SECTION I - BARRIER

SECTION I - BARRIER (CONT'D)

SECTION II - CURB & GUTTER

SECTION III - DRAINAGE

SECTION III - DRAINAGE (CONT'D)

SHEET NO. NAME

SECTION IV - EROSION

SHEET NO. NAME

SECTION V - LANDSCAPING

SHEET NO. NAME

SECTION VI - MISCELLANEOUS

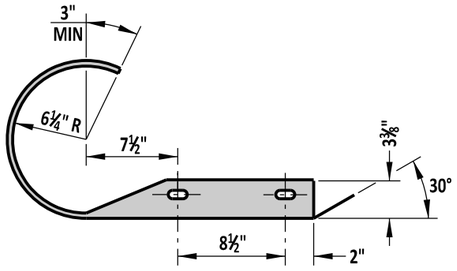
SHEET NO. NAME

SECTION VII - PAVEMENT

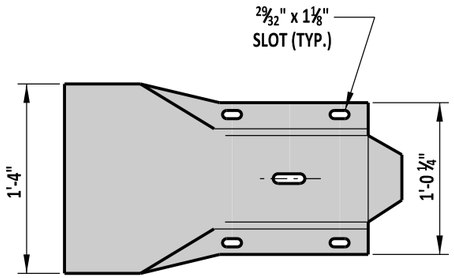
SHEET NO. NAME

SECTION VIII - TRAFFIC

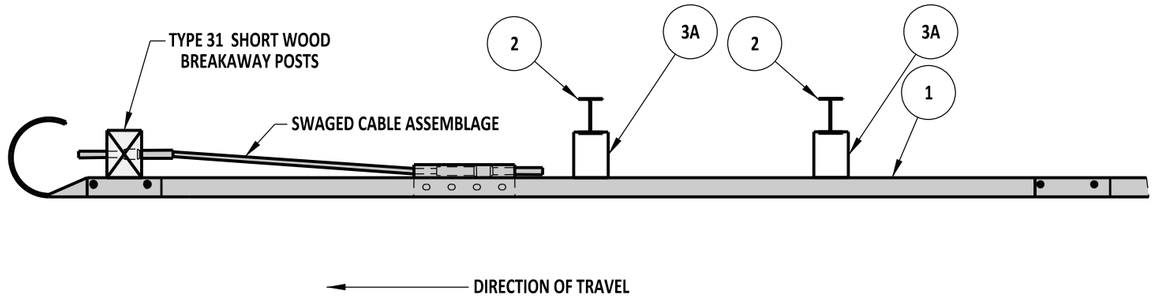
SCALE : NTS



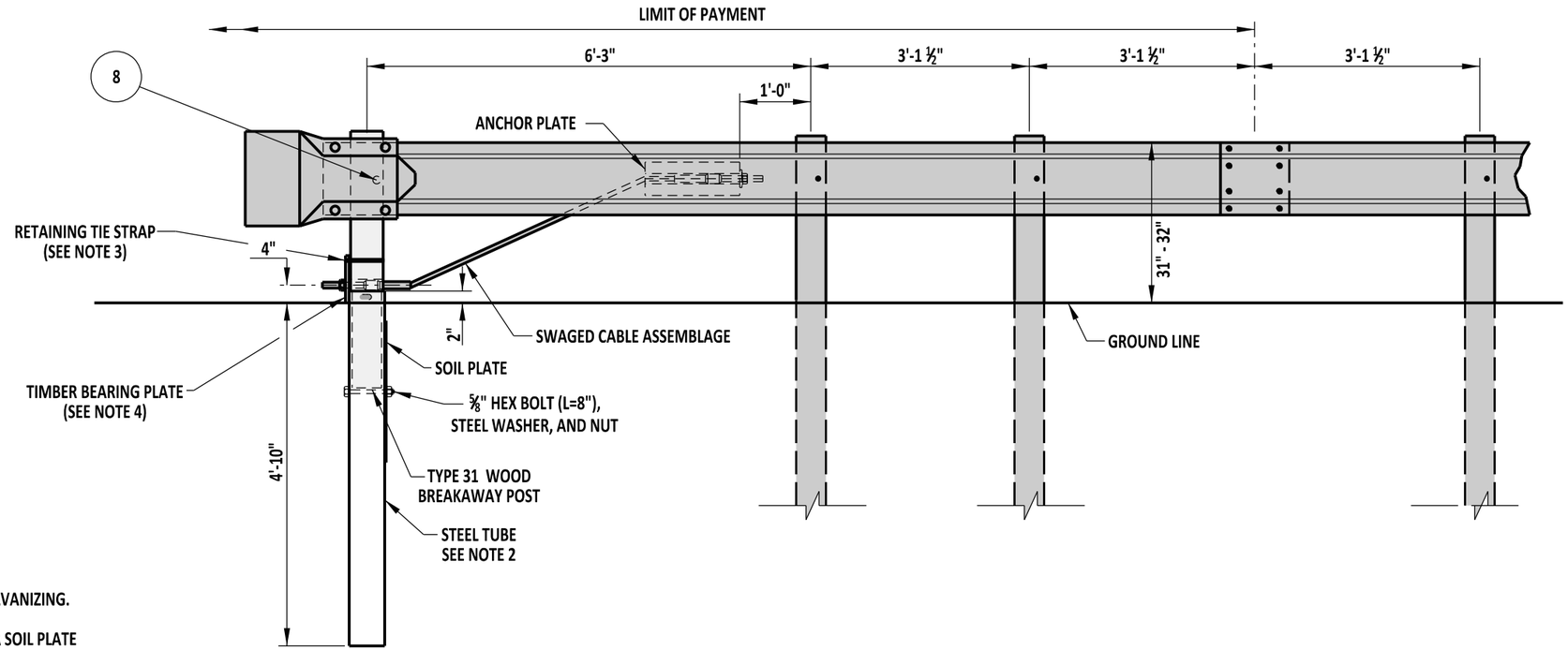
END SECTION PLAN



END SECTION ELEVATION



PLAN



ELEVATION

NOTES:

1). ADDITIONAL HOLES FOR ANCHOR PLATE SHALL BE DRILLED PRIOR TO GALVANIZING. (SEE STANDARD HARDWARE SHEET FOR HOLE SPACING INFORMATION).
2). CONTRACTOR HAS THE OPTION OF USING A 6'-0" STEEL TUBE WITHOUT A SOIL PLATE OR A 5'-0" STEEL TUBE WITH A SOIL PLATE.
3). PLACE A ½" WIDE PLASTIC RETAINING TIE STRAP AROUND THE SHORT TIMBER BREAKAWAY POST AND TIMBER BEARING PLATE TO ENSURE THE PROPER ORIENTATION OF THE TIMBER BEARING PLATE.
4). REFER TO DETAIL B-13, SHEET 8 OF 10 FOR PROPER TIMBER BEARING PLATE ORIENTATION.

DELAWARE
DEPARTMENT OF TRANSPORTATION

END ANCHORAGE, TYPE 31

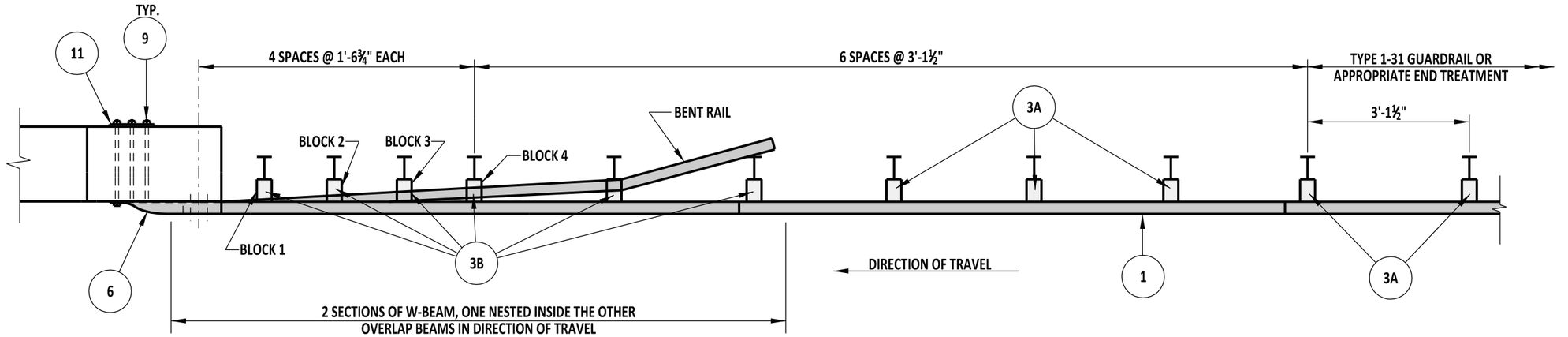
STANDARD NO. B-4 (2012) | SHT. 1 OF 1

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)

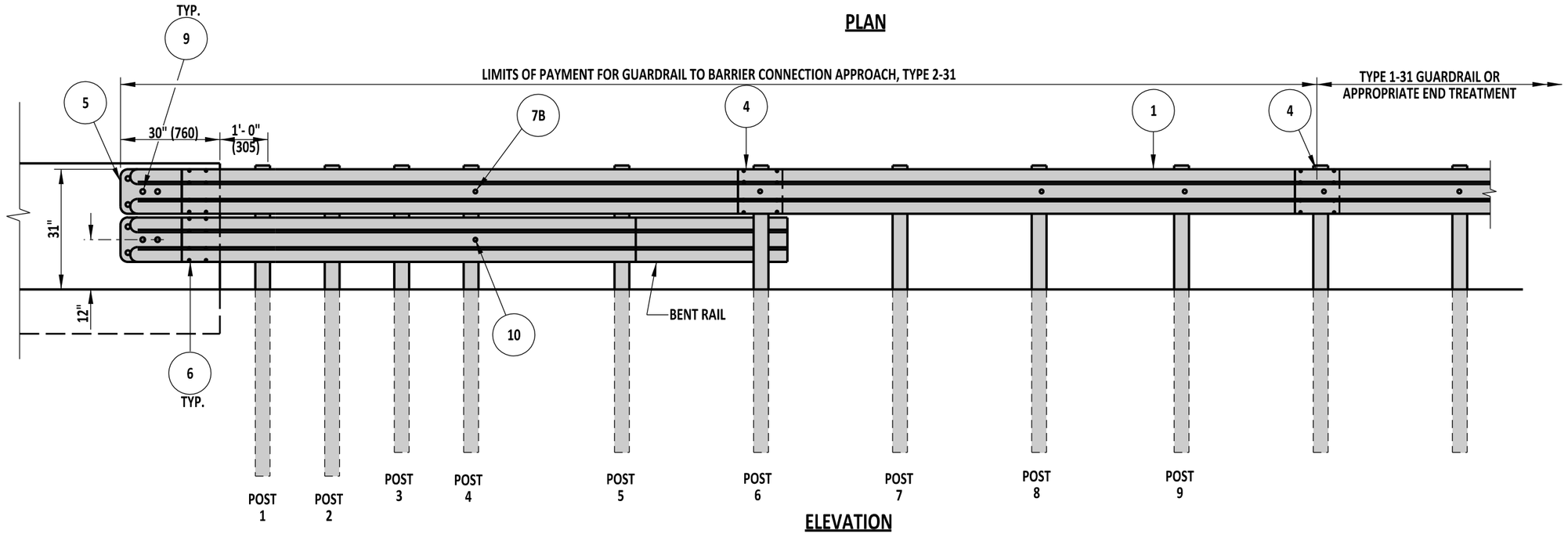
RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

SCALE : NTS



PLAN



ELEVATION

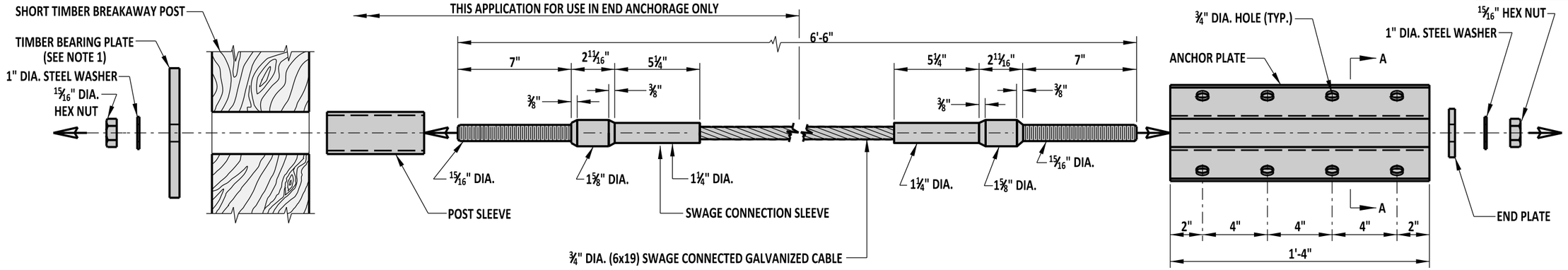
NOTES :

1). CURB SHALL NOT BE USED AT THE FACE OF RAIL WITHIN THE LIMITS OF THIS INSTALLATION.
2). POSTS 1, 2, 3, 4, AND 6 REQUIRE AN ADDITIONAL HOLE TO ATTACH OFFSET BLOCKS AND/OR BENT RAIL.
3). DO NOT ATTACH RAILS TO POSTS 1, 2, 3, 5, OR 7.
4). POSTS 1 AND 2 ARE W8x13, 7'-6" LONG. ALL OTHER POSTS IN TRANSITION ARE W6x9, 6'-0" LONG.
5). ALL HOLES SHALL BE DRILLED PRIOR TO GALVANIZING.
6). BENT RAIL MAY BE SHOP BENT TO FACILITATE INSTALLATION OR MAY BE FIELD BENT USING HEAT.
7). APPROVED CONCRETE INSERTS MAY BE USED IN NEW CONSTRUCTION TO ATTACH TERMINAL CONNECTORS TO PARAPET.
8). PLACE GUARDRAIL DELINEATORS AT THE INTERVALS SPECIFIED IN THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
9). FOR INSTALLATIONS WHERE CURB EXISTS, IF THE EXISTING CURB IS 8" (200) OR HIGHER AND CANNOT BE REMOVED, THE BOTTOM RAIL CAN BE ELIMINATED.
10). A 6" x 8" x 14" OFFSET BLOCK IS USED AT POSTS 1 THROUGH 6 AND A 6" x 12" x 14" OFFSET BLOCK IS USED AT POSTS 7 THROUGH 9.

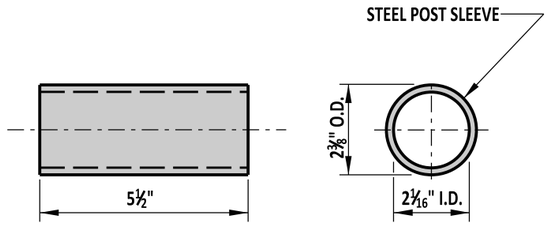
DELAWARE DEPARTMENT OF TRANSPORTATION	GUARDRAIL TO BARRIER CONNECTION, APPROACH, TYPE 2-31		APPROVED	SIGNATURE ON FILE (CHIEF ENGINEER) — 01/07/2013 (DATE)
	STANDARD NO. B-5 (2012)	SHT. 4 OF 6	RECOMMENDED	SIGNATURE ON FILE (DESIGN ENGINEER) — 12/20/2012 (DATE)

12/4/2012

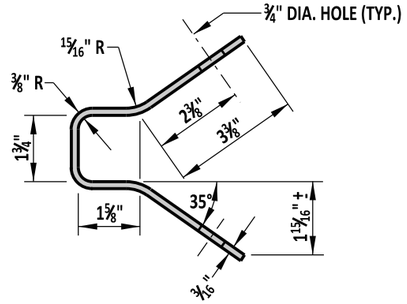
SCALE : NTS



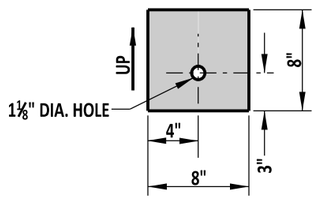
SWAGED CABLE ASSEMBLAGE AND RELATED HARDWARE ASSEMBLY



POST SLEEVE

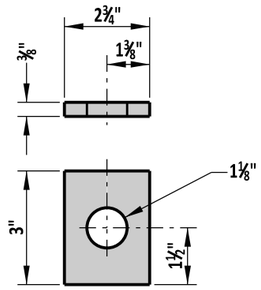


SECTION A-A

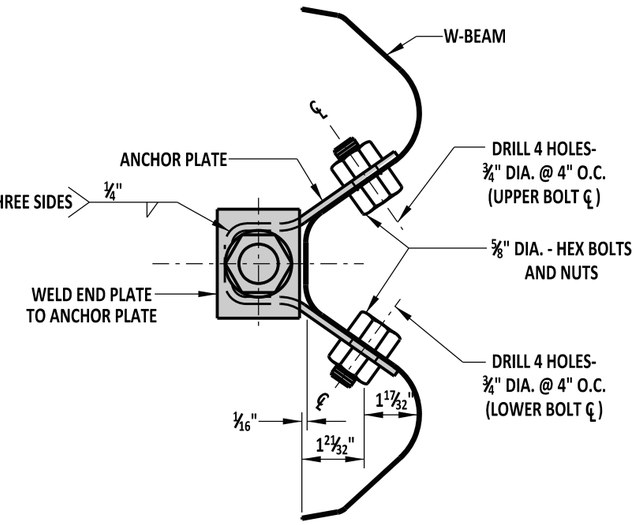


TIMBER BEARING PLATE

5/8" THICKNESS



END PLATE



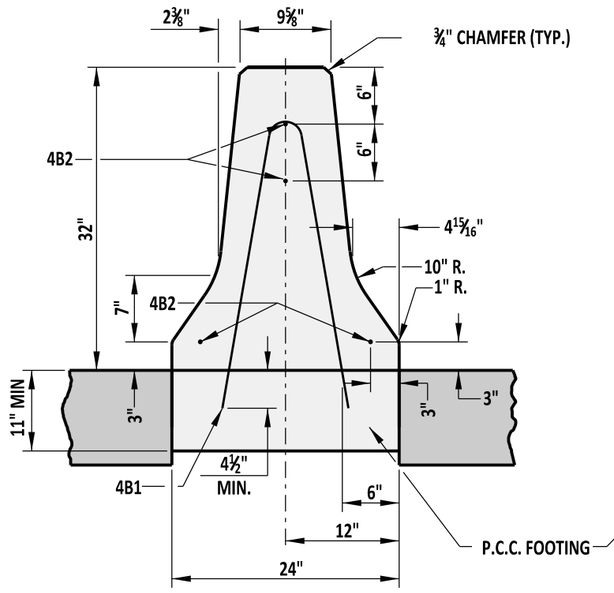
ANCHOR PLATE TO W-BEAM CONNECTION DETAIL

NOTES:
1). PLACE A ½" WIDE GALVANIZED RETAINING TIE STRAP AROUND THE SHORT TIMBER BREAKAWAY POST AND TIMBER BEARING PLATE TO ENSURE PROPER ORIENTATION OF THE TIMBER BEARING PLATE.
2). TIGHEN ASSEMBLY UNTIL CABLE IS TAUGHT.
3). ALL HOLES SHALL BE DRILLED PRIOR TO GALVANIZING.

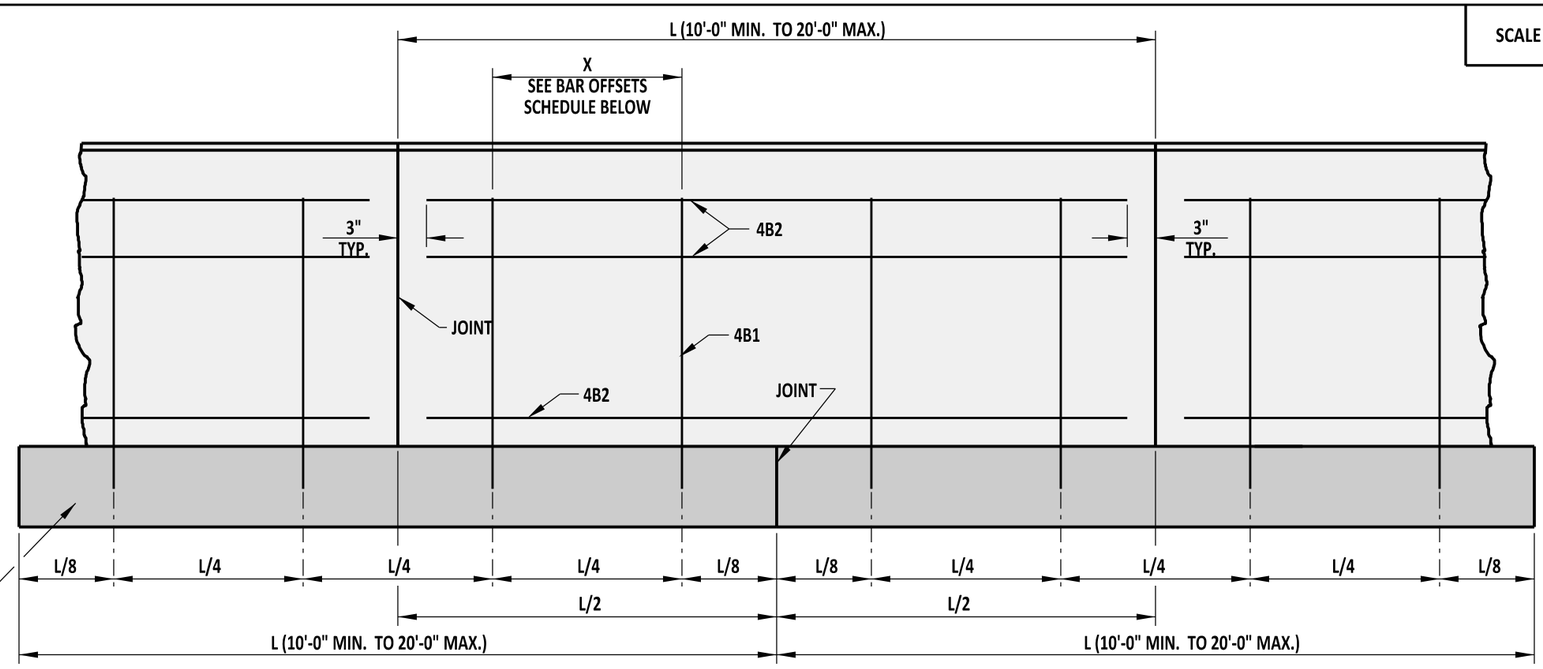
DELAWARE DEPARTMENT OF TRANSPORTATION	HARDWARE		APPROVED	SIGNATURE ON FILE (CHIEF ENGINEER)	01/07/2013 (DATE)
	STANDARD NO. B-13 (2012)	SHT. 8 OF 10	RECOMMENDED	SIGNATURE ON FILE (DESIGN ENGINEER)	12/20/2012 (DATE)

12/4/2012

SCALE : NTS

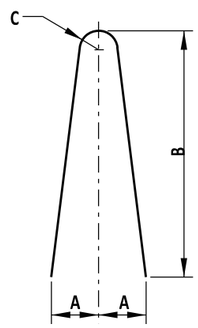


SECTION



ELEVATION

TYPICAL CAST-IN-PLACE OR SLIP-FORM CONSTRUCTION



TYPE '1' BAR

BAR OFFSETS		
NOMINAL LENGTH OF BARRIER SECTION (L)	X	NO. REQ'D FOR EACH BARRIER SECTION
20'-0"	5' - 0"	4
18'-0"	4' - 6"	4
16'-0"	4' - 0"	4
14'-0"	3' - 6"	4
12'-0"	3' - 0"	4
10'-0"	2' - 6"	4

BAR LIST							
MARK	SIZE	NUMBER IN EACH SECTION	LENGTH	TYPE	A	B	C
4B1	4	**	5'-4"	1	7"	30½"	2"
4B2	4	4	*	STR.	N/A	N/A	N/A

* THE LENGTH OF BAR 4B2 SHALL BE 6" SHORTER IN LENGTH THAN THE NOMINAL SIZE OF THE BARRIER IN WHICH IT IS USED.

** SEE "BAR OFFSETS" CHART ON THIS SHEET FOR MORE INFORMATION.

NOTES:

1). CONCRETE CLEAR COVER FOR REINFORCING BARS SHALL BE 1½" MIN.
2). FOR SLIP-FORM CONSTRUCTION, THE 4B2 BARS SHALL BE PLACED AS ONE CONTINUOUS PIECE. THE BARS SHALL OVERLAP A MINIMUM OF 12" IN THIS CASE.
3). FOR SLIP-FORM CONSTRUCTION, A JOINT SHALL BE CUT IN THE BARRIER EVERY 10'-0" AT A MAX DEPTH OF ½"

DELAWARE
DEPARTMENT OF TRANSPORTATION

32" CONCRETE SAFETY BARRIER (F SHAPE)

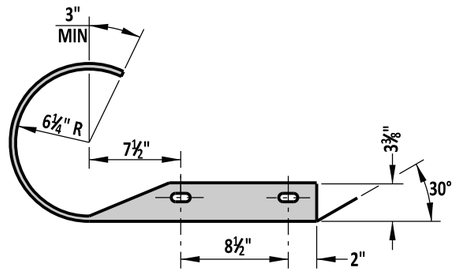
STANDARD NO. B-14 (2012) | SHT. 1 OF 4

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)

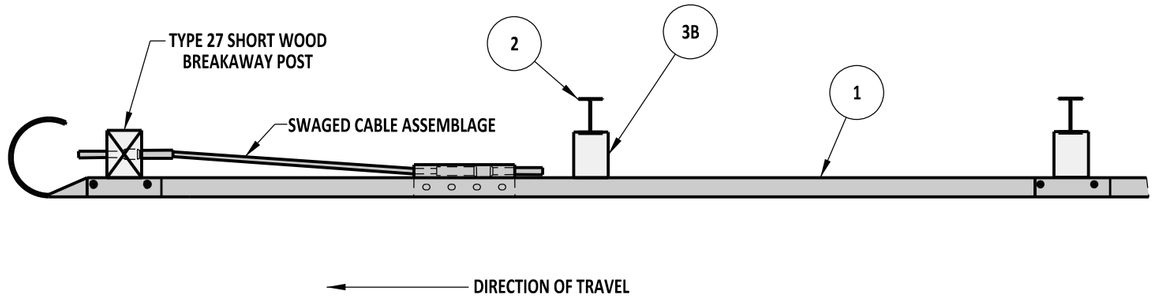
RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

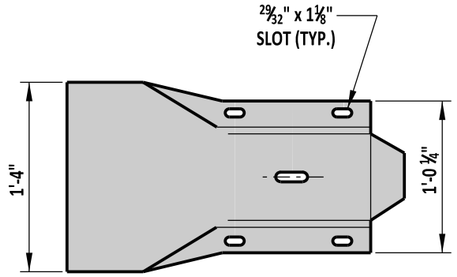
SCALE : NTS



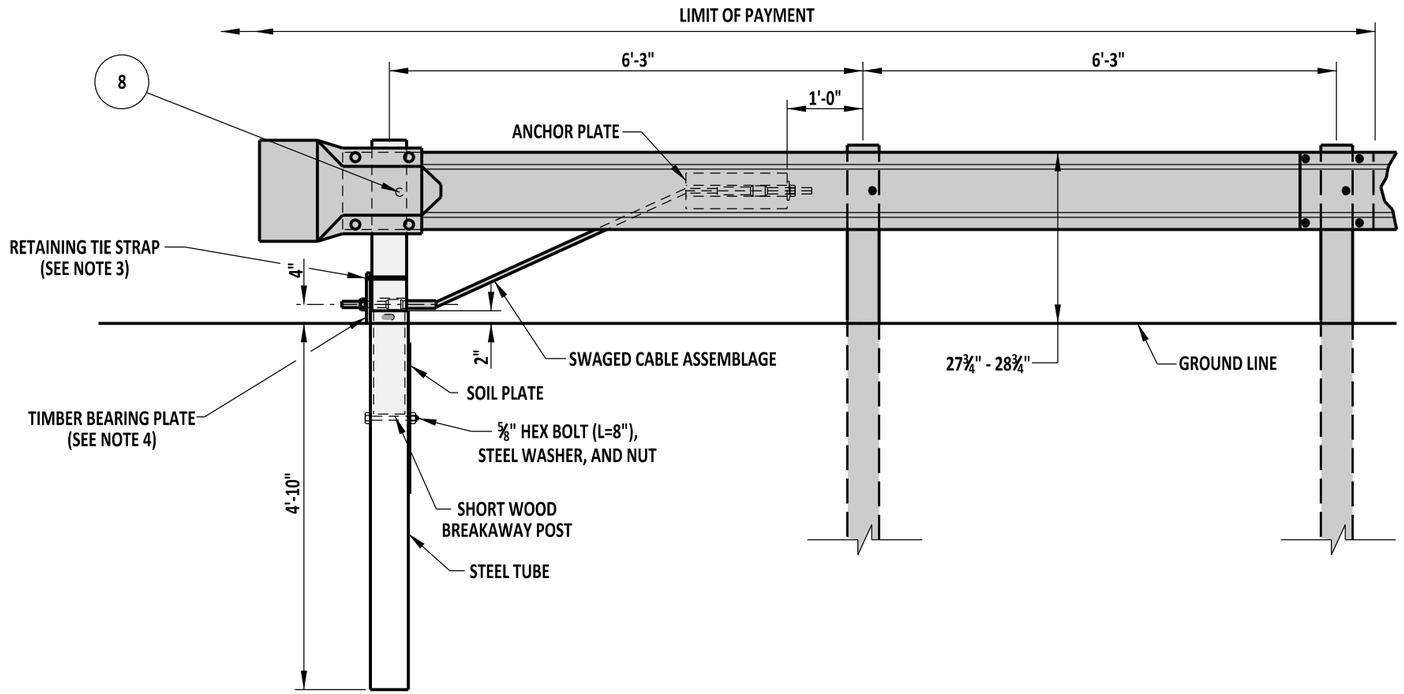
END SECTION PLAN



PLAN



END SECTION ELEVATION



ELEVATION

NOTES:

1). ADDITIONAL HOLES FOR ANCHOR PLATE SHALL BE DRILLED PRIOR TO GALVANIZING. (SEE STANDARD HARDWARE SHEET FOR HOLE SPACING INFORMATION).
2). CONTRACTOR HAS THE OPTION OF USING A 6'-0" STEEL TUBE WITHOUT A SOIL PLATE OR A 5'-0" STEEL TUBE WITH A SOIL PLATE.
3). PLACE A ½" WIDE PLASTIC RETAINING TIE STRAP AROUND THE SHORT TIMBER BREAKAWAY POST AND TIMBER BEARING PLATE TO ENSURE THE PROPER ORIENTATION OF THE TIMBER BEARING PLATE.
4). REFER TO DETAIL B-13, SHEET 8 OF 10 FOR PROPER TIMBER BEARING PLATE ORIENTATION.

DELAWARE
DEPARTMENT OF TRANSPORTATION

END ANCHORAGE, TYPE 27

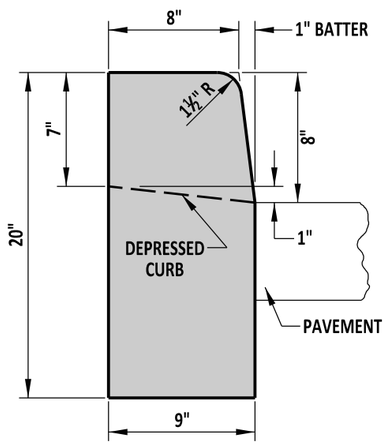
STANDARD NO. B-19 (2012) | SHT. 1 OF 1

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)

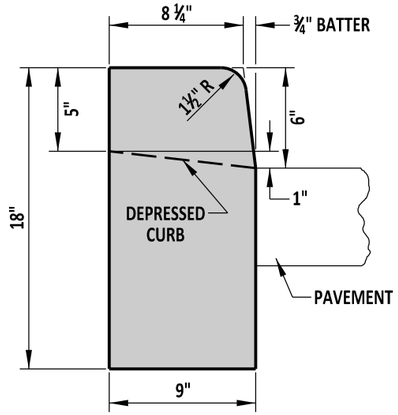
RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

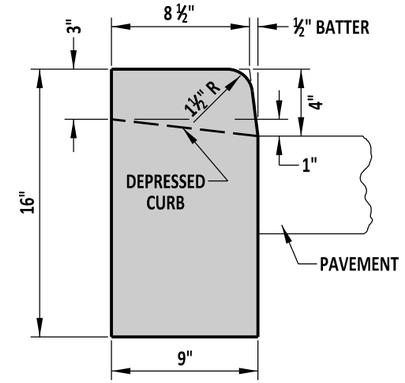
SCALE : NTS



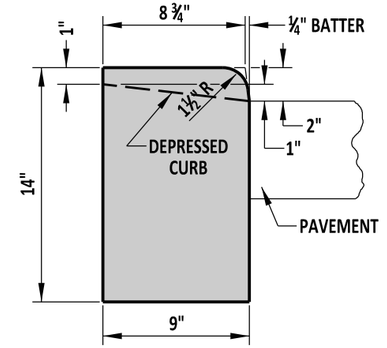
P.C.C. CURB
TYPE 1-8



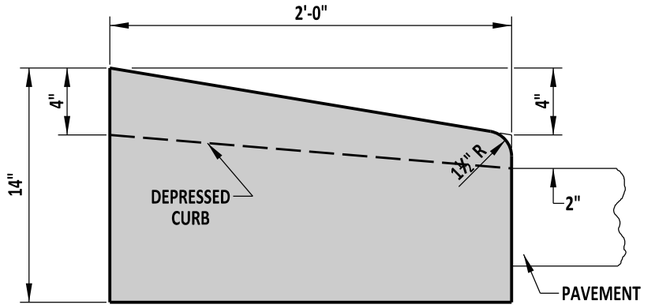
P.C.C. CURB
TYPE 1-6



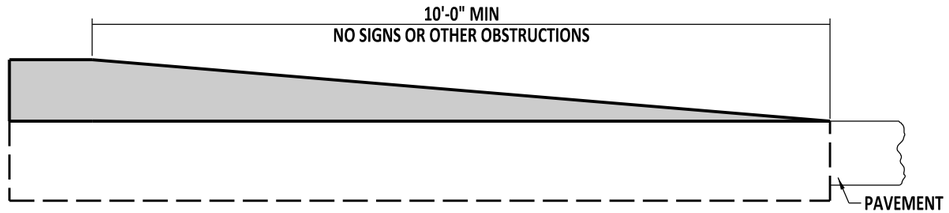
P.C.C. CURB
TYPE 1-4



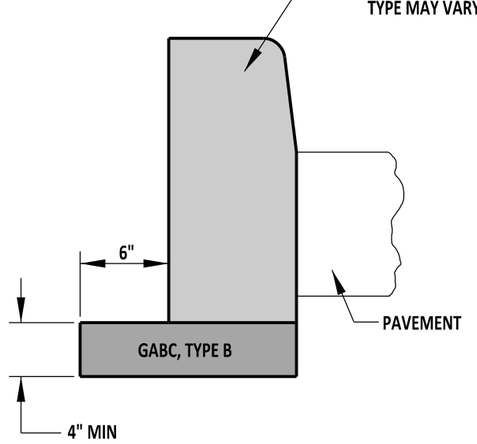
P.C.C. CURB
TYPE 1-2



P.C.C. CURB
TYPE 2



TYPICAL TAPER SECTION AT NOSE OF MEDIANS
TYPE 1-8 CURB SHOWN



TYPICAL CURB SECTION

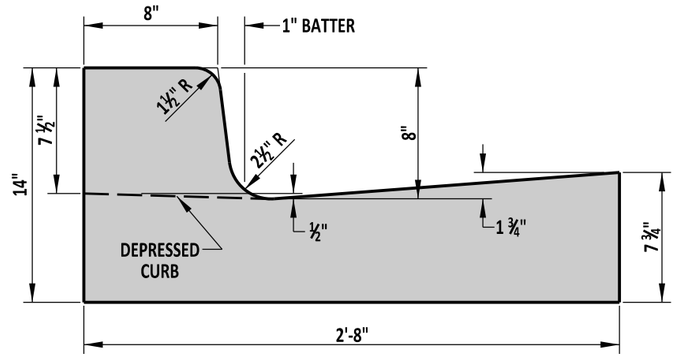
NOTES:

1). WHEN P.C.C. CURB OR INTEGRAL P.C.C. CURB AND GUTTER IS PLACED ADJACENT TO PORTLAND CEMENT CONCRETE PAVEMENT, CONSTRUCT THE JOINT AS PER THE LONGITUDINAL JOINT SEALANT DETAIL ON DETAIL P-2, SHEET 3 OF 5. USE APPROVED JOINT FILLER TO SEAL. WORK TO BE PAID UNDER RESPECTIVE CURB AND GUTTER ITEM.
2). DEPRESS CURB AT ENTRANCES AS DETAILED ON THIS SHEET.
3). DEPRESS CURB FLUSH WITH PAVEMENT AT CURB RAMPS. MAXIMUM SLOPE OF CURB AT CURB RAMPS IS 20:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL. SEE DETAIL C-2, SHEET 1 OF 4.
4). DEPRESS CURB FLUSH WITH PAVEMENT OR ADJACENT AREA AT LEADING EDGE OF TRIANGULAR ISLANDS, TAPERING BACK TO FULL HEIGHT AT A SLOPE OF 4:1.
5). DEPRESS END OF CURB RUNS NOT PART OF AN ISLAND OR MEDIAN FLUSH WITH PAVEMENT OR ADJACENT AREA AT A SLOPE OF 12:1.

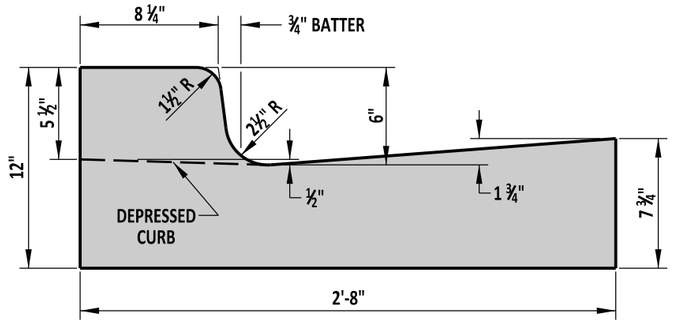
DELAWARE DEPARTMENT OF TRANSPORTATION	P.C.C. CURB		APPROVED	SIGNATURE ON FILE (CHIEF ENGINEER)	01/07/2013 (DATE)
	STANDARD NO. C-1 (2012)	SHT. 1 OF 2	RECOMMENDED	SIGNATURE ON FILE (DESIGN ENGINEER)	12/20/2012 (DATE)

12/4/2012

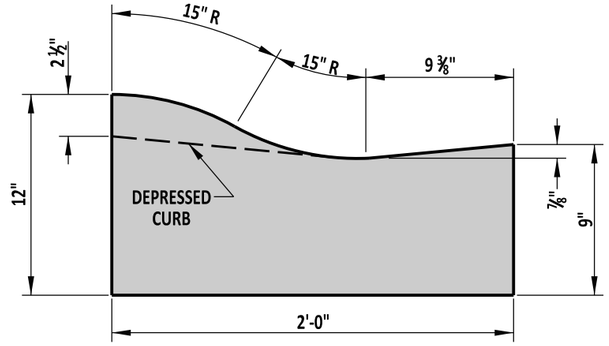
SCALE : NTS



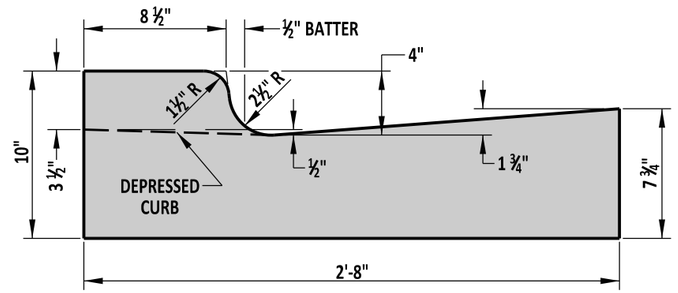
INTEGRAL P.C.C. CURB AND GUTTER
TYPE 1-8



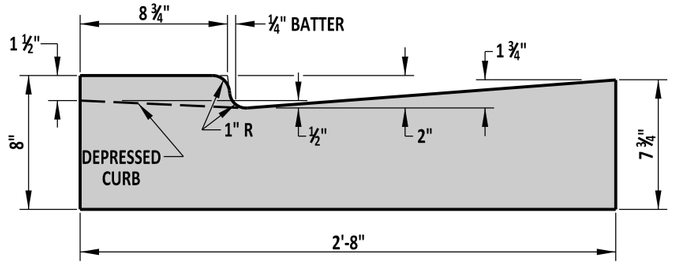
INTEGRAL P.C.C. CURB AND GUTTER
TYPE 1-6



INTEGRAL P.C.C. CURB AND GUTTER
TYPE 2



INTEGRAL P.C.C. CURB AND GUTTER
TYPE 1-4



INTEGRAL P.C.C. CURB AND GUTTER
TYPE 1-2

NOTES:

1). WHEN P.C.C. CURB OR INTEGRAL P.C.C. CURB AND GUTTER IS PLACED ADJACENT TO PORTLAND CEMENT CONCRETE PAVEMENT, CONSTRUCT THE JOINT AS PER THE LONGITUDINAL JOINT SEALANT DETAIL ON DETAIL P-2, SHEET 3 OF 5. USE APPROVED JOINT FILLER TO SEAL. WORK TO BE PAID UNDER RESPECTIVE CURB AND GUTTER ITEM.

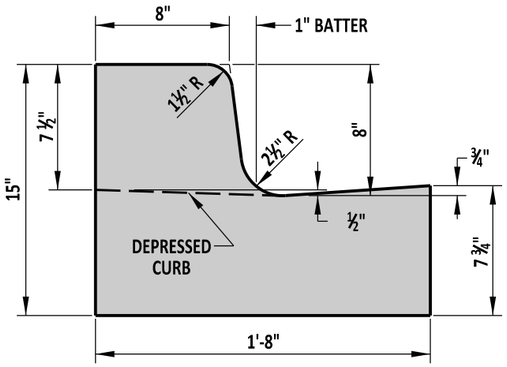
2). DEPRESS CURB AT ENTRANCES AS DETAILED ON THIS SHEET.

3). DEPRESS CURB FLUSH WITH PAVEMENT AT CURB RAMPS. MAXIMUM SLOPE OF CURB AT CURB RAMPS IS 20:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL. SEE DETAIL C-2, SHEET 1 OF 4.

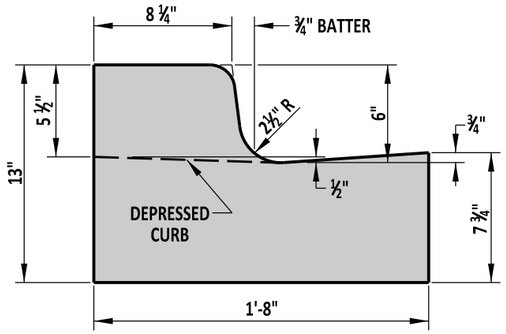
4). DEPRESS CURB FLUSH WITH PAVEMENT OR ADJACENT AREA AT LEADING EDGE OF TRIANGULAR ISLANDS, TAPERING BACK TO FULL HEIGHT AT A SLOPE OF 4:1. SEE DETAIL C-1, SHEET 1 OF 2 FOR TYPICAL SECTION OF TAPER AT NOSE OF MEDIAN ISLANDS.

5). 4" OF GABC, TYPE B SHALL BE PLACED UNDER ALL P.C.C. CURB AND P.C.C. CURB AND GUTTER. SEE DETAIL C-1, SHEET 1 OF 2 FOR TYPICAL SECTION.

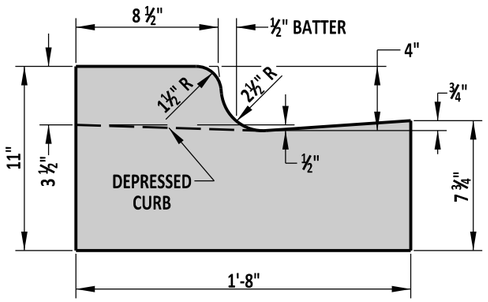
6). DEPRESS END OF CURB RUNS NOT PART OF AN ISLAND OR MEDIAN FLUSH WITH PAVEMENT OR ADJACENT AREA AT A SLOPE OF 12:1.



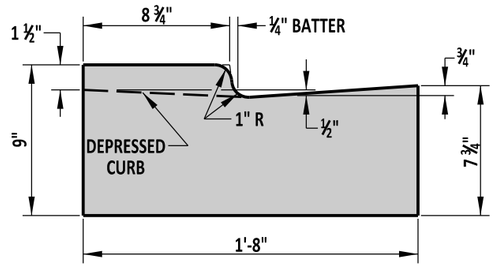
INTEGRAL P.C.C. CURB AND GUTTER
TYPE 3-8



INTEGRAL P.C.C. CURB AND GUTTER
TYPE 3-6



INTEGRAL P.C.C. CURB AND GUTTER
TYPE 3-4

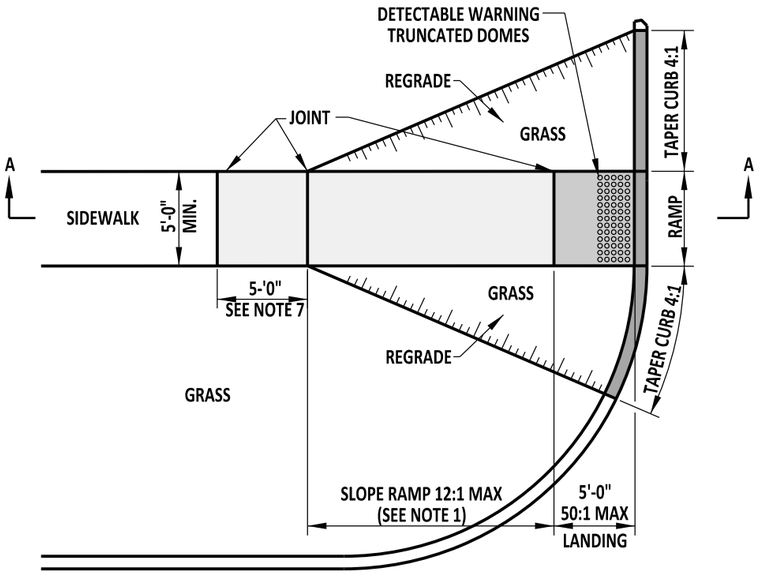


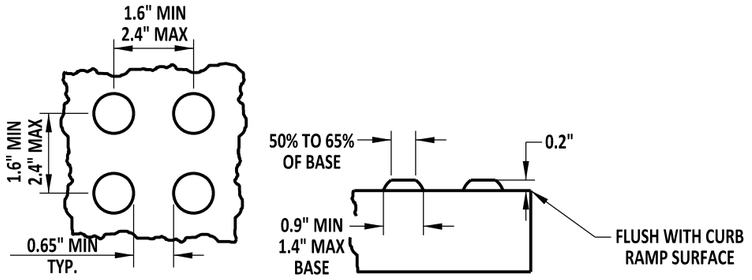
INTEGRAL P.C.C. CURB AND GUTTER
TYPE 3-2

DELAWARE DEPARTMENT OF TRANSPORTATION	INTEGRAL P.C.C. CURB & GUTTER		APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)
	STANDARD NO. C-1 (2012)	SHT. 2 OF 2	RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

SCALE : NTS



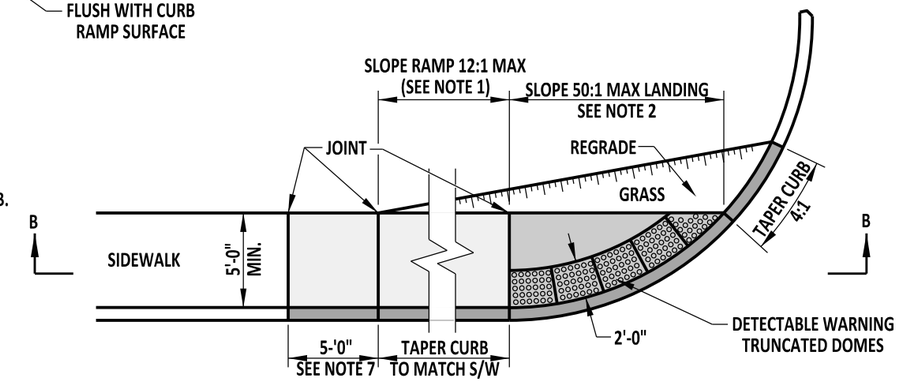


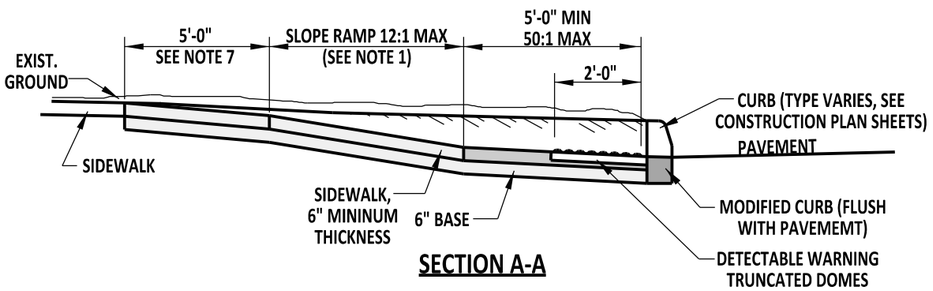
DETECTABLE WARNING TRUNCATED DOME DETAILS

NOTES:

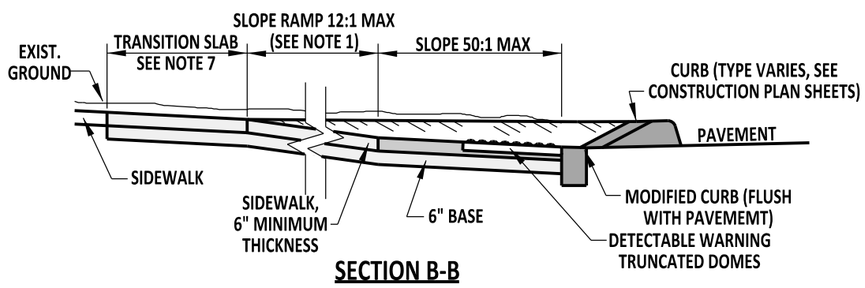
A). THE AREA OF DETECTABLE WARNING TRUNCATED DOMES SHALL BE 2'-0" LONG AND THE FULL WIDTH OF THE RAMP OR DEPRESSED CURB.

B). SEE SPECIFICATION FOR ADDITIONAL INFORMATION.

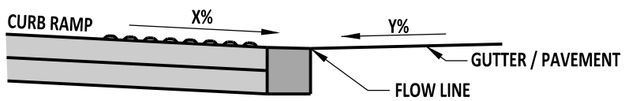




SECTION A-A



SECTION B-B



MAXIMUM DIFFERENCE IN GRADE FOR ALL CURB RAMP TYPES

FOR EXAMPLE, IF THE CURB RAMP AND DEPRESSED CURB SLOPE AT THE FLOW LINE (X) IS 8.1% AND THE PAVEMENT SLOPE (Y) IS 4.0%, THEN TO DETERMINE THE DIFFERENCE IN GRADE, ADD X + Y TO GET 12.1%, WHICH IS GREATER THAN THE 11% PREFERRED BUT LESS THAN THE 13% MAXIMUM.

CURB RAMP, TYPE 1

PERPENDICULAR CURB RAMP

NOTES:

1). FOR ALTERATIONS WITHOUT A GRASS STRIP OR WHERE THE EXISTING ROAD PROFILE IS STEEPER THAN 7% AND A 12:1 MAXIMUM SLOPE RAMP WILL NOT MEET THE SIDEWALK GRADE WITHIN A LENGTH OF 15'-0", THE RAMP LENGTH MAY BE LIMITED TO 15'-0" AT A CONSTANT SLOPE, AND ALLOWED TO EXCEED 12:1.

2). RAMP AND SIDEWALK CROSS SLOPE SHALL BE 50:1 (2%) MAXIMUM. FOR REHABILITATION WORK, THE RAMP CROSS SLOPE SHALL MATCH THE SLOPE OF THE ADJACENT ROADWAY.

3). IF GRADING WILL BE STEEPER THAN 6:1, THEN A TYPE 1-8 CURB OR RETAINING WALL SHOULD BE USED TO ELIMINATE THE NEED FOR THE STEEP SLOPE.

4). THE MAXIMUM DIFFERENCE IN GRADE BETWEEN THE CURB RAMP OR MODIFIED CURB AT THE FLOW LINE AND THE PAVEMENT SHALL BE 13%, HOWEVER 11% IS PREFERRED. SEE DETAIL ON THIS SHEET.

5). LANDING AREA SHALL BE EXTENDED 18" MIN BEYOND THE PEDESTRIAN PUSH BUTTON FOR ALL CURB RAMP TYPES. WHEN NO PEDESTRIAN PUSH BUTTON EXISTS, THE 18" EXTENSION CAN BE OMITTED.

6). LANDING AREA SHALL BE DELINEATED WITH JOINTS.

7). FOR REHABILITATION WORK, PLACE TRANSITION SLAB TO TRANSITION FROM THE NEW RAMP TO THE EXISTING SIDEWALK WHEN THE EXISTING SIDEWALK HAS A NON-CONFORMING RUNNING SLOPE, CROSS SLOPE, OR WIDTH. ADJACENT CURB TAPER SHOULD MATCH THE SLOPE OF THE TRANSITION SLAB.

8). REFER TO THE DELAWARE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES FOR DETAILS REGARDING THE LOCATION OF PEDESTRIAN PUSH BUTTONS.

DELAWARE
DEPARTMENT OF TRANSPORTATION

CURB RAMP, TYPE 1 AND SECTIONS

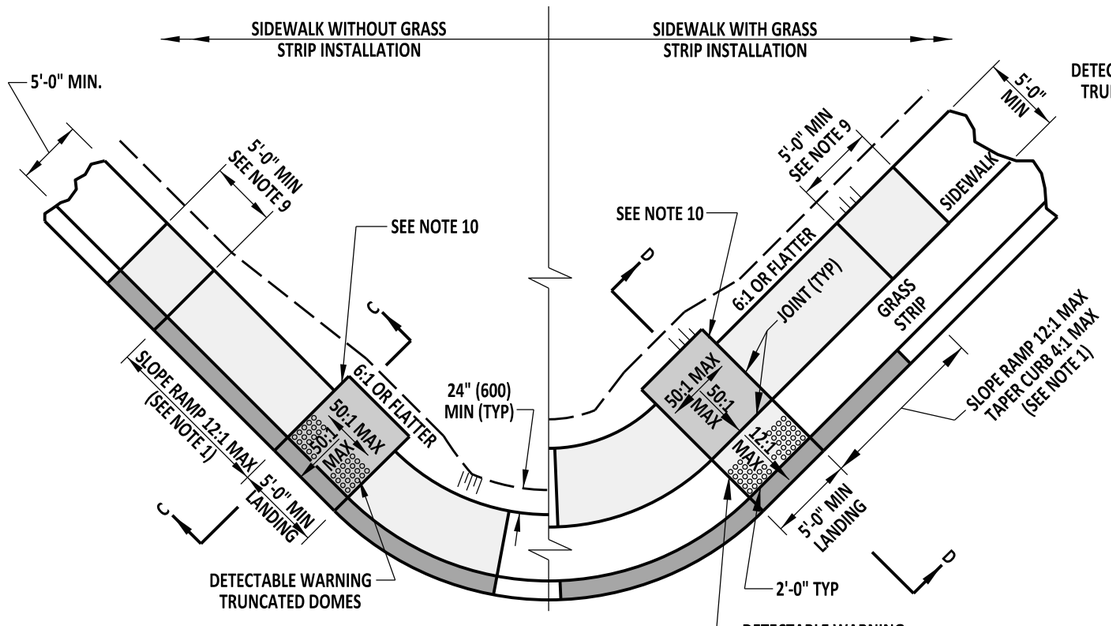
STANDARD NO. C-2 (2012) | SHT. 1 OF 3

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 03/07/2013 (DATE)

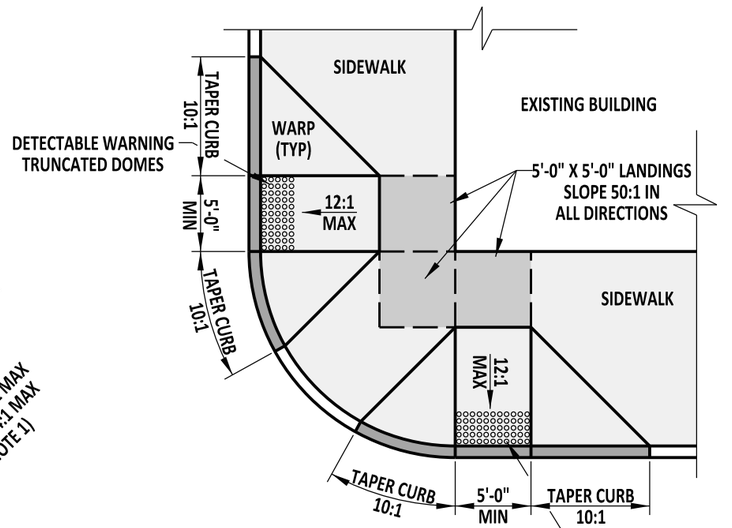
RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 03/07/2013 (DATE)

03/05/2013

SCALE : NTS

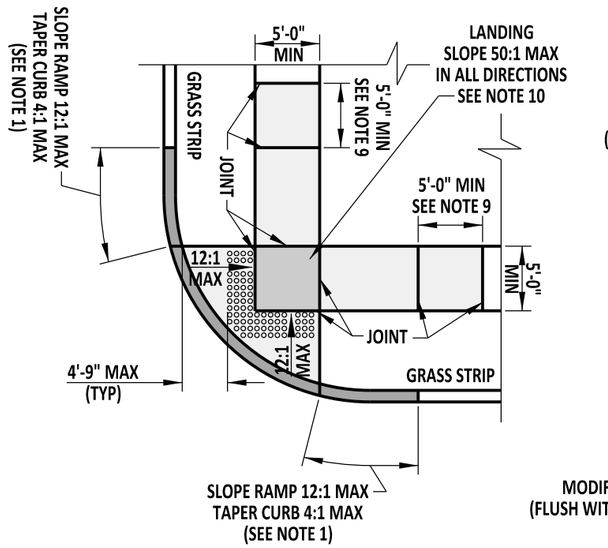


CURB RAMP, TYPE 2



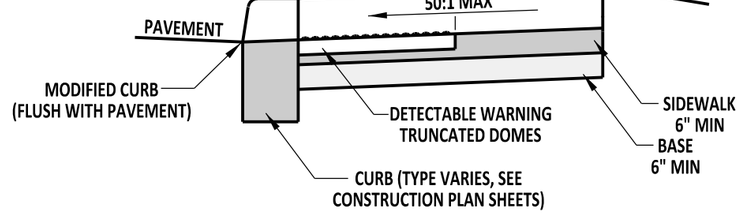
CURB RAMP, TYPE 4

PERPENDICULAR CURB RAMP
** - DASHED LINES DO NOT INDICATE JOINTS

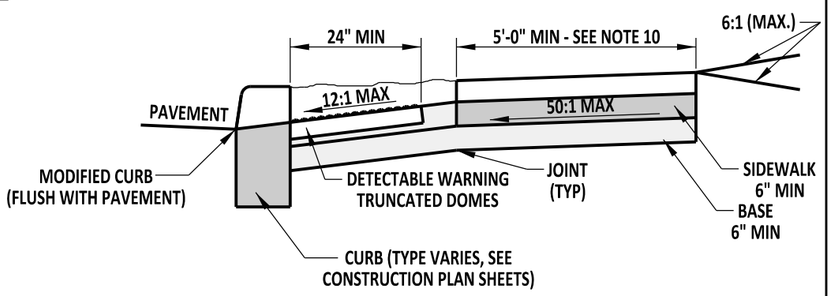


CURB RAMP, TYPE 3

DIAGONAL CURB RAMP



SECTION C-C



SECTION D-D

NOTES:

1). FOR ALTERATIONS WITHOUT A GRASS STRIP OR WHERE THE EXISTING ROAD PROFILE IS STEEPER THAN 7% AND A 12:1 MAXIMUM SLOPE RAMP WILL NOT MEET THE SIDEWALK GRADE WITHIN A LENGTH OF 15'-0", THE RAMP LENGTH MAY BE LIMITED TO 15'-0" AT A CONSTANT SLOPE, AND THE RAMP SLOPE ALLOWED TO EXCEED 12:1.
2). RAMP AND SIDEWALK CROSS SLOPE SHALL BE 50:1 (2%) MAXIMUM. FOR REHABILITATION WORK, THE RAMP CROSS SLOPE SHALL MATCH THE SLOPE OF THE ADJACENT ROADWAY
3). IF GRADING WILL BE STEEPER THAN 6:1 ADJACENT TO THE CURB RAMP OR SIDEWALK, THEN A TYPE 1-8 CURB OR RETAINING WALL SHOULD BE USED TO ELIMINATE THE NEED FOR THE STEEP SLOPE.
4). ENTIRE DEPRESSED AREA OF CURB SHALL HAVE DETECTABLE WARNING TRUNCATED DOMES.
5). THE MAXIMUM DIFFERENCE IN GRADE BETWEEN THE SIDEWALK OR CURB AND THE PAVEMENT SHALL BE 13%, HOWEVER 11% IS PREFERRED. SEE STANDARD NO. C-2, SHEET 1 OF 3.
6). REFER TO DELAWARE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES FOR DETAILS REGARDING THE LOCATION OF PEDESTRIAN PUSH BUTTONS.
7). LANDING AREA SHALL BE DELINEATED WITH JOINTS.
8). THE EDGE OF THE LANDING SHALL BE A MAXIMUM OF 10'-0" FROM THE FACE OF THE CURB.
9). FOR REHABILITATION WORK, PLACE TRANSITION SLAB TO TRANSITION FROM THE NEW RAMP TO THE EXISTING SIDEWALK WHEN THE EXISTING SIDEWALK HAS A NON-CONFORMING RUNNING SLOPE, CROSS SLOPE, OR WIDTH. ADJACENT CURB SHOULD MATCH THE SLOPE OF THE TRANSITION SLAB.
10). LANDING AREAS SHALL BE EXTENDED 18" MIN BEYOND THE PEDESTRIAN PUSH BUTTON FOR ALL CURB RAMP TYPES. WHEN NO PEDESTRIAN PUSH BUTTON EXISTS, THE 18" EXTENSION CAN BE OMITTED.

DELAWARE
DEPARTMENT OF TRANSPORTATION

CURB RAMPS, TYPES 2, 3, & 4

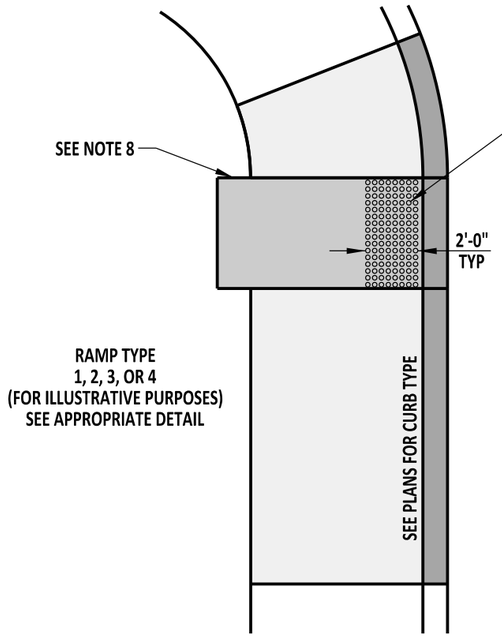
STANDARD NO. C-2 (2012) | SHT. 2 OF 3

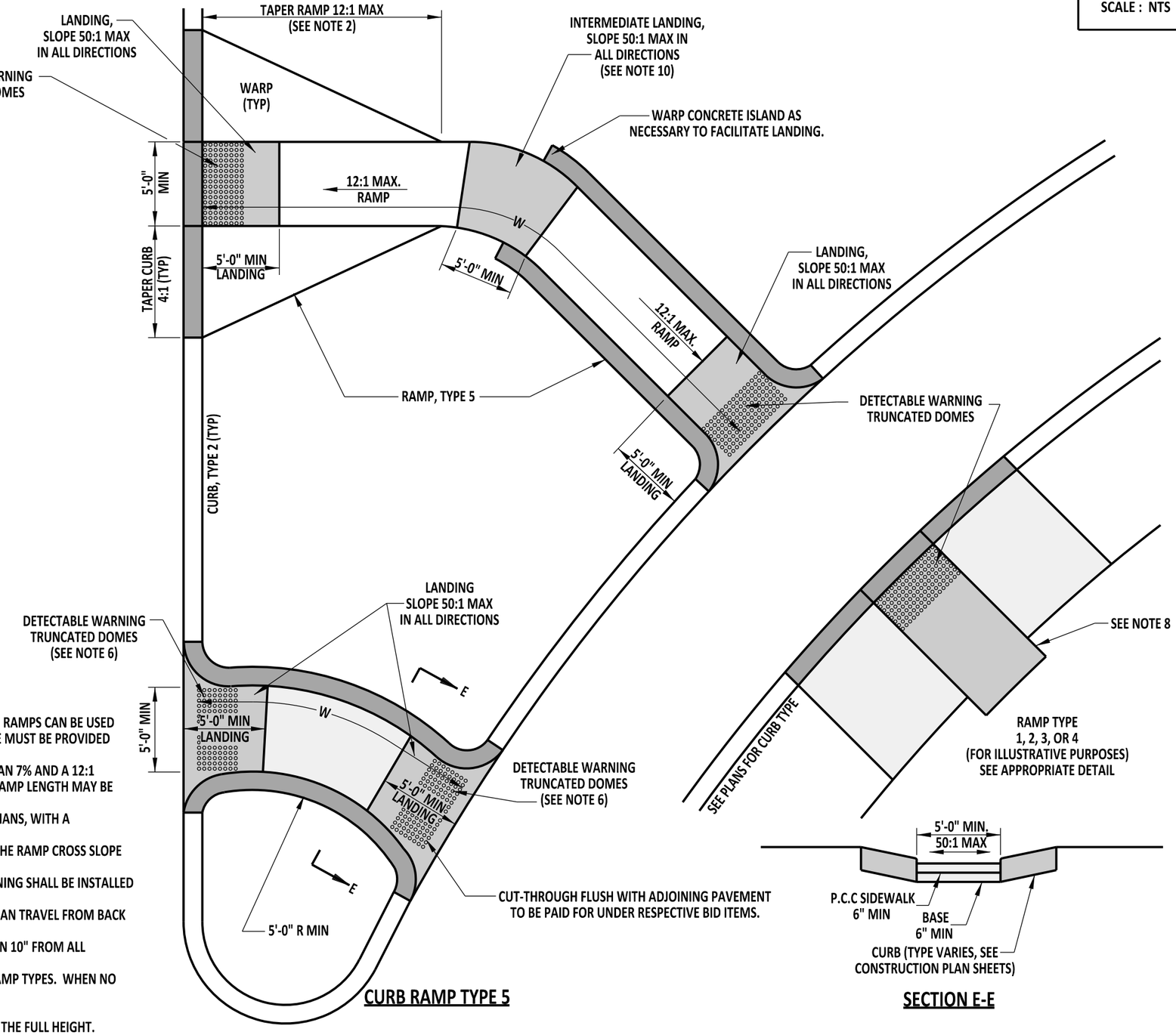
APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 03/07/2013 (DATE)

RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 03/07/2013 (DATE)

03/05/2013

SCALE : NTS





CURB RAMP TYPE 5

SECTION E-E

NOTES:

1). A CUT-THROUGH LEVEL WITH THE STREET IS THE PREFERRED TREATMENT FOR ISLANDS, ALTHOUGH, RAMPS CAN BE USED WHERE THE ISLAND WIDTH IS SUFFICIENT TO ACCOMMODATE THEM. POSITIVE SURFACE DRAINAGE MUST BE PROVIDED FOR EITHER TREATMENT. EITHER TREATMENT IS ACCEPTABLE.

2). FOR ALTERATIONS WITHOUT A GRASS STRIP OR WHERE THE EXISTING ROAD PROFILE IS STEEPER THAN 7% AND A 12:1 MAXIMUM SLOPE RAMP WILL NOT MEET THE SIDEWALK GRADE WITHIN A LENGTH OF 15'-0", THE RAMP LENGTH MAY BE LIMITED TO 15'-0" AT A CONSTANT SLOPE, AND ALLOWED TO EXCEED 12:1.

3). A CONTINUOUS PATH MUST BE PROVIDED BETWEEN ADJACENT CURB RAMPS IN ISLANDS AND MEDIANS, WITH A MAXIMUM RUNNING SLOPE OF 20:1.

4). RAMP AND SIDEWALK CROSS SLOPE SHALL BE 50:1 (2%) MAXIMUM. FOR REHABILITATION WORK, THE RAMP CROSS SLOPE SHALL MATCH THE SLOPE OF THE ADJACENT ROADWAY.

5). WHERE THERE IS NO DEPRESSED CURB AT A CUT-THROUGH OR CURB RAMP, THE DETECTABLE WARNING SHALL BE INSTALLED 3" FROM THE ROADWAY PAVEMENT.

6). DETECTABLE WARNINGS SHALL BE INSTALLED WHEN THE LENGTH W IN THE DIRECTION OF PEDESTRIAN TRAVEL FROM BACK OF CURB TO BACK OF CURB IS 6'-0" OR GREATER.

7). PEDESTRIAN SIGNALS SHALL BE ACCESSIBLE WITH A LEVEL LANDING, WHOSE EDGE IS NO MORE THAN 10" FROM ALL PEDESTRIAN PUSH BUTTONS.

8). LANDING AREA SHALL BE EXTENDED 18" MIN BEYOND PEDESTRIAN PUSH BUTTON FOR ALL CURB RAMP TYPES. WHEN NO PEDESTRIAN PUSH BUTTON EXISTS, THE 18" EXTENSION CAN BE OMITTED.

9). LANDING AREA SHALL BE CLEARLY DELINEATED WITH JOINTS.

10). INTERMEDIATE LANDING IS ONLY REQUIRED WHEN THE TWO RAMPS INTERSECT BEFORE REACHING THE FULL HEIGHT.

DELAWARE
DEPARTMENT OF TRANSPORTATION

CURB RAMP, TYPE 5 & SECTIONS

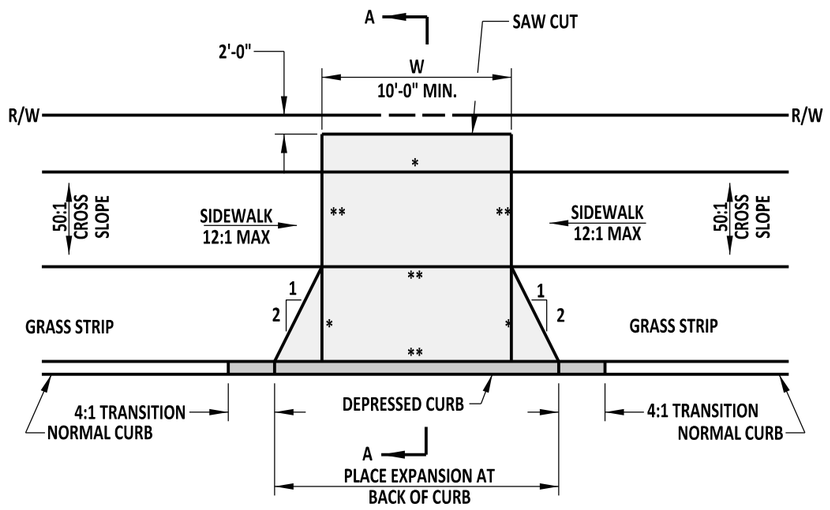
STANDARD NO. C-2 (2012) | SHT. 3 OF 3

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 03/07/2013 (DATE)

RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 03/07/2013 (DATE)

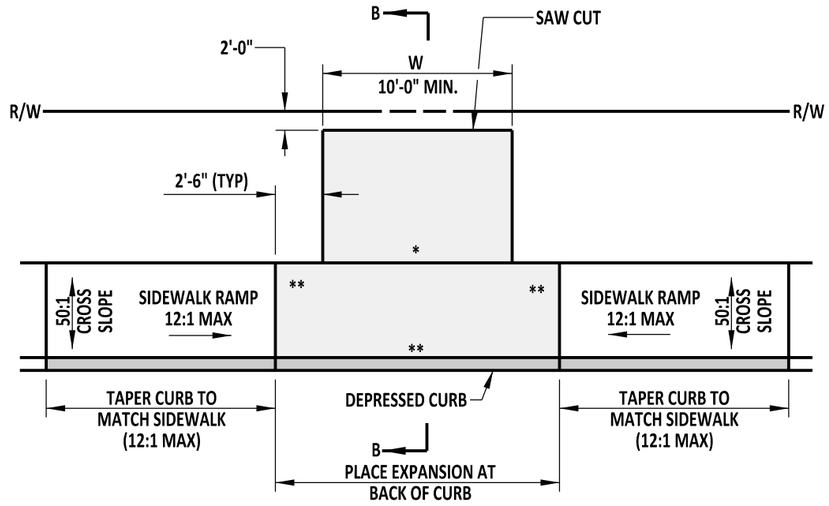
03/05/2013

SCALE : NTS



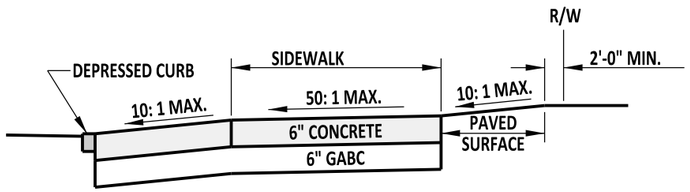
ENTRANCE WITH SIDEWALK AND GRASS STRIP

* - JOINT
** - EXPANSION MATERIAL

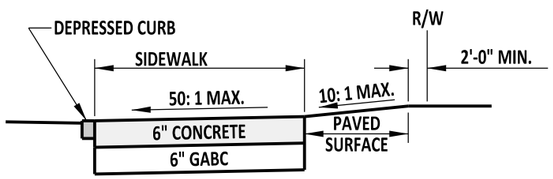


ENTRANCE WITH SIDEWALK AND NO GRASS STRIP

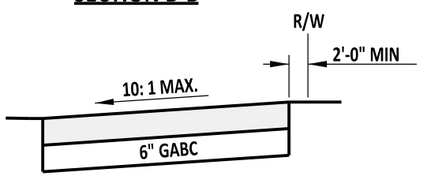
* - JOINT
** - EXPANSION MATERIAL



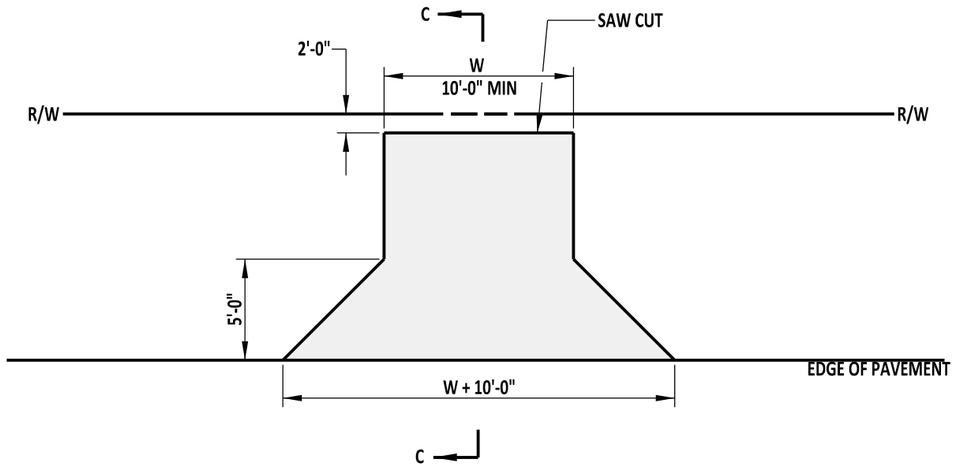
SECTION A-A



SECTION B-B



SECTION C-C



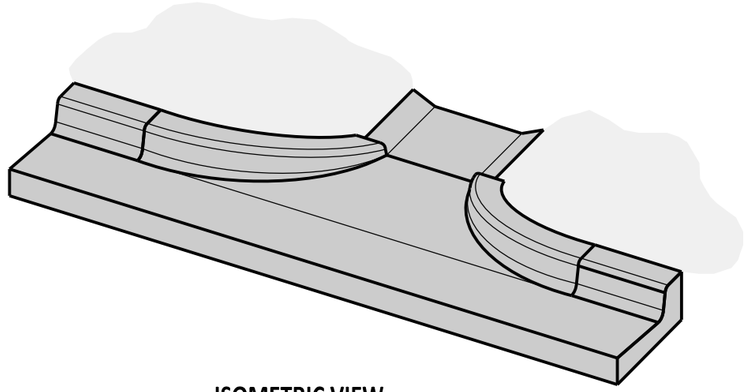
ENTRANCE WITHOUT SIDEWALK

NOTE:
IF WIDTH OF DRIVEWAY IS 15'-0" OR GREATER, THE FLARE AND EXTENSIONS CAN BE OMITTED.

DELAWARE DEPARTMENT OF TRANSPORTATION	ENTRANCES		APPROVED	SIGNATURE ON FILE (CHIEF ENGINEER)	01/07/2013 (DATE)
	STANDARD NO. C-3 (2012)	SHT. 1 OF 1	RECOMMENDED	SIGNATURE ON FILE (DESIGN ENGINEER)	12/20/2012 (DATE)

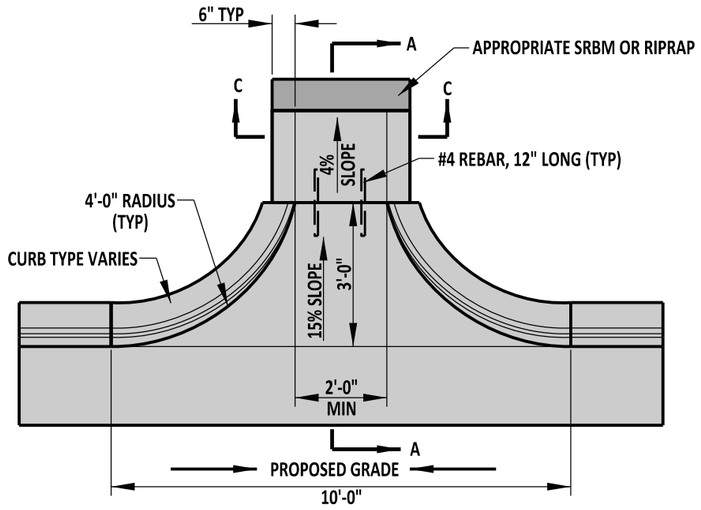
12/4/2012

SCALE : NTS



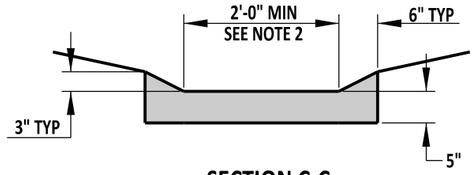
ISOMETRIC VIEW

SHOWN WITH INTEGRAL CURB & GUTTER, TYPE 1-8

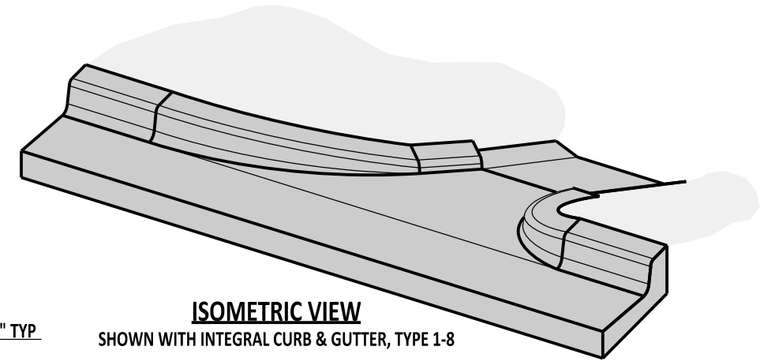


PLAN VIEW

IN SUMP LOCATION

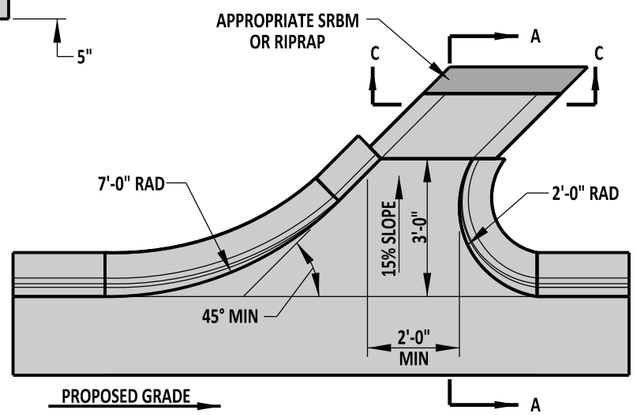


SECTION C-C



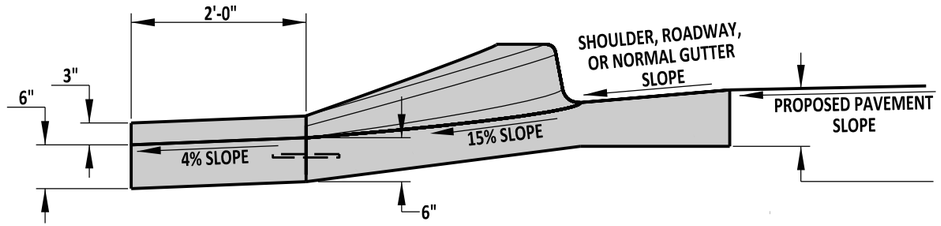
ISOMETRIC VIEW

SHOWN WITH INTEGRAL CURB & GUTTER, TYPE 1-8



PLAN VIEW

ON GRADE OR SLOPE



SECTION A-A

NOTES:

1). DESIGNER SHALL ESTABLISH WIDTH OF OPENING BASED ON DRAINAGE CALCULATIONS.
2). THE WIDTH OF THE APRON (SHOWN IN SECTION C-C) SHALL MATCH THE WIDTH OF THE CURB OPENING (SHOWN IN PLAN VIEW).

DELAWARE DEPARTMENT OF TRANSPORTATION	CURB OPENING DETAILS		APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)
	STANDARD NO. C-4 (2012)	SHT. 1 OF 1	RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

SCALE : NTS

INLET BOX SIZE		COVER SLAB SIZE (L X W)	DRAINAGE INLET TOP UNIT	INLET TOP UNIT REBAR LENGTH	INLET TOP UNIT LIMIT OF PAYMENT	INLET TOP UNIT BAR BENDING DIAGRAM	FRAME & GRATE (FOUND ON DETAIL D-5, SHEET 2)	MAXIMUM PIPE SIZE (SEE NOTE 1)		MAXIMUM HEIGHT (TO TOP OF BOX)
L	W							L	W	
17⅝"	11⅛"	NO COVER SLAB	TYPE 5 (FRAME & GRATE COMBO)	N/A	N/A	N/A	TYPE 5 (FRAME & GRATE COMBO)	N/A	N/A	4'-0"
24"	24"	NO COVER SLAB	TYPE 6 (FRAME & GRATE COMBO)	N/A	N/A	N/A	TYPE 6 (FRAME & GRATE COMBO)	15"	15"	4'-0"
34"	18"	NO COVER SLAB	TYPES A, C, D, & E (DETAIL D-5, SHEET 7)	79"	82"	S504 (DETAIL D-5, SHEET 7)	TYPES 1 THRU 4 GRATE STANDARD DRAINAGE INLET FRAME	24"	12"	11'-4"
34"	24"	NO COVER SLAB	TYPES A, B, C, D, & E (DETAIL D-5, SHEET 6)	79"	82"	S503 (DETAIL D-5, SHEET 6)	TYPES 1 THRU 4 GRATE STANDARD DRAINAGE INLET FRAME	24"	15"	11'-4"
48"	30"	60" x 42" (DETAIL D-5, SHEET 4)	TYPES A, B, C, D, & E (DETAIL D-5, SHEET 3)	93"	96"	S501 (DETAIL D-5, SHEET 6)	TYPES 1 THRU 4 GRATE STANDARD DRAINAGE INLET FRAME	36"	21"	11'-4"
48"	48"	60" x 60" (DETAIL D-5, SHEET 4)	TYPES A, B, C, D, & E (DETAIL D-5, SHEET 3)	93"	96"	S501 (DETAIL D-5, SHEET 3)	TYPES 1 THRU 4 GRATE STANDARD DRAINAGE INLET FRAME	36"	36"	11'-4"
66"	30"	78" x 42" (DETAIL D-4, SHEET 4)	TYPES A, B, C, D, & E (DETAIL D-5, SHEET 3)	111"	114"	S501 (DETAIL D-5, SHEET 3)	TYPES 1 THRU 4 GRATE STANDARD DRAINAGE INLET FRAME	48"	21"	11'-4"
66"	48"	78" x 60" (DETAIL D-5, SHEET 4)	TYPES A, B, C, D, & E (DETAIL D-5, SHEET 3)	111"	114"	S501 (DETAIL D-5, SHEET 3)	TYPES 1 THRU 4 GRATE STANDARD DRAINAGE INLET FRAME	48"	36"	11'-4"
66"	66"	78" x 78" (DETAIL D-5, SHEET 4)	TYPES A, B, C, D, & E (DETAIL D-5, SHEET 3)	111"	114"	S501 (DETAIL D-5, SHEET 3)	TYPES 1 THRU 4 GRATE STANDARD DRAINAGE INLET FRAME	48"	48"	11'-4"
72"	24"	84" x 36" DETAIL D-5, SHEET 5)	TYPES A, B, C, D, & E (DETAIL D-5, SHEET 3)	117"	120"	S502 (DETAIL D-5, SHEET 5)	TYPES 1 THRU 4 GRATE STANDARD DRAINAGE INLET FRAME	54"	15"	11'-4"
72"	48"	84" x 60" (DETAIL D-5, SHEET 5)	TYPES A, B, C, D, & E (DETAIL D-5, SHEET 3)	117"	120"	S502 (DETAIL D-5, SHEET 5)	TYPES 1 THRU 4 GRATE STANDARD DRAINAGE INLET FRAME	54"	36"	11'-4"
72"	72"	84" x 84" (DETAIL D-5, SHEET 5)	TYPES A, B, C, D, & E (DETAIL D-5, SHEET 3)	117"	120"	S502 (DETAIL D-5, SHEET 5)	TYPES 1 THRU 4 GRATE STANDARD DRAINAGE INLET FRAME	54"	54"	11'-4"

NOTES :

1). MAXIMUM PIPE SIZES ARE CALCULATED USING REINFORCED CONCRETE PIPE PERPENDICULAR TO THE BOX WALL. FOR OTHER PIPE SIZES, TYPES AND SKEW ANGLES OTHER THAN PERPENDICULAR, SEE CHART ON DELDOT DESIGN RESOURCE CENTER.

2). STEPS ARE REQUIRED ON ALL BOXES WHOSE DEPTH IS GREATER THAN 4'-0" (1219).

3). SEE DETAIL D-4 OR APPROPRIATE DETAIL SHEET FOR ADDITIONAL NOTES.

DELAWARE
DEPARTMENT OF TRANSPORTATION

DRAINAGE INLET REFERENCE SHEET

STANDARD NO. D-R (2012) | SHT. 1 OF 1

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)

RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

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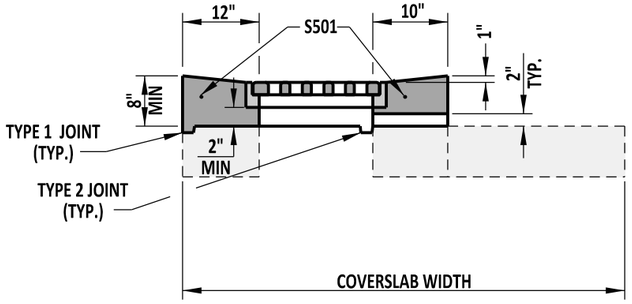
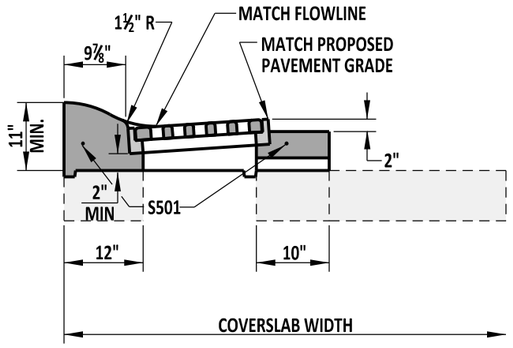
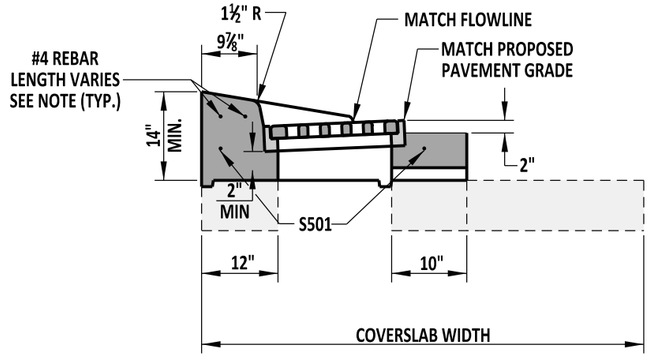


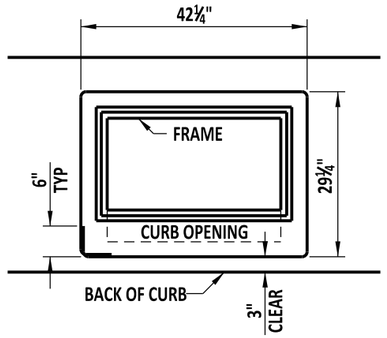
TYPE A



TYPE D

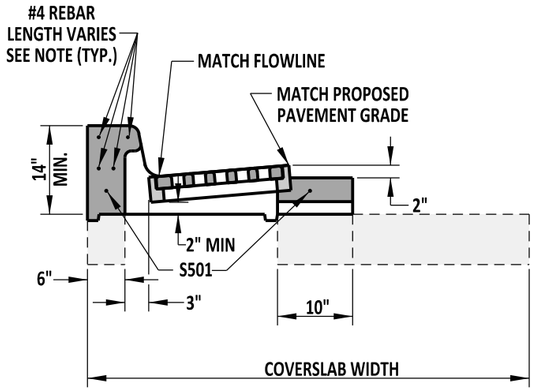


TYPE E



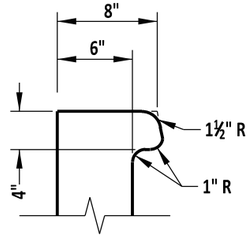
S501 BENDING DIAGRAM

S501 IS NOT REQUIRED TO BE ONE CONTINUOUS BAR. IF MORE THAN ONE BAR IS USED, THERE MUST BE A 12" OVERLAP BETWEEN BARS.



TYPE B

SEE CURB OPENING DETAIL ON THIS SHEET

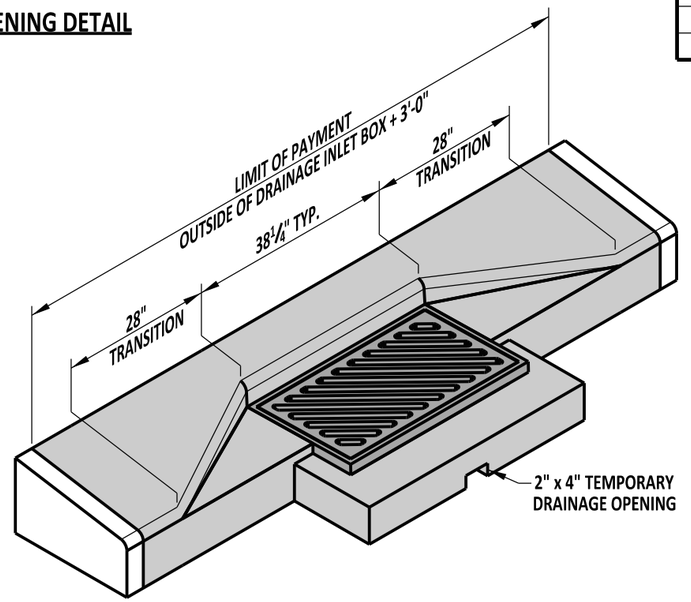


CURB OPENING DETAIL

INLET TOP UNIT APPLICATIONS	
TOP UNIT	CURB
TYPE A	USE IN DRAINAGE SWALE
TYPE B	INTEGRAL PCC CURB & GUTTER, TYPE 1-8 & 3-8, PCC CURB TYPE 1-8
TYPE C	INTEGRAL PCC CURB & GUTTER, TYPES 1-6, 3-6, 1-4, 3-4 , 1-2 AND 3-2 AND PCC CURB TYPE 1-6, 1-4, AND 1-2.
TYPE D	INTEGRAL PCC CURB & GUTTER, TYPE 2
TYPE E	PCC CURB TYPE 2

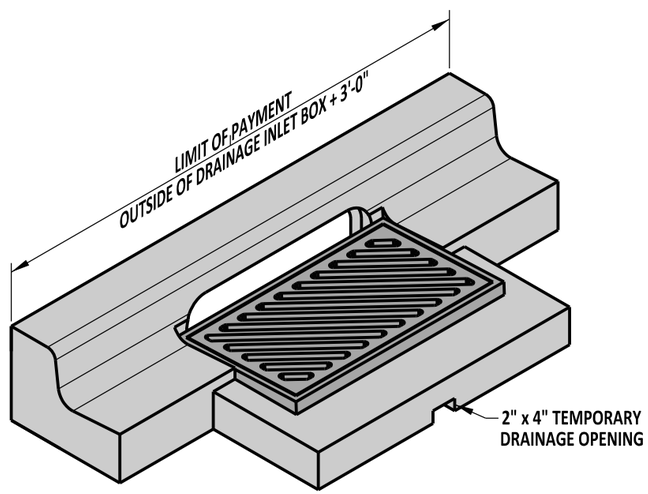
TYPE C

* - THIS DIMENSION VARIES BASED ON THE HEIGHT OF THE CURB AND GUTTER OR CURB USED:
- INTEGRAL P.C.C. CURB AND GUTTER, TYPES 1-6 AND 3-6 & CURB, TYPE 1-6 - 12" MIN.
- INTEGRAL P.C.C. CURB AND GUTTER, TYPES 1-4 AND 3-4 & CURB, TYPE 1-4 - 10" MIN.
- INTEGRAL P.C.C. CURB AND GUTTER, TYPES 1-2 AND 3-2 & CURB, TYPE 1-2 - 8" MIN.



ISOMETRIC VIEW

TYPE E UNIT SHOWN



ISOMETRIC VIEW

TYPE B TOP UNIT SHOWN WITH INTEGRAL CURB & GUTTER TYPE 3

NOTE: LENGTH OF #4 REBAR SHALL BE THE OUTSIDE OF THE DRAINAGE INLET BOX PLUS 2'-9".

DELAWARE
DEPARTMENT OF TRANSPORTATION

DRAINAGE INLET TOP UNITS

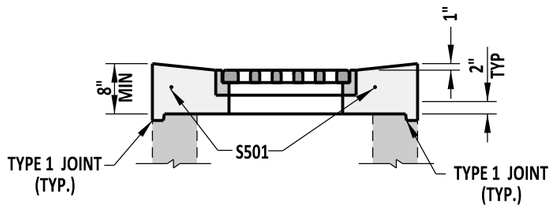
STANDARD NO. D-5 (2012) | SHT. 3 OF 9

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)

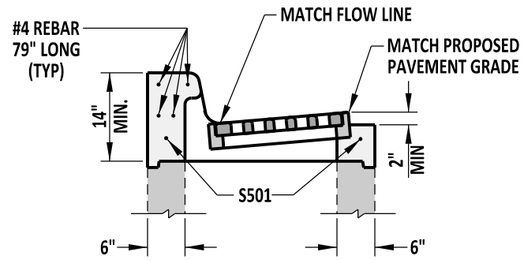
RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

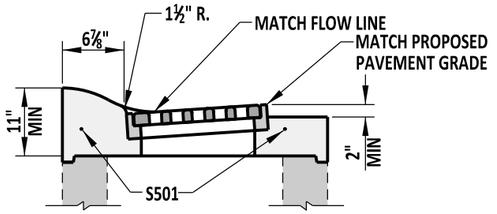
SCALE : NTS



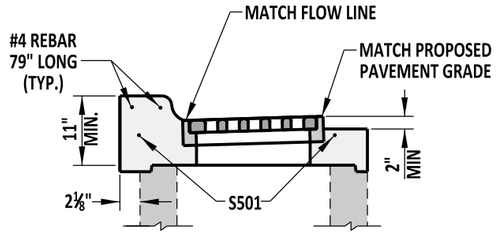
TYPE A



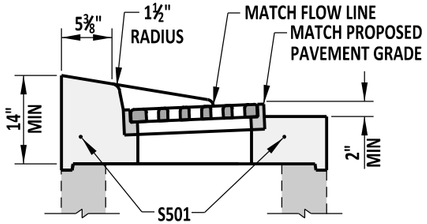
TYPE B



TYPE D



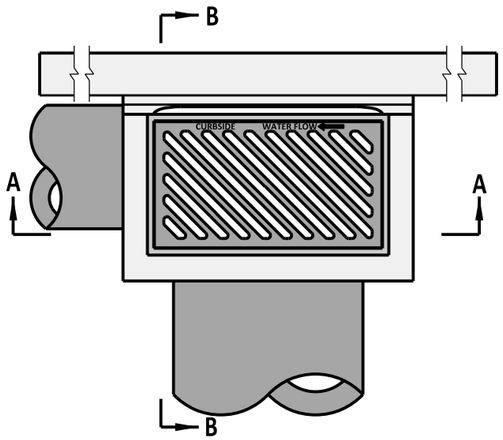
TYPE C



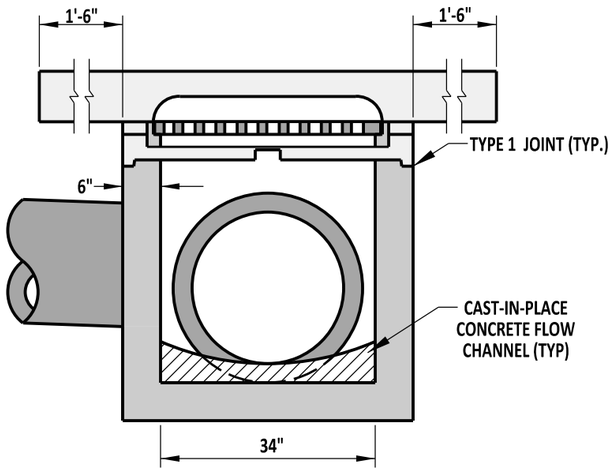
TYPE E

TOP UNIT DETAILS

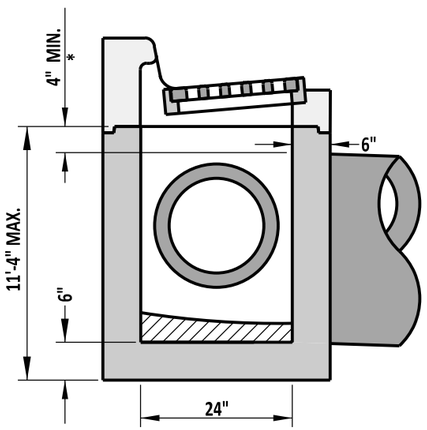
NOTE: SEE DETAIL D-5, SHEET 3 OF 9 FOR INLET TOP UNIT APPLICATIONS.



TOP VIEW



SECTION A-A



SECTION B-B

DRAINAGE INLET DETAILS

NOTE: REFER TO PREVIOUS SHEETS FOR REINFORCING REQUIREMENTS
* - SEE OPTIONAL PIPE OPENING DETAIL ON STANDARD NO. D-4, SHEET 1 OF 1

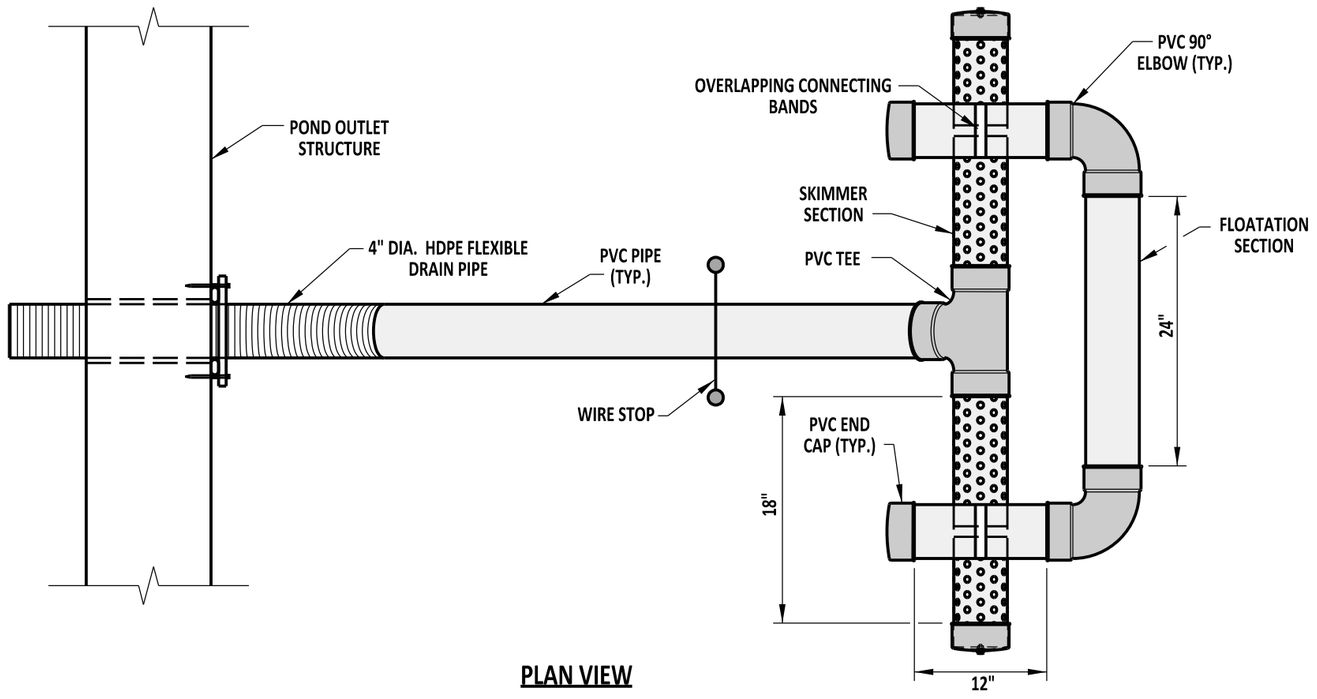
DELAWARE DEPARTMENT OF TRANSPORTATION	34" x 24" DRAINAGE INLET DETAILS		APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)
	STANDARD NO. D-5 (2012)	SHT. 6 OF 9	RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

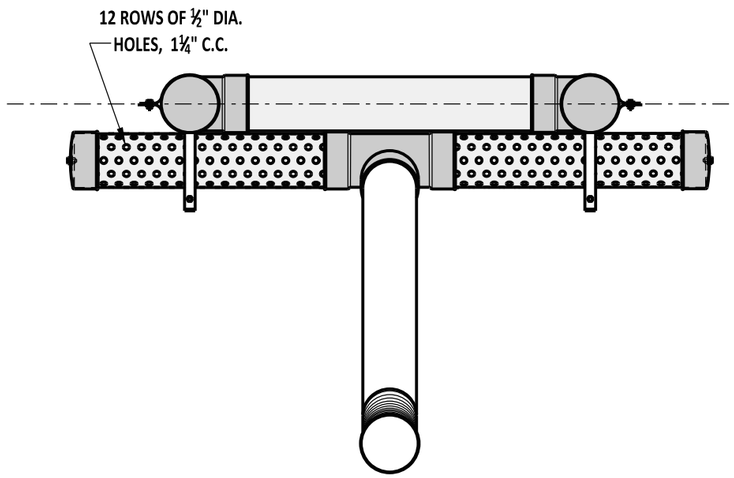
SCALE : NTS

NOTES:

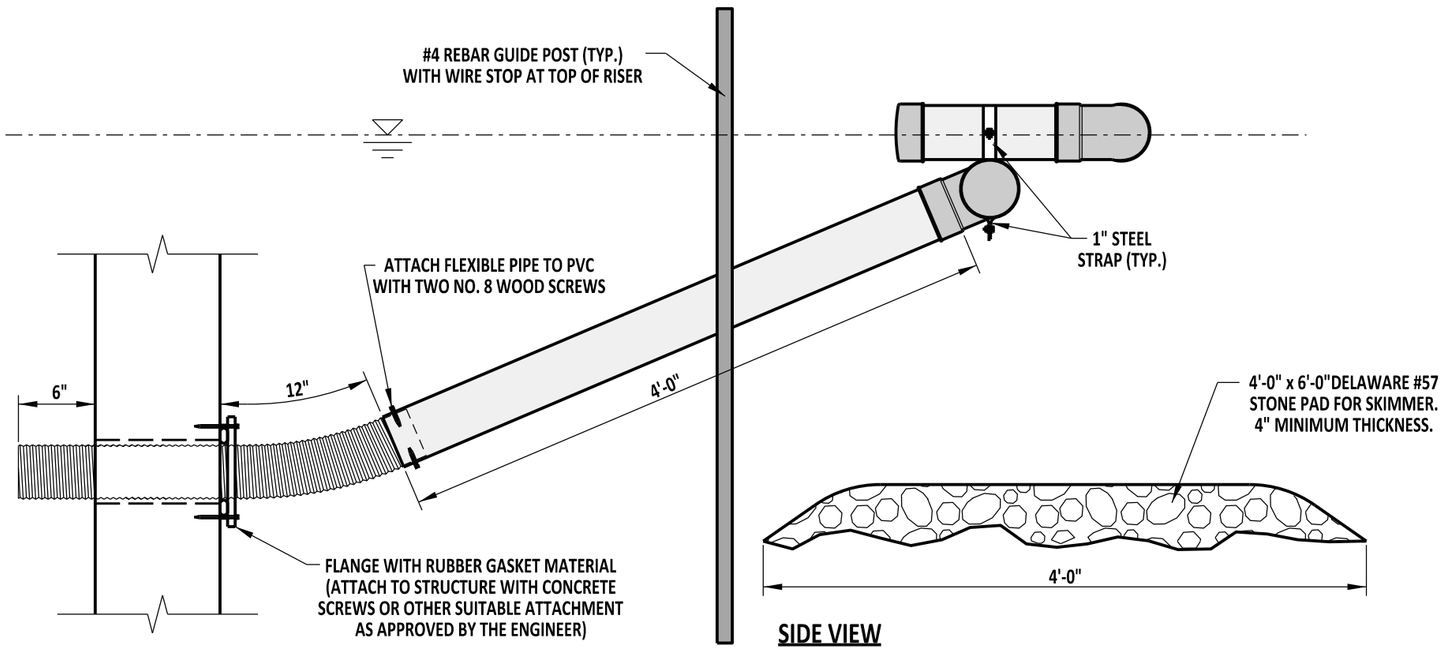
1). ALL P.V.C. PIPES ARE TO BE 4" I.D., SCHEDULE 40.
2). ALL JOINTS OF THE FLOATATION SECTION SHALL BE SOLVENT WELDED.
3). 4" HDPE FLEXIBLE DRAIN PIPE IS TO BE ATTACHED TO THE POND OUTLET STRUCTURE WITH WATER TIGHT CONNECTIONS



PLAN VIEW



FRONT VIEW

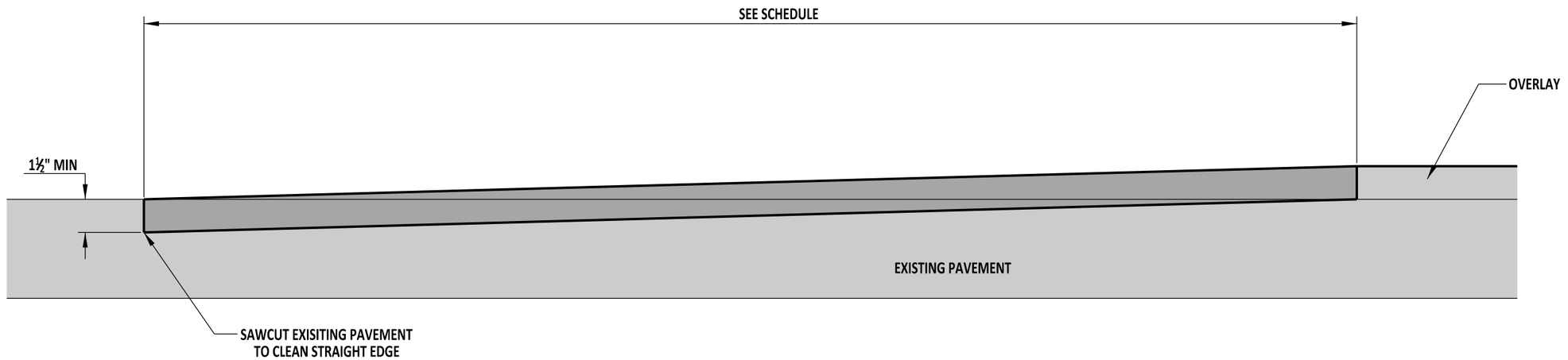


SIDE VIEW

DELAWARE DEPARTMENT OF TRANSPORTATION	SKIMMER DEWATERING DEVICE		APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)
	STANDARD NO. E-22 (2012)	SHT. 1 OF 1	RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

SCALE : NTS



NOTE:
THE PROFILE OF THE OVERLAY PAVING SHALL BE ADJUSTED TO ASSURE A SMOOTH TRANSITION THROUGH THE BUTT JOINT.

CONDITION	SLOPE
GREATER THAN OR EQUAL TO 55 MPH	40:1
LESS THAN 55MPH	30:1
STOP OR INTERSECTION	15:1

DELAWARE
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

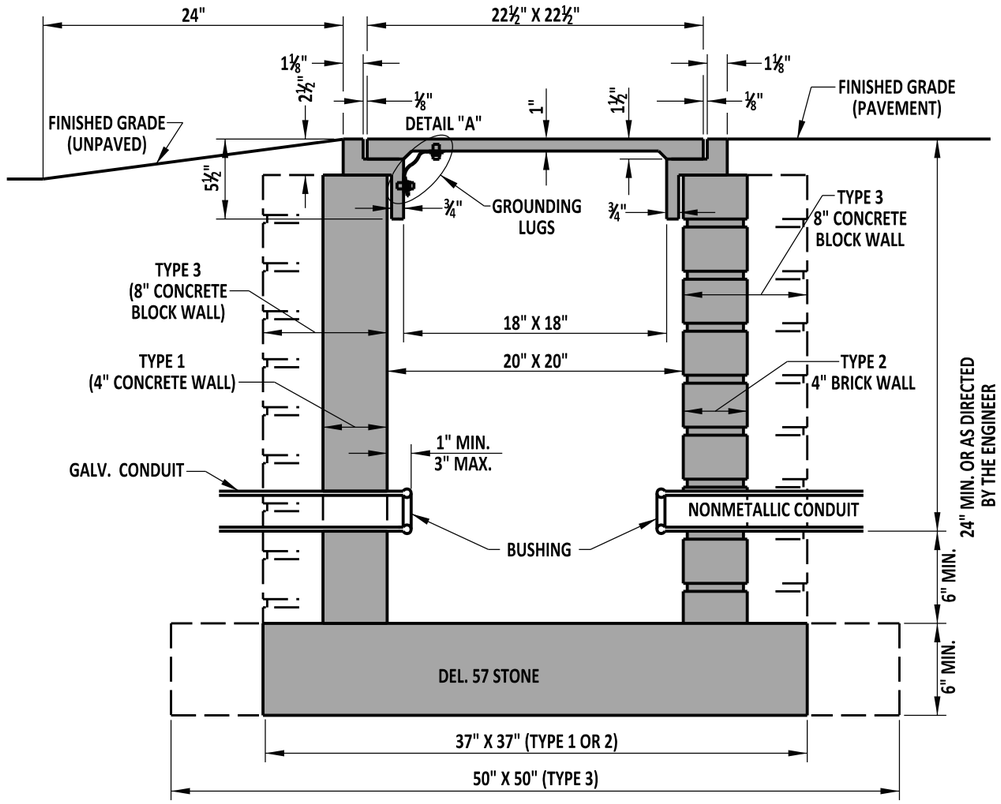
STANDARD NO. P-3 (2012) | SHT. 1 OF 1

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)

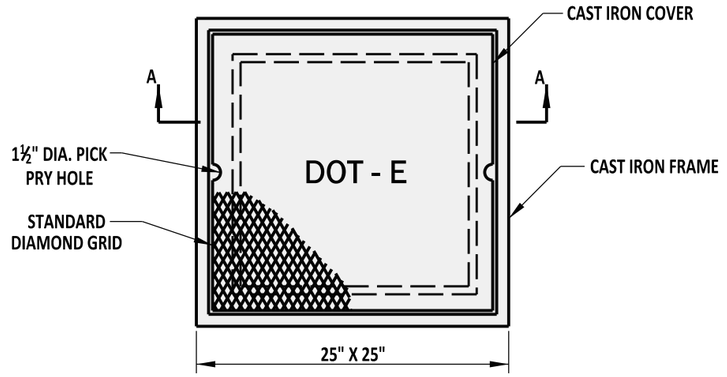
RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

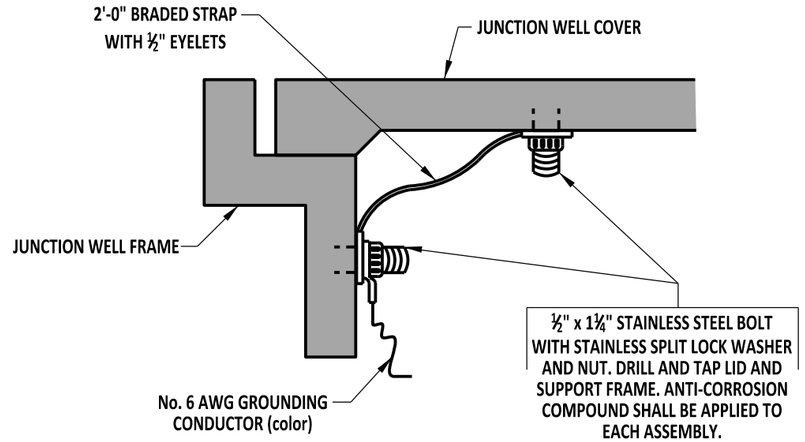
SCALE : NTS



SECTION A-A



PLAN VIEW



DETAIL "A"

NOTES:

1). TYPE 1 CONDUIT JUNCTION WELL SHALL BE PRECAST CONCRETE. AT LEAST ONE HOLE IN PRECAST WELLS WILL BE OF A 5" DIAMETER COMPLETELY THROUGH THE WALL. UNUSED HOLES SHALL BE PLUGGED.
2). TYPES 2 AND 3 CONDUIT JUNCTION WELLS SHALL BE BRICK AND WILL CONFORM TO STANDARD SPECIFICATIONS FOR BRICK MASONRY. JOINTS SHALL BE CONCAVE TYPE. TYPE 2 WALLS WILL BE A NOMINAL 4" THICK. TYPE 3 WALL WILL BE A NOMINAL 8" THICK.
3). JUNCTION WELLS SHALL NOT BE PLACED UNDER ANY TYPE OF PAVEMENT.
4). ALL CONDUIT JUNCTION WELLS SHALL 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.
5). ALL CRACKS, GAPS, OR OPENINGS IN JUNCTION WELL WALL SHALL BE SEALED WITH CONCRETE.

DELAWARE
DEPARTMENT OF TRANSPORTATION

CONDUIT JUNCTION WELL, TYPES 1, 2, AND 3

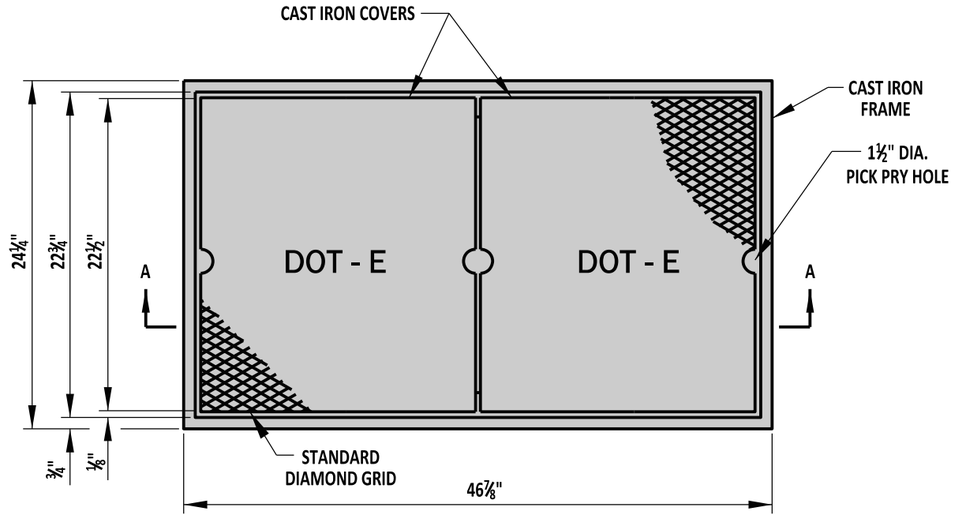
STANDARD NO. T-1 (2012) | SHT. 1 OF 3

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)

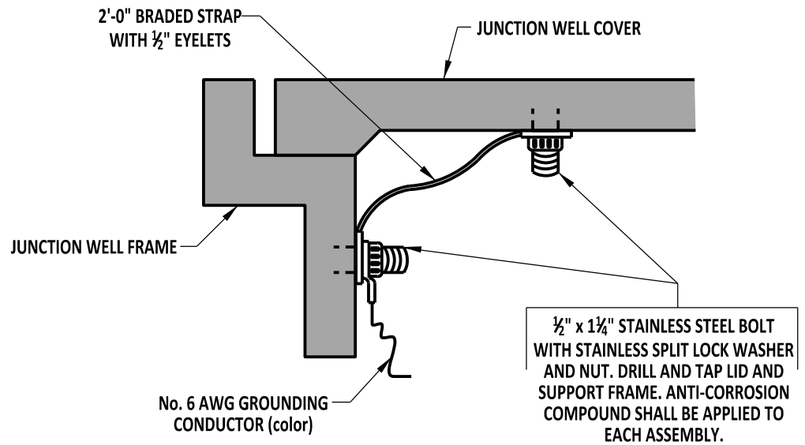
RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

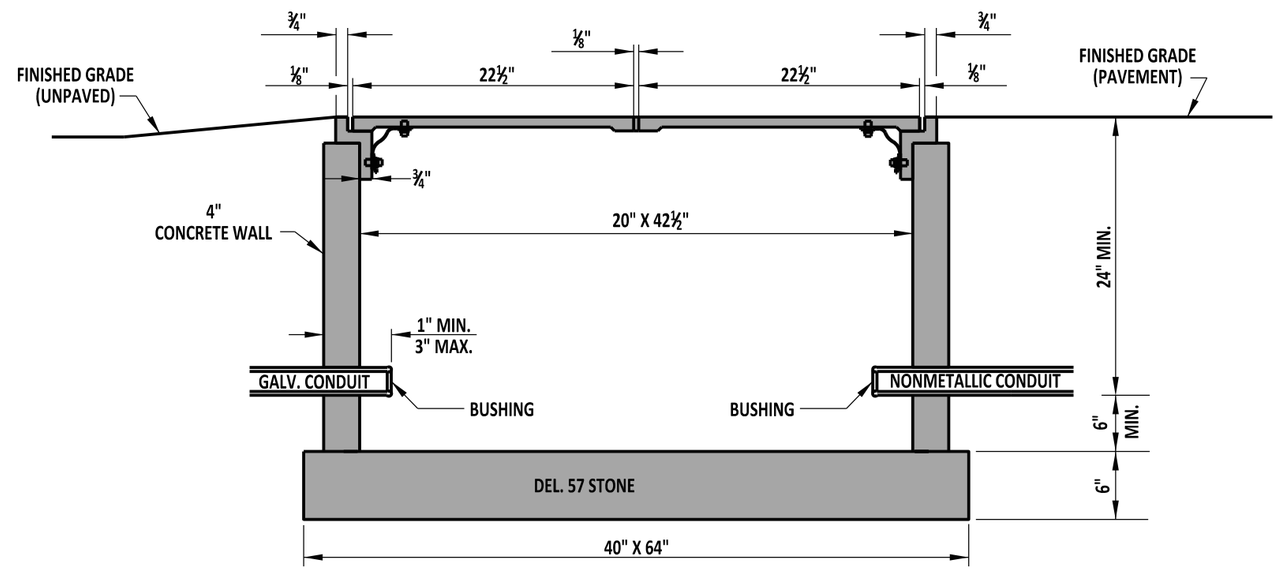
SCALE : NTS

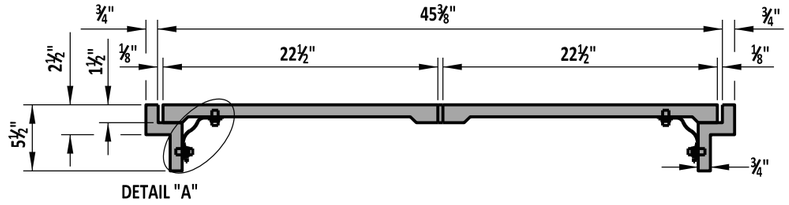


PLAN VIEW



DETAIL "A"





SECTION A-A

NOTES:

1). TYPE 4 CONDUIT JUNCTION WELL SHALL BE PRECAST CONCRETE. AT LEAST ONE HOLE IN PRECAST WELLS WILL BE OF A 5" DIAMETER COMPLETELY THROUGH THE WALL. UNUSED HOLES SHALL BE PLUGGED.
2). ALL CONDUIT JUNCTION WELLS CONSTRUCTED SHALL BEWITHIN 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.
3). ALL CRACKS, GAPS, OR OPENINGS IN JUNCTION WELL WALL SHALL BE SEALED WITH CONCRETE.

DELAWARE
DEPARTMENT OF TRANSPORTATION

CONDUIT JUNCTION WELL, TYPE 4

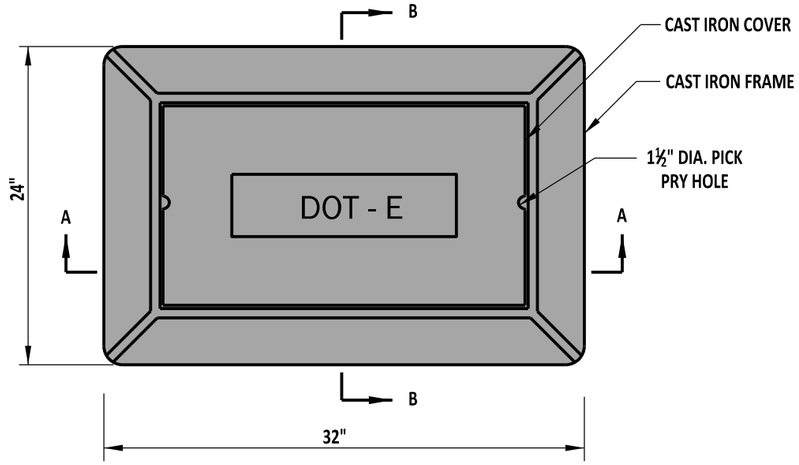
STANDARD NO. T-1 (2012) | SHT. 2 OF 3

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)

RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

SCALE : NTS



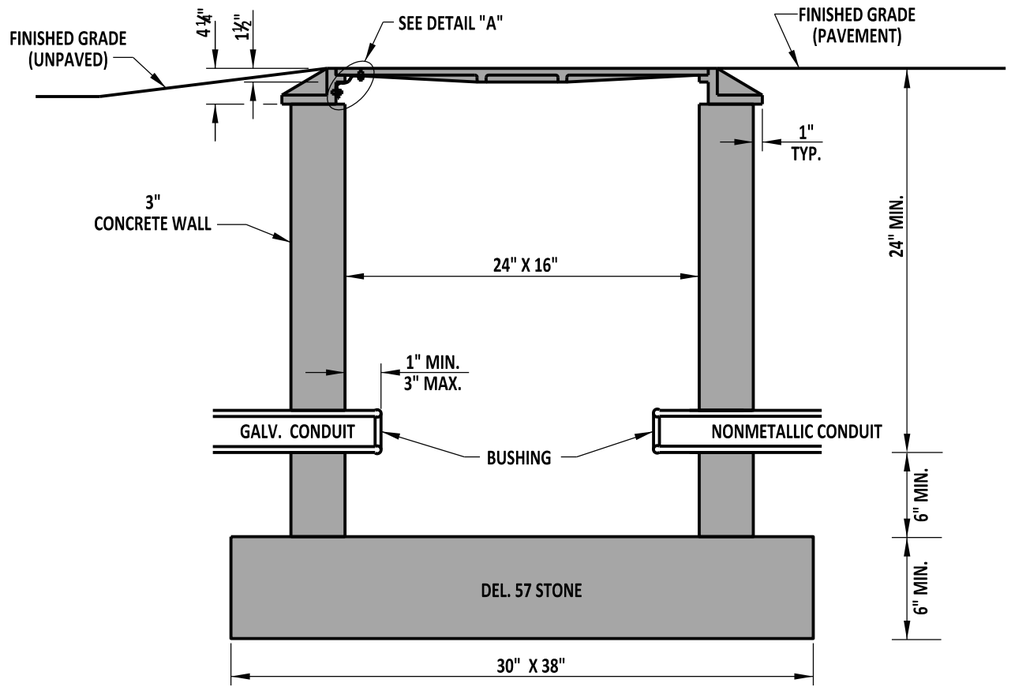
PLAN VIEW

NOTES:

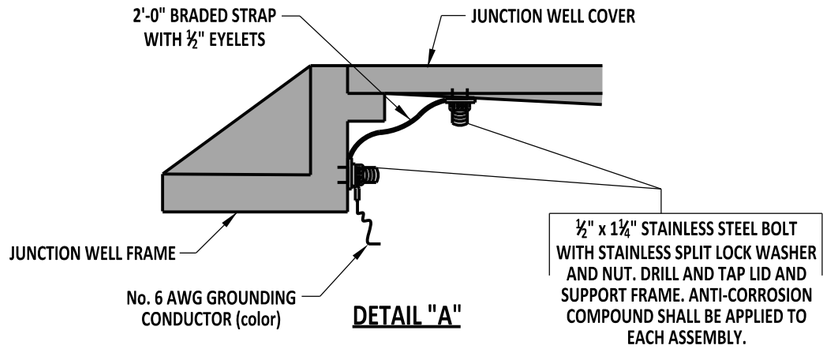
1). TYPE 5 CONDUIT JUNCTION WELL SHALL BE PRECAST CONCRETE. AT LEAST ONE HOLE IN PRECAST WELLS WILL BE OF A 5" DIAMETER COMPLETELY THROUGH THE WALL. UNUSED HOLES SHALL BE PLUGGED.

2). ALL CONDUIT JUNCTION WELLS CONSTRUCTED SHALL BEWITHIN 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.

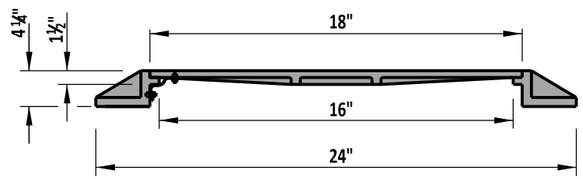
3). ALL CRACKS, GAPS, OR OPENINGS IN JUNCTION WELL WALL SHALL BE SEALED WITH CONCRETE.



SECTION A-A



DETAIL "A"

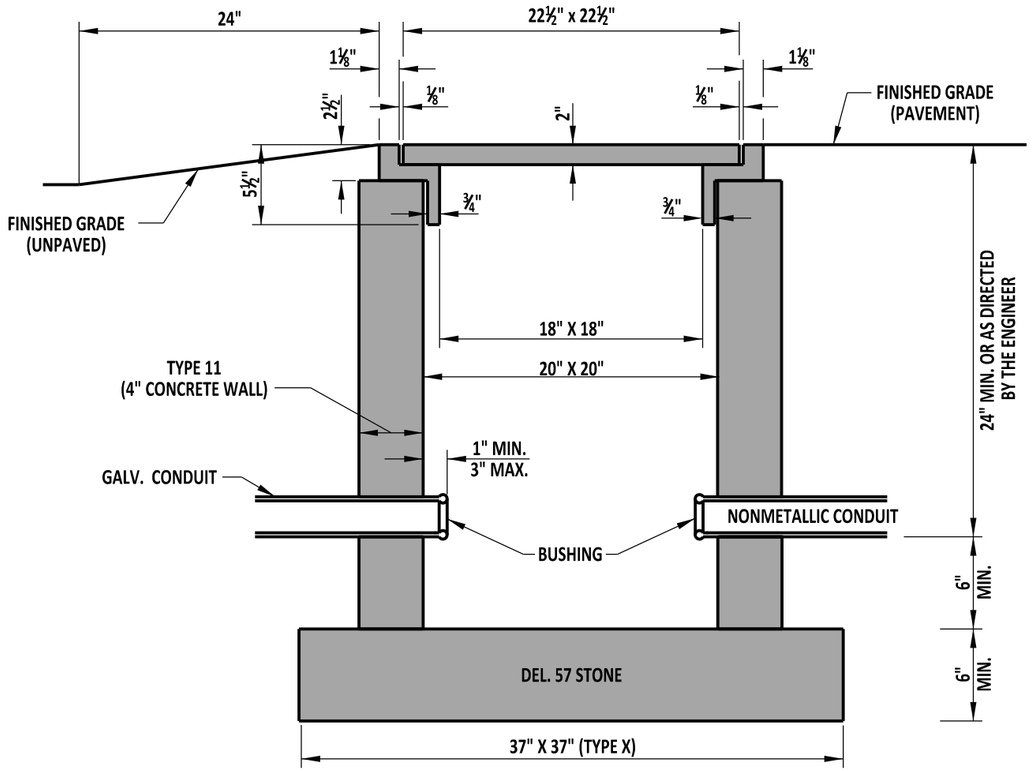


SECTION B-B

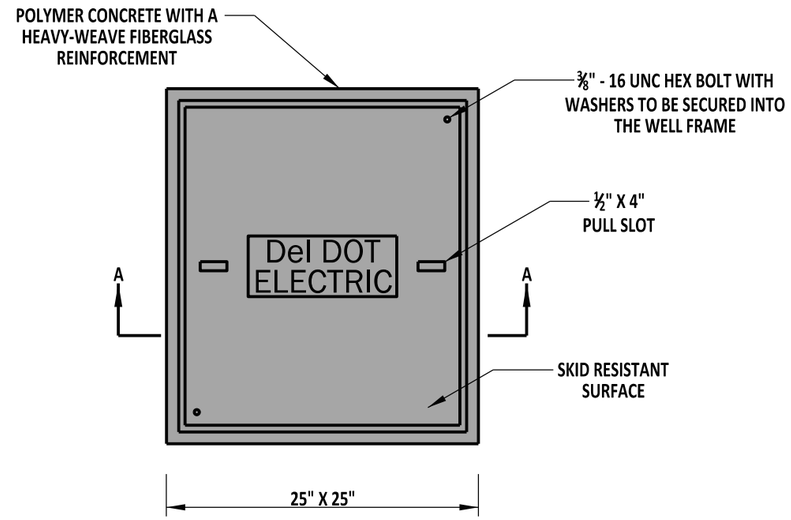
DELAWARE DEPARTMENT OF TRANSPORTATION	CONDUIT JUNCTION WELL, TYPE 5			APPROVED	SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)
	STANDARD NO. T-1 (2012)	SHT. 3	OF 3	RECOMMENDED	SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

SCALE : NTS



SECTION A-A



PLAN VIEW

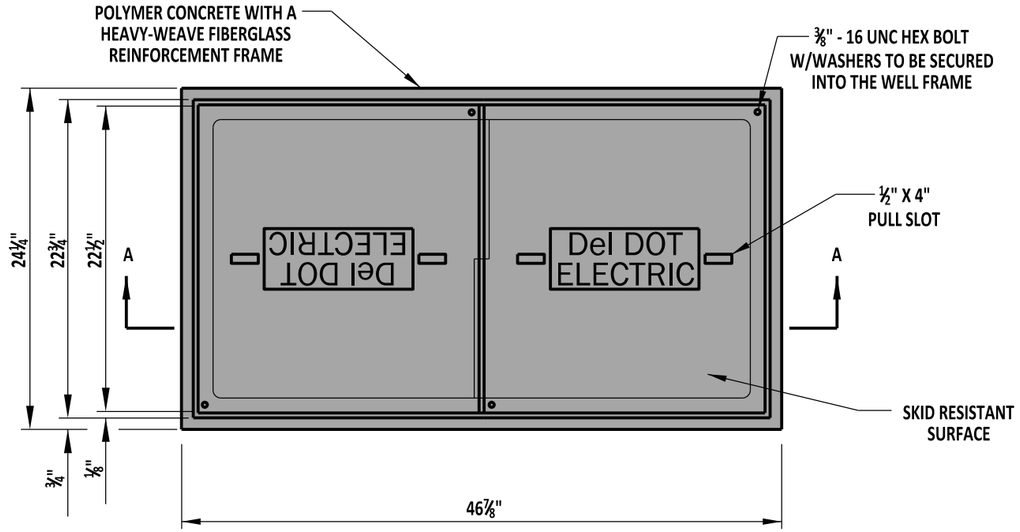
NOTES:

1). TYPE 11 CONDUIT JUNCTION WELL LID SHALL BE PRECAST POLYMER CONCRETE WITH A HEAVY-WEAVE FIBERGLASS FRAME. INSTALLED ON A PRECAST CONCRETE WELL.
2). TYPE 11 CONDUIT JUNCTION WELL BODY SHALL BE PRECAST CONCRETE. AT LEAST ONE HOLE IN PRECAST WELLS WILL BE OF A 5" DIAMETER COMPLETELY THROUGH THE WALL. UNUSED HOLES SHALL BE PLUGGED.
3). TYPE 11 CONDUIT JUNCTION WELLS SHALL 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.
4). ALL CRACKS, GAPS, OR OPENING IN JUNCTION WELL WALL SHALL BE SEALED WITH CONCRETE.

DELAWARE DEPARTMENT OF TRANSPORTATION	CONDUIT JUNCTION WELL, TYPE 11		APPROVED	SIGNATURE ON FILE (CHIEF ENGINEER)	01/07/2013 (DATE)
	STANDARD NO. T-3 (2012)	SHT. 1 OF 3	RECOMMENDED	SIGNATURE ON FILE (DESIGN ENGINEER)	12/20/2012 (DATE)

12/4/2012

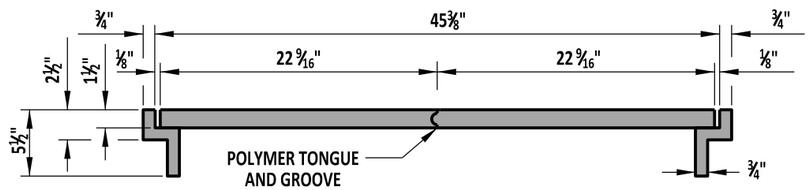
SCALE : NTS



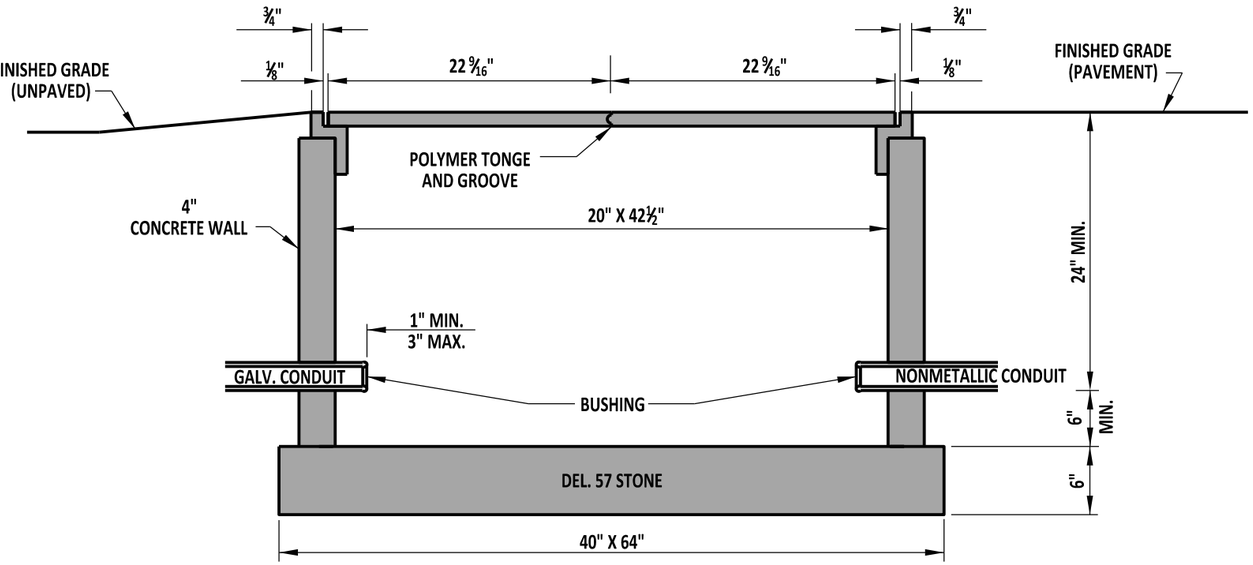
PLAN VIEW

NOTES:

1). TYPE 14 CONDUIT JUNCTION WELL LID SHALL BE PRECAST POLYMER CONCRETE WITH A HEAVY-WEAVE FIBERGLASS FRAME. INSTALLED ON A PRECAST CONCRETE WELL.
2). TYPE 14 CONDUIT JUNCTION WELL BODY SHALL BE PRECAST CONCRETE. AT LEAST ONE HOLE IN PRECAST WELLS WILL BE OF A 5" DIAMETER COMPLETELY THROUGH THE WALL. UNUSED HOLES SHALL BE PLUGGED.
3). TYPE 14 CONDUIT JUNCTION WELLS SHALL 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.
4). ALL CRACKS, GAPS, OR OPENINGS IN JUNCTION WELL WALL SHALL BE SEALED WITH CONCRETE.



SECTION A-A

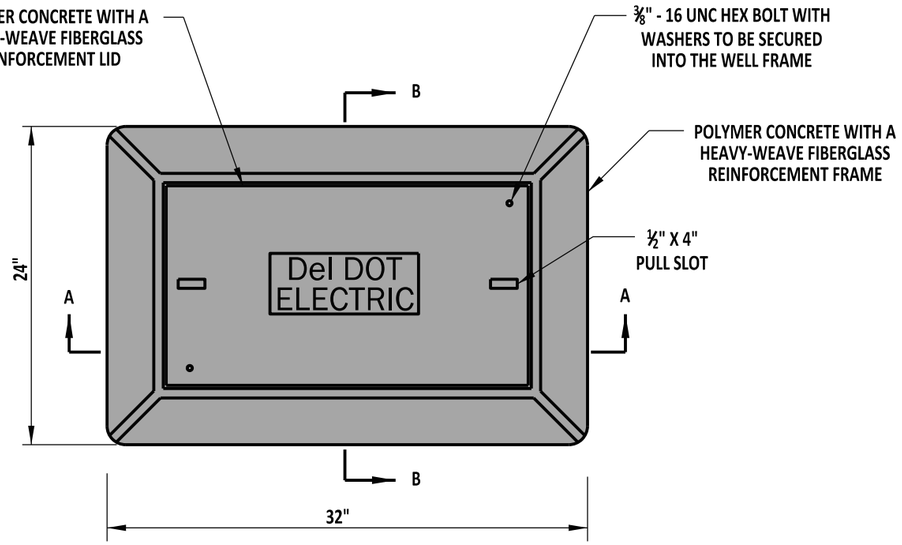


SECTION A-A

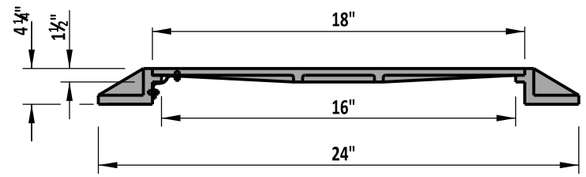
DELAWARE DEPARTMENT OF TRANSPORTATION	CONDUIT JUNCTION WELL, TYPE 14			APPROVED	SIGNATURE ON FILE (CHIEF ENGINEER) — 01/07/2013 (DATE)
	STANDARD NO. T-3 (2012)	SHT. 2	OF 3	RECOMMENDED	SIGNATURE ON FILE (DESIGN ENGINEER) — 12/20/2012 (DATE)

12/4/2012

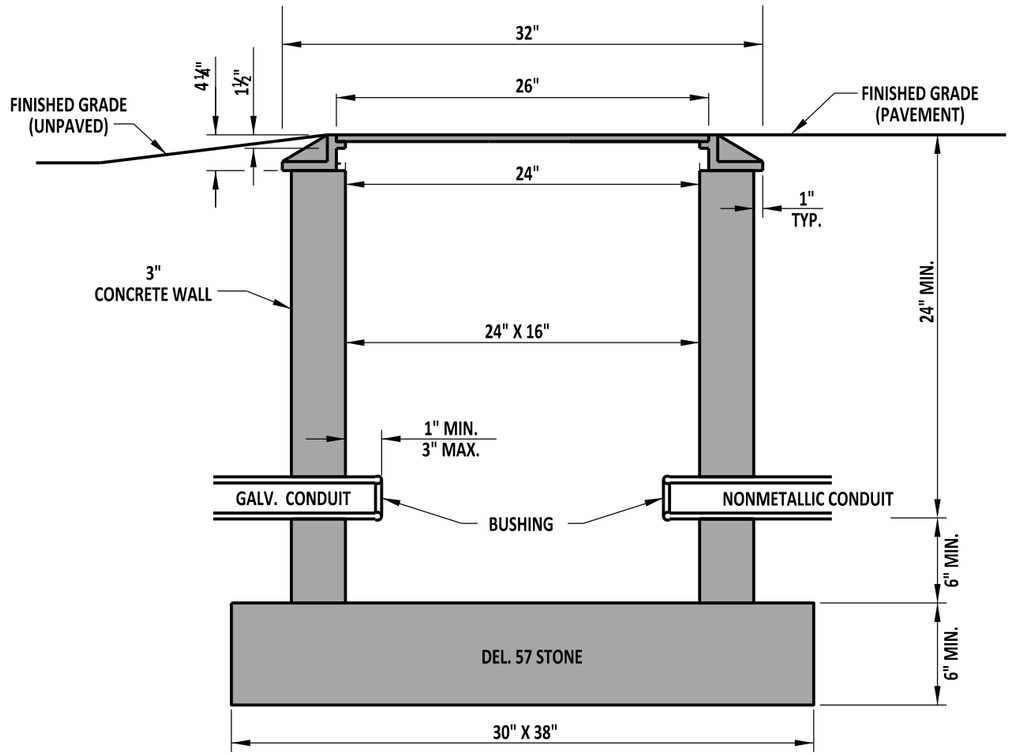
SCALE : NTS



PLAN VIEW



SECTION B-B



SECTION A-A

NOTES:

1). TYPE 15 CONDUIT JUNCTION WELL LID SHALL BE PRECAST POLYMER CONCRETE WITH A HEAVY-WEAVE FIBERGLASS FRAME. INSTALLED ON A PRECAST CONCRETE WELL.
2). TYPE 15 CONDUIT JUNCTION WELL BODY SHALL BE PRECAST CONCRETE. AT LEAST ONE HOLE IN PRECAST WELLS WILL BE OF A 5" DIAMETER COMPLETELY THROUGH THE WALL. UNUSED HOLES SHALL BE PLUGGED.
3). TYPE 15 CONDUIT JUNCTION WELLS SHALL 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.
4). ALL CRACKS, GAPS, OR OPENINGS IN JUNCTION WELL WALL SHALL BE SEALED WITH CONCRETE.

DELAWARE
DEPARTMENT OF TRANSPORTATION

CONDUIT JUNCTION WELL, TYPE 15

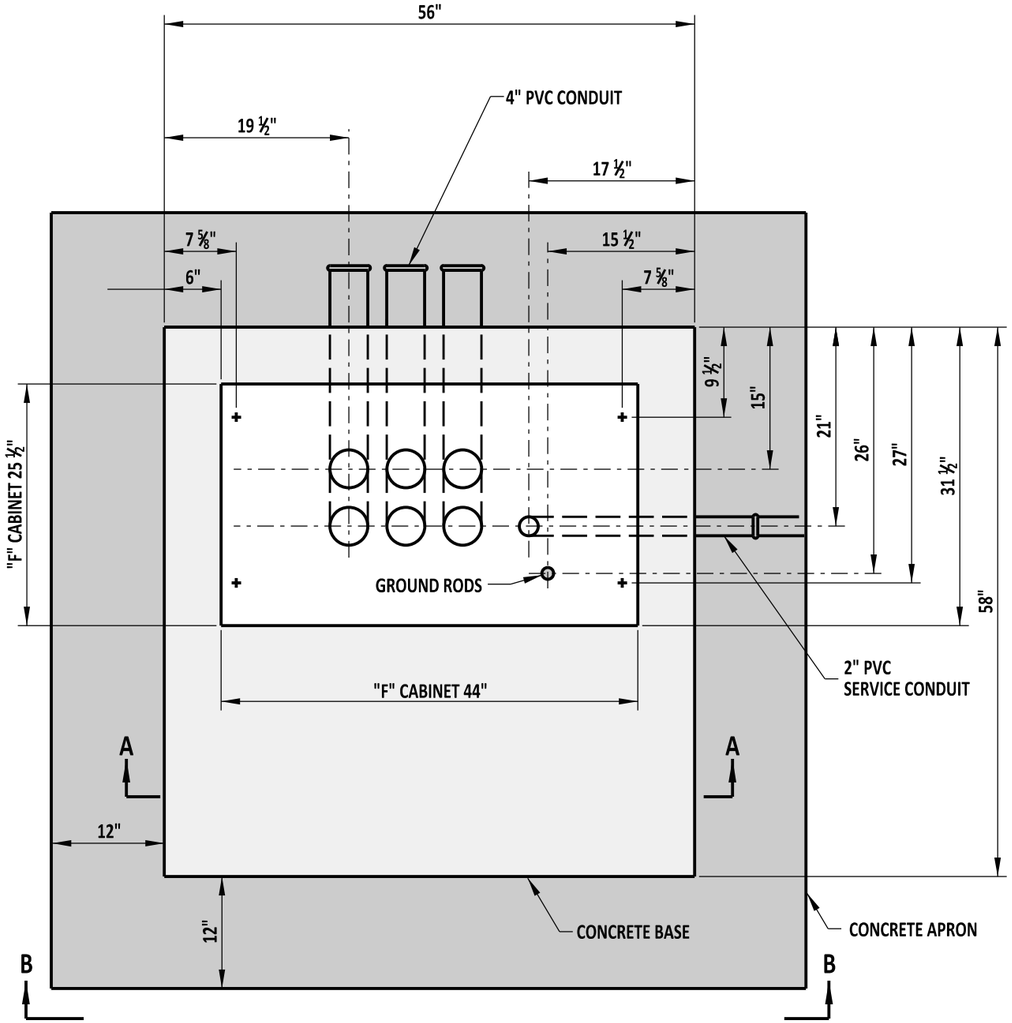
STANDARD NO. T-3 (2012) | SHT. 3 OF 3

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)

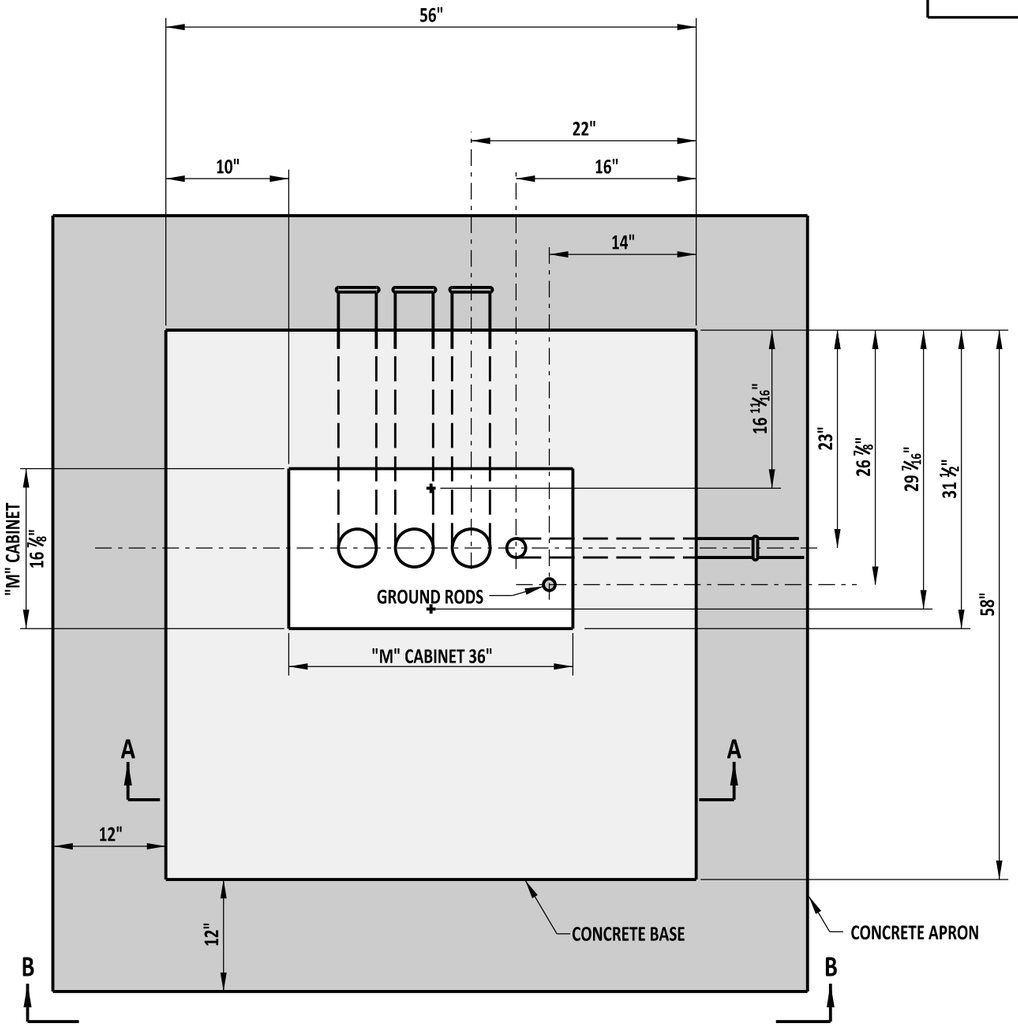
RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

SCALE : NTS



"F" CABINET
PLAN VIEW



"M" CABINET
PLAN VIEW

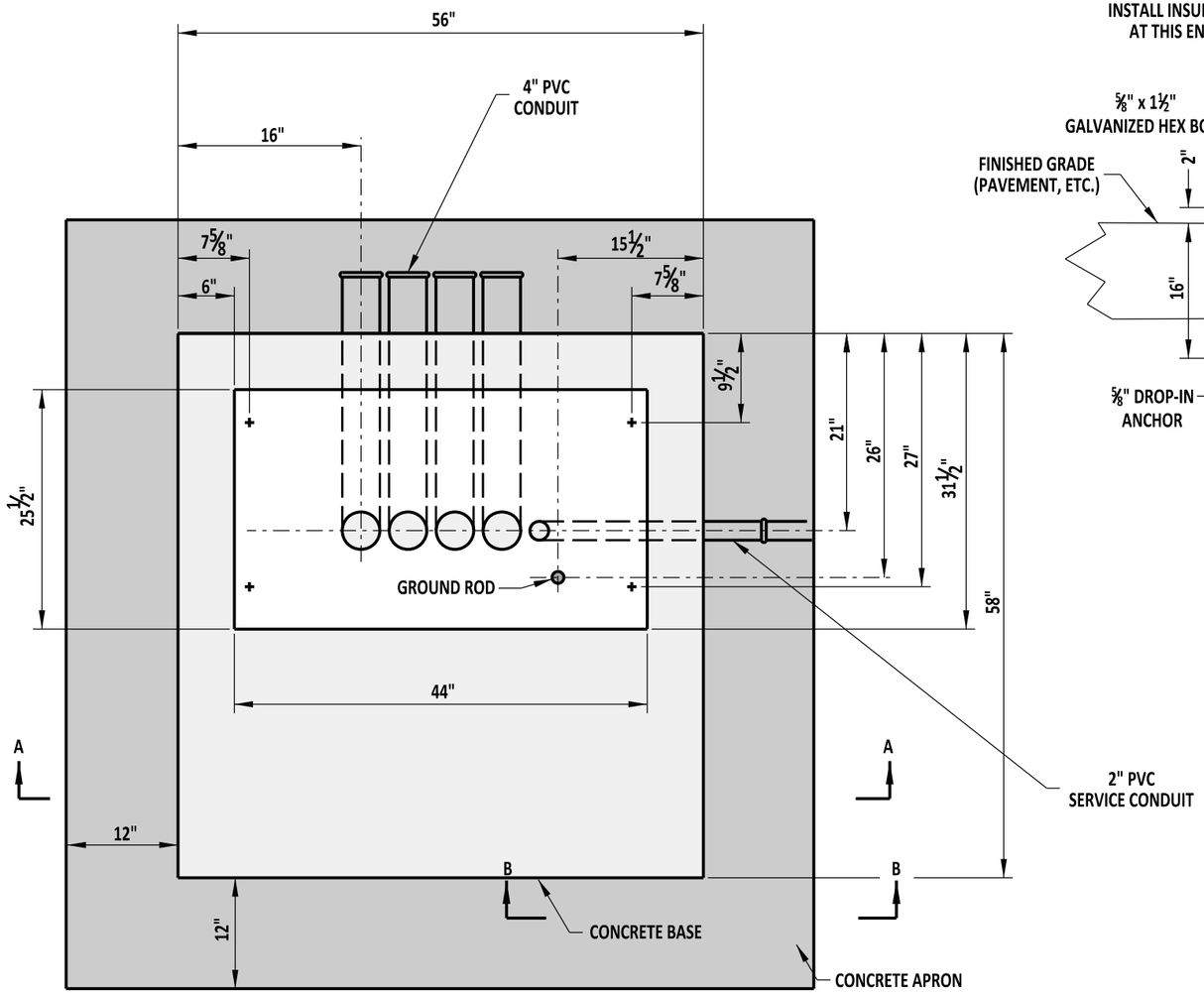
NOTE:

1). CONCRETE APRON IS REQUIRED ONLY WHEN CABINET BASE IS INSTALLED IN EARTH AREAS OR AS DIRECTED ON PLAN.
2). CONDUITS SHALL BE EVENLY SPACED, WITH MINIMUM 2" WIDTH SPACING ESTABLISHED BETWEEN ALL CONDUITS.
3). FOR VIEW OF SECTION A-A AND SECTION B-B, SEE SHEET 2 OF 2 OF T-4(2011)

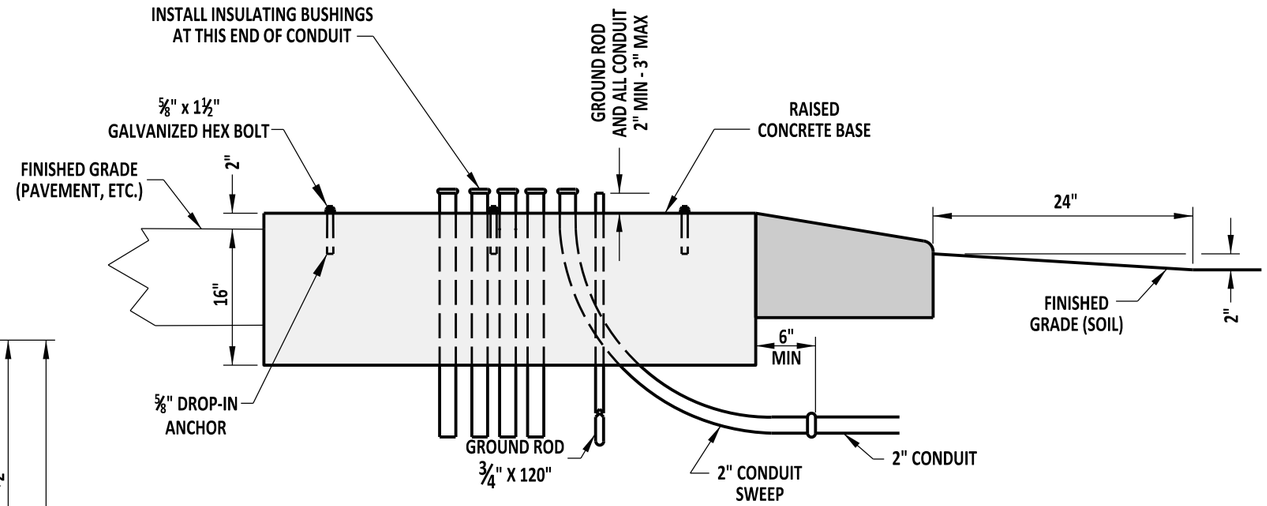
DELAWARE DEPARTMENT OF TRANSPORTATION	CABINET BASES, TYPES M & F		APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)
	STANDARD NO. T-4 (2012)	SHT. 1 OF 2	RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

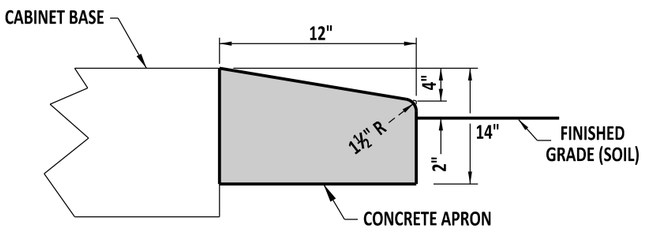
SCALE : NTS



"P & R" CABINET
PLAN VIEW



SECTION A-A



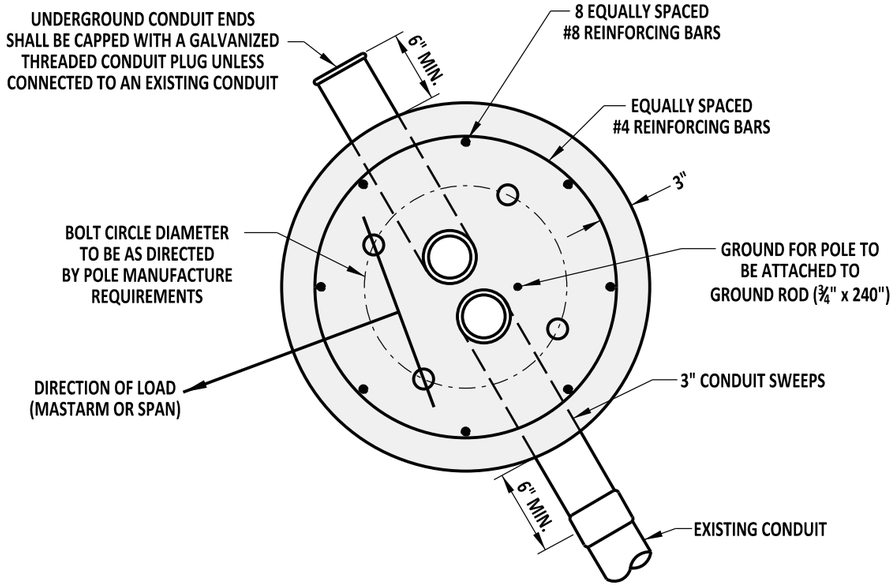
SECTION B-B

NOTE:
1). CONCRETE APRON IS REQUIRED ONLY WHEN CABINET BASE IS INSTALLED IN EARTH AREAS OR AS DIRECTED ON PLAN.
2). CONDUITS SHALL BE EVENLY SPACED, WITH MINIMUM 2" WIDTH ESTABLISHED BETWEEN ALL CONDUITS.

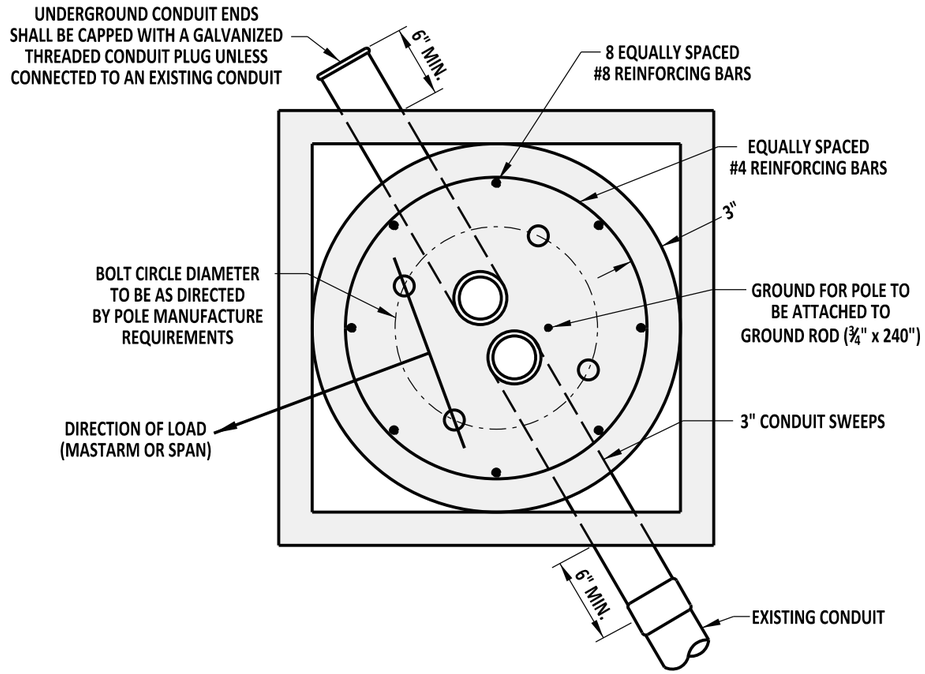
DELAWARE DEPARTMENT OF TRANSPORTATION	CABINET BASES, TYPES P & R		APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)
	STANDARD NO. T-4 (2012)	SHT. 2 OF 2	RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

SCALE : NTS



ROUND BASE



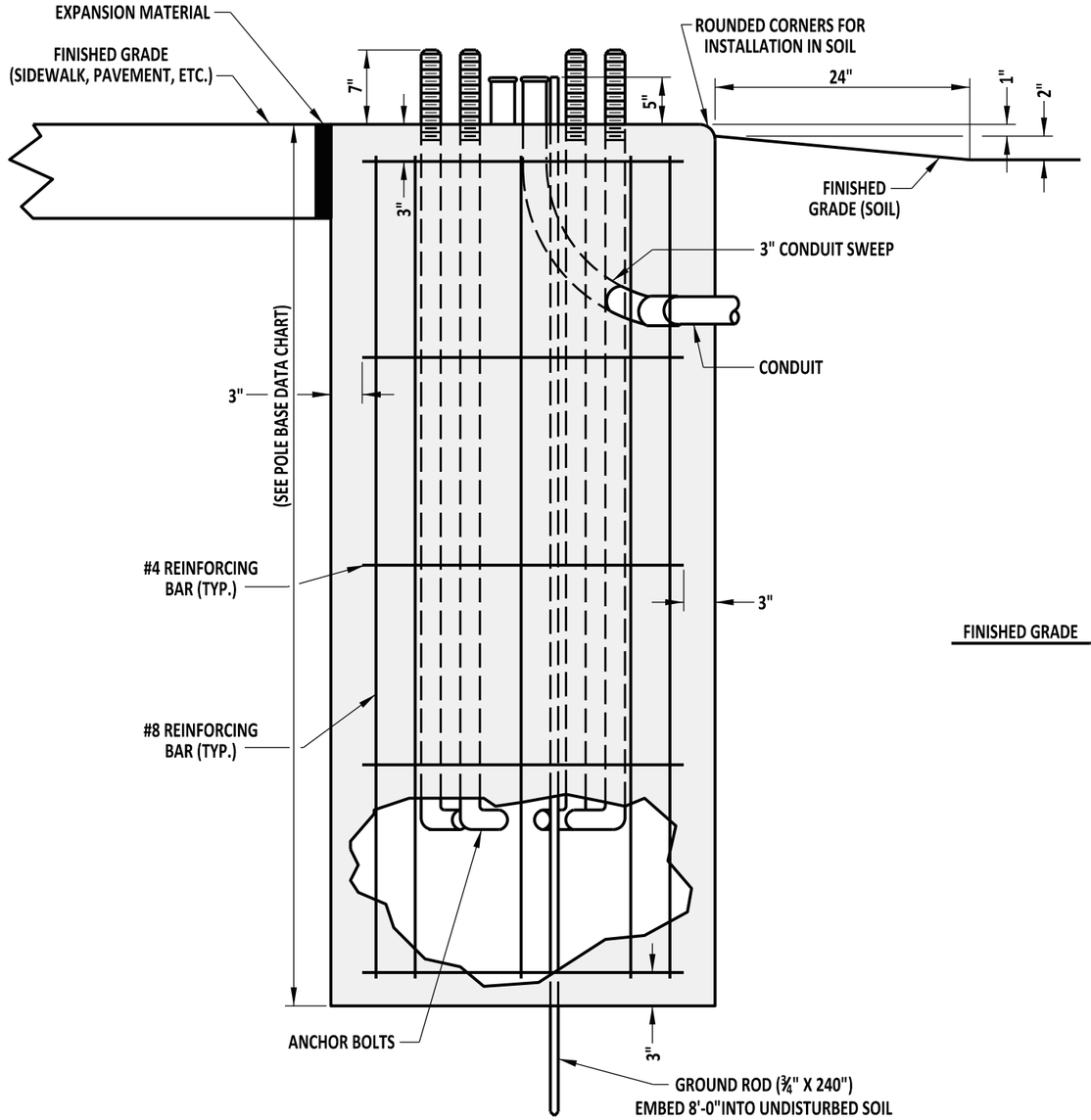
ROUND BASE w/ SQUARE FOUNDATION HEADER

NOTE:
SQUARE FOUNDATION HEADER SHALL HAVE A 6" MINIMUM DEPTH.

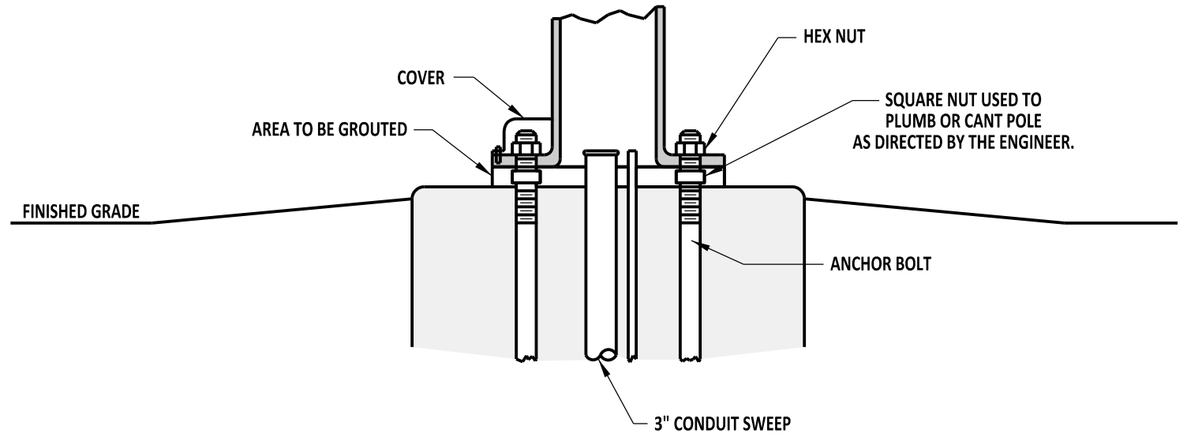
DELAWARE DEPARTMENT OF TRANSPORTATION	POLE BASES		APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)
	STANDARD NO. T-5 (2012)	SHT. 1 OF 4	RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

SCALE : NTS



TYPICAL SECTION (BASES 1,2,2A,2B,3,3A,3B, AND 7)



TYPICAL INSTALLATION (BASES 1,2,2A,2B,3,3A,3B, AND 7)

NOTES:

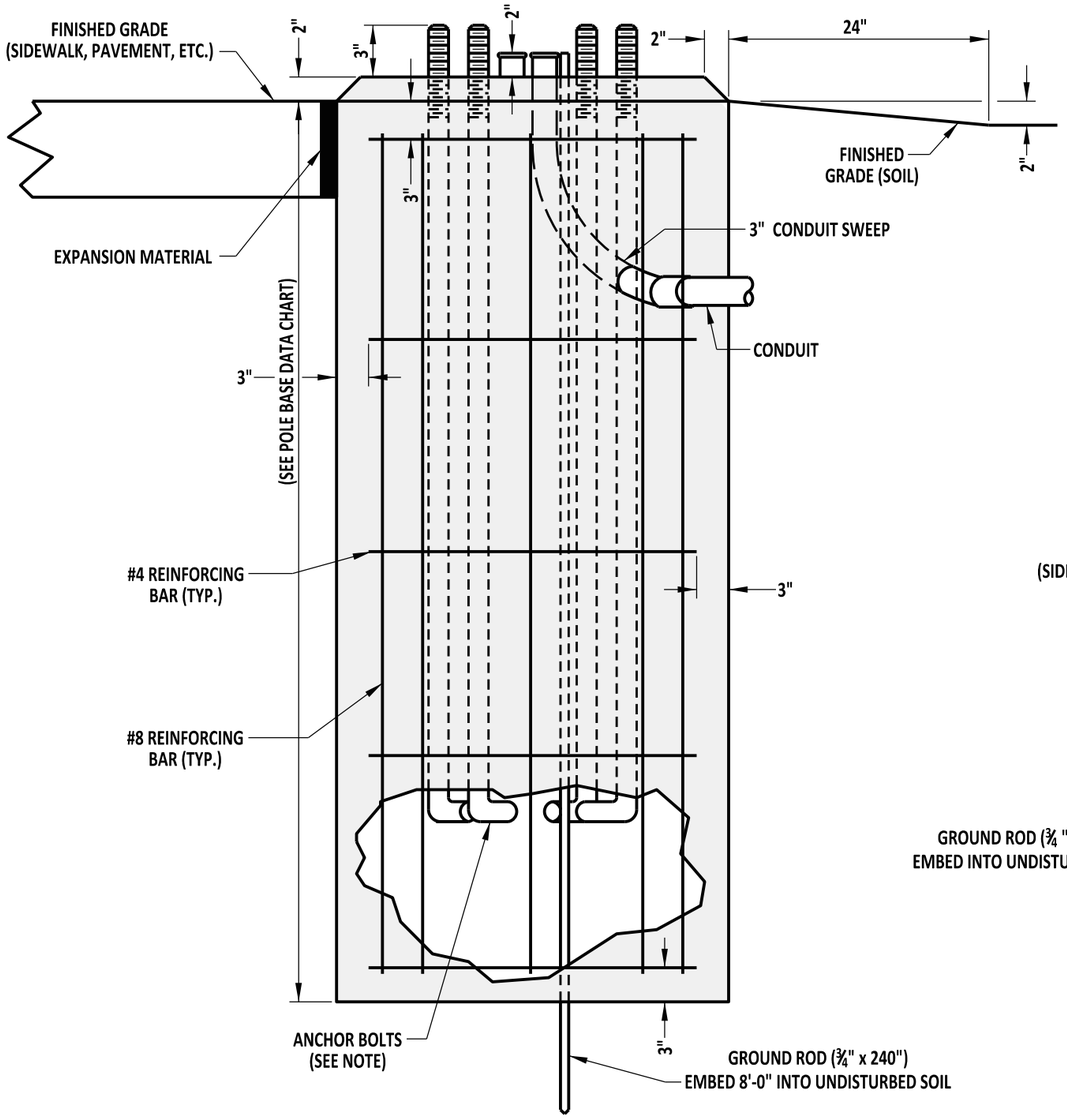
1). PLACE 2 EACH 6" LONG x ½" DIA. P.V.C., SCHEDULE 40 (TYP) VENTS IN THE GROUT AS DIRECTED IN THE FIELD BY ENGINEER.
2). SEE POLE BASE DATA CHART FOR POLE BASE DIMENSIONS.
3.) ANCHOR BOLTS AND BOLT PATTERN TO BE PROVIDED BY DELDOT'S SIGNAL CONSTRUCTION INSPECTOR UNLESS OTHERWISE DENOTED.
4). ANCHOR BOLTS AND BOLT PATTERN FOR TYPE 7 POLE BASES TO BE PROVIDED BY THE MANUFACTURER.

DELAWARE DEPARTMENT OF TRANSPORTATION	POLE BASES		APPROVED	SIGNATURE ON FILE CHIEF ENGINEER	01/07/2013 DATE
	STANDARD NO. T-5 (2012)	SHT. 2 OF 4	RECOMMENDED	SIGNATURE ON FILE DESIGN ENGINEER	12/20/2012 DATE

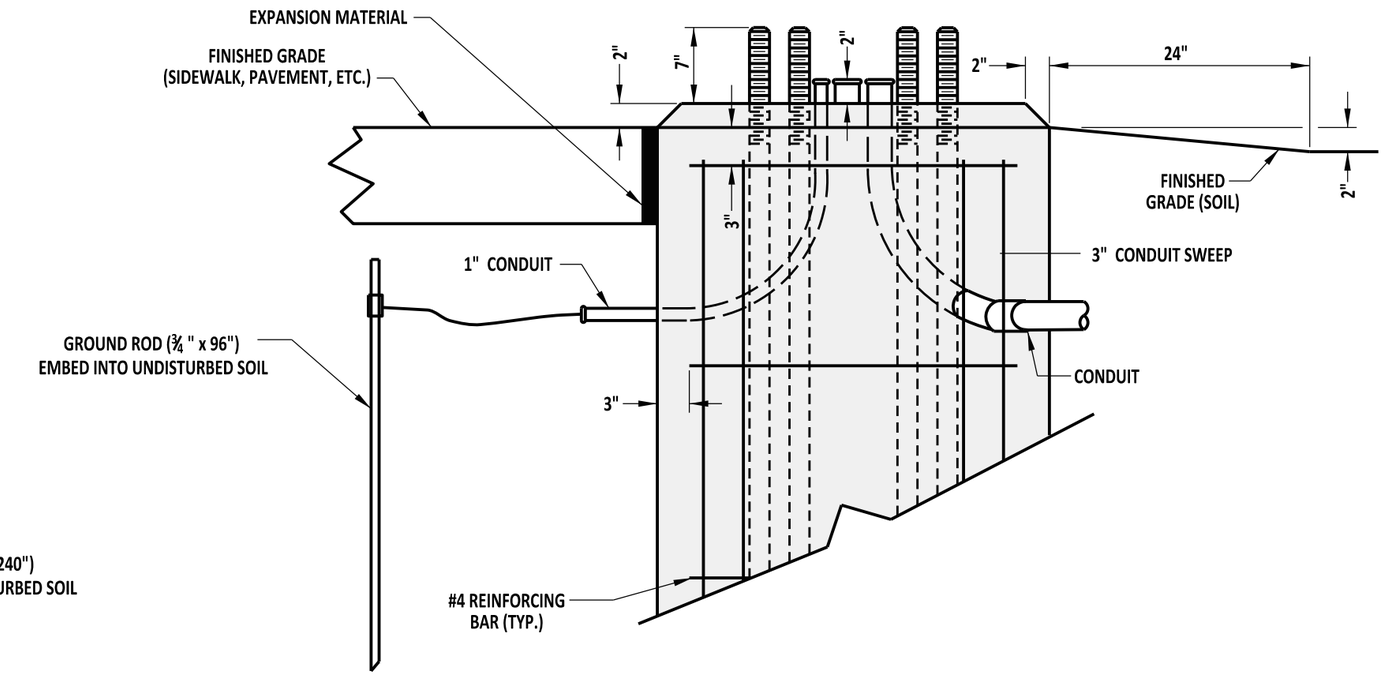
12/4/2012

SCALE : NTS

POLE BASE DATA CHART					
POLE BASE TYPE #	DIAMETER	DEPTH	#4 HORIZONTAL REINFORCING BARS	#8 VERTICAL REINFORCING BARS	CONDUITS
1	36"	7'-0"	5	8	2 - 3"
2	36"	10'-0"	6	8	2 - 3"
2A	48"	8'-0"	5	8	2 - 3"
2B	60"	7'-0"	5	8	2 - 3"
3	48"	10'-0"	6	8	2 - 3"
3A	60"	9'-0"	6	8	2 - 3"
3B	72"	7'-0"	5	8	2 - 3"
4	24"	2'-4"	NONE	NONE	1 - 2.5"
5	36"	4'-0"	NONE	NONE	2 - 3"
6	24"	6'-0"	4	8	2 - 3"
*7	48"	13'-4"	7	8	1 - 1", 2 - 3"



TYPICAL SECTION (BASES 5 AND 6)



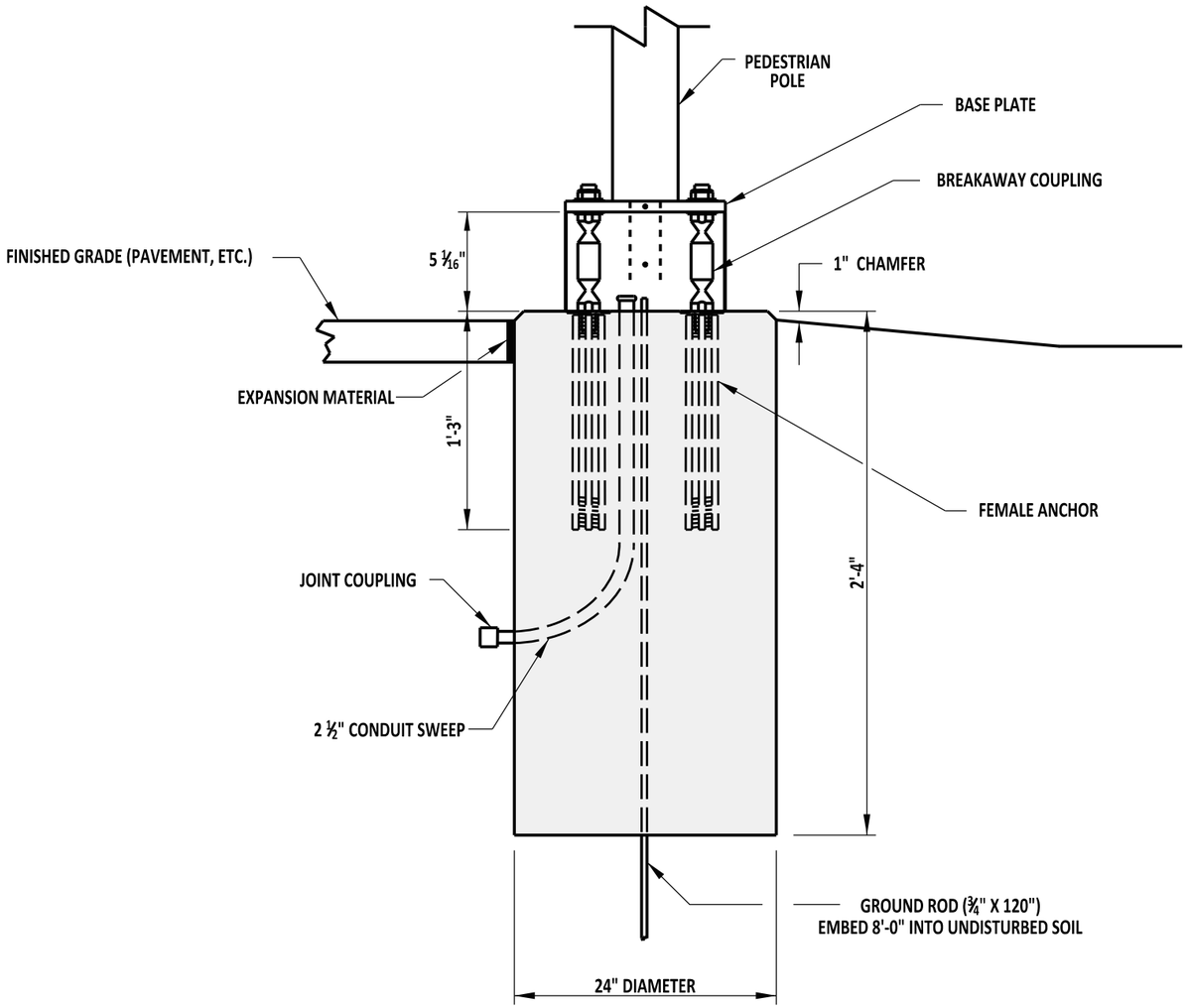
TYPE 7 GROUND ROD TYPICAL

NOTE:
ANCHOR BOLTS AND BOLT PATTERN FOR TYPES 5, 6, & 7 POLE BASES TO BE PROVIDED BY THE MANUFACTURER.

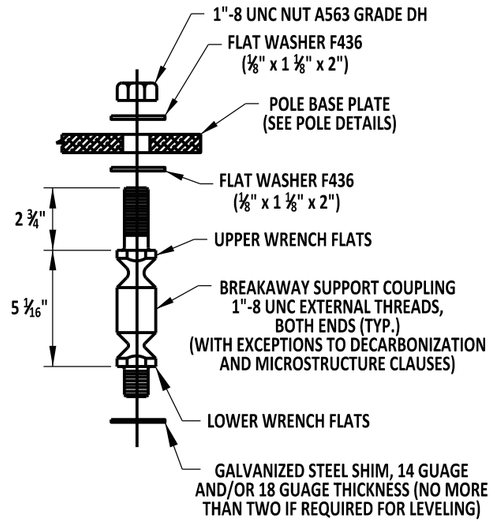
DELAWARE DEPARTMENT OF TRANSPORTATION	POLE BASES		APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)
	STANDARD NO. T-5 (2012)	SHT. 3 OF 4	RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012

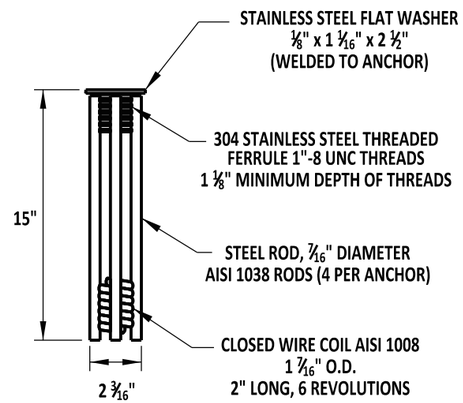
SCALE : NTS



TYPICAL SECTION (BASE 4)



BREAKAWAY COUPLING DETAIL



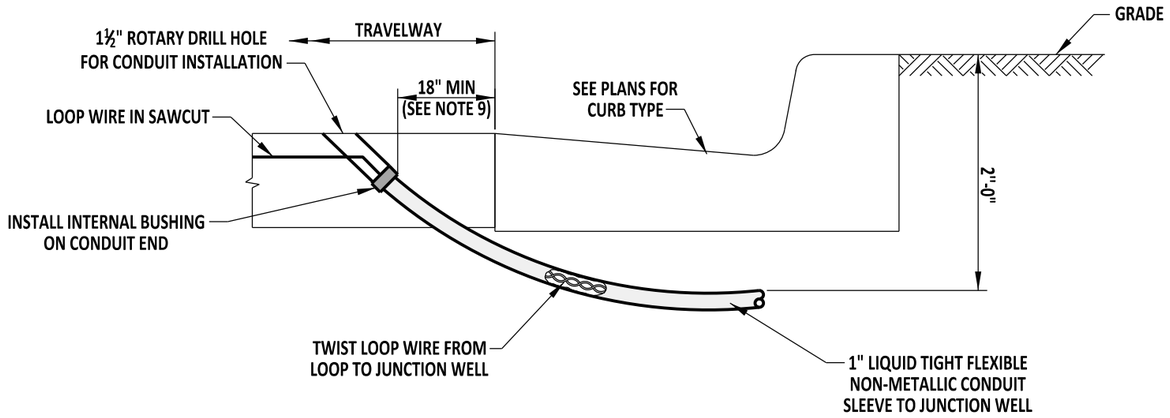
ANCHOR DETAIL

NOTES:
ANCHOR BOLTS AND BOLT PATTERN TO BE PROVIDED BY DELDOT'S SIGNAL CONSTRUCTION INSPECTOR.

DELAWARE DEPARTMENT OF TRANSPORTATION	POLE BASES		APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)
	STANDARD NO. T-5 (2012)	SHT. 4 OF 4	RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

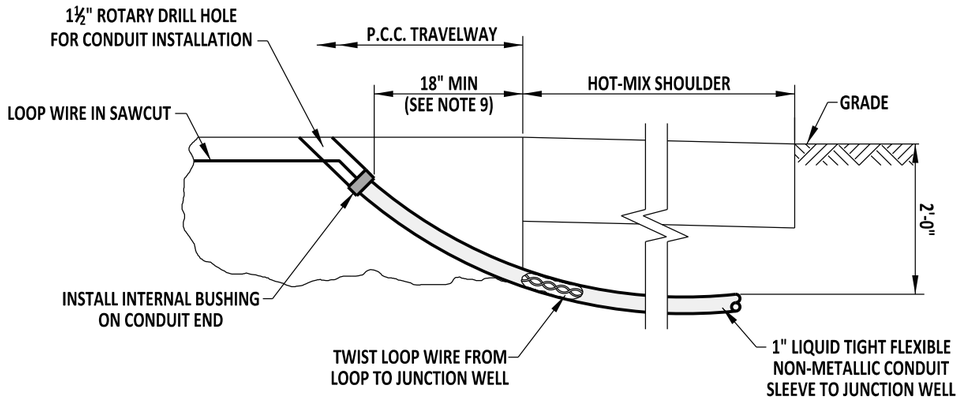
12/4/2012

SCALE : NTS



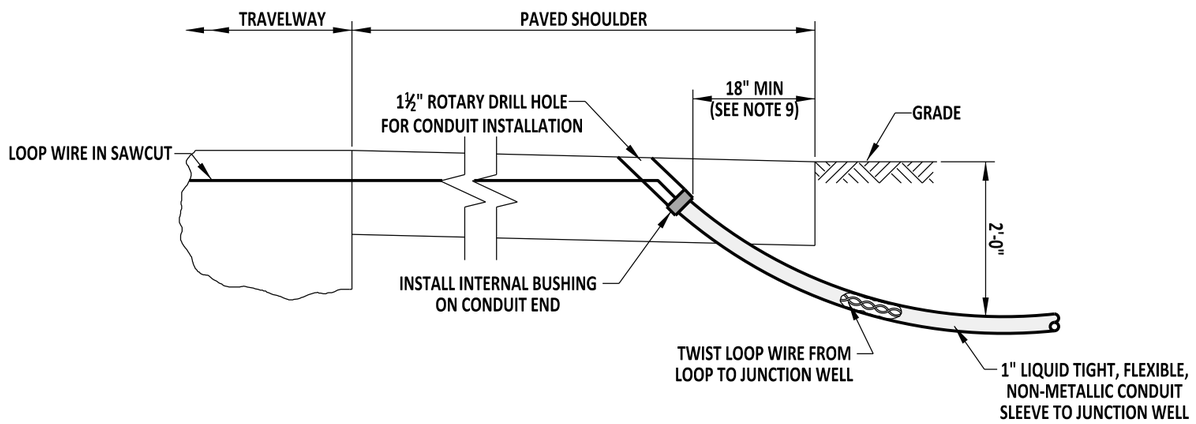
DETECTOR LEAD PLACED IN TRAVELWAY WITH CURB OR CURB & GUTTER

DETAIL SHOWN WITH CURB & GUTTER, TYPE 1-8, REFER TO
PLANS FOR ACTUAL CURB OR CURB & GUTTER TYPE.



DETECTOR LEAD PLACED IN PCC TRAVELWAY WITH HOT-MIX SHOULDER

THIS DETAIL TO BE USED ONLY WHEN TRAVELWAY
AND SHOULDER ARE DIFFERENT MATERIALS.



DETECTOR LEAD PLACED IN PAVED SHOULDER

THIS DETAIL TO BE USED ONLY WHEN TRAVELWAY
AND SHOULDER ARE THE SAME MATERIAL.

NOTES:

1). THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE CONDUIT AGAINST ANY POSSIBLE DAMAGE DURING PAVING OPERATIONS.
2). THE WEATHERPROOF FITTING SHALL CONSIST OF A GALVANIZED 1½" COUPLING CONTAINING A STEEL THREADED REDUCING BUSHING (1½" TO ¾") AND A ¾" WATERTIGHT CONNECTOR FOR SERVICE ENTRANCE CABLE.
3). THE LEAD-IN WIRE SHALL BE RUN THROUGH THE RUBBER OF THE WEATHERPROOF FITTING.
4). LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT SHALL BE USED WHERE THE DISTANCE BETWEEN THE DRILLED HOLE FOR CONDUIT SLEEVE AND JUNCTION WELL IS 6'-0" OR LESS. ALL OTHER CONDUIT SLEEVES SHALL BE 1" RIGID, GALVANIZED STEEL UNLESS OTHERWISE SPECIFIED.
5). INSTALL DUCT SEAL IN BOTH ENDS OF CONDUIT SLEEVE.
6). SLEEVE AND SAWCUT SHALL NOT DAMAGE OR CONTACT CURB AND GUTTER.
7). SEPARATE 1" ELECTRICAL CONDUIT SLEEVES SHALL BE REQUIRED FOR EACH LOOP SPACED 1'-0" MINIMUM APART IN ROADWAY.
8). CONTRACTOR SHOULD AVOID WHEEL PATH IN THE ROADWAY WHILE DRILLING FOR CONDUIT INSTALLATION.
9). MAINTAIN 18" TO EDGE OF TRAVELWAY (MEASURED TO FRONT OF GUTTER PAN, FACE OF UPRIGHT CURB, OR FRONT EDGE OF SHOULDER) OR OUTER EDGE OF PAVEMENT IF LOOP DETECTOR CONNECTION IS MADE IN THE SHOULDER.
10). REFER TO DETAIL T-9, SHEET 1 OF 1 FOR LOOP DETECTOR INSTALLATION DETAILS.

DELAWARE
DEPARTMENT OF TRANSPORTATION

LOOP DETECTOR TO CONDUIT CONNECTION

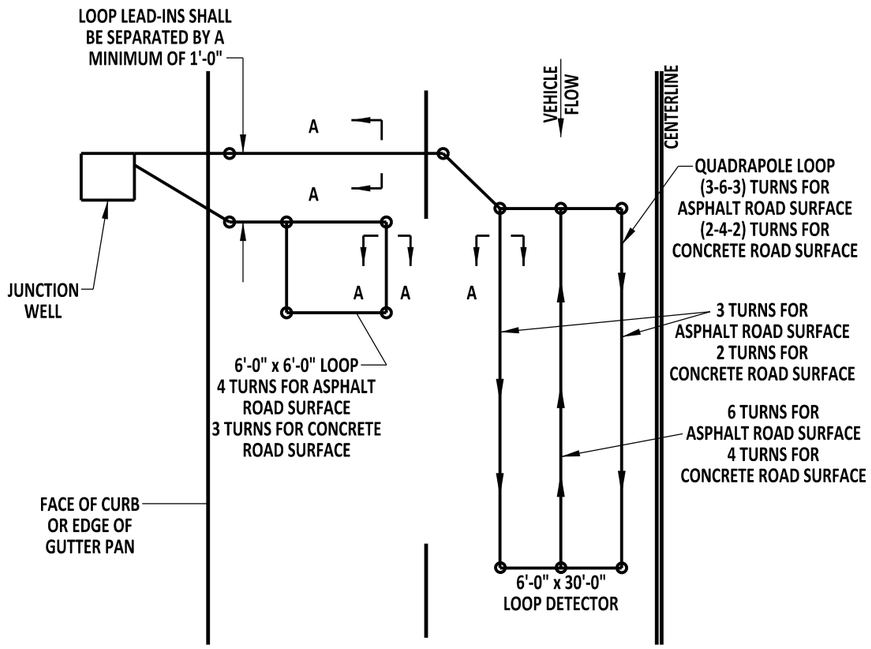
STANDARD NO. T-8 (2012) | SHT. 1 OF 1

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)

RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

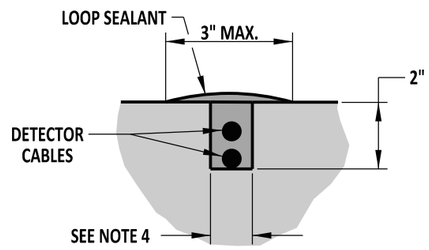
12/4/2012

SCALE : NTS

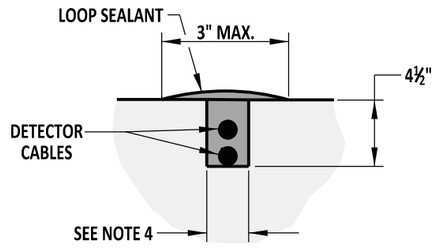


LOOP DETECTOR SAWCUT TYPICAL

REFER TO DETAIL T-8, SHEET 1 OF 1 FOR LOOP DETECTOR LEAD-IN INSTALLATION DETAILS.



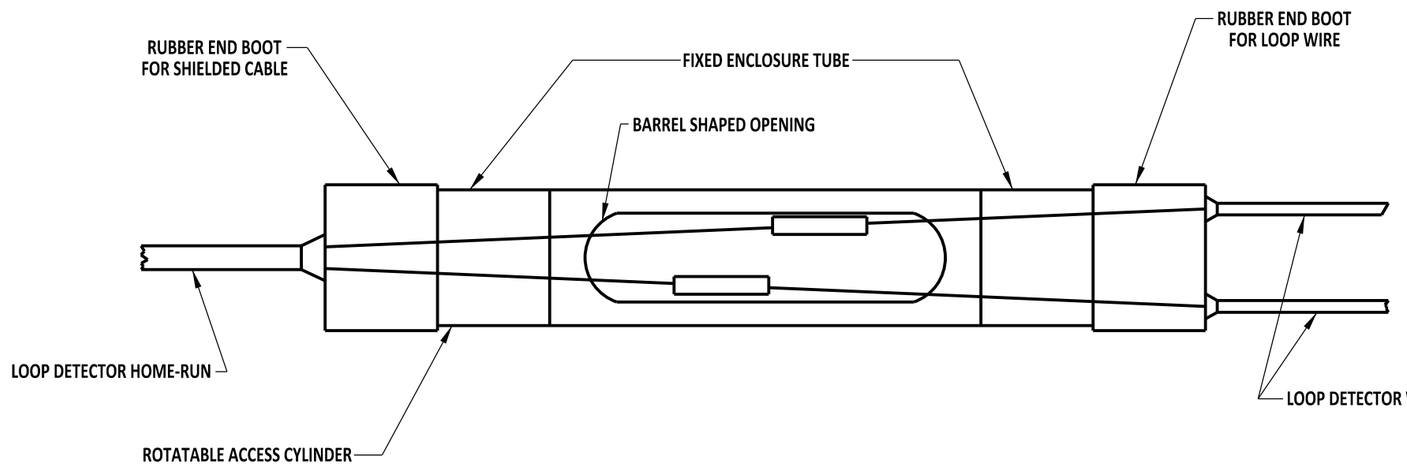
SECTION A-A CONCRETE SURFACE



SECTION A-A HOT-MIX SURFACE

NOTES:

1). WHEN A PROPOSED LOOP DETECTOR SAWCUT CROSSES A LATERAL ROADWAY JOINT OR VALVE COVER (FOR EXAMPLE, MANHOLE, JUNCTION WELL, ETC.), LOOP DETECTOR INSTALLATION SHALL BE MODIFIED INTO TWO SEPARATE LOOP DETECTORS WHICH SHALL NOT TRAVERSE JOINTS OR VALVE COVERS.
2). THE LOOPS SHALL BE PLACED IN THE CENTER OF THE LANE UNLESS OTHERWISE NOTED ON PLANS.
3). PRESENCE LOOP DETECTORS ARE TO BE PLACED 12" BEHIND THE EXISTING OR PROPOSED STOP LINE.
4). LOOP DETECTOR AND LEAD-IN SAWCUTS SHALL BE ⅝".
5). 1½" DRILL HOLES SHALL BE USED AT ALL CHANGES IN SAWCUT DIRECTIONS.
6). BARREL SIZE SHALL BE 1" TO 1½" DIAMETER AND 4" TO 6" LONG. ALL SPLICE KIT CONNECTIONS SHALL BE DONE IN JUNCTION WELLS ONLY.



SPLICE KIT DETAIL

SEE NOTE 6

DELAWARE
DEPARTMENT OF TRANSPORTATION

LOOP DETECTOR INSTALLATION & SPLICE KIT

STANDARD NO. T-9 (2012) | SHT. 1 OF 1

APPROVED SIGNATURE ON FILE (CHIEF ENGINEER) 01/07/2013 (DATE)

RECOMMENDED SIGNATURE ON FILE (DESIGN ENGINEER) 12/20/2012 (DATE)

12/4/2012