September 1, 2011


FROM: R. A. Garris, PE, State Contract Officer

SUBJECT: New and Revised Standard Drawings

This memo informs all holders of revisions made for the January 2012 edition of the Roadway Standard Drawings. The new edition will be effective with the January 2012 letting. The 2012 standard drawings are English only.

Listed below are new standard drawings and standard drawings that have been deleted or revised since the July 2006 edition of the Roadway Standard Drawings.

NEW STANDARDS:

<table>
<thead>
<tr>
<th>STANDARD DRAWING</th>
<th>SHEETS</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>422.11</td>
<td>2</td>
<td>BRIDGE APPROACH FILL – SUB REGIONAL TIER</td>
</tr>
<tr>
<td>806.03</td>
<td>1</td>
<td>CONCRETE CONTROL-OF-ACCESS MARKER</td>
</tr>
<tr>
<td>815.02</td>
<td>1</td>
<td>SUBSURFACE DRAIN</td>
</tr>
<tr>
<td>1205.13</td>
<td>1</td>
<td>PAVEMENT MARKINGS – LANE REDUCTIONS</td>
</tr>
<tr>
<td>1515.01</td>
<td>1</td>
<td>WATER METER</td>
</tr>
<tr>
<td>1515.02</td>
<td>1</td>
<td>FIRE HYDRANT</td>
</tr>
<tr>
<td>1520.01</td>
<td>1</td>
<td>SEWER CLEAN OUT</td>
</tr>
<tr>
<td>1631.01</td>
<td>1</td>
<td>MATTING INSTALLATION</td>
</tr>
</tbody>
</table>
1640.01  1  COIR FIBER BAFFLE
1645.01  1  TEMPORARY STREAM CROSSING
1705.03  1  SIGNAL HEADS – WIRE COLOR CONVENTIONS
1736.01  5  SPREAD SPECTRUM RADIO
1743.02  1  PEDESTALS – NORMAL DUTY TYPE II
1743.03  1  PEDESTALS – HEAVY DUTY TYPE III
1743.04  1  PEDESTALS – FOUNDATIONS

REVISED/DELETED STANDARDS:

<table>
<thead>
<tr>
<th>STANDARD DRAWING</th>
<th>SHEETS</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIVISION 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>200.02</td>
<td>1</td>
<td>METHOD OF CLEARING – METHOD II</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- CHANGED NOTE IN PART SECTION C-C AND SECTION A-A</td>
</tr>
<tr>
<td>200.03</td>
<td>1</td>
<td>METHOD OF CLEARING – METHOD III</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- CHANGED NOTE IN PART SECTION C-C AND SECTION A-A</td>
</tr>
<tr>
<td>225.08</td>
<td>2</td>
<td>EARTH BERM MEDIAN PIER PROTECTION</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- ROADWAY ITEM WAS ADDED TO 4’’ CONCRETE SLOPE PROTECTION</td>
</tr>
</tbody>
</table>

| DIVISION 3       |        |       |
| 300.01           | 3      | METHOD OF PIPE INSTALLATION |
|                  |        | - METHOD ‘A’ NOTE WAS DELETED. TRENCH DIMENSIONS WERE MODIFIED. A SHEET FOR RIGID PIPE, FLEXIBLE PIPE AND FILL HEIGHT TABLES WERE ADDED. THE TRENCH WIDTHS WERE MODIFIED. THE FILL MATERIAL WAS MODIFIED. ENGINEERING FABRIC WAS ADDED TO UNSUITABLE MATERIAL FOUNDATIONS. |
| 300.02           | 1      | METHOD OF PIPE INSTALLATION – METHOD ‘B’ |
|                  |        | -DELETED |
DIVISION 4
422.10 5 REINFORCED BRIDGE APPROACH FILLS

-CHANGED THE NOTES FOR THE APPROACH SLAB LENGTHS. DELETED SHEET 3 OF 7. DELETED SHEET 6 OF 7. REMOVED THE TRANSITION BRIDGE RAIL FROM THE APPROACH SLAB. MODIFIED THE LAYERS OF FABRIC CHART.

DIVISION 5
560.01 1 METHOD OF SHOULDER CONSTRUCTION
- HIGH SIDE OF SUPERELEVATED CURVE
  METHOD I (SHOULDERS UP TO 10’)

-ADDED 4’ PAVED SHOULDER TO DETAIL. DELETED SHEET 2 OF 2.

560.02 3 METHOD OF SHOULDER CONSTRUCTION
- HIGH SIDE OF SUPERELEVATED CURVE
  METHOD II (SHOULDERS UP TO 10’)

-ADDED 4’ PAVED SHOULDER TO DETAIL AND REMOVED BREAK POINT AT THE 5’ POINT IN THE SHOULDER. DELETED SHEET 2. DELETED SHEET 4.

DIVISION 6
645.01 1 PAVEMENT REPAIRS – FOR SUPERPAVE MIX TYPES

-CHANGED THE SURFACE COURSE AND BASE COURSE TYPES AND DEPTHS.

DIVISION 7
700.01 2 CONCRETE PAVEMENT JOINTS – CONSTRUCTION AND CONTRACTION JOINTS

-CHANGED DETAILS AND NOTES ON BOTH SHEETS.
DOWEL ASSEMBLY

-CHANGED DOWEL ASSEMBLY DETAILS AND ADDED ISOMETRIC VIEW.

DIVISION 8

838.80  1  PRECAST CONCRETE ENDWALL – FOR SINGLE 12” THRU 72” PIPE 90 DEGREE SKEW

-MODIFIED FIRST NOTE.

840.35  2  TRAFFIC BEARING GRATED DROP INLET - FOR CAST IRON DOUBLE FRAME AND GRATES

-CHANGED WALL CAVITY CONCRETE FROM CLASS ‘M’ TO CLASS ‘B’.

848.01  1  CONCRETE SIDEWALK

-REMOVED CURB RAMP PLAN VIEW DETAIL

848.05  3  CURB RAMP – PROPOSED CURB AND GUTTER

-CHANGED STANDARD NAME FROM WHEELCHAIR RAMP TO CURB RAMP. MODIFIED THE RAMPS TO SHOW A 4’x4’ LANDING AT THE TOP OF THE RAMP WITH TRANSITION TO SIDEWALK. WIDENED THE MINIMUM RAMP WIDTH FROM 3’-4” TO 4’. MODIFIED ALL THE NOTES ON SHEET 3

848.06  5  CURB RAMP – EXISTING CURB AND GUTTER

-CHANGED STANDARD NAME FROM WHEELCHAIR RAMP TO CURB RAMP. MODIFIED THE RAMPS TO SHOW A 4’x4’ LANDING AT THE TOP OF THE RAMP WITH TRANSITION TO SIDEWALK. WIDENED THE MINIMUM RAMP WIDTH FROM 3’-4” TO 4’. MODIFIED ALL THE NOTES ON SHEET 5.

852.04  1  METHOD FOR PLACEMENT OF DROP INLETS IN GRASSED MEDIAN (USING 1’-6” CURB & GUTTER)

-REMOVED CONCRETE APRON NOTE. CHANGED PAY LIMITS NAME TO “CONCRETE TRANSITIONAL SECTION FOR DROP INLETS”.

852.05  1  MEDIAN CURB FOR CATCH BASIN

-REMOVED CONCRETE APRON NOTE. CHANGED PAY LIMITS NAME TO “CONCRETE TRANSITIONAL SECTION FOR CATCH BASINS”.
852.06 1 METHOD FOR PLACEMENT OF DROP INLETS IN CONCRETE ISLANDS

- REMOVED CONCRETE APRON NOTE. CHANGED PAY LIMITS NAME TO “CONCRETE TRANSITIONAL SECTION FOR DROP INLETS”.

862.01 12 GUARDRAIL PLACEMENT

- SHEET 2: ADDED DETAIL OF GUARDRAIL AT MEDIAN SIGN SUPPORT.

- SHEET 11: MODIFIED THE NOTE FOR SEALING THE ABC TO CRS-2P EMULSION. ALL SHEETS: MODIFIED MOUNTING HEIGHT OF GUARDRAIL FROM 1'-9” TO 1'-11”.

862.02 7 GUARDRAIL INSTALLATION

- ALL SHEETS: MODIFIED MOUNTING HEIGHT OF GUARDRAIL FROM 1'-9” TO 1'-11”.

862.03 7 STRUCTURE ANCHOR UNITS

- SHEET 1: CHANGED MOUNTING HEIGHT OF TYPE III FROM 1'-9” TO 1'-11” ON BAR METAL RAIL BRIDGE RAIL.

- SHEET 2: TYPE III UNIT FOR SINGLE SLOPE BRIDGE RAIL – SUB REGIONAL TIER STRUCTURES.

- SHEET 3: TYPE III ANCHOR UNIT DETAILS AND MOUNTING HEIGHTS

- SHEET 4: B-77 ANCHOR UNIT. CHANGED THE MOUNTING HEIGHT FROM 1'-9” TO 1'-11”.

- SHEET 5: B-77 ANCHOR UNIT DETAILS

- SHEET 6: B-83 ANCHOR UNIT DETAILS

- SHEET 7: ANCHORING FOR GUARDRAIL POST ON BOX CULVERTS.

DIVISION 9
901.10 2 TYPE ‘A’ SIGNS – WELDED STUD CONSTRUCTION

- SHEET 1: REMOVED DETAIL “A” & SECTION A-A, MOVED TO 901.10 SHEET 2 W/NOTES. CHANGED VERBIAGE OF NOTE #5 AND NOTE #6, NOTES #9-16 CHANGED SEQUENCE, ADDED NOTE #17 AND 18 FOR CLARIFICATION DUE TO CURRENT FABRICATION PROCEDURE REQUIRING THRU BOLTS FOR PANELS ON OH SIGNS (SAFETY CONCERNS).

- SHEET 2: CHANGED DRAWINGS TO REFLECT THRU BOLT DETAIL FOR OH SIGN PANEL TO COMPLY WITH CURRENT FABRICATION PROCEDURES.
901.20  1  TYPE ‘B’ SIGNS – WELDED STUD CONSTRUCTION

-CHANGED DRAWING, ADDED DETAIL FOR CLARIFICATION, ADDED NOTES 
#10 AND 11 SPECIFYING THE REQUIREMENTS OF PLACING NYLON 
WASHERS UNDER HEAD OF THRU BOLTS AND CLARIFYING MAX. AND MIN. 
GAP ALLOWED FOR THRU BOLTS.

901.30  1  VHB TAPE CONSTRUCTION – FOR TYPE ‘A’ SIGNS

-DELETED FROM STANDARDS DRAWINGS

901.40  1  VHB TAPE CONSTRUCTION – FOR TYPE ‘B’ SIGNS

-DELETED FROM STANDARDS DRAWINGS

901.60  1  RIVET SPACING FOR OVERLAYED SIGNS

-ADDED NOTE

901.80  1  SIGN MOUNTING DETAILS- TYPE A AND TYPE B SIGNS

- CLEARED UP DUPLICATION IN NOTE #2. ADDED NOTE #4 FOR 
CLARIFICATION OF MOUNTING BOLTS SPECS AND THEIR GALVANIZATION 
REQUIREMENTS. CHANGED SIGN SUPPORTS SECTION TABLE TO INCLUDE 
NEW SIZES (ASSHTO COMPLIANCE).

903.10  3  GROUND MOUNTED SIGN SUPPORTS

- SHEET 1: CHANGED DETAILS OF THE DRAWINGS TO MATCH UP WITH 
TABLE REFERENCE ON 903.10 SHEET #2

-SHEET 2: CHANGED TABLE TO ACCOMMODATE NEW POST SIZES AND 
ADDED FOUNDATION DATA TABLE (ASSHTO COMPLIANCE).

-SHEET 3: REMOVED HINGE CONNECTION TORQUE CHART. ADDED 
VERBIAGE TO NOTE #5. UPDATED NOTE #3 TO COMPLY WITH ASTM GALV 
SPEC.

903.20  2  WOOD SIGN POST

-SHEET 1: REMOVED LVL DRILLING DETAIL.

-SHEET 2: ADDED DIMENSIONS TO ALUMINUM SHIMS.
903.30    1        BARRIER SIGN SUPPORT ASSEMBLY
- ADDED DIMENSIONS TO ALUMINUM SHIMS.

904.40    1        MILEPOST AND PLACEMENT
- CHANGED .08” TO READ .080”. ADDED ‘2# U CHANNEL’ UNDER POST DETAILS DRAWINGS FOR CLARIFICATION.

904.50    2        MOUNTING OF TYPE ‘D’, ‘E’ AND ‘F’ SIGNS ON U-CHANNEL POSTS
- SHEET 1: REMOVED NOTE #4
- SHEET 2: REMOVED DETAIL DRAWINGS REFERRING TO SPLICING STEEL U-CHANNEL POST.

905.10    2        LIGHTING SYSTEM FOR OVERHEAD SIGN ASSEMBLIES
- DELETED FROM STANDARD DRAWINGS

DIVISION 11
1101.01    3        WORK ZONE ADVANCE WARNING SIGNS
- SHEET 1: ALL NEW INFORMATION
- SHEET 2: ALL NEW INFORMATION
- SHEET 3: ALL NEW INFORMATION

1101.02    15       TEMPORARY LANE CLOSURES
- SHEET 1: REMOVED 50’ MIN. FROM BUFFER SPACE. ADDED “REFER TO ROADWAY STANDARD DRAWING 1180.01 FOR SKINNY DRUM REQUIREMENTS” IN GENERAL NOTES FOR FLAGGER OPERATIONS, NOTE #7. CHANGED “…IN ADVANCE OF THE FLAGGER. FOR SIGNALIZED INTERSECTIONS PLACE SIGNALS IN THE FLASH MODE AND RECOMMEND THE USE OF LAW ENFORCEMENT.” IN GENERAL NOTES FOR FLAGGER OPERATIONS. REMOVED EXISTING GENERAL NOTES FOR FLAGGER OPERATIONS NOTE #9. ADDED NEW GENERAL NOTES FOR FLAGGER OPERATIONS NOTES #9 & #10. REMOVED “(NOTE: CONES ARE ALWAYS REQUIRED IN THE UPSTREAM AND DOWNSTREAM TAPERS.)” FROM GENERAL NOTES FOR PILOT CAR OPERATIONS, NOTE #2 AND MADE IT NOTE #3.
- SHEET 2: REPLACED SIGN W20-17 WITH R3-2. REPLACED SIGN W1-4L WITH W24-1B. ADDED “REFER TO ROADWAY STANDARD DRAWING 1180.01 FOR SKINNY DRUM REQUIREMENTS.” TO GENERAL NOTE #6. ADDED GENERAL NOTE #7.
-Sheet 3: Added “(for roadways < 60 MPH)” to the title block. Removed truck mounted FAB, replaced 50’ minimum distance past work area and 100’ downstream drum taper with 200’ min. runout distance, and removed sign W4-2 option with mini-skips on both left and right details. Replaced ½ mile minimum initial placement for CMS with 1 mile. Removed “buffer space and” from general note #3. Removed “Sheets 1 & 4” and added “buffer space” to general note #4. Updated sheet numbers for general note #5. Removed “TMIA’s are required only when a buffer space cannot be attained, or when directed by the engineer or the plans. When used” and added “and continuously advance TMA’s as work progresses.” to general note #7. Replaced first “1/2” with “1” on general note #8. Removed existing general note #9 and replaced with “Do not exceed a 2 mile lane closure length unless otherwise shown in the TMP or as directed by the engineer.”

-Sheet 4: This is a new sheet that resembles Sheet 3, but title block has “(for roadways ≥ 60 MPH)” added. Also, the ABC stances have been replaced with numerical values. Added additional FAB and drum shoulder taper from the original Sheet 3. All changes to general notes from original Sheet 3 are reflected on this new sheet.

-Sheet 5: New sheet

-Sheet 6: New sheet

-Sheet 7: Formerly Sheet 4. Revised detail of sign placement.

-Sheet 8: Added truck mounted FAB, replaced 50’ distance past work area and 100’ downstream drum taper with 200’ min. runout distance, and removed sign W4-2 option with mini-skips on both left and right details. Added additional FAB and drum shoulder taper. Replaced 2 mile +/- distance from CMS to first FAB with 1 mile distance from CMS to first static sign. Replaced 2 miles in CMS with XX miles. Replaced existing general note #2 with “The first flashing arrow boards are not required on facilities ≤ 55 MPH.”

-Sheet 9: Formerly Sheet 6. Replace sign code SP99288 with W4-5P. Replaced “contact the work zone traffic control unit for further guidance.” with “Close ramp as directed by the engineer.” on general note #3. Updated sign code in general note #5.


-Sheet 11 – New sheet
- SHEET 2: REPLACED SP-4L & R WITH R3-2. REMOVED R1-3 PLAQUE.

- SHEET 3: W1-5 SHOULD BE REPLACED WITH W24-1.

- SHEET 4: ADDED ADDITIONAL FAB AND DRUM SHOULDER TAPER, REMOVED SIGN W4-2 OPTION WITH MINI-SKIPS ON BOTH LEFT AND RIGHT DETAILS. REPLACED 2 IN CMS WITH XX ON CMS ON LEFT SIDE OF PAGE. ADDED “SEE ROADWAY PLANS” TO Crossover DISTANCE. REPLACED “DEEMED NECESSARY” WITH “DIRECTED” AND “UNLESS ADDITIONAL CHANGEABLE MESSAGE SIGNS ARE USED.” IN GENERAL NOTE #5. ADDED GENERAL NOTE #7.

- SHEET 5: ADDED “SEE ROADWAY PLANS” TO Crossover DISTANCE.

- SHEET 6: ADDED “≤ 55MPH” TO TITLE BLOCK. ADDED “SEE ROADWAY PLANS” TO Crossover NOTE. REPLACED 2 IN CMS WITH XX AND REMOVED SIGN W4-2 OPTION WITH MINI-SKIPS ON BOTH LEFT AND RIGHT DETAILS. REMOVED EXISTING GENERAL NOTES 5 THRU 9. ADDED NEW GENERAL NOTES 5 AND 6.

- SHEET 7: ADDED ADDITIONAL FAB AND DRUM SHOULDER TAPER, 2 TMA’S, AND REMOVED SIGN W4-2 OPTION WITH MINI-SKIPS. REPLACED SIGN M4-10R WITH SIGN W1-6R ON BARRICADE. REPLACED SIGN SP03364 WITH SIGN G21-65 WITH DIMENSIONS 120” X 48”. REPLACED “POLICE OFFICERS” WITH “LAW ENFORCEMENT” IN GENERAL NOTE #2. ADDED “AND RECOMMEND THE USE OF LAW ENFORCEMENT.” TO GENERAL NOTE #3. REMOVED EXISTING GENERAL NOTE #4. REMOVED LAST SENTENCE FROM NEW GENERAL NOTE #4 (FORMERLY #5). REMOVED EXISTING GENERAL NOTES 6 AND 7. ADDED NEW GENERAL NOTES 5 AND 6.

- SHEET 8: REMOVED SIGN W20-1. REPLACED DISTANCE TEXT “2 X POSTED SPEED (IN FEET)” WITH “BUFFER SPACE”. REPLACED SIGN W20-7B WITH SIGN W3-4. ADDED GENERAL NOTE #5.

- SHEET 9: REMOVED SIGN W20-1 AND G20-4. REMOVED DETAIL OF SIGNS MOUNTED ON REAR OF PILOT CARS DETAIL. REMOVED DETAIL OF SIGNS MOUNTED ON REAR OF PILOT CARS AND PLACED SIGNS IN DRAWING. ADDED FAB ‘CAUTION MODE’ SYMBOL AND MODIFIED PILOT VEHICLE PLACEMENT AND PATTERN. MODIFIED PILOT VEHICLE DETAIL NOTES. ADDED “INSTALLATION OF LANE CLOSURES,” TO GENERAL NOTE #1. ADDED GENERAL NOTE #2. ADDED “UNLESS OTHERWISE SPECIFIED IN PLANS OR PERMITTED BY THE ENGINEER.” TO GENERAL NOTE #3 (FORMERLY 2). ADDED “PLACE ALL NECESSARY SIGNING BEFORE IMPLEMENTING THE ROLLING ROAD BLOCK.” TO GENERAL NOTE #4.
1101.04 1 TEMPORARY SHOULDER CLOSURES

-DETAIL 1: REPLACED “55 MPH OR ABOVE” WITH “≥ 60 MPH” IN DETAIL TITLE. REMOVED B DISTANCE, AND REPLACED A DISTANCE WITH NUMERICAL VALUES. ADDED WORK AREA AND REPLACED 50’ THE DOWNSTREAM DISTANCE WITH 100’. REMOVED SIGN W20-1.
-DETAIL 2: REPLACED “55 MPH OR LESS” WITH “≤ 55 MPH” IN DETAIL TITLE. REMOVED C DISTANCE. ADDED WORK AREA AND 50’ DOWNSTREAM DISTANCES. REMOVED SIGN W20-1.
-DETAIL 3: REPLACED “TWO LANE, TWO WAY” WITH “UNDIVIDED” IN DETAIL TITLE. ADDED WORK AREA AND 50’ DOWNSTREAM DISTANCES. REWORDED GENERAL NOTE #4.

1101.05 1 WORK ZONE VEHICLE ACCESSES

- ACCESS THROUGH TEMPORARY BARRIER DETAIL: ADDED “BARRIER GAP” TO 200 MAX NOTE AND REMOVED ** WITH NOTE. REPLACED ++ WITH “FOR LEFT LANE CLOSURE SEE STD. 1101.02, SHEET 3”. REPLACED “EXPOSED END OF BARRIER IS WITHIN 30’ OF EDGE OF TRAVEL WAY” WITH “BARRIER GAP IS ≥ 0’ ” IN CRASH CUSHION NOTE. ADDED “FOR FLAGGERS.” TO GENERAL NOTE #6.

1101.11 4 TRAFFIC CONTROL DESIGN TABLES

-SHEET 1: MODIFIED 100 FEET MAXIMUM TAPER LENGTH CRITERIA WITH 50 - 100 FEET MAXIMUM FOR TWO-WAY TRAFFIC TAPER. MODIFIED 100 FEET PER LANE TAPER LENGTH CRITERIA WITH 100 FEET MAXIMUM FOR DOWNSTREAM TAPER. RE-DREW QUICK REFERENCE TABLE.

-SHEET 2: MERGED TABLES INTO ONE.

-SHEET 3: UPDATED TABLE. ADDED GENERAL NOTE #1. REPLACED “NORMALLY,” WITH “THE PRIMARY USE OF” IN GENERAL NOTE #3 (FORMERLY #2).

-SHEET 4: ADDED GENERAL NOTE #1.

1110.01 3 STATIONARY WORK ZONE SIGNS

-SHEET 1: 42” MINIMUM EMBEDMENT DIMENSION CHANGED TO 36” – 42”. ADDED NOTE FOR NYLON WASHER IN ASSEMBLY DETAIL. ADDED “WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURE’S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NC DOT APPROVED.” TO GENERAL NOTE #2
1110.02  1  PORTABLE WORK ZONE SIGNS

- MOUNTING HEIGHT DIMENSIONS NOTE REVISED. REPLACED “NORTH CAROLINA’S APPROVED PRODUCTS LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE WORK ZONE TRAFFIC CONTROL UNIT.” WITH “THE DEPARTMENT’S APPROVED PRODUCTS LIST AT HTTPS://APPS.DOT.STATE.NC.US/VENDOR/APPROVEDPRODUCTS.” ON GENERAL NOTE #3.

1115.01  1  FLASHING ARROW BOARDS

- REMOVED PANEL TYPES A & B FROM FLASHING ARROW BOARD TYPE TABLE. ADDED MOVING CHEVRON TO FLASHING ARROW BOARD MODES. REMOVED EXISTING GENERAL NOTE #2. ADDED GENERAL NOTE #5.

1130.01  1  DRUM

- DRUM STRIPE WIDTH DIMENSION CHANGED FROM 6” – 8” TO 6”. REVISED SHADING ON DRUM. REVISED DRUM DETAIL NOTES. ADDED THIRD NOTE TO TIRE BALLAST DETAIL. REMOVED 21 ¾ DIMENSION FROM TIRE BALLAST DETAIL. ADDED GENERAL NOTES 3-5.

1135.01  1  CONES

- 28” CONE DETAIL: REPLACED 14 ½ “ BASE WIDTH WITH 13 ¾ “. 36” CONE: REPLACED “EXPRESSWAYS” WITH “INTERSTATES” UNDER 36” LABEL. ADDED GENERAL NOTES 2 AND 3.

1145.01  1  BARRICADES – TYPE III

- UPDATED “SEE NOTE 7” WITH “SEE NOTE 6”. REPLACED “FOR TYPE III BARRICADES MAY BE” WITH “MAY BE CONSTRUCTED OF APPROVED COMPOSITE,” AND “RAILS” WITH “MATERIAL” ON GENERAL NOTE #1. ALSO, THE LAST SENTENCE WAS REMOVED. “FOR CATEGORY II DEVICES WAS ADDED TO GENERAL NOTE 2. GENERAL NOTE 4 WAS REvised. REPLACED “, VIII, OR IX” WITH “OR HIGHER PRISMATIC” ON GENERAL NOTE 5. “FOR CATEGORY II DEVICES” WAS ADDED TO GENERAL NOTE 6. THE LAST SENTENCE WAS REMOVED FROM GENERAL NOTE 9 AND ADDED AS NEW GENERAL NOTE 10. GENERAL NOTE 11 REVISED TO REFER TO WEBSITE. ADDED “OR OTHER APPROVED BALLASTING METHODS” AND “FOR BALLASTING.” REMOVED FROM GENERAL NOTE 13.

1150.01  1  FLAGGING DEVICES

- REPLACED “TO DAYLIGHT HOURS” WITH “FROM DUSK TO DAWN” AND REMOVED “NON” FROM NOTE FOR STOP/SLOW PADDLE DETAIL. ELIMINATED FLASHLIGHT DETAIL. ADDED FLAGGER AND PADDLE
PLACEMENT DETAIL. REMOVED EXISTING GENERAL NOTES 6 – 8. ADDED GENERAL NOTE 6.

1160.01 1 TEMPORARY CRASH CUSHION

- DRAWING OF DETAIL SIMPLIFIED AS TO NOT PROMOTE A CERTAIN TYPE OF PRODUCT.

1165.01 1 WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION

- TITLE BLOCK CHANGED FROM TRUCK MOUNTED IMPACT ATTENUATOR DELINEATION TO WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION. TRUCK RE-DRAWN AND ENLARGED. TMA REMOVED FROM TRUCK AND LIGHT SYSTEM UPDATED. COVER BAR ADDED TO DUMP, YIELD SIGNS REMOVED. SECOND ‘FLATBED’ NON-DUMP BODY DETAIL ADDED. ADJUSTED LIGHT SYSTEM OPTIONS NOTATIONS. “*” NOTE REMOVED. REMOVED EXISTING GENERAL NOTE 1. GENERAL NOTE 1 REVISED (FORMERLY 2). ADDED GENERAL NOTES 2 AND 3.

1170.01 5 POSITIVE PROTECTION

-REVISED STANDARD TITLE.

-SHEET 4: ADDED GENERAL NOTES 1 & 2.

-SHEET 5: NEW SHEET.

1180.01 1 SKINNY DRUM

- REMOVED “OR FLUORESCENT RED-“FROM SKINNY DRUM NOTE. REPLACED 20 WITH 15 ON BALLAST WEIGHT NOTE. REMOVED FIRST SENTENCE AND SWITCHED PLACEMENT OF SECOND AND THIRD IN GENERAL NOTE 1. REMOVED SECOND SENTENCE FROM GENERAL NOTE 2. ADDED GENERAL NOTES 3 THRU 5.

DIVISION 12
1205.01 2 PAVEMENT MARKINGS – LINE TYPES AND OFFSETS

-UPDATED NOTES TO REDEFINE A “WIDE” LINE PER MUTCD. ADDED ADDITIONAL NOTES TO DEFINE WHEN TO USE 6 INCH LINES AND THE WIDTH OF A GORE LINE. ADDED NEW MINI-SKIP LINE STYLES PER MUTCD. ADD NEW WIDTHS FOR DIAGONAL LINES PER MUTCD.

1205.02 2 PAVEMENT MARKINGS – TWO LANE AND MULTI-LANE ROADWAYS

-REORGANIZED SHEETS AND DETAILS. REMOVED SHEET 3.
1205.03 3 PAVEMENT MARKINGS – INTERCHANGES

- REORGANIZED DETAILS. ADDED “MULTI-LANE EXIT” DETAIL ON SHEET 2. MOVED “CLOVERLEAF” DETAIL TO RSD 1205.06, SHEET 3. UPDATED DETAILS PER MUTCD AND NEW MINI-SKIP LINE STYLES.

1205.04 2 PAVEMENT MARKINGS – INTERSECTION

- REORGANIZED DETAILS. UPDATED DETAILS WITH NEW MINI-SKIP LINE STYLES

1205.05 1 PAVEMENT MARKINGS – TURN LANES

- UPDATED DETAILS WITH NEW MINI-SKIP LINE STYLES

1205.06 3 PAVEMENT MARKINGS

- REORGANIZED SHEETS AND DETAILS. REMOVED SHEET 4. ADDED “MULTI-LANE” EXIT DETAIL ON SHEET 2. ADDED “CLOVERLEAF” AND “ROUTE SPLIT” DETAIL ON SHEET 3. MOVED PREVIOUS DETAILS ON SHEET 2 TO NEW RSD 1205.13. UPDATED DETAILS PER MUTCD AND NEW MINI-SKIP LINE STYLES.

1205.07 1 PAVEMENT MARKINGS – PEDESTRIAN CROSSWALKS

- UPDATED DETAILS PER ADA STANDARDS.

1205.08 8 PAVEMENT MARKINGS – SYMBOLS AND WORD MESSAGES

- ADDED SHEET 2 WITH NEW SYMBOLS.

1205.11 4 PAVEMENT MARKINGS – RAILROAD CROSSINGS

- REVISED AND ADDED NOTES PER MUTCD.

1250.01 3 PAVEMENT MARKER SPACING

- UPDATED CHART AND DETAILS FOR NEW MINI-SKIP LINE STYLES.

1401.01 2 HIGH MOUNT STANDARD

- SHEET 1: ADDED GROUND ROD, CONDUIT AND GROUNDING CONDUCTOR TO POLE FOUNDATION. IDENTIFIED FEEDER CIRCUITS AND CONDUITS IN POLE FOUNDATION. CHANGED WORDING ON CARRIER RING JUNCTION BOX TO “NON-CORROSIVE METAL NEMA 3R JUNCTION BOX” IN TWO LOCATIONS.
CHANGED LUMINAIRE ARRAY TO 6 LUMINAIRE INSTEAD OF 4 TO REFLECT NEW DESIGN STANDARDS.

-SHEET 2: CHANGED WORDING ON CARRIER RING JUNCTION BOX TO “NON-CORROSIVE METAL NEMA 3R JUNCTION BOX”.

DIVISION 14

1402.01 1 HIGH MOUNT FOUNDATION

- ADDED FOUNDATION DESIGN FOR 60’ HIGH MASTS. ADDED DIMENSION FOR CONDUIT DEPTH AND FORMING OF FOUNDATION. ADDED NOTE CONCERNING GUARDRAIL.

1403.01 1 HIGH MOUNT LUMINARIES

- CHANGED WORDING OF LENS COVER TO READ “OPEN BOTTOM OR FLAT GLASS LENS”.

1404.01 3 LIGHT STANDARDS

-SHEET 1: ADDED SKETCH OF TRANSFORMER BASE ON THE STANDARD PLACEMENT CHANGED WORDING ON AREAS UNDER STANDARD PLACEMENT.

1405.01 3 STANDARD FOUNDATION

- SHEET 1: CHANGED GRADE FOR WORKING AREA AROUND FOUNDATION TO 1.5:1 FROM 1:1. ADD STUB HEIGHT REQUIREMENTS DIAGRAM AND UPDATE ASTM STANDARD NO FROM A36 TO F1554.

- SHEET 2: CHANGED GROUT TO “PROTECTIVE METAL SHROUD” IN ANCHOR BOLT DETAIL. UPDATE ASTM STANDARD NO FROM A36 TO F1554.

- SHEET 3: CHANGED GROUT TO “PROTECTIVE METAL SHROUD” IN ANCHOR BOLT DETAIL. UPDATE ASTM STANDARD NO FROM A36 TO F1554.

1406.01 1 LIGHT STANDARD LUMINARIES

-CHANGED CABLE IN POLE FROM NM TO SO. ADDED ROUND ROD, CONDUIT AND GROUNDING CONDUCTOR IN WIRING DIAGRAM

1407.01 1 ELECTRIC SERVICE POLE AND LATERAL

-CHANGED GROUNDING CONDUCTOR CONDUIT SIZE FROM ½” TO ¾”

1408.01 3 LIGHT CONTROL SYSTEM

-SHEET 1: REMOVED LIGHTNING ARRESTER FROM INTERIOR PANEL COMPONENT LAYOUT. REMOVED WIRING JOINT SHOWN AT THE NEUTRAL BAR. ADDED DELTA NOTE 11 TO ADVISE OF INSTALLING LIGHTNING ARRESTER OUTSIDE OF CABINET. CHANGED RATING OF CONTROL
CIRCUIT BREAKER FROM 20A TO 15A. CLARIFIED DELTA NOTE 5, ADDING THE WORD “METAL” IN FRONT OF CONDUIT.

-SHEET 2: ADDED PC36 JUNCTION BOX TO STANDARD DRAWING. CHANGED CONDUIT DESIGNATION FROM “C” TO “RGC”. ADDED DELTA NOTES FOR JUNCTION BOX. ADDED DELTA NOTE CLARIFYING USE OF RGC VERSUS PVC CONDUIT. ADDED DELTA NOTE ABOUT INSTALLING ARRESTOR OUTSIDE OF CABINET. CHANGED SIZE OF CONDUIT FOR GROUNDING CONDUCTOR FROM ½” TO ¾”.

-SHEET 3: REMOVED THE WORD “PADLOCKABLE” FROM ENCLOSURE SERVICE CIRCUIT BREAKER HANDLE. ADDED “PADLOCKABLE” TO DOOR HANDLE. ON CABINET LABEL CHANGED “W.O.” TO “TIP”. REVISED DELTA NOTE 3.

1411.01 1 ELECTRICAL JUNCTION BOXES

-STONE AROUND PC JUNCTION BOX CHANGED FROM ABC TO #67 WASHED STONE. INCREASED THE DEPTH OF STONE BELOW JUNCTION BOX FROM 6” TO 12”. REMOVED SLOPE AROUND PC JUNCTION BOX TO INSTALL FLUSH WITH GRADE. REMOVED GROUND ROD FROM PC JUNCTION BOX. ADDED TIER DESIGNATION TO COVER.

1412.01 2 UNDERPASS LIGHTING

-SHEET 1: RGS CHANGED TO RGC. CHANGED DETAIL A COMPONENT 10 TO “DROP-IN OR EXPANSION” ANCHOR INSTEAD OF “ADHESIVE” ANCHOR. CLARIFIED DELTA NOTE 2 ABOUT EXPANSION JOINTS. CHANGED DELTA NOTE 3 TO REFERENCE EXPANSION ANCHOR UNITS INSTEAD OF ADHESIVE ANCHORS.

-SHEET 2: CORRECTED MISSPELLING IN DELTA NOTE 2. ADDED DELTA NOTE 4. CHANGED WORDING OF “RGS CONDUIT” TO “RGC”. REMOVED ADHESIVE ANCHOR SPECS. CHANGED SIZE OF GROUNDING CONDUCTOR CONDUIT TO ¾”.

DIVISION 15
1525.01 2 PRECAST SANITARY SEWER MANHOLE

-DELETED

1525.02 1 PRECAST CONCRETE SANITARY SEWER MANHOLE - OUTSIDE DROP

- NEW TITLE.
- DELETED SHEET 2.
- UPDATED DETAILS TO DEPICT USE OF PRECAST COMPONENTS.
1525.03 2 PRECAST SANITARY SEWER DROP MANHOLE – 5’ DIAMETER OUTSIDE DRIP

-DELETED
<table>
<thead>
<tr>
<th>Code</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1525.04</td>
<td>1</td>
<td>PRECAST SANITARY SEWER DROP MANHOLE – 5’ DIAMETER</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>DELETED</strong></td>
</tr>
<tr>
<td>1525.05</td>
<td>1</td>
<td>PRECAST CONCRETE AND BRICK SANITARY SEWER MANHOLE</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>DELETED</strong></td>
</tr>
<tr>
<td>1525.06</td>
<td>2</td>
<td>PRECAST CONCRETE SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BOTTOM</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>NEW TITLE.</strong> <strong>REVISED DETAILS TO LIMIT SCOPE TO THE CONSTRUCTION OF THE MANHOLE BASE AND BOTTOM SECTION.</strong> <strong>ADDED SHEET 2 (FOOTING AND REINFORCEMENT SCHEDULE).</strong></td>
</tr>
</tbody>
</table>

**DIVISION 16**

<table>
<thead>
<tr>
<th>Code</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1605.01</td>
<td>1</td>
<td>TEMPORARY SILT FENCE</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>ADDED NOTE TO ADDRESS MECHANICAL SLICING METHOD INSTALLATION</strong></td>
</tr>
<tr>
<td>1606.01</td>
<td>1</td>
<td>SPECIAL SEDIMENT CONTROL FENCE</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>ADDED NOTE TO ADDRESS ATTACHMENT METHOD OF HARDWARE CLOTH TO POSTS. ADDED NOTE TO ADDRESS INSTALLATION BETWEEN SECTIONS OF SILT FENCE.</strong></td>
</tr>
<tr>
<td>1607.01</td>
<td>1</td>
<td>GRAVEL CONSTRUCTION ENTRANCE</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>ADDED NOTE TO PREVENT BYPASS OF ENTRANCE BY CONSTRUCTION VEHICLES</strong></td>
</tr>
<tr>
<td>1622.01</td>
<td>1</td>
<td>GUIDE FOR TEMPORARY BERMS AND SLOPE DRAIN</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>DELETED SILT BASIN DESIGN REQUIREMENT OF 1800 CUBIC FEET OF SEDIMENT STORAGE PER DISTURBED ACRE AND CHANGED SILT BASIN LABEL TO SUMP IN INLET PROTECTION OPTION #1 DRAWING</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>MODIFIED INLET PROTECTION OPTION #2 DRAWING TO ADDRESS MULTI-DIRECTION FLOW.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>MODIFIED NOTE #2 TO INCLUDE INFORMATION ABOUT T-SECTIONS AND ELBOWS AT INLETS</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>MODIFIED NOTE #3 TO REQUIRE SLOPE DRAINS TO EXTEND TO BOTTOM OF SLOPE.</strong></td>
</tr>
</tbody>
</table>
1630.01  2  RISER BASIN

- MODIFIED RISER PIPE FROM PERFORATED TO NON-PERFORATED

1630.02  1  SILT BASIN TYPE ‘B’

- ADDED COIR FIBER BAFFLE REQUIREMENT IN BASIN.
- ADDED REQUIREMENT FOR SKIMMER TO BE INSTALLED TO RISER PIPE 1 FT. FROM BOTTOM OF BASIN WITH A STONE PAD INSTALLED TO KEEP SKIMMER OFF BOTTOM OF BASIN.
- ADDED SKETCH OF DITCH AT INLET SIDE OF BASIN.
- ADDED REQUIREMENT FOR STONE ENERGY DISSIPATOR AT OUTLET OF BARREL PIPE.
- MODIFIED STANDARD BASIN DIMENSIONS TABLE; DELETED COLUMNS FOR MAXIMUM DRAINAGE AREA AND DENUDED AREA, AND COLUMNS FOR MINIMUM SURFACE AREA AND STORAGE VOLUME.
- MODIFIED NOTE #3 TO INCLUDE DESIGN CRITERIA GUIDELINES FOR SURFACE AREA AND SEDIMENT STORAGE.
- ADDED NOTE #10 TO REQUIRE INTERIOR AND EXTERIOR SLOPES TO BE SEEDED AND MATTED.
  – MODIFIED SIDE SLOPES TO HAVE A MAXIMUM OF 1.5:1 SLOPE.
- ADDED NOTE FOR COIR FIBER BAFFLE REQUIREMENT FOR BASINS AT OUTLETS AND DRAINAGE INLETS.

1630.03  1  TEMPORARY SILT DITCH

  – ADDED NOTE TO CONSTRUCT NON-VERTICAL SIDE SLOPES NOT GREATER THAN 1.5:1.
  - ADDED NOTE TO SEED BERM CREATED BY EXCAVATED MATERIAL.

1630.04  1  STILLING BASIN FOR PUMPED EFFLUENT

  – MODIFIED BOTTOM OF BASIN TO BE 1 FT. BELOW GROUND SURFACE AND BOTTOM OF STONE. DRAIN AND CHANGED MINIMUM DIKE HEIGHT FROM 3 FT. TO 2 FT.

1630.05  1  TEMPORARY DIVERSION

  - ADDED NOTE TO CONSTRUCT NON-VERTICAL SIDE SLOPES NOT GREATER THAN 1.5:1.
  - ADDED NOTE TO SEED BERM CREATED BY EXCAVATED MATERIAL.

1630.06  1  SPECIAL STILLING BASIN

  – ADDED NOTE SPECIFYING GRADE OF SEDIMENT CONTROL STONE.
  - ADDED NOTE TO ALLOW WOODEN PALLETS TO BE USED IN LIEU OF STONE UNDER BAG.
1632.03 1 MATTING INSTALLATION
- ADDED NOTE TO ADDRESS ATTACHMENT METHOD OF HARDWARE CLOTH TO POSTS.

1633.01 1 TEMPORARY ROCK SILT CHECK TYPE A
- CHANGED MINIMUM TOTAL HEIGHT OF CHECK TO 2 FT.
- CHANGED MINIMUM WEIR DEPTH TO 1’
- CHANGED MINIMUM WIDTH OF STONE AT TOP OF CHANNEL TO 1 FT.
- DELETED STONE APRON ON DOWNSTREAM SIDE OF SILT CHECK

1633.02 1 TEMPORARY ROCK SILT CHECK TYPE B
- DELETED REQUIREMENT FOR SEDIMENT CONTROL STONE TO BE PLACED ON UPSTREAM SIDE OF CHECK.

1634.01 1 TEMPORARY ROCK SEDIMENT DAM TYPE A
- ADDED NOTE TO REQUIRE COIR FIBER BAFFLES ON UPSTREAM SIDE OF DAM

1634.02 1 TEMPORARY ROCK SEDIMENT DAM TYPE B
- CHANGED MINIMUM DEPTH OF WEIR TO 12”.
- CHANGED TOTAL MAXIMUM HEIGHT OF DAM TO 5 FT. ABOVE NATURAL GROUND ELEVATION.
- DELETED STONE APRON ON DOWNSTREAM SIDE OF DAM
- CHANGED MINIMUM WEIR LENGTH FROM 2 FT. TO 4 FT.
- CHANGED STONE WIDTH AT TOP OF WEIR SECTION TO WEIR LENGTH PLUS 4’.
- CHANGED SEDIMENT STORAGE VOLUME REQUIREMENT FROM 1800 CUBIC FEET PER DISTURBED ACRE TO 3600 CUBIC FEET PER DISTURBED ACRE.
- ADDED NOTE TO REQUIRE COIR FIBER BAFFLES ON UPSTREAM SIDE OF DAM.
- ADDED NOTE TO REQUIRE INTERIOR AND EXTERIOR SLOPES TO BE SEEDED AND MATTED.

1635.01 1 ROCK PIPE INLET SEDIMENT TRAP TYPE A
- ADDED EARTH BERM REQUIREMENT ABOVE STONE AND PIPE.
- CHANGED SEDIMENT STORAGE VOLUME REQUIREMENT FROM 1800 CUBIC FEET PER DISTURBED ACRE TO 3600 CUBIC FEET PER DISTURBED ACRE.
- ADDED NOTE FOR VEHICULAR TRAVEL LANE RESTRICTION
ROCK PIPE INLET SEDIMENT TRAP
TYPE A

- ADDED EARTH BERM REQUIREMENT ABOVE STONE AND PIPE.
- CHANGED SEDIMENT STORAGE VOLUME REQUIREMENT FROM 1800 CUBIC FEET PER DISTURBED ACRE TO 3600 CUBIC FEET PER DISTURBED ACRE.
- CHANGED MAXIMUM DIAMETER OF PIPE TO 24"

DIVISION 17
1700.01  2 ELECTRICAL SERVICE OPTIONS

- MOVED CONNECTION DETAIL TO SHEET 2.
- ADDED SHEET 2.

1700.02  2 ELECTRICAL SERVICE GROUNDING

- SHEET 1: ADDED OPTIONAL USE OF NON-THREADED UL LISTED COUPLERS FOR SECTIONAL ELECTRODES.

- SHEET 2: NEW DRAWING WITH DETAILS FOR WOOD POLE INSTALLATION INCLUDING EXTRA GROUNDING ELECTRODE CONDUCTOR LENGTH FOR TESTING PURPOSES.

1705.01  2 SIGNAL HEADS – VEHICLE ASSEMBLIES

- SHEET 1: ADDED WIRE ENTRANCE AND CLOSURE CAP LABELS.

- SHEET 2: UPDATE TO INCLUDE FYA CLEARANCES.

1705.02  6 SIGNAL HEADS – PEDESTRIAN ASSEMBLIES

- SHEET 1: MODIFY PEDESTRIAN PUSHBUTTON SIGN (R10-3 D OR E), ADD VEHICULAR HEAD.

- SHEET 2: MODIFY PEDESTRIAN PUSHBUTTON SIGN (R10-3 D OR E), ADDED BONDING REQUIREMENT.

- SHEET 3: NEW DRAWING

- SHEET 4: MODIFY PEDESTRIAN PUSHBUTTON SIGN (R10-3 D OR E), ADDED BONDING REQUIREMENT.

- SHEET 5: UPDATE PREVIOUS SHEET WITH PEDESTRIAN PUSHBUTTON SIGN (R10-3 D OR E).

- SHEET 6: NEW DRAWING.
1715.01  2  UNDERGROUND CONDUIT – TRENCHING

- SHEET 1: REMOVE WORD "NOTE" IN UPPER RIGHT Pane; ADDED DIMENSION FOR CONDUIT PLACEMENT 6" BELOW SUBBASE.

1716.01  1  JUNCTION BOXES

-REMOVE “HEAVY DUTY” FROM OVER-SIZED LABEL.

1720.01  1  WOOD POLES

-REMOVE BURNDY CLAMP WITH PARALLEL GROOVE CLAMP.

1721.01  3  GUY ASSEMBLIES

- SHEET 3: REPLACE BURNDY CLAMP WITH PARALLEL GROOVE CLAMP.

1725.01  3  INDUCTIVE DETECTION LOOPS

-INCORPORATED NOVEMBER 2008 CHANGES.

1743.01  1  SIGNAL PEDESTALS

-REORGANIZED WITH REVISIONS AND ADDITIONAL CONTENT.

1751.01  2  CONTROLLERS AND CABINETS

-REVISED SUBTITLE. LOCATION OF SURGE PROTECTION DEVICES TO BE APPROVED DURING QPL EVALUATION.

1751.02  1  CONTROLLERS AND CABINETS

-KEEP FOR LEGACY SYSTEMS.