NOTES:
1. RIIIPRAF IS TO BE PLACED PRIOR TO PLACING PIPE.
2. PLACE DELAWARE NO.3 STONE UNDER PIPE.
3. ELEVATION (EL) SHOULD NOT BE HIGHER THAN PIPE INVERT.
4. REFER TO THE PIPE ENERGY DISSIPATOR SCHEDULE ON THE CONSTRUCTION PLANS FOR THE VALUE OF DIMENSION VARIABLES.
ALL DEAD, BROKEN, & CROSSING BRANCHES SHALL BE PRUNED OFF FOLLOWING INSTALLATION.

ROOTBALL SHALL BE SET FLUSH TO GRADE OR 1'-0" TO 2'-0" ABOVE GRADE IF SOILS ARE SLOW TO DRAIN, DO NOT COVER THE TOP OF THE ROOTBALL WITH SOIL.

ALL SOIL SHALL BE EXCAVATED FROM THE PIT, MIXED WITH APPROVED AMENDMENTS AND USED AS BACKFILL DURING INSTALLATION OF SHRUB.

Mulch in accordance with specifications. Do not place mulch against the shrub stems.

Remove burlap & wire baskets to 1/3 of the rootball. Do not leave burlap, basket, or rope debris in the pit.

Root ball shall be placed on tamped or undecayed soil.

Notes:
1. Base of planting pit shall be a minimum width of twice the root ball size and a maximum of three times the root ball size.
2. Shrubs shall be installed in masses of no less than 3 plants. A minimum of 6'10"00 width is required from the back of curb to the edge of sidewalk for installation of shrubs.
3. All pruning shall be done by an L/JA certified arborist, certified nursery professional, or under the direction thereof. Do not heavily prune shrubs at planting.
4. Auger holes shall be hand dug to final width and to eliminate glazing.
5. All shrub masses shall be mulched as one continuous bed.

Roadside shrub planting detail.
DO NOT PRUNE THE DOMINANT LEADER OR TERMINAL BUDS OF THE CROWN.

NOTES:
1. ALL PRUNING SHALL BE DONE BY OR UNDER THE DIRECTION OF AN I.S.A. CERTIFIED ARBORIST OR CERTIFIED NURSERY PROFESSIONAL. DO NOT HEAVILY PRUNE TREES AT PLANTING.
2. ALL DEAD, BROKEN, & CROSSING BRANCHES SHALL BE PRUNED OFF FOLLOWING INSTALLATION.
3. BASE OF PLANTING PIT SIZE SHALL BE A MINIMUM WIDTH OF TWICE THE ROOT BALL SIZE AND A MAXIMUM OF THREE TIMES THE ROOT BALL SIZE.
5. WHEN PLANTING TREES ALONG SIDEWALKS, THE TREE SHALL BE LIMED TO 7' (2100) FOR PEDESTRIAN CLEARANCE.

STAKE & GUY TREES. GUY WIRE, STAKES, & RUBBER HOSE SHALL BE AS SPECIFIED IN SECTION 1ST.

SET ROOT BALL FLUSH TO GRADE OR +/-5" TO +/-5" ABOVE GRADE. IF SOILS ARE SLOW TO DRAIN, PLANT TREES SUCH THAT THE TRUNK FLARE IS VISIBLE. ANY TREE WHERE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.

TAMP SOIL AROUND THE ROOT BALL BASE WITH FOOT PRESSURE SO ROOT BALL DOES NOT SHIFT.

REMOVE BURLAP AND BASKETS TO 1/2 OF THE ROOT BALL. DO NOT BURY EXCESS BURLAP. HOPE OR REMNANTS OF BASKET IN THE PLANTING HOLE.

MULCH IN ACCORDANCE WITH SPECIFICATIONS. DO NOT PLACE MULCH AGAINST THE TRUNK.

ALL SOIL SHALL BE EXCAVATED FROM THE PIT, MIXED WITH APPROVED AMENDMENTS AS PER SPECIFICATIONS AND USED AS BACKFILL. DURING INSTALLATION OF TREES, PLACE ROOT BALL ON TAMPERED OR UNEXCAVATED SOIL.
NOTES:
1. SEE PLANT LIST FOR SPACING CO.

PERENNIAL/GROUND COVER
FINISHED GRADE
3" (75) MULCH - NOT TO COVER LEAVES
ROOT MASS
6" (150) PREPARED SOIL MIX, AS PER SPECIFICATION
SUBGRADE TILLED TO 6" (150) DEPTH

PLAN VIEW

SECTION VIEW

PERENNIAL/GROUNDCOVER PLANTING DETAIL
LONGITUDINAL STEEL: 6 CAGE 14.89 VR WIRE SPACED 3" (76.2) C.C., 26" (660) LONG (TYP.)

TRANSVERSE STEEL: 7 CAGE 14.89 VR WIRE SPACED 8" (203) C.C.

SECTION A-A

TOP DETAIL

NOTES:
1. LONGITUDINAL STEEL SHALL BE HELD IN PLACE BY CRADLES.
2. LETTERS AND CROSS TO BE COUNTERSUNK IN TOP OF MARKER 1/4" (6.35).
SHARED USE PATH INTERSECTION

NOTES:
1. THE 4"(100) CONCRETE SHARED-USE PATH SHALL BE FINISHED TO INCLUDE A TEXTURED WARNING SURFACE BY USING A JOINT STRIPE TO PROVIDE A 1/3" (8MM) DEEP X-JOINT AT 6"(150) O.C. PAYMENT FOR INSTALLING THE GROOVED FINISH SHALL BE INCIDENTAL TO THE SIDEWALK CONSTRUCTION.
2. FOR 8' (2450) AND 10' (3050) PATH WIDTH, THE OUTSIDE DIMENSION FROM CENTER OF BOLLARD TO EDGE OF PATH SHALL BE 2' (610) AND 3' (915) RESPECTIVELY.
4. STEEL TUBE TO EXTEND 1/3" (8MM) ABOVE GROUND WITH CONCRETE TO SLOPE AWAY FROM TUBE TO KEEP WATER AND SEDIMENT FROM DRAINING INTO TUBE.

REMOVABLE BOLLARD

DETAIL A-A

BOLLARD DETAILS

DELTAWARE DEPARTMENT OF TRANSPORTATION

STANDARD NO. M-3 (2004) SHT. 1 OF 1

APPROVED 

Bollard Details

RECOMMENDED 

N. T. S.
8' (2450) OR 10' (3050)
DELAWARE
DEPARTMENT OF TRANSPORTATION

FRONT VIEW

CONCRETE OR GROUT

EXISTING CONCRETE

ALTERNATE ANCHOR OPTION

SECTION VIEW

CONCRETE OR GROUT

EXISTING CONCRETE

BIKE RACK DETAILS

ISOMETRIC VIEW

4 BIKE INSTALLATION

DELTA RACK DETAILS

EXISTING CONCRETE

CONCRETE OR GROUT

SCALE 1:50 M.S.

DEPARTMENT OF TRANSPORTATION

DATE: 04/03/2007

APPROVED

DATE: 10/23/07

RECOMMENDED

DATE: 04/03/2007
WOOD RAIL FENCE DETAILS

SECTION A-A

TYPICAL JOINT DETAIL

NOTES:
1. All rail joints shall be centered at the posts.
2. All joints shall be attached with 3 - 12d nails and two adjacent rails shall not end on the same post.
3. Rails shall be flush to the posts at the end posts.
NOTES:

1. Actual pattern to be used shall be specified on the plans. Color is to be "brick red" unless otherwise noted on the plans.
2. Materials and pavement box vary depending on plans.
3. For crosswalk applications, 8" (200) white lines should be placed on both sides.
4. The patterns above are the preferred patterns available for sidewalk or crosswalk applications.

BRICK PAYER SIDEWALK DETAIL

NOTES:

1. All pavers are to be "brick red" unless otherwise specified on the plans. The pattern shall be specified on the plans.
2. Expansion joint may be needed on non-curbside of brick paver sidewalk if this is against building or other confining feature.
DELAWARE
DEPARTMENT OF TRANSPORTATION

P.C.C. PARKING BUMPER

STANDARD NO. M-8 (2007)  SHT. 1  OF 1

APPROVED

RECOMMENDED

8/01/07  10/23/07

SCALE: 1

ELEVATION

SECTION A-A
SLAB PLAN (WITH DOWEL AND TIE LOCATIONS)

NOTES:
1. TRANSVERSE JOINTS ARE PERPENDICULAR TO THE CENTERLINE OF THE PAVEMENT WHEN THE PAVEMENT IS STRAIGHT.
2. TRANSVERSE JOINTS ARE PERPENDICULAR TO A TANGENT LINE TO THE OUTSIDE ARC OF THE PAVEMENT WHEN THE PAVEMENT IS CURVED.
3. ALIGN THE TRANSVERSE JOINTS FOR ALL ADJACENT SLABS WITH EACH OTHER.
4. ABRUPT CHANGES IN PAVEMENT WIDTH MAY OCCUR ONLY AT THE TRANSVERSE JOINT LINE; LONGITUDINAL JOINTS SHALL BE CONTINUOUS WHENEVER POSSIBLE.
5. LONGITUDINAL JOINTS SHOULD NOT BE LOCATED WITHIN PROPOSED WHEEL PATHS. THE WHEEL PATH IS GENERALLY LOCATED 2' (600) INSIDE OF THE LANE EDGE LINE OR CENTERLINE.

DELAVARE
DEPARTMENT OF TRANSPORTATION

P.C.C. PAVEMENT

STANDARD NO. P-1 (2001) SHT. 1 OF 5

APPROVED: RECOMMENDED:

04/18/2001
NOTES:
1. AS DIMENSIONED, THE WIDTH OF THE TRANSVERSE SEALANT RESERVOIR IS APPLICABLE WHEN THE TEMPERATURE OF THE PAVEMENT SURFACE IS BETWEEN 60°F (16°C) AND 80°F (27°C). WHEN THE TEMPERATURE IS BELOW 60°F (16°C), THE SEALANT RESERVOIR SHALL BE CUT 1/2" (13) WIDER. WHEN THE TEMPERATURE IS ABOVE 80°F (27°C), THE SEALANT RESERVOIR SHALL BE CUT 1/4" (6) NARROWER.
2. "T" REFERS TO THE ACTUAL CONSTRUCTED SLAB THICKNESS.
3. TOLERANCE ON ALL JOINT SEALANT DETAIL DIMENSIONS SHOWN WITHOUT RANGES SHALL BE PLUS 1/6" (16) MINUS 0 (12).
4. THE TOP EDGES OF THE CONTACT SURFACES OF THE SEALANT MATERIAL ON BOTH SIDES OF THE JOINT RESERVOIR SHALL BE AT THE SAME ELEVATION.
5. TRANSVERSE JOINT MATERIAL SHALL BE PLACED BEFORE LONGITUDINAL JOINT MATERIAL. THE TRANSVERSE JOINT MATERIAL SHALL BE CONTINUOUS FOR THE FULL WIDTH OF ALL ADJACENT P.C.C. PAVEMENT SLABS.
6. LONGITUDINAL JOINT MATERIAL SHALL BE PLACED WITHOUT GAPS WHENEVER INTERRUPTED BY THE TRANSVERSE JOINT MATERIAL.
7. TRANSVERSE JOINT SEAL TO BE RECESSED 1/8" (3) TO 1/4" (6) BELOW THE TOP OF THE SLAB.
8. A 45° CHAMFER SHALL BE CUT 1/16" (1.6) TO 1/8" (3.2) DEEP AT THE TOP OF THE SLAB ALONG BOTH SIDES OF THE TRANSVERSE SEALANT RESERVOIR.
9. THE TOP EDGES OF THE COMPRESSION SEAL SHALL BE IN FULL CONTACT WITH THE SLAB SIDES.
10. JOINT AND SEALANT DETAILS

DELTAWS 
DEPARTMENT OF TRANSPORTATION 
P.C.C. PAVEMENT 
STANDARD NO. P-1 0260 
SHT. 2 OF 5 
APPROVED 
RECOMMENDED 
DATE: NOVEMBER 14, 2005 
DATE: NOVEMBER 16, 2005 
1/21/200
DOWEL & TIE BAR PLACEMENT TOLERANCES
**PLAN**

- Proposed locations for transverse joints shall exactly match the alignment of the final existing or relocated transverse joints in all immediately adjacent lanes.

**NOTES:**
1. When repairing existing transverse joints, the patch shall extend a minimum of 24" (600 mm) through the existing joint, which will relocate the joint.
2. Proposed locations for transverse joints, when not aligned with the final expected transverse joint locations in the immediately adjacent lanes, shall be offset a minimum of 24" (600 mm) from the aforementioned joints.
3. The longitudinal joint alignment shall be straight and continuous through the repaired area.

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**FULL DEPTH PATCH**
**SECTION A-A**

- Top of existing hot-mix pavement
- Top of existing P.C.C. slab
- Bottom of existing P.C.C. slab
- P.C.C. patch
- Additional P.C.C. patch required for undercut areas
- Dowel
- Sealant reservoir
- Grout retention disk
- Longitudinal joint
- Slab width

**SECTION B-B**

- Top of slab
- 0.5L
- 0.5T
- Dowel
- Sealant reservoir
- Grout retention disk
- Additional P.C.C. patch required for undercut areas
- P.C.C. patch
- Dowel support basket required for this application (refer to standard construction detail for P.C.C. pavement)

**SECTION C-C**

- Top of existing P.C.C. slab
- Bottom of existing P.C.C. slab
- Dowel
- Sealant reservoir
- Grout retention disk
- Additional P.C.C. patch required for undercut areas
- P.C.C. patch

**EXIST. HOT-MIX OVER P.C.C. PAVEMENT**

**EXIST. P.C.C. PAVEMENT**

**TRANSVERSE CONSTRUCTION JOINT USED ON JOINTS BETWEEN EXISTING PAVEMENT AND PATCH**

**FULL DEPTH PATCH**

- Varies 4" (100) - 8" (200)
- TYP. 6" (150) MAX
- 12" (300) TYP.

**DELAWARE DEPARTMENT OF TRANSPORTATION**

**P.C.C. PAVEMENT PATCHING**

**STANDARD NO. P-2 (2004)**

**APPROVED**

**RECOMMENDED**

**08/25/2004 1/01/05**
SEALANT DETAIL - LONGITUDINAL JOINT

SEALANT DETAIL - TRANSVERSE SAW-CUT JOINT

SEALANT DETAIL - TRANSVERSE CONSTRUCTION JOINT

NOTES:
1. AS DIMENSIONED, THE WIDTH OF THE TRANSVERSE SEALANT RESERVOIR IS APPROPRIATE WHEN THE TEMPERATURE OF THE PAVEMENT SURFACE IS BETWEEN 60°F (16°C) AND 80°F (27°C). WHEN THE TEMPERATURE IS BELOW 60°F (16°C), THE SEALANT RESERVOIR SHALL BE CUT ¥" (2) WIDER.
2. "T" REFERS TO THE EXISTING "AS-CONSTRUCTED" SLAB THICKNESS.
3. TOLERANCE ON ALL JOINT SEALANT DETAIL DIMENSIONS ShOWN WITHOUT TOLERANCES SHALL BE PLUS/­MINUS 0.50".
4. THE TOP EDGES OF THE CONTACT SURFACES OF THE SEALANT MATERIAL ON BOTH SIDES OF THE JOINT RESERVOIR SHALL BE AT THE SAME ELEVATION.

GROUT RETENTION DISK

D - DOWEL DIAMETER INCLUDING PROTECTING COATINGS, IF ANY

SEALANT DETAIL - TRANSVERSE SAW-CUT JOINT

SEALANT DETAIL - TRANSVERSE CONSTRUCTION JOINT

NOTES:
1. AS DIMENSIONED, THE WIDTH OF THE TRANSVERSE SEALANT RESERVOIR IS APPLICABLE WHEN THE TEMPERATURE OF THE PAVEMENT SURFACE IS BETWEEN 60°F (16°C) AND 80°F (27°C). WHEN THE TEMPERATURE IS BELOW 60°F (16°C), THE SEALANT RESERVOIR SHALL BE CUT ¥" (2) WIDER.
2. "T" REFERS TO THE EXISTING "AS-CONSTRUCTED" SLAB THICKNESS.
3. TOLERANCE ON ALL JOINT SEALANT DETAIL DIMENSIONS ShOWN WITHOUT TOLERANCES SHALL BE PLUS/­MINUS 0.50".
4. THE TOP EDGES OF THE CONTACT SURFACES OF THE SEALANT MATERIAL ON BOTH SIDES OF THE JOINT RESERVOIR SHALL BE AT THE SAME ELEVATION.

FULL DEPTH PATCH

DELWARE
DEPARTMENT OF TRANSPORTATION

P.C.C. PAVEMENT PATCHING


SHT. 3 OF 5

APPROVED

RECOMMENDED

DATE: 11/14/05

DATE: 5/12/05

DATE: 1/9/05
DOWEL & TIE BAR PLACEMENT TOLERANCES

VERTICAL TRANSLATION

HORIZONTAL TRANSLATION

LONGITUDINAL TRANSLATION

HORIZONTAL ROTATION

VERTICAL ROTATION

FULL DEPTH PATCH
NOTE: CLOSED CELL POLYETHYLENE FOAM SHALL BE THE SAME WIDTH AS THE JOINT AND 2'-0" (600MM) IN DEPTH. AFTER THE CONCRETE IN THE REPAIR AREA HAS ACHIEVED THE SPECIFIED STRENGTH, THE FOAM SHALL BE REMOVED AND REPLACED WITH BACKER ROD AND HOT-POUR SEALANT MEETING ALL APPLICABLE STANDARD DETAILS AND SPECIFICATIONS.

SECTION WITH SPALL ADJACENT TO JOINT

PARTIAL DEPTH PATCH

NOTE: WHEN X > 12'-0" (3600MM), THEN 1'-0" (250MM) AND POLYETHYLENE FOAM IS NOT USED. WHEN X ≤ 12'-0" (3600MM), THEN 1'-0" AND POLYETHYLENE FOAM IS USED.

DELAWARE
DEPARTMENT OF TRANSPORTATION

P.C.C. PAVEMENT PATCHING

STANDARD NO. P-2 (2001)  SHT. 5 Of 5

APPROVED

RECOMMENDED
NOTES:
1. TYPE 1 CONDUIT JUNCTION WELL SHALL BE PRECAST CONCRETE. AT LEAST ONE HOLE IN PRECAST WELLS WILL BE OF A 5 INCH DIAMETER COMPLETELY THROUGH THE WALL, UNUSED HOLES SHALL BE PLUGGED.

2. TYPE 2 AND TYPE 3 CONDUIT JUNCTION WELLS SHALL BE BRICK AND WILL CONFORM TO STANDARD SPECIFICATIONS FOR BRICK MASONRY. JOINTS SHALL BE CONCRETE TYPE.

3. TYPE 2 WELLS WILL BE A NOMINAL 4 INCH THICK. TYPE 3 WELL WILL BE A NOMINAL 8 INCH THICK.

4. TYPE 2 AND TYPE 3 CONDUIT JUNCTION WELLS SHALL NOT BE PLACED UNDER ANY TYPE OF PAVEMENT.

5. ALL CONDUIT JUNCTION WELLS CONSTRUCTED WITHIN PAVEMENT, SIDEWALKS, ETC. WILL BE CONSTRUCTED FLUSH WITH THE SURFACE OF THE SAME. INSTALLATION IN UNPAVED AREAS WILL BE CONSTRUCTED ABOVE GRADE AND GRADED TO DRAIN AWAY FROM CONDUIT JUNCTION WELL.
NOTES:
1. TYPE 4 CONDUIT JUNCTION WELL SHALL BE PRECAST CONCRETE. AT LEAST ONE HOLE IN PRECAST WELLS SHALL BE OF A 5" (125MM) DIAMETER COMPLETELY THROUGH THE WALL. Unused HOLES SHALL BE PLUGGED.
2. ALL CONDUIT JUNCTION WELLS CONSTRUCTED WITHIN PAVEMENT, SIDESWALKS, ETC. WILL BE CONSTRUCTED FLUSH WITH THE SURFACE OF THE SAME. INSTALLATION IN UNPAVED AREAS WILL BE CONSTRUCTED ABOVE GRADE AND GRADED TO DRAIN AWAY FROM CONDUIT JUNCTION WELL.

PLAN SYMBOL

DEL. 57 STONE

SECTION A-A

SECTION B-B
NOTES:

0. TYPE 5 CONDUIT JUNCTION WELL SHALL BE PRECAST CONCRETE. AT LEAST ONE HOLE IN PRECAST WELLS WILL BE OF A 5" (125) DIAMETER COMPLETELY THROUGH THE WALL, UNUSED HOLES SHALL BE PLUGGED.

2. ALL CONDUIT JUNCTION WELLS CONSTRUCTED WITHIN PAVEMENT, SIDEWALKS, ETC., WILL BE CONSTRUCTED FLUSH WITH THE SURFACE OF THE SAME. INSTALLATION IN UNPAVED AREAS WILL BE CONSTRUCTED ABOVE GRADE AND GRADED TO DRAIN AWAY FROM CONDUIT JUNCTION WELL.
ROUND BASE

- Under Ground Conduit Ends shall be capped with a galvanized threaded conduit plug unless connected to an existing conduit.
- 8 equally spaced (4 x 1") reinforcing bars.
- Equally spaced (4 x 1") reinforcing bars.
- Bolt circle diameter to be as directed by the engineer.
- Direction of load (mastarm or span).
- 2 1/2" x 16g conduit sweeps.
- Existing conduit.

SQUARE BASE

- Under Ground Conduit Ends shall be capped with a galvanized threaded conduit plug unless connected to an existing conduit.
- 8 equally spaced (4 x 1") reinforcing bars.
- Equally spaced (4 x 1") reinforcing bars.
- Bolt circle diameter to be as directed by the engineer.
- Direction of load (mastarm or span).
- Ground for pole to be attached to ground R5003/4" x 240°/160°.
- 2 1/2" x 16g conduit sweeps.
- Existing conduit.

Note: Base dependent on pole and equipment to be attached.

PLAN SYMBOL

DELAWARE DEPARTMENT OF TRANSPORTATION

POLE BASES

STANDARD NO. T-5 (2002) SHT. 1 OF 3

APPROVED RECOMMENDED

06/1/2002
NOTES:
1. UNDERGROUND CONDUIT ENDS SHALL BE CAPPED WITH A GALLANCED THREADED CONDUIT PLUG UNLESS CONNECTED TO AN EXISTING CONDUIT.
2. PLACE 2 EACH 6" (150MM) X 1/8" (3MM) P.V.C., SCHEDULE 40 (TYP) VENTS IN THE GROUT AS DIRECTED IN THE FIELD BY THE ENGINEER.
1 - #3 (14 ga) SPIRAL BAR, 504" (12800) LONG AT 8" (200) PITCH
8 - #5 (16 ga) BARS, 4" (1050) LONG

NOTES: 1. STUB POST TO BE SUPPLIED BY THE DEPARTMENT'S TRAFFIC, ENGINEERING, AND MANAGEMENT SECTION.

SECTION A-A

PLAN SYMBOL

DELAWARE DEPARTMENT OF TRANSPORTATION

SIGN FOUNDATION

STANDARD NO. T-7 (2002) SHT. 1 OF 1

APPROVED

RECOMMENDED

01/31/2002
NOTES:
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE CONDUIT AGAINST ANY POSSIBLE DAMAGE IN PAVING OPERATIONS.

2. THE WEATHERPROOF FITTING SHALL CONSIST OF A GALVANIZED ½" C80 COUPLING CONTAINING A STEEL THREADED REDUCING BUSHING ½" C80 TO ⅜" C80 AND A ⅜" C80 WATERTIGHT CONNECTOR FOR SERVICE ENTRANCE CABLE.

3. THE LEAD-IN WIRE SHALL BE RUN THROUGH THE RUBBER OF THE WEATHERPROOF FITTING.

DETAIL A - TYPICAL INSTALLATION UNDER INTEGRAL CURB AND GUTTER

DETAIL B - TYPICAL INSTALLATION UNDER CURBING

DETAIL C - TYPICAL INSTALLATION WITHOUT CURBING
1. Saw cuts for wire slot construction shall be extended beyond the corners so that the slot is full depth at turn points. A forty-five (45) degree angle shall be cut 12" (300) back from the point of the extended corners.
2. The diagonal cut shall be stopped approximately 2" (50) from the corner to prevent the triangular portion of the pavement from breaking.
3. A maximum of two loop detectors can be spliced to one lead-in cable. The detail illustrates the method of splicing two loop detectors (Loop #1 and Loop #2) to a lead-in cable.
4. Loop detector shall be centered in travel lane.
1. SAW CUTS FOR WIRE SLOT CONSTRUCTION SHALL BE EXTENDED BEYOND THE CORNERS SO THAT THE SLOT IS FULL DEPTH AT TURN POINTS. A FORTY-FIVE (45) DEGREE ANGLE SHALL BE CUT 1' (0.3m) BACK FROM THE POINT OF THE EXTENDED CORNER.

2. THE DIAGONAL CUT SHALL BE STOPPED APPROXIMATELY 2" (50) FROM THE CORNER TO PREVENT THE TRIANGULAR PORTION OF THE PAVEMENT FROM BREAKING.

3. A MAXIMUM OF TWO LOOP DETECTORS CAN BE SPLICED TO ONE LEAD-IN CABLE. THE DETAIL ILLUSTRATES THE METHOD OF SPLICING TWO LOOP DETECTORS (LOOP #1 AND LOOP #2) TO A LEAD-IN CABLE.

4. LOOP DETECTOR SHALL BE CENTERED IN TRAVEL LANE.
INTERMEDIATE MESSENGER WIRE ATTACHMENT ON WOODpoles

DETAIL "A"

COORDINATION CABLE
GALVANIZED
GUY CLAMP
GALVANIZED
3/16" X 3/8" CENTER
THRU-BOLT
GALVANIZED
1/2" x 3/8"
CLAMP BOLT
GALVANIZED
1/2" x 3/8" NUT
MESSENGER WIRE

SEE DETAIL "A"

COORDINATION CABLE
GALVANIZED
GUY CLAMP
GALVANIZED
3/16" X 3/8" CENTER
THRU-BOLT
GALVANIZED
1/2" x 3/8"
CLAMP BOLT
GALVANIZED
1/2" x 3/8" NUT
MESSENGER WIRE

SIDE VIEW

FRONT VIEW

TOP VIEW
SPAN WIRE ATTACHMENT BETWEEN POLES

STRAIN PLATE (2 REQUIRED, 1 IN FRONT AND 1 IN REAR OF POLES)

WOOD POLE

$\frac{3}{8}" \times 4"$ GALVANIZED SCREW

GUY HOOK

$\frac{3}{8}" \times 2\frac{1}{2}"$ GALVANIZED SCREW

NOTE: SPAN WIRE ATTACHMENT BETWEEN METAL POLES IS THE SAME AS SHOWN FOR WOOD POLES EXCEPT THAT THE STRAIN PLATES AND GUY HOOKS ARE NOT USED. FOR DETAIL SEE T-14 SHEET 2 - "DEAD END MESSENGER WIRE ATTACHMENT, METAL POLES."

SERVICE SLEEVE

SPAN WIRE

TOP VIEW

SPAN WIRE ATTACHMENT BETWEEN POLES

WOOD POLE

GALVANIZED SCREW

$\frac{3}{8}" \times 2\frac{1}{2}"$ GALVANIZED SCREW

GUY HOOK

3-BOLT GUY CLAMPS (2 REQUIRED)

MATCH LINE A - A

SPAN WIRE (1 WRAP AROUND POLE)

MATCH LINE A - A

SPAN WIRE ATTACHMENT BETWEEN POLES

WOOD POLE

GALVANIZED SCREW

GALVANIZED SCREW

NOTE: SPAN WIRE ATTACHMENT BETWEEN METAL POLES IS THE SAME AS SHOWN FOR WOOD POLES EXCEPT THAT THE STRAIN PLATES AND GUY HOOKS ARE NOT USED. FOR DETAIL SEE T-14 SHEET 2 - "DEAD END MESSENGER WIRE ATTACHMENT, METAL POLES."

SPAN WIRE ATTACHMENT BETWEEN POLES

WOOD POLE

GALVANIZED SCREW

$\frac{3}{8}" \times 4"$ GALVANIZED SCREW

GUY HOOK

$\frac{3}{8}" \times 2\frac{1}{2}"$ GALVANIZED SCREW

NOTE: SPAN WIRE ATTACHMENT BETWEEN METAL POLES IS THE SAME AS SHOWN FOR WOOD POLES EXCEPT THAT THE STRAIN PLATES AND GUY HOOKS ARE NOT USED. FOR DETAIL SEE T-14 SHEET 2 - "DEAD END MESSENGER WIRE ATTACHMENT, METAL POLES."

PLAN SYMBOL

- X -

DELAWARE DEPARTMENT OF TRANSPORTATION

STANDARD NO. T-12 (2004) SHT. 1 OF 2 RECOMMENDED

APPROVED

DATE: 1/10/05

DRAWN

DATE: 1/10/05

CHECKED

DATE: 1/10/05

PRINTED

DATE: 1/10/05

DELTA DELAWARE DEPARTMENT OF TRANSPORTATION

STANDARD NO. T-12 (2004) SHT. 1 OF 2 RECOMMENDED

APPROVED

DATE: 1/10/05

DRAWN

DATE: 1/10/05

CHECKED

DATE: 1/10/05

PRINTED

DATE: 1/10/05
**DEAD END MESSENGER WIRE ATTACHMENT**

**WOOD POLES**

- Messenger Wire
- Messenger Clamp
- Lashing Wire
- Cable Spacer
- Electrical Cable
- Wood Pole

**METAL POLES**

- Service Sleeve
- Service Wedge Clamp
- 6'4" (1930)
- 1'2" (360)
- 30" (762)
- 36" (914) Min.
- Metal Pole
- Messenger Wire 3/8" (19) Around Pole
- 1" (25) Service Sleeve
- 1" (25) Service Sleeve
- 3-Bolt 3/8" (19) Guy Clamps (2 Required)
- 6" (150) Galvanized " (6) x 3" Washer with 1/2" (13) Hole
- 1/4" (6) x 3" (76) Washer with 1/8" (3) Hole

**NOTES:**

1. Installation method shown for dead end messenger wire attachment to metal poles shall be used for span wire attachment between metal poles.
1. Type 6 conduit junction well shall be precast polymer concrete.

2. All conduit junction wells constructed within pavement, sidewalks, etc. will be constructed flush with the surface of the same. Installation in unpaved areas will be constructed above grade and graded to drain away from the conduit junction well.

3. Polymer concrete covers shall be the heavy-duty type with a design load of 8,000 lbs (3600 kg) over a 10" (255) square.

NOTES:

- 3/8" (9) - 16 UNC hex bolt w/washers to be secured into the wall frame.
- POLYMER CONCRETE WITH A HEAVY-WEB FIBERGLASS REINFORCEMENT.
- 1/4" x 2" x 2" pull slot.
1. TYPE T CONDUIT JUNCTION WELL SHALL BE PRECAST POLYMER CONCRETE.
2. ALL CONDUIT JUNCTION WELLS CONSTRUCTED WITHIN PAVEMENT, SIDEWALKS, ETC. WILL BE CONSTRUCTED FLUSH WITH THE SURFACE OF THE SAME. INSTALLATION IN UNPAVED AREAS WILL BE CONSTRUCTED ABOVE GRADE AND GRADED TO ORAN AWAY FROM THE CONDUIT JUNCTION WELL.
3. POLYMER CONCRETE COVERS SHALL BE THE HEAVY DUTY TYPE WITH A DESIGN LOAD OF 5,000 LBS (6800 kg) OVER A 0'x0.25' SQUARE.
POLYMER CONCRETE WITH A HEAVY-WEAVE FIBERGLASS REINFORCEMENT

1/8" x 100' pull slot

1/4" x 18 - UNC HEX BOLT w/ washers to be secured into the well frame

NOTES:

1. TYPES 8 & 10 CONDUIT JUNCTION WELLS SHALL BE PRECAST POLYMER CONCRETE.
2. ALL CONDUIT JUNCTION WELLS CONSTRUCTED WITHIN PAVEMENT, SIDEWALKS, ETC. WILL BE CONSTRUCTED FLUSH WITH THE SURFACE OF THE SAME. INSTALLATION IN UNPAVED AREAS WILL BE CONSTRUCTED ABOVE GRADE AND GRADED TO DRAIN AWAY FROM THE CONDUIT JUNCTION WELL.
3. POLYMER CONCRETE COVERS SHALL BE THE HEAVY-DUTY TYPE WITH A DESIGN LOAD OF 5,000 LBS (6000 kN) OVER A 10" (250) SQUARE.

DIMENSIONS

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<tr>
<th>COVER</th>
<th>TYPE 8</th>
<th>TYPE 10</th>
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<tbody>
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DELWARE
DEPARTMENT OF TRANSPORTATION

CONDUIT JUNCTION WELLS, TYPES 8 & 10

APPROVED

STANDARD NO. T-13 (2006)

SHT. 3 OF 3

RECOMMENDED

05/13/2006
CABLE CONNECTIONS TO TERMINAL STRIP

1. UPRIGHT CONFIGURATION SHALL BE USED FOR MOUNTING ON MAST ARMS, SIGNAL HEAD FRAMEWORKS AND PEDESTALS.
2. UPRIGHT MOUNTING HARDWARE SHALL BE SUPPLIED BY THE DEPARTMENT.
3. TEFON TAPE SHALL BE APPLIED TO THREADS BEFORE MOUNTING.
4. ROUTE THE LEAD-IN CABLE THROUGH THE METAL CAP AND THE RUBBER PLUG.
   REPLACE THE METAL CAP, SEALING THE CABLE ENTRY PORT. TIGHTEN THE METAL CAP SO THE CABLE WILL NOT SLIDE THROUGH THE RUBBER PLUG.

**NOTES:**

1. Inverted configuration shall be used for span mount.
2. Span wire mounting hardware shall be supplied by the department.
3. Teflon tape shall be applied to threads before mounting.
4. Route the lead-in cable through the metal cap and the rubber plug. Replace the metal cap, sealing the cable entry port. Tighten the metal cap so the cable will not slide through the rubber plug.

**SIDE VIEW**
- 5 wraps of Scotch Super 33 tape
- To controller cabinet
- Drip loop
- Lower point of drip loop must be lower than cable entry point

**PLAN SYMBOL**
- Cable connections to terminal strip
- Span wire clamp
- See note 3
- Wiring access door weather proof
- Green, black, red, white
- Base
- Base to controller cabinet
- Metal cap (see note 4)
- 4-conductor #18 and shielded lead-in cable
- Cable entry port
- Access door screw hole
- Tubing assemblies
- Cap screw
- 5/16-18 x 3/4 neep hole
- Two 5/16-18 x 3/4 neep holes
- 4-position terminal strip

**SIDE VIEW**
- Metal cap
- Base
- Access door
- Wiring access door
- Weather proof

**FRONT VIEW**
- Cable not shown
- Terminal strip
- Two 5/16-18 x 3/4 neep holes
- Cap screw
- Side view

**SIDE VIEW**
- Metal cap
- Base
- Access door
- Wiring access door
- Weather proof

**FRONT VIEW**
- Cable not shown
- Terminal strip
- Two 5/16-18 x 3/4 neep holes
- Cap screw
- Side view

**SIDE VIEW**
- Metal cap
- Base
- Access door
- Wiring access door
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**FRONT VIEW**
- Cable not shown
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- Metal cap
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