

Public Works Standard Drawings Subcommittee Meeting

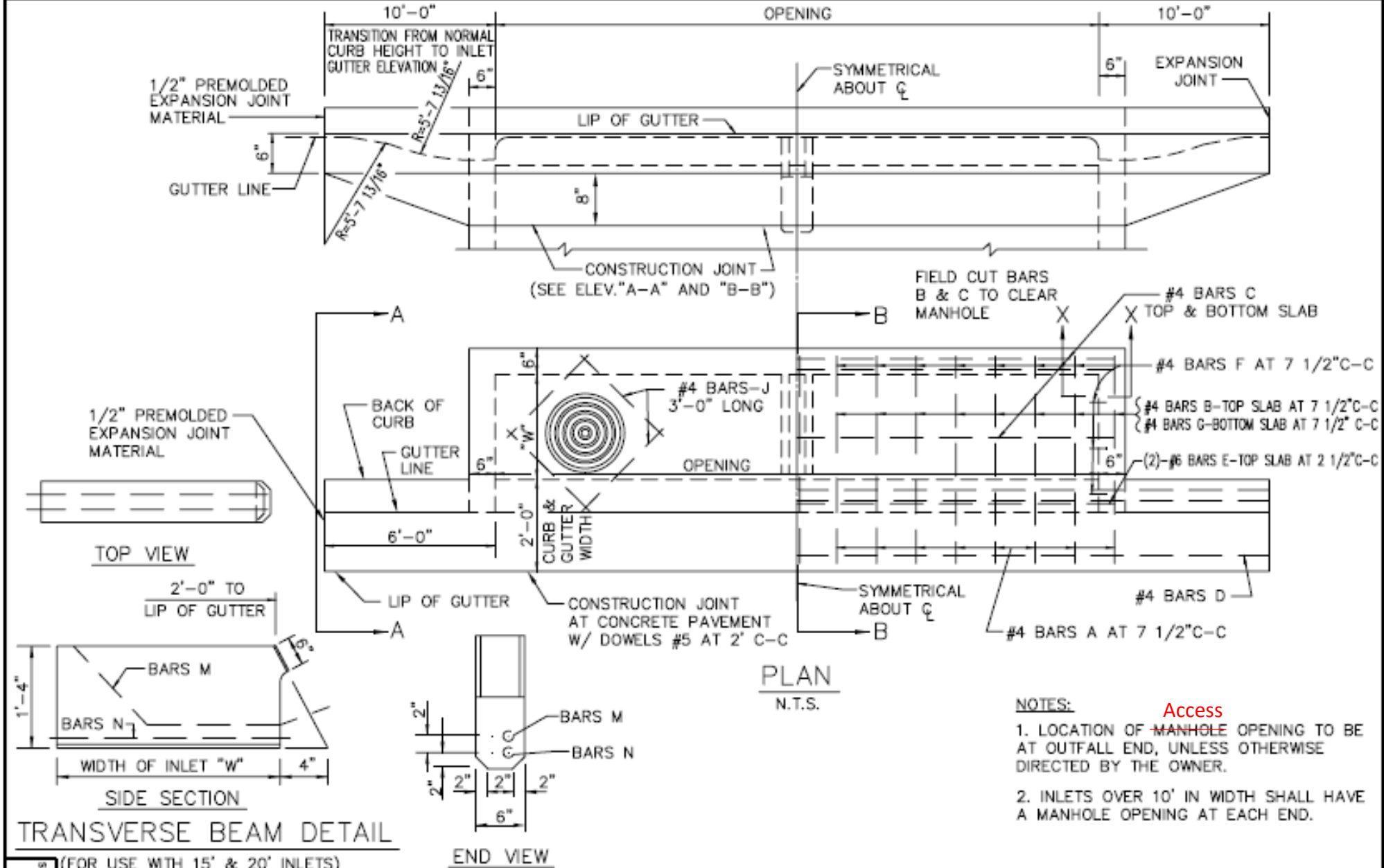
Monday, November 18, 2019

Regional Forum Room

Welcome and Introductions

Meeting Summary

Division 6020 & 6030 Drawings



TRANSVERSE BEAM DETAIL

(FOR USE WITH 15' & 20' INLETS)
N.T.S.

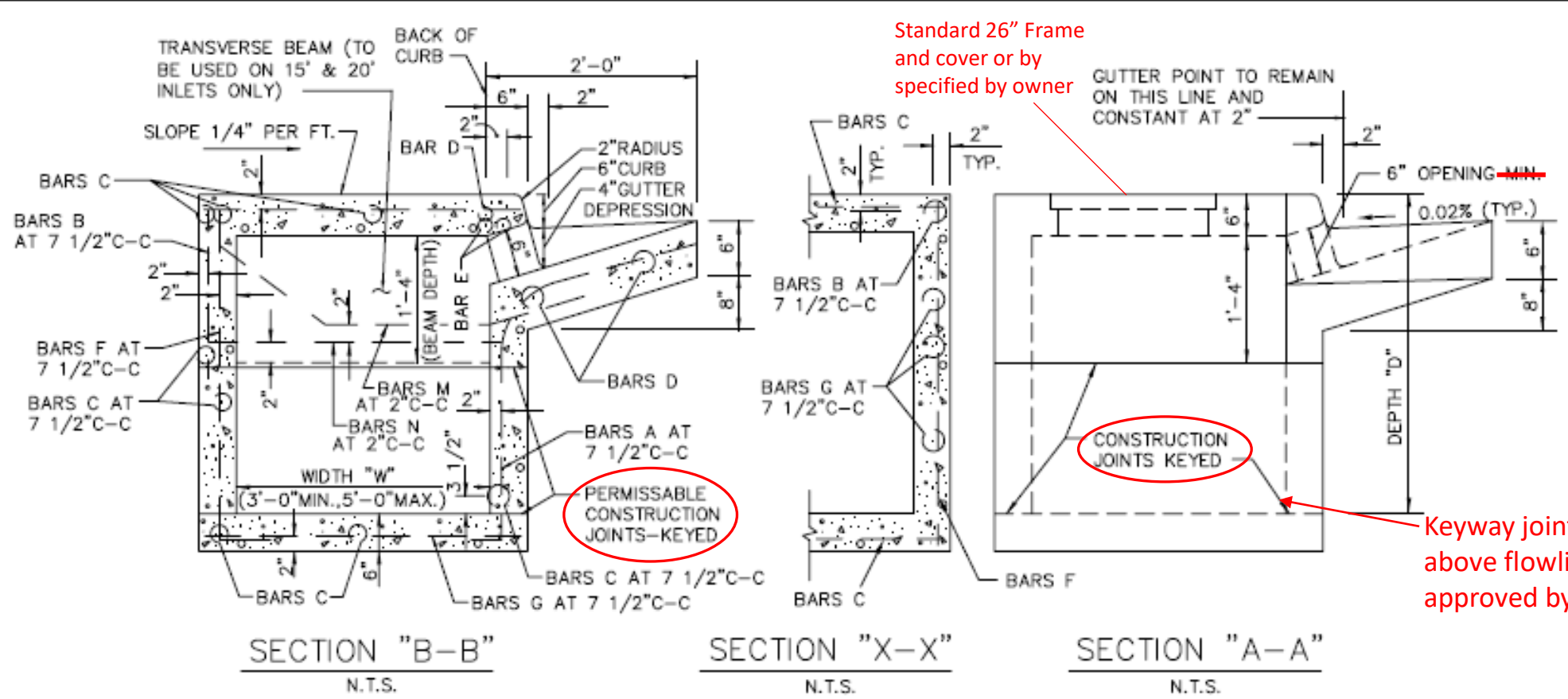
STANDARD DRAWING NO
6020A

CURB INLET
5', 10', 15' OR 20' OPENING



STANDARD SPECIFICATION REFERENCE 702	
DATE OCT. '04	STANDARD DRAWING NO. 6020A

- NOTES:**
1. LOCATION OF ~~MANHOLE~~ **Access** OPENING TO BE AT OUTFALL END, UNLESS OTHERWISE DIRECTED BY THE OWNER.
 2. INLETS OVER 10' IN WIDTH SHALL HAVE A MANHOLE OPENING AT EACH END.



Standard 26" Frame and cover or by specified by owner

GUTTER POINT TO REMAIN ON THIS LINE AND CONSTANT AT 2"

PERMISSABLE CONSTRUCTION JOINTS-KEYED

CONSTRUCTION JOINTS KEYED

Keyway joint to be min. 18" above flowline, unless approved by engineer.

GENERAL NOTES:

1. ALL CONCRETE SHALL BE CLASS "C" CONCRETE.
2. REINFORCING BARS SHALL BE STANDARD GRADE STEEL, DEFORMED REINFORCING BARS OF A DIAMETER AND LENGTH AS SHOWN.
3. CHAMFER ALL EXPOSED CORNERS 3/4" EXCEPT WHERE OTHERWISE NOTED.
4. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
5. FIELD CUT AND BEND BARS AS NECESSARY TO ACCOMODATE STORM SEWER PIPE.
6. RING AND COVER SHALL BE APPROVED BY THE OWNER AND INSTALLED BY THE CONTRACTOR.

9. Allow 1" min clear space between OD of pipe or box and inside wall of inlet (OD of pipe or box should account for skewed conditions).

7. Inlet opening shall be 6" min or 8" max

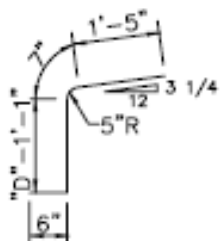
8. Precast products may be used at the approval of the Owner

STANDARD DRAWING NO. 6020B

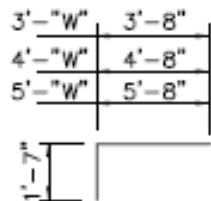
CURB INLET
CROSS SECTION & INLET THROAT



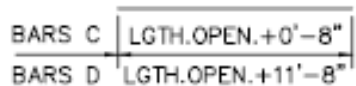
STANDARD SPECIFICATION REFERENCE	
702	
DATE	STANDARD DRAWING NO.
OCT. '04	6020B



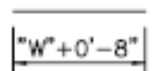
#4 BARS A
N.T.S.



#4 BARS B
N.T.S.



#4 BARS C & D
N.T.S.



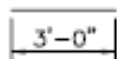
#4 BARS G
N.T.S.



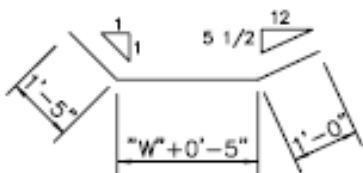
#4 BARS E
N.T.S.



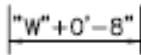
#4 BARS F
N.T.S.



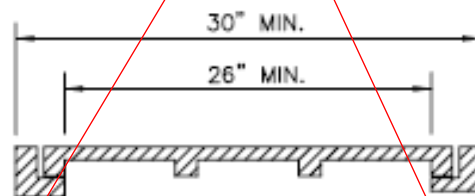
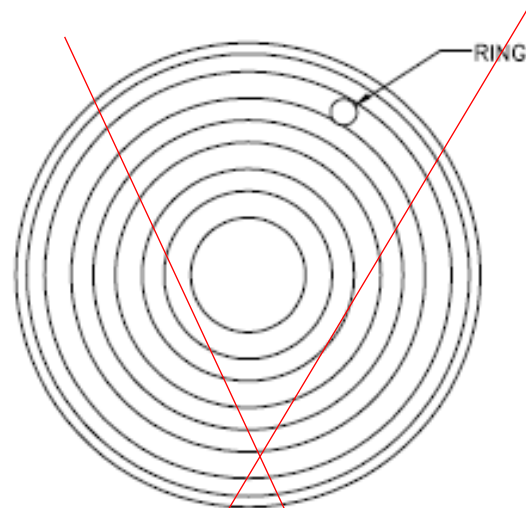
#4 BARS J
N.T.S.



#3 BARS M
N.T.S.



#5 BARS N
N.T.S.



CAST IRON
FRAME AND COVER
N.T.S.

STANDARD DRAWING NO.
6020C

CURB INLET
REBAR & M.H. FRAME & COVER



STANDARD SPECIFICATION REFERENCE
702
DATE
OCT. '04
STANDARD DRAWING NO.
6020C

BILL OF REINFORCING STEEL

DEPTH "D"	ALL WIDTHS AND LENGTHS				OPENING LENGTH "L" = 5ft						OPENING LENGTH "L" = 10ft						OPENING LENGTH "L" = 15 ft						OPENING LENGTH "L" = 20 ft									
					Widths "W"			Widths "W"			Widths "W"			Widths "W"			Widths "W"			Widths "W"												
	3ft	4ft	5ft	3ft	4ft	5ft	3ft	4ft	5ft	3ft	4ft	5ft	3ft	4ft	5ft	3ft	4ft	5ft														
	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS			
C	D	E	J	F	F	F	A	B	G	F	F	F	A	B	G	F	F	F	A	B	G	M	N	F	F	F	A	B	G	M	N	
3'-6"	17	3	2	4	20	24	28	10	10	20	28	32	36	18	18	28	36	40	44	26	26	36	2	2	44	48	52	34	34	44	2	2
3'-9"	18	"	"	"	"	"	"	"	"	20	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	"	"	44	"	"
4'-0"	19	"	"	"	"	"	"	"	"	24	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	"	"	48	"	"
4'-3"	19	"	"	"	"	"	"	"	"	24	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	"	"	48	"	"
4'-6"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"
4'-9"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"
5'-0"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"
5'-3"	23	"	"	"	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	"	"	52	"	"
5'-6"	23	"	"	"	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	"	"	52	"	"
5'-9"	25	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"
6'-0"	25	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"
6'-3"	26	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"
6'-6"	27	"	"	"	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	"	"	56	"	"
6'-9"	27	"	"	"	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	"	"	56	"	"
7'-0"	29	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"
7'-3"	29	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"
7'-6"	30	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"
7'-9"	31	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"
8'-0"	31	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"
8'-3"	32	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"
8'-6"	33	"	"	"	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	54	"	"	"	"	"	"	"	62	"	"
8'-9"	34	"	"	"	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	54	"	"	"	"	"	"	"	62	"	"
9'-0"	35	"	"	"	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	56	"	"	"	"	"	"	"	64	"	"
9'-3"	36	"	"	"	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	56	"	"	"	"	"	"	"	64	"	"
9'-6"	37	"	"	"	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	58	"	"	"	"	"	"	"	66	"	"
10'-0"	38	"	"	"	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	58	"	"	"	"	"	"	"	66	"	"

NOTE:

FOR CONVENIENCE, DEPTHS OF INLETS SHOWN IN ABOVE TABLES ARE IN INCREMENTS OF 3 INCHES BUT ANY DEPTHS OTHER THAN THOSE SHOWN ABOVE MAY BE USED WHEREVER DEEMED NECESSARY. QUANTITIES FOR OTHER DEPTHS FALLING WITHIN THE LIMITS OF THE TABLE MAY BE FOUND BY INTERPOLATION.

STANDARD DRAWING NO.
6020D

CURB INLET
BILL OF REINFORCING STEEL

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

702

DATE

OCT. '04

STANDARD DRAWING NO.

6020D

SUMMARY OF QUANTITIES FOR CURB INLETS																									
DEPTH "D"	5'-0" OPENING						10'-0" OPENING						15'-0" OPENING						20'-0" OPENING						
	WIDTH 3'-0"		WIDTH 4'-0"		WIDTH 5'-0"		WIDTH 3'-0"		WIDTH 4'-0"		WIDTH 5'-0"		WIDTH 3'-0"		WIDTH 4'-0"		WIDTH 5'-0"		WIDTH 3'-0"		WIDTH 4'-0"		WIDTH 5'-0"		
	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	
3'-6"	2.62	306	2.95	332	3.28	373	4.12	479	4.64	521	5.20	564	5.69	667	6.40	721	7.10	775	7.20	846	8.11	909	9.03	976	
3'-9"	2.70	309	3.04	341	3.39	373	4.25	494	4.78	536	5.34	579	5.87	687	6.58	741	7.30	796	7.42	874	8.34	937	9.27	1010	
4'-0"	2.78	328	3.14	364	3.49	399	4.38	518	4.92	565	5.49	610	6.05	718	6.77	776	7.49	835	7.64	909	8.58	976	9.51	1046	
4'-3"	2.87	334	3.23	370	3.59	406	4.51	526	5.06	573	5.64	619	6.22	729	6.95	787	7.69	847	7.87	922	8.81	990	9.75	1061	
4'-6"	2.95	356	3.32	394	3.69	431	4.64	558	5.20	607	5.79	656	6.40	770	7.14	830	7.88	891	8.09	973	9.04	1043	9.99	1115	
4'-9"	3.03	361	3.41	410	3.79	438	4.77	566	5.34	616	5.94	665	6.57	780	7.32	841	8.07	903	8.31	986	9.27	1056	10.23	1129	
5'-0"	3.12	367	3.51	416	3.90	445	4.90	574	5.47	624	6.09	674	6.75	791	7.51	853	8.27	915	8.53	999	9.50	1070	10.47	1144	
5'-3"	3.20	383	3.60	424	4.00	465	5.03	600	5.61	652	6.23	704	6.93	827	7.69	890	8.46	955	8.76	1044	9.73	1118	10.71	1194	
5'-6"	3.28	389	3.69	430	4.10	472	5.16	608	5.75	661	6.38	713	7.11	837	7.88	901	8.66	967	8.98	1057	9.97	1131	10.95	1208	
5'-9"	3.37	405	3.78	451	4.20	495	5.29	635	5.89	690	6.53	744	7.28	874	8.07	940	8.85	1007	9.20	1102	10.20	1178	11.19	1258	
6'-0"	3.45	415	3.88	460	4.30	504	5.42	646	6.03	702	6.68	757	7.45	888	8.25	954	9.05	1022	9.42	1119	10.43	1196	11.43	1276	
6'-3"	3.53	425	3.97	470	4.41	515	5.55	661	6.17	718	6.83	773	7.63	908	8.44	975	9.24	1044	9.64	1147	10.66	1223	11.67	1305	
6'-6"	3.62	437	4.06	486	4.51	532	5.68	681	6.31	739	6.97	797	7.81	935	8.62	1005	9.43	1057	9.87	1178	10.89	1258	11.92	1340	
6'-9"	3.70	441	4.15	490	4.61	537	5.81	688	6.45	747	7.12	806	7.98	945	8.81	1015	9.63	1066	10.09	1191	11.12	1272	12.15	1355	
7'-0"	3.78	460	4.25	510	4.71	560	5.94	716	6.59	777	7.27	837	8.16	981	8.99	1053	9.82	1126	10.31	1237	11.35	1319	12.40	1404	
7'-3"	3.86	465	4.34	516	4.81	567	6.07	724	6.72	785	7.42	846	8.33	992	9.18	1065	10.02	1138	10.53	1249	11.59	1333	12.64	1418	
7'-6"	3.95	477	4.43	529	4.91	570	6.20	742	6.86	804	7.57	866	8.51	1016	9.36	1089	10.21	1163	10.75	1290	11.82	1365	12.88	1451	
7'-9"	4.03	491	4.53	544	5.02	597	6.33	762	7.00	826	7.71	890	8.67	1040	9.55	1116	10.41	1193	10.98	1313	12.05	1399	13.12	1498	
8'-0"	4.12	496	4.62	550	5.12	604	6.46	770	7.14	834	7.86	899	8.86	1051	9.73	1129	10.60	1205	11.20	1325	12.28	1412	13.36	1510	
8'-3"	4.20	504	4.71	559	5.22	613	6.59	784	7.28	849	8.01	915	9.04	1069	9.92	1149	10.80	1228	11.42	1353	12.51	1440	13.60	1529	
8'-6"	4.28	519	4.80	576	5.32	632	6.71	804	7.42	871	8.16	938	9.21	1107	10.10	1176	10.99	1257	11.64	1385	12.74	1474	13.84	1565	
8'-9"	4.37	528	4.90	586	5.42	643	6.84	819	7.56	886	8.31	954	9.39	1119	10.29	1199	11.18	1280	11.87	1410	12.97	1500	14.08	1592	
9'-0"	4.45	545	4.99	605	5.53	664	6.97	842	7.70	912	8.46	982	9.56	1148	10.47	1231	11.38	1313	12.09	1447	13.21	1539	14.32	1631	
9'-3"	4.53	554	5.08	614	5.63	674	7.10	858	7.84	929	8.60	999	9.74	1169	10.66	1252	11.57	1335	12.31	1474	13.44	1563	14.56	1660	
9'-6"	4.62	568	5.17	630	5.73	692	7.23	878	7.97	950	8.75	1022	9.92	1195	10.84	1280	11.77	1365	12.53	1505	13.67	1600	14.80	1696	
10'-0"	4.78	582	5.36	645	5.93	708	7.49	900	8.11	974	9.05	1048	10.27	1227	11.21	1312	12.16	1399	12.98	1546	14.13	1642	15.29	1739	

NOTE:
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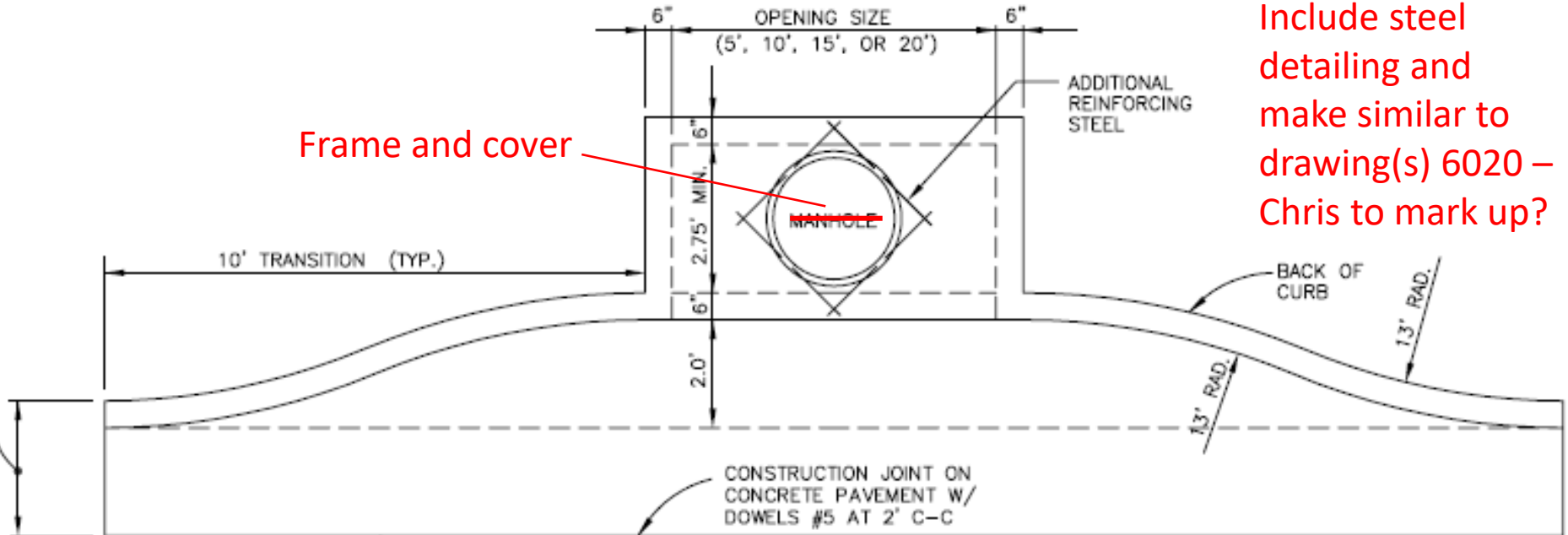
STANDARD DRAWING NO.
6020E

CURB INLET
 SUMMARY OF QUANTITIES

North Central Texas Council of Governments


STANDARD SPECIFICATION REFERENCE
 702
 DATE
 OCT. '04
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 6020E

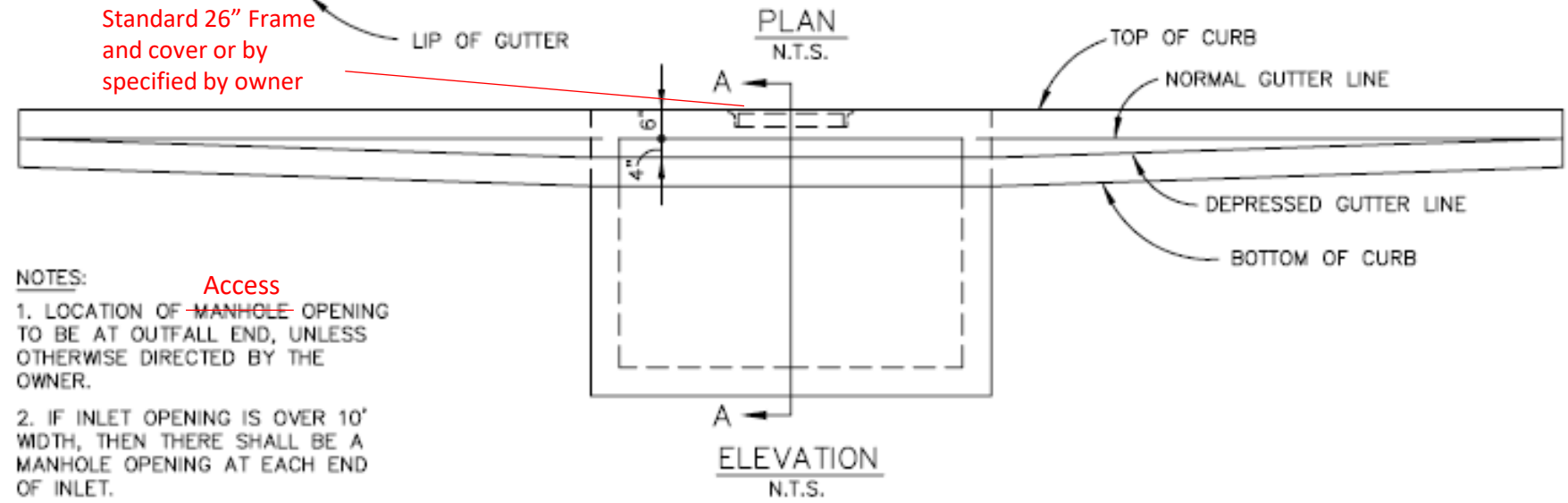
CURB & GUTTER WIDTH



Frame and cover

Include steel detailing and make similar to drawing(s) 6020 – Chris to mark up?

Standard 26" Frame and cover or by specified by owner



- NOTES:
1. LOCATION OF ~~MANHOLE~~ **Access** OPENING TO BE AT OUTFALL END, UNLESS OTHERWISE DIRECTED BY THE OWNER.
 2. IF INLET OPENING IS OVER 10' WIDTH, THEN THERE SHALL BE A MANHOLE OPENING AT EACH END OF INLET.

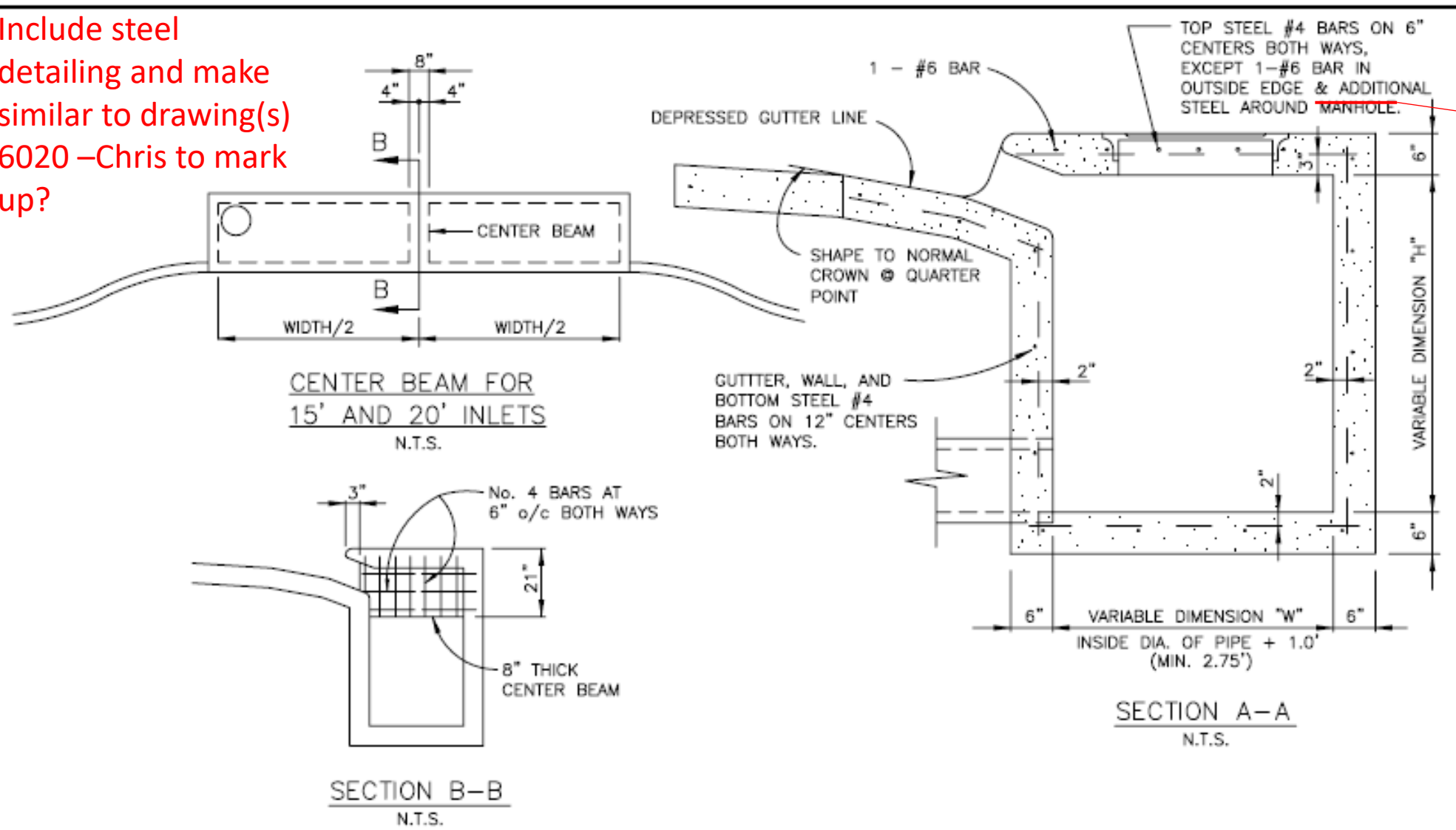
6030A
STANDARD DRAWING
ON STANDARD SPECIFICATIONS

CURB INLET RECESSED
5', 10', 15' OR 20' OPENING



STANDARD SPECIFICATION REFERENCE	
702	
DATE	STANDARD DRAWING NO.
OCT. '04	6030A

Include steel detailing and make similar to drawing(s) 6020 –Chris to mark up?



Frame and cover

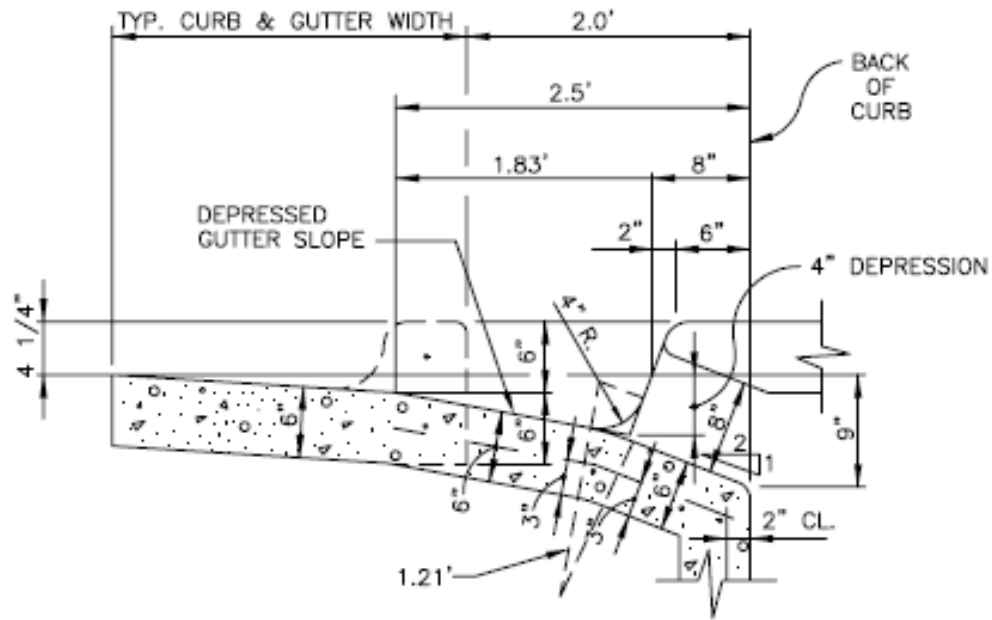
STANDARD DRAWING NO.
6030B

CURB INLET RECESSED
CROSS SECTION & CENTER BEAM

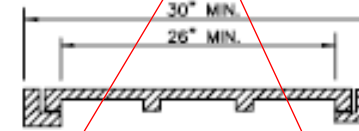
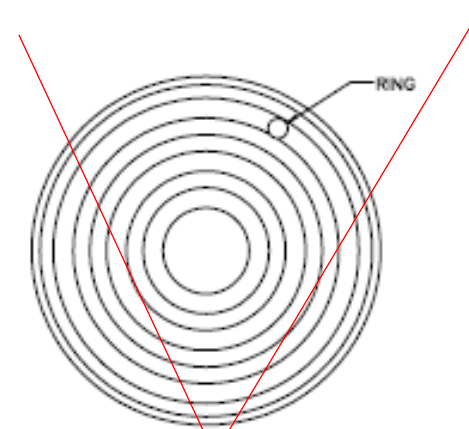


STANDARD SPECIFICATION REFERENCE 702	
DATE OCT. '04	STANDARD DRAWING NO. 6030B

Include steel detailing and make similar to drawing(s) 6020 – Chris to mark up?



INLET THROAT
N.T.S.



MANHOLE FRAME & COVER
N.T.S.

STANDARD DRAWING NO.
6030C

CURB INLET RECESSED
INLET THROAT & M.H. FRAME & COVER

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE
702
DATE
OCT. '04
STANDARD DRAWING NO.
6030C

GENERAL NOTES:

1. IN GENERAL, REINFORCING STEEL SHALL BE #4 BARS ON 12" CENTERS BOTH WAYS FOR GUTTER, BOTTOM SLAB ENDS, FRONT AND BACK WALLS, AND #4 BARS ON 6" CENTERS BOTH WAYS FOR TOP SLAB. AN ADDITIONAL #6 BAR SHALL BE PLACED IN THE FRONT EDGE OF THE TOP SLAB IN THE INLETS AND ADDITIONAL REINFORCING STEEL SHALL BE PLACED AROUND MANHOLES AS SHOWN.
2. ALL REINFORCING STEEL SHALL BE GRADE 60.
3. ALL CONCRETE SHALL BE CLASS "A"; ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
4. ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2" TO THE CENTERS OF THE BARS.
5. 10'-0" OF EXISTING CURB AND GUTTER UPSTREAM AND 10'-0" OF EXISTING CURB AND GUTTER DOWNSTREAM SHALL BE REMOVED AND REPOURED INTEGRALLY WITH EACH INLET.
6. ALL BACK FILLING SHALL BE PERFORMED BY MECHANICAL TAMPING TO ~~90%~~ 95% STANDARD PROCTOR DENSITY.

7. Precast products may be used at the approval of the Owner

9. Allow 1" min clear space between OD of pipe or box and inside wall of inlet (OD of pipe or box should account for skewed conditions).

STANDARD DRAWING NO.
6030D

CURB INLET RECESSED
GENERAL NOTES

North Central Texas Council of Governments



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DATE
OCT. '04

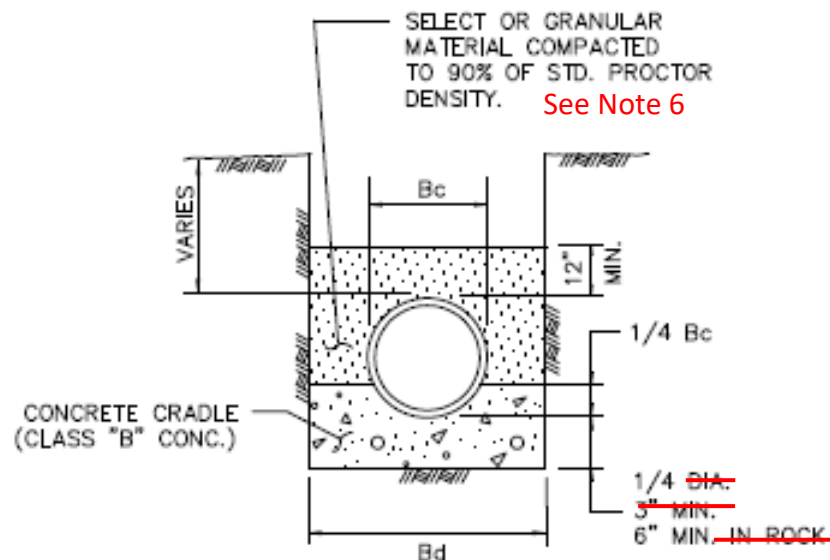
STANDARD DRAWING NO.
6030D

Division 3000 Drawings

DIVISION 3000 GENERAL UNDERGROUND CONDUIT**TABLE OF CONTENTS**

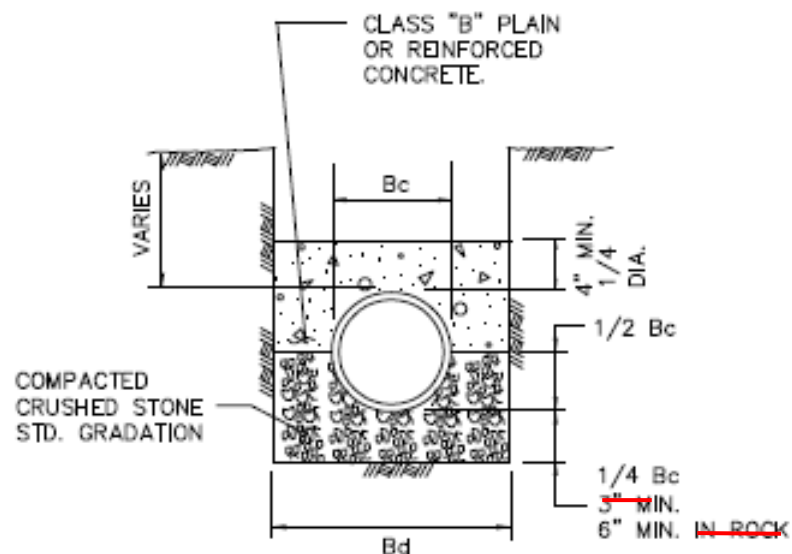
<u>Drawing #</u>	<u>Subject</u>	<u>Section / Item #</u>
3010	Embedment Class "A" & "A-1"	504.5. Pages 504-6 to 504-11
3020	Embedment Class "B", "B+", & "B-1"	504.5. Pages 504-6 to 504-11
3030	Embedment Class "B-2", "B-3", & "B-4"	504.5. Pages 504-6 to 504-11
3040	Embedment Class "C", "C+", & "C-1"	504.5. Pages 504-6 to 504-11
3050	Embedment Class "D+" & "G"	504.5. Pages 504-6 to 504-11
3060	Embedment Class "G-1" & "H"	504.5. Pages 504-6 to 504-11
3070	Pavement Cut and Repair Removal and Replacement	402.1. Page 402-1
3070A	Pavement Cut and Repair Concrete and Parkway	402. Pages 402-1 to 402-5
3070B	Pavement Cut and Repair Asphalt	402. Pages 402-1 to 402-5
3070C	Pavement Cut and Repair Extent - Residential	402. Pages 402-1 to 402-5
3070D	Pavement Cut and Repair Extent – Multiple Lanes	402. Pages 402-1 to 402-5
3080	Infiltration Protection Conduit Under Channel	504. Pages 504-1 to 504-12 803. Pages 803-1 to 803-9

Add geotextile wrap around stone trenches to avoid soil migration as directed by owner – Chris and Matthew will provide markup with where geotextile should be placed



CLASS "A"

CLASS "B" CONCRETE CRADLE
PLAIN CONC. LF 2.8
REINF. CONC. LF 3.4 P=0.4% N.T.S.



CLASS "A-1"

CLASS "B" CONCRETE CAP
PLAIN CONC. LF 2.8
REINF. CONC. LF 3.4 P=0.4%
REINF. CONC. LF 4.8 P=1.0% N.T.S.

NOTES:

1. LF. = LOAD FACTOR TO BE USED TO DETERMINE 3 EDGE BEARING BASED ON TYPE OF EMBEDMENT.
2. FREE-FALL OF CONCRETE NOT TO EXCEED 5 FT. MAXIMUM.
3. P = Rho FOR STEEL %
4. Bc = OUTSIDE DIAMETER OF PIPE
5. Bd = TRENCH WIDTH

6. Use 95% density under paved surface and 90% in unpaved areas

STANDARD DRAWING NO. 3010

EMBEDMENT
CLASS "A" & "A-1"

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

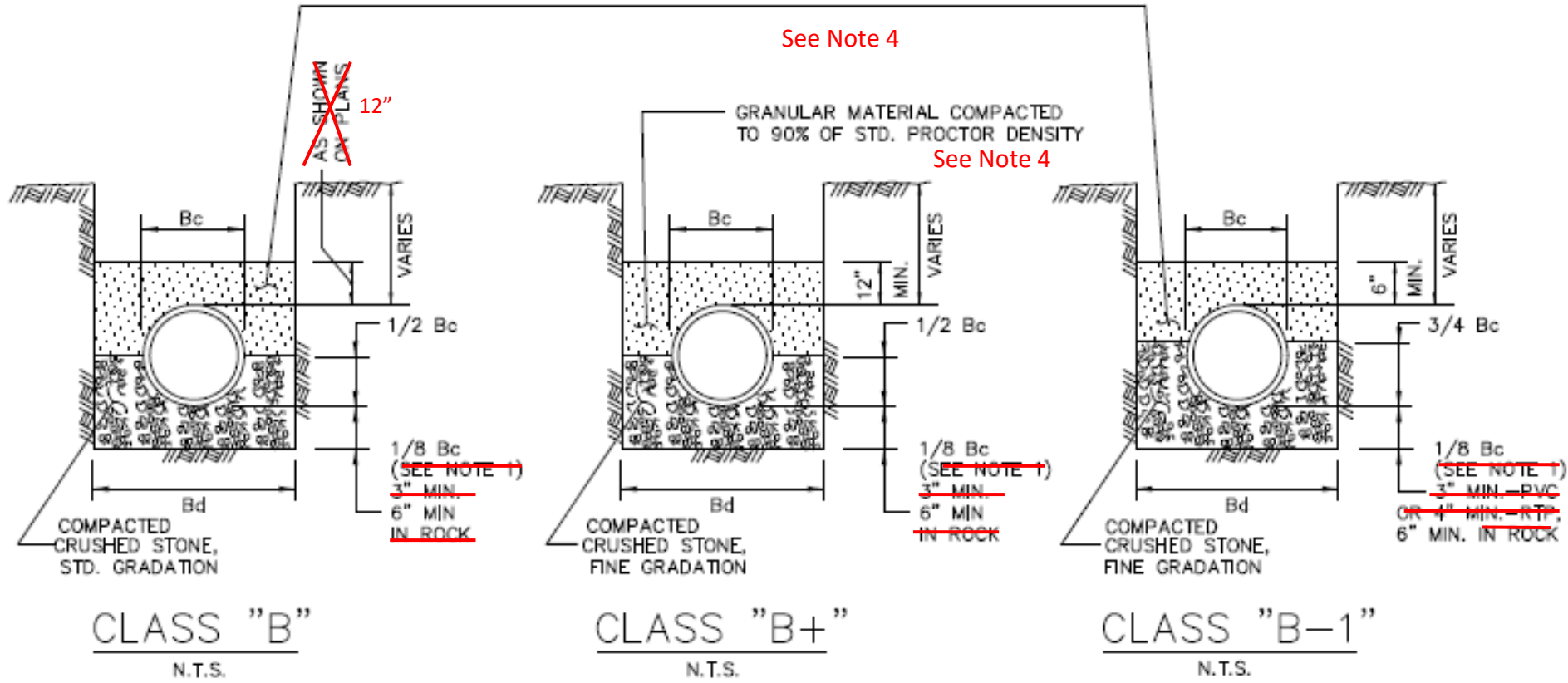
504.5

DATE
OCT. '04

STANDARD DRAWING NO.
3010

SELECT OR GRANULAR MATERIAL COMPACTED TO 90% OF STD. PROCTOR DENSITY

See Note 4



CLASS "B"

N.T.S.

CLASS "B+"

N.T.S.

CLASS "B-1"

N.T.S.

NOTES:

- 1. ~~FOR MAINS 42" DIAMETER AND LARGER LARGER, 1/8 Bc SHALL BE TAKEN AS 6".~~
- 2. Bc = OUTSIDE DIAMETER OF PIPE
- 3. Bd = TRENCH WIDTH

4. Use 95% density under paved surface and 90% in unpaved areas

STANDARD DRAWING NO. 3020

EMBEDMENT
CLASS "B", "B+", & "B-1"

North Central Texas Council of Governments



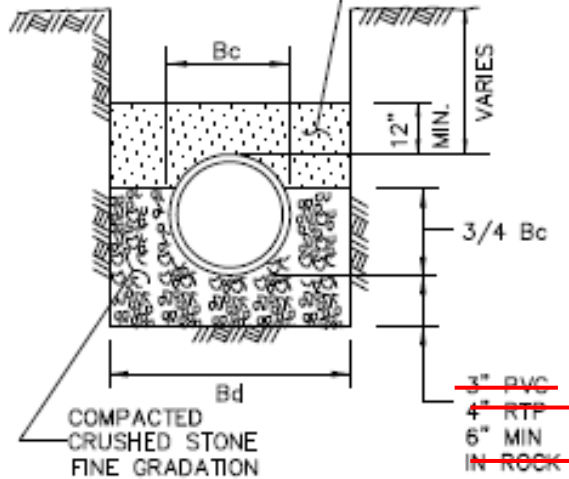
STANDARD SPECIFICATION REFERENCE

504.5

DATE
OCT. '04

STANDARD DRAWING NO.
3020

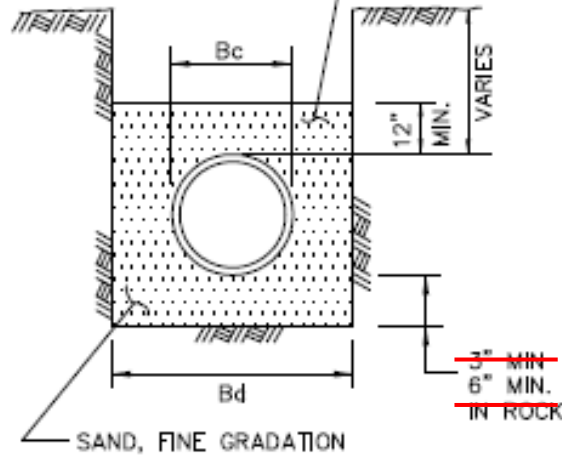
COMPACTED SELECT OR GRANULAR MATERIAL COMPACTED TO 90% OF STD. PROCTOR DENSITY See Note 3



CLASS "B-2"

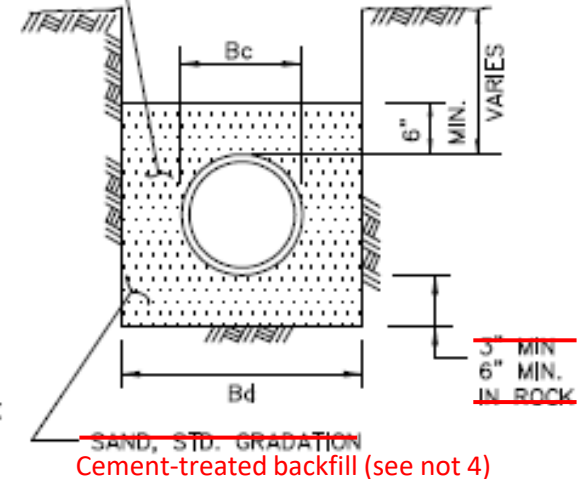
N.T.S.

SAND COMPACTED TO 90% OF STD. PROCTOR DENSITY See Note 3



CLASS "B-3"

N.T.S.




CLASS "B-4"

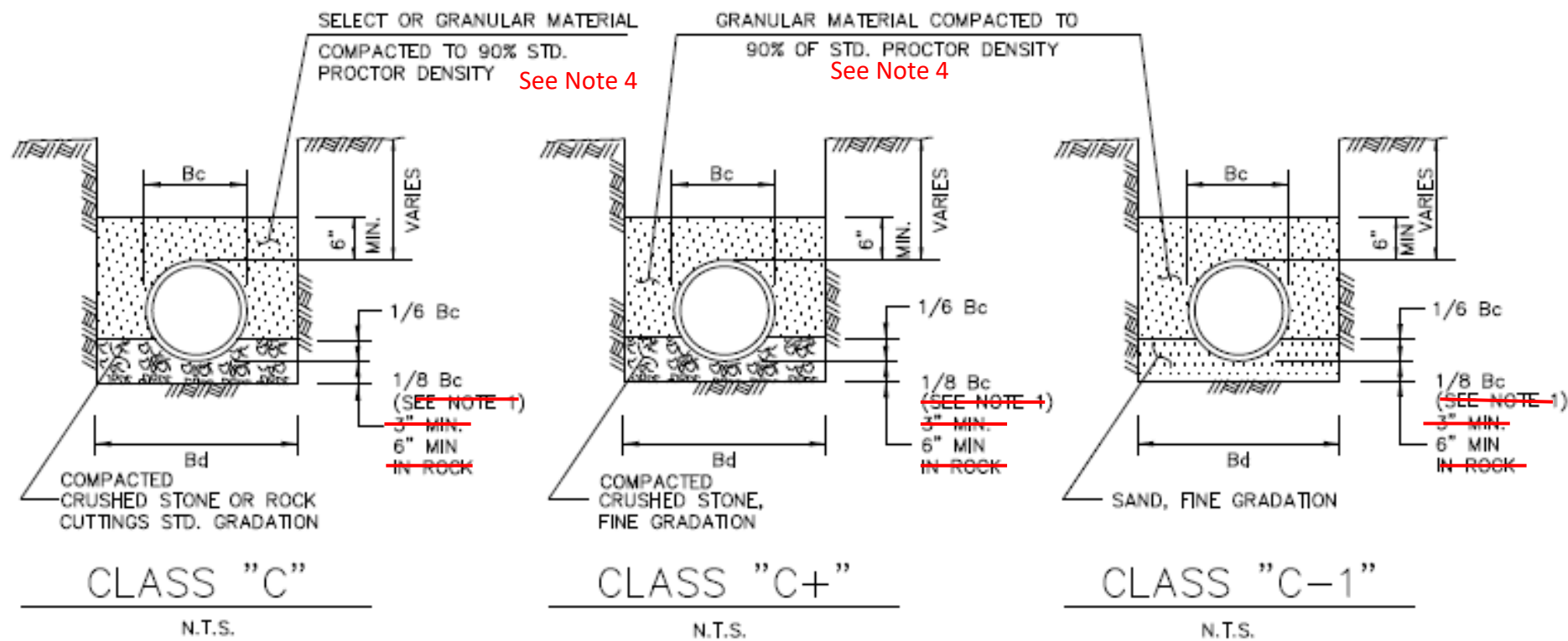
N.T.S.

NOTES:

1. Bc = OUTSIDE DIAMETER OF PIPE
2. Bd = TRENCH WIDTH
3. Use 95% density under paved surface and 90% in unpaved areas
4. Refer to 504.6.2

STANDARD DRAWING NO. 3030

EMBEDMENT		North Central Texas Council of Governments		STANDARD SPECIFICATION REFERENCE 504.5	
CLASS "B-2", "B-3", & "B-4"				DATE OCT. '04	
				STANDARD DRAWING NO. 3030	



NOTES:

1. ~~FOR MAINS 42" DIAMETER AND LARGER, 1/8 Bc SHALL BE TAKEN AS 6".~~
2. Bc = OUTSIDE DIAMETER OF PIPE
3. Bd = TRENCH WIDTH

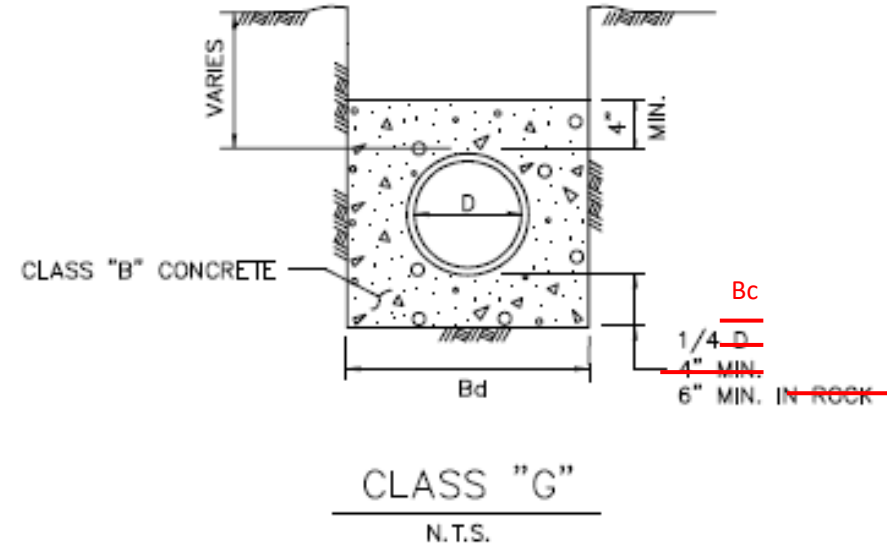
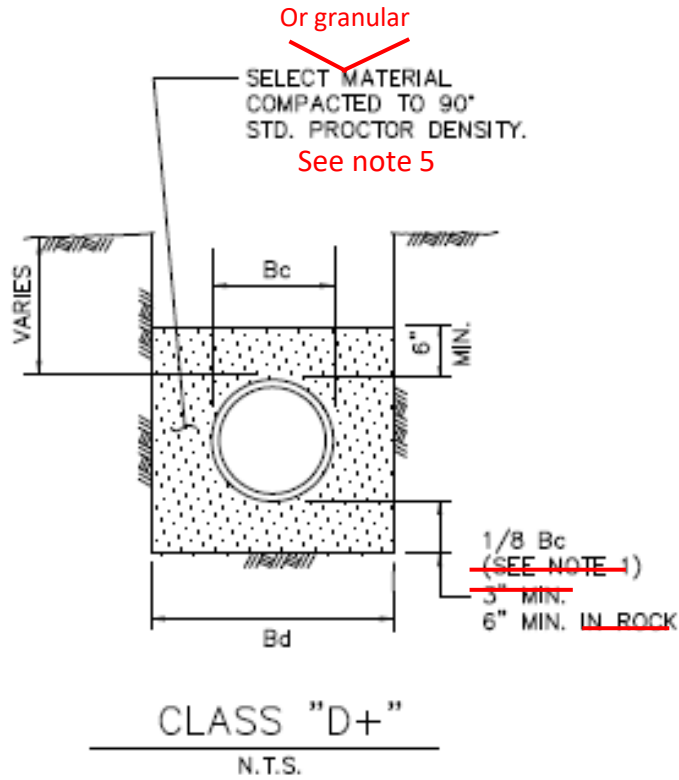
4. Use 95% density under paved surface and 90% in unpaved areas

STANDARD DRAWING NO. 3040

EMBEDMENT
CLASS "C", "C+", & "C-1"




STANDARD SPECIFICATION REFERENCE 504.5	
DATE OCT. '04	STANDARD DRAWING NO. 3040

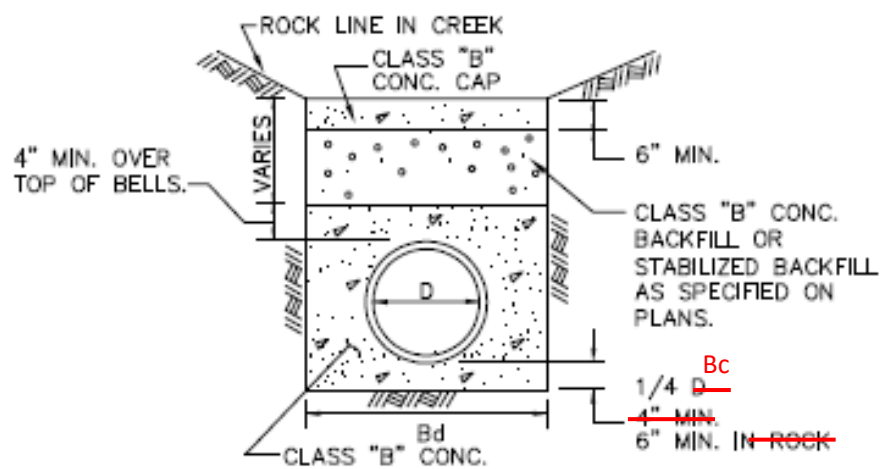


NOTES:

1. ~~FOR MAINS 42" DIAMETER AND LARGER, 1/8 Bc SHALL BE TAKEN AS 8".~~
2. Bc = OUTSIDE DIAMETER OF PIPE
3. Bd = TRENCH WIDTH
4. D = INSIDE DIAMETER OF PIPE
5. Use 95% density under paved surface and 90% in unpaved areas

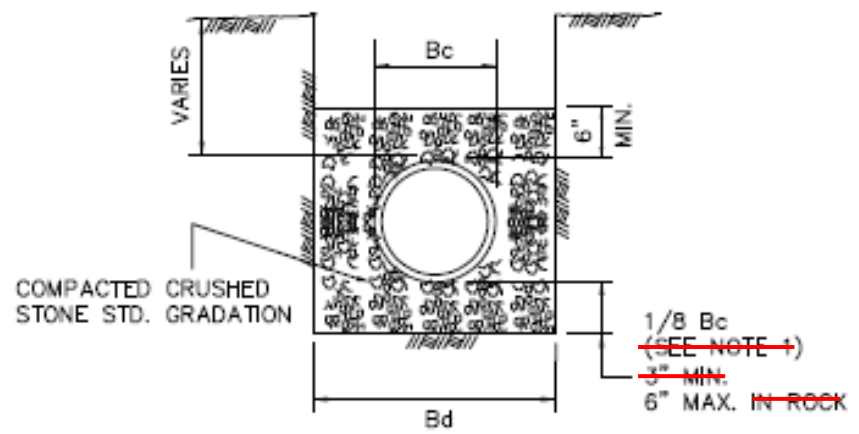
STANDARD DRAWING NO.
3050

EMBEDMENT		North Central Texas Council of Governments		STANDARD SPECIFICATION REFERENCE 504.5	
CLASS "D+" & "G"				DATE OCT. '04	
				STANDARD DRAWING NO. 3050	



CLASS "G-1"

~~(FOR ROCK DITCHES IN CREEKS)~~
N.T.S.



CLASS "H"

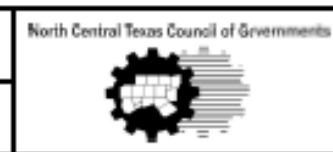
N.T.S.

NOTES:

- ~~1. FOR MAINS 42" DIAMETER AND LARGER, 1/8 Bc SHALL BE TAKEN AS 6".~~
2. Bd = TRENCH WIDTH
3. Bc = OUTSIDE DIAMETER OF PIPE
4. D = INSIDE DIAMETER OF PIPE

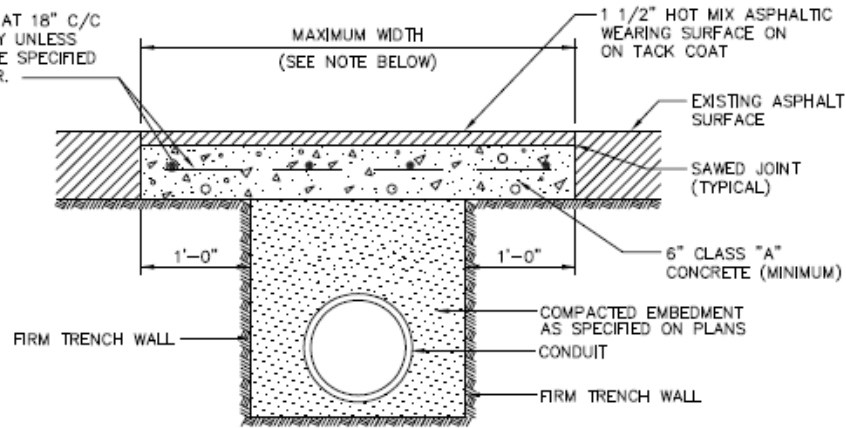
STANDARD DRAWING NO.
3060

EMBEDMENT
CLASS "G-1" & "H"

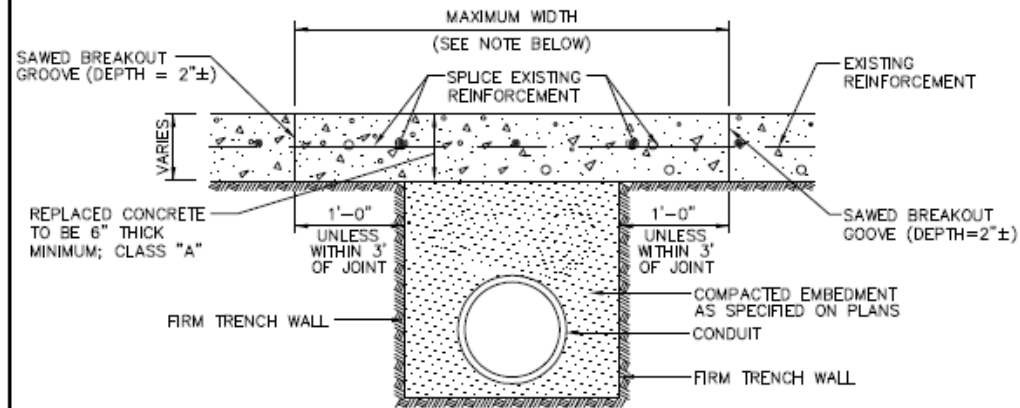


STANDARD SPECIFICATION REFERENCE 504.5	
DATE OCT. '04	STANDARD DRAWING NO. 3060

#3 BARS AT 18" C/C
EACH WAY UNLESS
OTHERWISE SPECIFIED
BY OWNER.



ASPHALT PAVEMENT
N.T.S.



CONCRETE PAVEMENT
N.T.S.

NOTES:

1. PAYMENT TO THE CONTRACTOR FOR REPLACEMENT OF PAVEMENT AND/OR DRIVEWAYS WILL BE BASED ON ACTUAL MEASUREMENTS UP TO A MAXIMUM WIDTH EQUAL TO THE SPECIFIED MAXIMUM TRENCH WIDTH (PER STD. SPEC. ITEM 6.2.) PLUS 2 FEET. ANY EXISTING PAVEMENT DAMAGED OR REMOVED IN EXCESS OF THE MAXIMUM LIMITS SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
2. WHEN REMOVING CONCRETE PAVEMENT THE CONTRACTOR SHALL ENDEAVOR TO LIMIT DAMAGE TO EXISTING REINFORCEMENT SO IT MAY BE EMPLOYED IN THE REPLACEMENT OPERATION. IF ORIGINAL REINFORCEMENT IS CUT OR BROKEN, REPLACEMENT BARS OF THE SAME SIZE SHALL BE INSTALLED BY DRILLING AND DOWELLING AS DIRECTED BY THE OWNER.

PAVEMENT CUTS

REMOVAL AND REPLACEMENT

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

402.1

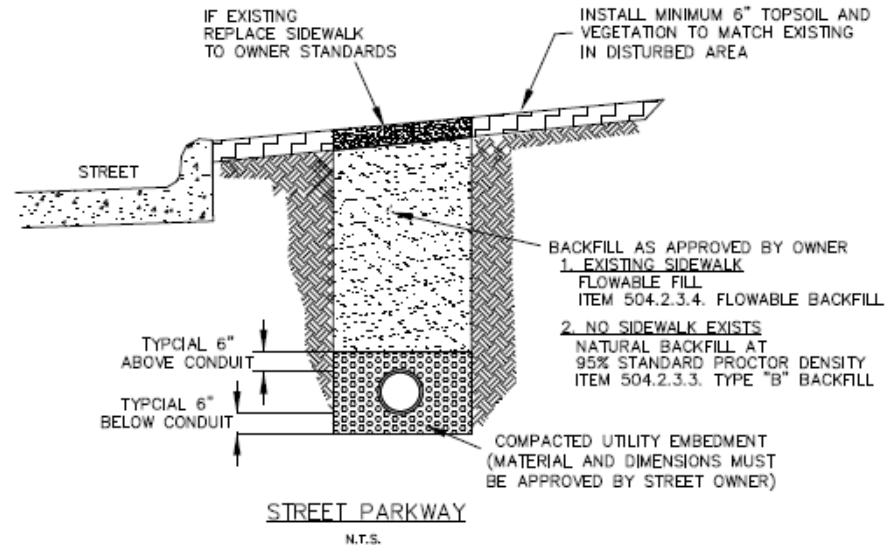
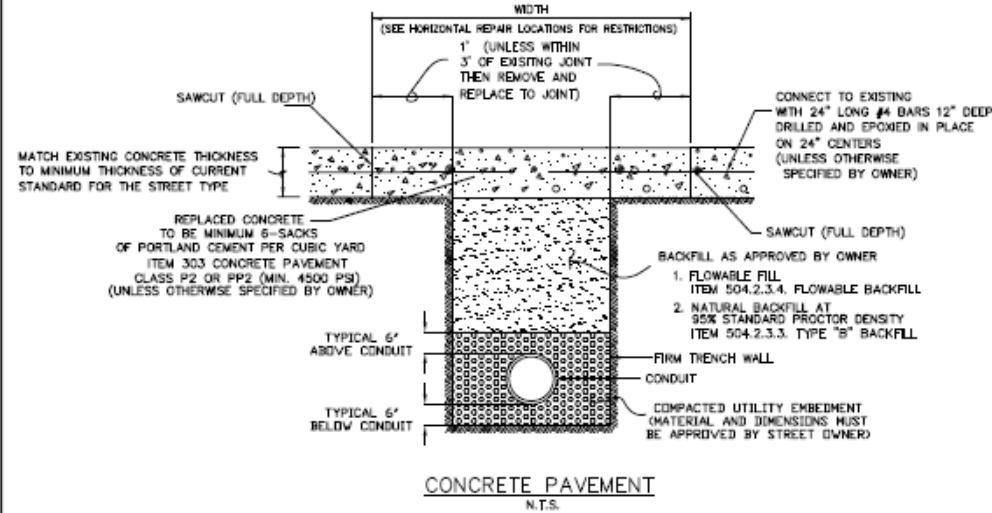
DATE

OCT. '04

STANDARD DRAWING NO.

3070

GENERAL NOTE: CHECK WITH STREET OWNER FOR SPECIFIC REQUIREMENTS NOT CONTAINED HEREIN



PAVEMENT CUT AND REPAIR
CONCRETE AND PARKWAY



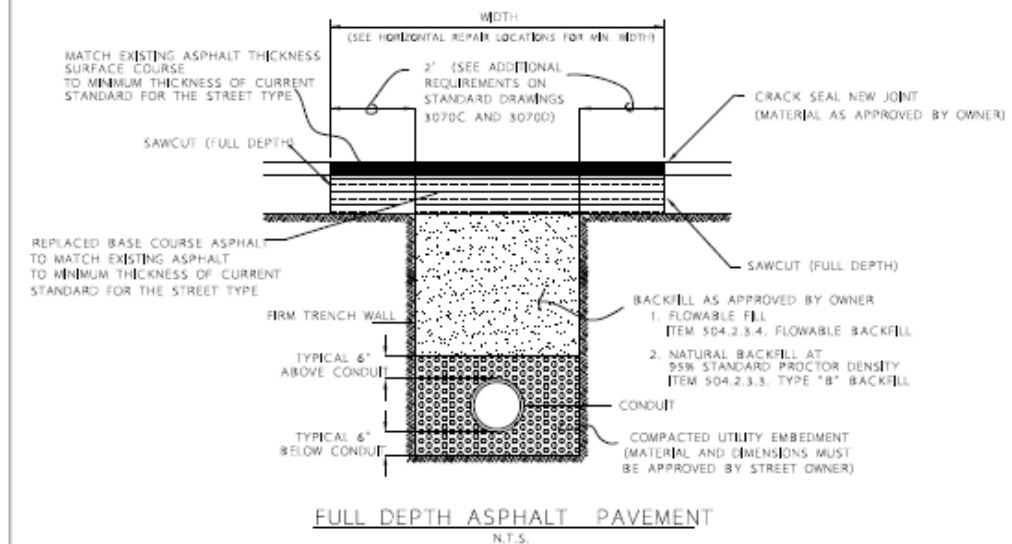
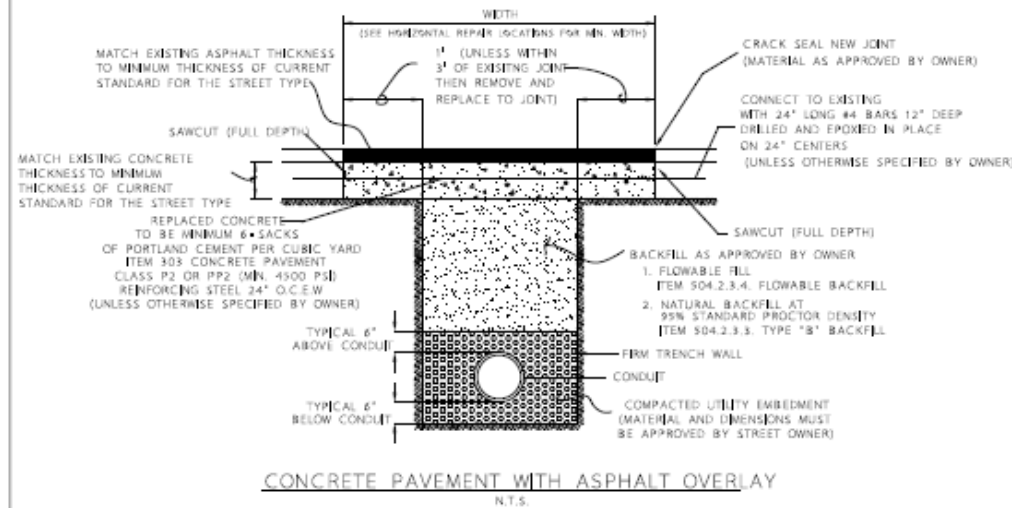
STANDARD SPECIFICATION REFERENCE

402

DATE
OCT. '04

STANDARD DRAWING NO.
3070A

GENERAL NOTE: CHECK WITH STREET OWNER FOR
SPECIFIC REQUIREMENTS NOT CONTAINED HEREIN



PAVEMENT CUT AND REPAIR

ASPHALT

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

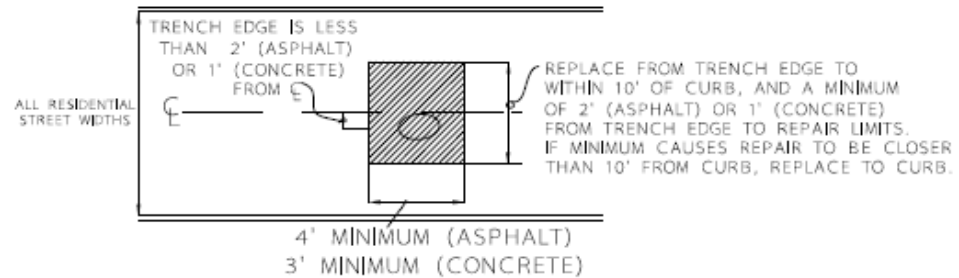
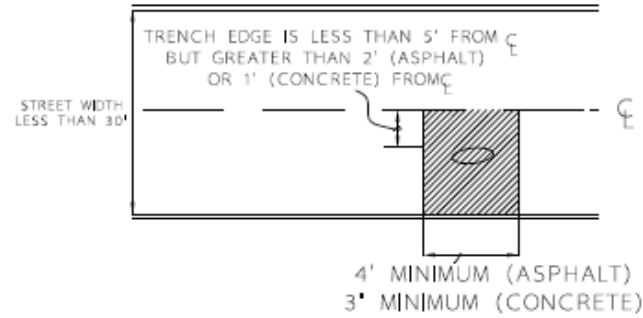
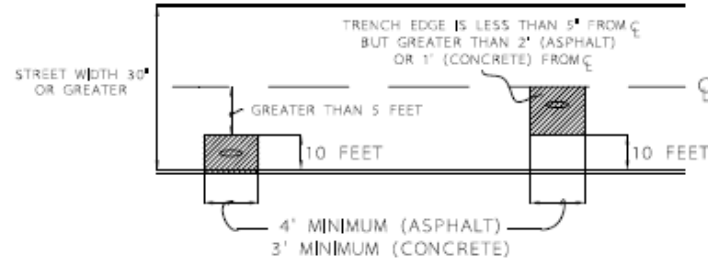
402

DATE
OCT. '04

STANDARD DRAWING NO.
3070B

GENERAL NOTES

1. REMOVE AND REPLACE A MINIMUM OF 4' (ASPHALT) OR 3' (CONCRETE) LONGITUDINAL, OR 2' (ASPHALT) 1' (CONCRETE) FROM THE EDGE OF THE TRENCH, WHICHEVER IS GREATER
2. IF WITHIN 3' OF AN EXISTING JOINT, THEN REMOVE TO THE EXISTING JOINT
3. MULTIPLE LOCATIONS ARE TO BE A MINIMUM OF 10' APART FROM EDGE OF REPAIR TO EDGE OF REPAIR. IF LESS THAN 10' APART, A CONTINUOUS SECTION MUST BE REPLACED.
4. A GUTTER OF AT LEAST 12" MAY REMAIN, PROVIDED THAT THE CURB AND GUTTER IS NOT DAMAGED BY THE CONSTRUCTION ACTIVITY.
5. EXACT PAVEMENT REMOVAL LOCATIONS TO BE APPROVED BY OWNER PRIOR TO CONSTRUCTION.



VARIABLE WIDTH RESIDENTIAL STREET

PAVEMENT CUT AND REPAIR

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE

402

EXTENT - RESIDENTIAL

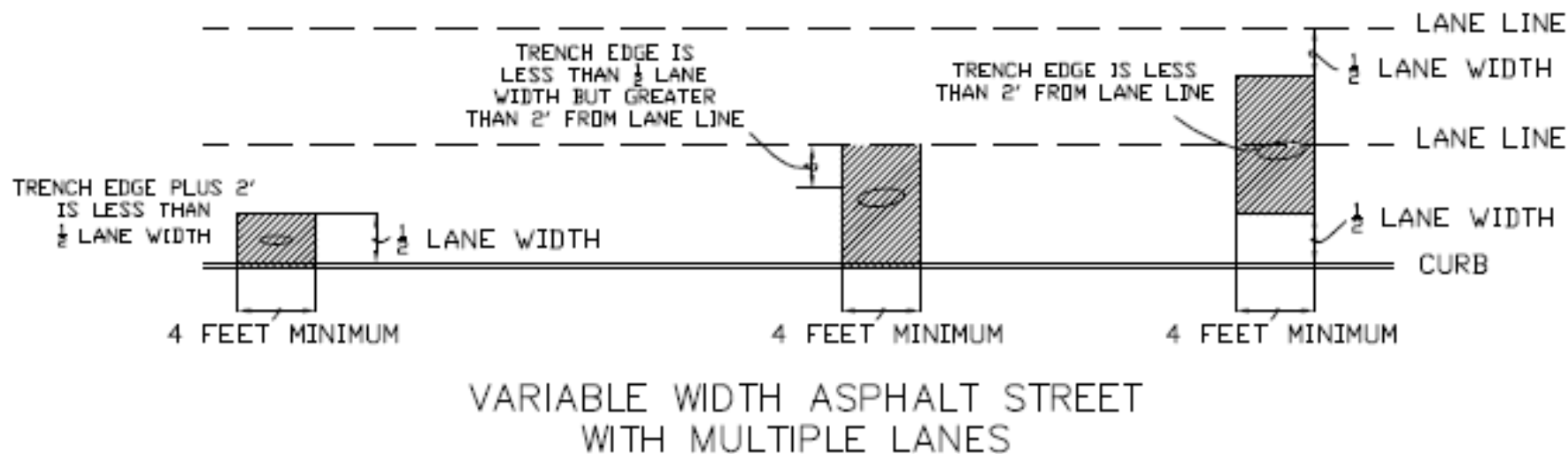
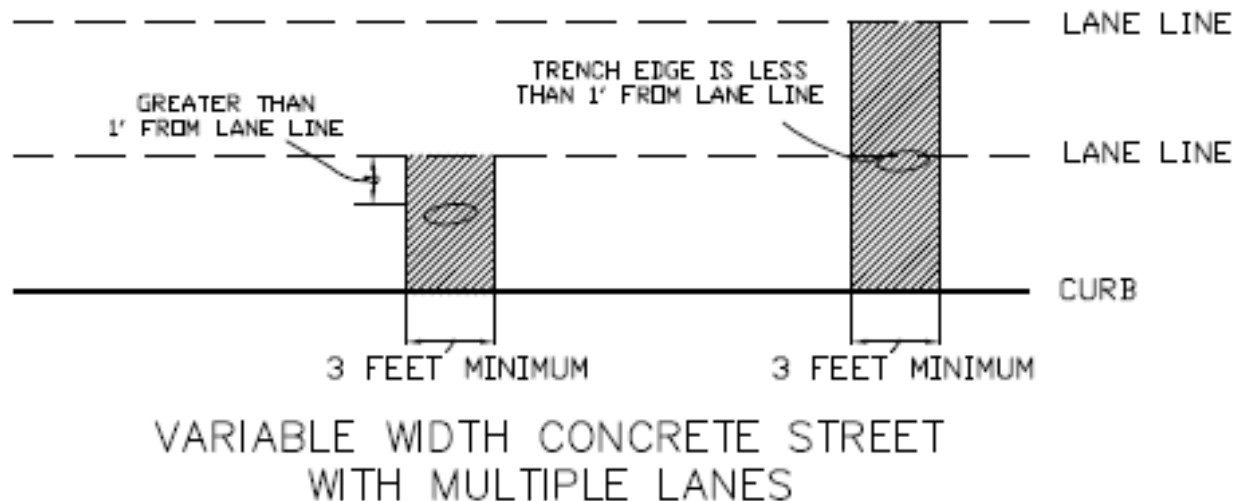


DATE
OCT. '04

STANDARD DRAWING NO
3070C

GENERAL NOTES

1. REMOVE AND REPLACE A MINIMUM OF 3' (CONCRETE) OR 4' (ASPHALT) LONGITUDINAL, OR 1' (CONCRETE) OR 2' (ASPHALT) FROM THE EDGE OF THE TRENCH, WHICHEVER IS GREATER
2. IF WITHIN 3' OF AN EXISTING JOINT, THEN REMOVE TO THE EXISTING JOINT
3. MULTIPLE LOCATIONS ARE TO BE A MINIMUM OF 10' APART FROM EDGE OF REPAIR TO EDGE OF REPAIR. IF LESS THAN 10' APART, A CONTINUOUS SECTION MUST BE REPLACED.
4. A GUTTER OF AT LEAST 12" MAY REMAIN, PROVIDED THAT THE CURB AND GUTTER IS NOT DAMAGED BY THE CONSTRUCTION ACTIVITY.
5. EXACT PAVEMENT REMOVAL LOCATIONS TO BE APPROVED BY OWNER PRIOR TO CONSTRUCTION.



STANDARD DRAWING NO. 3070D

PAVEMENT CUT AND REPAIR
EXTENT – MULTIPLE LANES

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

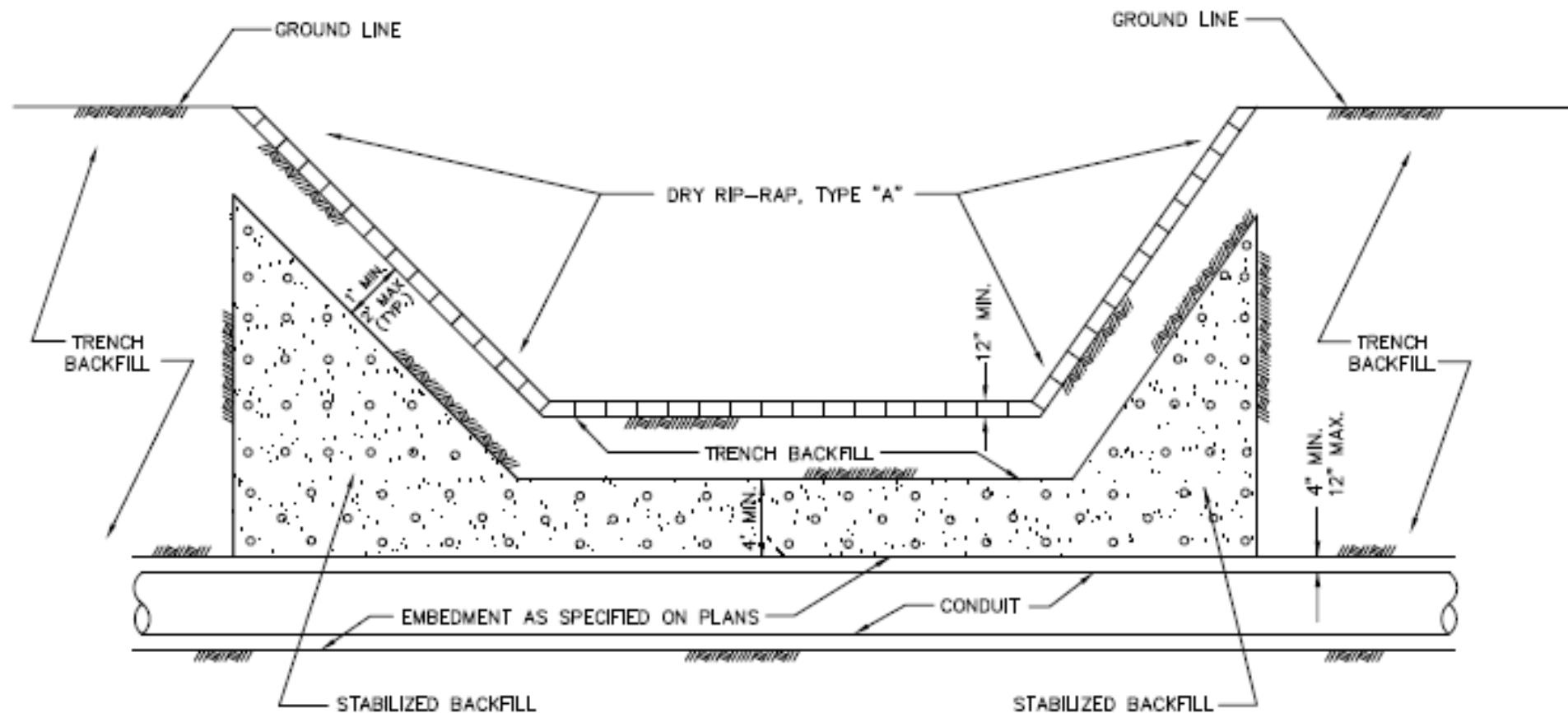
402

DATE

OCT. '04

STANDARD DRAWING NO.

3070D



STANDARD DRAWING NO.
3080

INFILTRATION PROTECTION
CONDUIT UNDER CHANNEL

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

504; 803

DATE

OCT. '04

STANDARD DRAWING NO.

3080

Additional Comments

- Edit Spec 504.5.2.7 from granular material back to sand for water mains
- Edit Spec 504.5.2.12 to include granular material
- Incorporate note “Use 95% density under paved areas and 90% density in unpaved areas” into Specs 504.5

Next Steps

- Determine action items for Subcommittee Members and NCTCOG staff

Next Standard Drawings Meeting(s)

December 16, 2019

10am-11:30am

Regional Forum Room