Public Works
Standard Drawings
Subcommittee Meeting

Monday August 6, 2018
Regional Forum Room
The slides in this presentation reflect the edits discussed at the July 2, 2018 Standard Drawings Subcommittee meeting.

Slides 2 - 3: 1030 Interceptor Swale
Slides 4 - 6: 1040 Diversion Dike
Slides 7 - 9: 1050 Triangular Sediment Filter Dike
Slides 10 - 12: 1080 Sand Bag Check Dam
Slide 13 - 14: 1090 Stone Outlet - Sediment Trap
Slide 15 - 16: 1110 Pipe Slope Drain
Slide 17 - 20: Additional Edits - Drawing Titles
For channel material, see Note 6

- Turf reinforcement mat or a layer of crushed stone or riprap is required when velocities exceed 6 fps or slope exceeds 2.0%.

- Channel width (per plans) is indicated.

- 3:1 slope or flatter.

- Design water surface elevation.

- Cross section details with flow and plan view indicated.
1. All trees, brush, stumps, obstructions and other material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.

2. The swale shall be excavated or shaped to line, grade and cross-section as required to meet criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.

3. All earth removed and not needed in construction shall be disposed of in an approved spoils site so that it will not interfere with the functioning of the swale.

4. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device.

5. The on-site location may need to be adjusted to meet field conditions in order to utilize the most suitable outlet.

6. For grades less than 2 percent and velocities less than 6 feet per second, the minimum required channel stabilization shall be grass, erosion control mats or mulching. For grades in excess of 2 percent or velocities exceeding 6 feet per second, stabilization is required in the form of turf reinforcement mats (or a layer of crushed stone or rip-rap with appropriate size, gradation, and thickness as specified in the SWPPP).

7. Minimum compaction for the swale shall be 95 percent standard proctor.

8. Inspection shall be as specified in the SWPPP.

Provide edits/additions below:

9. For temporary stabilization rip-rap; width, depth, and surface water elevation should be designed by owner or owner’s representative.

10. Refer to Drawing 1230A and B for turf reinforcement mat.

11. See iSWM Manual for more information on interceptor swale.
Plan view should include an “outlet flow” arrow.
Figure 2.6 - Schematics of Diversion Dike with Swale
DIVERSION DIKE GENERAL NOTES:

1. All Dikes shall be placed in 8" lifts or less and compacted to 95% standard proctor density.

2. All diversion dikes shall have positive drainage to a controlled outlet.

3. Diverted runoff from a protected or stabilized area shall have its outlet flow directed to an undisturbed stabilized area or into a level spreader or grade stabilization structure.

4. Diverted runoff from a disturbed or exposed area shall be conveyed to a sediment trapping device.

5. For grades less than 2 percent and velocities less than 6 feet per second, the minimum required channel stabilization shall be grass, erosion control mats or mulching. For grades in excess of 2 percent or velocities exceeding 6 feet per second, stabilization is required in the form of turf reinforcement mats (or a layer of crushed stone or rip-rap with appropriate size, gradation, and thickness as specified in the SWPPP).

6. Inspection shall be as specified in the SWPPP.

Provide edits/additions below:

7. See iSWM Manual for more information on Diversion Dikes.

“Refer to Item 202.7 in the Standard Specifications.”

Replace “grades” with “longitudinal slopes”
Replace 1050A with iSWM 3.32
1. Toe-in 6" min
2. Fabric skirt weighted with filter stone
   (Rock bags may be substituted for filter stone)
3. Trenched in 4'

Figure 3.32 Schematics of Triangular Sediment Filter Dike
TRIANGULAR SEDIMENT FILTER DIKE GENERAL NOTES:

1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.

2. THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE, AND FABRIC SHALL BE OVERLAPPED A MINIMUM OF 12".

3. THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF TYPE 'A' RIP RAP, OR TOED-IN 6" WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED TO A DEPTH OF 4 INCHES.

4. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 6-INCH WIRE STAPLES ON 2-FOOT CENTERS ON BOTH EDGES AND SKIRTS.

5. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 6" TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SOLE RINGS.

6. THE DIKE STRUCTURE SHALL BE 6 GA. 6" X 6" WIRE MESH, 18" ON A SIDE.

7. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.

8. THE FILTER DIKE SHALL BE REMOVED WHEN FINAL STABILIZATION IS ACHIEVED OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED.

9. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES APPROXIMATELY 6-INCHES IN DEPTH. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
Replace 1080A with iSWM 2.2
Figure 2.2 - Schematics of Rock Bag Check Dams

NOTES: ACTUAL DIMENSIONS OF THE CHECK DAMS SHALL BE DESIGNED BASED ON FLOW CONDITIONS IN THE DRAINAGE SWALE OR DITCH. PROVIDE CALCULATIONS THAT DOCUMENT THE FOLLOWING PARAMETERS USED TO DESIGN THE CHECK DAMS.

* HEIGHT OF CHECK DAMS BASED ON SWALE OR DITCH DIMENSIONS AND FLOW CONDITIONS.
* SPACING OF CHECK DAMS BASED ON GRADE OF THE SWALE OR DITCH. TOP OF DOWNSTREAM DAM SHALL BE AT SAME ELEVATION AS TOE OF UPSTREAM DAM.
SAND BAG CHECK DAM GENERAL NOTES:

1. WHEN A SANDBAG IS FILLED WITH MATERIAL, THE OPEN END OF THE SANDBAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CORD.

2. SANDBAGS SHOULD BE STACKED IN AT LEAST THREE ROWS ABUTTING EACH OTHER, AND IN STAGGERED ARRANGEMENT.

3. THE BASE OF THE CHECK DAM SHOULD HAVE AT LEAST 3 SANDBAGS. THESE CAN BE REDUCED TO 2 AND 1 BAG IN THE SECOND AND THIRD ROWS RESPECTIVELY.

4. FOR EACH ADDITIONAL 6” OF HEIGHT, AN ADDITIONAL SANDBAG MUST BE ADDED TO EACH ROW WIDTH.

5. THE SANDBAG CHECK DAM SHALL BE INSPECTED AS SPECIFIED IN THE SWPPP AND SHALL BE RESHAPED OR REPLACED AS NEEDED. REPAIRS SHALL BE MADE FOR WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

6. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD OF THE HEIGHT OF THE CHECK DAM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CREATE A SITATION PROBLEM.

7. WHEN THE SITE HAS ACHIEVED FINAL STABILIZATION OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED, THE CHECK DAM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

Provide edits/additions below:

8. See iSWM Manual for more information on Sand Bag Check Dam
Replace 1090A with iSWM 3.30 and 3.31
Figure 3.20: Schematics of Sediment Basin with Overflow Riser

Sediment Basin with Overflow Riser Plan View

Sediment Basin with Overflow Riser Cross Section

NOTE:
DO NOT LOCATE EMERGENCY SPILLWAY ON EARTH BERM

EXCAVATED BASIN FOR STORAGE AS NEEDED. SHAPE MAY VARY

STABILIZATION:
RIP RAP, TRIM OR OTHER EROSION RESISTANT MATERIAL

ENERGY DISSIPATION:
CONCRETE BLOCKS (AS NEEDED)

EMBANKMENT

FLOW

CONVEYANCE:
STORM HIGH WATER
(25-YR, 24-HR)

DESIGN STORM CAPACITY
(2-YR, 24-HR)

EMERGENCY SPILLWAY
ELEVATION

EMERGENCY SPILLWAY

OUTFALL PIPE

OUTFALL PIPE

PRIMARY OUTLET

ANCHOR BLOCK

COMPACTED CLAY EMBANKMENT

STABILIZED OUTLET

ANTI-SEEP COLLARS

1' MAX

1' MIN

0' MAX

N.T.S.
Additional Edits

Drawing Titles
### DIVISION 1000 EROSION AND SEDIMENT CONTROL

#### TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Drawing #</th>
<th>Subject</th>
<th>Section / Item #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1010</td>
<td>RESERVED</td>
<td>N/A</td>
</tr>
<tr>
<td>1020A</td>
<td>Silt Fence</td>
<td>202.5 Pages 202-3 to 202-4</td>
</tr>
<tr>
<td>1020B</td>
<td>Silt Fence</td>
<td>202.5 Pages 202-3 to 202-4</td>
</tr>
<tr>
<td>1050A</td>
<td>Interceptor Swale</td>
<td>202.6 Page 202-4</td>
</tr>
<tr>
<td>1050B</td>
<td>Interceptor Swale</td>
<td>202.6 Page 202-4</td>
</tr>
<tr>
<td>1060A</td>
<td>Diversion Dike</td>
<td>202.7 Page 202-4</td>
</tr>
<tr>
<td>1060B</td>
<td>Diversion Dike</td>
<td>202.7 Page 202-4</td>
</tr>
<tr>
<td>1059A</td>
<td>Triangular Sediment Filter Dike</td>
<td>202.8 Pages 202-4 to 202-5</td>
</tr>
<tr>
<td>1059B</td>
<td>Triangular Sediment Filter Dike</td>
<td>202.8 Pages 202-4 to 202-5</td>
</tr>
<tr>
<td>1069A</td>
<td>Rock Check Dam</td>
<td>202.9 Pages 202-5 to 202-6</td>
</tr>
<tr>
<td>1069B</td>
<td>Rock Check Dam</td>
<td>202.9 Pages 202-5 to 202-6</td>
</tr>
<tr>
<td>1070A</td>
<td>Stabilized Construction Entrance</td>
<td>202.11 Pages 202-6 to 202-7</td>
</tr>
<tr>
<td>1070B</td>
<td>Stabilized Construction Entrance</td>
<td>202.11 Pages 202-6 to 202-7</td>
</tr>
<tr>
<td>1080A</td>
<td>Sand Bag Check Dam</td>
<td>N/A</td>
</tr>
<tr>
<td>1080B</td>
<td>Sand Bag Check Dam</td>
<td>N/A</td>
</tr>
<tr>
<td>1090</td>
<td>Stone Outlet Sediment Trap</td>
<td>202.12 Pages 202-7 to 202-8</td>
</tr>
<tr>
<td>1100</td>
<td>Pipe Outlet Sediment Drain</td>
<td>N/A</td>
</tr>
<tr>
<td>1110</td>
<td>Pipe Slope Drain</td>
<td>202.13 Page 202-8</td>
</tr>
<tr>
<td>1120</td>
<td>Inlet Protection - Area</td>
<td>202.14 Pages 202-9 to 202-11</td>
</tr>
<tr>
<td>1120</td>
<td>Filter Screen</td>
<td>202.14 Pages 202-9 to 202-11</td>
</tr>
<tr>
<td>1130</td>
<td>Inlet Protection - Area</td>
<td>202.14 Pages 202-9 to 202-11</td>
</tr>
<tr>
<td>1130</td>
<td>Filter Screen</td>
<td>202.14 Pages 202-9 to 202-11</td>
</tr>
<tr>
<td>1140</td>
<td>Inlet Protection - Area</td>
<td>202.14 Pages 202-9 to 202-11</td>
</tr>
<tr>
<td>1140</td>
<td>Curb Block and Gravel</td>
<td>202.14 Pages 202-9 to 202-11</td>
</tr>
<tr>
<td>1150</td>
<td>Inlet Protection - Area</td>
<td>202.14 Pages 202-9 to 202-11</td>
</tr>
<tr>
<td>1150</td>
<td>Excavated Impoundment</td>
<td>202.14 Pages 202-9 to 202-11</td>
</tr>
<tr>
<td>1160A</td>
<td>Erosion Control Blankets</td>
<td>202.15 Page 202-11</td>
</tr>
<tr>
<td>1160B</td>
<td>Erosion Control Blankets</td>
<td>202.15 Page 202-11</td>
</tr>
</tbody>
</table>
INLET PROTECTION-AREA

I. STANDARD INSTALLATION

2\(\times\)2\(\times\)4 WOOD FRAME

1.8 MAX.

2.4 MAX.

3 MIN.

EXCAVATED IMPoundMENT

SLOPE 2:1

FLOW

FLOW

FILTER STONE (1\(\times\)2\(\times\)2") FOR COVERING WEEP HOLES

ISOMETRIC PLAN VIEW

SECTION A-A

FILTER STONE (1\(\times\)2\(\times\)2") FOR COVERING WEEP HOLES

1" DIA. WEEP HOLES, TO BE FILLED WITH GROUT PRIOR TO BACKFILLING OF STORAGE AREA

EXCAVATED IMPoundMENT

INLET PROTECTION

FILTER BARRIER

PERSPECTIVE VIEW

ELEVATION OF STAKE AND FABRIC ORIENTATION

DETAIL A

PERSPECTIVE VIEW

II. ALTERNATE INSTALLATION

DROP INLET WITH GRATE

CATCH EXCESS AT CORNERS

FRAME

INLET PROTECTION-AREA

INLET PROTECTION

FILTER BARRIER

PERSPECTIVE VIEW

PERSPECTIVE VIEW

INLET PROTECTION-AREA

INLET PROTECTION

FILTER BARRIER

PERSPECTIVE VIEW

INLET PROTECTION-AREA

INLET PROTECTION

FILTER BARRIER

PERSPECTIVE VIEW

PERSPECTIVE VIEW

<table>
<thead>
<tr>
<th>Drawing #</th>
<th>Original #</th>
<th>Subject</th>
<th>Spec. Page Number</th>
<th>Equivalent ISWM Schematic</th>
<th>Haiff Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1020A,B</td>
<td>1020A,B</td>
<td>Silt Fence</td>
<td>202.5, Pages 202-3 to 202-4</td>
<td>Figure 3.28, Detail for Silt Fence</td>
<td>2017</td>
</tr>
<tr>
<td>1030A,B</td>
<td>1030A,B</td>
<td>Interceptor Swale</td>
<td>202.6, Page 202-4</td>
<td>Figure 2.9, Schematics of Interceptor Swale</td>
<td>-</td>
</tr>
<tr>
<td>1040A,B</td>
<td>1040A,B</td>
<td>Diversion Dike</td>
<td>202.7, Page 202-4</td>
<td>Figure 2.5, Schematics of Diversion Dike</td>
<td>-</td>
</tr>
<tr>
<td>1050A,B</td>
<td>1050A,B</td>
<td>Triangular Sediment Filter Dike</td>
<td>202.8, Pages 202 to 202-5</td>
<td>Figure 3.32, Schematics of Triangular Sediment Filter Dike</td>
<td>-</td>
</tr>
<tr>
<td>1060A,B</td>
<td>1060A,B</td>
<td>Rock Check Dam</td>
<td>202.9, Pages 202-50 to 202-6</td>
<td>Figure 2.1, Rock Check Dams</td>
<td>2017</td>
</tr>
<tr>
<td>1070A,B</td>
<td>1070A,B</td>
<td>Stabilized Construction Exit</td>
<td>202.11, Pages 202-60 to 202-7</td>
<td>Figure 3.29, Stabilized Construction Exit</td>
<td>2017</td>
</tr>
<tr>
<td>1080A,B</td>
<td>1080A,B</td>
<td>Sand Bag Check Dam</td>
<td>N/A</td>
<td>Figure 2.2, Schematics of Rock Bag Check Dams</td>
<td>-</td>
</tr>
<tr>
<td>1090</td>
<td>1090</td>
<td>Stone Outlet - Sediment Trap</td>
<td>202.12, Pages 202-7 to 202-8</td>
<td>Figure 3.30, Schematics of Excavated Stone Outlet Sediment Trap</td>
<td>-</td>
</tr>
<tr>
<td>1100</td>
<td>1100</td>
<td>Pipe Outlet - Sediment Basin</td>
<td>N/A</td>
<td>Figure 3.20, Sediment Basin with Overflow Riser</td>
<td>2017</td>
</tr>
<tr>
<td>1110</td>
<td>1110</td>
<td>Pipe Slope Drain</td>
<td>202.13, Page 202-8</td>
<td>Figure 2.10, Schematics of Pipe Slope Drain</td>
<td>-</td>
</tr>
<tr>
<td>1120</td>
<td></td>
<td>Pipe Outlet Velocity Dissipation Device</td>
<td>-</td>
<td>Figure 2.13, Schematics of Velocity Dissipation Device</td>
<td>2018</td>
</tr>
<tr>
<td>1130</td>
<td>1130</td>
<td>Inlet Protection-Area - Filter Barrier</td>
<td>202.14, Pages 202-9 to 202-11</td>
<td>Figure 3.10, Filter Fabric Area Inlet Protection</td>
<td>2018</td>
</tr>
<tr>
<td>1140</td>
<td>1140</td>
<td>Inlet Protection-Drop - Block and Gravel</td>
<td>202.14, Pages 202-9 to 202-11</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1150</td>
<td>1150</td>
<td>Inlet Protection-Area - Excavated Impoundment</td>
<td>202.14, Pages 202-9 to 202-11</td>
<td>Figure 3.11, Schematics of Excavated Impoundment Area Inlet Protection</td>
<td>2018</td>
</tr>
<tr>
<td>1160</td>
<td></td>
<td>Inlet Protection-Area - Filter Tube</td>
<td>-</td>
<td>Figure 3.13, Filter Tube Area Inlet Protection</td>
<td>2017</td>
</tr>
<tr>
<td>1170</td>
<td>1170</td>
<td>Inlet Protection-Curb - Block and Gravel</td>
<td>202.14, Pages 202-9 to 202-11</td>
<td>Figure 3.8, Schematics of Block and Gravel Filter Curb Inlet Protection</td>
<td>-</td>
</tr>
<tr>
<td>1180</td>
<td></td>
<td>Inlet Protection-Curb - Weir and Filter Stone</td>
<td>-</td>
<td>Figure 3.5, Schematics of 2&quot;x4&quot; Weir Curb Inlet Protection</td>
<td>2018</td>
</tr>
<tr>
<td>1190</td>
<td></td>
<td>Inlet Protection-Curb - Filter Tube</td>
<td>-</td>
<td>Figure 3.6, Filter Tube Curb Inlet Protection</td>
<td>2017</td>
</tr>
<tr>
<td>1200</td>
<td></td>
<td>Inlet Protection-Curb - Hog Wire Weir</td>
<td>-</td>
<td>Figure 3.7, Hog Wire Curb Inlet Protection</td>
<td>2017</td>
</tr>
<tr>
<td>1210</td>
<td></td>
<td>Inlet Protection-On-Grade Curb - Rock Sock</td>
<td>-</td>
<td>Figure 3.9, Curb Rock Sock On-Grade Curb Inlet Protection</td>
<td>2017</td>
</tr>
<tr>
<td>1220A</td>
<td>1160A</td>
<td>Temporary Erosion Control Blankets</td>
<td>202.15, Page 202-11</td>
<td>Figure 2.7, Temporary Erosion Control Blankets</td>
<td>2017</td>
</tr>
<tr>
<td>1220B</td>
<td>1160B</td>
<td>Anchor Examples for Temporary Erosion Control Blankets</td>
<td>202.15, Page 202-11</td>
<td>Figure 2.8, Anchor Examples for Erosion Control Blankets</td>
<td>2018</td>
</tr>
<tr>
<td>1230A</td>
<td></td>
<td>Permanent Turf Reinforcement Mats</td>
<td>-</td>
<td>Figure 2.11, Schematics of Turf Reinforcement Mats</td>
<td>2018</td>
</tr>
<tr>
<td>1230B</td>
<td></td>
<td>Permanent Turf Reinforcement Mats Anchoring</td>
<td>-</td>
<td>Figure 2.12, Examples of Turf Reinforcement Mat Anchoring</td>
<td>2018</td>
</tr>
<tr>
<td>1240</td>
<td></td>
<td>Dewatering Controls</td>
<td>-</td>
<td>Figure 3.4, Dewatering Controls</td>
<td>2017</td>
</tr>
<tr>
<td>1250</td>
<td></td>
<td>Concrete Washout Containment</td>
<td>-</td>
<td>Figure 4.1, Schematics of Concrete Washout Containment</td>
<td>2018</td>
</tr>
<tr>
<td>1260</td>
<td></td>
<td>Grouted Rock Rip-Rap</td>
<td>-</td>
<td>-</td>
<td>2018</td>
</tr>
<tr>
<td>1270</td>
<td></td>
<td>Stream Trash Catch/Screen</td>
<td>-</td>
<td>-</td>
<td>2018</td>
</tr>
</tbody>
</table>
Next Steps

Determine action items for subcommittee members and NCTCOG staff
Next Meeting – Possible Dates

**September 2018**

<table>
<thead>
<tr>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**October 2018**

<table>
<thead>
<tr>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td>28</td>
<td>29</td>
<td>30</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sept. 10, Six Flags Conference Room  
Sept. 24, Pecan Conference Room  
Oct. 1, Regional Forum Room  
Oct. 22, Six Flags Conference Room
NCTCOG Construction Standards Fifth Edition
Division 1000 Drawings

Slides 2 - 3: 1030A, 1030B Interceptor Swale
Slides 4 - 5: 1040A, 1040B Diversion Dike
Slides 6 - 7: 1050A, 1050B Triangular Sediment Filter Dike
Slides 8 - 9: 1080A, 1080B Sand Bag Check Dam
Slide 10: 1090 Stone Outlet, Sediment Trap
Slide 11: 1110 Pipe Slope Drain

*When providing comments on the following drawings, please preface edits with your initials.*
KM - Slope @ 2% or less, or add reinforcement. See note below.

KM - TRM extend beyond top of bank

KM - Per detail #

KM - Define material better? Rock size, etc. (See note 6 for reinforcement)

Which slope?
INTERCEPTOR SWALE GENERAL NOTES:

1. All trees, brush, stumps, obstructions and other material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.

2. The swale shall be excavated or shaped to line, grade and cross-section as required to meet criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.

3. All earth removed and not needed in construction shall be disposed of in an approved spoils site so that it will not interfere with the functioning of the swale.

4. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device.

5. The on-site location may need to be adjusted to meet field conditions in order to utilize the most suitable outlet.

6. For grades less than 2 percent and velocities less than 6 feet per second, the minimum required channel stabilization shall be grass, erosion control mats or mulching. For grades in excess of 2 percent or velocities exceeding 6 feet per second, stabilization is required in the form of turf reinforcement mats (or a layer of crushed stone or rip-rap with appropriate size, gradation, and thickness as specified in the SWPPP).

7. Minimum compaction for the swale shall be 95 percent standard proctor.

8. Inspection shall be as specified in the SWPPP.

Provide edits/additions below:

JCI - The TRM should extend beyond the top of banks to match with the TRM details we already are using

KM - Design by professional engineer

KM - temporary device?

KM - recycled concrete?

KM - 95%
DIVERSION DIKE GENERAL NOTES:

1. ALL DIKES SHALL BE PLACED IN 8" LIFTS OR LESS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.

2. ALL DIVERSION DIKES SHALL HAVE POSITIVE DRAINAGE TO A CONTROLLED OUTLET.

3. DIVERTED RUNOFF FROM A PROTECTED OR STABILIZED AREA SHALL HAVE ITS OUTLET FLOW DIRECTED TO AN UNDISTURBED STABILIZED AREA OR INTO A LEVEL SPREADER OR GRADE STABILIZATION STRUCTURE.

4. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.

5. FOR GRADIENTS LESS THAN 2 PERCENT AND VELOCITIES LESS THAN 6 FEET PER SECOND, THE MINIMUM REQUIRED CHANNEL STABILIZATION SHALL BE GRASS, EROSION CONTROL MATS OR MULCHING. FOR GRADIENTS IN EXCESS OF 2 PERCENT OR VELOCITIES EXCEEDING 6 FEET PER SECOND, STABILIZATION IS REQUIRED IN THE FORM OF TURF REINFORCEMENT MATS (OR A LAYER OF CRUSHED STONE OR RIP-RAP WITH APPROPRIATE SIZE, GRADATION, AND THICKNESS AS SPECIFIED IN THE SWPPP).

6. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP.

Provide edits/additions below:

KM - Bring in 2.6 from iSWM to combine

KM - at max velocity? Add info from 202.7.1
CT - Assume this means 3” to 5” depth

KM - is this option 2?

KM - Anchors in lieu of rock?
1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.

2. THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE, AND FABRIC SHALL BE OVERLAPPED A MINIMUM OF 12".

3. THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF TYPE 'A' RIP RAP, OR TOED-IN 6" WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED TO A DEPTH OF 4 INCHES.

4. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 6-INCH WIRE STAPLES ON 2-FOOT CENTERS ON BOTH EDGES AND SKIRTS.

5. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 6" TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.

6. THE DIKE STRUCTURE SHALL BE 6 GA. 6" X 6" WIRE MESH, 18" ON A SIDE.

7. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.

8. THE FILTER DIKE SHALL BE REMOVED WHEN FINAL STABILIZATION IS ACHIEVED OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED.

9. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES APPROXIMATELY 6-INCHES IN DEPTH. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
CT - pipe spacing 24” minimum?

KM - I've never seen these used like this

KM - Any changes?

KM - Figure 3.15, 202.10

KM - revised to filter tube

NOTE: SAND BAG CHECK DAM CONSTRUCTION AND PLACEMENT SHALL BE IN ACCORDANCE WITH THE SPACING, CROSS-SECTION, AND PROFILE VIEWS OF THE ROCK CHECK DAM IN DRAWING 1060A.
1. When a sandbag is filled with material, the open end of the sandbag should be stapled or tied with nylon or poly cord.

2. Sandbags should be stacked in at least three rows abutting each other, and in staggered arrangement.

3. The base of the check dam should have at least 3 sandbags. These can be reduced to 2 and 1 bag in the second and third rows respectively.

4. For each additional 6" of height, an additional sandbag must be added to each row width.

5. The sandbag check dam shall be inspected as specified in the SWPPP and shall be reshaped or replaced as needed. Repairs shall be made for washout, construction traffic damage, etc.

6. When silt reaches a depth equal to one-third of the height of the check dam or one foot, whichever is less, the silt shall be removed and disposed of at an approved site and in such a manner as to not create a siltation problem.

7. When the site has achieved final stabilization or another erosion or sediment control device is employed, the check dam and accumulated silt shall be removed and disposed of in an approved manner.

Provide edits/additions below:

JCI - Is this detail ever used? I have only used the rock check dams.

MP- We have only used the rock check dams. Easier to remove after construction is complete.

KM - Revise to filter tube
JCI - Is the 4' min for the filter fabric?

KM - I don't understand this detail. Need plan review?

JCI - Water surface of top of bank?

CT - 1' minimum

KM - where is the outlet?