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THE TOWN OF

Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL

SHEET INDEX

DATE:

MAY 2025

SD-0B

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THE TOWN OF

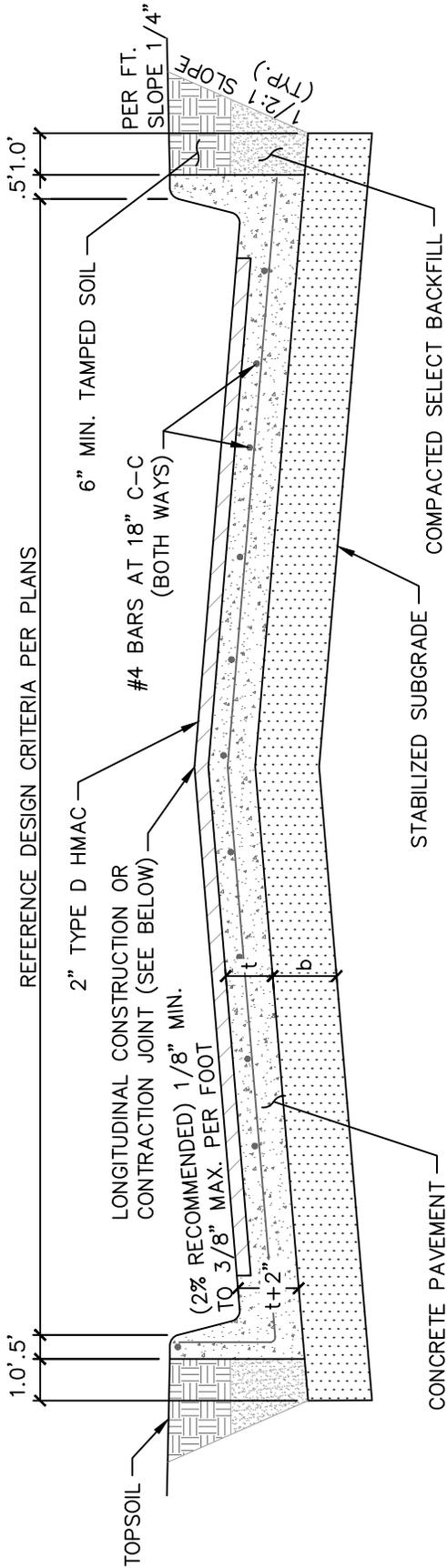
Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL

SHEET INDEX

DATE:
JULY 2025

SD-0C



REINFORCED CONCRETE PAVEMENT WITH 2" ASPHALT

t = 6" (MINIMUM) FOR SECONDARY STREET SECTIONS
 8" (MINIMUM) FOR PRIMARY STREET SECTIONS
 (UNLESS OTHERWISE NOTED IN PLANS)
 b = 12" FLEXIBLE BASE
 (UNLESS OTHERWISE NOTED IN PLANS)

NOTE: A GEOTECHNICAL REPORT SEALED BY A LICENSED PROFESSIONAL ENGINEER IS REQUIRED TO PROVIDE RECOMMENDATIONS FOR LIME OR CEMENT CONTENT AND SUBGRADE THICKNESS.

TRANSVERSE SAWED CONTRACTION JOINT

BACK OF CURB 15'-0"

15'-0"

FOR FULL-WIDTH CONSTRUCTION LONGITUDINAL CONTRACTION JOINT.
 FOR HALF-WIDTH CONSTRUCTION LONGITUDINAL CONTRACTION JOINT

NOTE: MONOLITHIC CURB SHALL BE USED WITH THIS TYPE OF PAVING.

#4 BARS AT 18" C-C (BOTH WAYS)

STEEL LAYOUT PLAN

NOTE: ALL CONCRETE PAVEMENT SHALL BE CLASS "P1" OR "P2" (PER ITEM 303).

NOTE: TRANSVERSE DOWELED ISOLATION JOINTS (OR EXPANSION JOINTS) SHALL NOT EXCEED A MAX. 250' SPACING-RE: SD-4.

THE TOWN OF

Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL

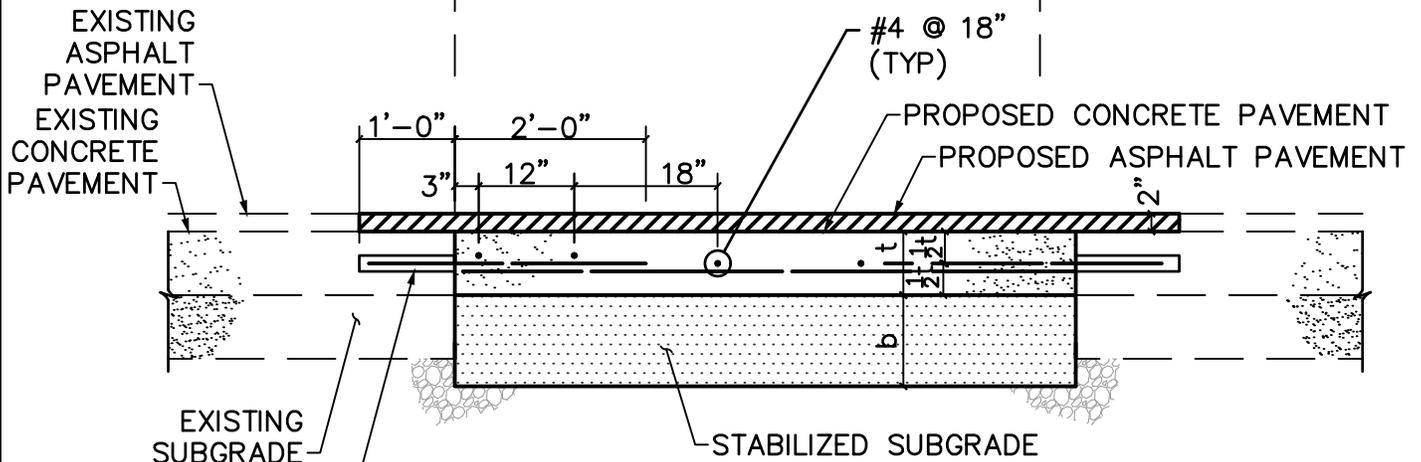
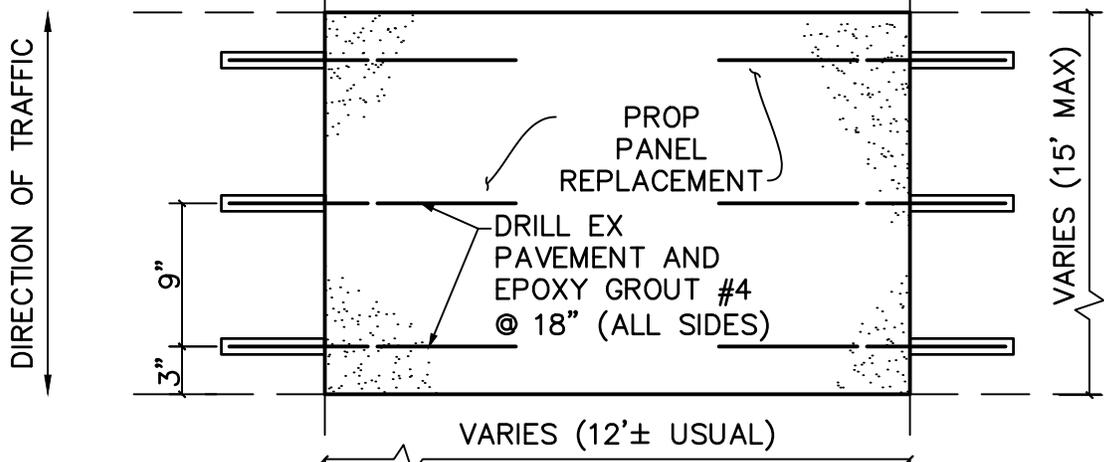
STREET TYPICAL SECTION
(CONCRETE W/ HMAC OVERLAY)

DATE:

APR 2022

SD-01

ADDITIONAL REINFORCEMENT NOT SHOWN FOR CLARITY

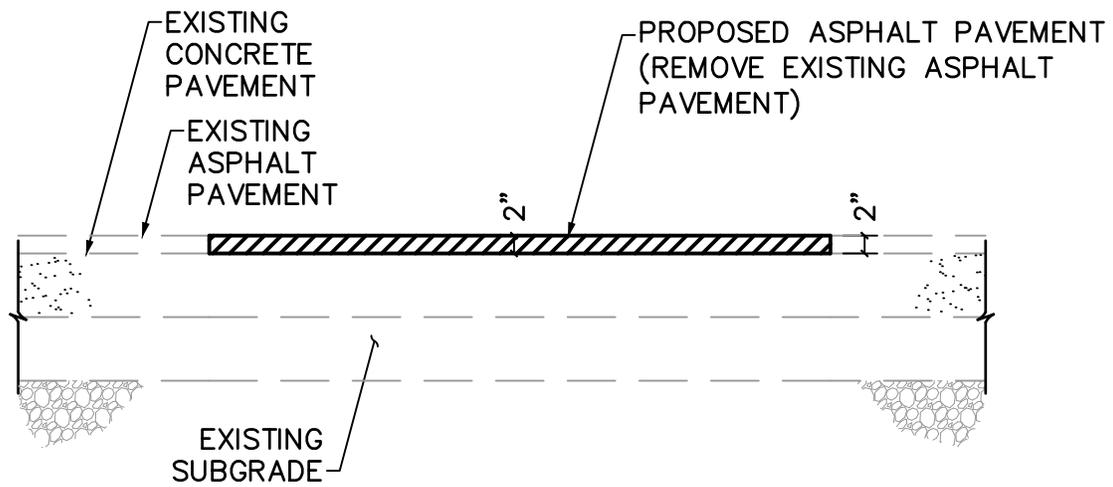


DRILL EX PAVEMENT AND EPOXY GROUT #4 @ 18" (ALL SIDES)

t = 6" (MINIMUM) FOR SECONDARY STREET SECTIONS
 8" (MINIMUM) FOR PRIMARY STREET SECTIONS
 (UNLESS OTHERWISE NOTED IN PLANS)
 b = 12" FLEXIBLE BASE
 (UNLESS OTHERWISE NOTED IN PLANS)

*ALLEYS SHALL HAVE JOINTS AT MAX SPACING OF 10'.

THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL EXISTING PAVEMENT REHAB FULL DEPTH (CONCRETE W/ HMAC OVERLAY)	DATE: APR 2022
		SD-02A



THE TOWN OF

Highland Park
TEXAS

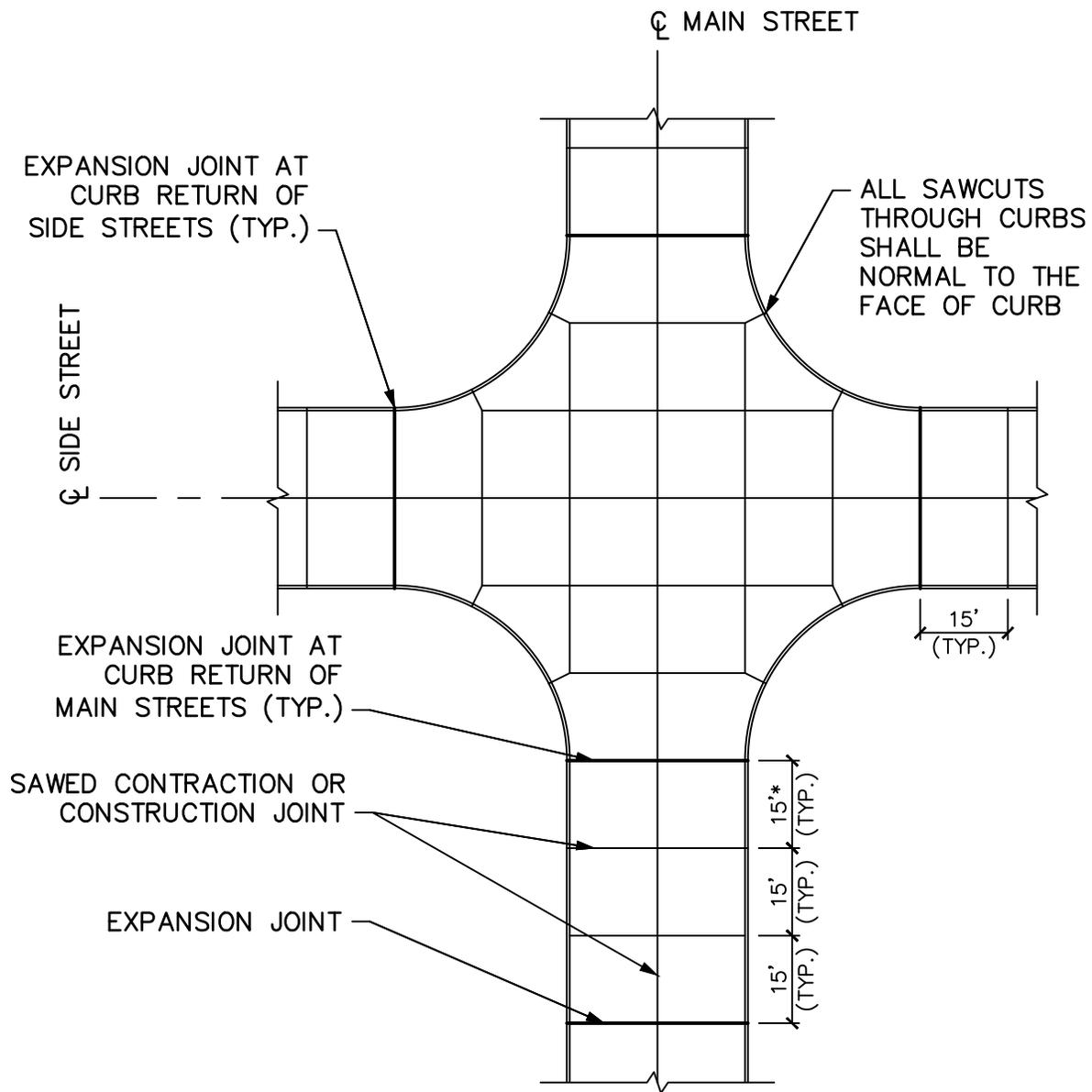
STANDARD CONSTRUCTION DETAIL

EXISTING PAVEMENT REHAB
ASPHALT REPAIR
MILL AND OVERLAY

DATE:

FEB 2020

SD-02B

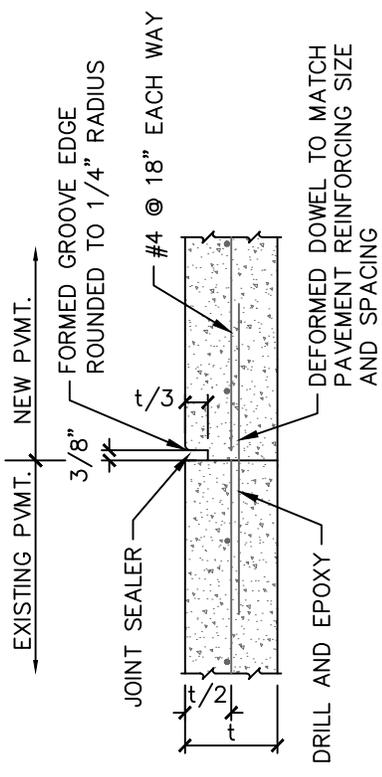


NOTE:

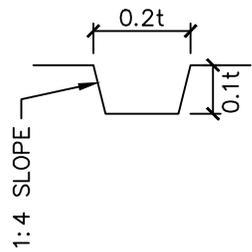
1. ALL PAVEMENT JOINTS ARE EITHER SAWED CONTRACTION OR CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
2. MAXIMUM TRANSVERSE JOINT SPACING IS 15'.*
3. LONGITUDINAL JOINT SPACING SHALL MATCH LANE LINES UNLESS NOTED OTHERWISE.
4. ALL SAWCUTS SHALL BE 1/8" TO 1/4" WIDE AND ONE-THIRD THE DEPTH OF THE PAVEMENT THICKNESS. REFER TO SD-03B.
5. ALL PAVEMENT JOINTS SHALL BE SEALED. REFER TO SD-03C FOR JOINT SEALANTS.
6. TRANSVERSE DOWELED ISOLATION JOINTS (OR EXPANSION JOINTS) SHALL NOT EXCEED A MAX. 250' SPACING.

*ALLEYS SHALL HAVE JOINTS AT MAX SPACING OF 10'.

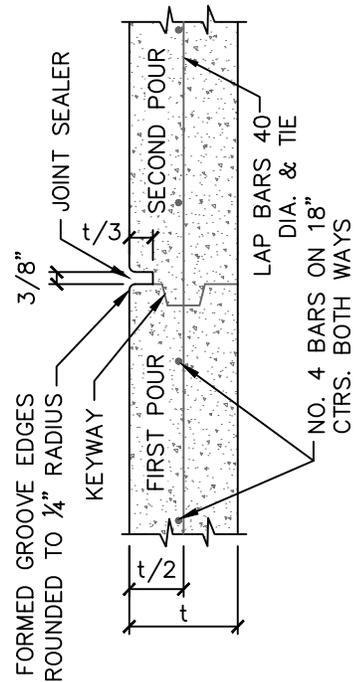
THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE: MAY 2022
	CONCRETE PAVEMENT – JOINT LAYOUT	SD-03A



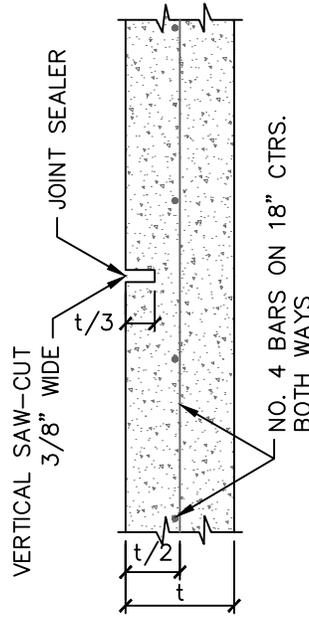
SAWED CONSTRUCTION JOINT



KEYWAY DIMENSIONS

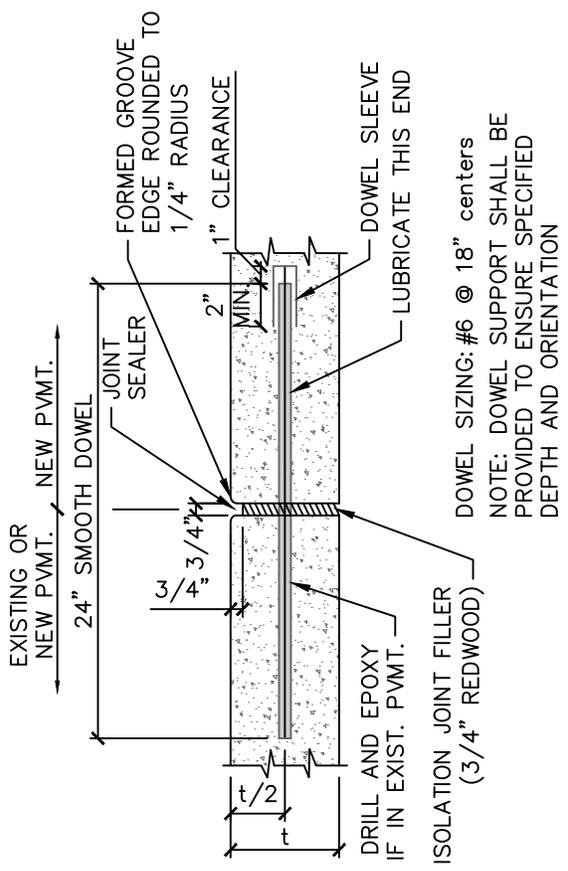


TRANSVERSE OR LONGITUDINAL CONSTRUCTION JOINT

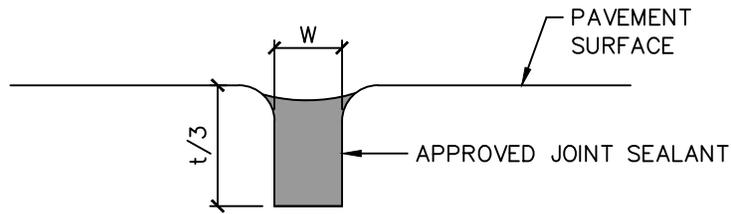


TRANSVERSE OR LONGITUDINAL SAWED CONTRACTION JOINT

ALL ISOLATION JOINTS SHALL EXTEND THROUGH THE CURB SECTION. THE SAW-CUT OF ALL TRANSVERSE CONTRACTION JOINTS SHALL EXTEND THROUGH THE CURB SECTION. AT ALL TRANSVERSE CONSTRUCTION JOINTS, THE CURB SECTION SHALL BE SAW-CUT.



DOWELED ISOLATION JOINT

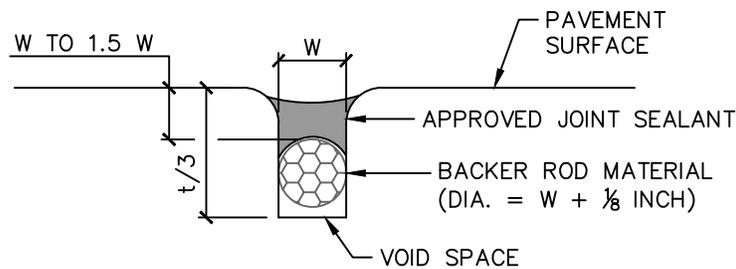


NOTE:

t = 6" (MINIMUM) FOR SECONDARY STREET SECTIONS
 8" (MINIMUM) FOR PRIMARY STREET SECTIONS
 (UNLESS OTHERWISE NOTED IN PLANS)

1. SEALANT MATERIAL SHALL BE LISTED ON THE CURRENT AND APPROVED TxDOT PREQUALIFIED JOINT SEALERS LIST.
2. SEALANT MATERIAL SHALL BE TxDOT CLASS 3.
3. CLEAN JOINT OPENING PRIOR TO SEALING.

HOT Poured JOINT SEALANT



NOTE:

SEALANT MATERIAL SHALL BE GRAY IN COLOR FOR CONCRETE APPLICATIONS AND BLACK IN COLOR FOR ASPHALT APPLICATIONS.

NOTE:

t = 6" (MINIMUM) FOR SECONDARY STREET SECTIONS
 8" (MINIMUM) FOR PRIMARY STREET SECTIONS
 (UNLESS OTHERWISE NOTED IN PLANS)

1. SEALANT MATERIAL SHALL BE LISTED ON THE CURRENT AND APPROVED TxDOT PREQUALIFIED JOINT SEALERS LIST.
2. SEALANT MATERIAL SHALL BE TxDOT CLASS 8.
3. CLEAN JOINT OPENING PRIOR TO SEALING.

SILICONE JOINT SEALANT (COLD POUR)

THE TOWN OF

Highland Park
 TEXAS

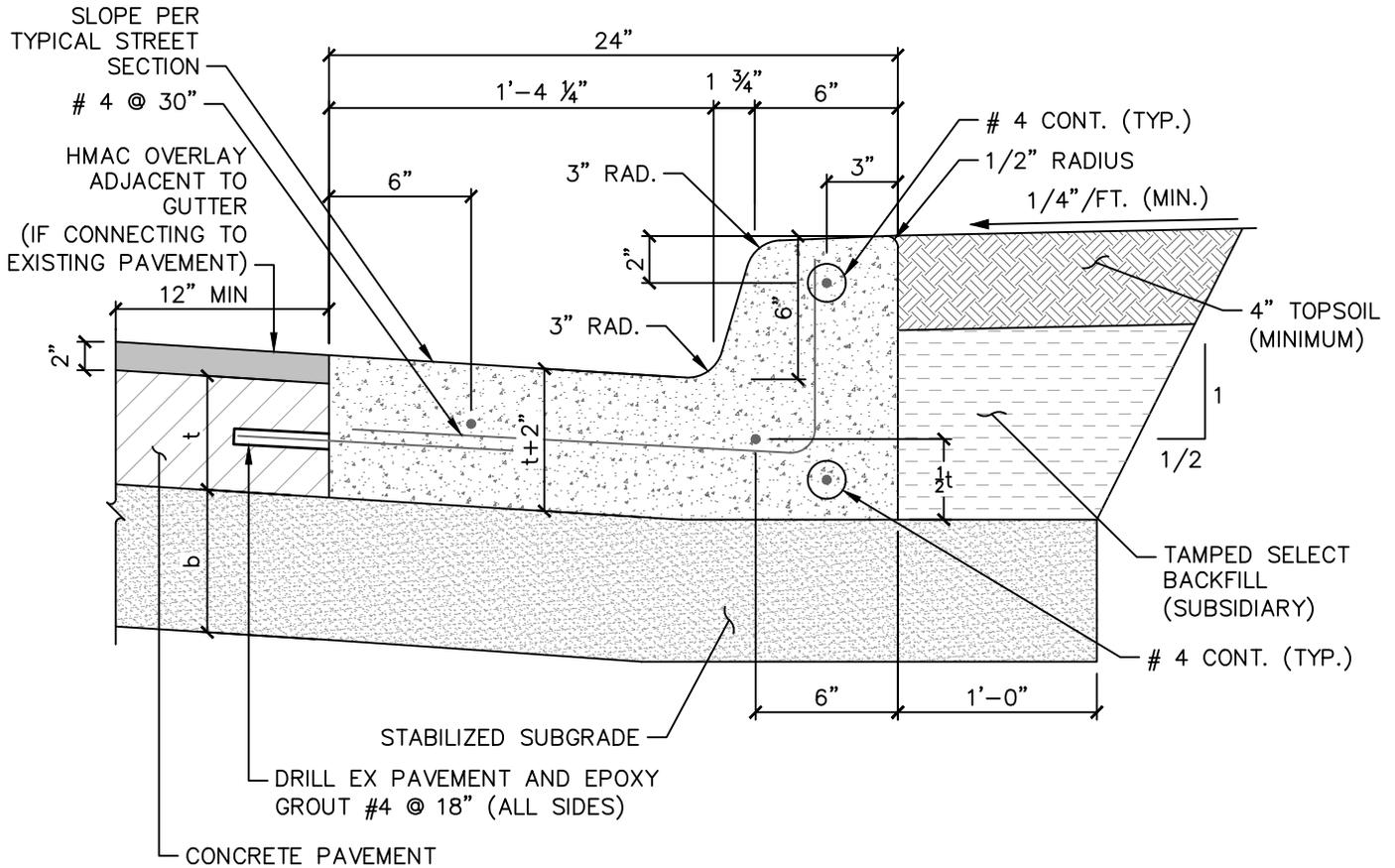
STANDARD CONSTRUCTION DETAIL

CONCRETE PAVEMENT –
 JOINT SEALANTS

DATE:

APR 2022

SD-03C



NOTES:

t = 6" (MINIMUM) FOR SECONDARY STREET SECTIONS
 8" (MINIMUM) FOR PRIMARY STREET SECTIONS
 (UNLESS OTHERWISE NOTED IN PLANS)

b = 12" FLEXIBLE BASE
 (UNLESS OTHERWISE NOTED IN PLANS)

1. 15' MAXIMUM JOINT SPACING ON CURB AND GUTTER
2. CURB AND GUTTER MAY BE SAWED IN
3. BITUMINOUS MATERIAL NOT PERMITTED FOR EXPANSION JOINTS, ONLY REDWOOD MATERIAL PERMITTED FOR EXPANSION JOINTS

THE TOWN OF

Highland Park
 TEXAS

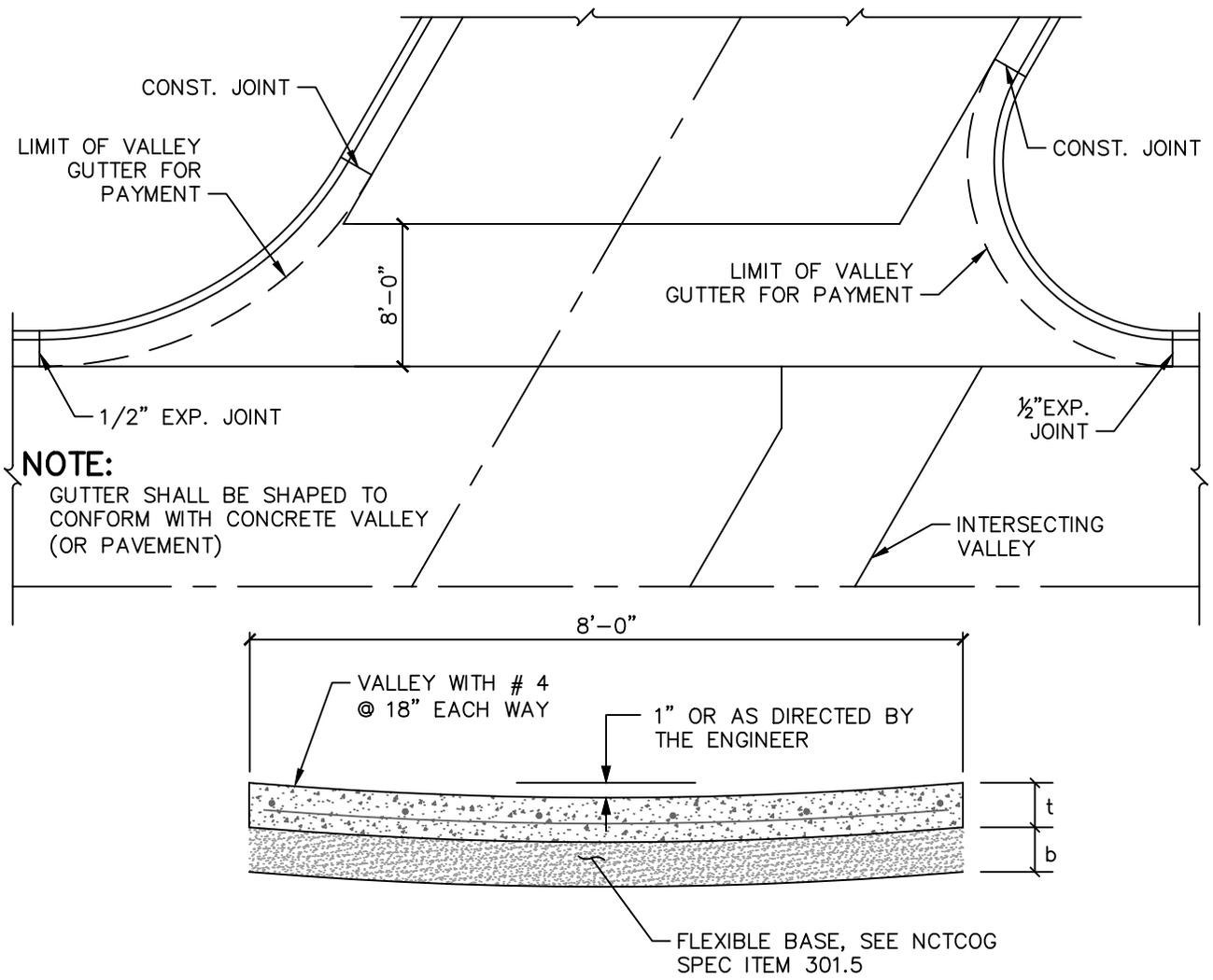
STANDARD CONSTRUCTION DETAIL

SEPARATE CONCRETE CURB (6")
 AND GUTTER (18")

DATE:

MAY 2023

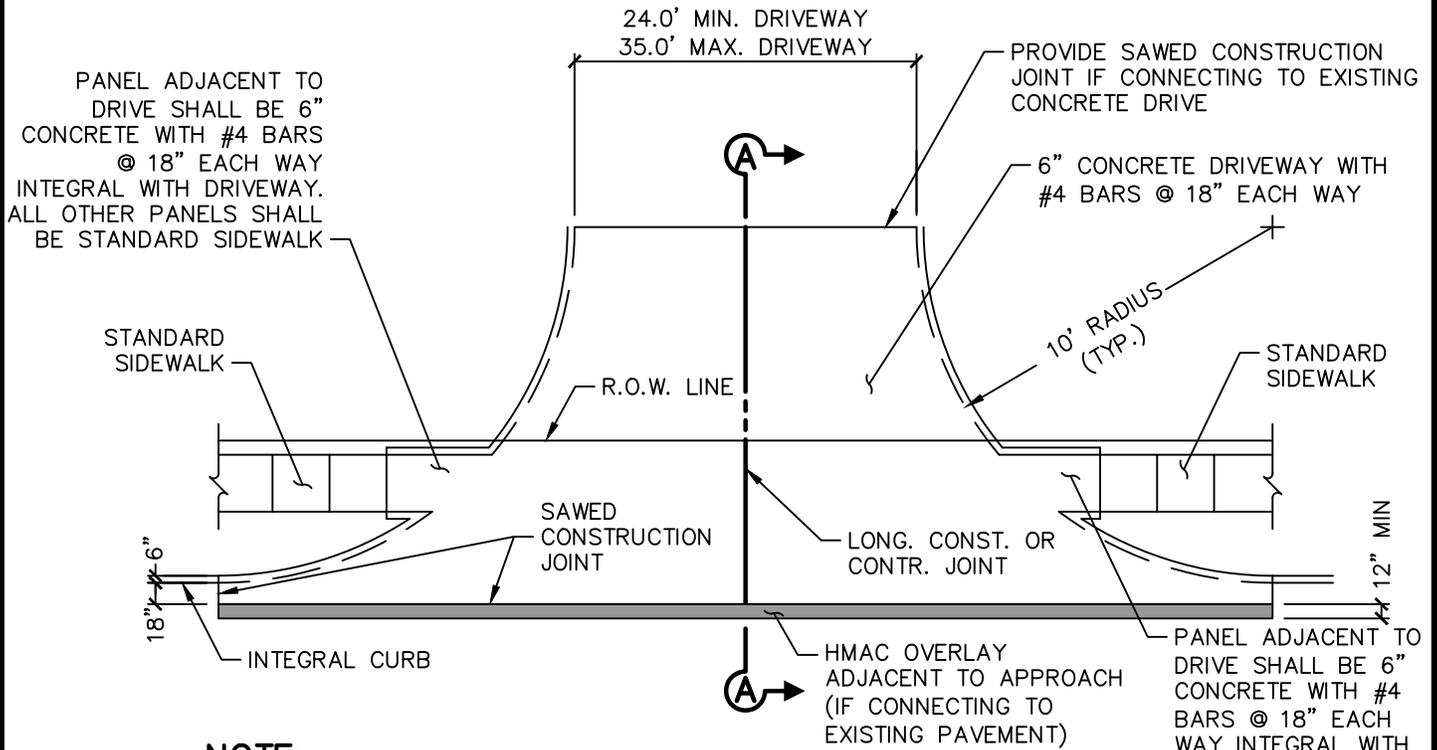
SD-04A



THE REINFORCED CONCRETE VALLEY SHALL REPLACE THE TOP OF THE PAVEMENT WITH THE REMAINING PORTION OF THE PAVEMENT TO BE CONSTRUCTED INCLUDING SUBGRADE TREATMENT, IN ACCORDANCE WITH THE TYPICAL PAVING SECTION. THE CONCRETE VALLEY WILL BE GOVERNED ACCORDING TO TOWN STANDARDS FOR CONCRETE CURB AND GUTTER.

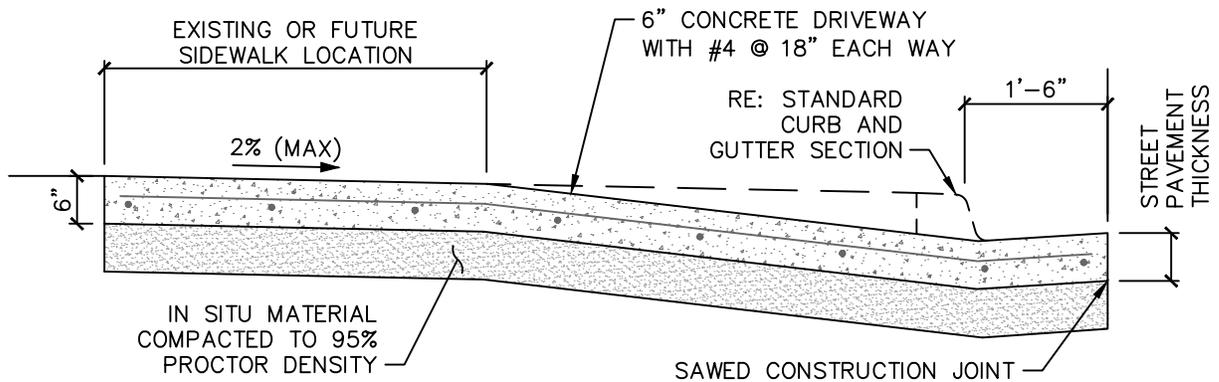
TRANSITION SECTION FOR VALLEYS CROSSING MAJOR STREETS	
DIST. FROM C/L OF DIP	CROWN
0 FT	0.000 FT
5 FT	0.041 FT
10 FT	0.083 FT
20 FT	0.208 FT
30 FT	0.333 FT
40 FT	0.458 FT
50 FT	0.500 FT

t = 6" (MINIMUM) FOR SECONDARY STREET SECTIONS
 8" (MINIMUM) FOR PRIMARY STREET SECTIONS
 (UNLESS OTHERWISE NOTED IN PLANS)
 b = 12" FLEXIBLE BASE
 (UNLESS OTHERWISE NOTED IN PLANS)



NOTE:

1. EXISTING CURB AND GUTTER SHALL BE VERTICALLY SAWCUT. HORIZONTAL SAWCUTTING OF CURB NOT ALLOWED.
2. PROVIDE BARRIER FREE RAMP IF SIDEWALK IS HIGHER THAN DRIVEWAY GRADE.

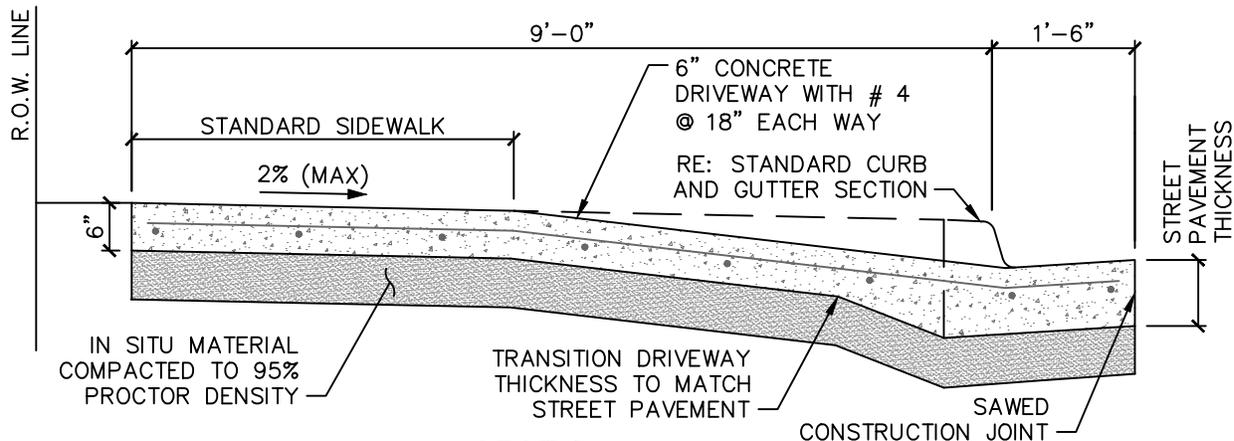
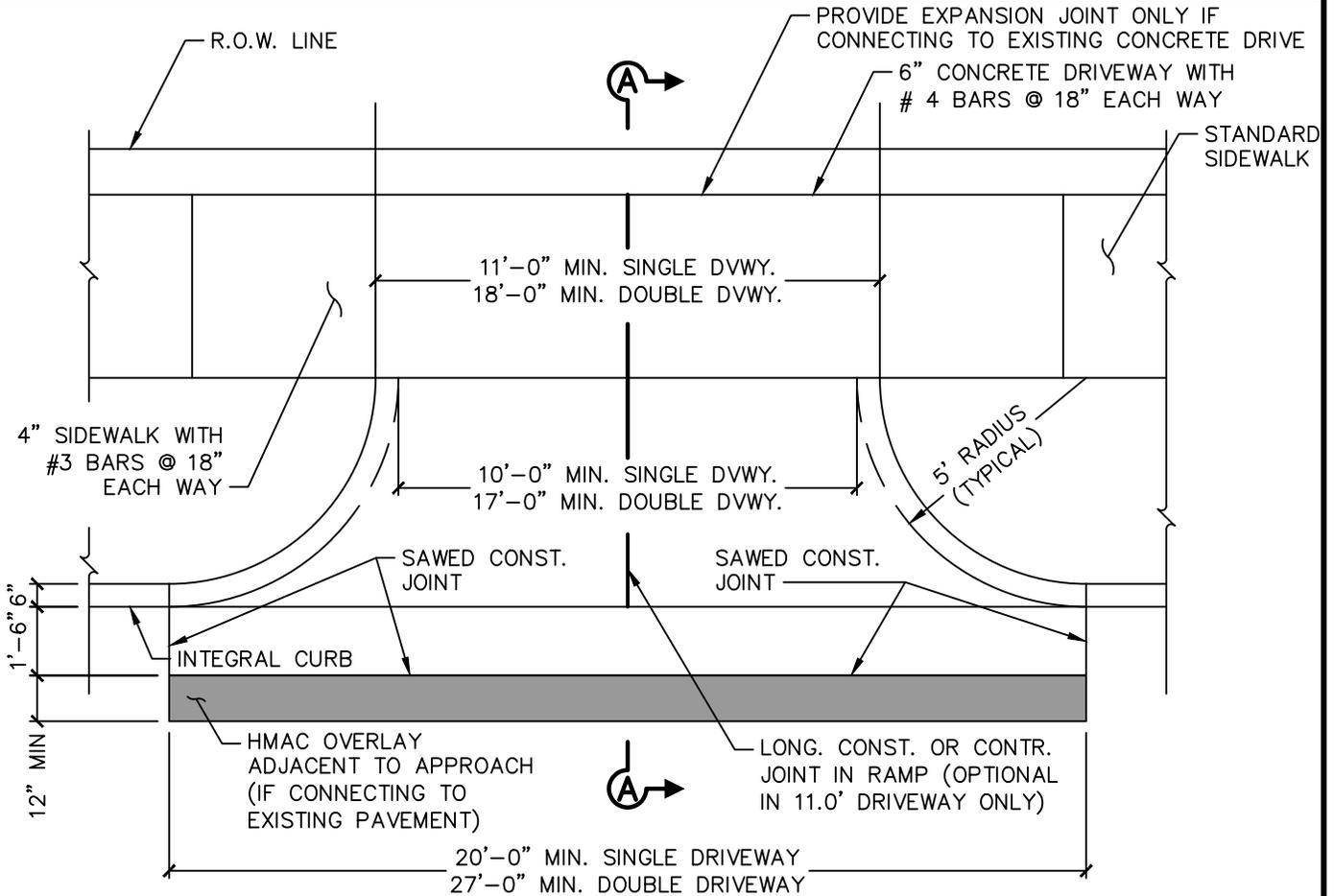


NOTE:

SIDEWALK SECTION THROUGH DRIVEWAY SHALL BE POURED SAME THICKNESS AS DRIVEWAY APPROACH (EXISTING SIDEWALK, IF ANY, SHALL BE REMOVED AND REPLACED)

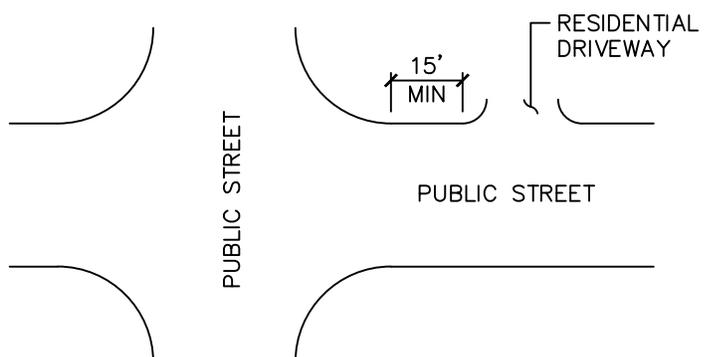
SECTION A-A

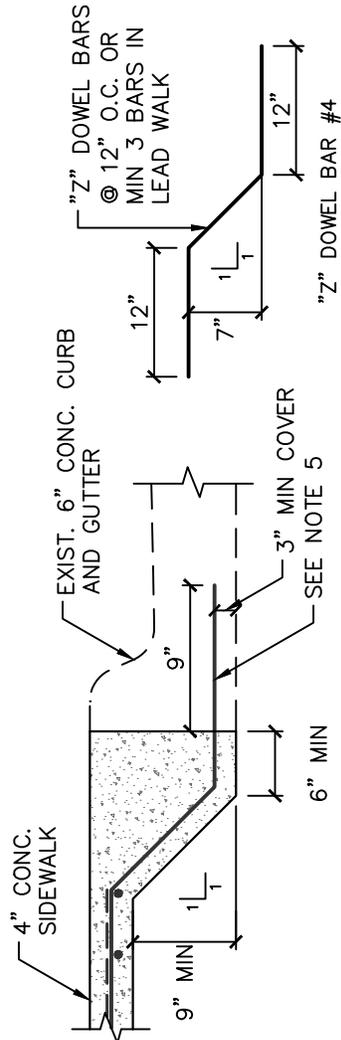
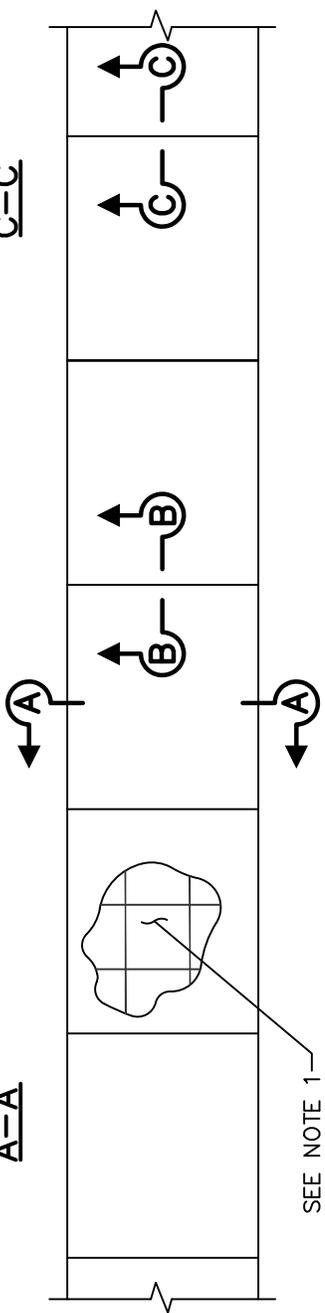
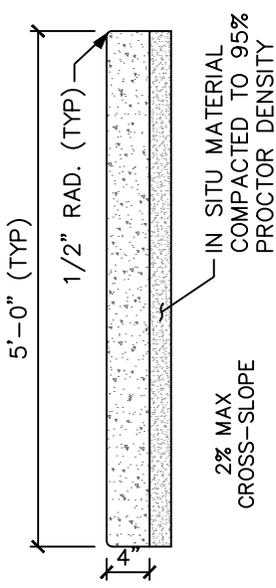
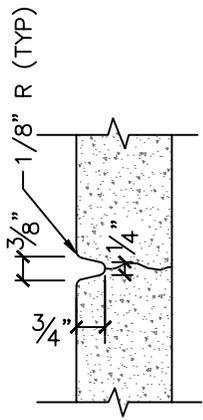
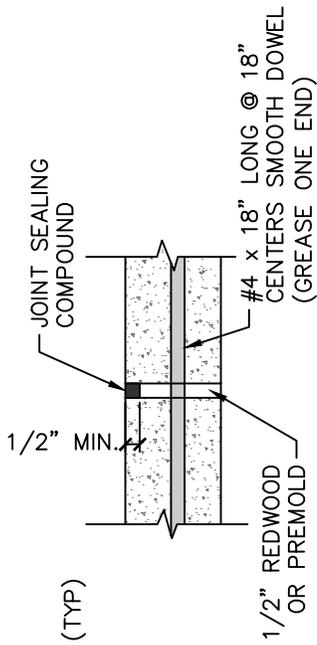
THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE: MAY 2023
	COMMERCIAL DRIVEWAY	SD-05A



SECTION A-A

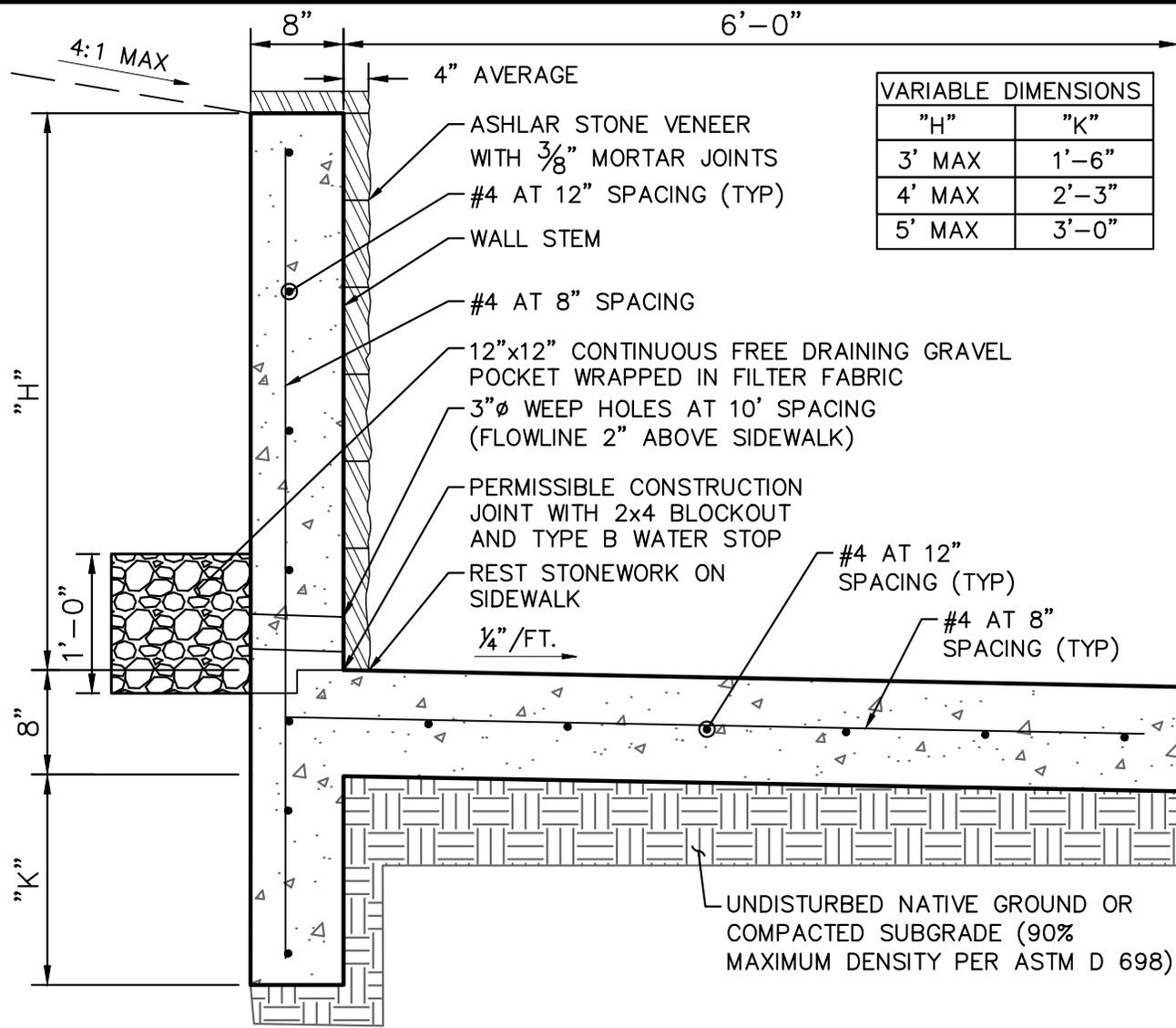
- NOTE:**
- EXISTING CURB AND GUTTER SHALL BE VERTICALLY SAWCUT. HORIZONTAL SAWCUTTING OF CURB NOT ALLOWED. REDWOOD OR FELT SHALL BE PLACED ON BOTH SIDES OF SAWED CONST. JOINT.
 - SIDEWALK SECTION THROUGH DRIVEWAY SHALL BE POURED SAME THICKNESS AS DRIVEWAY APPROACH (EXISTING SIDEWALK, IF ANY, SHALL BE REMOVED AND REPLACED).
 - THE FLARE OF A RESIDENTIAL DRIVEWAY CONNECTING TO A PUBLIC STREET SHALL NOT BE LOCATED CLOSER THAN FIFTEEN FEET (15') FROM THE CURB RETURN OF AN INTERSECTION.





- NOTE:**
1. REINFORCEMENT SHALL BE #3 BARS @ 18" EACH WAY. PANELS ADJACENT TO COMMERCIAL DRIVEWAYS AND ALLEYS SHALL BE 6" CONCRETE WITH #4 BARS @ 18" EACH WAY.
 2. PROVIDE EXPANSION JOINTS ALSO WHEN CONNECTING TO EXISTING SIDEWALKS, DRIVEWAYS, CURBS AND GUTTER.
 3. PROVIDE 5'x5' SIDEWALK PASSING AREAS PER T.A.S. REQUIREMENTS AT REASONABLE INTERVALS NOT TO EXCEED 200' ALONG SIDEWALK.
 4. EPOXY DOWELS IN PLACE. DRILLED HOLE SHALL BE 1/8" LARGER THAN DOWEL. USE MECHANICAL DRILL AND INSTALL DOWELS HORIZONTAL INTO EXISTING PAVEMENT. CLEAN AND DRY DRILL HOLES PRIOR TO APPLYING EPOXY.

**SIDEWALK
ADJACENT TO CURB**

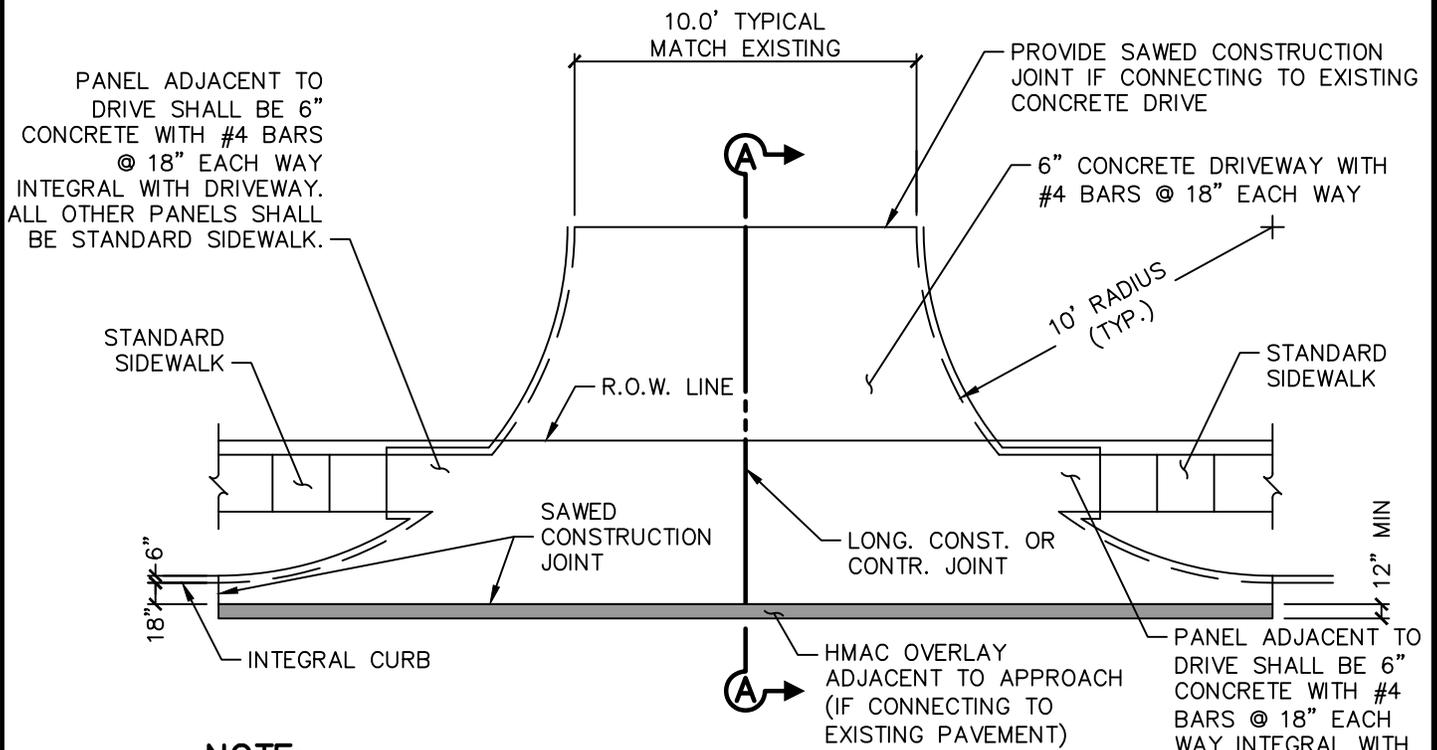


RETAINING WALL WITH INTEGRAL 6' SIDEWALK

NOT TO SCALE

NOTE:

1. FOR USE OF THIS STANDARD DETAIL, THE FOLLOWING GEOTECHNICAL SITE CONDITIONS MUST BE MET:
 - MINIMUM ALLOWABLE BEARING PRESSURE: 1,500 PSF
 - MINIMUM COEFFICIENT OF FRICTION: 0.3
 - MAXIMUM ACTIVE PRESSURE COEFFICIENT (Ka): 0.65
2. ALL MATERIALS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
4. ALL REINFORCING STEEL SHALL BE GRADE 60.
5. ALL CLEAR COVER SHALL BE 2" WHERE FORMED AND 3" WHERE CAST AGAINST EARTH.
6. IF ANY SURCHARGE LOAD IS ANTICIPATED WITHIN A HORIZONTAL DISTANCE OF HALF THE WALL HEIGHT FROM THE BACK OF WALL, AN ENGINEERING DESIGN IS REQUIRED, SEALED BY A REGISTERED ENGINEER IN THE STATE OF TEXAS. THIS INCLUDES DEAD LOAD SURCHARGES AND LIVE LOAD SURCHARGES SUCH AS TRAFFIC LOADS.
7. JOINT LOCATIONS SHALL MATCH ON SIDEWALK AND WALL. JOINT SPACING SHALL BE EVERY 30 FEET FOR CONTROL JOINTS AND EVERY 90 FEET FOR EXPANSION JOINTS. TYPE B WATERSTOP SHALL BE APPLIED AT ALL EXPANSION AND CONSTRUCTION JOINTS.
8. FOR WALL HEIGHTS LESS THAN 2'-0", STRUCTURAL DESIGN IS NOT REQUIRED.



PANEL ADJACENT TO DRIVE SHALL BE 6" CONCRETE WITH #4 BARS @ 18" EACH WAY INTEGRAL WITH DRIVEWAY. ALL OTHER PANELS SHALL BE STANDARD SIDEWALK.

STANDARD SIDEWALK

R.O.W. LINE

PROVIDE SAWED CONSTRUCTION JOINT IF CONNECTING TO EXISTING CONCRETE DRIVE

6" CONCRETE DRIVEWAY WITH #4 BARS @ 18" EACH WAY

10' RADIUS (TYP.)

STANDARD SIDEWALK

SAWED CONSTRUCTION JOINT

LONG. CONST. OR CONTR. JOINT

18" ± 6"

INTEGRAL CURB

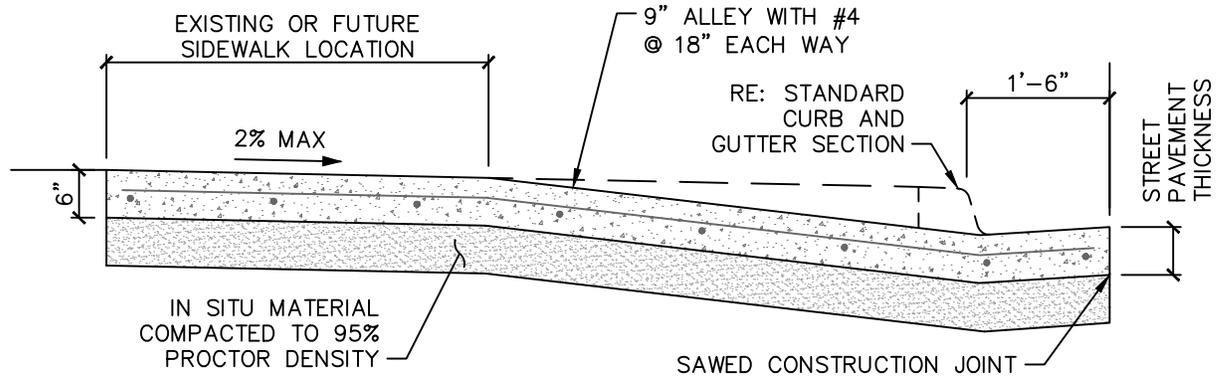
HMAC OVERLAY ADJACENT TO APPROACH (IF CONNECTING TO EXISTING PAVEMENT)

PANEL ADJACENT TO DRIVE SHALL BE 6" CONCRETE WITH #4 BARS @ 18" EACH WAY INTEGRAL WITH DRIVEWAY. ALL OTHER PANELS SHALL BE STANDARD SIDEWALK.

12" MIN

NOTE:

1. EXISTING CURB AND GUTTER SHALL BE VERTICALLY SAWCUT. HORIZONTAL SAWCUTTING OF CURB NOT ALLOWED.
2. PROVIDE BARRIER FREE RAMP IF SIDEWALK IS HIGHER THAN DRIVEWAY GRADE.

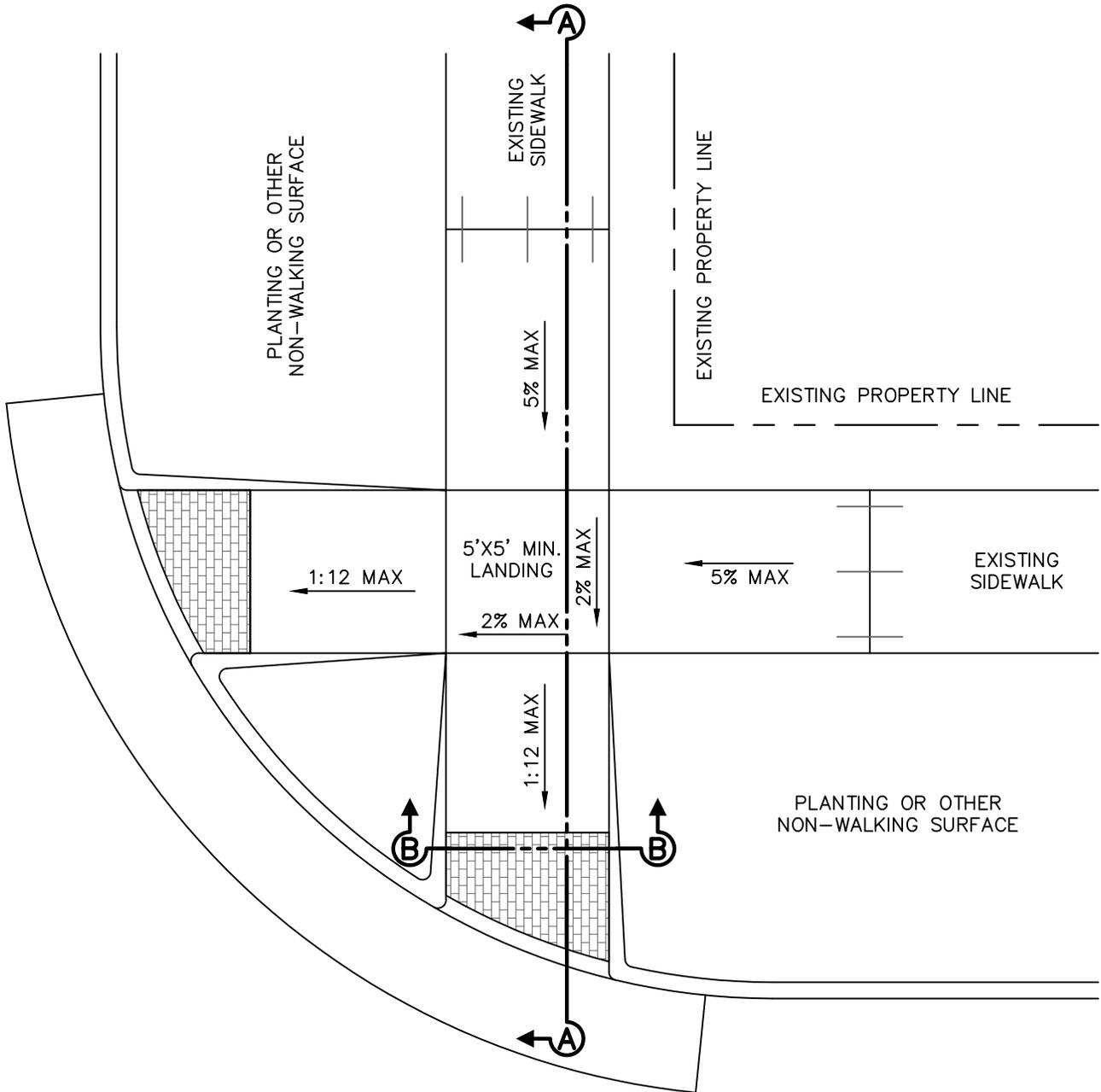


NOTE:

SIDEWALK SECTION THROUGH ALLEY SHALL BE POURED SAME THICKNESS AS ALLEY APPROACH (EXISTING SIDEWALK, IF ANY, SHALL BE REMOVED AND REPLACED)

SECTION A-A

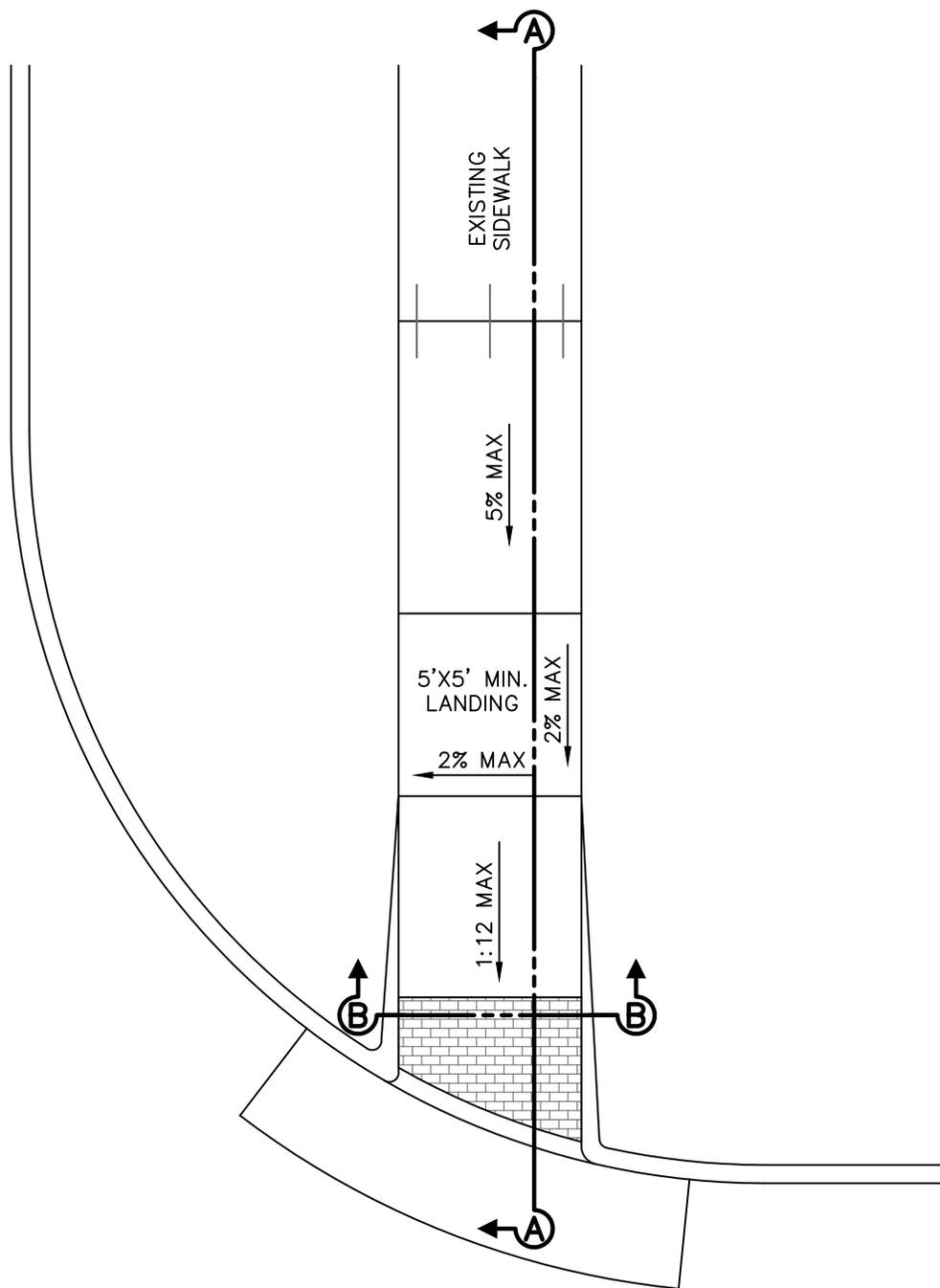
THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE: MAY 2023
	CONCRETE ALLEY	SD-07



NOTE:

SEE DETAIL SD-09A FOR SECTION A-A AND SECTION B-B.

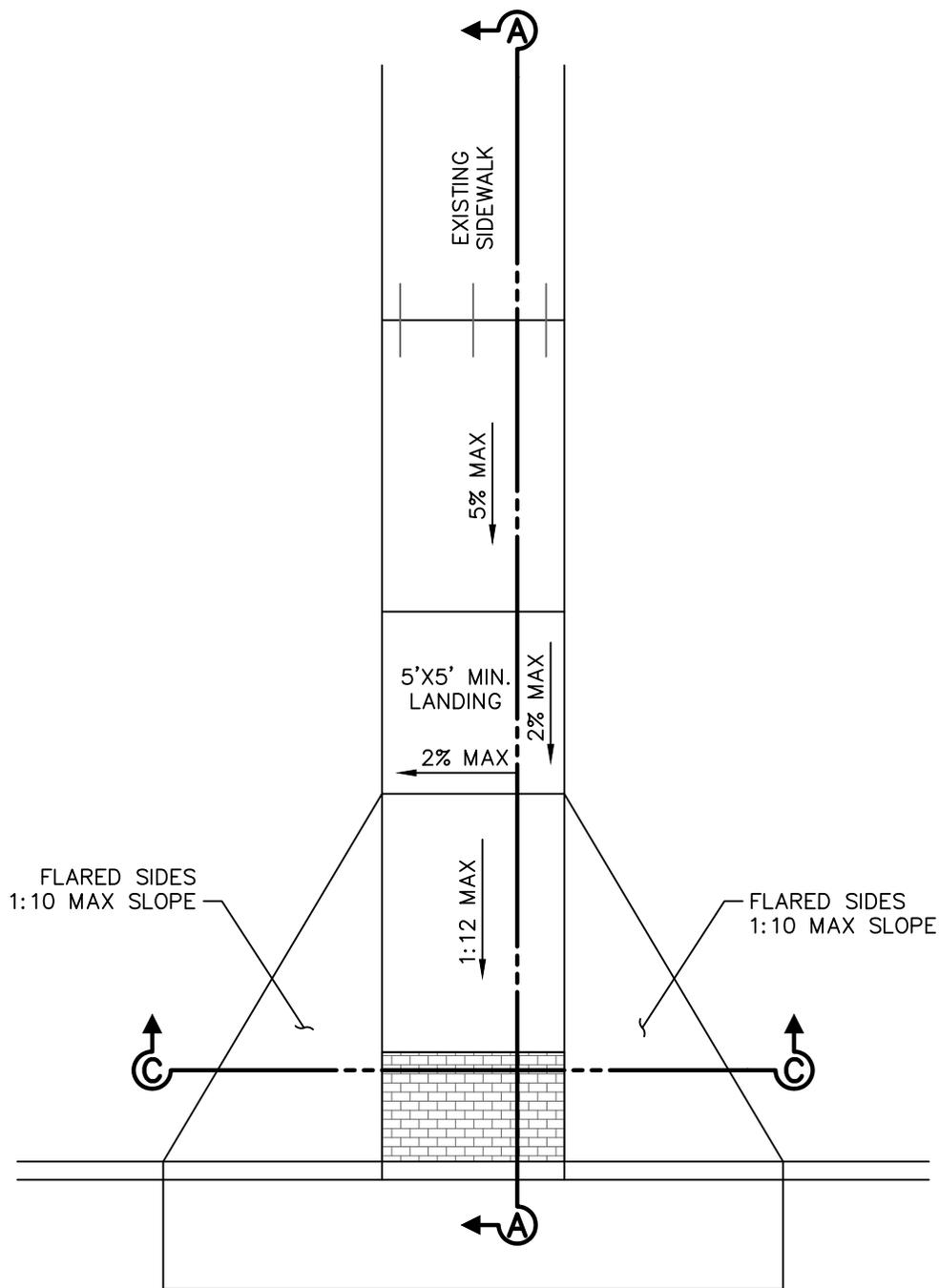
THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE:
	BARRIER FREE RAMPS TYPE A - DOUBLE CURB RAMPS	MAY 2022
		SD-08A



NOTE:

SEE DETAIL SD-09A FOR SECTION A-A AND SECTION B-B.

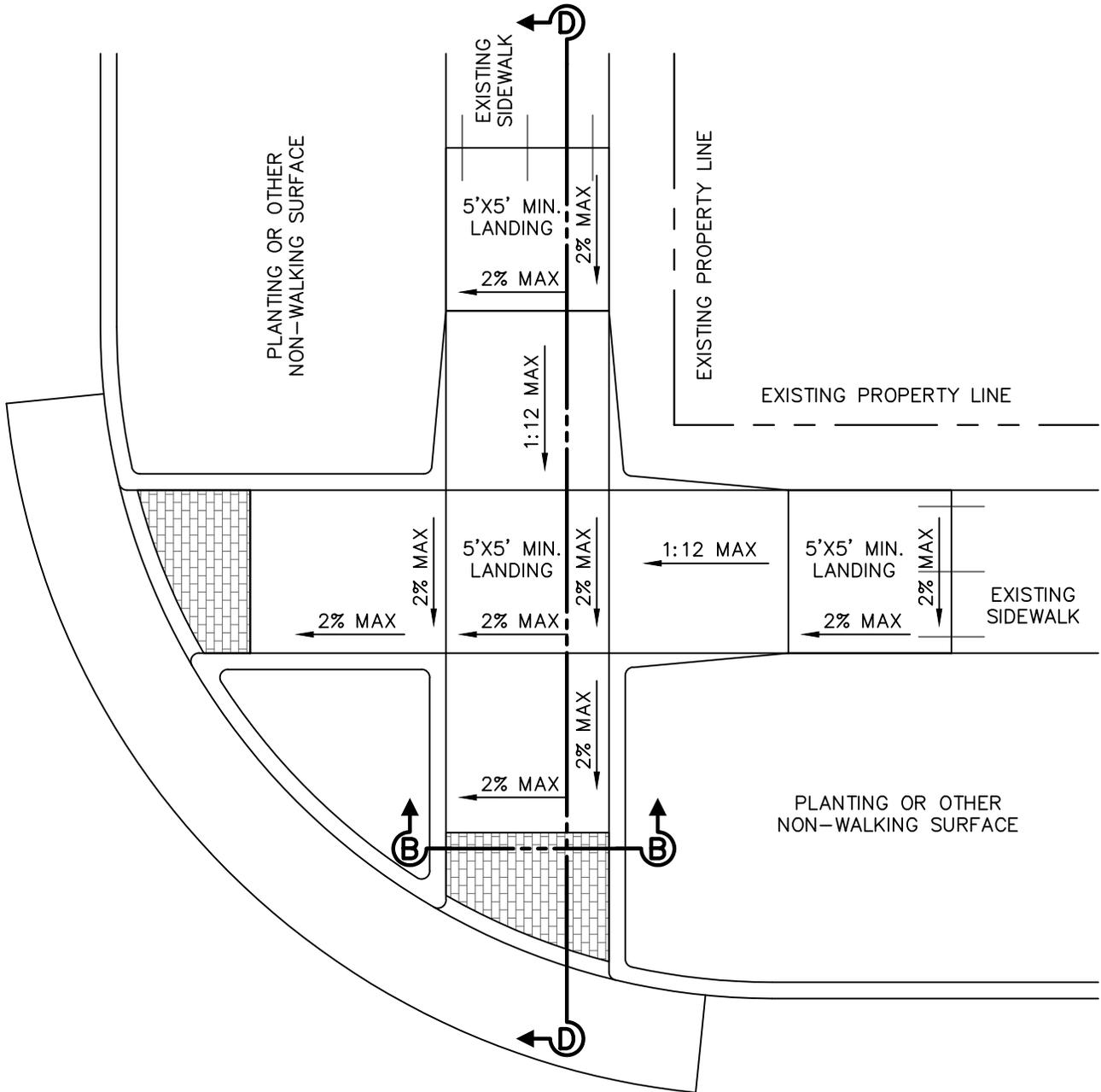
THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE:
	BARRIER FREE RAMPS TYPE B - SINGLE CURB RAMP	MAY 2022
		SD-08B



NOTE:

SEE DETAIL SD-09A FOR SECTION A-A AND SECTION C-C.

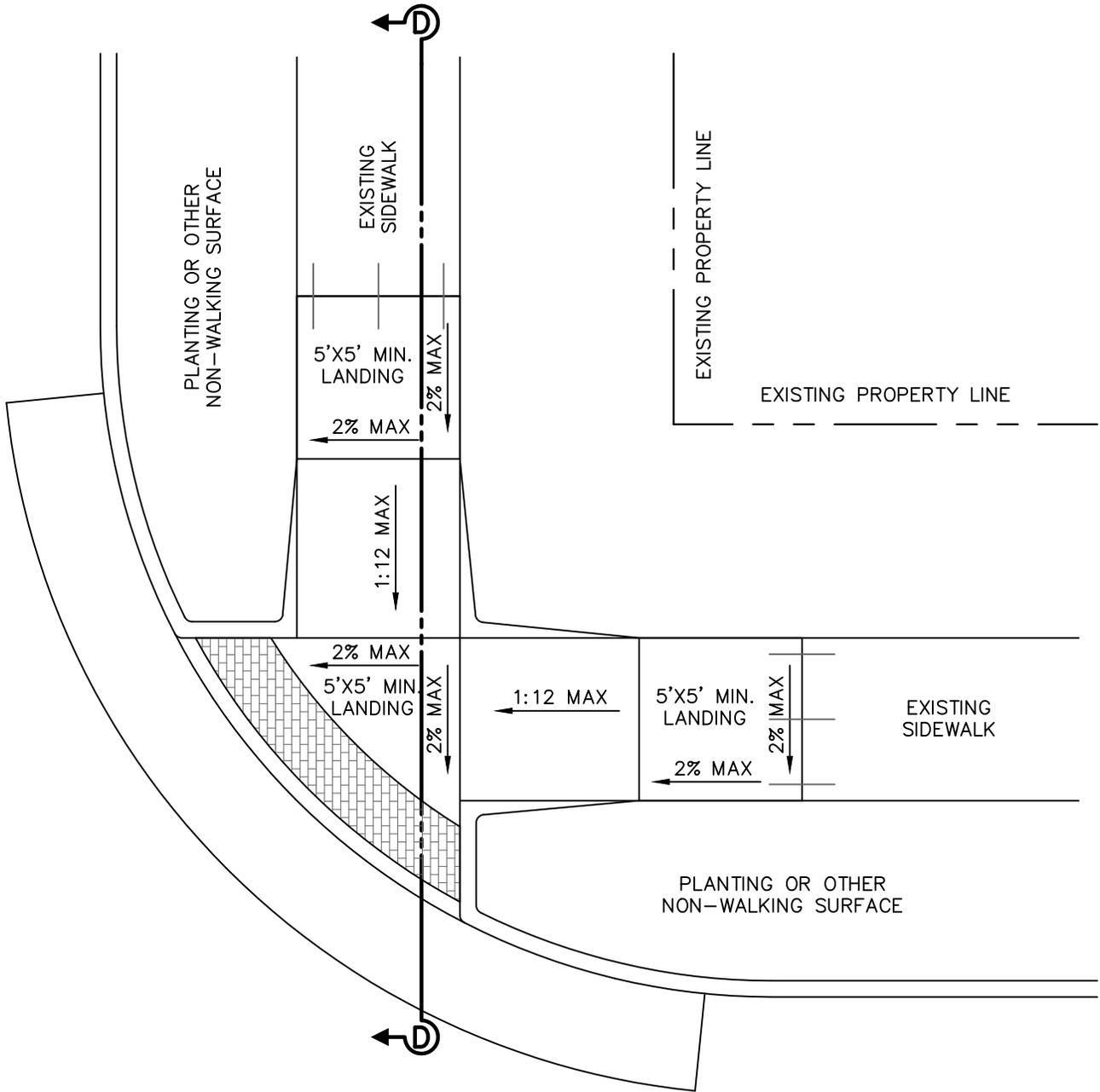
THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE: MAY 2022
	BARRIER FREE RAMPS TYPE C - SINGLE CURB RAMP	SD-08C



NOTE:

SEE DETAIL SD-09A FOR SECTION B-B AND DETAIL SD-09B FOR SECTION D-D.

THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE: MAY 2022
	BARRIER FREE RAMPS TYPE D - DOUBLE CURB RAMPS	SD-08D



NOTE:

SEE DETAIL SD-9B FOR SECTION D-D.

THE TOWN OF

Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL

BARRIER FREE RAMPS
TYPE E - DOUBLE CURB RAMPS

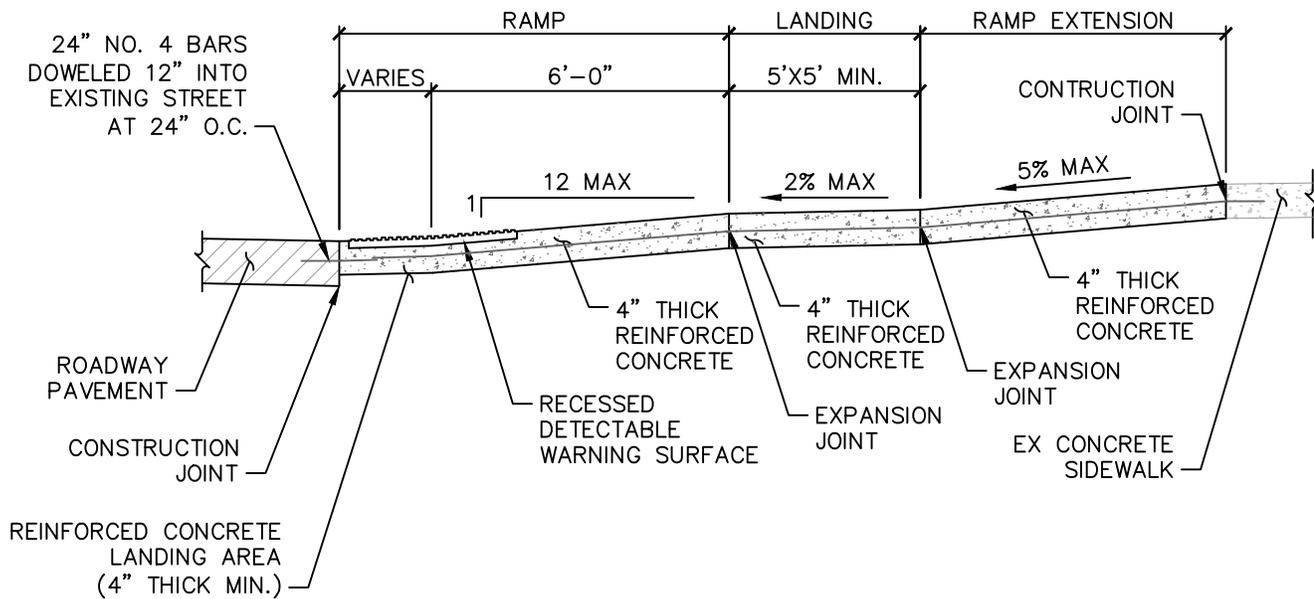
DATE:

MAY 2022

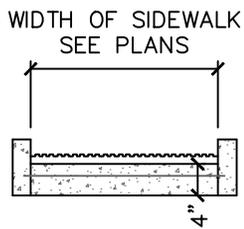
SD-08E

GENERAL NOTES:

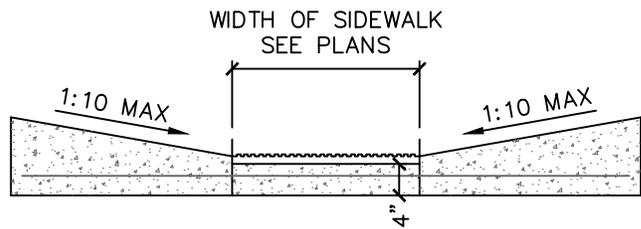
1. ALL RAMPS SHALL BE POURED MONOLITHIC WITH THE CURB AND GUTTER.
2. RAMP EXTENSION TO EXTEND TO MATCH THE PROPOSED SIDEWALK GRADE. RAMP EXTENSION MAY BE OMITTED IF LANDING MATCHES SIDEWALK GRADES.
3. NO RAMP IS REQUIRED IF DETECTABLE WARNING SURFACE IS INSTALLED APPROPRIATELY IN LANDING.
4. POSITIVE DRAINAGE SHALL BE PROVIDED.
5. ALL RAMPS REQUIRE LANDINGS WITH ADEQUATE CLEARSPACE.
6. TRAVELED WAY SLOPE AND CROSS SLOPE SHALL NOT EXCEED 2%.
7. RAMP SHALL BE SLIP RESISTANT.
8. ALL PEDESTRIAN FACILITIES SHALL FOLLOW THE LATEST APPROVED AMERICAN WITH DISABILITY STANDARDS PROVIDED BY DOJ/DOT/US ACCESS BOARD AND TEXAS ACCESSIBILITY STANDARDS BY TDLR.
9. DETECTABLE WARNING SURFACE SHALL BE A PREFABRICATED CAST-IN-PLACE RED DETECTABLE WARNING PANEL. COLOR OF SURFACE MUST CONTRAST WITH SURROUNDING MATERIAL.
10. NO DETECTABLE WARNING PAVERS SHALL BE ALLOWED.
11. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF MATERIAL TO TOWN FOR APPROVAL PRIOR TO PURCHASING AND INSTALLATION.
12. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24 INCHES IN WIDTH IN THE DIRECTION OF PEDESTRIAN TRAVEL, AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.



SECTION A-A



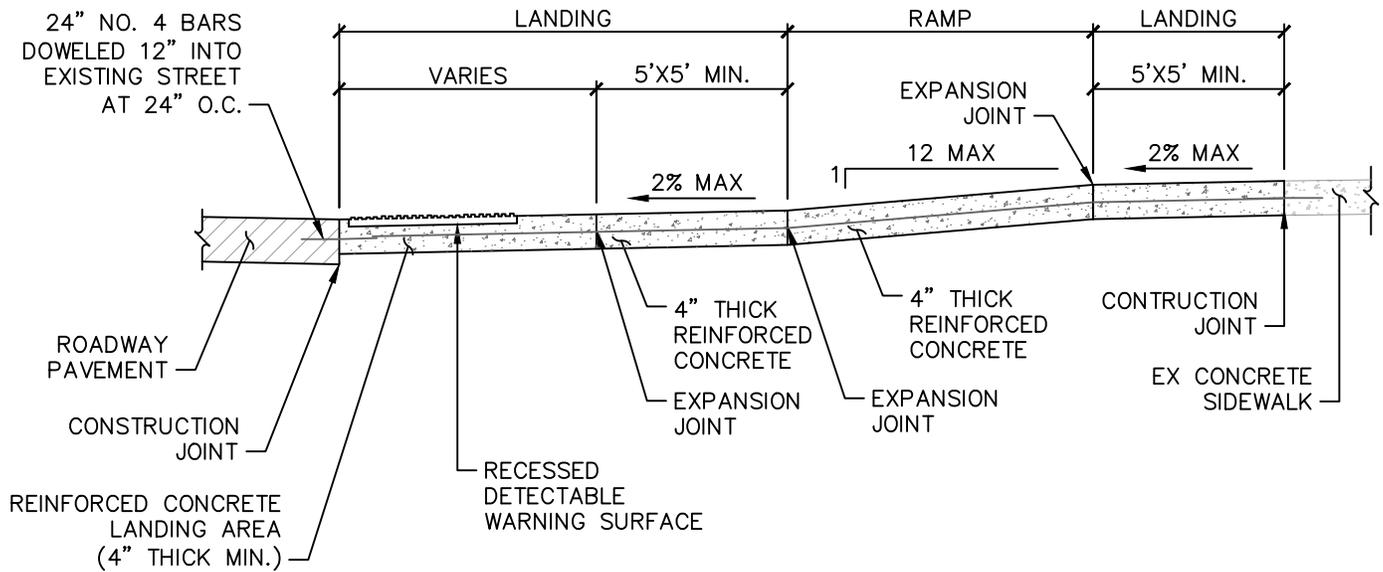
SECTION B-B



SECTION C-C

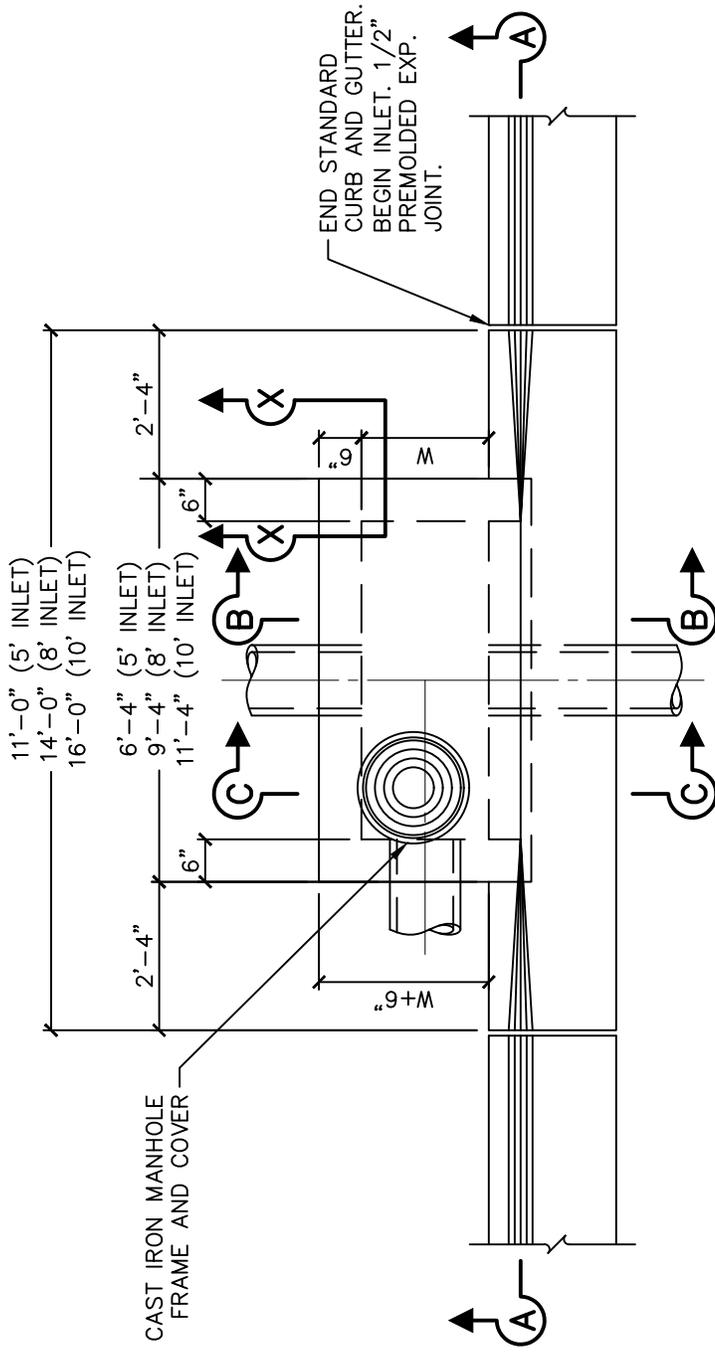
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1. ALL RAMPS SHALL BE POURED MONOLITHIC WITH THE CURB AND GUTTER.
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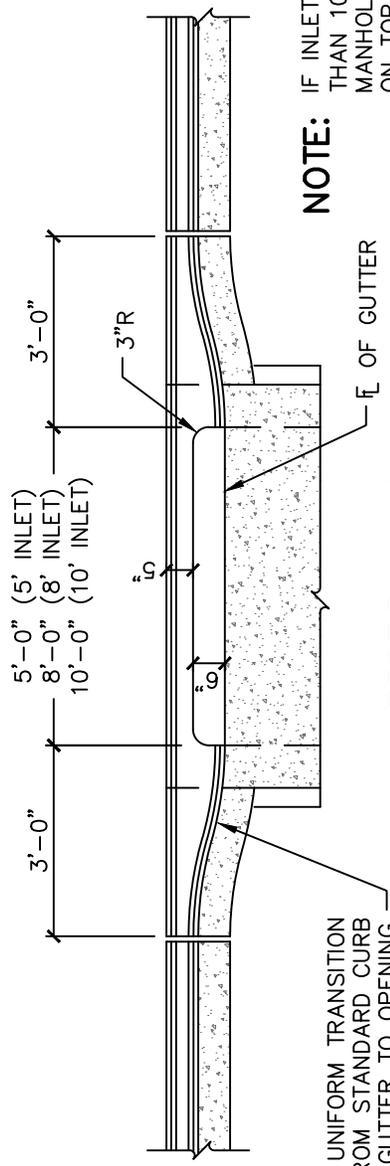
SECTION D-D

THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE: MAY 2022
	BARRIER FREE RAMPS NOTE & TYPICAL SECTIONS (2 OF 2)	SD-09B



PLAN VIEW

NOTE: CONCRETE FOR CURB INLETS SHALL BE 4200 PSI



SECTION A-A

NOTE: IF INLET LENGTH IS GREATER THAN 10'-0", PLACE TWO (2) MANHOLE FRAMES AND COVERS ON TOP OF INLET BOX.

UNIFORM TRANSITION FROM STANDARD CURB & GUTTER TO OPENING.

THE TOWN OF

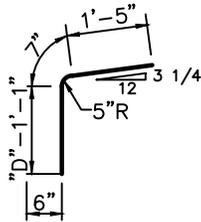
Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL

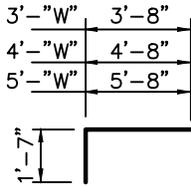
STORM DRAIN INLET
SECTION A-A

DATE:
MAY 2025

SD-10A



#4 BARS A
NOT TO SCALE



#4 BARS B
NOT TO SCALE



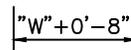
#4 BARS C & D
NOT TO SCALE



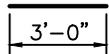
#4 BARS E
NOT TO SCALE



#4 BARS F
NOT TO SCALE



#4 BARS G
NOT TO SCALE



#4 BARS J
NOT TO SCALE

THE TOWN OF

Highland Park
TEXAS

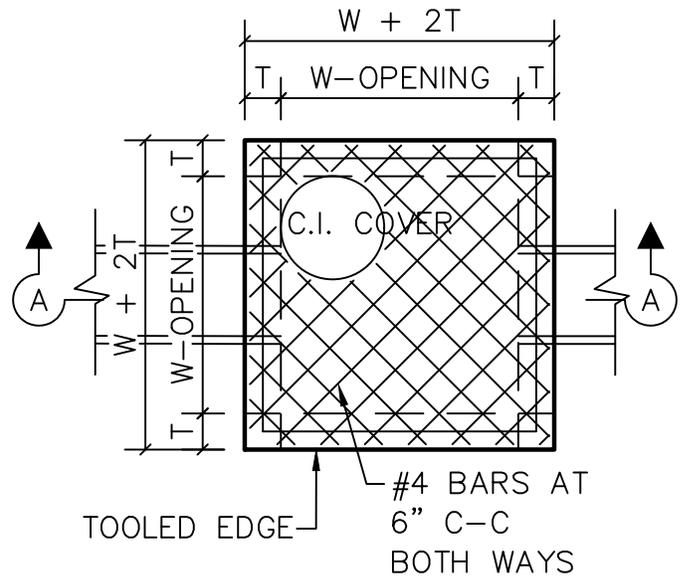
STANDARD CONSTRUCTION DETAIL

STORM DRAIN INLET
REBAR

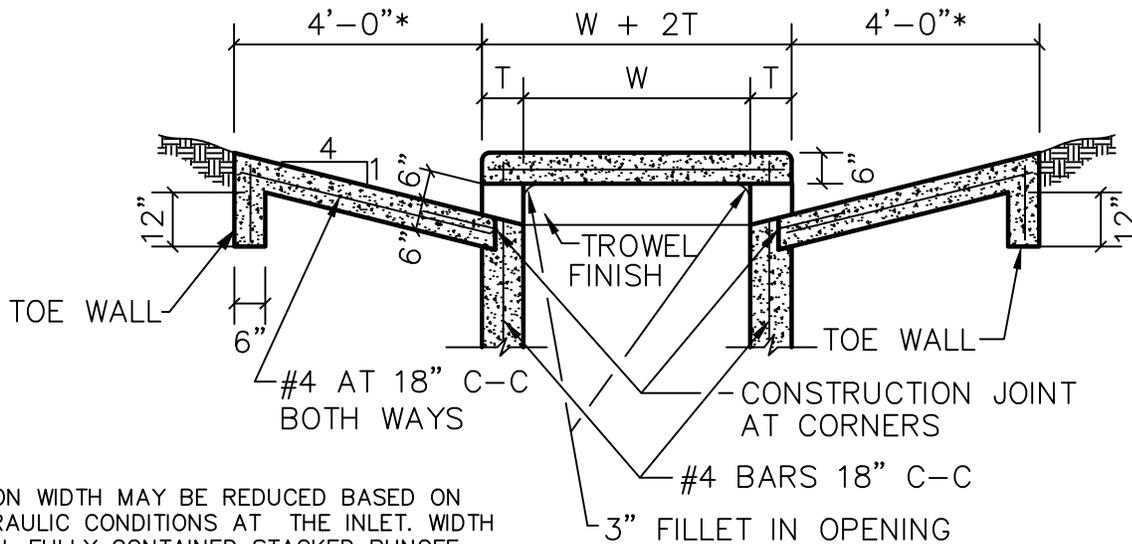
DATE:
FEB 2025
SD-10C

INLET SIZE	T	W
2' SQUARE	7"	2'-0"
4' SQUARE	7"	4'-0"
5' SQUARE	8"	5'-0"
6' SQUARE	9"	6'-0"
7' SQUARE	9"	7'-0"
8' SQUARE	9"	8'-0"

FOR LOWER PORTION OF 2' SQUARE DROP INLET USE REINF. STEEL DETAILS OF 4' SQUARE MANHOLE AND ELIMINATE INLET RING AND COVER.



PLAN VIEW
NOT TO SCALE



SECTION A-A
NOT TO SCALE

* APRON WIDTH MAY BE REDUCED BASED ON HYDRAULIC CONDITIONS AT THE INLET. WIDTH SHALL FULLY CONTAINED STACKED RUNOFF.

NOTE: TOE WALLS TO BE 18" IN DEPTH AND 6" IN WIDTH WITH REINFORCING BARS.

NOTE:

1. MATERIAL AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF STANDARD SPECIFICATIONS FOR STANDARD CONCRETE MANHOLES.
2. LAYERS OF REINFORCED STEEL NEAREST THE INTERIOR AND EXTERIOR SURFACES SHALL HAVE A COVER OF 2" TO THE CENTER OF BARS, UNLESS OTHERWISE NOTED.
3. EXCAVATION FOR DROP INLET TO BE INCLUDED IN THE PRICE BID FOR DROP INLET.
4. FOR DETAILS OF REINFORCING TO LOWER PORTIONS OF INLET SEE APPROPRIATE SQUARE STORM DRAIN MANHOLE DETAILS.
5. DEPTH OF DROP INLET FROM FINISHED GRADE TO FLOW LINE OF INLET IS VARIABLE. APPROXIMATE DEPTH WILL BE SHOWN ON PLANS AT LOCATION OF INLET.
6. ALL STANDARD DROP INLETS SHALL HAVE ONE OPENING ON EACH SIDE UNLESS SHOWN ON PLANS.
7. DECK MAY BE REINFORCED SAME AS STANDARD SQUARE STORM DRAIN MANHOLE.
8. CAST IRON FRAME AND COVER WITH CHAIN. VULCAN V-1874 OR BASS AND HAYES PATTERN NO. 103, OR APPROVED EQUAL.

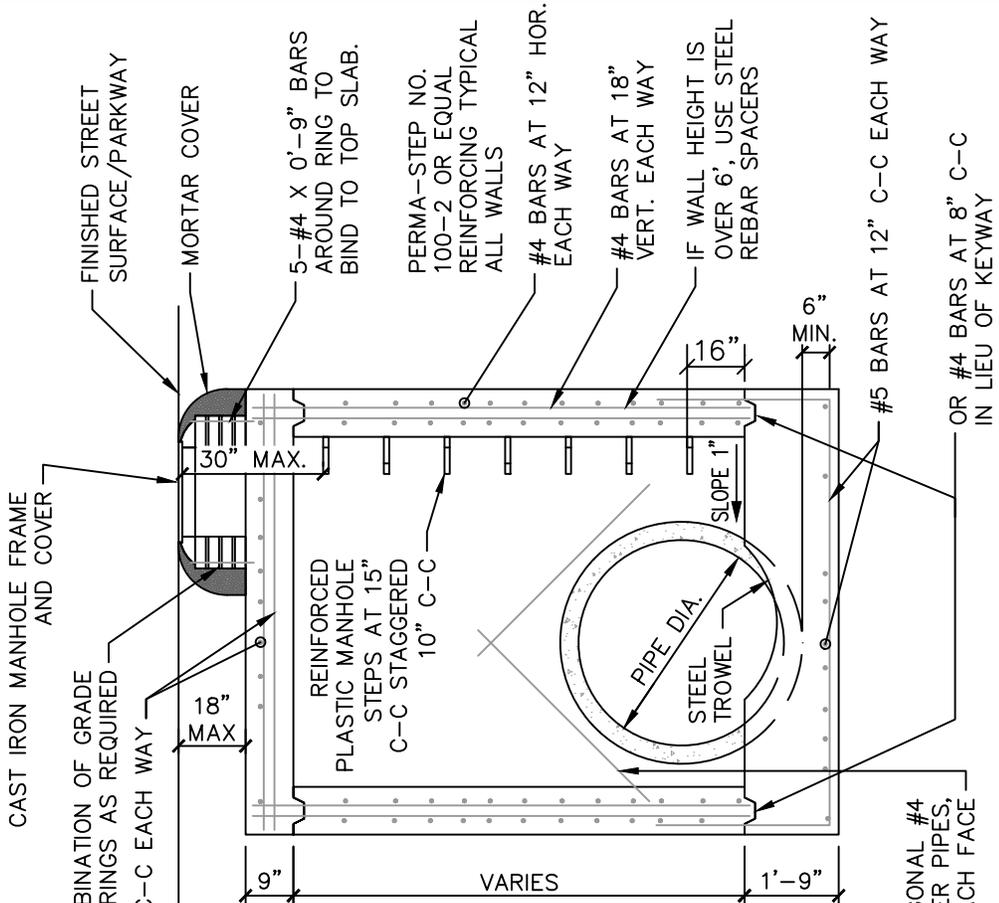
THE TOWN OF

Highland Park
TEXAS

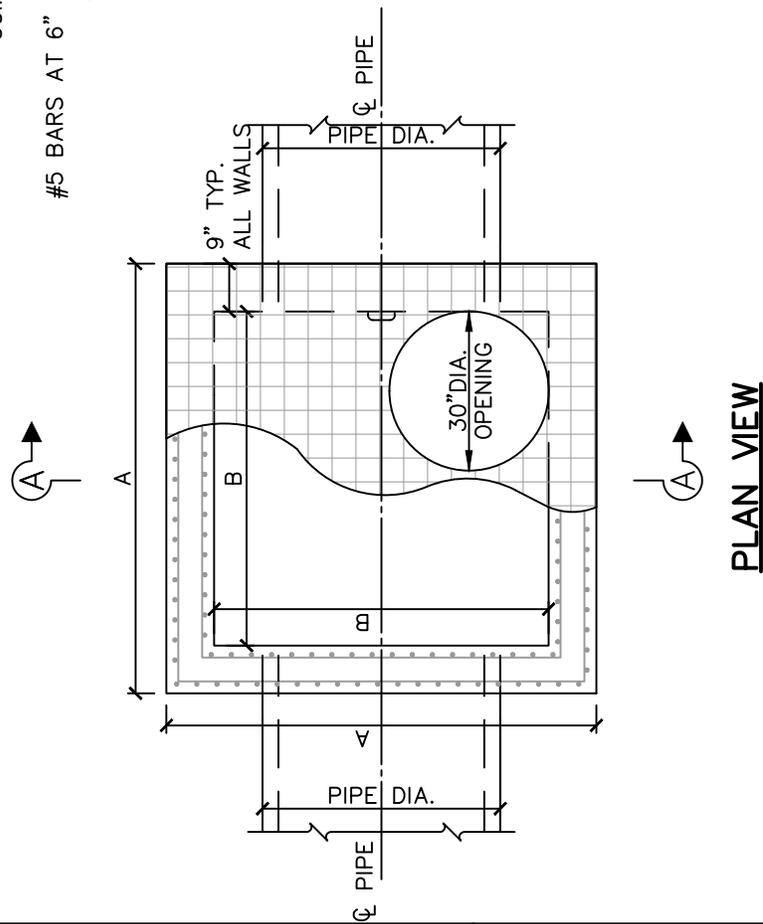
STANDARD CONSTRUCTION DETAIL

STORM DRAIN WYE INLET

DATE:
FEB 2025
SD-11



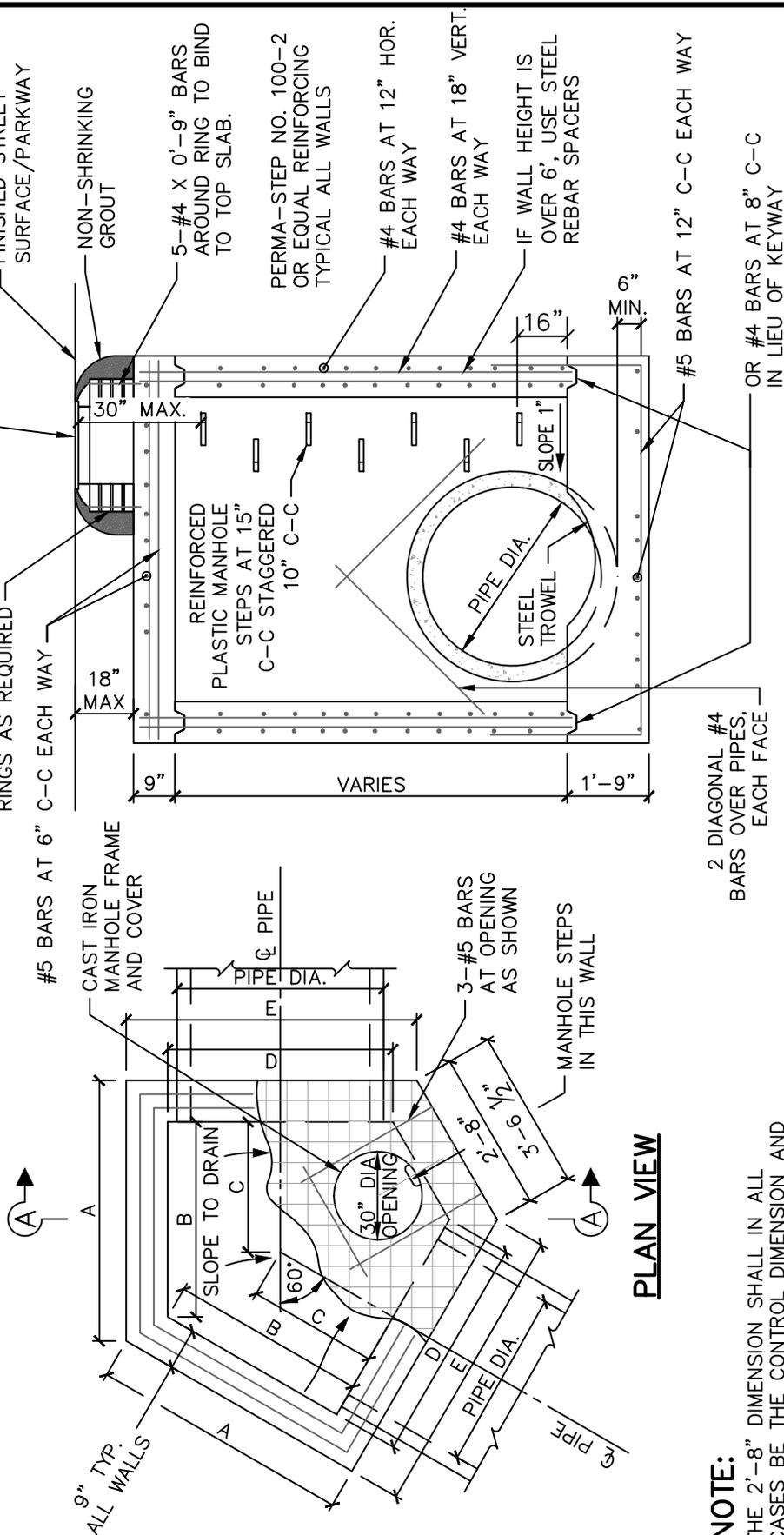
SECTION A-A



PLAN VIEW

MANHOLE TYPE

	1	2	3	4	5	6	7
PIPE DIA.	18" TO 24"	27" TO 33"	36" TO 42"	48" TO 54"	60" TO 66"	72" TO 78"	84" TO 96"
A	4' 5-1/2"	4' 11-5/8"	5' 5-5/8"	6' 1-3/4"	6' 9-7/8"	7' 6"	8' 6-1/8"
B	3' 3-5/16"	3' 9-3/8"	4' 3-7/16"	4' 11-1/2"	5' 7-5/8"	6' 3-3/4"	7' 3-7/8"



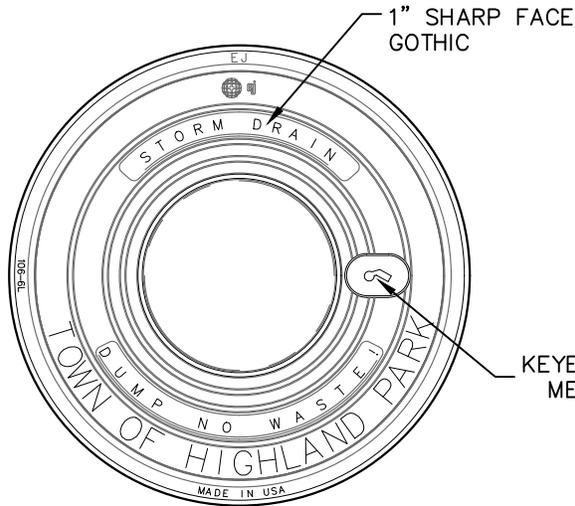
NOTE:

THE 2'-8" DIMENSION SHALL IN ALL CASES BE THE CONTROL DIMENSION AND ANY DEVIATION IN OTHER DIMENSIONS EN-COUNTERED IN THE FIELD SHALL BE ADJUSTED BY THE CITY ENGINEER.

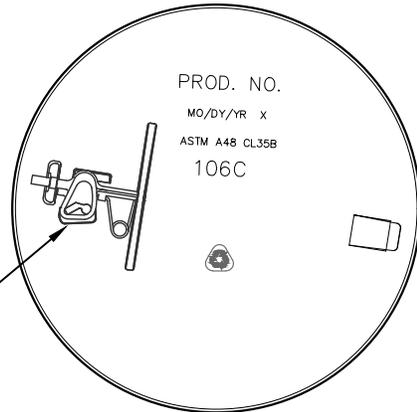
SECTION A-A

MANHOLE TYPE

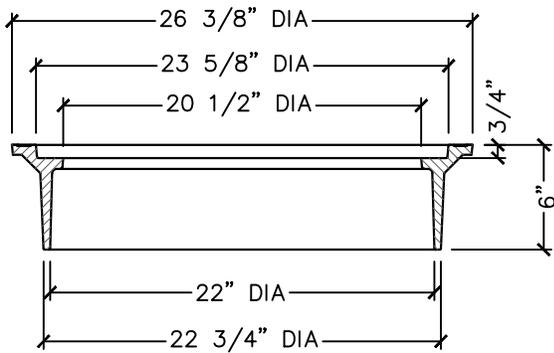
	8	9	10	11	12	13	14
PIPE DIA.	18" TO 24"	27" TO 33"	36" TO 42"	48" TO 54"	60" TO 66"	72" TO 78"	84" TO 96"
A	4' 5-1/2"	4' 11-5/8"	5' 5-5/8"	6' 1-3/4"	6' 9-7/8"	7' 6"	8' 6-1/8"
B	3' 3-5/16"	3' 9-3/8"	4' 3-7/16"	4' 11-1/2"	5' 7-5/8"	6' 3-3/4"	7' 3-7/8"
C	2' 5"	2' 8"	2' 11"	3' 3"	3' 7"	3' 11"	4' 5-1/8"
D	3' 0"	3' 10-1/2"	4' 9"	5' 11"	7' 1"	8' 3"	10' 0"
E	4' 2"	5' 1"	5' 11-1/4"	7' 1-1/4"	8' 3-1/4"	9' 5-1/4"	11' 2-1/4"



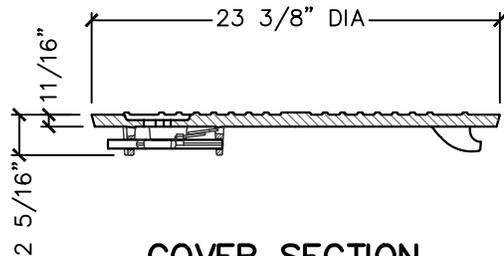
ASSEMBLY



BOTTOM VIEW OF COVER



FRAME SECTION



COVER SECTION

MANUFACTURER	REFERENCE NUMBER	APPROX. WEIGHT
EAST JORDAN	106-6C	175 lb
BASS & HAYS	226	175 lb
*OR APPROVED EQUAL		

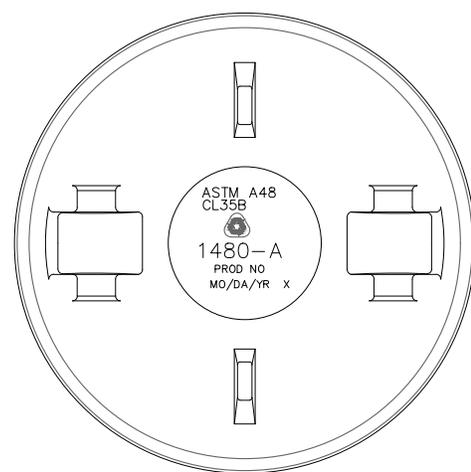
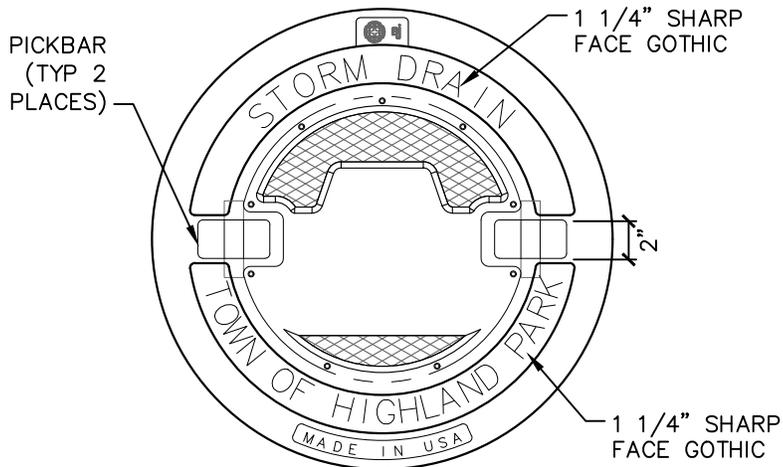
NON-TRAFFIC RATED LOCKING

NOT TO SCALE

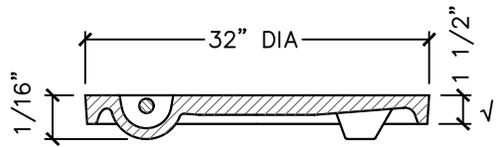
NOTE:

1. MANHOLE FRAME AND COVER MAY BE CAST IRON OR COMPOSITE AS SPECIFIED IN THE PLANS. CAST IRON IS SHOWN ABOVE. FOR COMPOSITE FRAME AND COVER REFERENCE WS-19.

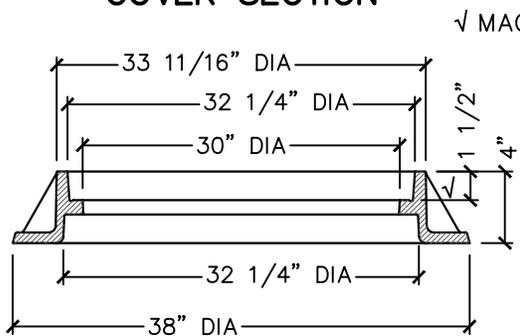
<p>THE TOWN OF</p>	<p>STANDARD CONSTRUCTION DETAIL</p>	<p>DATE:</p>
	<p>STORM DRAIN INLET MANHOLE COVER AND FRAME</p>	<p>FEB 2025</p>
	<p>COVER AND FRAME</p>	<p>SD-13A</p>



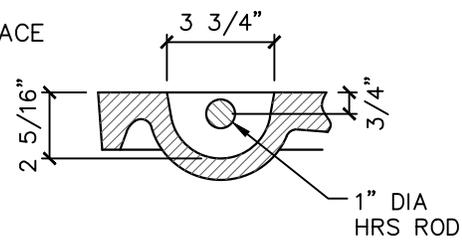
BOTTOM VIEW OF COVER



COVER SECTION



RING SECTION



PICKBAR DETAILS

MANUFACTURER	REFERENCE NUMBER	APPROX. WEIGHT
EAST JORDAN	1480-A	400 lb
BASS & HAYS	VRM-30	400 lb
*OR APPROVED EQUAL		

TRAFFIC RATED
NOT TO SCALE

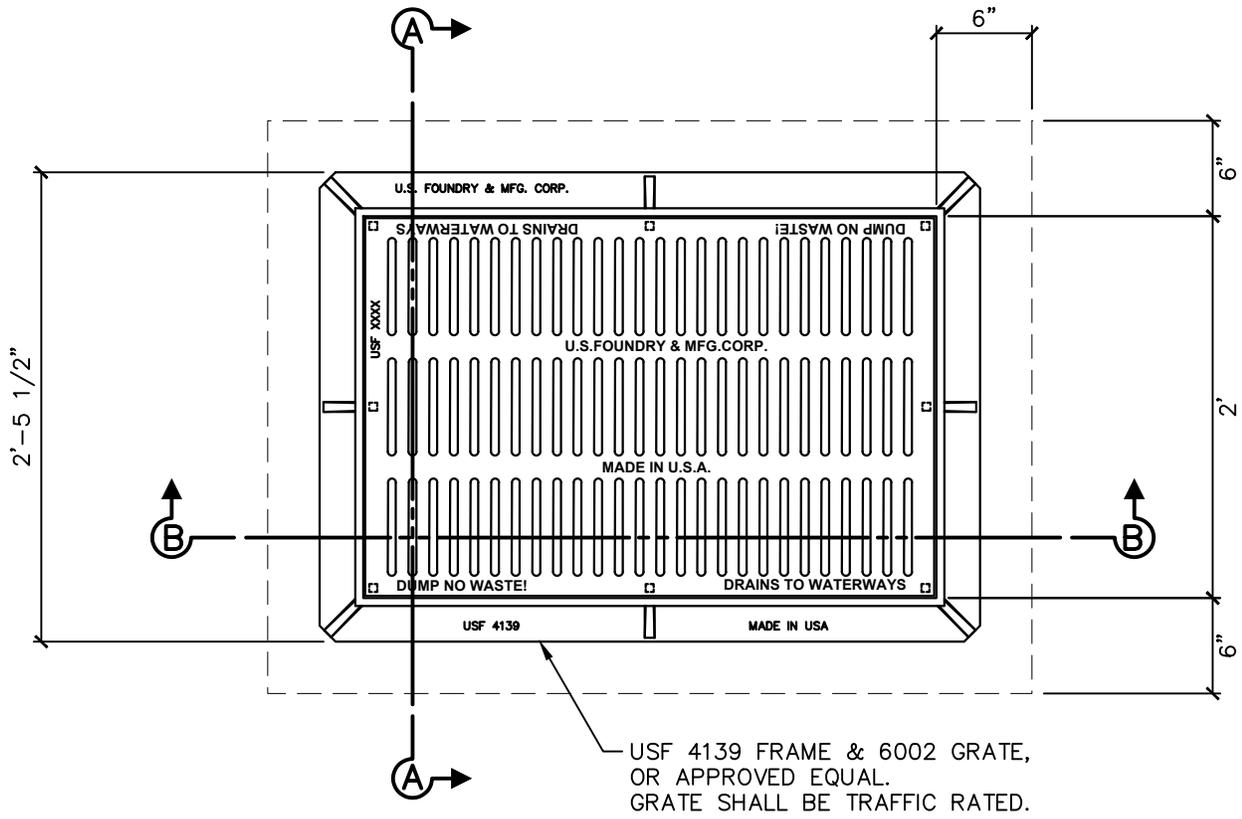
NOTE:

1. MANHOLE FRAME AND COVER MAY BE CAST IRON OR COMPOSITE AS SPECIFIED IN THE PLANS. CAST IRON IS SHOWN ABOVE. FOR COMPOSITE FRAME AND COVER REFERENCE WS-19.

THE TOWN OF
Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL
STORM DRAIN JUNCTION BOX
MANHOLE COVER AND FRAME
COVER AND FRAME

DATE:
FEB 2025
SD-13B

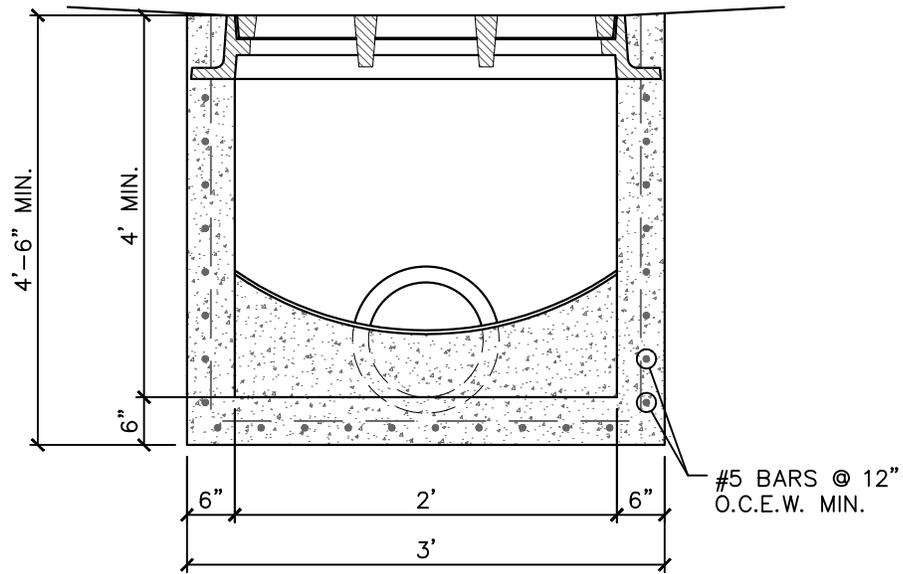


PLAN VIEW
"A" GRATE INLET

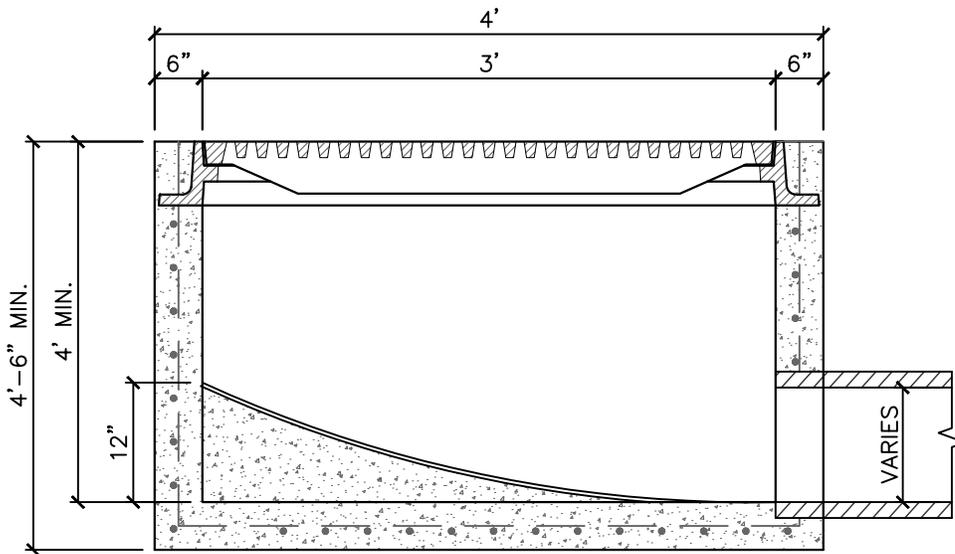
NOTE:

1. REINFORCEMENT, STRUCTURAL STEEL AND CASINGS SHALL CONFORM TO THE SPECIFICATIONS.
2. TOP OF INLET SLOPE SHALL CONFORM TO ADJACENT PARKWAY NORMAL $\frac{1}{4}$ " / FT. SLOPE.
3. CONCRETE FOR INLET CONSTRUCTION SHALL BE CLASS F, $6\frac{1}{2}$ " SACK, 4200 PSI HAND FINISH CONCRETE WHEN USED IN STREETS OR ALLEYS.
4. ALTERNATE CONSTRUCTION:
ALTERNATE PRECAST INLETS MAY BE APPROVED ON AN INDIVIDUAL BASIS. PRECAST INLETS SHALL BE OF EQUAL OR GREATER STRENGTH MATERIAL AND WORKMANSHIP AND SHALL MEET THE STANDARD DESIGN CRITERIA OF THE CAST-IN-PLACE INLETS SHOWN IN THESE DETAILS.
5. DIMENSIONS RELATING TO PLACEMENT OF REINFORCING BARS ARE FORM CENTER TO CENTER OF BARS UNLESS OTHERWISE NOTED. BAR SPLICES ARE PERMISSIBLE IF BARS ARE TIED AND OVERLAPPED 30x DIAMETER WITH 18" MIN.
6. PIPE LATERALS MAY ENTER INLET AT SIDES OR ENDS.
7. STRUCTURAL EXCAVATION WILL NOT BE A SEPARATE PAY ITEM.
8. CHAMFER ALL EXPOSED EDGES AROUND INLET OPENINGS $\frac{3}{4}$ ".
9. PROVIDE STREET JOINTS FOR INTEGRAL CONCRETE PAVEMENT.
10. INCLUDE IN UNIT BID PRICE FOR ALL INLETS COMPLETE IN PLACE, ALL ITEMS, INCLUDING EXCAVATION.

THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE: FEB 2020
	GRATE INLET STORM DRAIN DETAIL	SD-14A



SECTION A-A



SECTION B-B

THE TOWN OF

Highland Park
TEXAS

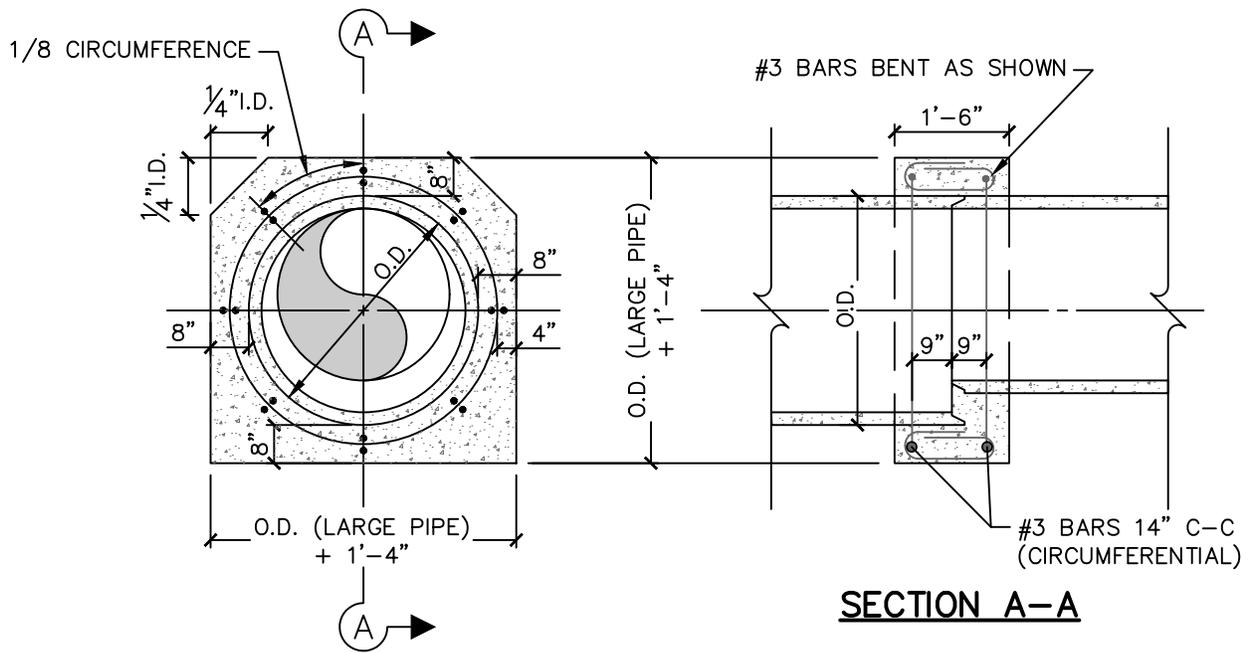
STANDARD CONSTRUCTION DETAIL

GRATE INLET STORM DRAIN DETAIL

DATE:

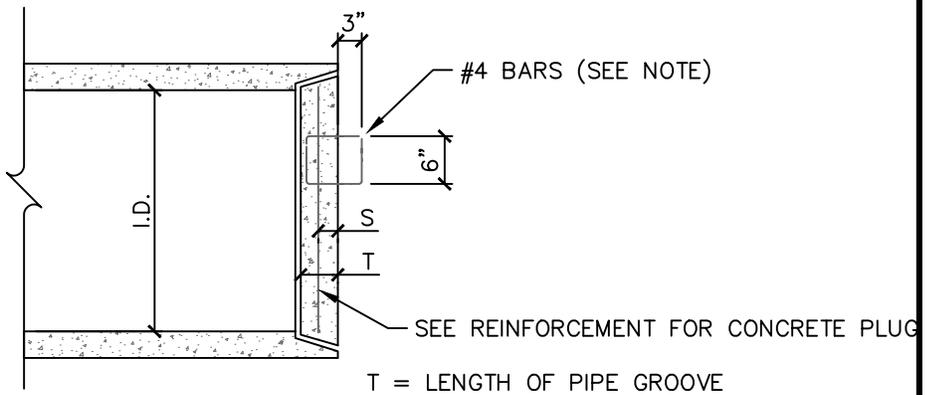
FEB 2020

SD-14B



REINFORCED CONCRETE COLLAR
NOT TO SCALE

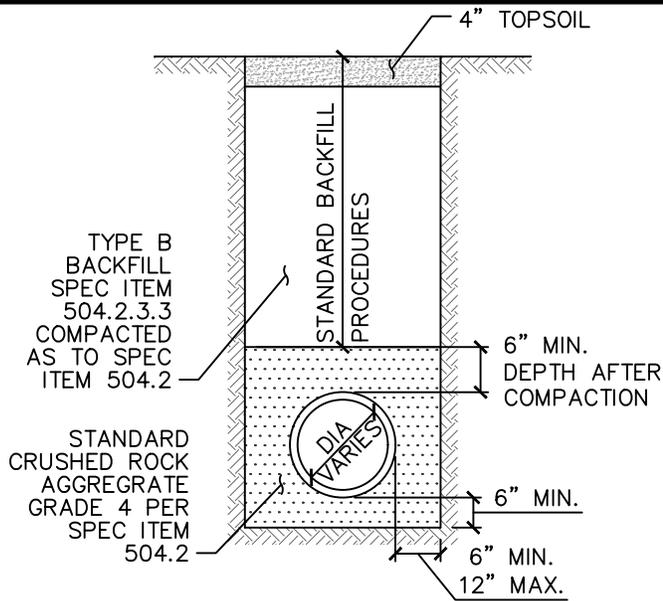
NOTE: COLLARS MAY ONLY BE USED TO REDUCE THE DIAMETER ONE PIPE SIZE. A JUNCTION BOX IS REQUIRED FOR REDUCING MORE THAN ONE PIPE SIZE.



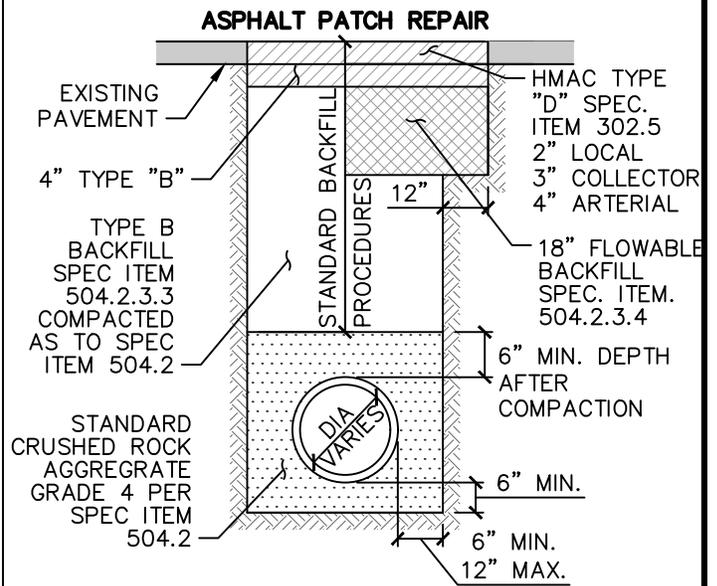
REINFORCED CONCRETE PIPE PLUG
NOT TO SCALE

PIPE SIZE	REINF. BAR	DISTANCE C-C BOTH WAYS	S
18"-33"	# 3	12"	1/2 T
36"-54"	# 3	12"	1/3 T
60"-84"	# 4	12"	1/4 T

NOTE: STEEL HANDLE FOR REINFORCED CONCRETE PIPE PLUG SHALL BE LOCATED 1/4 I.D. ABOVE CENTER POINT OF PLUG. TWO (2) STEEL HANDLES WILL BE REQUIRED ON PLUGS OF 36" DIA. PIPES OR LARGER AND SHALL BE PLACED 1/4 I.D. APART AND 1/4 I.D. ABOVE CENTER OF PLUG.

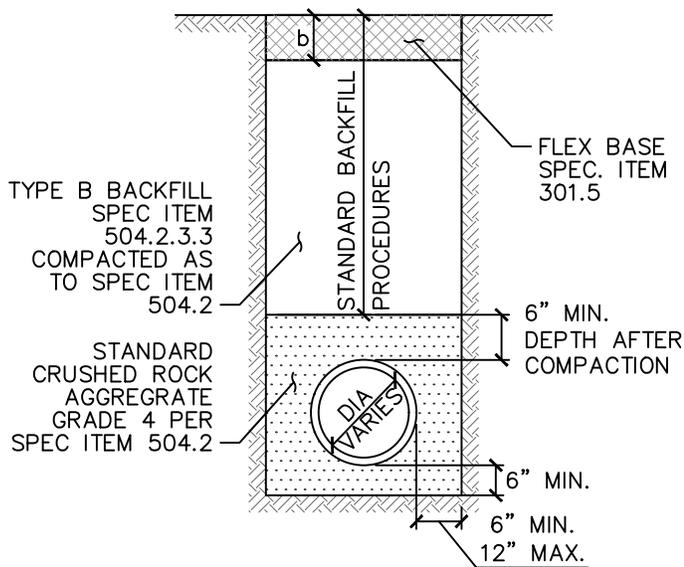


UNPAVED AREA

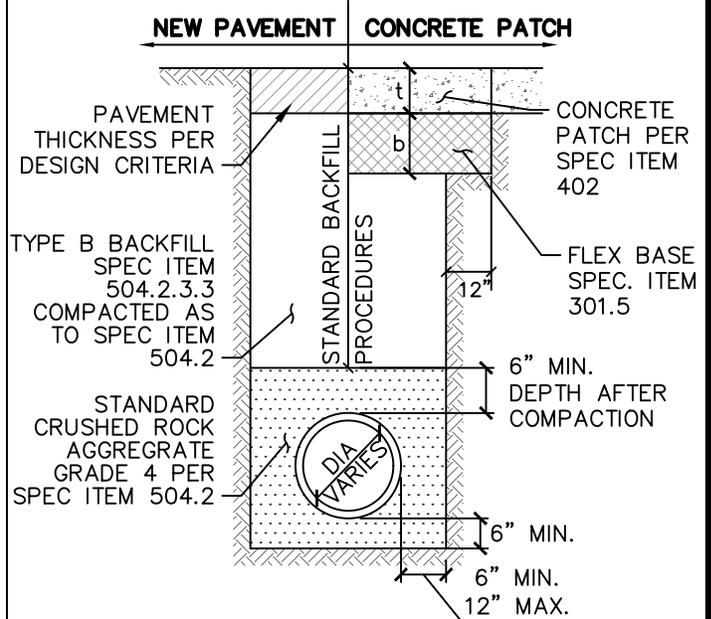


NOTE: FOR NEW STREETS, BACKFILL MAY BE EXTENDED TO THE TOP OF THE TRENCH

ASPHALT PAVEMENT



GRAVEL SURFACE



CONCRETE PAVEMENT

- NOTE:**
1. ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 2. AT THE END OF EACH WORK DAY ALL SPOILS SHALL BE REMOVED FROM THE CITY R.O.W. UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE CITY TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
 3. ALL BACKFILL SHALL BE PER SPEC. ITEM 504 AND SHALL BE COMPACTED PER SPEC. ITEM. 504. ROCKS GREATER THAN 4" IN DIA. SHALL BE REMOVED FROM ANY NATIVE MATERIAL USED AS BACKFILL.
 4. ALL PAVEMENT SHALL BE REMOVED ALONG NEAT SAW CUT LINES PER SPEC. ITEM 402.3.
 5. A MAXIMUM OF 200 FT. OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE CITY ENGINEER.
 6. IN SANDY SOILS, THE CRUSHED ROCK EMBEDMENT SHALL BE WRAPPED IN A FILTER FABRIC.
 7. TOPSOIL SHALL BE 4 INCHES IN DEPTH AND SHALL BE LOOSE AND FREE OF ROCKS OR CLODS GREATER THAN 1/4" IN DIAMETER. ALL TOPSOIL SHALL BE APPROVED BY THE CITY PRIOR TO INSTALLATION.
- t = 6" (MINIMUM) FOR SECONDARY STREET SECTIONS
8" (MINIMUM) FOR PRIMARY STREET SECTIONS
(UNLESS OTHERWISE NOTED IN PLANS)
- b = 12" FLEXIBLE BASE
(UNLESS OTHERWISE NOTED IN PLANS)

THE TOWN OF

Highland Park
TEXAS

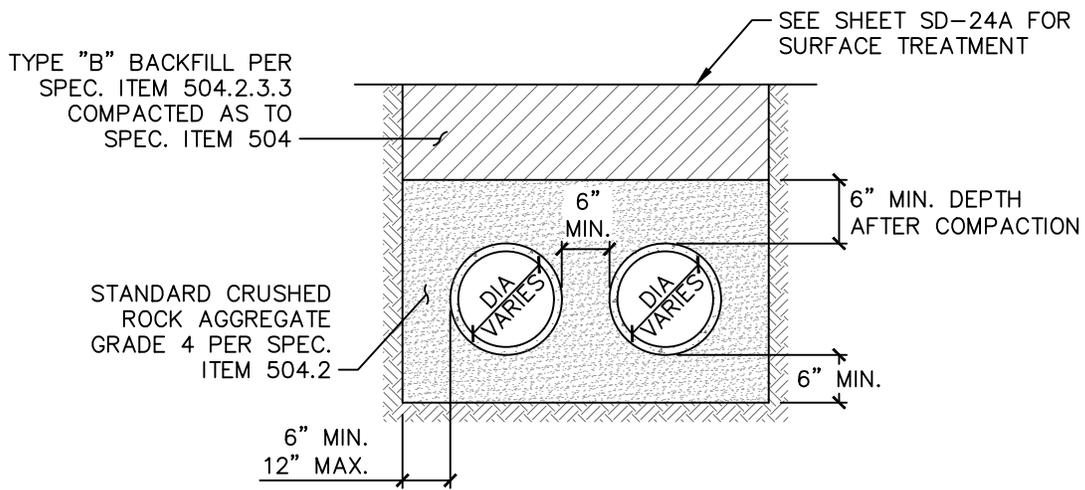
STANDARD CONSTRUCTION DETAIL

EMBEDMENT, BACKFILL, PAVEMENT
REPAIR FOR STORM DRAIN

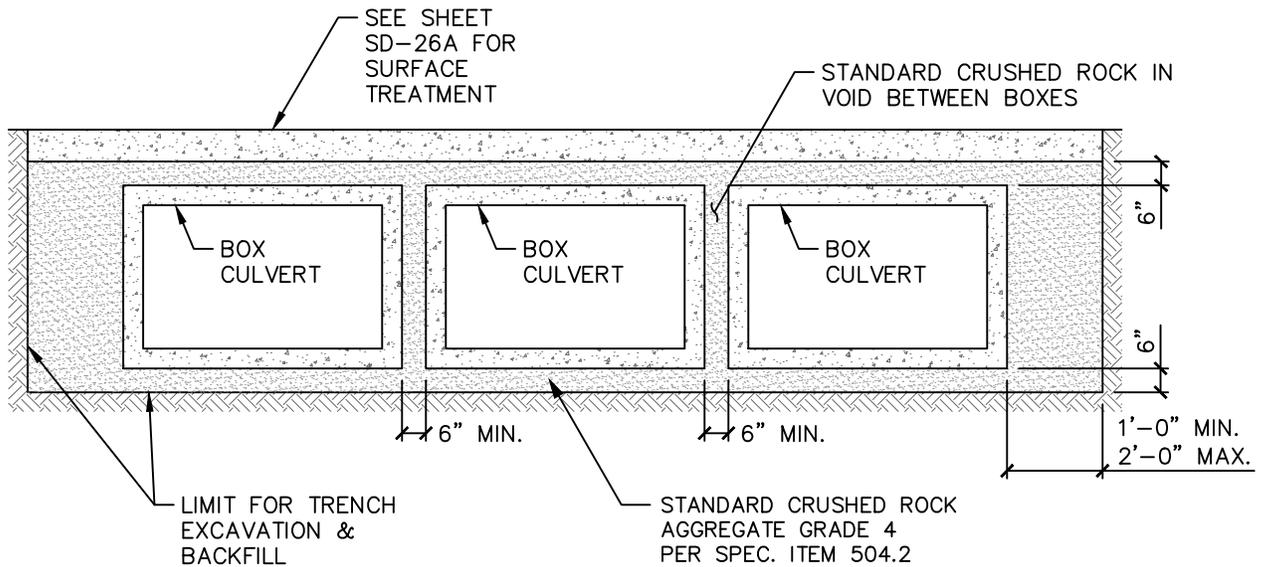
DATE:

APR 2022

SD-17A



MULTIPLE PIPE EMBEDMENT



MULTIPLE BOX EMBEDMENT

- NOTE:**
1. ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 2. AT THE END OF EACH WORK DAY ALL SPOILS SHALL BE REMOVED FROM THE TOWN R.O.W. UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE TOWN TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
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 4. ALL PAVEMENT SHALL BE REMOVED ALONG NEAT SAW CUT LINES PER SPEC. ITEM 402.3.
 5. A MAXIMUM OF 200 FT. OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE TOWN ENGINEER.
 6. IN SANDY SOILS, THE CRUSHED ROCK EMBEDMENT SHALL BE WRAPPED IN A FILTER FABRIC.
 7. TOPSOIL SHALL BE 4 INCHES IN DEPTH AND SHALL BE LOOSE AND FREE OF ROCKS OR CLODS GREATER THAN 1/4" IN DIAMETER. ALL TOPSOIL SHALL BE APPROVED BY THE TOWN PRIOR TO INSTALLATION.

THE TOWN OF

Highland Park
TEXAS

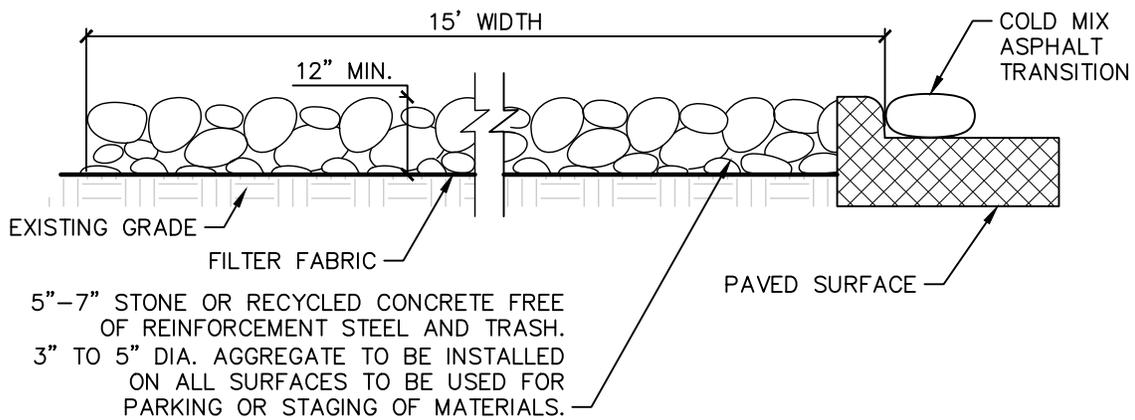
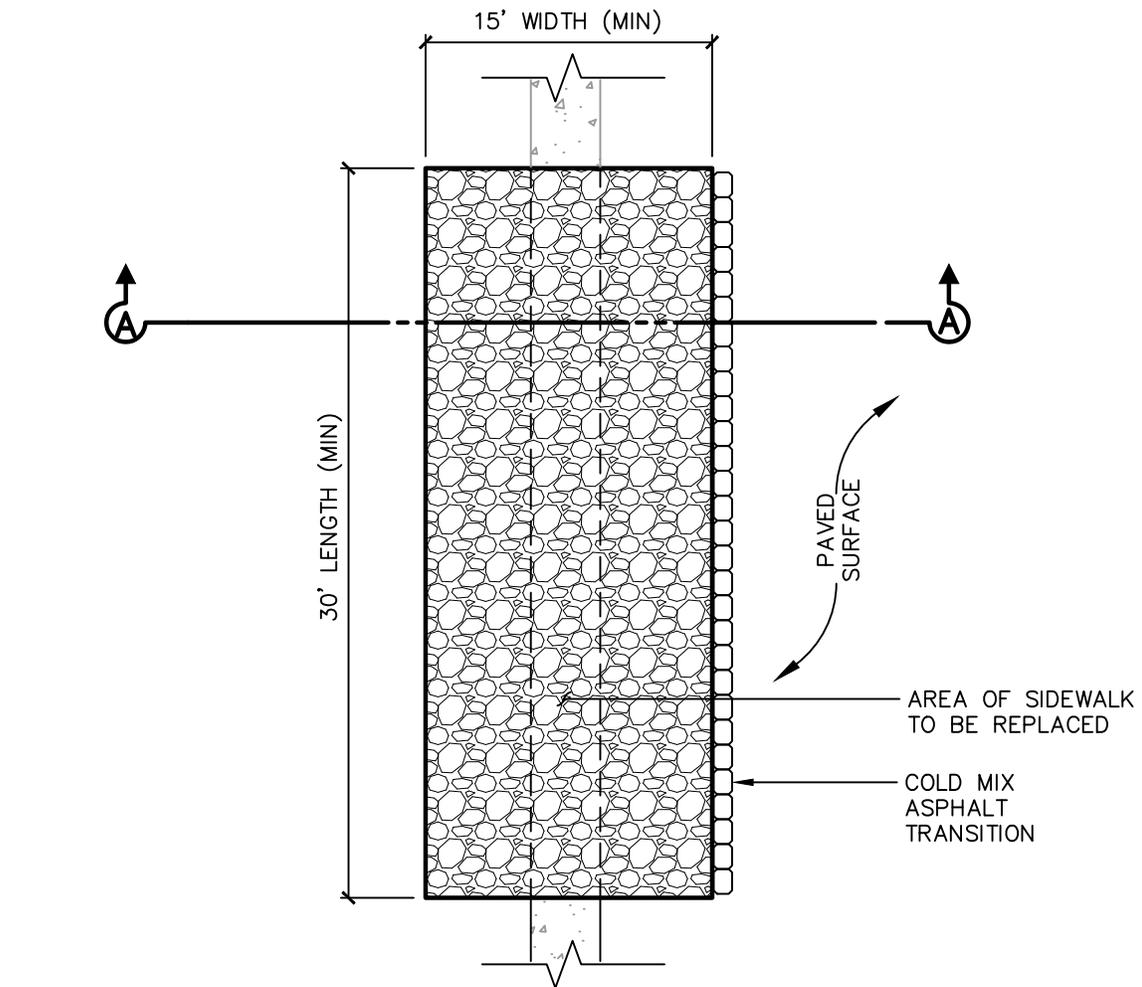
STANDARD CONSTRUCTION DETAIL

EMBEDMENT, BACKFILL, PAVEMENT
REPAIR FOR STORM DRAIN

DATE:

FEB 2020

SD-17B



SECTION A-A

NOTE:

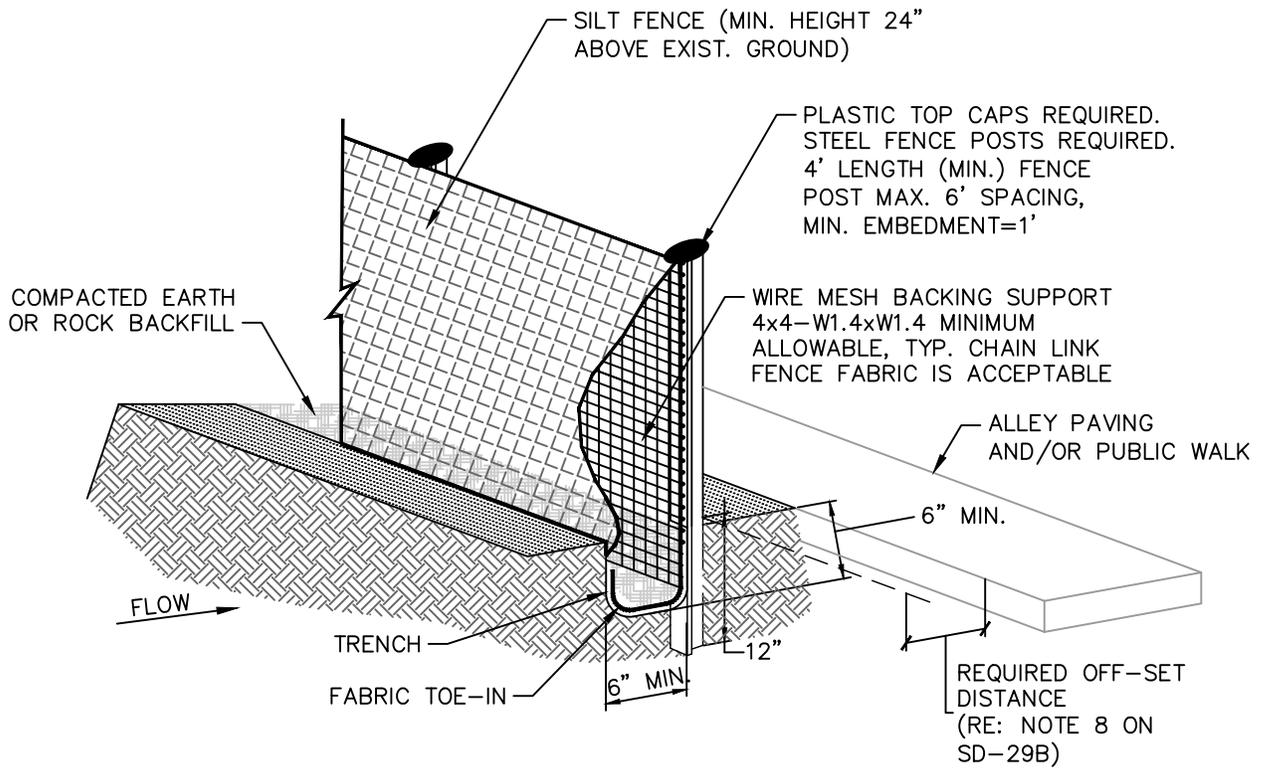
1. INSTALL SILT FENCE, CONSTRUCTION SAFETY FENCING OR SIMILAR BARRIER ALONG THE EXIT TO DIRECT TRAFFIC INTO THE EXIT.
2. GRADE TO DRAIN AWAY FROM STABILIZATION, PAVED SURFACES, AND TO PREVENT RUNOFF FROM LEAVING THE SITE.
3. ANY EXISTING SIDEWALK AND CURB WITHIN THE LIMITS OF THE CONSTRUCTION ENTRANCE SHALL BE REPLACED.

THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE:
	STABILIZED CONSTRUCTION ENTRANCE	FEB 2020
		SD-18A

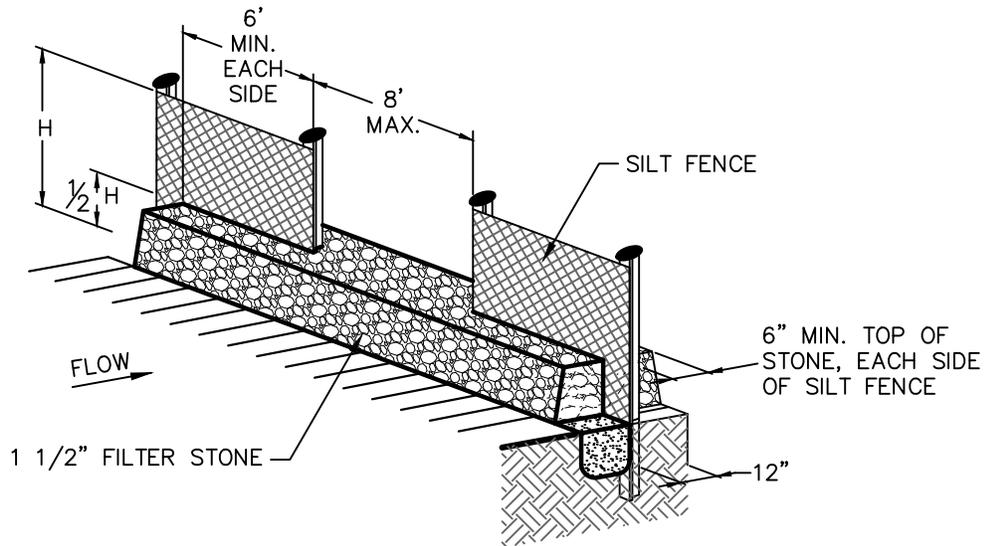
STABILIZED CONSTRUCTION ENTRANCE GENERAL NOTES:

1. STONE SHALL BE 3 TO 5 INCH DIAMETER COARSE AGGREGATE.
2. THE THICKNESS SHALL NOT BE LESS THAN 12 INCHES.
3. THE WIDTH SHALL BE NO LESS THAN THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS, 30' (MIN).
4. WHEN NECESSARY, VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE STREET AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PAVED SURFACES MUST BE REMOVED IMMEDIATELY.
6. THE ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
7. PREVENT SHORTCUTTING OF THE FULL LENGTH OF THE CONSTRUCTION ENTRANCE BY INSTALLING BARRIERS AS NECESSARY.
8. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP.

THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE:
	STABILIZED CONSTRUCTION ENTRANCE NOTES	FEB 2020
		SD-18B



SILT FENCE



STONE OVERFLOW STRUCTURE

NOTE:

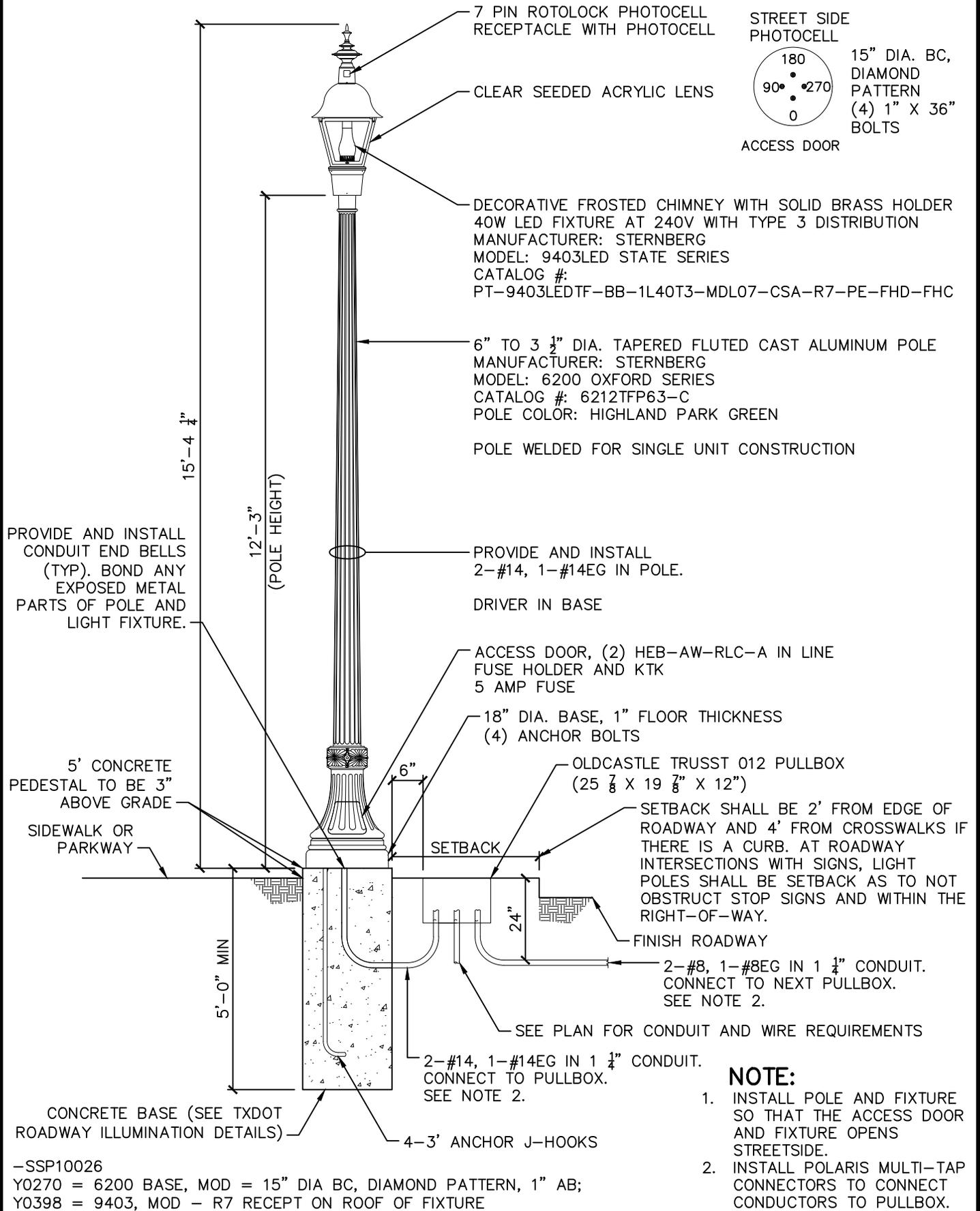
STONE OVERFLOW STRUCTURES OR OTHER OUTLET CONTROL DEVICES SHALL BE INSTALLED AT ALL LOW POINTS ALONG THE FENCE AT A MINIMUM OF EVERY 300 FEET.

THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE:
	SILT FENCE	FEB 2020
		SD-19A

SILT FENCE GENERAL NOTES:

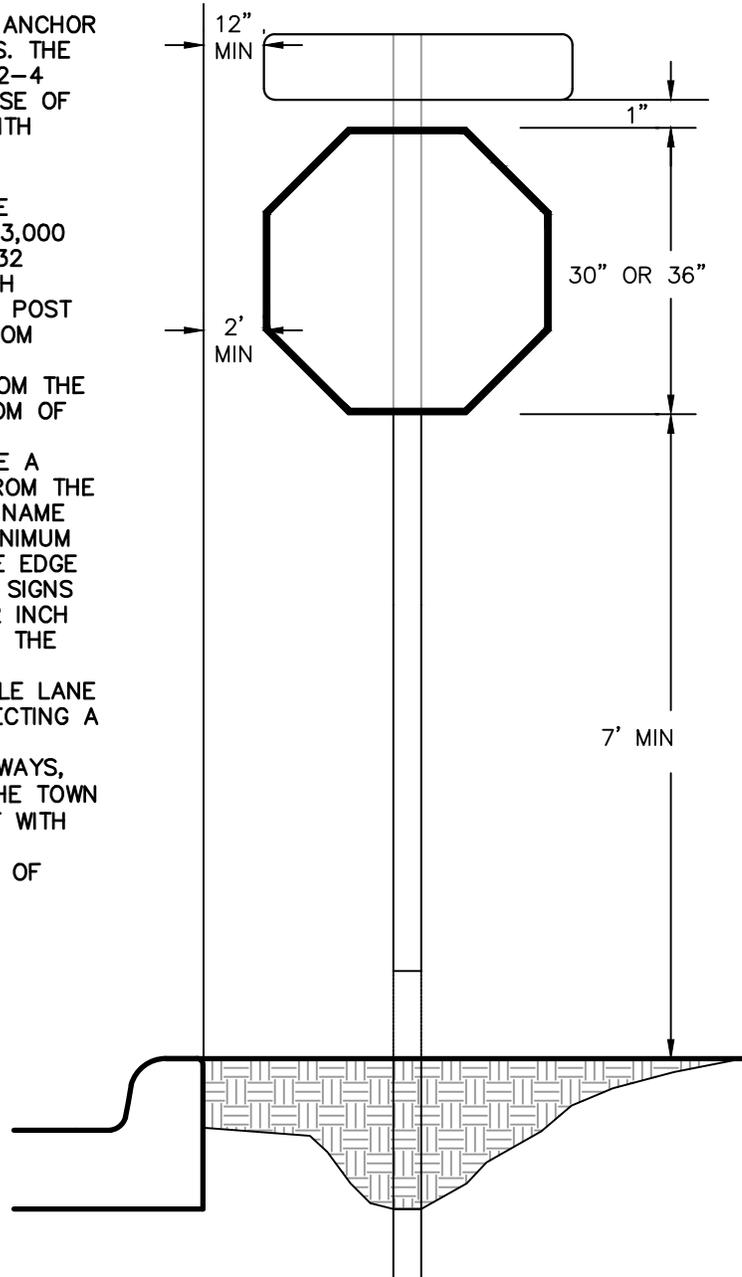
1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1 FOOT. STEEL POSTS ARE REQUIRED WITH PLASTIC CAPS.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WIRE BACKING, WHICH IN TURN IS ATTACHED TO THE FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN FINAL STABILIZATION IS ACHIEVED OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. SILT FENCE SHALL BE SET BACK A MINIMUM DISTANCE OF 18" FROM ALL TOWN SIDEWALKS AND 30" FROM PAVED ALLEY(S). NO SILT FENCE OR EROSION CONTROL DEVICE/SYSTEM SHALL BE INSTALLED IN AN EASEMENT, UNLESS PRIOR APPROVAL IS ISSUED FROM TOWN.
9. IN THE EVENT OF A STRUCTURE DEMOLITION/RAZE, A PRE-DEMO AND POST-DEMO EROSION CONTROL PLAN WILL BE REQUIRED PRIOR TO A DEMO PERMIT BEING ISSUED.

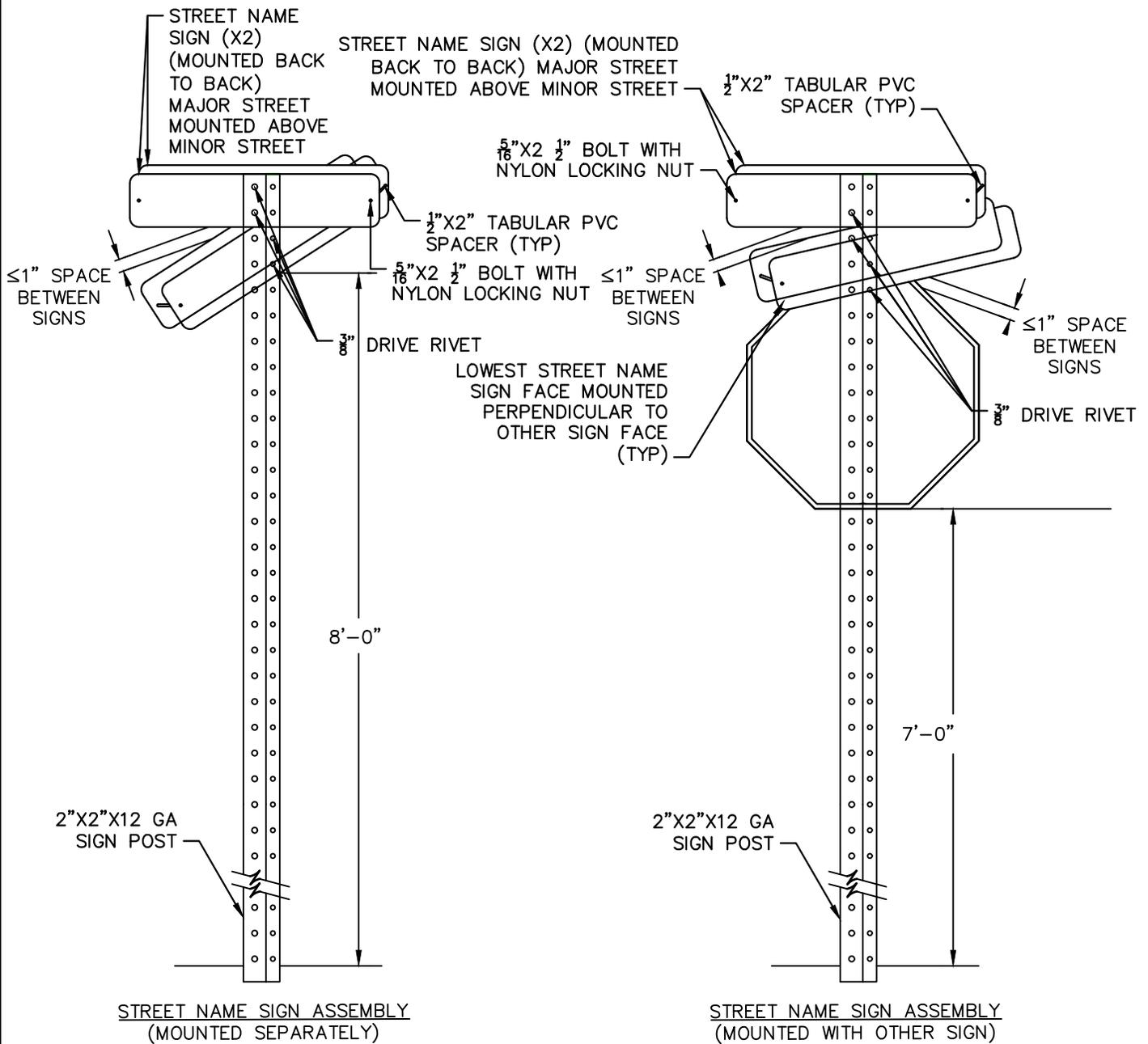
THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE:
	SILT FENCE NOTES	FEB 2020
		SD-19B



NOTES:

1. THE INSTALLATION OF ANY SIGNS MUST BE COMPLETED PRIOR TO FINAL ACCEPTANCE.
2. ALL SIGNS SHALL COMPLY WITH THE LATEST VERSION OF THE TMUTCD.
3. SIGNS SHALL BE AS FOLLOWS:
STOP SIGN: WHITE ASTM HIGH INTENSITY PRISMATIC GRADE REFLECTIVE SHEETING (MANUFACTURED BY 3M OR EQUAL) COVERED WITH EASY CUTTABLE RED FILM, REVERSE SCREEN PROCESS.
4. SIGNS SHALL BE MOUNTED ON A 2 INCH BY 12 FOOT MINIMUM TELESPAR SQUARE POST WITH ONE OF THE FOLLOWING ANCHOR SYSTEMS:
 - a. 2 1/4 INCH BY 36 INCH TELESPAR GROUND ANCHOR INTO THE GROUND A DEPTH OF 32 INCHES. THE ANCHOR POST SYSTEM SHALL PROTRUDE 2-4 INCHES FROM FINISHED GRADE AT THE BASE OF THE SIGN AND BOLTED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS, OR
 - b. 2 1/4 INCH BY 36 INCH TELESPAR GROUND ANCHOR, WRAPPED TO PREVENT CONCRETE INFILTRATION INTO ANCHOR POST, SET IN 3,000 PSI CONCRETE 1 FOOT IN DIAMETER AND 32 INCHES DEEP. CONCRETE SHALL BE 4-INCH BELOW FINISHED GRADE AND THE ANCHOR POST SYSTEM SHALL PROTRUDE 2-4 INCHES FROM FINISHED GRADE.
5. STOP SIGNS SHALL BE MOUNTED 7 FEET FROM THE TOP OF THE CURB MEASURED TO THE BOTTOM OF THE LOWEST SIGN.
6. STOP SIGNS SHALL BE MOUNTED TO PROVIDE A MINIMUM 2 FOOT HORIZONTAL CLEARANCE FROM THE EDGE OF THE SIGN TO THE BACK OF CURB. NAME SIGNS SHALL BE MOUNTED TO PROVIDE A MINIMUM 12 INCH HORIZONTAL CLEARANCE FROM THE EDGE OF THE SIGN TO THE BACK OF CURB. NAME SIGNS SHALL BE MOUNTED TO PROVIDE MINIMUM 12 INCH HORIZONTAL CLEARANCE FROM THE EDGE OF THE SIGN TO THE BACK OF THE CURB.
7. STOP SIGNS SHALL BE 30 INCHES FOR SINGLE LANE ROAD, AND 36 INCHES FOR A ROAD INTERSECTING A PLANNED MULTI-LANE ROAD.
8. FOR STREETS INTERSECTING ARTERIAL ROADWAYS, DEVELOPER/CONTRACTOR SHALL CONTACT THE TOWN INSPECTOR TO COORDINATE SIGN PLACEMENT WITH TOWN.
9. DIMENSIONS SHOWN ABOVE ARE FROM BACK OF CURB.



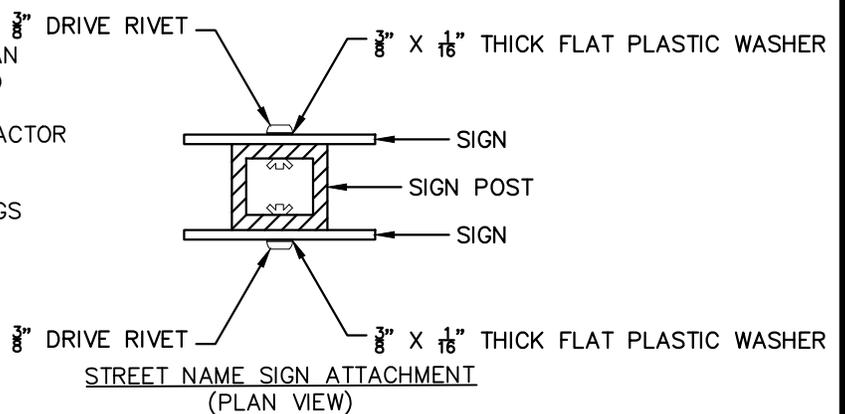


STREET NAME SIGN ASSEMBLY
(MOUNTED SEPARATELY)

STREET NAME SIGN ASSEMBLY
(MOUNTED WITH OTHER SIGN)

NOTES:

1. IF LENGTH OF NAME PLATE IS GREATER THAN 54", A DOUBLE MOUNT SHALL BE INSTALLED ACCORDING TO DETAILS AS SHOWN.
2. FOR TXDOT NAME SIGN ASSEMBLIES, CONTRACTOR WILL NEED TO PROVIDE ADAPTER COUPLER DETAIL.
3. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ANY DECORATIVE ELEMENTS.



STREET NAME SIGN ATTACHMENT
(PLAN VIEW)

THE TOWN OF

Highland Park
TEXAS

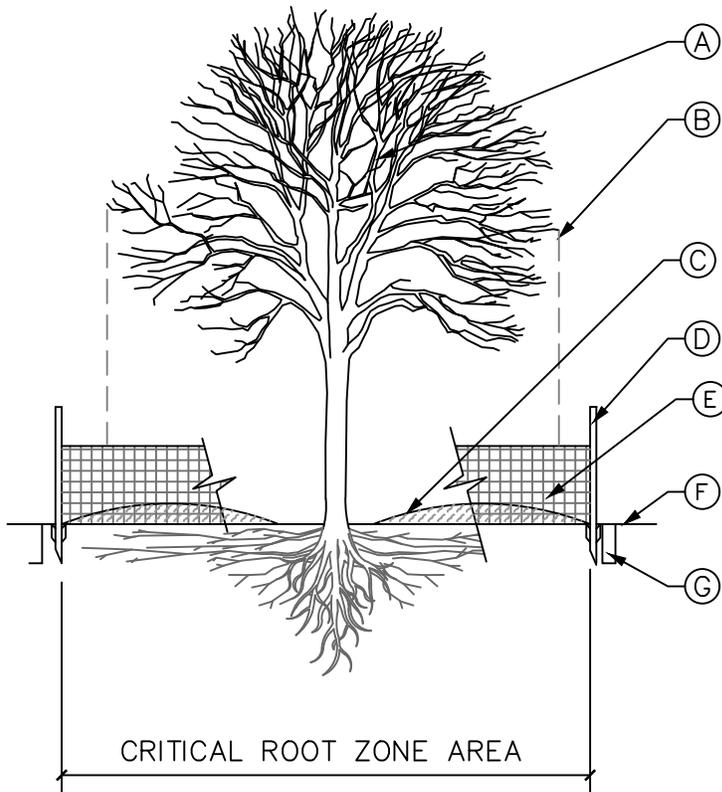
STANDARD CONSTRUCTION DETAIL

STREET NAME SIGN DETAILS
DOUBLE MOUNT

DATE:

JUN 2023

SD-21B



NOT TO SCALE

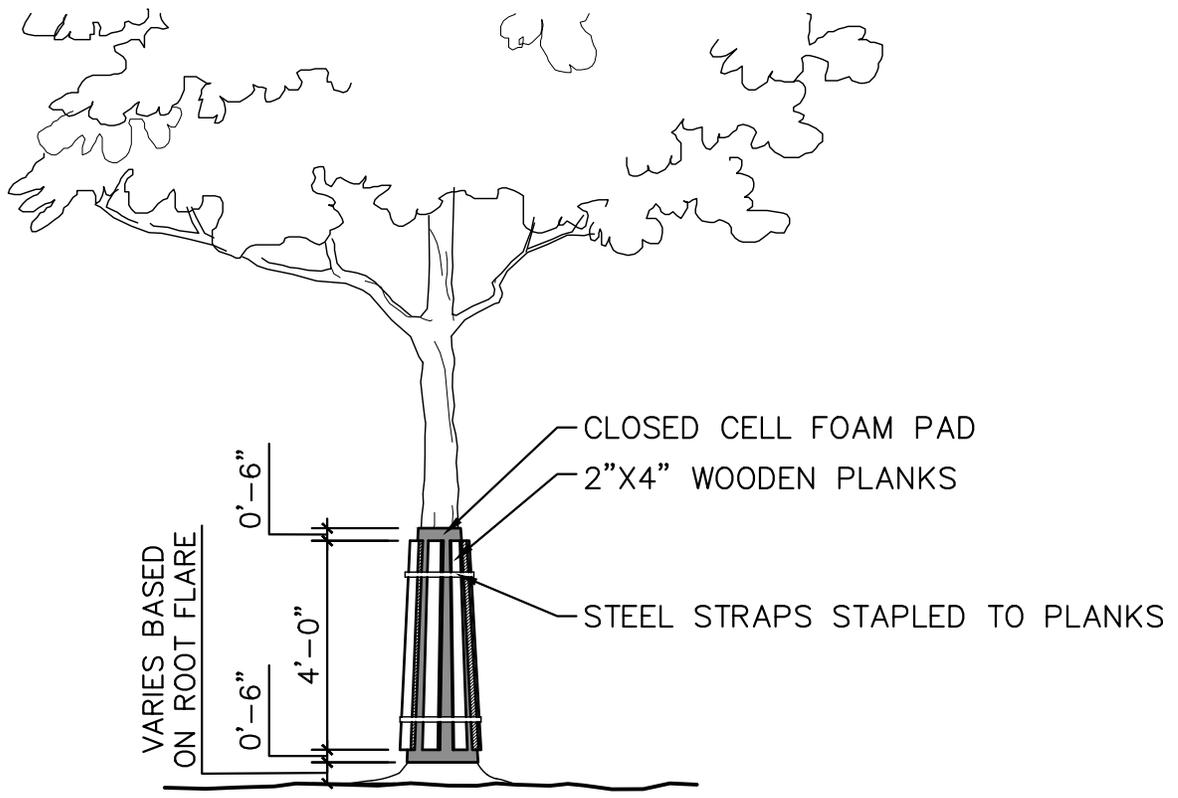
NOTES:

1. ALL TREES HAVING TRUNKS OR ROOTS WITHIN 5' OF THE PROPOSED LIMITS OF CONSTRUCTION SHALL BE PROTECTED, UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL AVOID MOVING EQUIPMENT OVER EXISTING ROOTS.
3. DO NOT MULCH AREA WITHIN 6" TO 12" OF TREE TRUNK.
4. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE TOWN IF PRUNING IS REQUIRED. THE TOWN MAY, AT IT'S OWN DISCRETION, REQUIRE THE CONTRACTOR TO PRUNE THE TREES (SUBSIDIARY TO THE COST OF THE PROJECT), OR THE TOWN MAY HIRE AN OUTSIDE EXPERT TO PERFORM THE WORK.

LEGEND:

- (A) EXISTING TREE(S) TO REMAIN
- (B) DRIP LINE OF EXISTING TREE (TYP.)
- (C) 5" THICK LAYER OF MULCH
- (D) 2"x2"x6' STEEL POST T-STAKES (MUST HAVE CAPS), 8' O.C. MIN., DRIVEN 2' INTO GROUND AT (OR OUTSIDE) TREE DRIP LINE
- (E) 4' MIN HEIGHT GREEN PLASTIC FENCING
- (F) EXISTING GRADE TO BE DISTURBED
- (G) ROOT PRUNING TRENCH 12" OUTSIDE FENCE

THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE:
	TREE PROTECTION	FEB 2025
		SD-22A

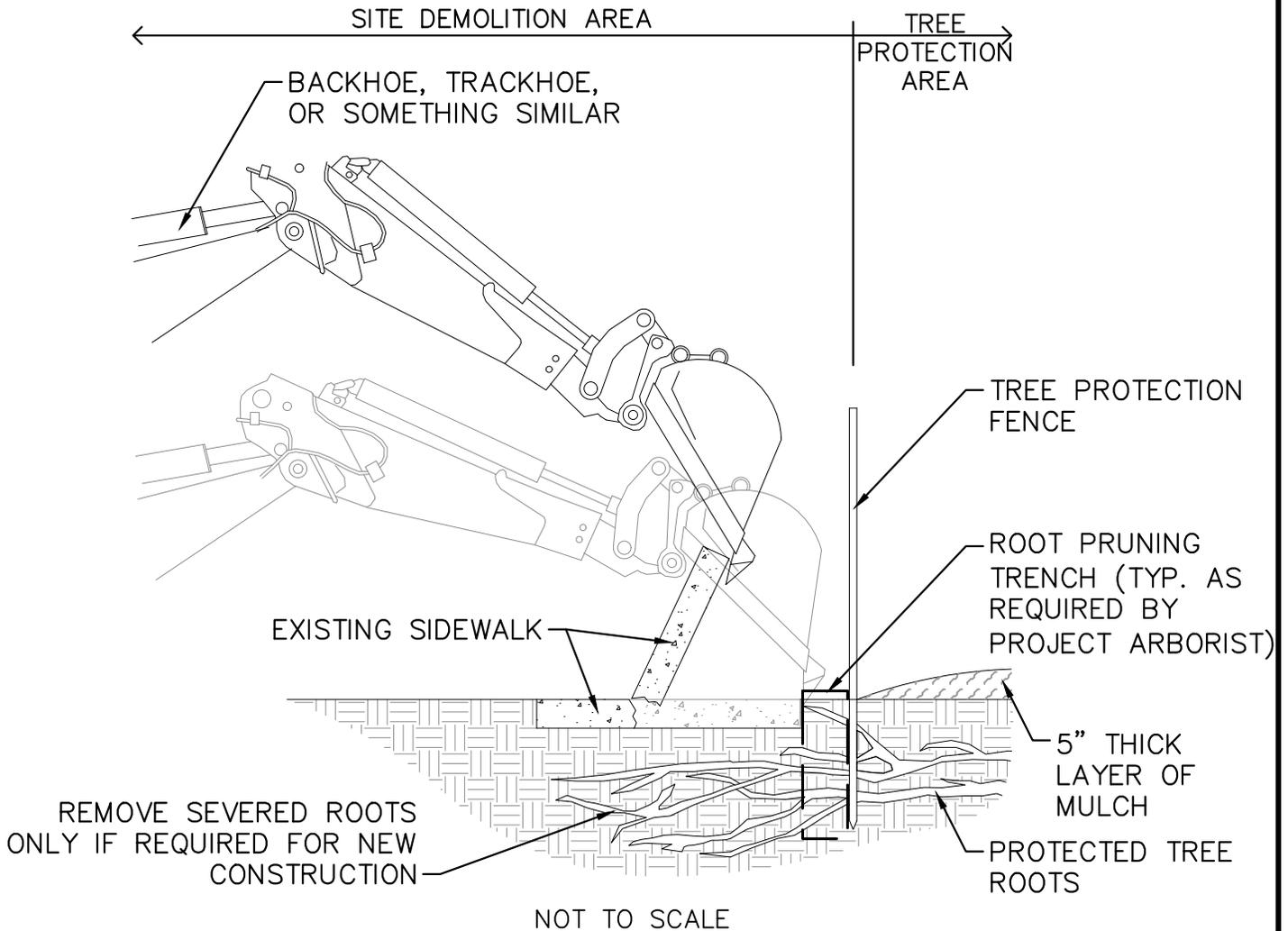


NOT TO SCALE

NOTES:

1. REFERENCE TREE AND PLANT PROTECTION SPECIFICATIONS FOR ADDITIONAL INFORMATION.

THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE: FEB 2025
	TRUNK PROTECTION	SD-22B



NOT TO SCALE

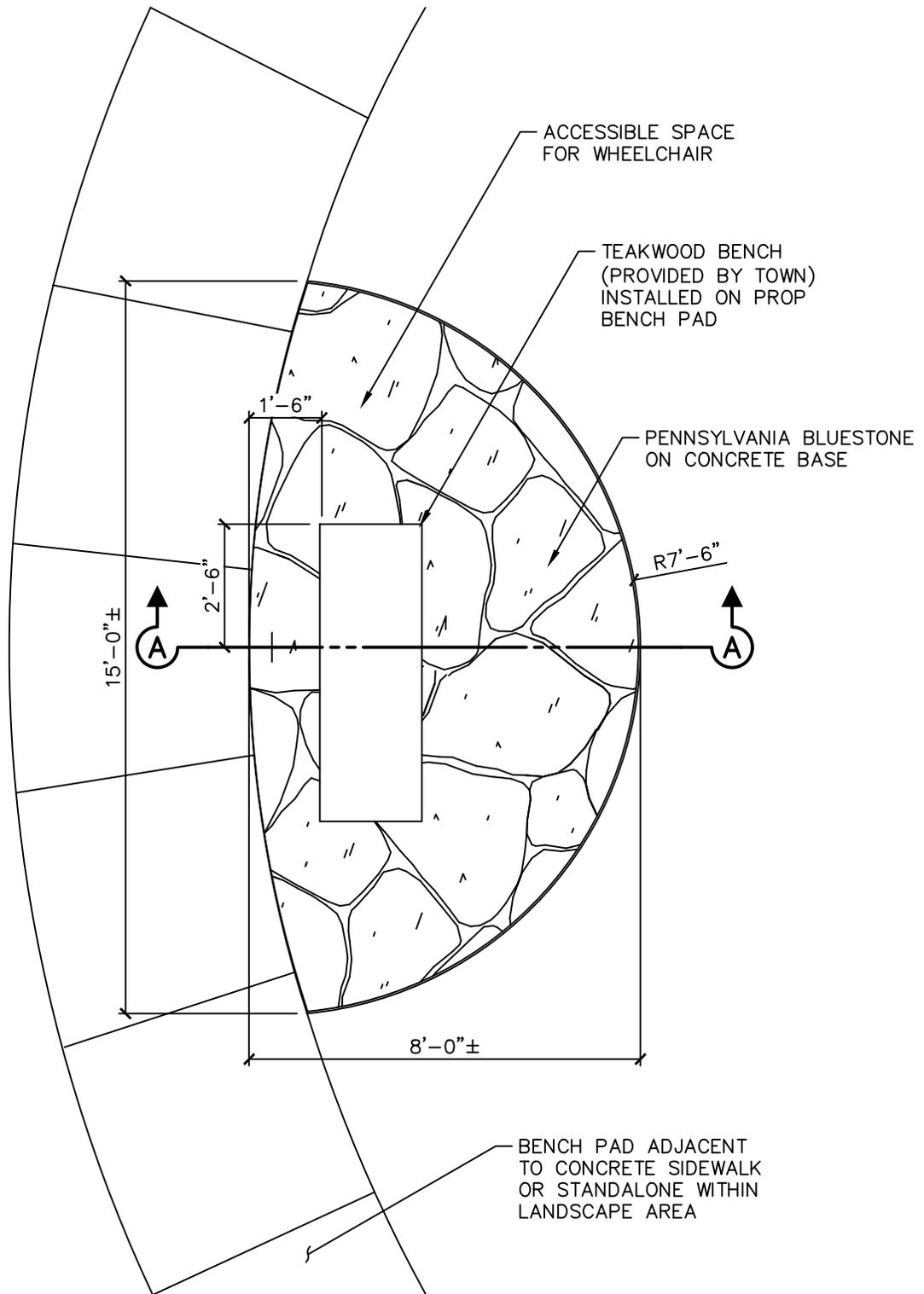
NOTES:

1. COORDINATE WITH OWNER'S REPRESENTATIVE PRIOR TO DEMOLITION ACTIVITIES.
2. ALL TREE PROTECTION MEASURES MUST BE IN PLACE AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO DEMOLITION ACTIVITIES.
3. OWNER'S REPRESENTATIVE TO APPROVE ANY CANOPY THINNING AND/OR CANOPY RAISING/PRUNING TO ALLOW FOR DEMOLITION ACTIVITIES PRIOR TO CONSTRUCTION.

DEMOLITION SEQUENCE:

1. PERFORM ANY ROOT PRUNING.
2. INSTALL TREE PROTECTION FENCING.
3. CAREFULLY REMOVE SIDEWALK AND BASE MATERIAL, COORDINATE ALL DEMOLITION OPERATIONS AROUND PROTECTED TREES WITH OWNER'S REPRESENTATIVE AND PROJECT ARBORIST.

<p>THE TOWN OF</p> 	STANDARD CONSTRUCTION DETAIL	DATE:
	SIDEWALK DEMOLITION AROUND EXISTING TREE ROOTS	FEB 2025
		SD-22C

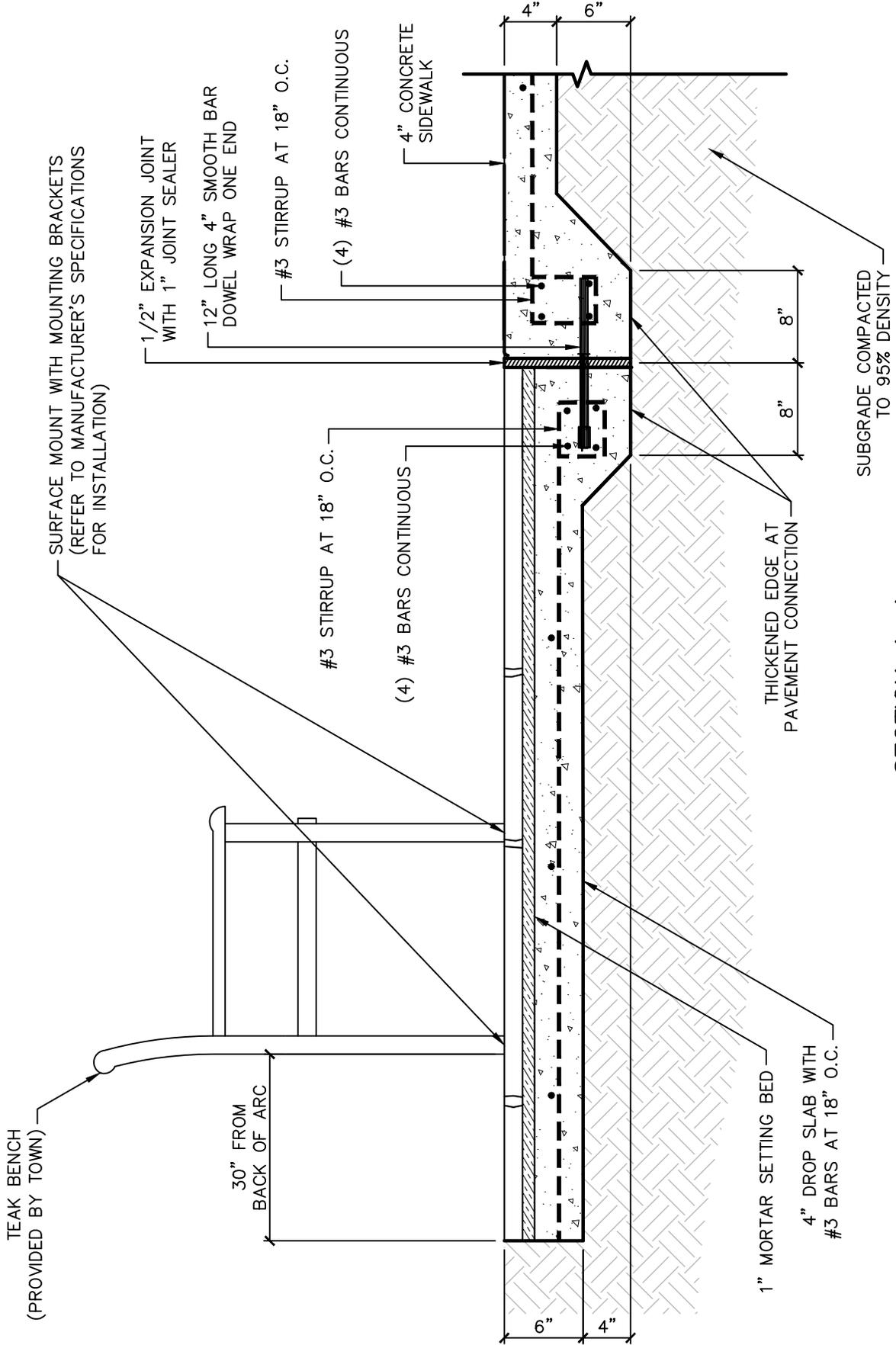


NOTE:

1. REFER TO TOWN STANDARD DETAIL SD-03C FOR JOINT SEALANT REQUIREMENTS. CONTRACTOR SHALL CONFIRM JOINT COLOR WITH TOWN PRIOR TO INSTALLATION.
2. 1" TO 1-1/2" THICK PENNSYLVANIA BLUESTONE (FULL COLOR) RANDOM SIZES WITH 4 SQUARE FEET MINIMUM PER SLAB, IRREGULAR PATTERN. CONTRACTOR TO PROVIDE 8'X8' MOCK UP FOR TOWN APPROVAL. APPROVAL WILL BE ISSUED BY OWNER IN WRITING. USE GRAY MORTAR MAX 1/2" JOINT SIZE, ACID CLEAN ALL AREAS OF MORTAR DUST.
3. BENCH PAD SHALL BE 2% MAXIMUM IN ALL DIRECTIONS.

THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE: MAY 2025
	BENCH PAD	SD-23A

NOTE: REFER TO TOWN STANDARD DETAIL SD-06A FOR CONCRETE SIDEWALK REINFORCEMENT.



SECTION A-A

THE TOWN OF

Highland Park
TEXAS

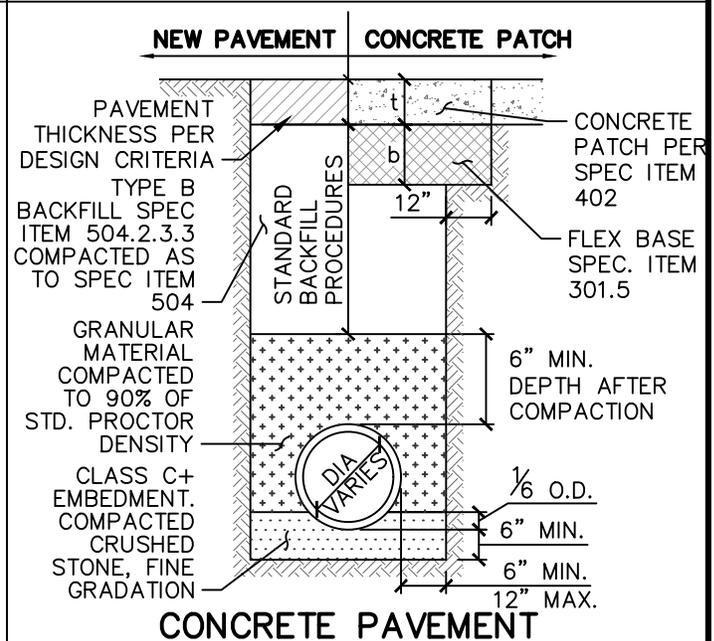
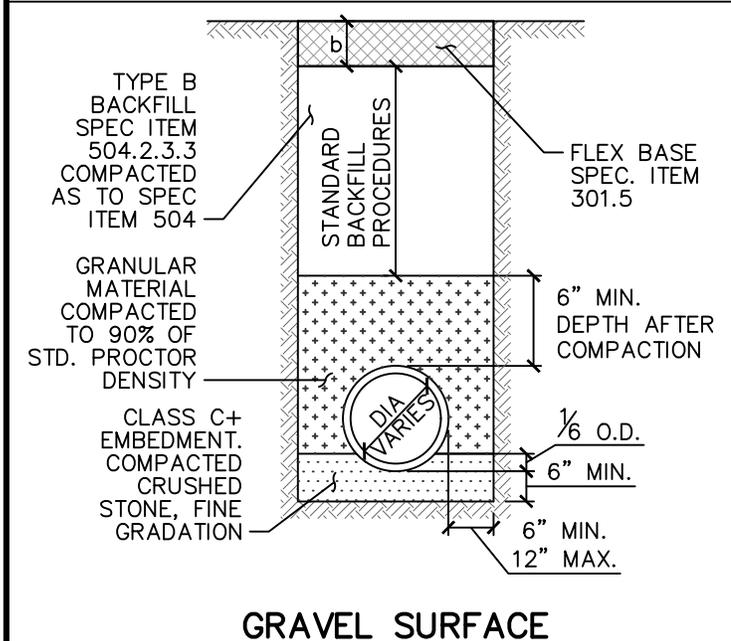
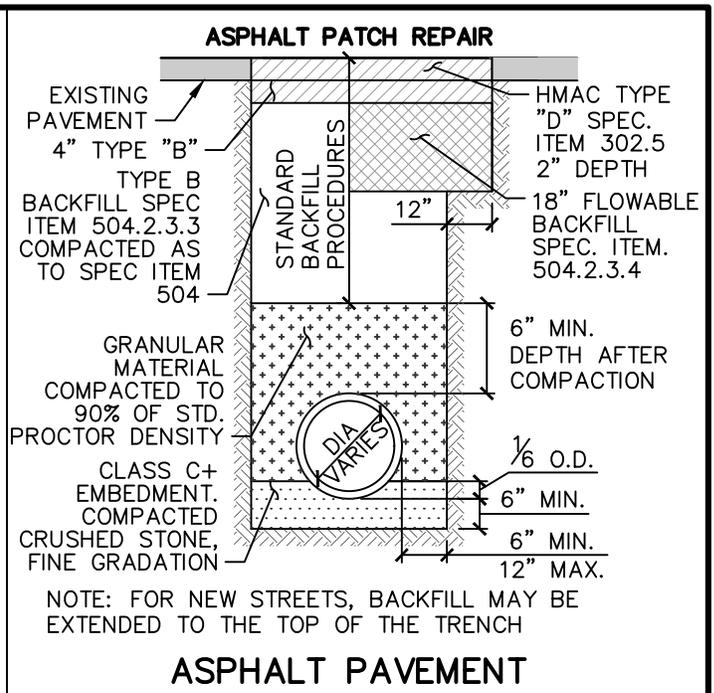
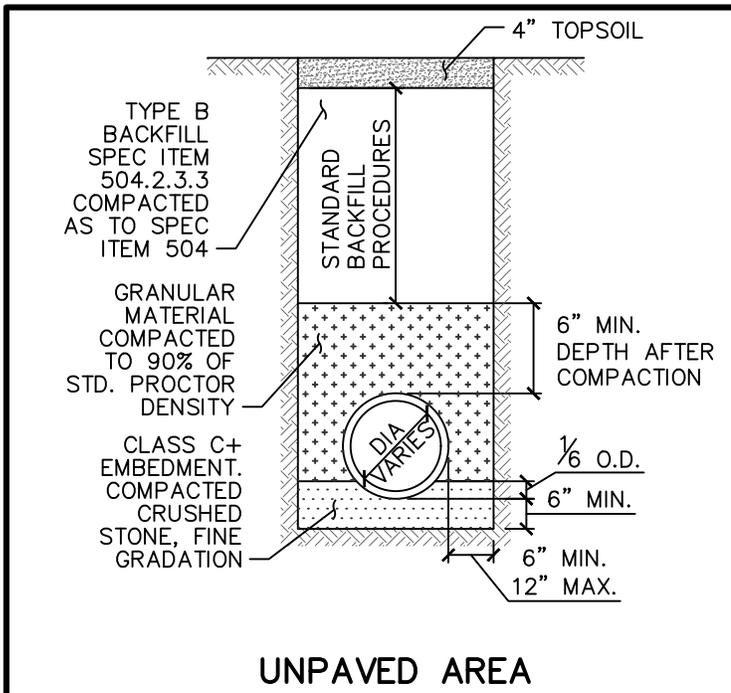
STANDARD CONSTRUCTION DETAIL

BENCH PAD

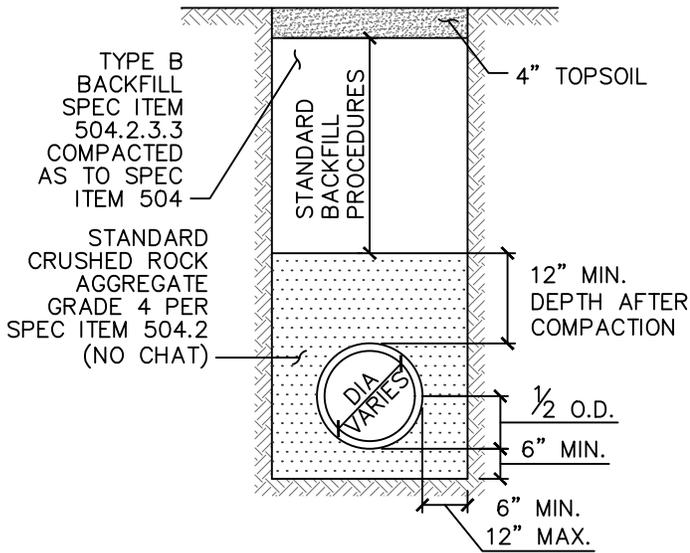
DATE:

MAY 2025

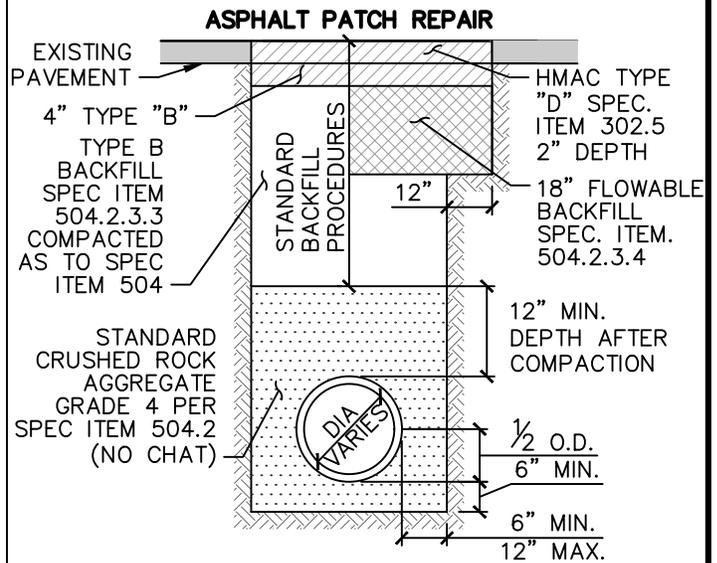
SD-23B



- NOTE:**
- UTILIZE CLASS "C+" EMBEDMENT FOR DUCTILE IRON WATER LINES.
 - ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 - AT THE END OF EACH WORK DAY ALL SPOILS SHALL BE REMOVED FROM THE TOWN R.O.W. UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE TOWN TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
 - ALL BACKFILL SHALL BE PER SPEC. ITEM 504 AND SHALL BE COMPACTED PER SPEC. ITEM. 504. ROCKS GREATER THAN 4" IN DIA. SHALL BE REMOVED FROM ANY NATIVE MATERIAL USED AS BACKFILL.
 - ALL PAVEMENT SHALL BE REMOVED ALONG NEAT SAW CUT LINES PER SPEC. ITEM 402.3.
 - COATED TRACER WIRE (MIN. 10-GAUGE) SHALL BE INSTALLED IN THE EMBEDMENT MATERIAL ABOVE THE PVC PIPE WITH THE TRACER WIRE TERMINATING IN IN-LINE GATE VALVE BOXES ACCESSIBLE BY TOWN STAFF. BLUE UNDERGROUND WATER LINE WARNING TAPE OF MIN. 4" WIDTH SHALL BE INSTALLED ABOVE THE EMBEDMENT MATERIAL.
 - A MAXIMUM OF 200 FT. OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE TOWN ENGINEER.
 - TOPSOIL SHALL BE 4 INCHES IN DEPTH AND SHALL BE LOOSE AND FREE OF ROCKS OR CLODS GREATER THAN 1/4" IN DIAMETER. ALL TOPSOIL SHALL BE APPROVED BY THE TOWN PRIOR TO INSTALLATION.
- t = 6" (MINIMUM) FOR SECONDARY STREET SECTIONS
 8" (MINIMUM) FOR PRIMARY STREET SECTIONS
 (UNLESS OTHERWISE NOTED IN PLANS)
- b = 12" FLEXIBLE BASE
 (UNLESS OTHERWISE NOTED IN PLANS)

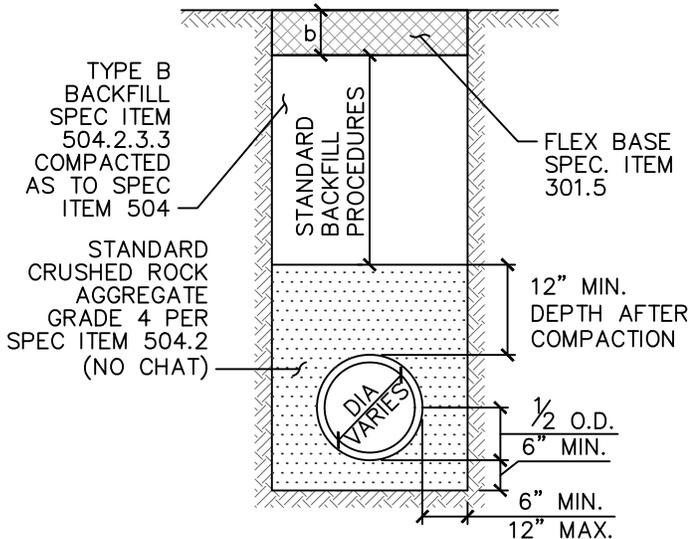


UNPAVED AREA

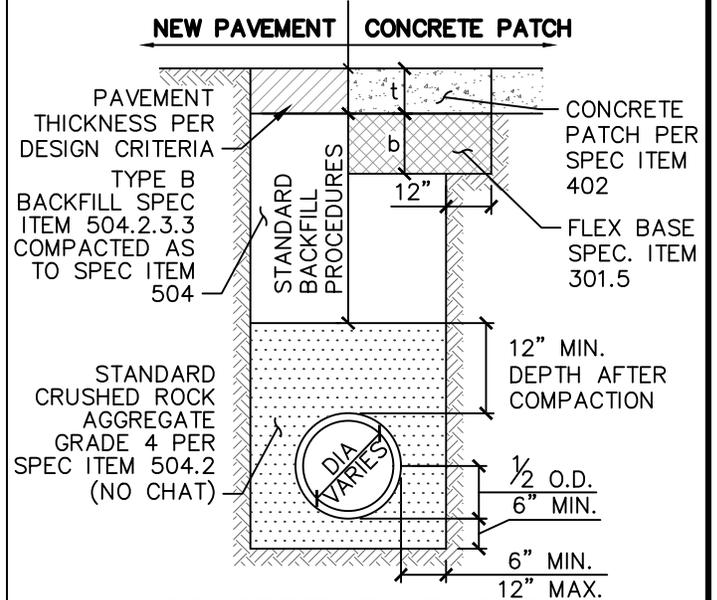


NOTE: FOR NEW STREETS, BACKFILL MAY BE EXTENDED TO THE TOP OF THE TRENCH

ASPHALT PAVEMENT



GRAVEL SURFACE



CONCRETE PAVEMENT

- NOTE:**
- UTILIZE CLASS "B+" EMBEDMENT FOR PVC WATER LINES.
 - ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 - AT THE END OF EACH WORK DAY ALL SPOILS SHALL BE REMOVED FROM THE TOWN R.O.W. UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE TOWN TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
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 - A MAXIMUM OF 200 FT. OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE TOWN ENGINEER.
 - TOPSOIL SHALL BE 4 INCHES IN DEPTH AND SHALL BE LOOSE AND FREE OF ROCKS OR CLODS GREATER THAN 1/4" IN DIAMETER. ALL TOPSOIL SHALL BE APPROVED BY THE TOWN PRIOR TO INSTALLATION.
- t = 6" (MINIMUM) FOR SECONDARY STREET SECTIONS
8" (MINIMUM) FOR PRIMARY STREET SECTIONS (UNLESS OTHERWISE NOTED IN PLANS)
- b = 12" FLEXIBLE BASE (UNLESS OTHERWISE NOTED IN PLANS)

THE TOWN OF

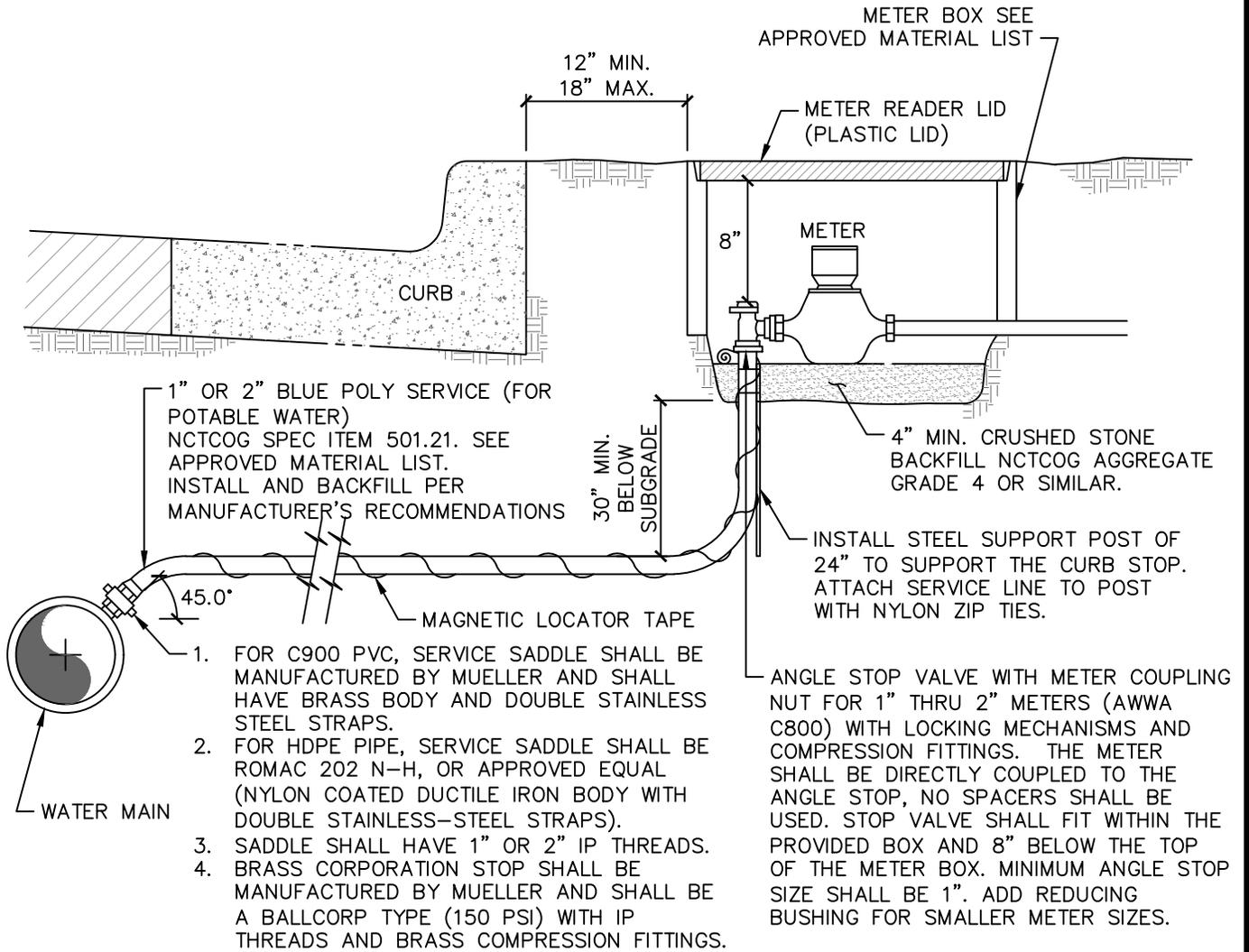
Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL
EMBEDMENT, BACKFILL, PAVEMENT
REPAIR FOR DUCTILE IRON WATER
LINE

DATE:
APR 2022
WS-02

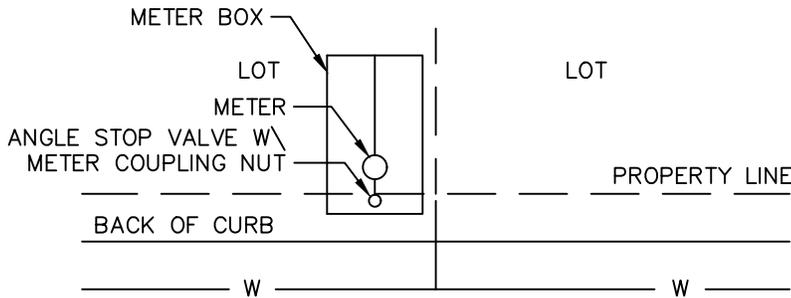
METER SIZE

- SINGLE 1" OR 2"



1. FOR C900 PVC, SERVICE SADDLE SHALL BE MANUFACTURED BY MUELLER AND SHALL HAVE BRASS BODY AND DOUBLE STAINLESS STEEL STRAPS.
2. FOR HDPE PIPE, SERVICE SADDLE SHALL BE ROMAC 202 N-H, OR APPROVED EQUAL (NYLON COATED DUCTILE IRON BODY WITH DOUBLE STAINLESS-STEEL STRAPS).
3. SADDLE SHALL HAVE 1" OR 2" IP THREADS.
4. BRASS CORPORATION STOP SHALL BE MANUFACTURED BY MUELLER AND SHALL BE A BALLCORP TYPE (150 PSI) WITH IP THREADS AND BRASS COMPRESSION FITTINGS.

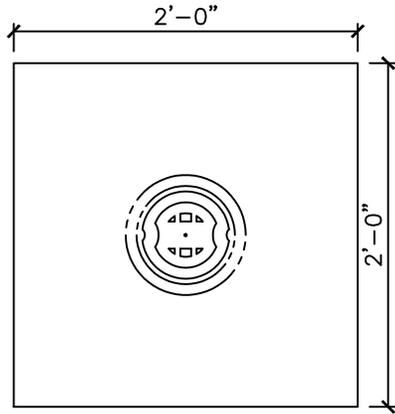
ANGLE STOP VALVE WITH METER COUPLING NUT FOR 1" THRU 2" METERS (AWWA C800) WITH LOCKING MECHANISMS AND COMPRESSION FITTINGS. THE METER SHALL BE DIRECTLY COUPLED TO THE ANGLE STOP, NO SPACERS SHALL BE USED. STOP VALVE SHALL FIT WITHIN THE PROVIDED BOX AND 8" BELOW THE TOP OF THE METER BOX. MINIMUM ANGLE STOP SIZE SHALL BE 1". ADD REDUCING BUSHING FOR SMALLER METER SIZES.



RESIDENTIAL SERVICE LAYOUT

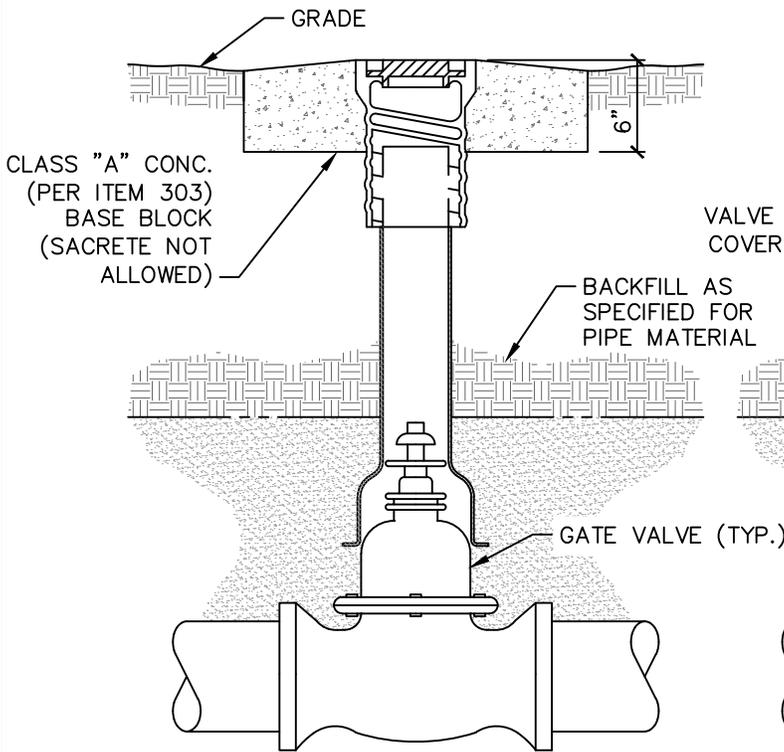
NOTES:

1. A 2" DOMESTIC SERVICE LINE IS REQUIRED FOR ALL NEW HOME BUILDS, REMODELS REQUIRING A FIRE SUPPRESSION SYSTEM, OR A CHANGE OUT OR UPSIZE TO THE DOMESTIC SERVICE LINE.
2. A 1" IRRIGATION SERVICE LINE IS REQUIRED FOR ALL NEW HOME BUILDS OR A CHANGE OUT OR UPSIZE TO THE IRRIGATION SERVICE LINE. A 2" IRRIGATION SERVICE LINE IS PERMITTED BUT NOT REQUIRED.
3. NO FLARED FITTINGS ALLOWED.
4. DO NOT USE PIPE DOPE OR GLUE.
5. ACCEPTABLE MANUFACTURES ARE MUELLER OR APPROVED EQUAL.
6. PROVIDED TAPPING SADDLE MUST BE COMPATIBLE WITH WATER MAIN MATERIAL FOR EACH APPLICATION.

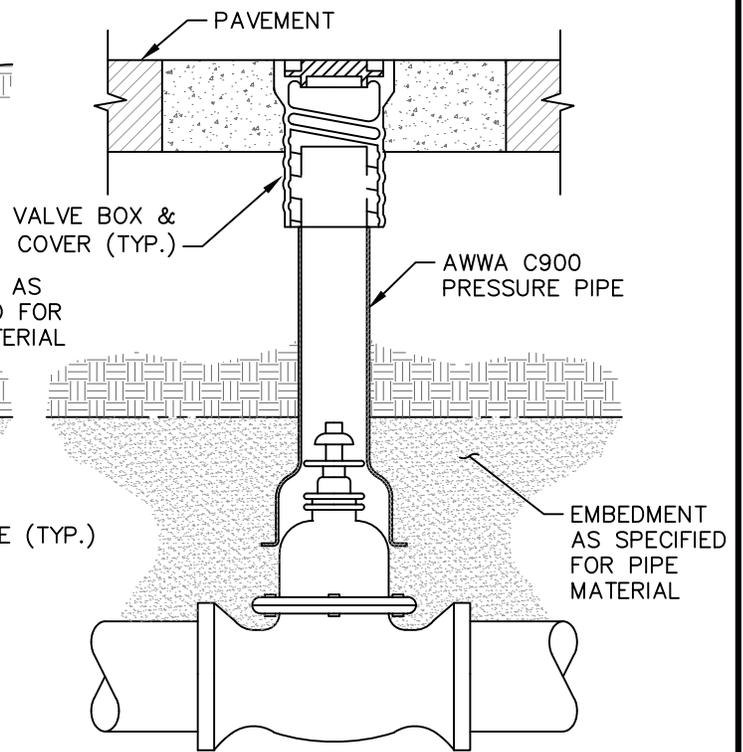


NOTE:

1. THE VALVE AND JOINT ASSEMBLIES SHALL BE WRAPPED IN POLYETHYLENE ACCORDING TO AWWA C105.
2. THE JOINT TYPE SHALL BE MECHANICAL JOINT UNLESS OTHERWISE SPECIFIED IN THE PLANS.
3. VALVE BOX SHALL BE TYLER PIPE 6850 SERIES OR APPROVED EQUAL.
4. GATE VALVE SHALL BE RESILIENT SEAT TYPE WITH A NON RISING STEM, A 2-INCH SQUARE OPERATOR, AND A FULLY ENCAPSULATED WEDGE. RESILIENT SEAT GATE VALVE SHALL CONFORM TO AWWA C509.
5. ACCEPTABLE MANUFACTURERS FOR GATE VALVES ARE MUELLER OR APPROVED EQUAL.
6. STEM EXTENSIONS ARE REQUIRED WHEN THE DEPTH TO THE TOP OF THE OPERATING NUT EQUALS OR EXCEEDS 3 FEET.
7. BOX TOP INSERTS ARE REQUIRED IN ALL BOX INSTALLATIONS. 8. 16" AND LARGER GATE VALVES REQUIRE CONCRETE BLOCK UNDER THE VALVE BODY.
8. ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.



VALVES IN YARDS OR OTHER AREAS NOT SUBJECT TO TRAFFIC



VALVES WITHIN ROADWAYS OR OTHER PAVED OR SURFACED AREAS

THE TOWN OF

Highland Park
TEXAS

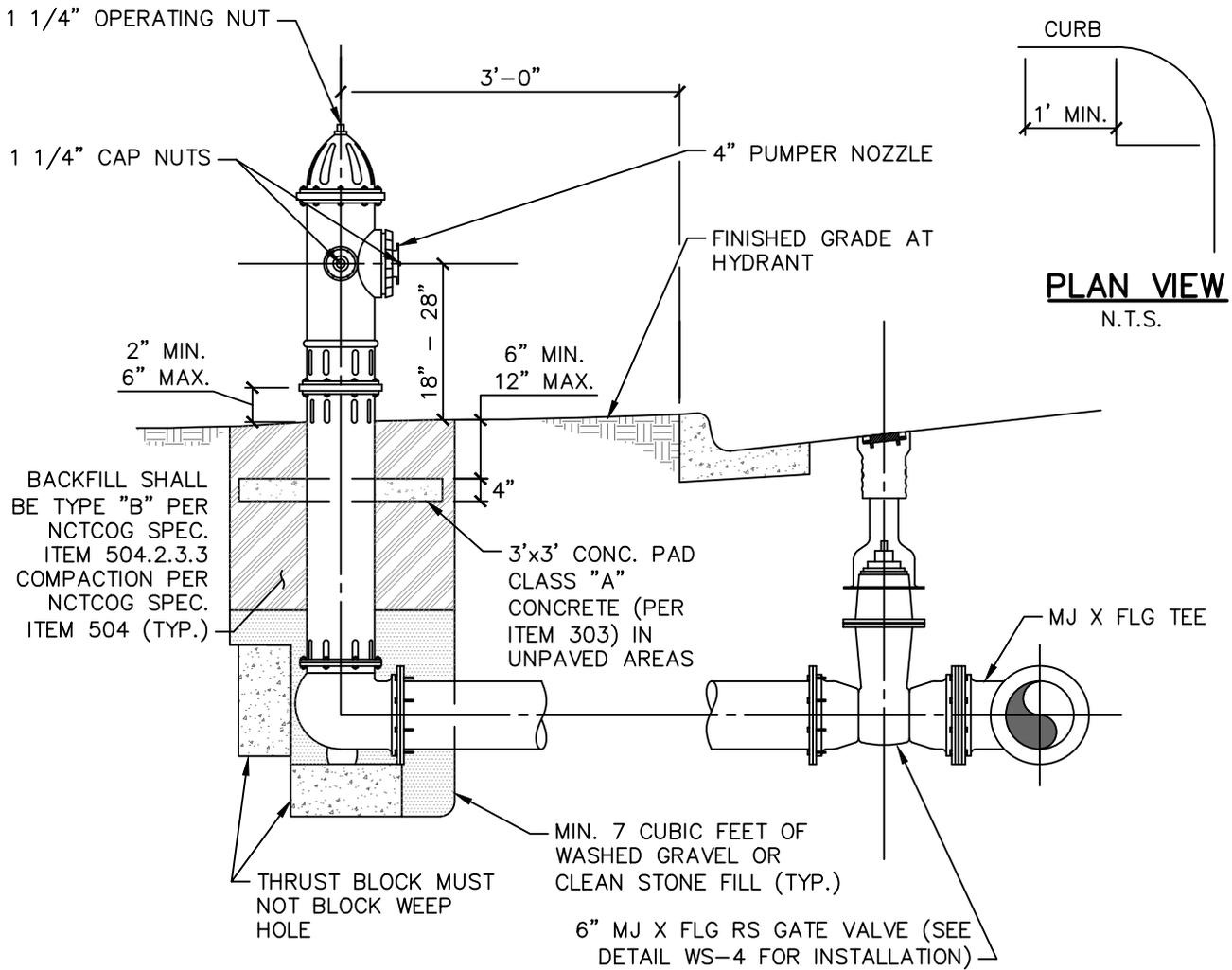
STANDARD CONSTRUCTION DETAIL

GATE VALVE AND BOX
INSTALLATION

DATE:

MAY 2022

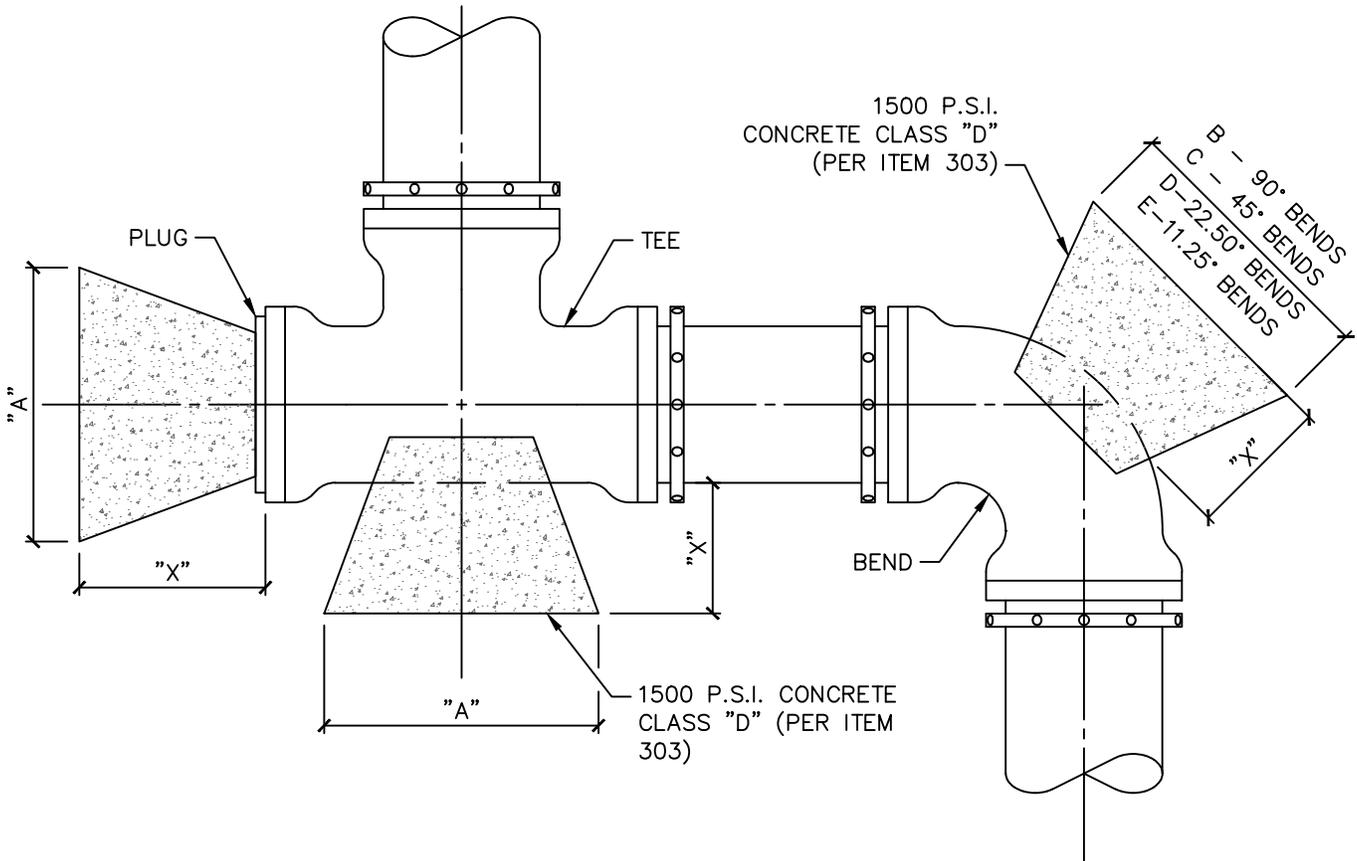
WS-04



NOTE:

1. ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS, C502. FIRE HYDRANTS SHALL HAVE A 5 1/4" MIN VALVE OPENING AND AN INSIDE BARREL DIAMETER OF APPROXIMATELY 7". ALL HYDRANTS SHALL BE EQUIPED WITH A BREAKAWAY FLANGE. SEE APPROVED MATERIAL LIST.
2. ACTUAL VALVE LOCATION WILL DEPEND ON LOCATION OF WATER MAIN.
3. FIRE HYDRANT LEADS GREATER THAN 2 FEET REQUIRE JOINT THRUST RETAINERS.
4. FIRE HYDRANT NO CLOSER THAN 18" TO EXISTING OR PROPOSED SIDEWALKS (TYPICAL).
5. TOP OF PIPE SHALL BE A MINIMUM 42" BELOW GRADE.
6. FIRE HYDRANT SHALL BE PLACED ON THE EXTENDED LOT LINE WHEN POSSIBLE.
7. FIRE HYDRANT SHALL BE LOCATED A MINIMUM 1 FT. OUTSIDE OF THE AREA BETWEEN THE P.C.'S OF THE CORNER TURNING RADIUS AT THE INTERSECTIONS. (SEE PLAN VIEW)
8. ALL FIRE HYDRANTS SHALL BE AT LEAST 42 INCHES FROM ANY ABOVE GROUND OBSTRUCTIONS, SUCH AS GUARDRAILS, RETAINING WALLS, BOLLARDS, ETC.
9. ALL BELOW GROUND IRON ASSEMBLES SHALL BE WRAPPED IN POLYETHYLENE ACCORDING TO AWWA C105.
10. ACCEPTABLE MANUFACTURERS: MUELLER-SUPER CENTURIAN.
11. GRADELOCK OR APPROVED EQUAL CONNECTOR PIPE SHALL BE USED AS NECESSARY TO ENSURE THE FIRE HYDRANT IS SET AT THE PROPER GRADE.
12. A BLUE REFLECTORIZED PAVEMENT MARKER ON THE CENTERLINE OF THE STREET IS REQUIRED TO MARK THE LOCATION OF THE FIRE HYDRANT.
13. FIRE HYDRANTS SHALL BE PAINTED BY THE CONTRACTOR. PAINT WILL BE PROVIDED BY THE TOWN FOR CONTRACTOR USE.
14. ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE: NOV 2021
	FIRE HYDRANT INSTALLATION	WS-05



HORIZONTAL BLOCKING TABLE

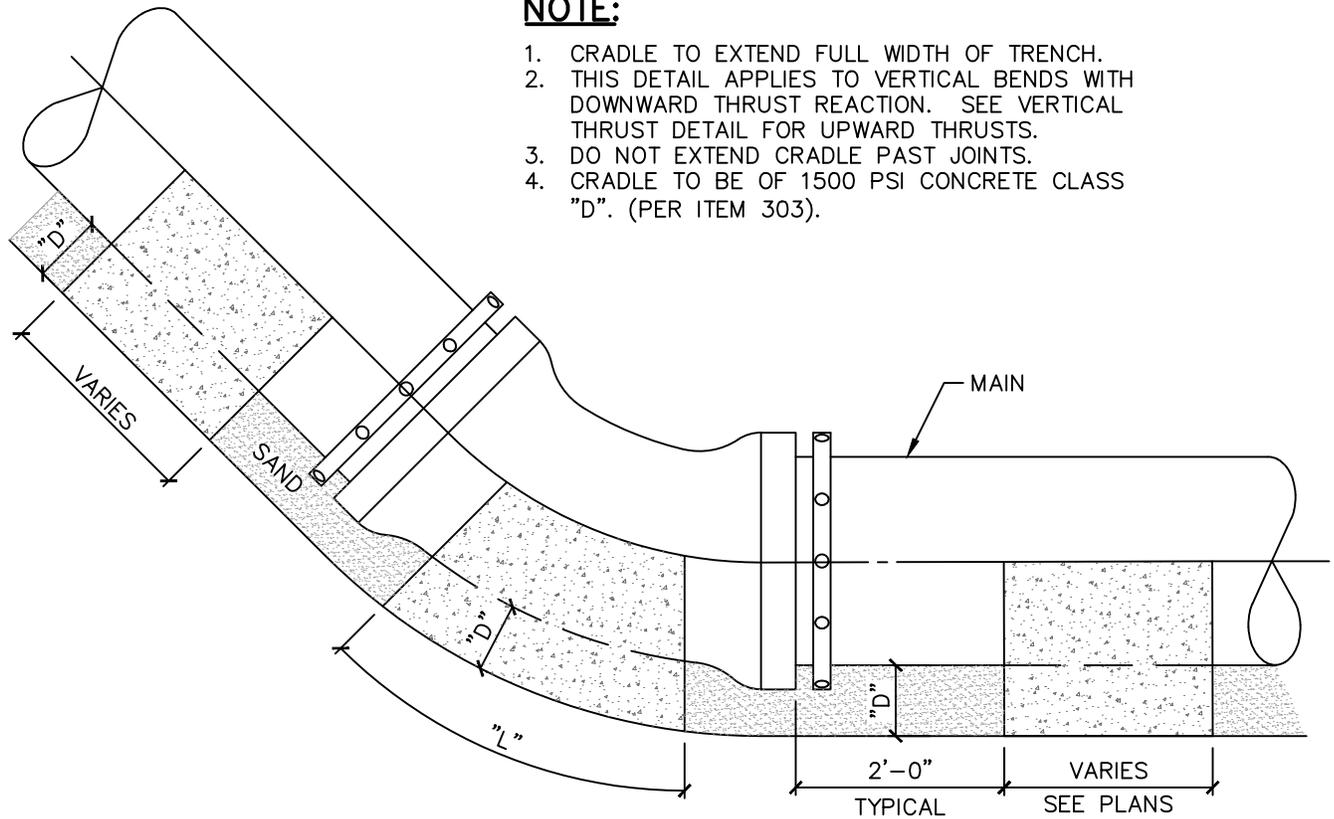
DIMENSION "X" TO BE A MINIMUM OF (1) FOOT, BUT IS TO BE INCREASED WHERE NECESSARY TO PROVIDE BEARING AGAINST UNDISTURBED TRENCH WALL.

PIPE SIZE	"X" DIM.	PLUGS & TEES		90° BENDS		45° BENDS		22.50° BENDS		11.25° BENDS	
		"A"	MIN. AREA sf	"B"	MIN. AREA sf	"C"	MIN. AREA sf	"D"	MIN. AREA sf	"E"	MIN. AREA sf
6"	1'-6"	1'-0"	1.06	1'-2"	1.50	1'-0"	.83	1'-0"	.83	1'-0"	.83
8"	1'-6"	1'-3"	1.89	1'-6"	2.66	1'-3"	1.44	1'-0"	.83	1'-0"	.83
10"	1'-6"	1'-9"	2.95	2'-0"	4.17	1'-6"	2.26	1'-3"	1.15	1'-0"	.83
12"	1'-6"	2'-0"	4.25	2'-3"	6.00	1'-9"	3.25	1'-3"	1.65	1'-0"	.83
16"	2'-0"	2'-7"	7.54	3'-0"	10.65	2'-3"	5.76	1'-8"	2.94	1'-2"	1.48

- NOTE:**
1. BEARING AREAS SHOWN ARE BASED ON 150 PSI TEST PRESSURE AND 3000 PSF ALLOWABLE SOIL BEARING PRESSURE.
 2. WRAP ALL BELOW GROUND IRON ASSEMBLIES IN POLYETHYLENE ACCORDING TO AWWA C105.
 3. ALL TEES, BENDS, PLUGS, ETC. SHALL BE MECHANICALLY RESTRAINED BY MEGALUG OR APPROVED EQUAL.
 4. ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

NOTE:

1. CRADLE TO EXTEND FULL WIDTH OF TRENCH.
2. THIS DETAIL APPLIES TO VERTICAL BENDS WITH DOWNWARD THRUST REACTION. SEE VERTICAL THRUST DETAIL FOR UPWARD THRUSTS.
3. DO NOT EXTEND CRADLE PAST JOINTS.
4. CRADLE TO BE OF 1500 PSI CONCRETE CLASS "D". (PER ITEM 303).



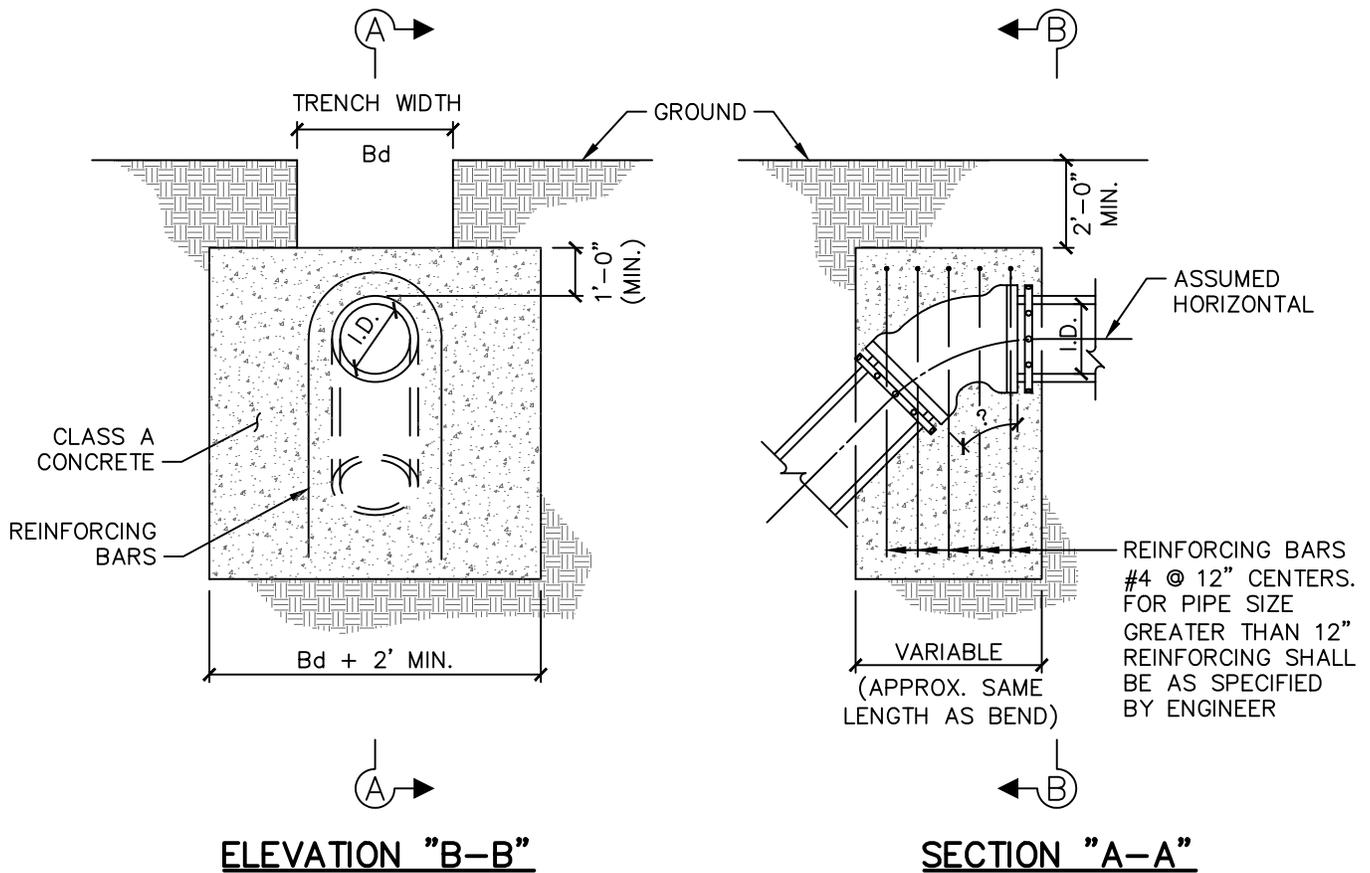
"D" = 6" MINIMUM TO UNDISTURBED SOIL

CONCRETE CRADLE TABLE

PIPE SIZE	90° BENDS		45° BENDS		22.50° BENDS		11.25° BENDS	
	"L"	MIN. AREA sf	"L"	MIN. AREA sf	"L"	MIN. AREA sf	"L"	MIN. AREA sf
6"	6"	1.50	1'-0"	.83	1'-0"	.83	1'-0"	.83
8"	1'-6"	2.66	1'-3"	1.44	1'-0"	.83	1'-0"	.83
10"	2'-0"	4.17	1'-6"	2.26	1'-3"	1.15	1'-0"	.83
12"	2'-3"	6.00	1'-9"	3.25	1'-3"	1.65	1'-0"	.83
16"	3'-0"	10.65	2'-3"	5.76	1'-8"	2.94	1'-2"	1.48

NOTES:

1. BEARING AREAS SHOWN ARE BASED ON 150 PSI TEST PRESSURE AND 3000 PSF ALLOWABLE SOIL BEARING PRESSURE.
2. WRAP ALL BELOW GROUND IRON ASSEMBLIES IN POLYETHYLENE ACCORDING TO AWWA C105.
3. ALL TEES, BENDS, PLUGS, ETC. SHALL BE MECHANICALLY RESTRAINED BY MEGALUG OR APPROVED EQUAL.
4. ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

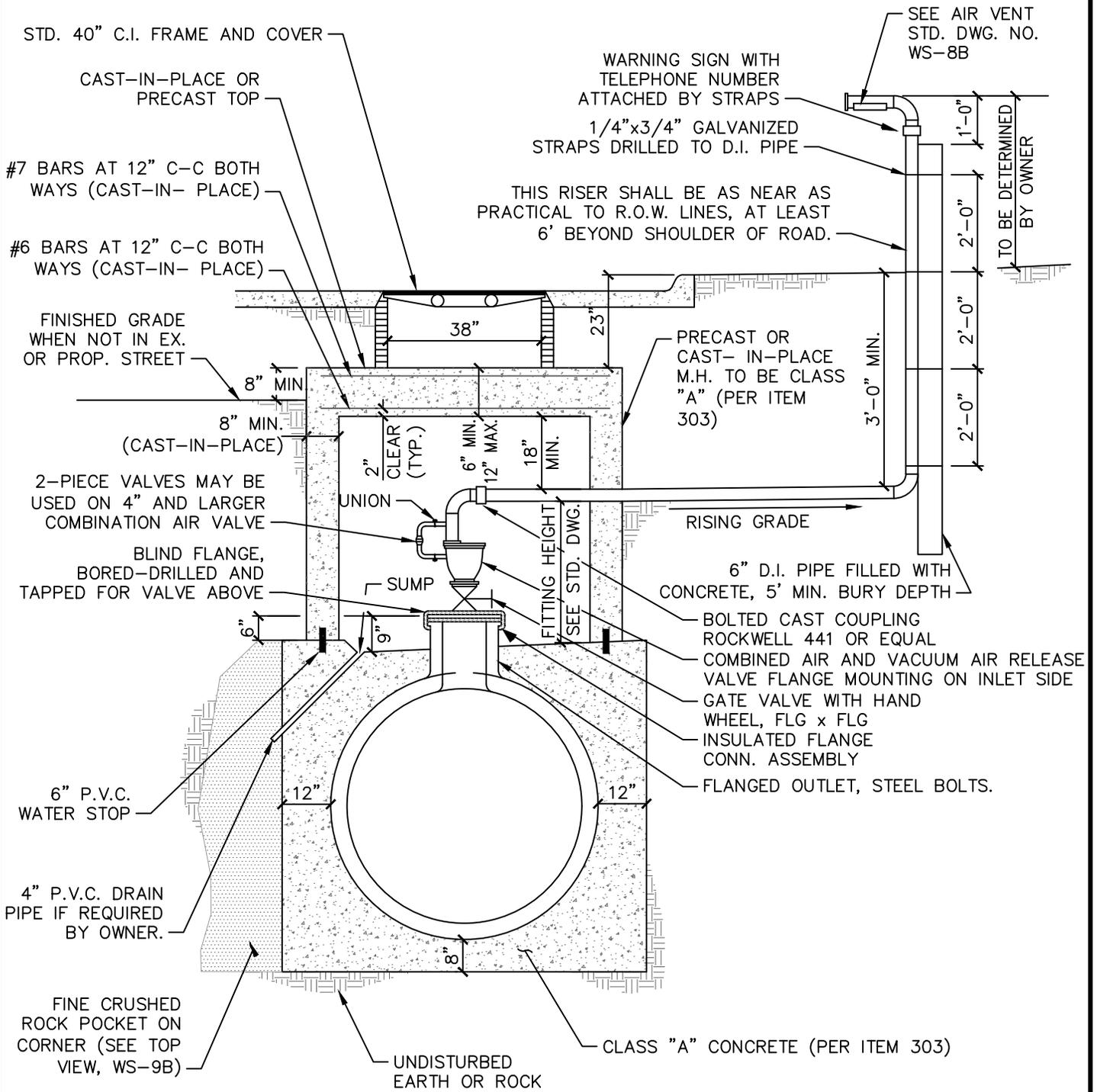


VERTICAL THRUST BLOCK TABLE

△→	11.25'		22.50'		30.00'		45.00'		67.50'		90.00'		←△
I.D. (IN.)	THRUST (TONS)	VOL. (C.Y.)	I.D. (IN.)										
4,6,8	1.0	0.5	2.0	1.0	2.5	1.3	3.6	1.8	4.6	2.3	5.0	2.5	4,6,8
10,12	2.2	1.1	4.3	2.2	5.7	2.8	8.0	4.0	10.5	5.2	11.3	5.7	10,12

NOTE:

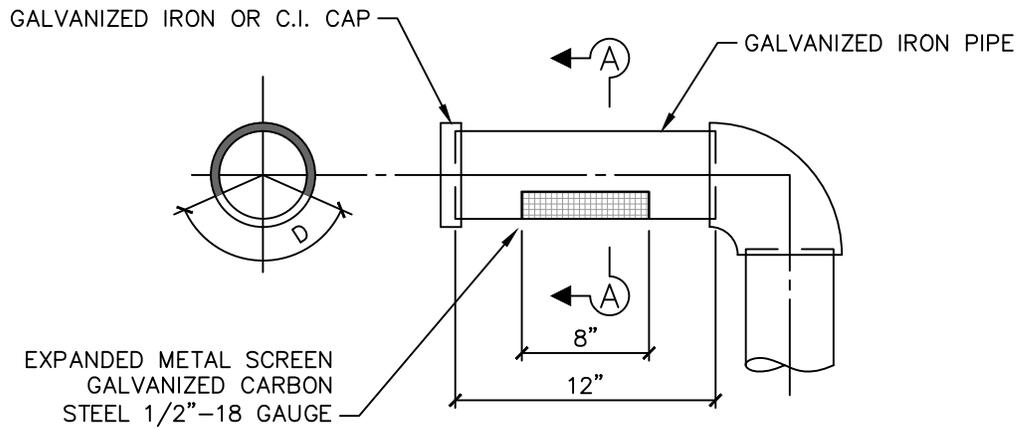
1. WRAP ALL BELOW GROUND IRON ASSEMBLIES IN POLYETHYLENE ACCORDING TO AWWA C105.
2. ALL TEES, BENDS, PLUGS, ETC. SHALL BE MECHANICALLY RESTRAINED BY MEGALUG OR APPROVED EQUAL.
3. ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.



NOTE:

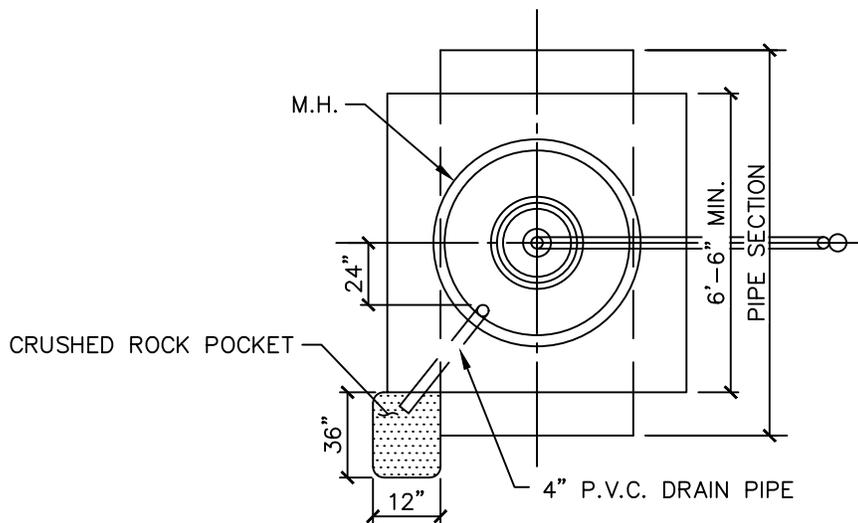
- ON 4" AND LARGER TWO PIECE COMBINATION AIR VALVES, THE OUTLET PIPING OF THE SMALL VALVE SHALL BE VENTED INTO THE SIDE OF THE LARGER VENT PIPE THAT GOES ABOVE GROUND.
- WHEN NOT IN PAVING OR WALK, A CONCRETE PAD REINFORCED W/ #3 BARS AT 12" C-C EACH WAY, SHALL EXTEND A MINIMUM OF 2' AROUND THE M.H. AND VENT PIPE, AND SHALL BE A MINIMUM OF 4" THICK.
- ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

<p>THE TOWN OF</p> <p><i>Highland Park</i></p> <p>TEXAS</p>	STANDARD CONSTRUCTION DETAIL	DATE:
	AIR RELEASE VALVE	FEB 2020
	TYPE 2	WS-09A



AIR VENT
NOT TO SCALE

AIR VALVE	GATE VALVE	FLANGE OUTLET	MIN. FITTING HEIGHT	VENT PIPE D	M.H. DIA.
2"	2"	8"	26"	2"	5"
3"	3"	18"	31"	3"	5'
4"	4"	18"	38"	4"	5'
6"	6"	18"	46"	6"	5'
8"	8"	18"	53"	8"	6'
10"	10"	20"	62"	10"	6'
12"	12"	24"	72"	12"	6'



PLAN VIEW
NOT TO SCALE

THE TOWN OF

Highland Park
TEXAS

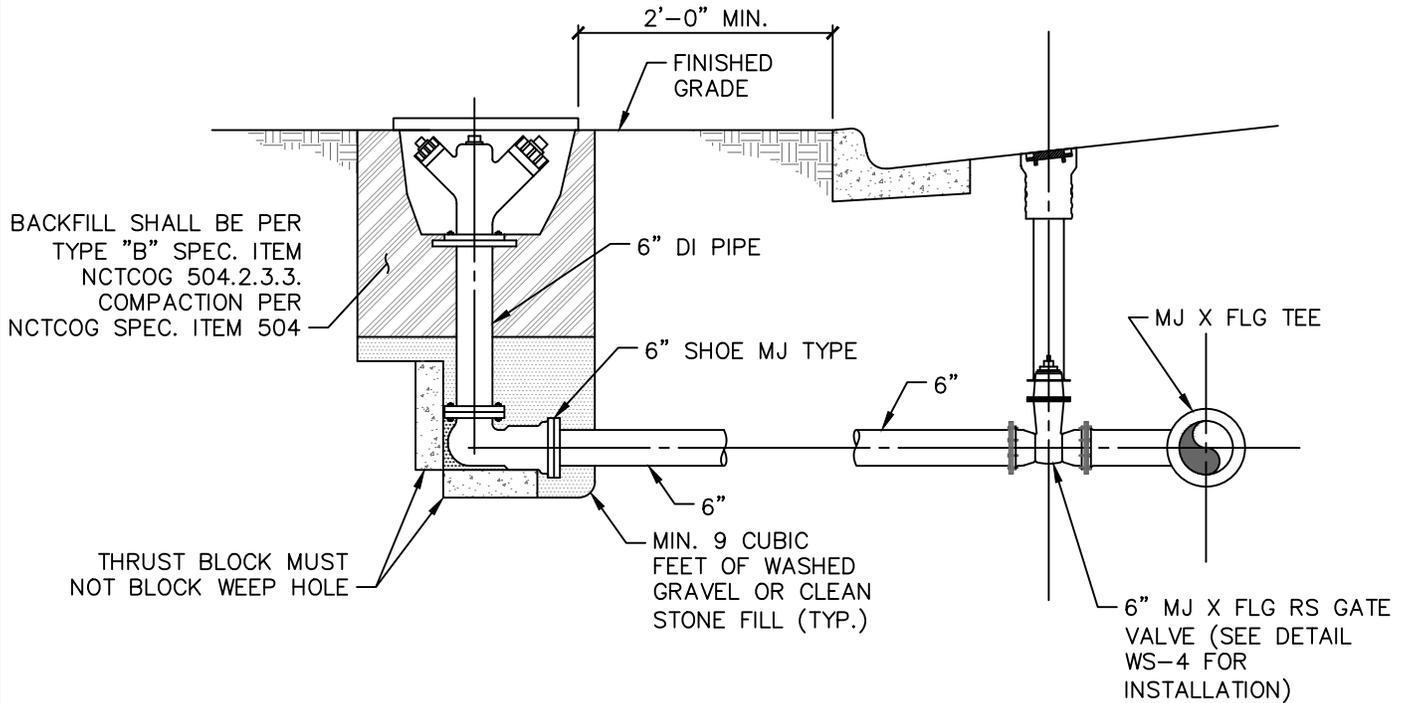
STANDARD CONSTRUCTION DETAIL

AIR RELEASE VALVE
TYPE 2

DATE:

FEB 2025

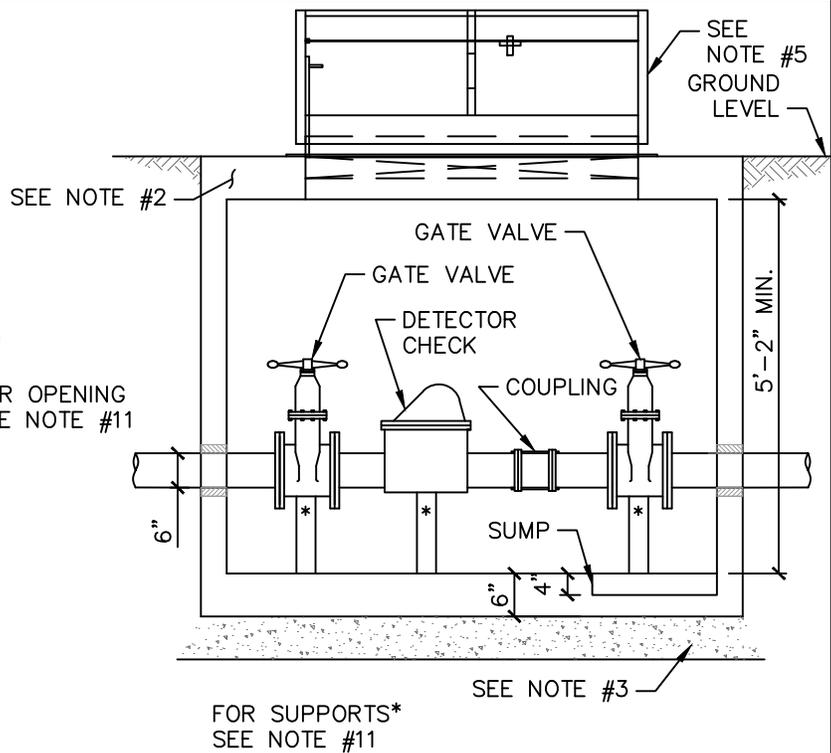
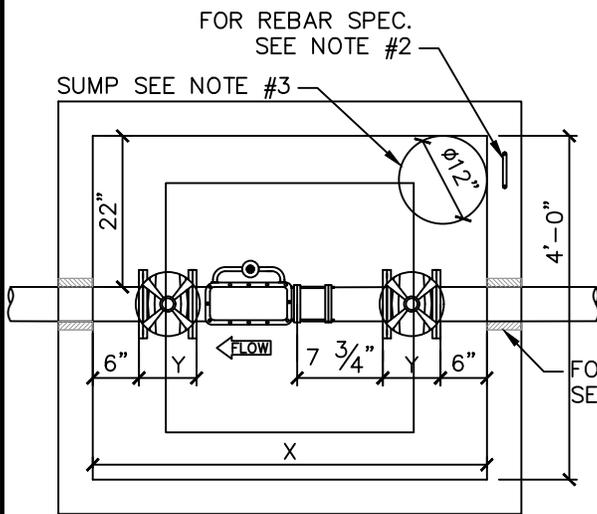
WS-09B



NOTE:

1. LOCATE THE BLOW-OFF HYDRANT NEAR PROPERTY LINE WITHOUT DISRUPTION TO SERVICE LINES.
2. ACTUAL VALVE LOCATION WILL DEPEND ON LOCATION OF THE WATER MAIN.
3. STANDARD BURY DEPTH SHALL BE 2 FEET.
4. GRADELOCK OR APPROVED EQUAL CONNECTOR PIPE SHALL BE USED AS NECESSARY TO ENSURE THE BLOW-OFF HYDRANT IS SET AT THE PROPER GRADE.
5. ALL BELOW GROUND IRON ASSEMBLIES SHALL BE WRAPPED IN POLYETHYLENE ACCORDING TO AWWA C105.
6. ACCEPTABLE MANUFACTURER: MUELLER 5-1/4" FLUSH TYPE FIRE HYDRANT (W/ ONE PUMPER NOZZLE AND TWO HOSE NOZZLES) OR APPROVED EQUAL.

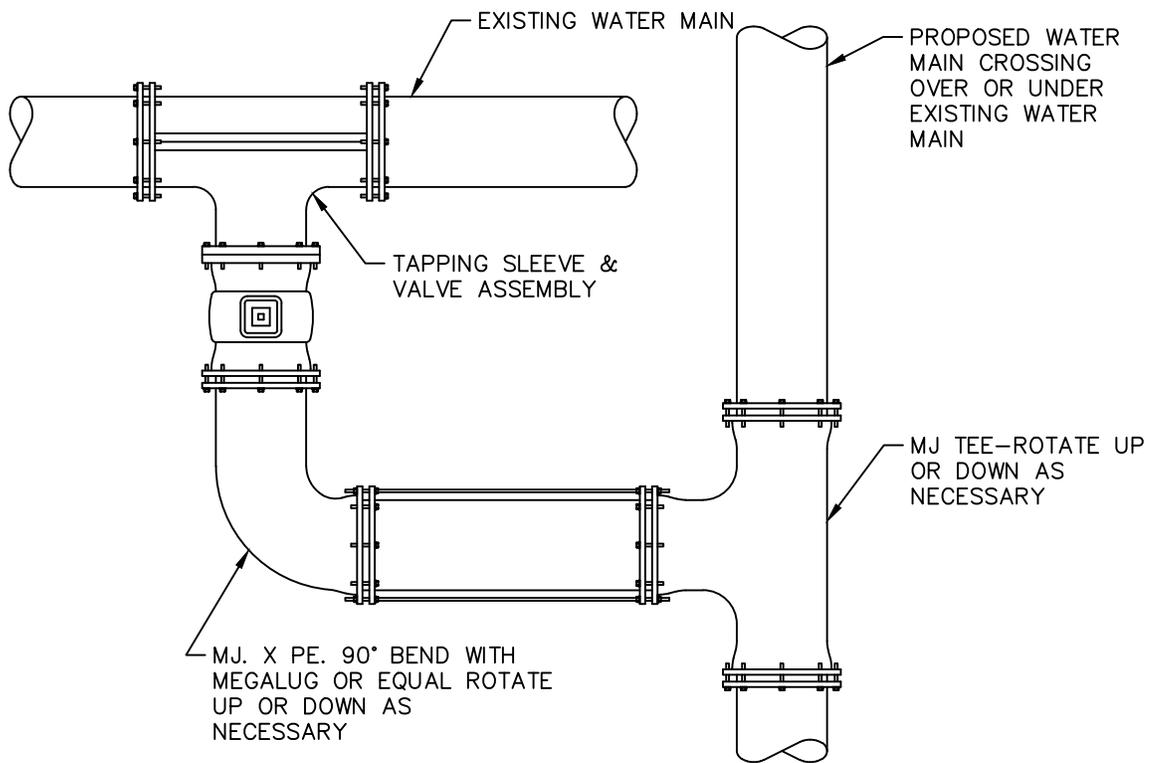
THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE: FEB 2020
	WATER MAIN BLOW-OFF	WS-10



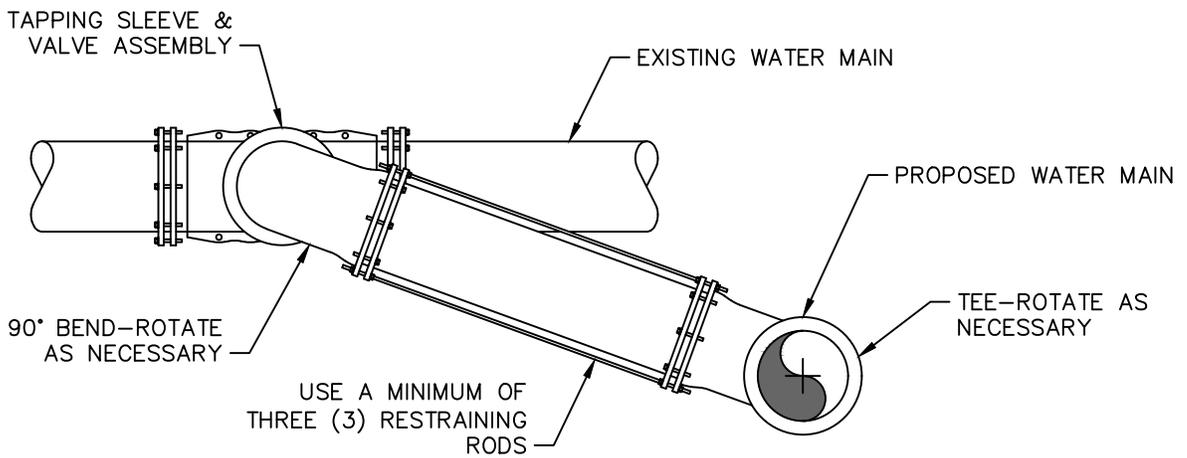
DETECTOR CHECK VAULT		
DETECTOR SIZE	"X"	"Y"
4"	4'-7"	9"
6"	5'-4"	10 1/2"
8"	5'-8"	11 1/2"

NOTE:

1. NOTIFY THE TOWN PRIOR TO CONSTRUCTION OF METER VAULT OR BY-PASS ASSEMBLY.
2. THE VAULT CAN BE EITHER POURED-IN-PLACE OR PREFABRICATED. ALL WALLS, EITHER POURED-IN-PLACE OR PREFABRICATED, SHALL BE A MONOLITHIC POUR. NO SEAMS OR EXTENSIONS WILL BE ALLOWED. CONCRETE SHALL BE 6" THICK - 3,000 P.S.I., REINFORCED WITH #4 STEEL BARS ON 12" CENTERS EACH WAY ON POURED-IN-PLACE VAULTS. PREFABRICATED VAULTS SHALL BE 4" THICK - 4,500 P.S.I. CONCRETE, REINFORCED WITH #4 STEEL BARS ON 8" CENTERS EACH WAY. THESE ARE MINIMUM SPECIFICATIONS.
3. THE BOTTOM OF THE VAULT SHALL BE 6" THICK - 3,000 P.S.I. CONCRETE, REINFORCED WITH #4 STEEL BARS ON 12" CENTERS BOTH WAYS. A 4" DEEP X 12" DIAMETER SUMP SHALL BE INSTALLED TO ONE SIDE AND IN EITHER CORNER OF THE BOTTOM SLAB. A 4" CUSHION OF SAND SHALL BE INSTALLED UNDER THE SLAB. IF A PRE-CAST VAULT IS NOT USED, A LAYER OF RAM-NEK SHALL BE INSTALLED BETWEEN THE WALLS AND BOTTOM SLAB.
4. THE VAULT SHALL NOT BE INSTALLED IN ANY DRIVING OR PARKING AREAS AND MUST BE LOCATED IN A UTILITY EASEMENT DEDICATED TO THE TOWN OF SAGINAW.
5. THE VAULT LID SHALL BE A BILCO TYPE JD-AL (OR APPROVED EQUAL). CHANNEL FRAME IS 1/4" STEEL (OR ALUMINUM) WITH ANCHOR FLANGE AROUND PERIMETER. THE LEAF IS 1/4" STEEL DIAMOND PATTERN PLATE, PIVOTING ON TORSION BARS FOR EASY OPERATIONS. THE MINIMUM LIVE LOAD CAPACITY IS 150 LBS PER SQUARE FOOT. THE LID SIZE SHALL BE 3' X 3'.
6. ALL PIPING INSIDE THE VAULT SHALL BE DUCTILE IRON WITH FLANGED FITTINGS. THE OUTSIDE DIMENSIONS OF THE PIPING SHALL BE WITHIN THE FOLLOWING RANGES: 3" PIPE - 3.74 TO 3.86; 4" PIPE - 4.74 TO 4.90; 6" PIPE - 6.81 TO 6.96; 8" PIPE - 8.98 TO 9.20; 10" PIPE - 11.04 TO 11.61. VARIATION FROM THESE DIMENSIONS WILL RESULT IN THE VAULT BEING REJECTED.
7. THE DETECTOR CHECK VALVE SHALL BE A HERSEY (MUELLER) MODEL EDC III (OR APPROVED EQUAL) EQUIPPED WITH A TRIM PACKAGE. THE TRIM PACKAGE SHALL INCLUDE ISOLATION VALVES AT BOTH ENDS. FITTINGS AND PIPING SHALL BE BRASS AND COPPER WITH IRON PIPE THREADING. THE SIZE OF THE TRIM PACKAGE IS AS FOLLOWS FOR EACH SIZE: 3" THROUGH 8" DETECTOR CHECK REQUIRES A 1" TRIM PACKAGE; 10" DETECTOR CHECK REQUIRES A 2" TRIM PACKAGE. THE METER FOR THE TRIM PACKAGE SHALL BE HERSEY MODEL MVR OR MODEL 400/500 IIS (OR APPROVED EQUAL).
8. THE GATE VALVES SHALL BE AS SPECIFIED IN WS-4 NOTE 5. VALVE SHALL INCLUDE HAND WHEEL ASSEMBLY.
9. ALL PIPING INSIDE THE VAULT AND THE VAULT ITSELF HAS TO BE INSPECTED AND APPROVED BY THE UTILITY OPERATIONS DEPARTMENT.
10. CONTRACTOR SHALL PROVIDE LINK SEAL WALL SLEEVES CAST IN THE WALL OF THE VAULT. THE WALL SLEEVES SHALL USE LINK SEALS. THE CONTRACTOR MAY HAVE THE WALL CORED BEFORE INSTALLATION OF VAULT AND PIPING. BREAKING OF THE WALL WITH A JACKHAMMER OR USING PRE-CAST KNOCKOUT PANELS IS NOT PERMITTED.
11. THERE WILL BE A CONCRETE SUPPORT UNDER EACH VALVE AND THE DETECTOR CHECK.
12. MINIMUM DEPTH OF ANY VAULT SHALL BE 5'-2".
13. IF ELEVATION ADJUSTMENTS ARE NEEDED ON THE ACCESS LID, CONTRACTOR SHALL CONTACT UTILITY OPERATIONS DEPARTMENT FOR APPROVAL PRIOR TO IMPLEMENTATION OF ADJUSTMENT.



PLAN



SECTION

NOTE:

1. WRAP ALL BELOW GROUND ASSEMBLIES IN POLYETHYLENE ACCORDING TO AWWA C105.
2. THE DIAMETER OF THE CONNECTING PIPE BETWEEN THE PROPOSED AND EXISTING WATER MAINS SHALL HAVE A DIAMETER EQUAL TO THE SMALLER OF THE TWO MAINS TO BE CONNECTED THROUGH THE PROPOSED RING CONNECTION.
3. PROPOSED WATER MAIN SHALL HAVE A MINIMUM OF 4' OF COVER.

THE TOWN OF

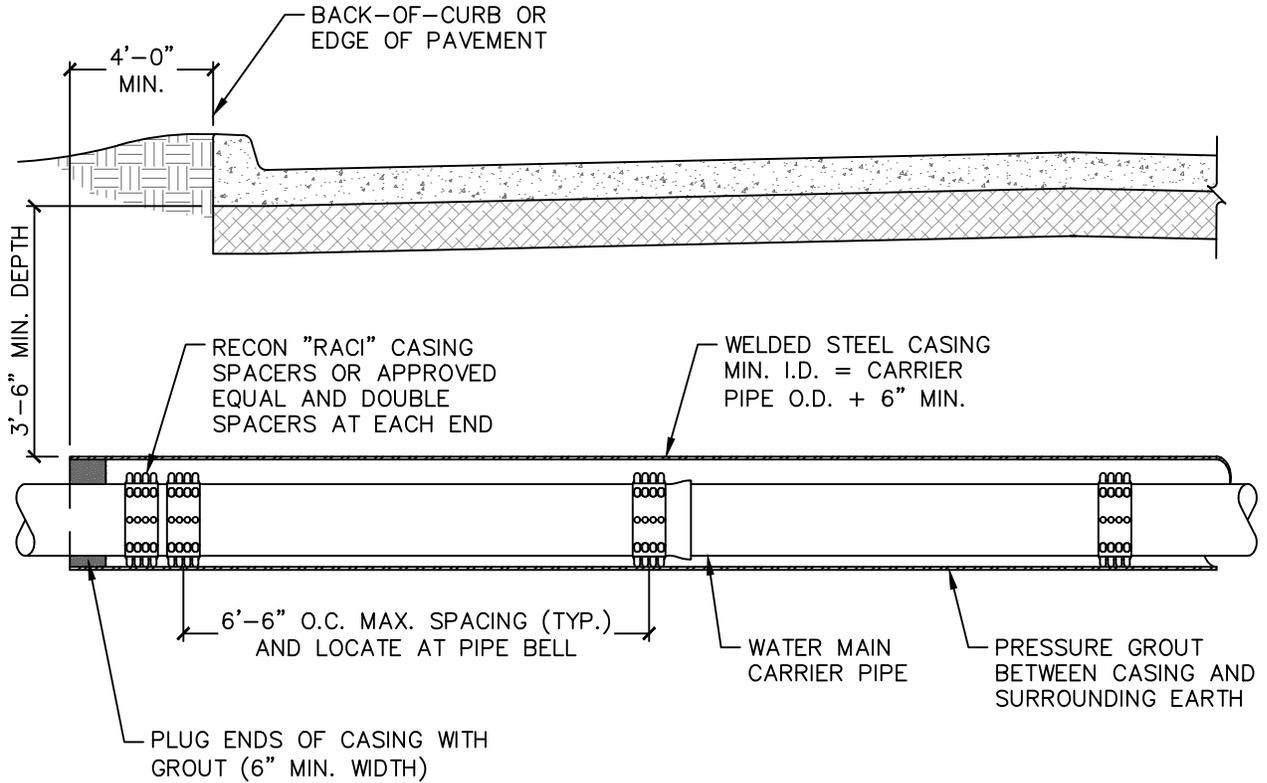
Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL

TYPICAL RING CONNECTION

DATE:
MAY 2022

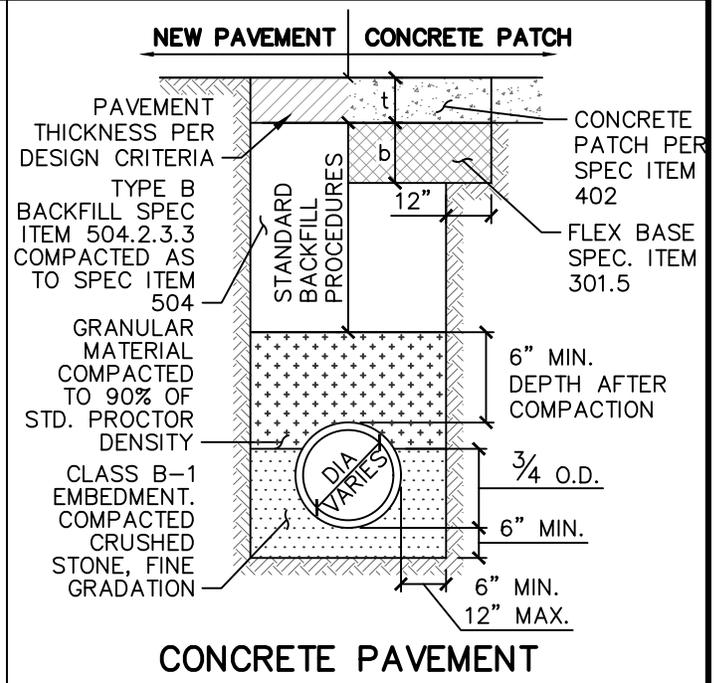
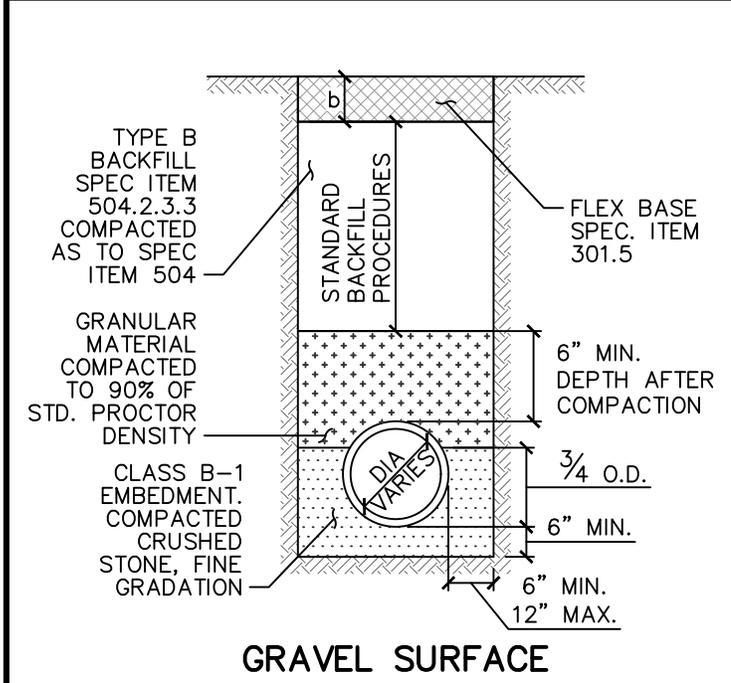
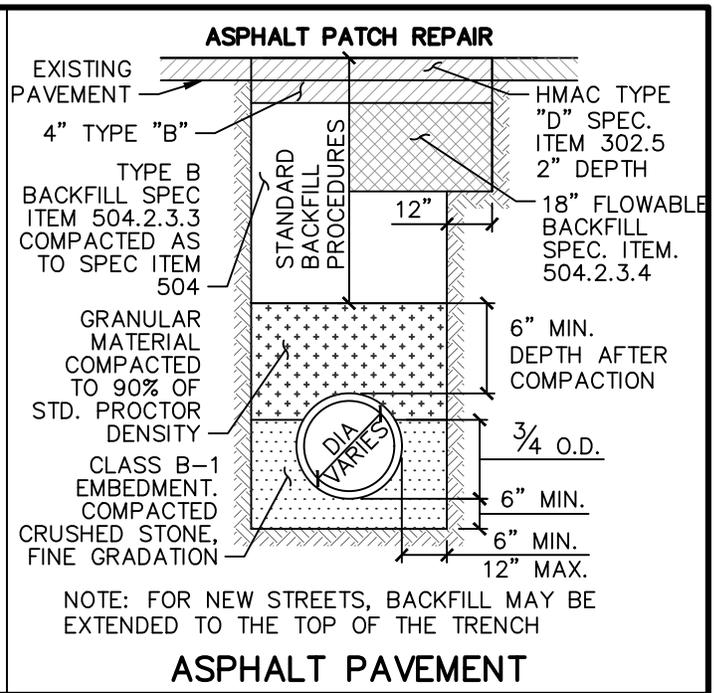
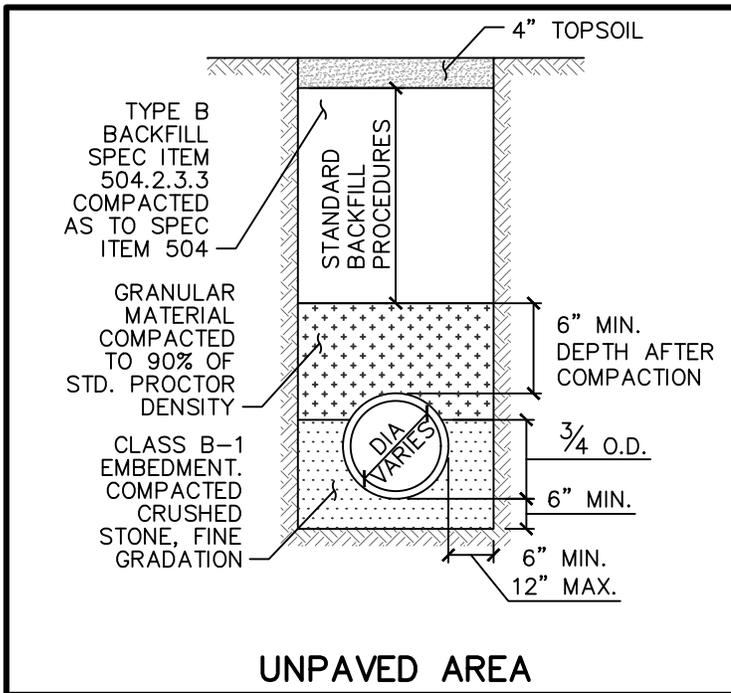
WS-12



CASING DIAMETER	MIN. WALL THICKNESS
12" OR LESS	0.25"
OVER 12" - 18"	0.3125"
OVER 18" - 22"	0.375"
OVER 22" - 28"	0.4375"
OVER 28" - 34"	0.5"
OVER 34" - 42"	0.5625"
OVER 42" - 48"	0.625"
OVER 48" - 60"	0.6875"

NOTE:

1. WHERE A BORE PIT EXCEEDS 5 FEET IN DEPTH, THE CONTRACTOR SHALL INSTALL SHORING OF THE PIT WALLS AS REQUIRED BY OSHA.
2. WHERE A BORE IS TO BE PARTIALLY OR COMPLETELY ABANDONED, SAID BORE SHALL BE COMPLETELY FILLED WITH HYDRAULICALLY PLACED CEMENT GROUT.
3. CASING SHALL BE EXTENDED TO THE RIGHT-OF-WAY LINE FOR STATE HIGHWAY AND RAILROAD CROSSINGS.
4. THE EDGE OF BORE PIT SHALL BE A MINIMUM OF 4' BEHIND THE BACK OF CURB OR EDGE OF PAVEMENT.
5. STEEL CASING PIPE SHALL HAVE A MINIMUM YIELD STRENGTH OF 35 KSI.

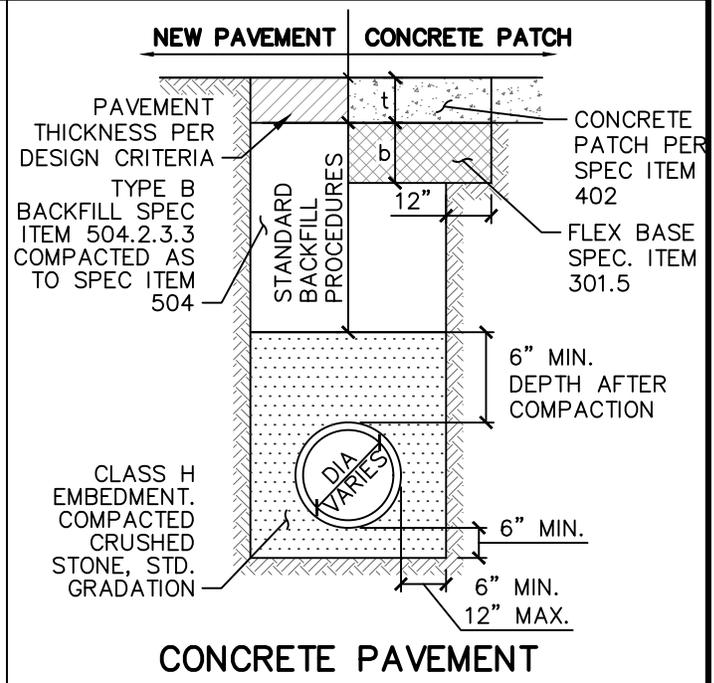
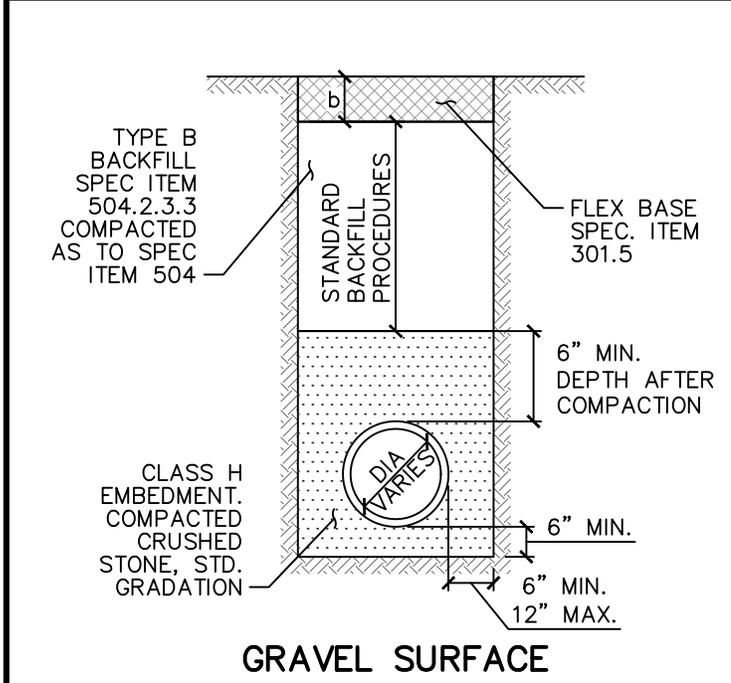
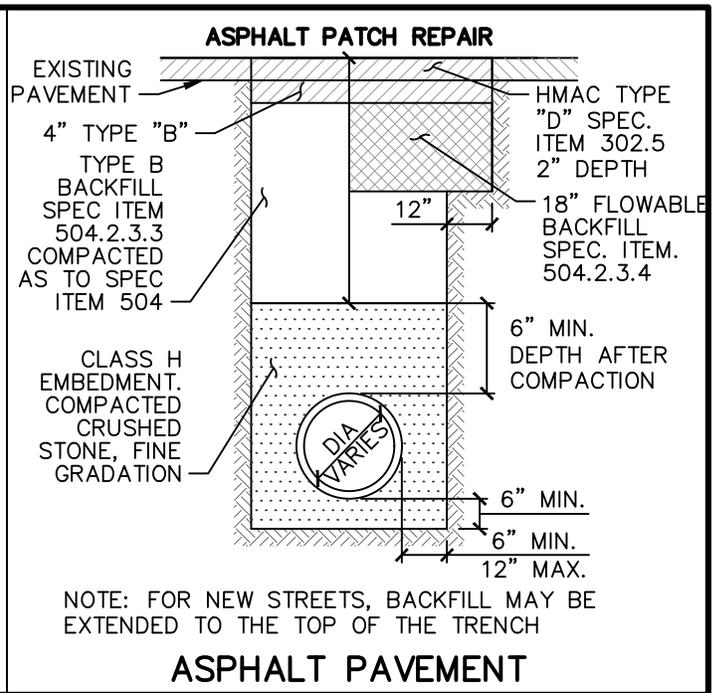
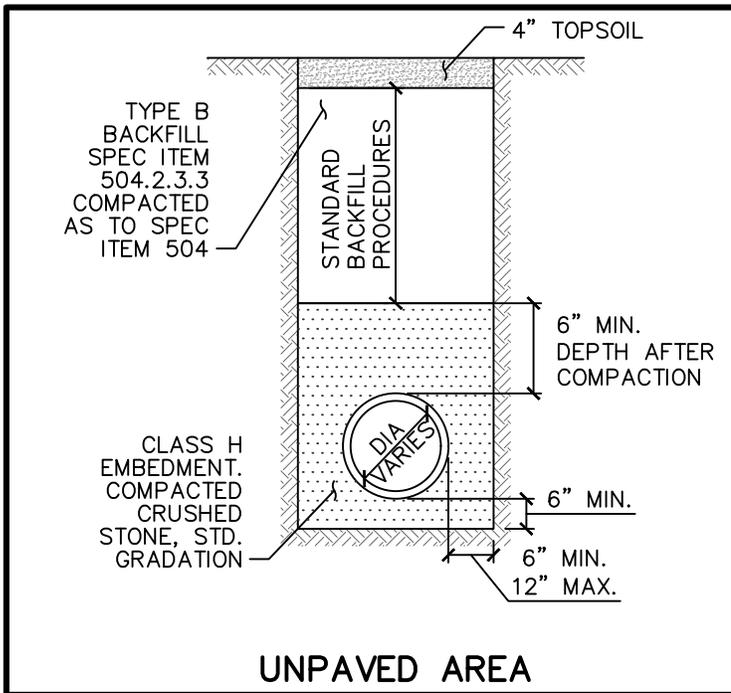


NOTE:

- UTILITZE CLASS "B-1" EMBEDMENT FOR PVC (SDR 35) SANITARY SEWER LINES WITH LESS THAN 15 FT OF COVER.
- ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- AT THE END OF EACH WORK DAY, ALL SPOILS SHALL BE REMOVED FROM THE TOWN R.O.W. UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE TOWN TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
- ALL BACKFILL SHALL BE PER SPEC. ITEM 504 AND SHALL BE COMPACTED PER SPEC. ITEM. 504. ROCKS GREATER THAN 4" IN DIA. SHALL BE REMOVED FROM ANY NATIVE MATERIAL USED AS BACKFILL.
- ALL PAVEMENT SHALL BE REMOVED ALONG NEAT SAW CUT LINES PER SPEC. ITEM 402.3.
- A MAXIMUM OF 200 FT. OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE TOWN ENGINEER.
- TOPSOIL SHALL BE 4 INCHES IN DEPTH AND SHALL BE LOOSE AND FREE OF ROCKS OR CLODS GREATER THAN 1/4" IN DIAMETER. ALL TOPSOIL SHALL BE APPROVED BY THE TOWN PRIOR TO INSTALLATION.

t = 6" (MINIMUM) FOR SECONDARY STREET SECTIONS
 8" (MINIMUM) FOR PRIMARY STREET SECTIONS
 (UNLESS OTHERWISE NOTED IN PLANS)

b = 12" FLEXIBLE BASE
 (UNLESS OTHERWISE NOTED IN PLANS)



NOTE:

- UTILITZE CLASS "H" EMBEDMENT FOR PVC (SDR 35) SANITARY SEWER LINES WITH 15 FT OR MORE OF COVER.
- ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- AT THE END OF EACH WORK DAY, ALL SPOILS SHALL BE REMOVED FROM THE TOWN R.O.W. UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE TOWN TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
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- A MAXIMUM OF 200 FT. OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE TOWN ENGINEER.
- TOPSOIL SHALL BE 4 INCHES IN DEPTH AND SHALL BE LOOSE AND FREE OF ROCKS OR CLODS GREATER THAN 1/4" IN DIAMETER. ALL TOPSOIL SHALL BE APPROVED BY THE TOWN PRIOR TO INSTALLATION.

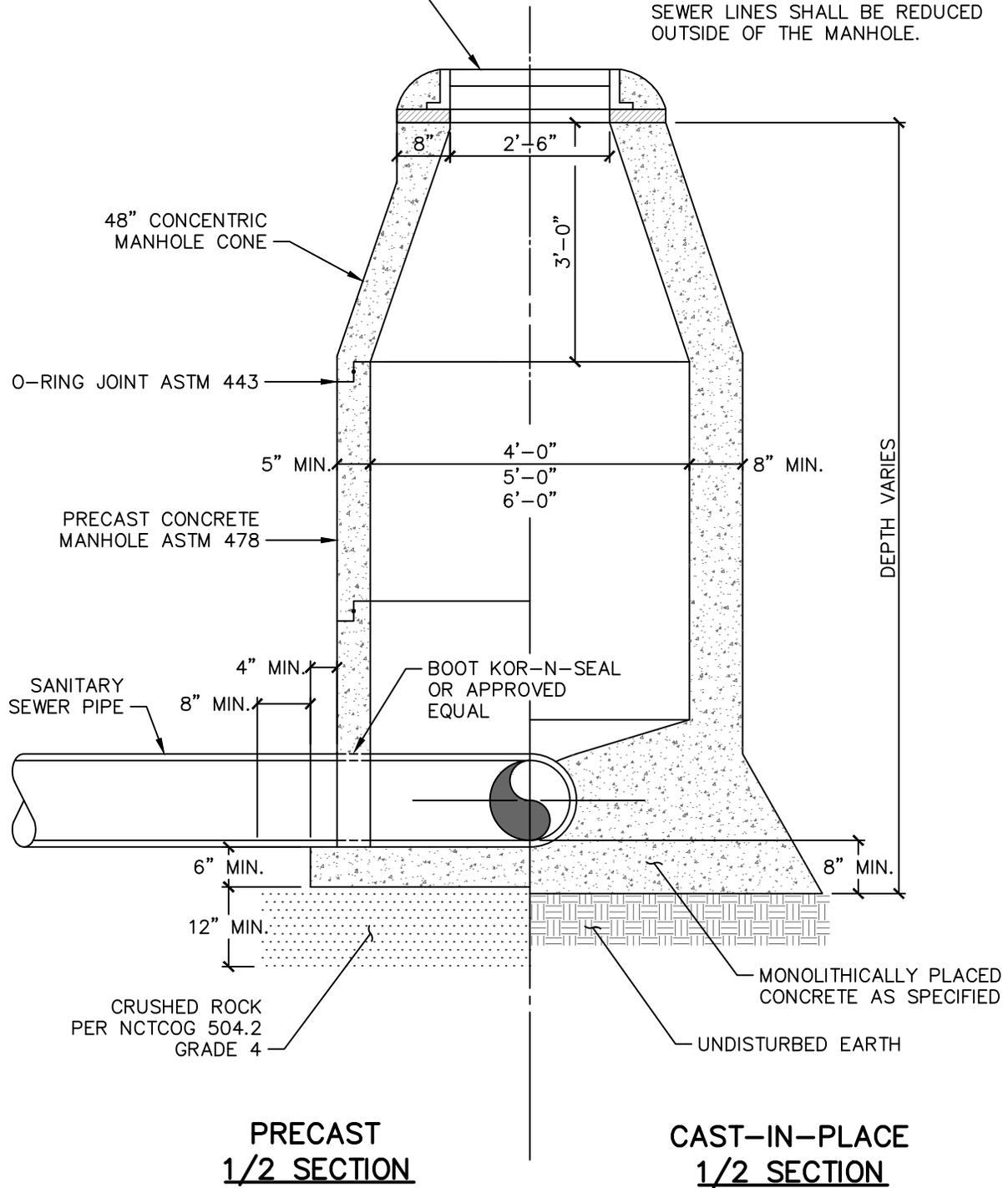
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 8" (MINIMUM) FOR PRIMARY STREET SECTIONS
 (UNLESS OTHERWISE NOTED IN PLANS)

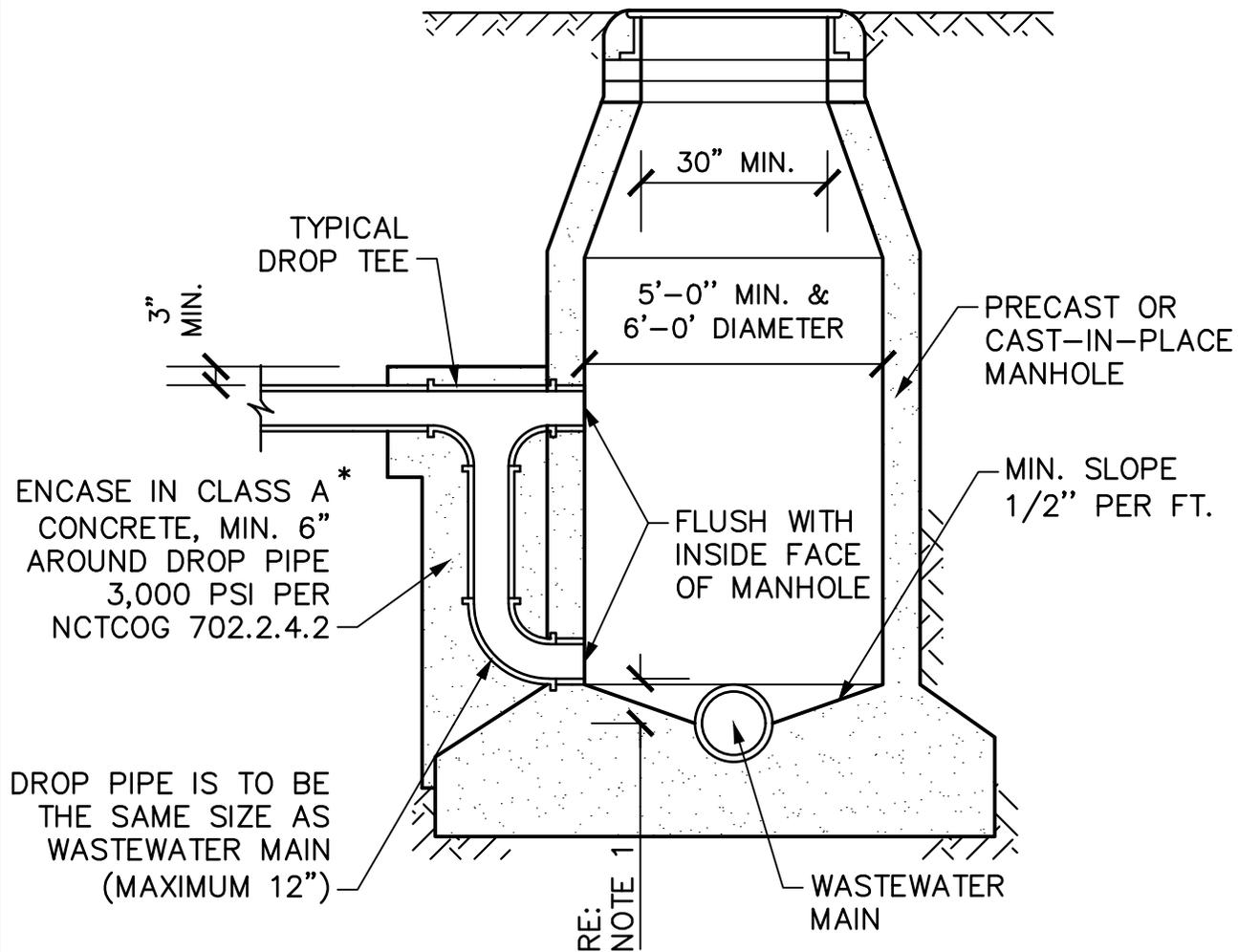
b = 12" FLEXIBLE BASE
 (UNLESS OTHERWISE NOTED IN PLANS)

NOTE:

1. MAXIMUM CHIMNEY HEIGHT SHALL BE 15".
2. MANHOLES SHALL BE CONCENTRIC UNLESS OTHERWISE APPROVED BY THE TOWN ENGINEER.
3. 4'X4' PAVEMENT INSERTS OF 6" 3000 PSI CONCRETE SHALL BE PROVIDED FOR MANHOLE LIDS.
4. ALL PIPES ENTERING MANHOLE AND FLUMES INSIDE MANHOLE SHALL BE 8" UNLESS OTHERWISE NOTED IN THE PLANS. PIPE CONNECTIONS TO 6" SANITARY SEWER LINES SHALL BE REDUCED OUTSIDE OF THE MANHOLE.

SEE DETAIL WS-19 FOR PLACEMENT OF GRADE RINGS, FRAME, AND MANHOLE INSERT





NOTE:

1. FLOWLINE OF DROP SHALL BE LOCATED BETWEEN THE CENTERLINE AND TOP OF WASTEWATER MAIN.
2. THERE SHALL BE A MINIMUM OF ONE-TENTH OF A FOOT (0.1') DROP BETWEEN INVERTS OF PIPES IN AND OUT OF MANHOLES.
3. WHERE UNEQUAL PIPES ENTER A MANHOLE, THE CROWN OF THE PIPES SHALL BE SET AT THE SAME ELEVATION.
4. ALL PIPES ENTERING MANHOLE AND FLUMES INSIDE MANHOLE SHALL BE 8" UNLESS OTHERWISE NOTED IN THE PLANS. PIPE CONNECTIONS TO 6" SANITARY SEWER LINES SHALL BE REDUCED OUTSIDE OF THE MANHOLE.

THE TOWN OF

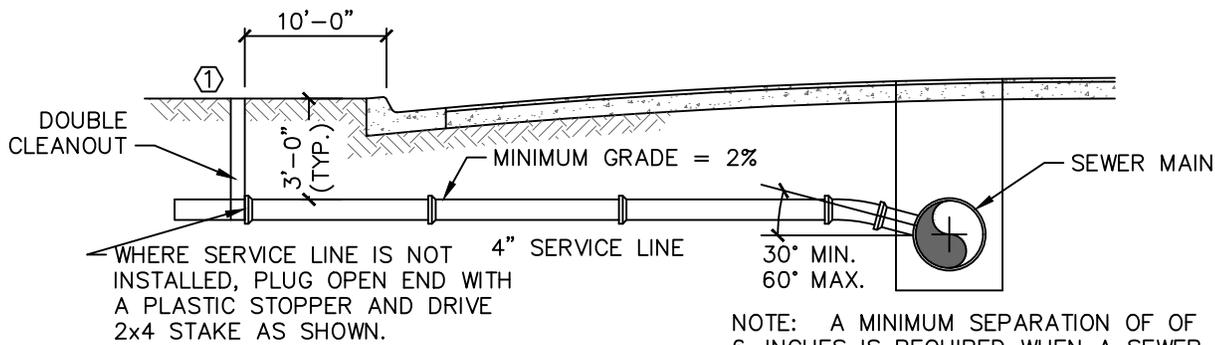
Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL

DROP CONNECTIONS FOR
SANITARY SEWER MANHOLE

DATE:
FEB 2020

WS-16

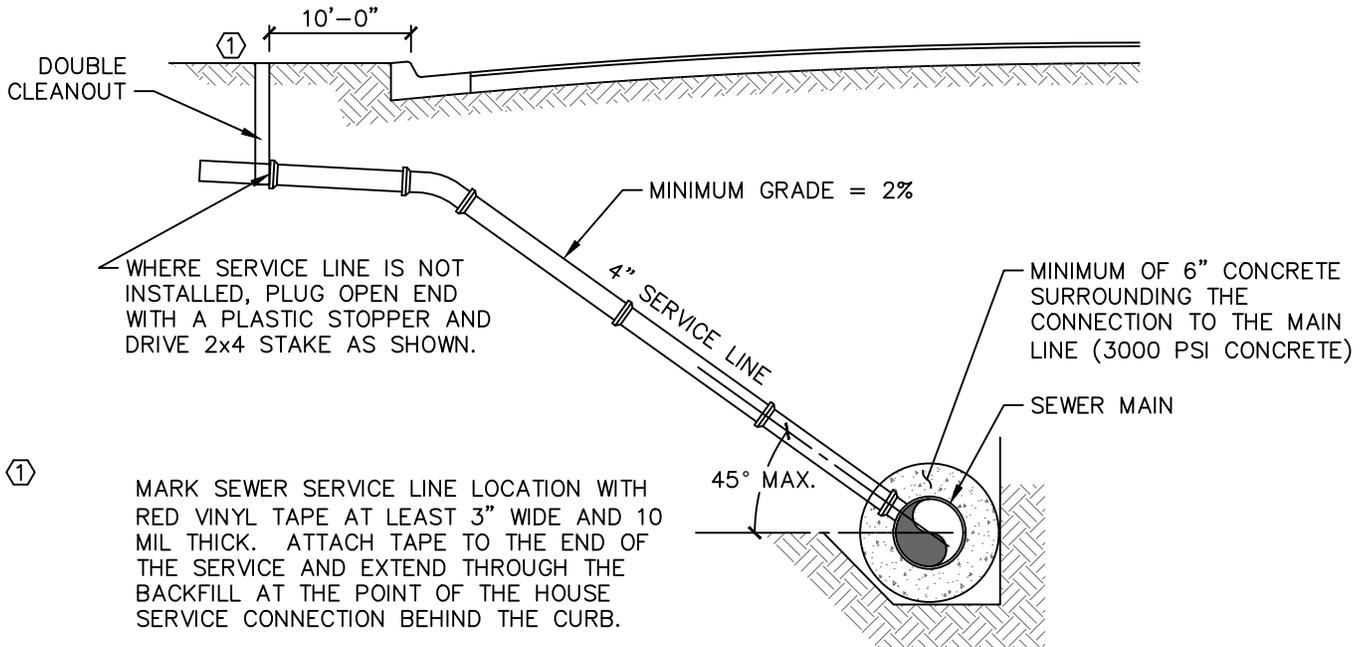
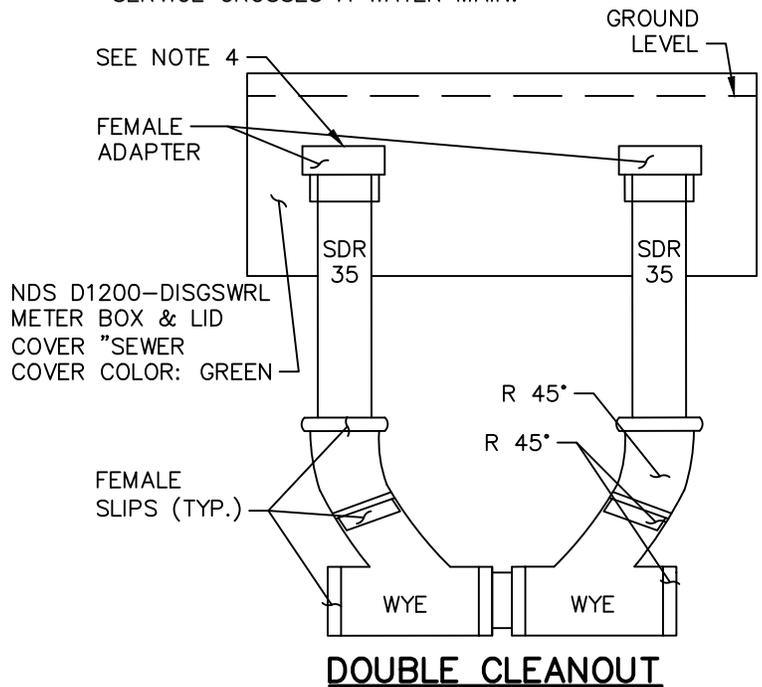


NOTE: A MINIMUM SEPARATION OF 6-INCHES IS REQUIRED WHEN A SEWER SERVICE CROSSES A WATER MAIN.

STANDARD SEWER SERVICE DETAIL

NOTE:

1. USE TEE OR TEE WYE FITTING (PVC) FOR CONNECTION TO EXISTING PVC SEWER MAIN. USE FERNCO FLEXIBLE TEE TAP SADDLE FITTING WITH STAINLESS STEEL STRAPS OR ROMAC STYLE CB SEWER SADDLE FOR CONNECTION TO EXISTING HDPE SEWER MAIN. ALL CONNECTIONS TO BE MADE AT THE TWO O'CLOCK OR TEN O'CLOCK POSITION. CONNECTIONS TO SEWER MAINS FROM 0' TO 7' DEEP SHALL CONFORM TO THE STANDARD SEWER CONNECTION DETAIL. CONNECTIONS TO SEWER MAINS DEEPER THAN 7' SHALL CONFORM TO THE DEEP SEWER CONNECTION DETAIL.
2. NEW SANITARY SEWER SERVICE SHALL INCLUDE REPLACING OR INSTALLING DOUBLE CLEANOUT. FOR SINGLE SERVICE CLEANOUT, SEE SHEET WS-17A.
3. ALL SANITARY SEWER SERVICE LINES SHALL BE SDR 35 PVC PIPE EXCEPT AS NOTED ON PLANS.
4. SANITARY SEWER CLEANOUT SHALL UTILIZE BASS AND HAYS 404 CLEANOUT BODY WITH FERNCO TRANSITION COUPLING.



DEEP SEWER SERVICE DETAIL

THE TOWN OF

Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL

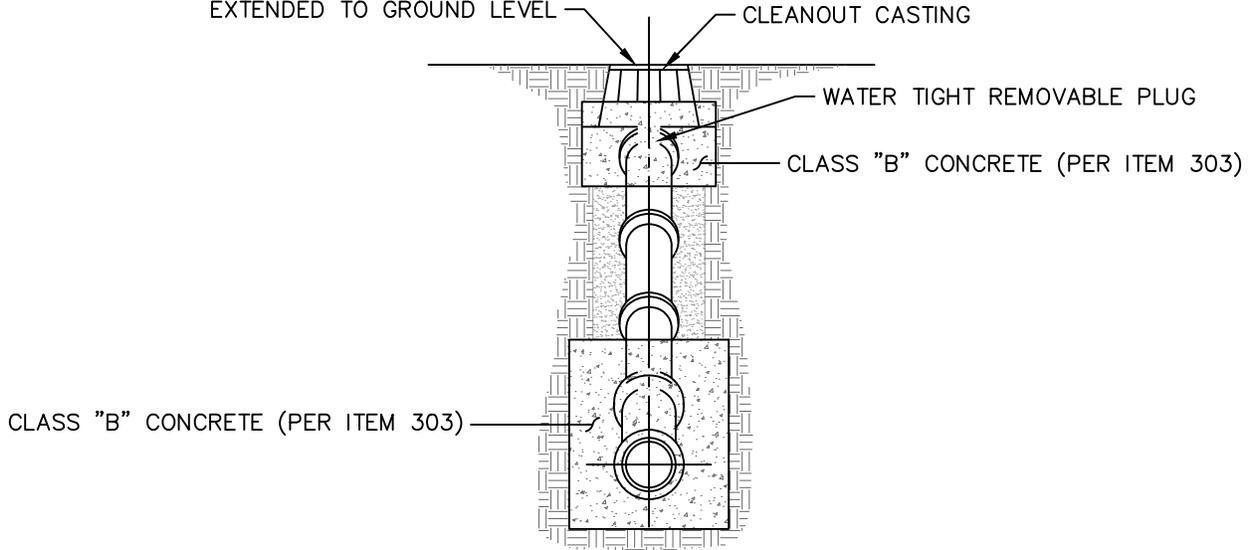
4" SANITARY SEWER SERVICE

DATE:

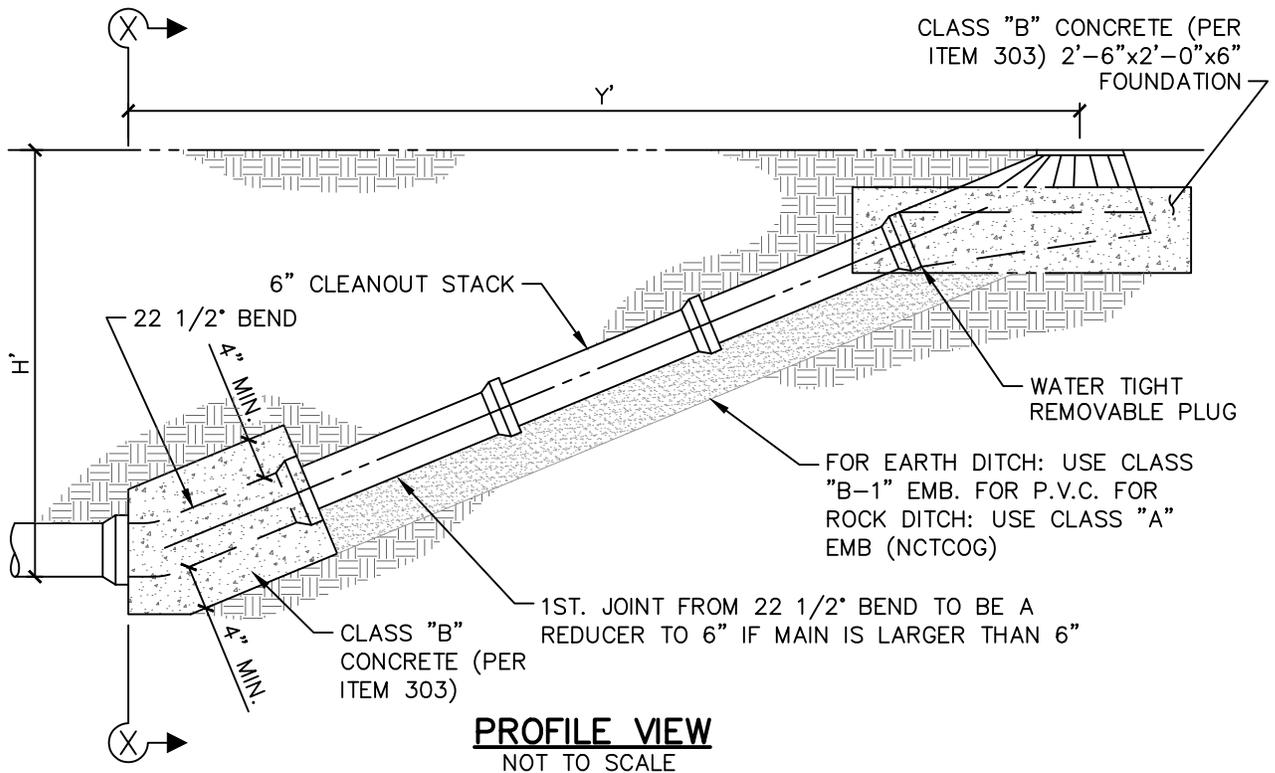
MAY 2022

WS-17B

CLEANOUT CASTING OPENING TO BE INSTALLED CENTERED OVER THE CENTERLINE OF THE CLEANOUT STACK EXTENDED TO GROUND LEVEL



SECTION "X-X"
NOT TO SCALE



PROFILE VIEW
NOT TO SCALE

NOTE:

1. IF CLEANOUT IS PLACED IN ADVANCE OF PAVEMENT PLACE SAND AROUND CLEANOUT CASTING IN LIEU OF CLASS "B" CONCRETE (PER ITEM 303).
2. ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

H'	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	H'
Y'	10	12	14	17	19	22	24	27	29	31	34	36	39	41	43	46	48	Y'

THE TOWN OF

Highland Park
TEXAS

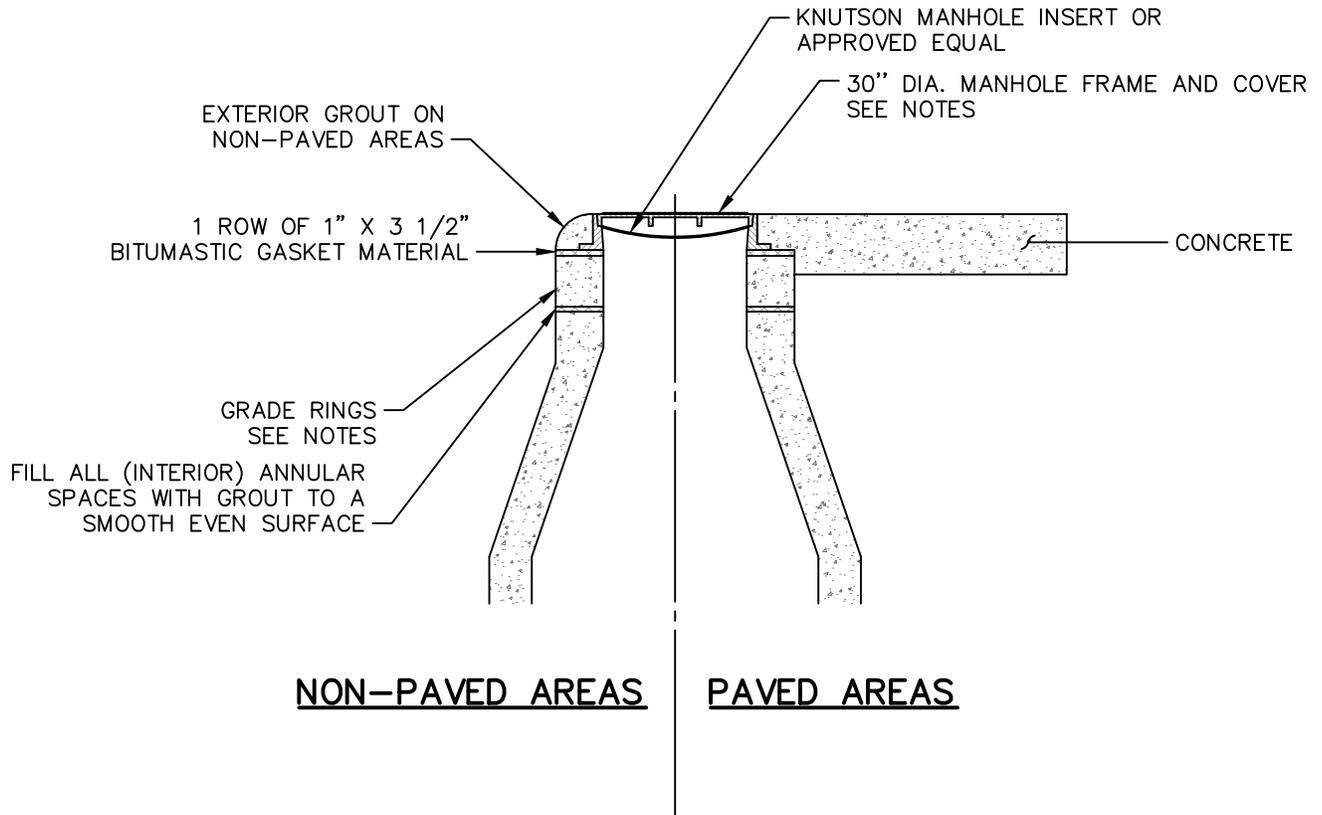
STANDARD CONSTRUCTION DETAIL

ACCESS DEVICE FOR
SANITARY SEWER LINE

DATE:

FEB 2025

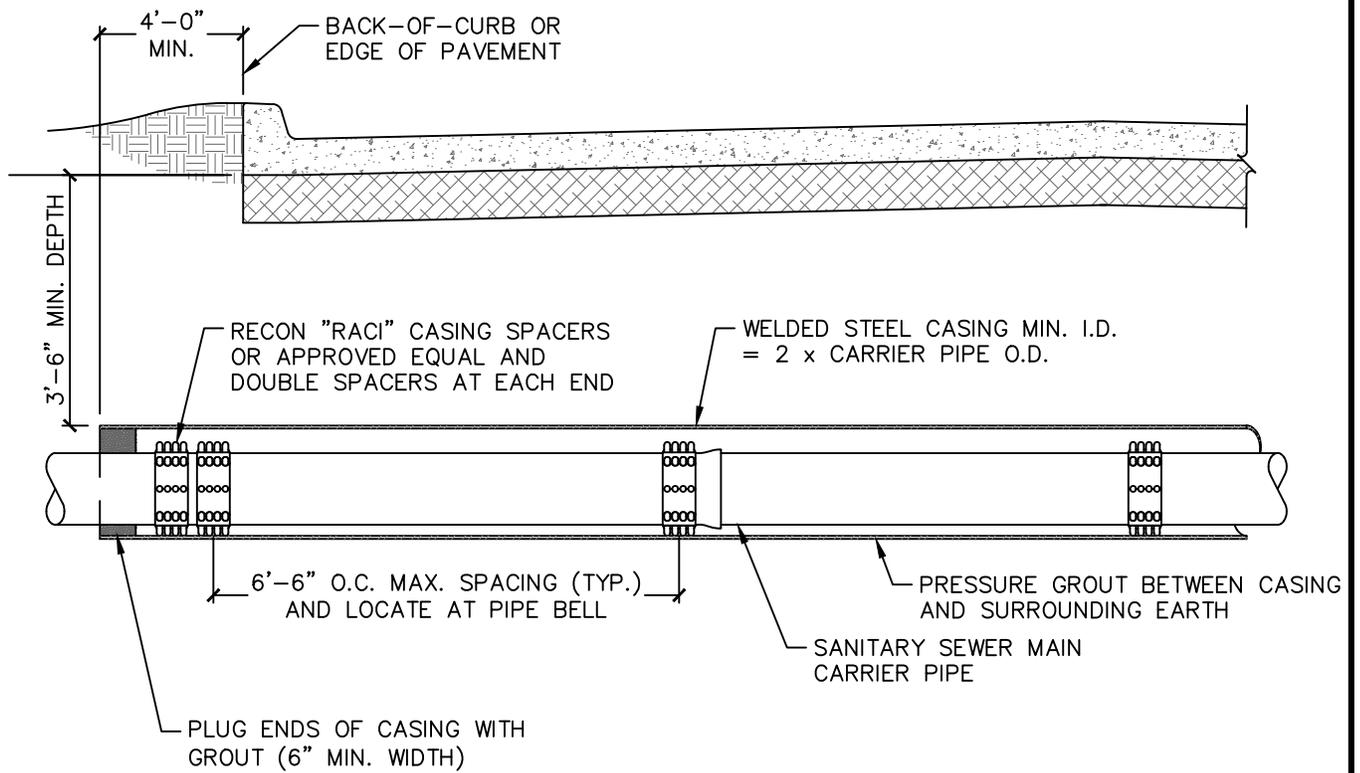
WS-18



NOTE:

1. NO GAPS WILL BE ALLOWED IN BITUMASTIC GASKET.
2. ONLY 30" DIAMETER, DOMESTICALLY MADE MANHOLE FRAMES AND COVERS SHALL BE USED.
3. THERE SHALL BE A SMOOTH TRANSITION BETWEEN THE FRAME AND CONE OR GRADE RING, OR THE GRADE RING AND THE CONE.
4. MANHOLE INSERTS SHALL BE MADE OF HIGH-DENSITY POLYETHELENE THAT MEETS ASTM D-1248, CLASS A, CATEGORY 5, TYPE 111 STANDARDS AND IS A UNIFORM THICKNESS OF 1/8" OR GREATER. AN ENVELOPE-STYLE GASKET, RIBBED ON ONE SIDE TO ENSURE A POSITIVE SEAL AND DESIGNED NOT TO SEPARATE FROM THE INSERT DURING INSTALLATION AND REMOVAL, SHALL BE FURNISHED. INSERTS SHOULD PROVIDE A GAS RELEASE HOLE (1/8") HAVING A WATER LEAKAGE RATE NOT TO EXCEED 1/2 GPH. TWO 1" WIDE NYLON LIFT STRAPS ATTACHED TO THE INSERT WITH TWO HIGH GRADE STAINLESS STEEL RIVETS WITH WASHERS ARE REQUIRED.
5. MANHOLE FRAME AND COVER MATERIAL AS SPECIFIED IN THE PLANS.
FOR COMPOSITE FRAME AND COVER:
 - 5.A. GRADE RINGS SHALL BE HDPE MATERIAL BONDED TO THE STRUCTURE, MANHOLE FRAME, AND ONE ANOTHER WITH BUTYL RUBBER SEALANT.
 - 5.B. FRAME AND COVER SHOULD CONSIST OF THERMOSETTING RESIN MATRIX BLENDED WITH NONMETALLIC REINFORCING STRUCTURES. FRAME AND COVER SHALL BE CAPABLE OF WITHSTANDING AASHTO M306 PROOF TESTING. COVERS SHALL BE BOLT-DOWN OR HAVE LATCH FASTENING MECHANISM PER TOWN DIRECTION AND HAVE CONCEALED PICK HOLES WITH STAINLESS STEEL INSERTS.
6. MANHOLE FRAME AND COVER MATERIAL AS SPECIFIED IN THE PLANS.
FOR CAST IRON FRAME AND COVER:
 - 6.A. GRADE RINGS SHALL BE DOWELED INTO THE MANHOLE CONE AND SEALED WITH 1 ROW OF 1" X 3.5" BITUMASTIC GASKET MATERIAL.
 - 6.B. CAST IRON FRAME AND COVER SHALL BE BASS-HAYES OR APPROVED EQUAL WITH A PICK BAR (PICK HOLES THROUGH COVER NOT ALLOWED).

THE TOWN OF <i>Highland Park</i> TEXAS	STANDARD CONSTRUCTION DETAIL	DATE: MAY 2022
	EXTENSION RING INSTALLATION (FRAME/COVER REPLACEMENT)	WS-19



NOTE:

1. FOR PVC AND CLAY PIPE REPAIRS, INSTALL PVC REPLACEMENT PIPE.
2. TO RELOCATE A SERVICE TAP ON AN HDPE LINE, REMOVE SERVICE SADDLE AND INSTALL A REPAIR CLAMP AT ORIGINAL LOCATION, THEN INSTALL NEW FERNCO OR ROMAC SADDLE (SEE SANITARY SEWER SERVICE DETAIL).

THE TOWN OF

Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL

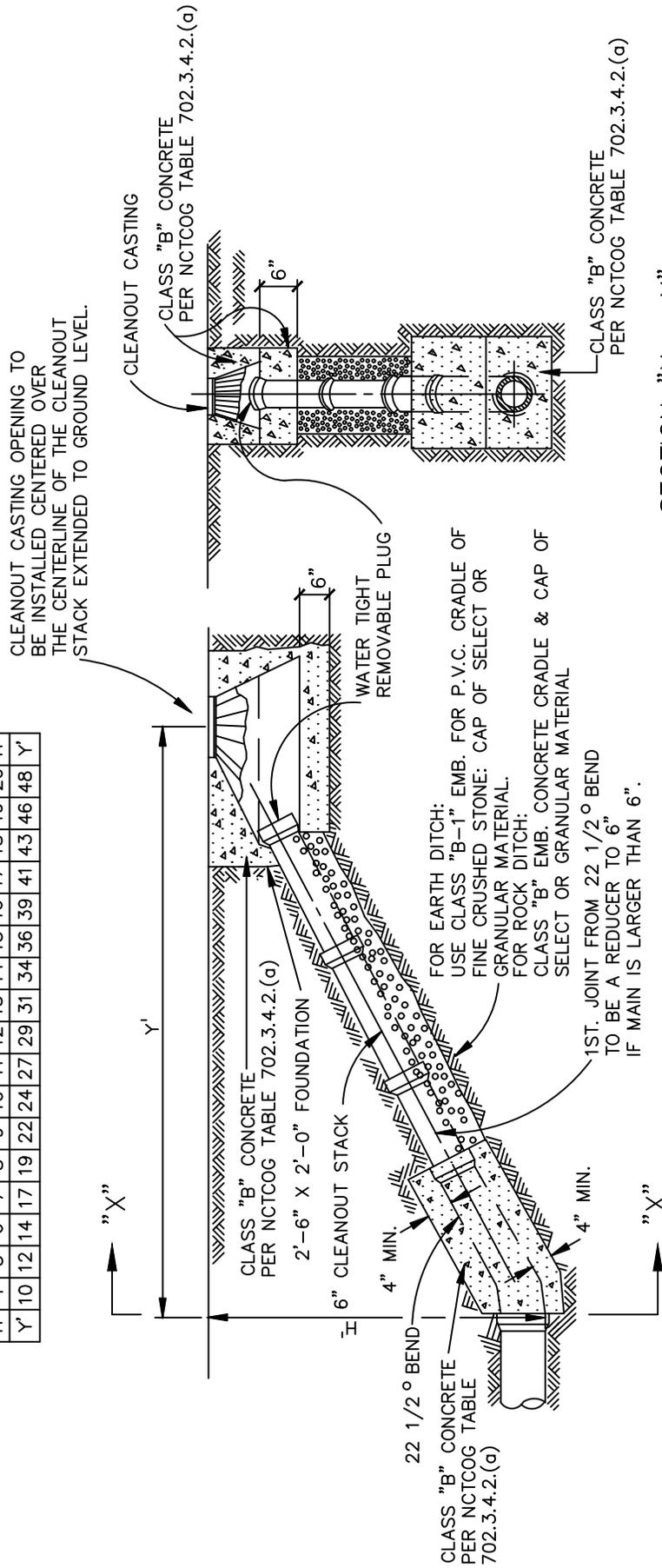
BORING AND CASING FOR
SANITARY SEWER LINE

DATE:

FEB 2020

WS-20

H'	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	H'
Y'	10	12	14	17	19	22	24	27	29	31	34	36	39	41	43	46	48	Y'

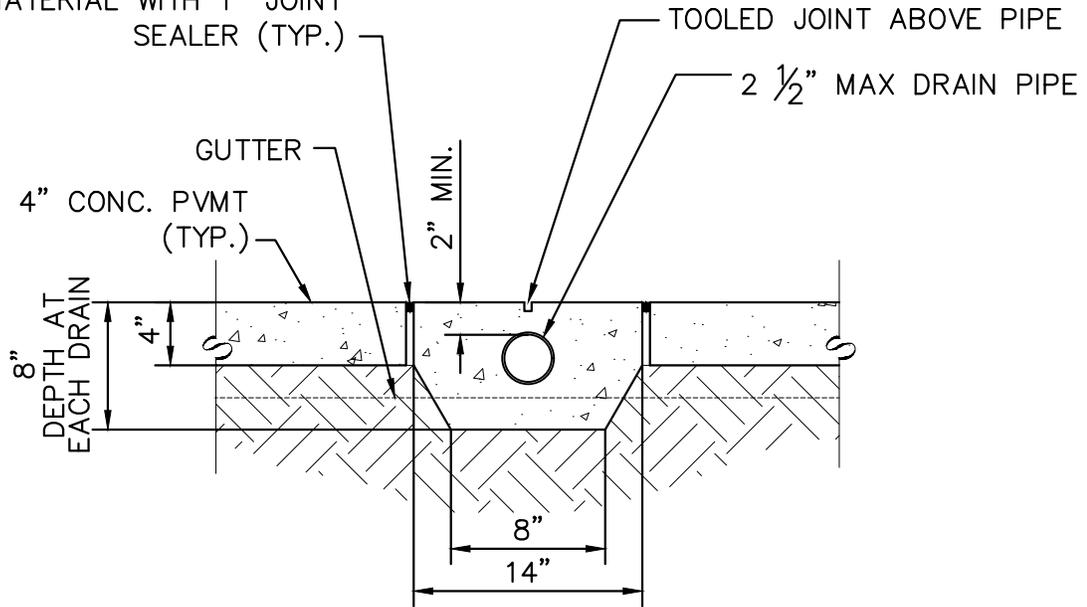


SECTION "X - X"
NOT TO SCALE

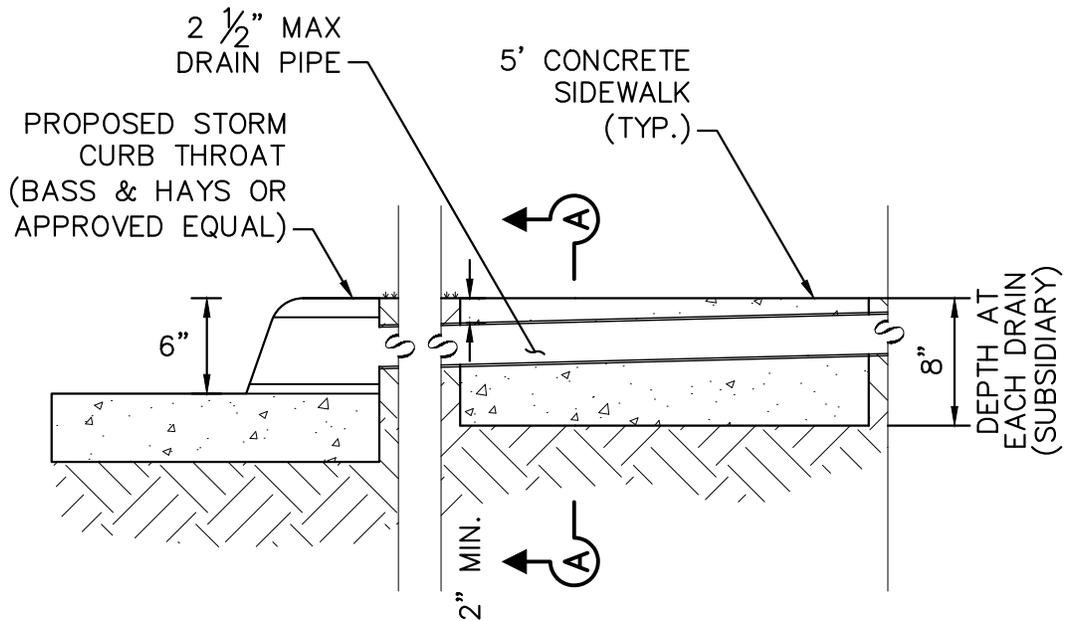
PROFILE VIEW
NOT TO SCALE

- NOTE:**
- IF CLEANOUT IS PLACED IN ADVANCE OF PAVEMENT PLACE SAND AROUND CLEANOUT CASTING IN LIEU OF CLASS "B" CONCRETE. 2000 PSI, 4.0 SK
 - IF CLEANOUT IS OUTSIDE OF PAVEMENT, CENTER CASTING IN 2'-6" X 2'-0" CLASS "B" CONCRETE PAD TO EXTEND 6" OR 4" BELOW CEMENT CASTING.
 - ALL SPEC. ITEM NUMBER REFERENCES SHALL REFERENCE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

1/2" REDWOOD EXP/ JOINT.
MATERIAL WITH 1" JOINT
SEALER (TYP.)



SECTION (A-A)



NOTE: ALL DRAIN PIPES THROUGH THE CURB ARE TO BE 2 1/2" MAXIMUM WITH 6" SPACING. ANY MODIFICATIONS SUCH AS BENDS REDUCERS, (ETC.), ALL NEW PIPE RECONNECTIONS SHALL BE CONSIDERED SUBSIDIARY TO THE CURB AND GUTTER BID ITEM (NO SEPARATE PAY).

THE TOWN OF

Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL

CURB DRAIN CONNECTION

DATE:

MAY 2022

WS-22

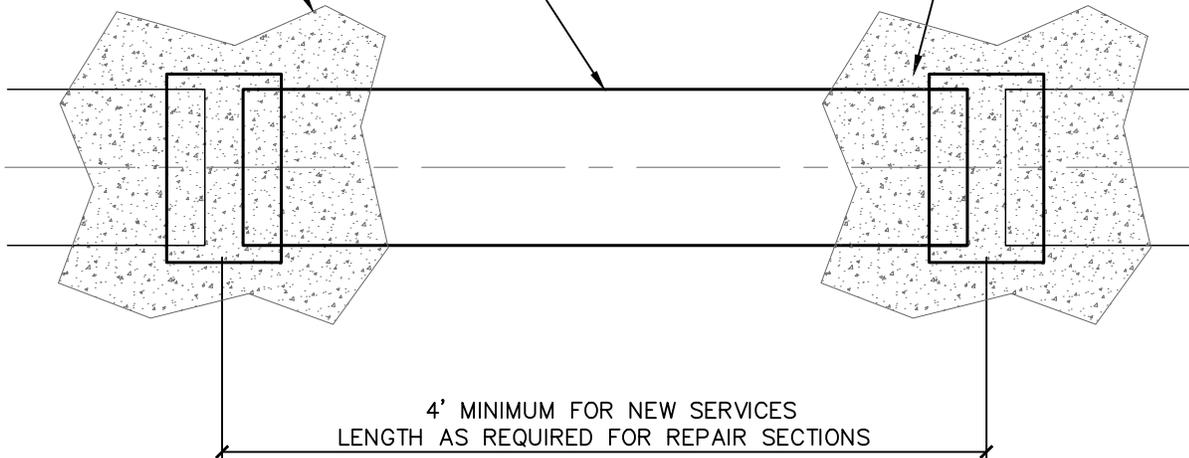
SEE PLANS FOR
SURFACE FINISH



COMPACT EMBEDMENT
AROUND NEW PIPE

INSTALL MINIMUM
6" CONCRETE
(3,000 PSI)
AROUND REPAIR
COUPLINGS

FERNCO FLEXIBLE COUPLING
WITH STAINLESS STEEL
BANDS (TYP. OF 2).
FOR LIKE PIPE MATERIALS,
INCLUDE STAINLESS STEEL
SHIELD AROUND COUPLING
FOR RIGIDITY



NOTE:

1. FOR PVC AND CLAY PIPE REPAIRS, INSTALL PVC REPLACEMENT PIPE.
2. TO RELOCATE A SERVICE TAP ON AN HDPE LINE, REMOVE SERVICE SADDLE AND INSTALL A REPAIR CLAMP AT ORIGINAL LOCATION, THEN INSTALL NEW FERNCO OR ROMAC SADDLE (SEE SANITARY SEWER SERVICE DETAIL).

THE TOWN OF

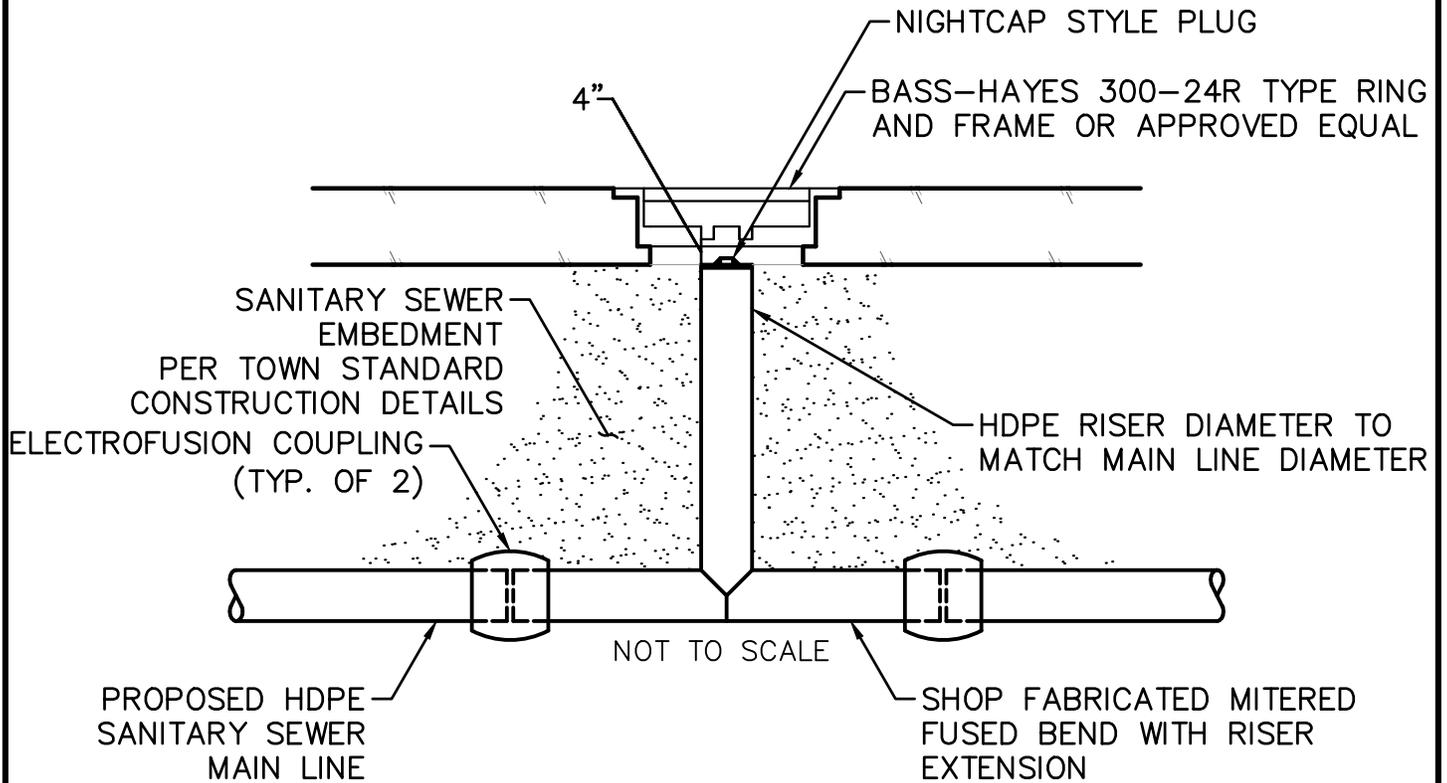
Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL

SANITARY SEWER LINE
REPAIR

DATE:
MAY 2022

WS-23



NOTES:

1. IF EXISTING UTILITY CONFLICTS PROHIBIT INSTALLATION OF SANITARY SEWER MANHOLE AS DIRECTED IN PLANS, CONTRACTOR SHALL INSTALL HDPE SANITARY SEWER ACCESS POINT.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWING OF HDPE ACCESS POINT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. SHOP DRAWING SHALL INCLUDE DIMENSIONS, ANGLES, PIPE MATERIAL, AND PRODUCT DATA SHEETS.

THE TOWN OF

Highland Park
TEXAS

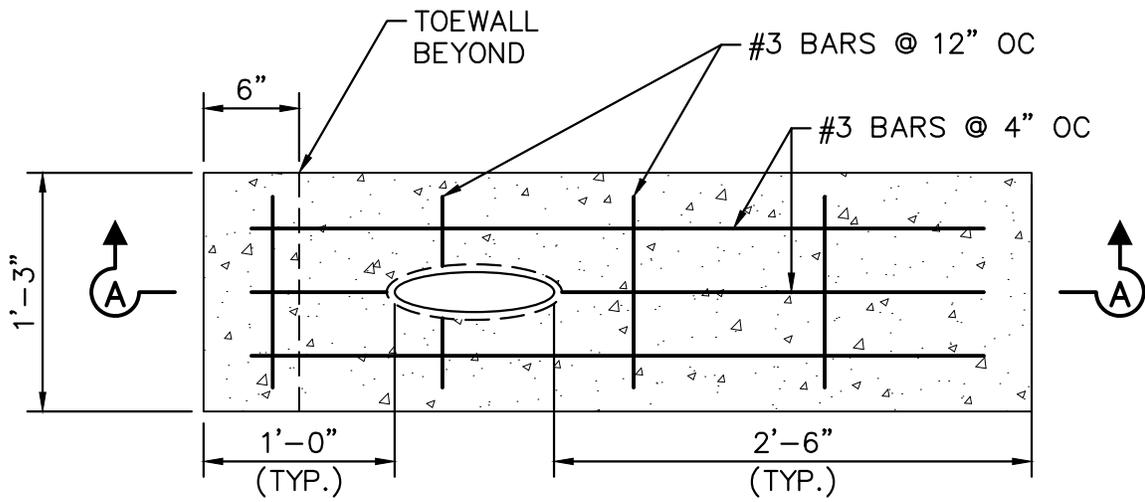
STANDARD CONSTRUCTION DETAIL

HDPE SANITARY SEWER
ACCESS POINT

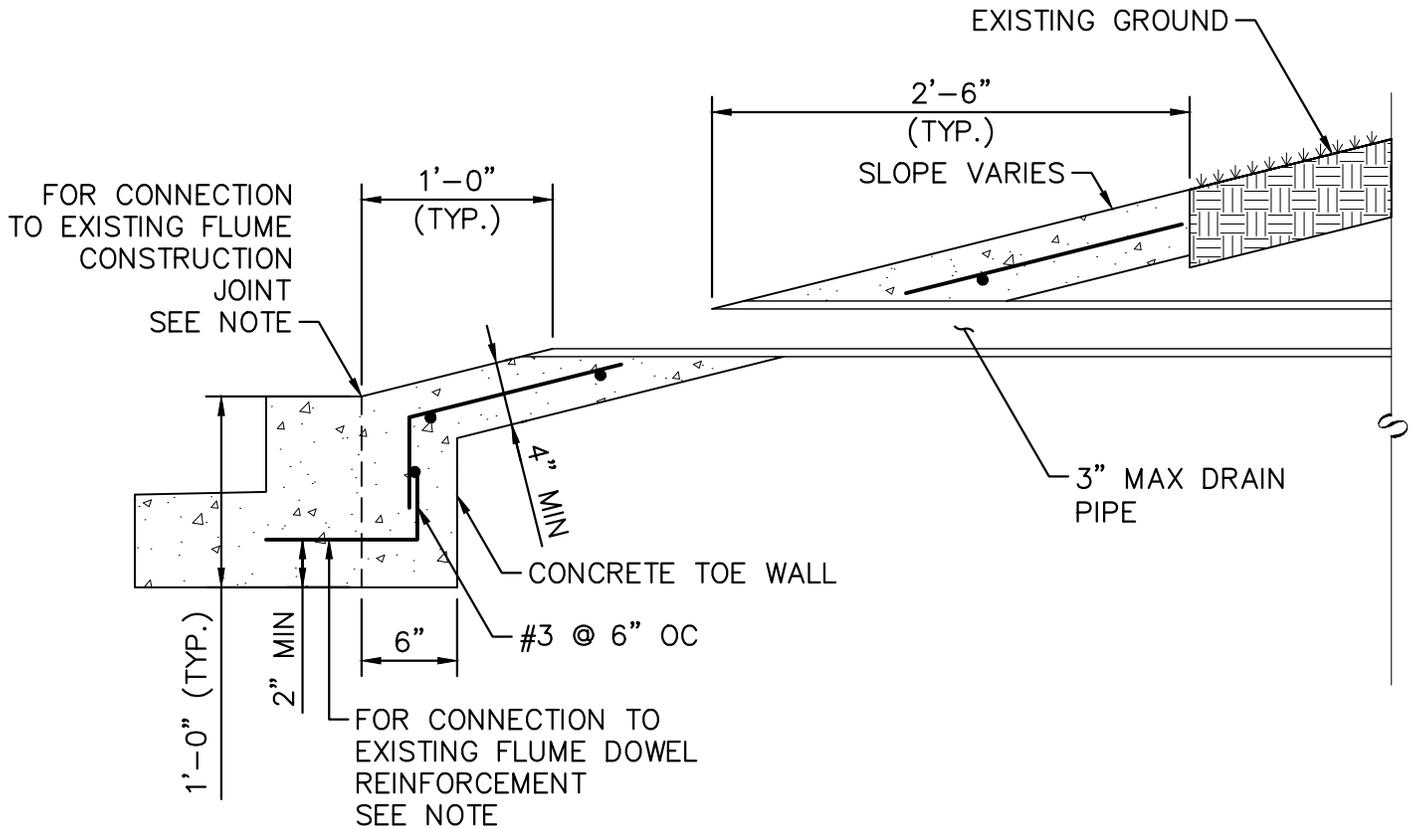
DATE:

FEB 2025

WS-24



PLAN



SECTION (A-A)

NOTE: FOR CONNECTIONS TO EXISTING FLUMES, DRILL AND EPOXY #3 DOWELS 6" INTO EXISTING CONCRETE UTILIZING TOWN APPROVED EPOXY. INSTALL CONSTRUCTION JOINT BETWEEN EXISTING FLUME AND PROPOSED DRAIN END TREATMENT.

THE TOWN OF

Highland Park
TEXAS

STANDARD CONSTRUCTION DETAIL

DRAIN END TREATMENT

DATE:

JULY 2022

WS-25