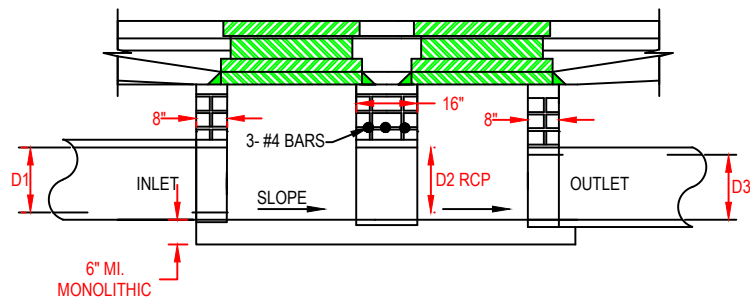
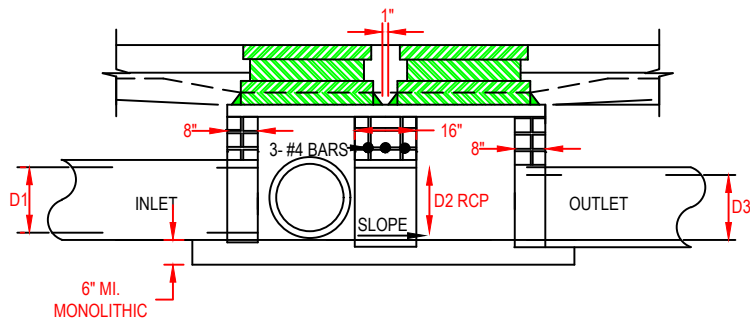


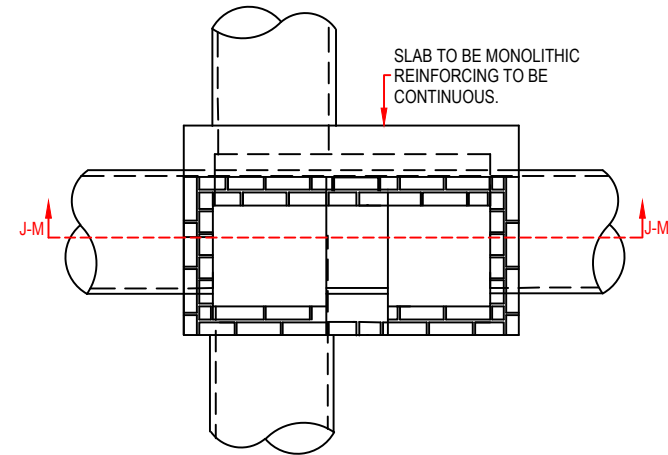
PLAN
N.T.S.



SECTION Y-Y 15" to 24"
N.T.S.



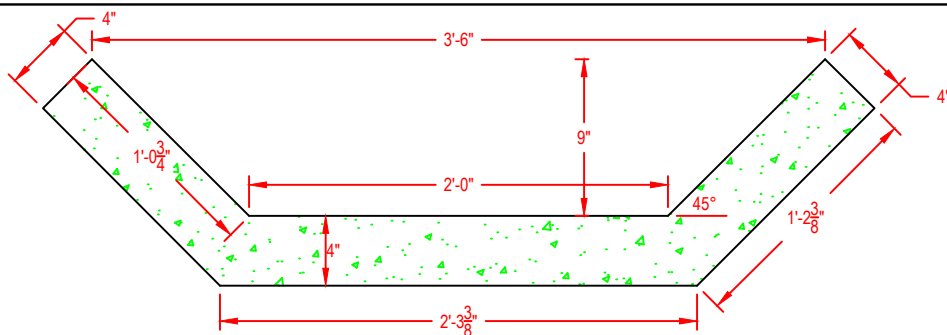
SECTION J-J 30" TO 36" PIPE
N.T.S.



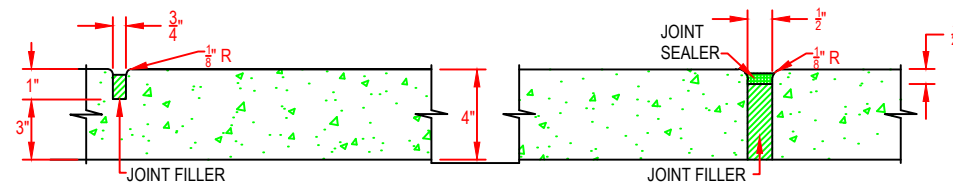
PLAN
N.T.S.

GENERAL NOTES:

- 1- DOUBLE CATCH BASIN ONLY FOR USE W/IN TOWN MAINTAINED STREETS.
INSTALLATION ON STREETS W/IN EXIST./FUTURE SCDOT MAINTAINED R/W
REQUIRES A MIN. OF ONE 4' LONG SECTION OF REINF. CONC. PIPE BETWEEN
CATCH BASINS.
- 2- SEE SCDOT STD. FOR DETAILS BASED ON PIPE SIZE PER CROSS-SECTION.
- 3- CONSTRUCT 2 SINGLE BASINS PER SCDOT STD. W/ DOUBLE INTERIOR WALL.
- 4- ALL CONC. TO BE 3,600 P.S.I COMPRESSIVE STRENGTH.
- 5- BASE SLAB SHALL BE MONOLITHIC.
- 6- SEE APPLICABLE STD. FOR PLACEMENT OF CATCH BASIN.
- 7- RCP PIPE SECTION D2 CONNECTING CATCH BASINS SHALL HAVE A MIN. DIAM.
SAME AS OF OUTLET PIPE D3.
- 8- ALL REINF. STEEL SHOWN ON STDs IS TO BE PROVIDED AS CONTINUOUS MEMBERS.
(NO LAPS, USED AS A SINGLE CONTINUOUS BAR IN THE SLAB)

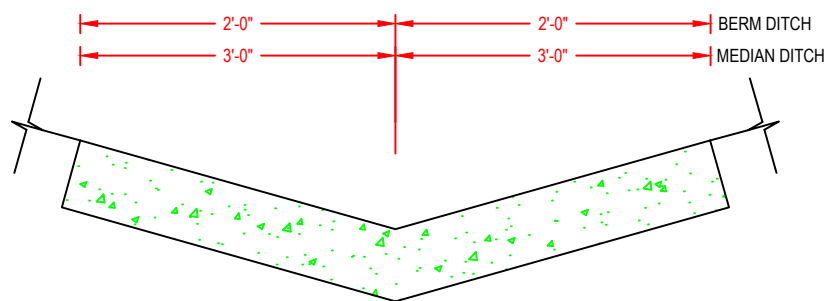


SLOPE DRAIN, BASE DITCH OR BERM DRAINAGE
OUTLET DITCH (N.T.S.)

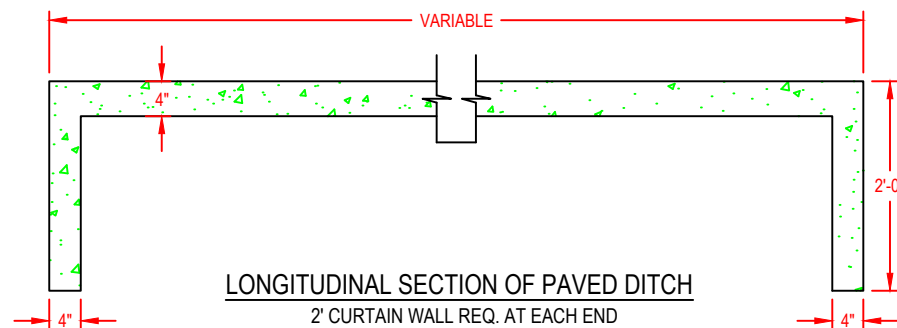


GROOVED JOINT
N.T.S.

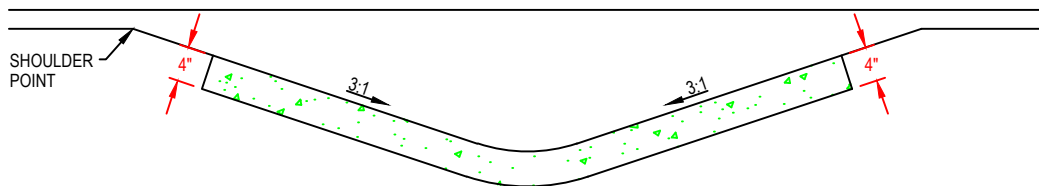
EXPANSION JOINT
N.T.S.



MEDIAN OR BERM DITCH
N.T.S.



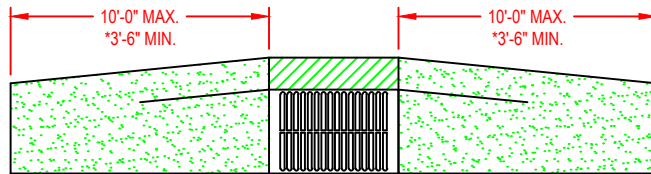
LONGITUDINAL SECTION OF PAVED DITCH
2' CURTAIN WALL REQ. AT EACH END



SIDE DITCH
N.T.S.

GENERAL NOTES:

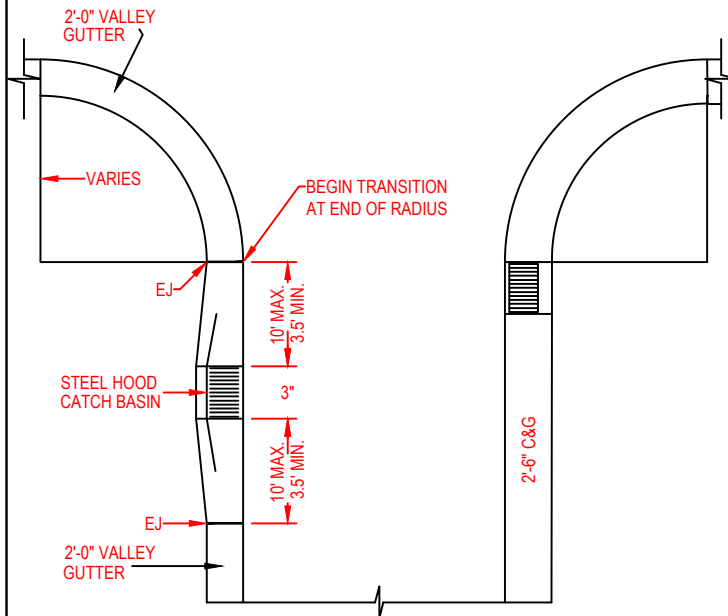
1. IN THE 4" CONC. PAVED DITCHES PLACE 1/2" E.J. AT 30' INTERVALS & AT ALL OTHER POINTS WHERE PROPOSED DITCHES ABUT RIGID OBJECTS. PLACE GROOVED JOINTS 1" DEEP AT 10' INTERVALS BETWEEN EJs.
2. WIDTH & SHAPE OF PROPOSED 4" CONC. PAVED DITCHES AS SHOWN OR AS DIRECTED BY THE TOWN ENGINEER.
3. ALL CONC. TO BE 3600 P.S.I. COMPRESSIVE STRENGTH.



CATCH BASIN FRAME IN VALLEY GUTTER
(PLAN VIEW) N.T.S.

NOTES:

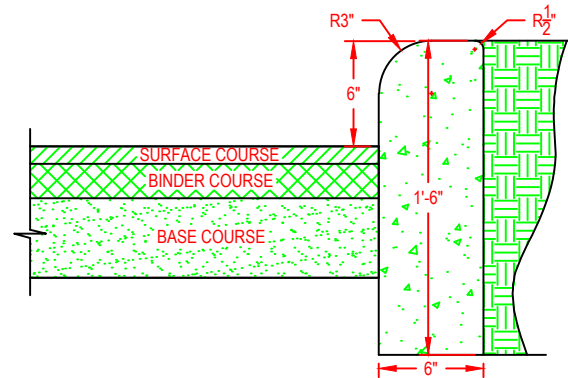
- TRANSITION FROM 2'-6" STD. CURB TO VALLEY CURB AT A DRAINAGE INLET. SEE STANDARD 10.19 FOR CROSS SECTION GEOMETRY.



CATCH BASIN PLACEMENT AT INTERSECTIONS
(PLAN VIEW) N.T.S.

NOTE:

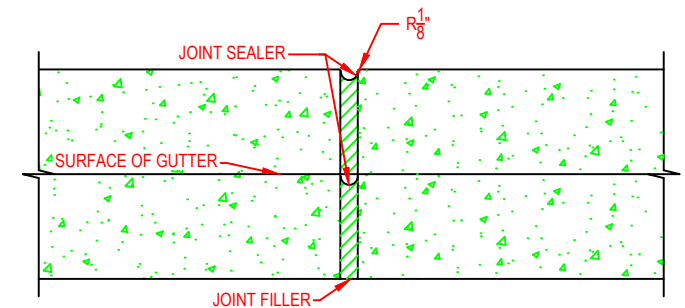
- WHERE 2'-6" C&G IS USED, CATCH BASINS MAY BE LOCATED AT END OF RADIUS.
- RADIUS AT INTERSECTION MAY VARY.



18" VERTICAL CURB
N.T.S.

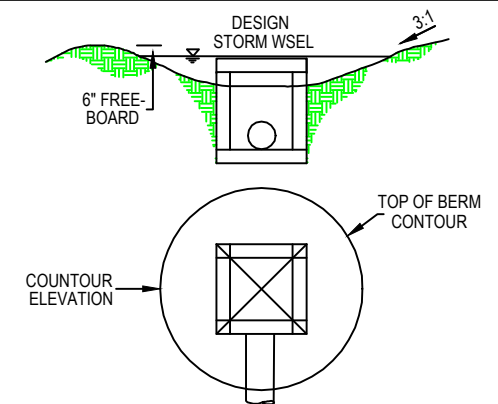
NOTES:

- CJs SHALL BE SPACED AT 10' INTERVALS TO PREVENT UNCONTROLLED CRACKING. JOINT SPACING MAY BE ALTERED BY THE ENGINEER.
- CJs MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. SPACING MAY BE ALTERED BY THE ENGINEER.
- ALL EJs SHALL BE SPACED AT 50' INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS. JOINTS SHALL MATCH LOCATIONS W/ JOINTS IN ABUTTING SIDEWALK.
- CONC. COMPRESSIVE STRENGTH SHALL BE 3,600 P.S.I. IN 28 DAYS.
- CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ACCESSIBLE RAMPS.
- TOP 6" OF SUBGRADE BENEATH CURB SHALL BE COMPACTED TO 100% STD. PROCTOR DENSITY.
- DETAIL MAY BE USED FOR PRIVATE DRIVES, PARKING LOTS, AND INTERIOR CIRCULATION DRIVE.



CURB & GUTTER EJ & CJ
N.T.S.

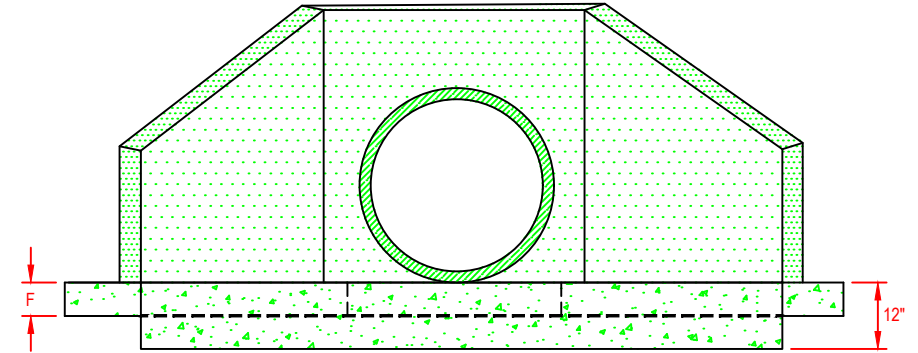
- CJs SHALL BE SPACED AT 10' INTERVALS. FOR VALLEY GUTTER, A 10' SPACING MAY BE USED WHEN A MACHINE IS USED. JOINT SPACING MAY BE ALTERED BY THE TOWN ENGINEER TO PREVENT UNCONTROLLED CRACKING.
- CJs MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MIN. DEPTH OF 1 1/2" SHALL BE OBTAINED.
- ALL EJs SHALL BE SPACED AT 50' INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS. JOINTS SHALL MATCH LOCATIONS W/ JOINTS IN ABUTTING SIDEWALK.
- CONC. COMPRESSIVE STRENGTH SHALL BE 3,600 P.S.I. IN 28 DAYS.
- CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ADA RAMPS.
- TOP 6" OF SUB-GRADE BENEATH THE C&G SHALL BE COMPACTED TO 100% STD. PROCTOR DENSITY.



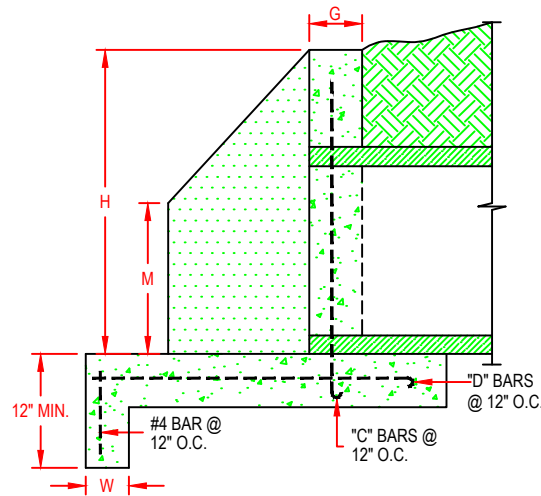
GRADING AT DROP INLET
N.T.S.

CONCRETE PIPE			DIMENSIONS										
WALL THK.	OUT DIA.	IN DIA.	MIN. H	A	B	C	E	F	G	W	K	M	
2 1/4"	19 1/2"	15"	27 1/2"	20"	24"	8"	7 1/2"	4"	8"	17"	10"		
2 1/2"	23"	18"	31"	20"	24"	8"	9"	4"	4"	8"	17"	12"	
3"	30"	24"	38"	20"	30"	8"	12"	4"	4"	8"	21"	15"	
3 1/2"	37"	30"	45"	20"	44"	12"	15"	6"	8"	8"	31"	18"	
4"	44"	36"	52"	32"	44"	12"	18"	6"	8"	8"	31"	22"	
4 1/2"	51"	42"	59"	32"	48"	12"	21"	6"	8"	8"	34"	26"	
5"	58"	48"	66"	32"	48"	12"	24"	6"	8"	8"	34"	29"	
5 1/2"	65"	54"	73"	32"	54"	12"	27"	6"	8"	8"	38"	33"	
6"	72"	60"	80"	36"	66"	12"	30"	8"	12"	12"	46"	36"	
6 1/2"	79"	66"	87"	36"	72"	12"	33"	8"	12"	12"	51"	40"	
7"	86"	72"	94"	36"	78"	12"	36"	8"	12"	12"	56"	43"	

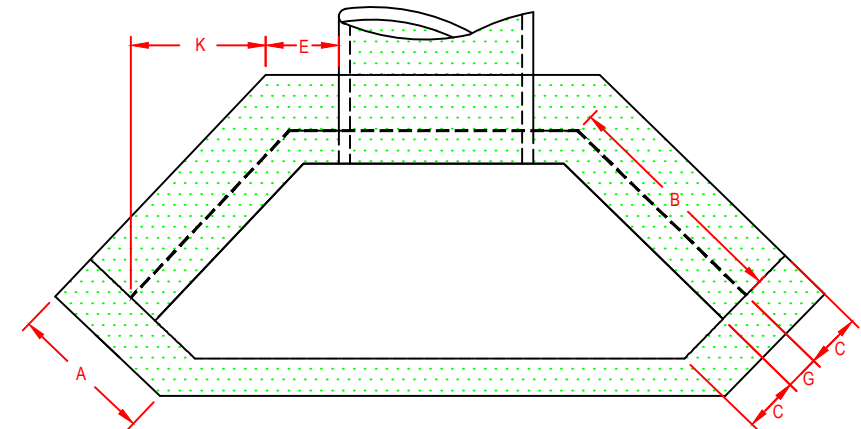
REINFORCING				
DIA.	"C" BAR		"D" BAR	
	NO.	LGT.	NO.	LGT.
15"	4	2'-0"	4	1'-11"
18"	4	2'-3"	4	2'-2"
24"	4	2'-9"	4	2'-8"
30"	4	3'-3"	4	3'-2"
36"	4	3'-9"	4	3'-8"
42"	4	4'-3"	4	4'-2"
48"	4	4'-9"	4	4'-8"
54"	4	5'-3"	4	5'-2"
60"	4	5'-9"	4	5'-8"
66"	4	6'-3"	4	6'-2"
72"	4	6'-9"	4	6'-8"



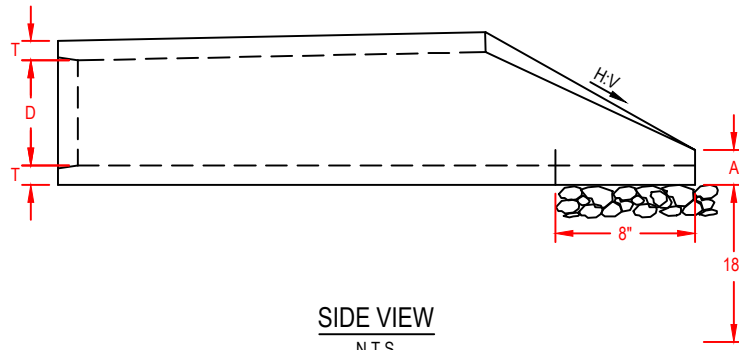
FRONT VIEW
N.T.S.



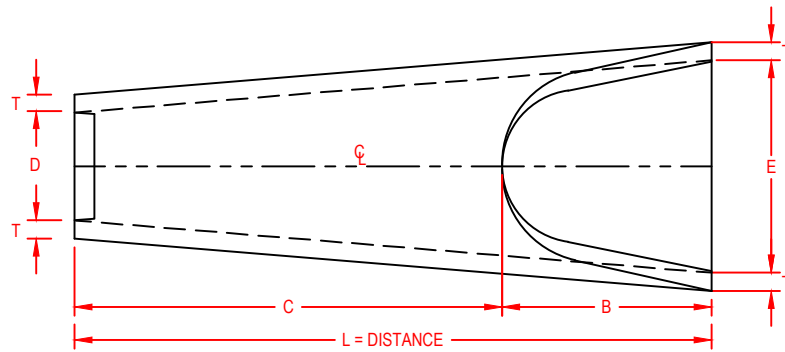
SIDE VIEW
N.T.S.



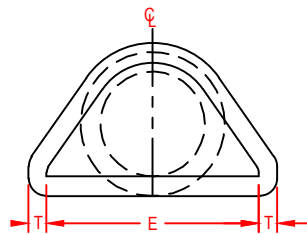
TOP VIEW
N.T.S.



SIDE VIEW
N.T.S.



TOP VIEW
N.T.S.

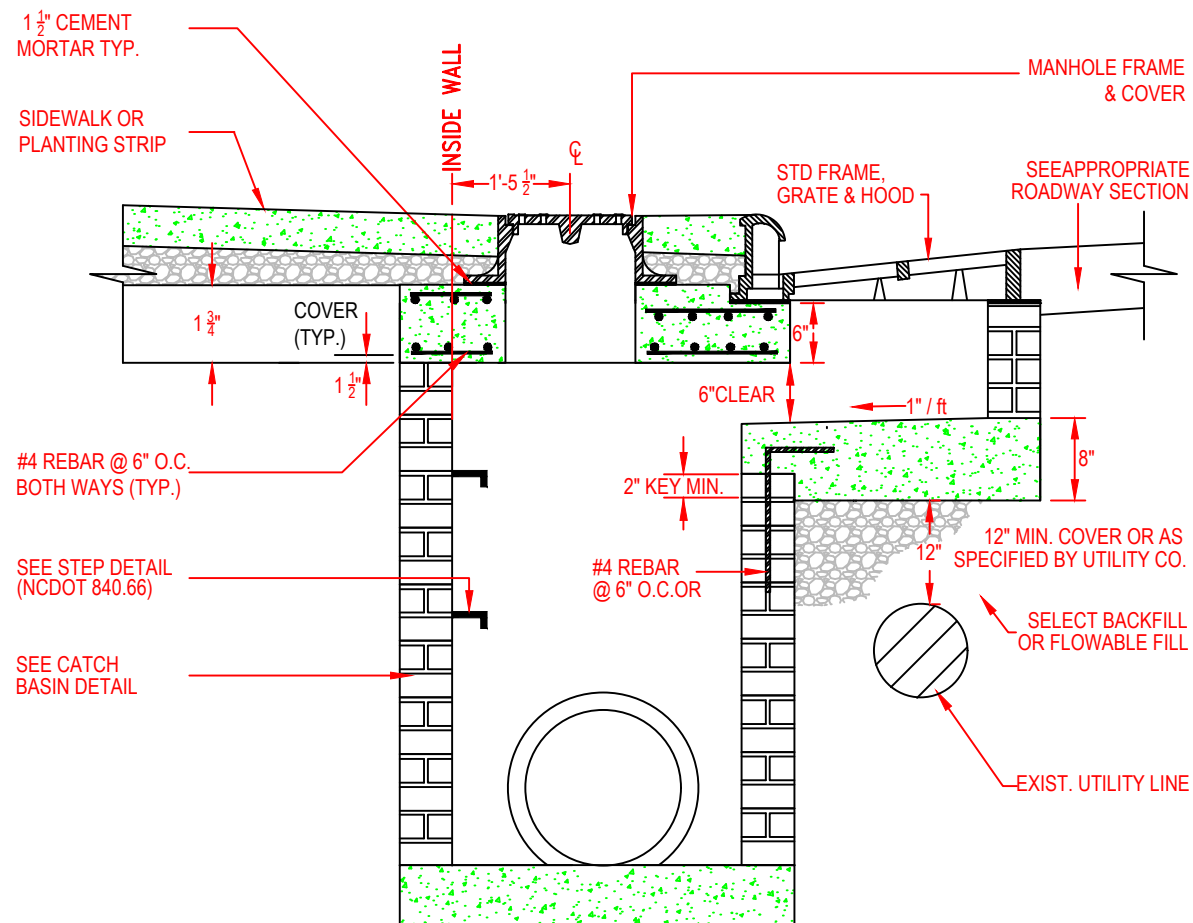


END VIEW
N.T.S.

TABLE OF DIMENSIONS							
D	T	A	B	C	E	L	H:V
12"	2-1/4"	4"	2'-0"	4'-1"	2'-0"	6'-1"	3:1
15"	2-1/4"	6"	2'-3"	3'-10"	2'-0"	6'-1"	3:1
18"	2-1/2"	9"	2'-3"	3'-10"	3'-0"	6'-1"	3:1
24"	3"	10"	3'-8"	2'-6"	4'-0"	6'-2"	3:1
30"	3-1/2"	1'-0"	4'-6"	1'-8"	5'-0"	6'-2"	3:1
36"	4"	1'-3"	5'-3"	2'-11"	6'-0"	8'-2"	3:1
42"	4-1/2"	1'-9"	5'-3"	2'-11"	6'-6"	8'-2"	3:1
48"	5"	2'-0"	6'-0"	2'-2"	7'-0"	8'-2"	3:1
54"	5-1/2"	2'-3"	5'-6"	2'-10"	7'-6"	8'-4"	3:1
60"	6"	2'-6"	5'-0"	3'-3"	8'-0"	8'-3"	3:1
66"	6-1/2"	3'-0"	6'-0"	2'-3"	8'-6"	8'-3"	3:1
72"	7"	3'-0"	6'-6"	1'-9"	9'-0"	8'-3"	3:1

GENERAL NOTES:

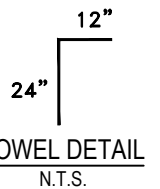
1. SEE SCDOT STDS. FOR DETAILS.
2. REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF REINFORCED CONC. PIPE OF LIKE DIAM. PER AASHTO M170, TABLE 2, WALL B.
3. ALL CON. TO BE 4,000 P.S.I COMPRESSIVE STRENGTH.
4. PROVIDE TONGUE OR SPIGOT JOINT AT INLET END SECTION.
5. PROVIDE GROOVE OR BELL JOINT AT OUTLET END SECTION.
6. THE DIMENSIONS FOR END SECTIONS SHALL SUBSTANTIALLY AGREE W/ THE TABLE. MINOR VARIATIONS WILL BE PERMITTED ON THE MANUFACTURER'S STDS FORMS & TEMPLATES.
7. NOT TO BE USED IN SCDOT MAINTAINED R/W.

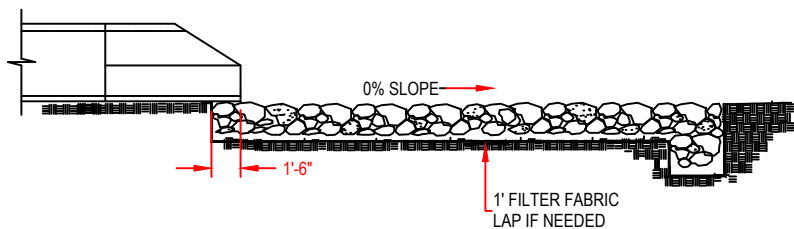


NOTES

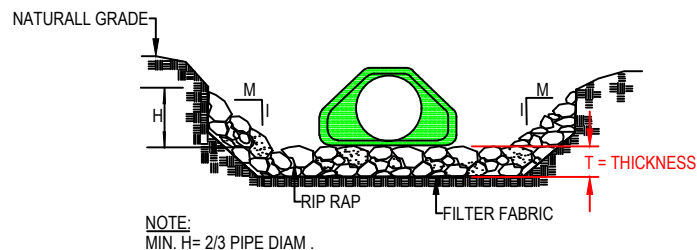
1. PRIOR APPROVAL FROM THE TOWN ENGINEER IS REQUIRED.
2. THIS STRUCTURE IS TO ONLY BE USED ON TOWN MAINTAINED STREETS & NOT ON SCDOT STREETS W/O THEIR PERMISSION.

OFFSET CATCH BASIN EXIST. UTILITY CONFLICT
N.T.S.

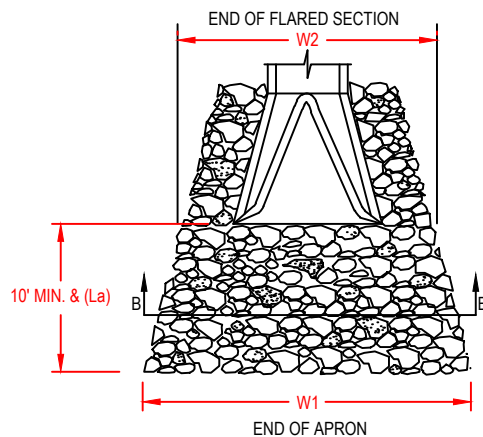




ELEVATION
N.T.S.



SECTION B-B
N.T.S.



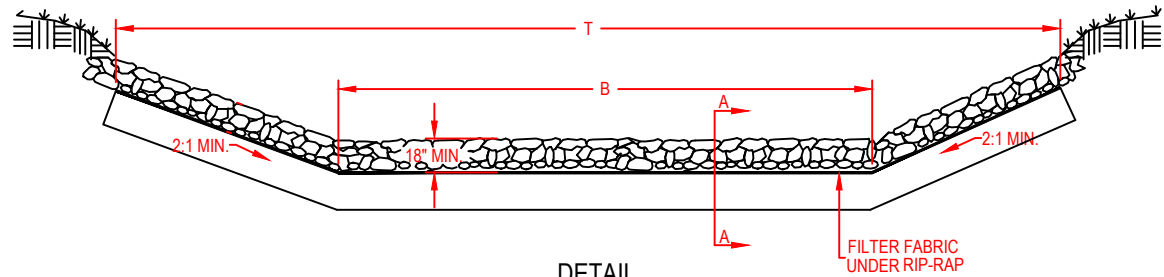
PLAN
N.T.S.

NOTES:

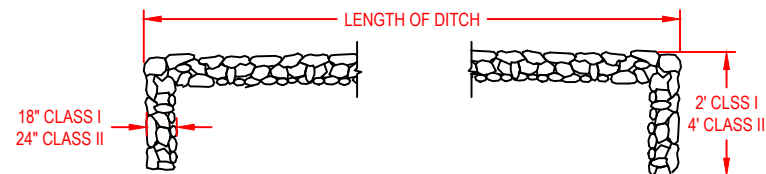
1. CLASS OR MEDIAN SIZE OF RIPRAP & LENGTH, WIDTH & DEPTH OF APRON TO BE DESIGNED BY THE ENGINEER.
 2. REFER TO THE SCDOT STORM WATER DESIGN MANUAL FOR RIPRAP APRON DESIGN STDs.
 3. RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON & AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAX. SLOPE OF 2:1 & A HEIGHT NOT < 2/3s THE PIPE DIAM. OR CULVERT HEIGHT.
 4. THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) W/ THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
 5. THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAX. TAPER TO RECEIVING CHANNEL 5:1.
 6. ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
 7. THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
 8. NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.
 9. FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.
 10. ANY DISTURBED AREA FROM END OF APRON TO RECEIVING CHANNEL MUST BE STABILIZED.
- USE USDA NOMOGRAPH FROM SC SEDIMENT & EROSION CONTROL MANUAL.

RIP RAP SUMMARY CHART

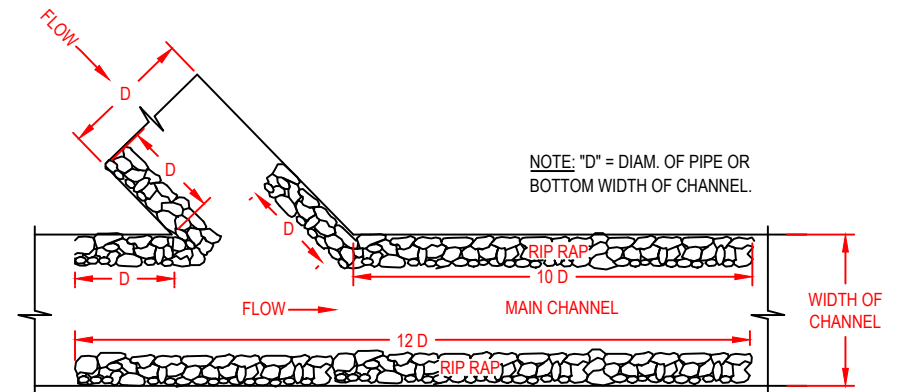
OUTLET	La	W1	W2	T*	H



DETAIL
N.T.S.



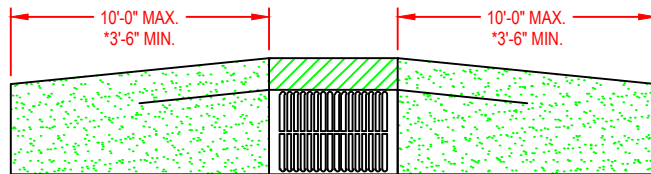
LONGITUDINAL SECTION A-A
N.T.S.



CHANNEL INTERSECTIONS
N.T.S.

GENERAL NOTES:

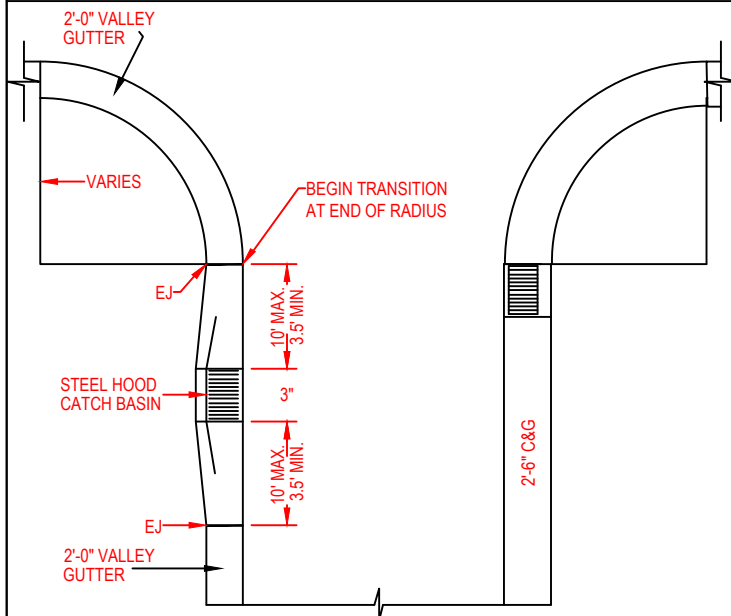
1. IF BEDROCK IS ENCOUNTERED W/IN THE LIMITS OF THE TOEWALL, BEGIN TOEWALL ON THE BEDROCK OR AS DIRECTED BY THE ENGINEER.
2. WHERE ONLY ONE SIDE REQUIRES RIP RAP CLASS I OR II, LIST STATION & SIDE OF SAME.
3. CHANNEL & RIP RAP SIZE TO BE DESIGNED BY THE ENGINEER.
4. DEPENDING ON SOIL CONDITIONS, WASHED STONE AND FILTER FABRIC MAY BE NECESSARY UNDER RIP RAP.
5. CHANNEL DEPTH "H" SHALL INCLUDE A MIN. 6" OF FREEBOARD.



CATCH BASIN FRAME IN VALLEY GUTTER
(PLAN VIEW) N.T.S.

NOTES:

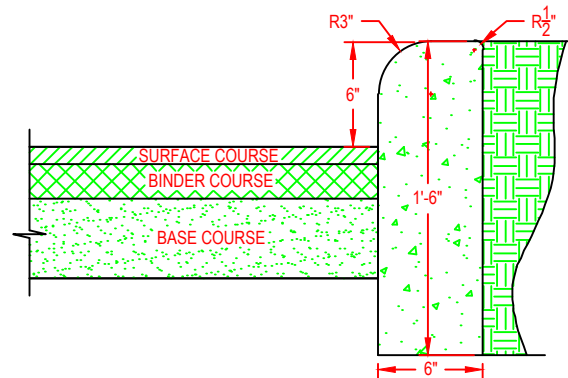
- 1. TRANSITION FROM 2'-6\"/>



CATCH BASIN PLACEMENT AT INTERSECTIONS
(PLAN VIEW) N.T.S.

NOTE:

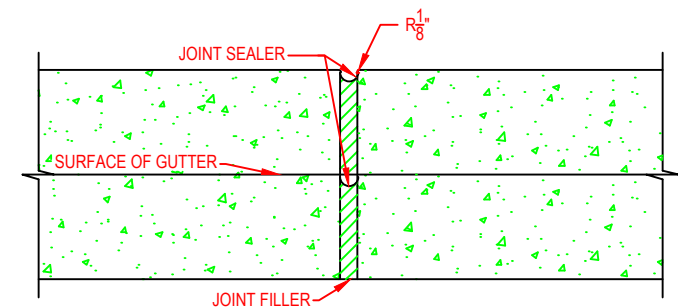
1. WHERE 2'-6\"/>



18\"/>

NOTES:

1. CJs SHALL BE SPACED AT 10' INTERVALS TO PREVENT UNCONTROLLED CRACKING. JOINT SPACING MAY BE ALTERED BY THE ENGINEER.
2. CJs MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. SPACING MAY BE ALTERED BY THE ENGINEER.
3. ALL EJs SHALL BE SPACED AT 50' INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS. JOINTS SHALL MATCH LOCATIONS W/ JOINTS IN ABUTTING SIDEWALK.
4. CONC. COMPRESSIVE STRENGTH SHALL BE 3,600 P.S.I. IN 28 DAYS.
5. CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ACCESSIBLE RAMPS.
6. TOP 6\"/>
7. DETAIL MAY BE USED FOR PRIVATE DRIVES, PARKING LOTS, AND INTERIOR CIRCULATION DRIVE.



CURB & GUTTER EJ & CJ
N.T.S.

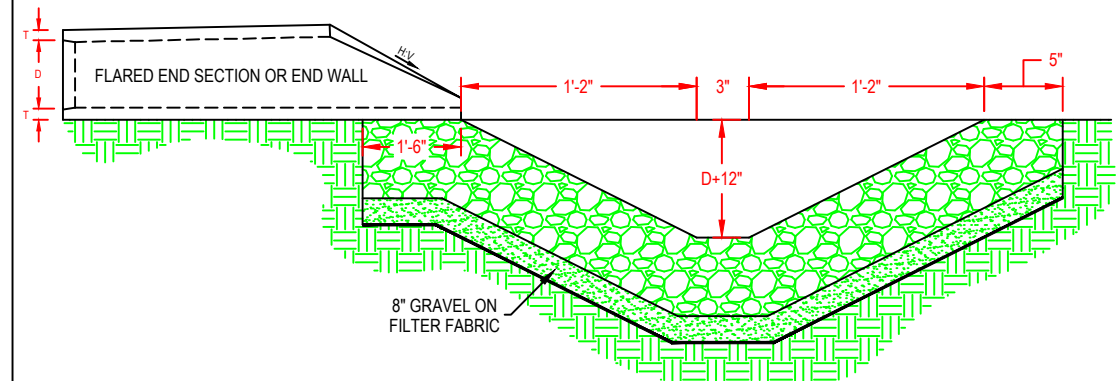
NOTES:

1. CJs SHALL BE SPACED AT 10' INTERVALS. FOR VALLEY GUTTER, A 10' SPACING MAY BE USED WHEN A MACHINE IS USED. JOINT SPACING MAY BE ALTERED BY THE TOWN ENGINEER TO PREVENT UNCONTROLLED CRACKING.
2. CJs MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MIN. DEPTH OF 1 1/2\"/>
3. ALL EJs SHALL BE SPACED AT 50' INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS. JOINTS SHALL MATCH LOCATIONS W/ JOINTS IN ABUTTING SIDEWALK.
4. CONC. COMPRESSIVE STRENGTH SHALL BE 3,600 P.S.I. IN 28 DAYS.
5. CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ADA RAMPS.
6. TOP 6\"/>

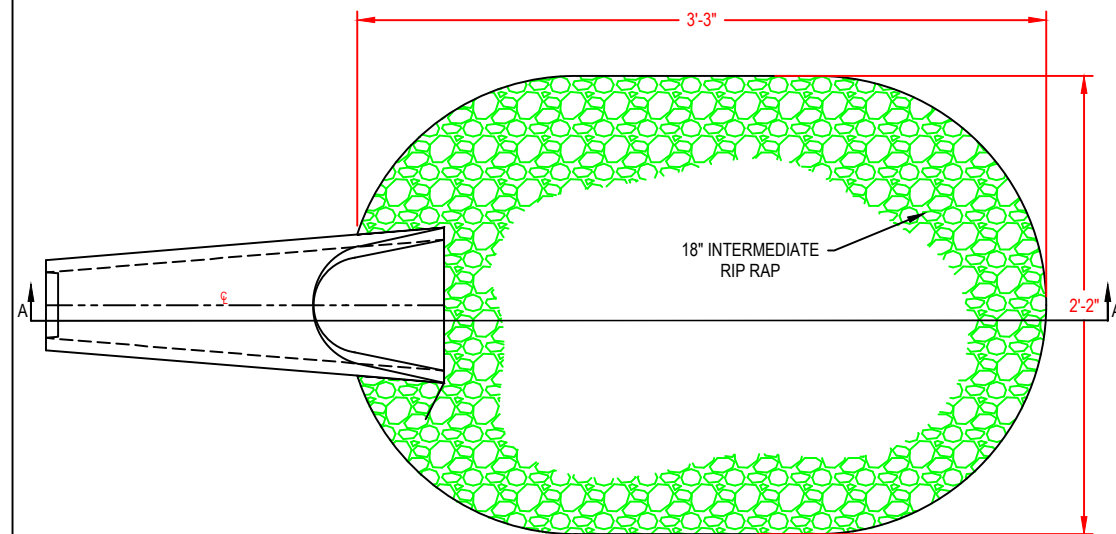
PIPE SIZE	A	B	C	D	E	F	WT. RIP RAP IN TONS
15"	13'-2"	8'-9"	4'-6"	1'-0"	4'-6"	1'-6"	6
18"	15'-10"	10'-6"	5'-5"	1'-2"	5'-5"	1'-10"	8
21"	18'-5"	12'-3"	6'-4"	1'-5"	6'-4"	2'-1"	12
24"	21'-0"	14'-0"	7'-2"	1'-7"	7'-2"	2'-5"	15
30"	26'-3"	17'-6"	9'-0"	2'-0"	9'-0"	3'-0"	22
36"	31'-6"	21'-0"	10'-9"	2'-5"	10'-9"	3'-7"	33

NOTE:

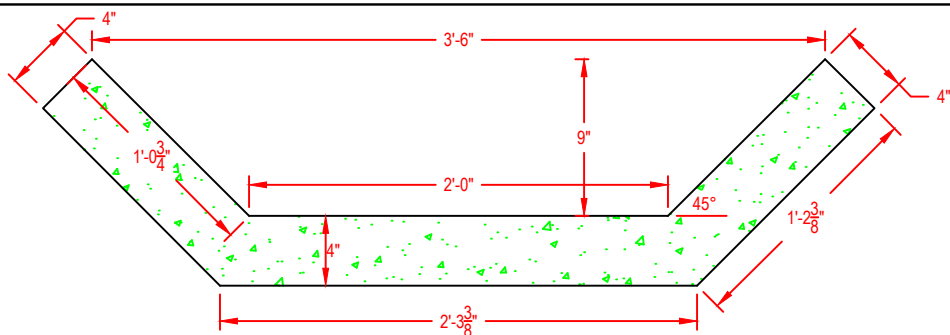
1. THIS DETAIL IS ONLY TO BE USED WHEN OUTFALL HAS A CONTINUOUS FLOW OF WATER & W/ PRIOR APPROVAL OF THE COUNTY ENGINEER.



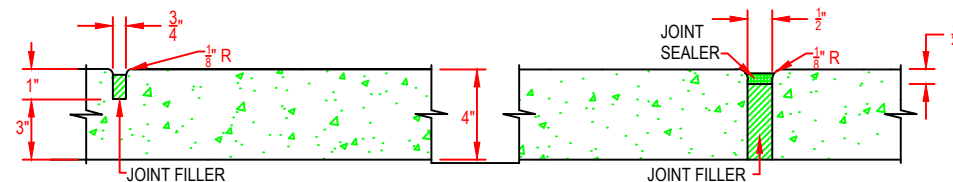
CROSS SECTION A-A
N.T.S.



PLAN VIEW
N.T.S.

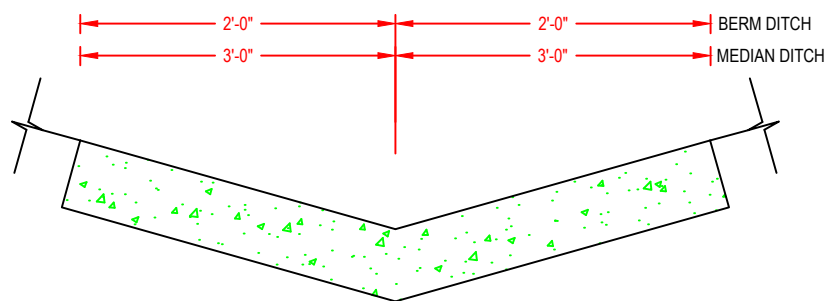


SLOPE DRAIN, BASE DITCH OR BERM DRAINAGE
OUTLET DITCH (N.T.S.)

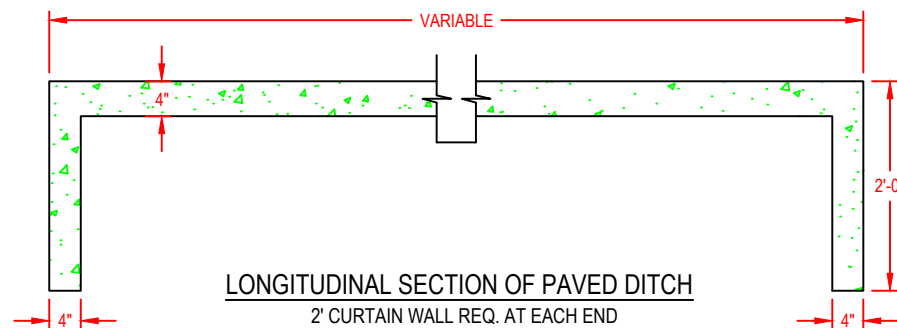


GROOVED JOINT
N.T.S.

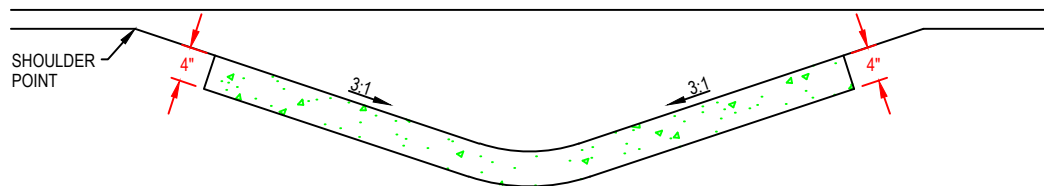
EXPANSION JOINT
N.T.S.



MEDIAN OR BERM DITCH
N.T.S.



LONGITUDINAL SECTION OF PAVED DITCH
2' CURTAIN WALL REQ. AT EACH END



SIDE DITCH
N.T.S.

GENERAL NOTES:

1. IN THE 4" CONC. PAVED DITCHES PLACE 1/2" E.J. AT 30' INTERVALS & AT ALL OTHER POINTS WHERE PROPOSED DITCHES ABUT RIGID OBJECTS. PLACE GROOVED JOINTS 1" DEEP AT 10' INTERVALS BETWEEN EJs.
2. WIDTH & SHAPE OF PROPOSED 4" CONC. PAVED DITCHES AS SHOWN OR AS DIRECTED BY THE TOWN ENGINEER.
3. ALL CONC. TO BE 3600 P.S.I. COMPRESSIVE STRENGTH.