Proposed Revisions to Appendix B Standard Details
January 18, 2017 Draft

As part of the Phase 1 updates to the Design and Construction Standards, Clean Water Services will update the standard details found in Appendix B. Proposed changes to the drawings are summarized below and in the attached side-by-side comparison. The water quality drawings (700-790) are under review for content changes.

The proposed changes include minor content revisions to reflect existing practice and current construction techniques and materials. These minor content revisions include updating the manhole base from poured-in-place to pre-cast; removing cone sections from manholes when relevant; replacing galvanized manhole steps with polypropylene plastic; and removing the requirement for steps from all storm catch basins and inlets (with the exception of CG-48 manholes). In the side-by-side comparison the existing drawing is shown on the left side of each page. The proposed drawing, with changes noted by the red text, is shown on the right side of each page.

In addition to the minor content changes, drafting changes will be made to drawings 10 through 940. These changes standardize the layout, including text font and type and line type and weight. Hatch patterns that indicate different materials are modified to improve legibility.

Standard drawings included in the attached side-by-side comparison

Manholes and Appurtenances

<table>
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<tr>
<td>30</td>
<td>“Manhole Connections” (previously #20)</td>
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<tr>
<td>40</td>
<td>“Shallow Flat Top Manhole”</td>
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<tr>
<td>60</td>
<td>“Mechanical Inside Drop Manhole”</td>
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<tr>
<td>70</td>
<td>“Partition Inside Drop Manhole” (DELETED)</td>
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<td>“Open Inside Drop Manhole”</td>
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<td>90</td>
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<td>130</td>
<td>“Watertight Manhole Frame and Cover”</td>
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<td>240</td>
<td>“Water Quality Manhole (Mechanical)” (DELETED)</td>
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<tr>
<td>250</td>
<td>“Water Quality Manhole”</td>
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Pipes

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<tr>
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<th>Description</th>
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<tr>
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<td>“Standard Cleanout”</td>
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<tr>
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<td>“Side Sewer/ Side Storm Pipeline”</td>
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<td>540</td>
<td>“Indexed PVC Gasketed Saddle” (DELETED)</td>
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<td>590</td>
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<td>“Bore Detail”</td>
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<td>620</td>
<td>“Creek Crossing Restoration”</td>
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Erosion Control

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<tr>
<td>810</td>
<td>“Plastic Sheeting”</td>
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<td>815</td>
<td>“Pipe Slope Drain”</td>
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<td>820</td>
<td>“Outlet Protection”</td>
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<td>845</td>
<td>“Check dam Bio-Filter Bag”</td>
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<td>880</td>
<td>“Wattles”</td>
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<td>885</td>
<td>“Wattles Single Family Application”</td>
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<td>“Filter Berm Rock/Compost”</td>
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<td>900</td>
<td>“Inlet Protection Type 1” (DELETED)</td>
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<td>905</td>
<td>“Inlet Protection Type 2” (DELETED)</td>
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<td>920</td>
<td>“Inlet Protection Type 6”</td>
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Storm Structures

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<th>Description</th>
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<tr>
<td>300</td>
<td>“Gutter &amp; Curb Inlet Catch Basin (CG-2)”</td>
</tr>
<tr>
<td>340</td>
<td>“Inlet Catch basin (CG-48)”</td>
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NOTES:
1. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-410 AND APPLICABLE PROVISIONS OF STANDARD MANHOLE DRAWING NO. 013.
2. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-445.

ADDED NOTE:
1. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-410 AND APPLICABLE PROVISIONS OF STANDARD MANHOLE DRAWING NO. 013.
2. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-445.
3. ALL POURED IN-PLACE CONCRETE SHALL HAVE A 28 DAY MINIMUM OF 3000 PSI AND A MINIMUM OF 5" THICKNESS.

ADDED EXAMPLE OF A MH SECTION JOINT

JOINT DETAIL WILL VARY BY MANUFACTURER

SHOWED CHANNEL, SHELF AND AGG BASE REQUIREMENT.

SHOWED A POUR-IN-PLACE BASE WITH CHANNEL, SHELF, WITH THE MIN OVERLAP FOR FIRST BARREL SECTION AND AGG BASE REQUIREMENT.

THE EXISTING STANDARD DRAWING # 30 LABEL "PRECAST RUBBER GASKET MANHOLE" HAS BEEN MODIFIED AND LABEL AS STANDARD DRAWING # 20 "MANHOLE BASE".

PRE CAST RUBBER GASKET MANHOLE

MANHOLE BASE
NOTES:
ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-476 AND APPLICABLE PROVISIONS OF STANDARD DRAWING NO. 010.

ENCAPSULATED RUBBER GASKET

PVC PIPE

Sanded Bell Fitting

5" Minimum

1/8" Slip

PIPE 0.5

PIPE 0.25

Concrete pipe 3/4" Compacted Base Rock

Construct channel and shelf in field.

12" Minimum of 3/4" Compacted Base Rock

KOR-N-SEAL BOOT

REMOVED BELL SECTION OF PIPE FOR CLARIFICATION AND SHOWED THE GROUT AREA.

ENCAPSULATED RUBBER GASKET

PVC PIPE

Sanded Bell Fitting

5" Minimum

1/8" Slip

Construct channel and shelf in field.

12" Minimum of 3/4" Compacted Base Rock

KOR-N-SEAL BOOT

THE EXISTING STANDARD DRAWING #20 "PRECAST CONCRETE MANHOLE BASE" HAS BEEN MODIFIED AND LABEL AS: STANDARD DRAWING #30 "MANHOLE CONNECTIONS".

DRAWN THE CHANNEL AND STEPS.

PVC SANCED BELL
NOTES:
1. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-413.
2. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-419 AND APPLICABLE PROVISIONS OF STANDARD MANHOLE DRAWING NO. 210.
3. CENTER OPENING FLAT TOP REQUIRED.

SHALLOW FLAT TOP MANHOLE

RUBBER GASKET FLAT TOP (OPTIONAL)

RUBBER GASKET FLAT TOP REINFORCEMENT OR STANDARD MANHOLE FLAT TOP REINFORCEMENT

#6 BAR AROUND OUTSIDE OF OPENING
#6 DIAGONALS BOTH SIDES OF OPENING
#6" O.C. BOTH WAYS

RUBBER GASKET FLAT TOP W/ REINFORCEMENT OR STANDARD MANHOLE FLAT TOP W/ REINFORCEMENT

#6 BAR AROUND OUTSIDE OF OPENING
#6 DIAGONALS BOTH SIDES OF OPENING
#6" O.C. BOTH WAYS

6" MINIMUM OVERLAY

12" OF 3/4" COMPACTED BASE ROCK

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DRAWING NO. 040
REVISED 02-03

SHALLOW FLAT TOP MANHOLE

RUBBER GASKET FLAT TOP (OPTIONAL)

RUBBER GASKET FLAT TOP REINFORCEMENT OR STANDARD MANHOLE FLAT TOP REINFORCEMENT

#6 BAR AROUND OUTSIDE OF OPENING
#6 DIAGONALS BOTH SIDES OF OPENING
#6" O.C. BOTH WAYS

RUBBER GASKET FLAT TOP W/ REINFORCEMENT OR STANDARD MANHOLE FLAT TOP W/ REINFORCEMENT

#6 BAR AROUND OUTSIDE OF OPENING
#6 DIAGONALS BOTH SIDES OF OPENING
#6" O.C. BOTH WAYS

6" MINIMUM OVERLAY

12" OF 3/4" COMPACTED BASE ROCK

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DRAWING NO. 040
REVISED 12-16
**Mechanical Inside Drop (Optional)**

- **Plumb End**: Plug end as required.
- **Pipe Length**: As required.
- **Tee Fitting**: Tee fitting for drop assembly.
- **Inflow Pipe**: Inflow pipe to manhole.
- **Water Tight**: Watertight seal.
- **Wall**: Manhole wall.
- **Curve**: 45 degree bend.
- **Crouch to Centerline of Bend**.

**Notes:**
1. Pipe and fittings shall be same size as inflow pipe to manhole.
2. Pipe and fittings for drop assembly shall be ductile iron and ASTM A250, CSA-611 or PVC/PE ASTM 3034 SDR 35.

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**Specifications**
1. Clamp and brackets is type 304 stainless steel, 11 gauge (316c).
2. 3/8" stainless steel 11 gauge.
3. Replacement clamp/skewet and anchor or approved equivalent.

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**Anchor Detail**

**Mechanical Inside Drop (Optional)**

**Clamp Detail**
OPEN INSIDE DROP MANHOLE

PIPE PROTECTING SURFACE OF MANHOLE WALL IS NOT ALLOWED.

OPEN INSIDE DROP WITH BEAVER SLIDE

2. INSIDE DROP PIPE TO EXTEND A MINIMUM OF "I" BEYOND SHELF.

OPEN INSIDE DROP FOR LARGE DIAMETER PIPE

CHANGED THE MAXIMUM FALL REQUIREMENT FROM INLET.
MATERIALS:

GALVANIZED:
- #6 (3/4" DIA.) GALVANIZED DEFORMED REINFORCING BAR.
- REINFORCING BAR CONFORMING WITH ASTM A-615 GRADE 60.
- GALVANIZED CONFORMING WITH ASTM A-123.

PLASTIC:
- MUST CONFORM WITH ASTM C-478.
- STEEL REINFORCING BAR MINIMUM 1/2" GRADE 60.
- MEETING REQUIREMENTS OF ASTM A-615 ENCAPSULATED WITH INJECTION MOLDED COPOLYMER POLYPROPYLENE WITH SERRATED SURFACES.

NOTES:
1. ALL STEPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
2. MANHOLE STEPS MUST BE TIGHT AND FIRMLY EMBEDDED.
3. ALL STEPS WITHIN A MANHOLE SHALL BE OF THE SAME DESIGN, TYPE, AND SIZE. (MIXING OF UNMATCHED STEPS IS NOT PERMITTED).

DELETED GALVANIZED STEPS DETAIL AND THE NOTES FOR GALVANIZED STEPS.

MATERIALS:

PLASTIC:
- MUST CONFORM WITH ASTM C-478.
- STEEL REINFORCING BAR MINIMUM 1/2" GRADE 60.
- MEETING REQUIREMENTS OF ASTM A-615 ENCAPSULATED WITH INJECTION MOLDED COPOLYMER POLYPROPYLENE WITH SERRATED SURFACES.

DRAWING NO. 100
REvised 02-08
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DRAWING NO. 100
REvised 12-16
CleaNWATeR SeRVICeS
REVISED DETAIL. REPLACED OLD WATER TIGHT MANHOLE FRAME AND COVER WITH COMPOSITE FRAME AND COVER.

WATERTIGHT MANHOLE RING

FRAME WILL BE ATTACHED TO THE MANHOLE TOP/CONE SECTION BY USING A "TIE HEAD" ANCHOR (OR EQUAL) THAT IS A MIN 1-1/4" O.D. W/S. STEEL WASHER 3/32" THICK. IF GRADE RINGS NEED TO BE INSTALLED, A HOE WILL BE CITED THROUGH THE RING SO THE BOLT CAN BE ATTACHED TO TOP SECTION.

SECTION A-A

NOTE: WATERTIGHT/TAMPER PROOF MANHOLE FRAME AND COVER SHALL BE USED IN ALL EASEMENT AND OFF STREET AREAS.

SECTION B-B

NOTE: WATERTIGHT/TAMPER PROOF MANHOLE FRAME AND COVER SHALL BE USED IN ALL EASEMENT AND OFF STREET AREAS.

BOLT-DOWN DETAIL

1. BOLT FEATURES A DOMED HEAD WITH 5 EQUALLY SPACED SLOTS RUNNING HORIZONTALLY AROUND THE BOLT HEAD.
2. STANDARD BOLT SIZES ARE 14 MM COARSE THREADS WITH A FLAT MACHINED ON TWO SEES TO ENGAGE PADDLE.
3. THE PADDLE IS DIE CAST FROM 304 STAINLESS STEEL AND ALSO AVAILABLE IN BOTH STANDARD CAYSO SOCKET DESIGN, OR EXTENDED SUCCEEDED CONFIGURATION.
4. THE BOLT AND PADDLE WILL BE ASSEMBLED USING TWO STAINLESS STEEL 14 M M NUTS. THE BOLT NUT IS A STANDARD NUT THAT WILL BE TORQUED TO 50 FT. LBS. TO GIVE THE DESIRED TENSION ON THE BOLT. A SECOND WINDUP LOCK NUT IS USED AS A JAM NUT AND TORQUED TO 50 FT. LBS. STAINLESS STEEL WASHERS ARE USED TO PROVIDE CONSISTENT TURNING RESISTANCE.
5. A 0-7/8 STAINLESS STEEL SET SCREW SET IN A THREADED HOLE IN THE COVER POSSIBLY FOR A STOP AT 1/3 TURN OF OPERATION.
6. THE BOLT WILL BE OPERATED BY MEANS OF A SPECIAL MADE OPENING KEY CONSISTING OF A SPECIAL SOCKET ATTACHED TO A T HANDLE USED TO BOTH TURN THE BOLT AND LIFT OUT THE COVER.
7. ONE SET OF REPLACEMENT OPENING KEYS WILL BE PROVIDED TO CLEAN WATER SERVICES AT TIME OF INSTALLATION.
8. THE BOLT HEAD IS PROTECTED BY A WEATHER RESISTANT PLASTIC DESIGNS CAP. THE CAP IS INCLUDED WITH EACH LOCK.

WATERTIGHT MANHOLE FRAME AND COVER

DRAWING NO. 130 REvised 02-03

WATERTIGHT MANHOLE FRAME AND COVER

DRAWING NO. 130 REvised 12-16

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WATER QUALITY MANHOLE (MECHANICAL) DELETED

WATER QUALITY MANHOLE (MECHANICAL)
INLET CATCH BASIN (CG-48)

NOTES:
1. ALL FABRICATED METAL PARTS SHALL BE NEW STRUCTURAL ASTM A-36 STEEL AND BE HOT-DIPPED GALVANIZED AFTER FABRICATION.
2. ALL Poured IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI AND A SLUMP OF 2" TO 4".
3. INSTALL STRUCTURE ON MINIMUM OF 8" OF 3/4" TO 0" COMPACTED BASE MATERIAL.
4. INSTALL STRUCTURE ON MINIMUM OF 8" OF 3/4" TO 0" COMPACTED BASE MATERIAL.
5. 12" MAXIMUM ALLOWED WITH DISTRICT OR CITY APPROVAL TO AVOID CONFLICTS WITH EXISTING UTILITIES.

REMOVED REQUIREMENT OF HAVING STEPS IN CATCH BASIN.
1. All storm and sanitary service laterals shall be marked on the top face of curb as follows:
   - Storm drain laterals: "0"
   - Sanitary sewer laterals: "5"

2. Letters shall have 5" max width and a max height of 4".

3. Letter shall be centered on top face of curb.

CURB STAMP DETAIL

ADDED DETAIL

1. For new construction all side sewer and side storm pipeline connections to 8" and 10" mains shall be with factory-fabricated "TEE" fittings unless otherwise approved.

2. Pipe material shall be one of the following:
   - PVC ASTM D3034, ASTM C-900
   - Concrete ASTM C-304
   - Ductile Iron Class 50

3. All pipe shall be color coded:
   - Green for sanitary sewer
   - White for storm sewer

DELETED CONCRETE AS A PIPE MATERIAL

1. For new construction all side sewer and side storm pipeline connections to 8" and 10" mains shall be with factory-fabricated "TEE" fittings unless otherwise approved.

2. Pipe material shall be one of the following:
   - PVC ASTM D3034, ASTM C-900
   - Concrete ASTM C-304
   - Ductile Iron Class 50

3. All pipe shall be color coded:
   - Green for sanitary sewer
   - White for storm sewer

MINIMUM SLOPE FOR 5" PIPE = 0.010
MINIMUM SLOPE FOR 4" PIPE = 0.020
MINIMUM SLOPE FOR 3½″ PIPE = 0.050
MINIMUM SLOPE FOR 3¼″ PIPE = 0.020
MINIMUM SLOPE FOR 2½″ PIPE = 0.010
MINIMUM SLOPE FOR 2″ PIPE = 0.005
MINIMUM SLOPE FOR 1½″ PIPE = 0.005
MINIMUM SLOPE FOR 1″ PIPE = 0.004
MINIMUM SLOPE FOR 3/4″ PIPE = 0.003
MINIMUM SLOPE FOR 1/2″ PIPE = 0.002
MINIMUM SLOPE FOR 1/4″ PIPE = 0.001
1. PVC hub shall conform to ASTM 2344, size 3S drive into center of rubber sleeve after sleeve is placed in hole.

2. Stainless steel band secures upper half of rubber sleeve to the PVC hub. Stainless steel band shall be 300 series, 1/4" band width, cadmium plated carbon steel, and attached with hex head slotted screw.

3. Complete rubber sleeve includes a molded segment that holds it in place.

**NOTE:**

1. All Inserta-Tee holes shall be machine drilled and cored.
2. Inserta-Tee are allowed in newly constructed sewer mains 12" and larger inside diameter (i.d.).
3. Sewer main shall be two sizes (nominal i.d.) larger than the Inserta-Tee.
4. Host pipe shall be minimum .35" wall thickness.

**REMOVED .35 WALL THICKNESS REQUIREMENT**

**EDITED:**

CLARIFIED RUBBER SLEEVE TO MATCH CURRENT SLEEVE

**EDITED:**

1. All Inserta-Tee holes shall be machine drilled and cored.
2. Inserta-Tee are not allowed in newly constructed sewer mains 10" in diameter or smaller inside diameter (i.d.).
3. Sewer main shall be two sizes (nominal i.d.) larger than the Inserta-Tee.
INDEXED PVC GASKETED SADDLE

NOTES:
1. INDEXED PVC GASKETED SADDLE SHALL CONFORM TO ASTM 3034 SDR35.
2. PVC COMPOUNDS SHALL CONFORM TO ASTM D1784 WITH CELL CLASS OF 12454-B/C OR 12544-A/C.
3. ALL ELASTOMERIC SEALS (RUBBER GASKETS) SHALL CONFORM TO ASTM F477.
4. INDEXED PVC GASKETED SADDLE SHALL BE INSTALLED WITH RUBBER GASKETS APPROVED FOR THE SPECIFIED WALL CONFIGURATION (PROFILE OR SMOOTH WALL).
5. STAINLESS STEEL BANDS SHALL BE 300 SERIES, 3/8" BAND WIDTH, CROMIUM PLATED, CARBON STEEL AND ATTACHED WITH HEX HEAD, SLOTTED SCREWS.
6. INSERTION HOLE SHALL BE CIRCULAR.
7. INDEXED SADDLE SHALL BE INSERTED A MINIMUM OF 1" FROM OUTSIDE WALL OF M/C PIP AND SHALL NOT PROTRUDE BEYOND THE INSIDE WALL OF THE M/C PIP.

INDEXED PVC GASKETED SADDLE

DRAWING NO. 540  REVISED 12-08

INDEXED PVC GASKETED SADDLE

DRAWING NO. 540  REVISED 12-16
TRENCH BACKFILL DETAILS

NOTE:
ALL COMPACTION REQUIREMENTS PER AASHTO T-69 AND DOT/APA SPEC 00406.

1/2 PIPE O.D. PLUS 6" MIN. FOR PIPE Smaller THAN 18"
1/2 PIPE O.D. PLUS 8" MIN. FOR PIPE 18" AND LARGER

TRENCH STABILIZATION:
RECOMMENDED TRENCH STABILIZATION SHALL BE SPREAD SEPARATELY
AND PLACED PRIOR TO PLACEMENT OF BACKFILL MATERIAL.

1/2 PIPE O.D. PLUS 4" MIN. FOR PIPE Smaller THAN 18"
1/2 PIPE O.D. PLUS 6" MIN. FOR PIPE 18" AND LARGER

MOUND EXCESS NATIVE MATERIAL FOR SETTLEMENT

12" NATIVE TOP SOIL IF TOP SOIL EXISTED PRIOR TO EXCAVATION

1/2 PIPE 0.0 PLUS 6"
NOTE:
1. TEE CUT TO BE DONE AFTER EXCAVATION AND BACKFILL OF TRENCH.
2. SEE STD. DRAWING NO. 590 FOR BEDDING, PIPE ZONE, AND TRENCH BACKFILL.

INCREASED WIDTH OF T-CUT TO COMPLY WITH LOCAL GOVERNMENT REQUIREMENTS.

NOTE:
1. TEE CUT TO BE DONE AFTER EXCAVATION AND BACKFILL OF TRENCH.
2. SEE STD. DRAWING NO. 590 FOR BEDDING, PIPE ZONE, AND TRENCH BACKFILL.
PLASTIC SHEETING

NOTES:
1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. BARRIER REQUIRED AT TOE OF STOCKPILE
3. COVERING MAINTAINED TIGHTLY IN PLACE
   BY USING SANDBAGS OR TIRES ON ROPES WITH A
   MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.

PLASTIC SHEETING

Added text to call out note 3

Added note

Clarified type of barrier.
FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

NOTE:
1. BAGS ONLY REQUIRED WHEN DISCHARGING SEDIMENT LADEN WATER.
2. STAKING OF BAGS REQUIRED WITH EITHER METHOD USING (2) 1" X 2" WOOD STAKES OR APPROVED EQUAL PER BAG.

NOTE:
1. END BAGS ONLY REQUIRED WHEN DISCHARGING SEDIMENT LADEN WATER.
2. STAKING OF BAGS REQUIRED WITH EITHER METHOD USING (2) 1" X 2" WOOD STAKES OR APPROVED EQUAL PER BAG.
PLACE WATTLE ALONG SLOPE CONTOURS.

WATTLE

SECTION

RICE, COCONUT OR EXCLUDER WATTLE

STAGGER JOINTS

STAKING SPACING 4'-6"

FLOW

STAKING SPACING 4'-6"

FLOW

FLOW

TIGHTLY ABUT ADJACENT WATTLE

PLAN VIEW

NOTES:

1. STAKING SPECIFICATIONS:
   a. 1" x 3" wooden stakes
   b. Additional stakes may be installed on down-hill side of wattles, on steep slope or highly erodible soil.
   c. Spacing in accordance with detail 940.

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

DECREASED REQUIRED DEPTH OF WATTLE.

STAGGER JOINTS

MINIMUM 1' OVERLAPPING ON UPHILL SIDE

PLAN VIEW

NOTES:

1. STAKING SPECIFICATIONS:
   a. 1" x 3" wooden stakes
   b. Additional stakes may be installed on down-hill side of wattles, on steep slope or highly erodible soil.
   c. Spacing in accordance with detail 940.

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

MODIFIED TO SHOW INSTALLATION WITH CONTOURS AND OVERLAP BY 1 FOOT ON THE UPHILL SIDE.
NOTE:
1. Staking of wattles required 4' on center using 1"x2" wood stakes or approved equal per wattle.
2. Wattles are used as alternate for sediment fence following installation of sidewalk on single family construction only.
3. Alternate materials may be used as approved by district or city.

WATTLES
SINGLE FAMILY APPLICATION

DRAWING NO. 885  REVISED 12-06

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

ADDED FLOW LINES

MODIFIED WATTLES ALONG DOWNSLOPE OF PROPERTY LINE TO SHOW THE 1' MIN OVERLAP

CHANGED THE NOTES.

WATTLES
SINGLE FAMILY APPLICATION

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE
NOTES:
1. DIRECT THE OUTLET SIDE OF THE ROCK FILTER BERM AGAINST A STABILIZED AREA, SUCH AS VEGETATION OR ROCK.
2. PLACE A MIN. OF 4' INTO THE EXISTING GROUND/EROSION BERM.
3. USE ROCK FILTER BERM ON 3:1 OR FLATTER SIDE SLOPES WITHIN THE Safety CLEAR ZONE SIZE 6:1 OR FLATTER ON SIDE SLOPES.
4. PLACE COMPOST FILTER BERMS ALONG OR ON THE GROUND CONTOUR WITH THE ENDS TURNED UP SLOPE.
5. PRIOR TO INSTALLING A COMPOST FILTER BERM IN A VEGETATED AREA, ENSURE THAT THE VEGETATION IS CUT TO A HEIGHT OF NO GREATER THAN 3" PRIOR TO INSTALLATION.
6. COMPOST HAS NOT BEEN CHEMICALLY TREATED AND IS DE-FOSSIL PLANT-BASED, NON-FOSSIL PLANT MATERIAL. ANIMAL WASTE IS NOT ALLOWED.

FILTER BERMS
ROCK/BRUSH

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND MITIGATION AND DESIGN MANUAL.

FILTER BERMS
ROCK/COMPOST

REPLACED THE BRUSH BERM WITH COMPOST FILTER BERM. ADDED DIMENSIONS.

CLARIFIED NOTES AND ADDED NOTES FOR COMPOST FILTER BERM.
INLET PROTECTION TYPE 2

DELETED
NOTE:

1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS; SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

INLET PROTECTION TYPE 5

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DRAWING NO. 920 REVISED 12-06

CHANGED TEXT

NOTE:

1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS; SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

INLET PROTECTION TYPE 5

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DRAWING NO. 920 REVISED 12-16