sequential numerical order by item number.
- Page 527, Spec 2575.3C.3 TYPE 4 MULCH should read....3884, **HYDRAULIC STABILIZED FIBER MATRIX...**
- Page 540, Spec 2580 INTERIM PAVEMENT MARKING...
 - ❖ Item 2102.501 INTERIM PAVEMENT MARKING should be **2580.501**.
 - ❖ Item 2102.503 INTERIM PAVEMENT MARKING should be **2580.503**.

Chapter 2 – CULVERT/STORM TREATMENTS

When these details are included in the plan it needs to be clear how the excavation is being paid for. This CANNOT be incidental as this is over and above what a culvert excavation would be. Make sure the detail makes it clear how the excavation is being paid for and include quantities in the earthwork tabulation to account for this work.

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Chapter 3 – RUMBLE STRIP/STRIPE (Revised)

This section is replaced with the following....

Technical Memorandum No. 17-08-T-02 Rumble Strips and Stripes on Rural Trunk Highways was issued on August 21, 2017. As a result there are now typical details on the traffic pavement marking website (MnDOT A to Z under “Pavement Markings”...”Pavement marking typical detail sheets”).

These are general details for rumbles. If the typical is modified the designer will need to follow the modification guidelines as stated in the Design Scene Chapter 16 – PAVEMENT MARKING TYPICALS article.

RUMBLE STRIP/STRIPE

~~Technical Memorandum No. 14-07-T-01 Rumble Strips and Stripes on Rural Trunk Highways was issued on May 21, 2014. (to be updated soon) As a result the standard plan sheets for the rumble strips are in the process of being updated and no longer accessible. While these standard plan sheets are being revised the unapproved details for the rumble strips and rumble stripes can be found at...:pw:\\PW8i.ad.dot.state.mn.us:cadp\Documents\OTS\DesignStandards\DesignDetails\rumbles_dd.dgn~~

~~Do not use all the details but only those that apply to your project. For non MnDOT designers you will need to contact your project manager to get a copy of the details.~~

~~The designer needs to modify the details to reflect their specific project (e.g. shoulder widths should be labeled, remove option labels).~~

~~The designer should follow the Informal Design Exceptions guidelines as outlined in the Road Design Manual Chapter 2-6.03.02 for their design decisions in the lenient areas.~~

Chapter 12 – PLASTIC PIPE OPTION FOR STORM SEWER AND CULVERTS (Clarified)

There has been some confusion with this article given the latest Technical Memorandum 17-5-B-02 issued 4-25-2017.

How plastic pipe options has not changed as a result of this Technical Memorandum. Pay for them as the existing/previous article states. The major change for this is that when listing options the designer CAN now also include PP (polypropylene pipe).

When giving plastic pipe as an option the plan should include the detail from

- Attachment D if using flexible pipe for storm sewer,
- Attachment E (First detail) if giving flexible pipe as an option for centerline culvert.
- Attachment E Treatment types if giving flexible pipe where treatments are needed.

The designer should use these details not ones they created.

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Chapter 12 – CULVERT WORK

Whenever you revise a portion of a culvert, such as a lining or a salvage/install apron. You need to make sure that the aprons are up to current standards. If a safety apron and/or grate is needed and the existing apron does not meet this then the designer must replace the apron to bring it up to current standards.

Chapter 13 – EROSION CONTROL BLANKET PRODUCTS (RECP) (Revised)

This section will be replaced with the following....

Spec 2016 and 2018 ... Pay items for CATEGORY 3 and CATEGORY 4 EROSION CONTROL BLANKETS have multiple options that fall under the same pay item. If these options are not specified, the default will typically be a blanket with plastic netting and straw fill because this is often the lowest-cost blanket. While this may meet the needs of the project, be aware that this is a less expensive product and there may be disputes if a change is asked for in the field. Clarify the expected options to avoid confusion.

- Netting... use the suffix “P” (for plastic netting) or “N” (for natural netting) as part of the pay item description. Plastic netting is more common and often less expensive. However, natural netting may be desired or even required due to concerns about animal entanglement, permit requirements, appearance, difficulty of mowing, or other reasons.
- Fill Material... is not included in part of the pay item description however it should be identified in a note either in the SEQ or Tabulation.
 - ❖ For example..
 - ✦ “Category 3N (Wood Fiber)” identifies category 3 blanket with natural netting and wood fiber
 - ✦ “Category 3P (Straw)” means the blanket will have plastic netting and straw fill material.
 - ❖ Wood fiber may be preferred in concentrated flow conditions such as ditch grades. Wood fiber may last longer than straw.
 - ❖ The same options exist for Category 4 blankets, with the exception that the “Straw” filler for Category 4 blankets is actually a straw/coconut blend.
 - ❖ Do not rely solely on the plan sheets or the special provisions to clarify these options—include them on the SEQ and/or Tabulations to reduce confusion and disputes on projects.

For example it is recommended that it be shown in the plan as follows....

STATEMENT OF ESTIMATED QUANTITIES						
TAB	SHT NO	ITEM NO	DESCRIPTION	NOTES	UNITS	TOTAL EST QUANT
E	15	2575.504	EROSION CONTROL BLANKETS CATETORY 3N	①	SQ YD	400
E	15	2575.504	EROSION CONTROL BLANKETS CATETORY 3P	①	SQ YD	300

① WOOD FIBER IS REQUIRED FOR SPECIFIC AREAS ON THE PLAN, SEE TAB FOR LOCATIONS.

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If you do not have a preference for the fill material then do not use note one and do not break it out in the tab (e.g. straw or wood fiber...just one column instead of two).

EROSION CONTROL BLANKETS					
STA TO STA	LOC	EROSION CONTROL BLANKETS CATEGORY 3N (STRAW)	EROSION CONTROL BLANKETS CATEGORY 3N (WOOD FIBER)	EROSION CONTROL BLANKETS CATEGORY 3P (STRAW)	EROSION CONTROL BLANKETS CATEGORY 3P (WOOD FIBER)
		SQ YD	SQ YD	SQ YD	SQ YD
13+00 to 17+00	RT	250			
13+00 to 17+00	LT		150		
17+00 to 20+00	RT			100	
17+00 to 20+00	LT				200
TABULATION TOTAL		400		300	

Chapter 15 – CHAIN LINK FENCE PAY ITEMS

When placing new chain link fence the METAL BRACE ASSEMBLIES are included in the cost of the chain link fence unless a separate pay item is included in the SEQ.

However, the ELECTRICAL GROUND is always paid for separately. Be sure to include a pay item for this in the SEQ.

Chapter 16 – RUMBLE STRIPES

Any Wet Reflective pavement marking needs to be recessed somehow. This is due to the fact that the Wet Reflective markings utilize larger sized reflective media that will typically be scraped off in the winter months by plows – leading to little-to-no retroreflectivity after some snow plow operations.

This can become even more confusing when placed in a rumble. When a Wet Reflective marking is placed in a sinusoidal rumble (which is installed fully below the pavement surface) or placed in a centerline area that is recessed by installing a chip seal only in the travel lanes. Then it is already recesses and does NOT need to be ground in further. Therefore, the pay item for these pavement markings should just be (WR) not Ground In (WR).

The rectangular corrugated rumble is made by grinding out corrugations every 7 inches out of the pavement, which leaves the space in between the corrugations alone. If a Wet Reflective pavement marking is placed on a rectangular corrugated rumble, then the reflective media between the rumbles will be scraped off. Therefore, it is recommended that these Wet Reflective pavement markings also be ground in...Ground In (WR).