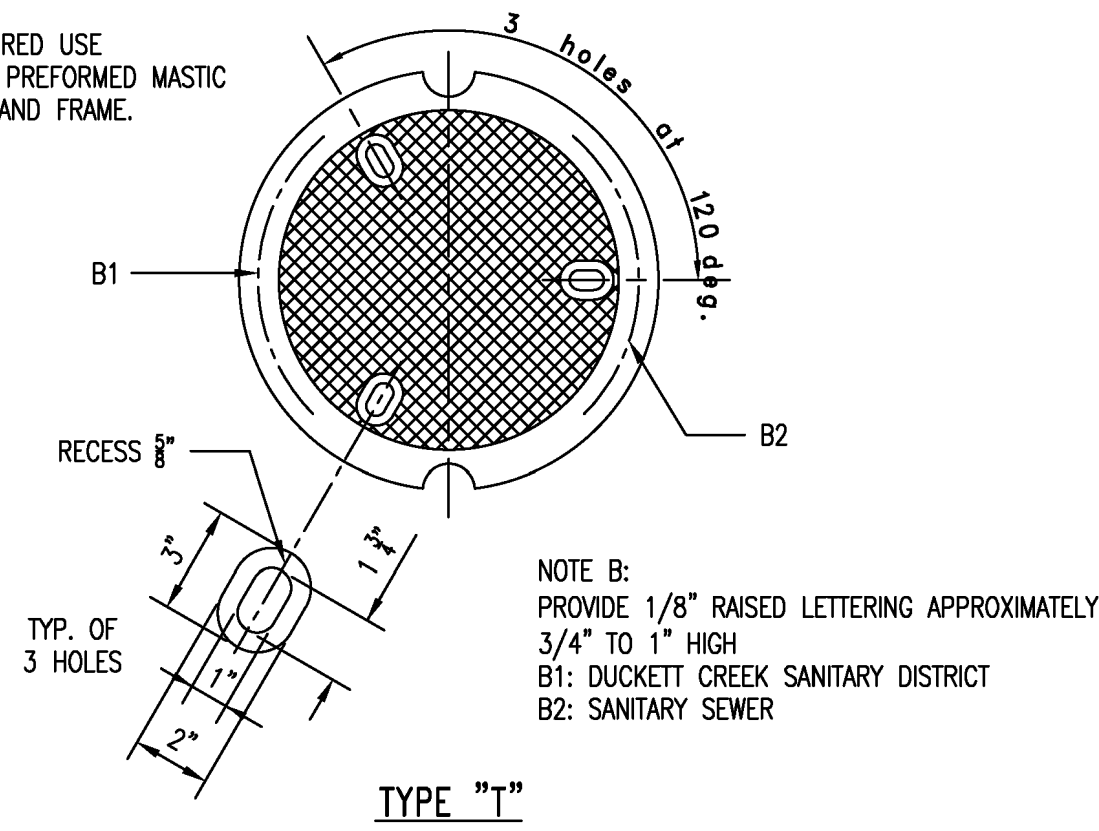


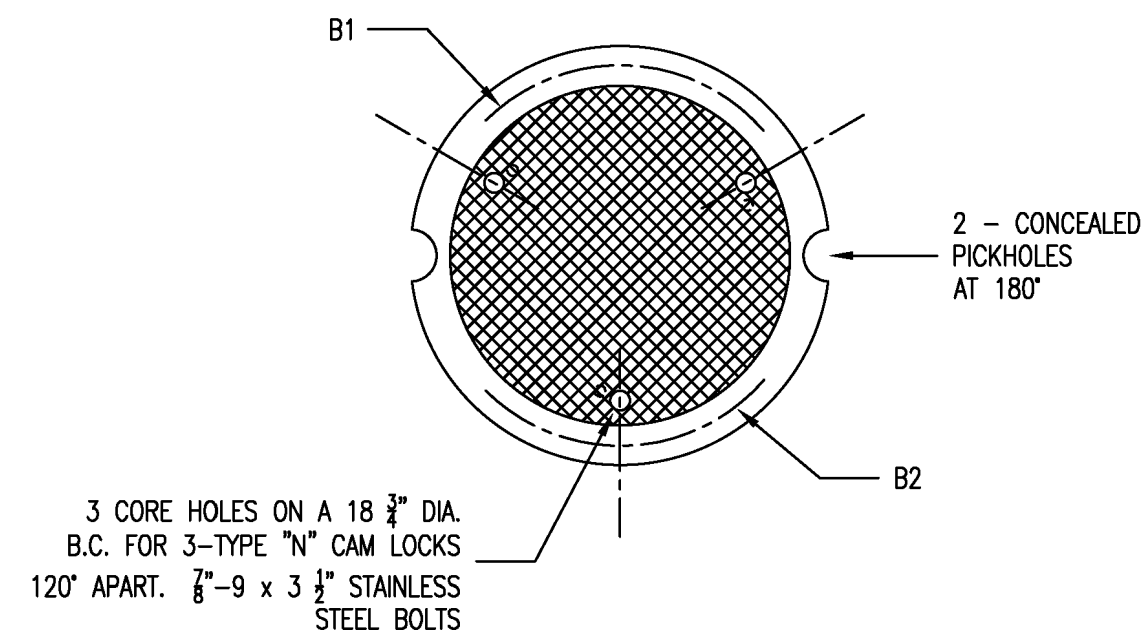
SECTION A-A

NOTE:
IF WATER TIGHT COVER REQUIRED USE APPROVED BUTYL RUBBER PREFORMED MASTIC SEALANT BETWEEN COVER AND FRAME.

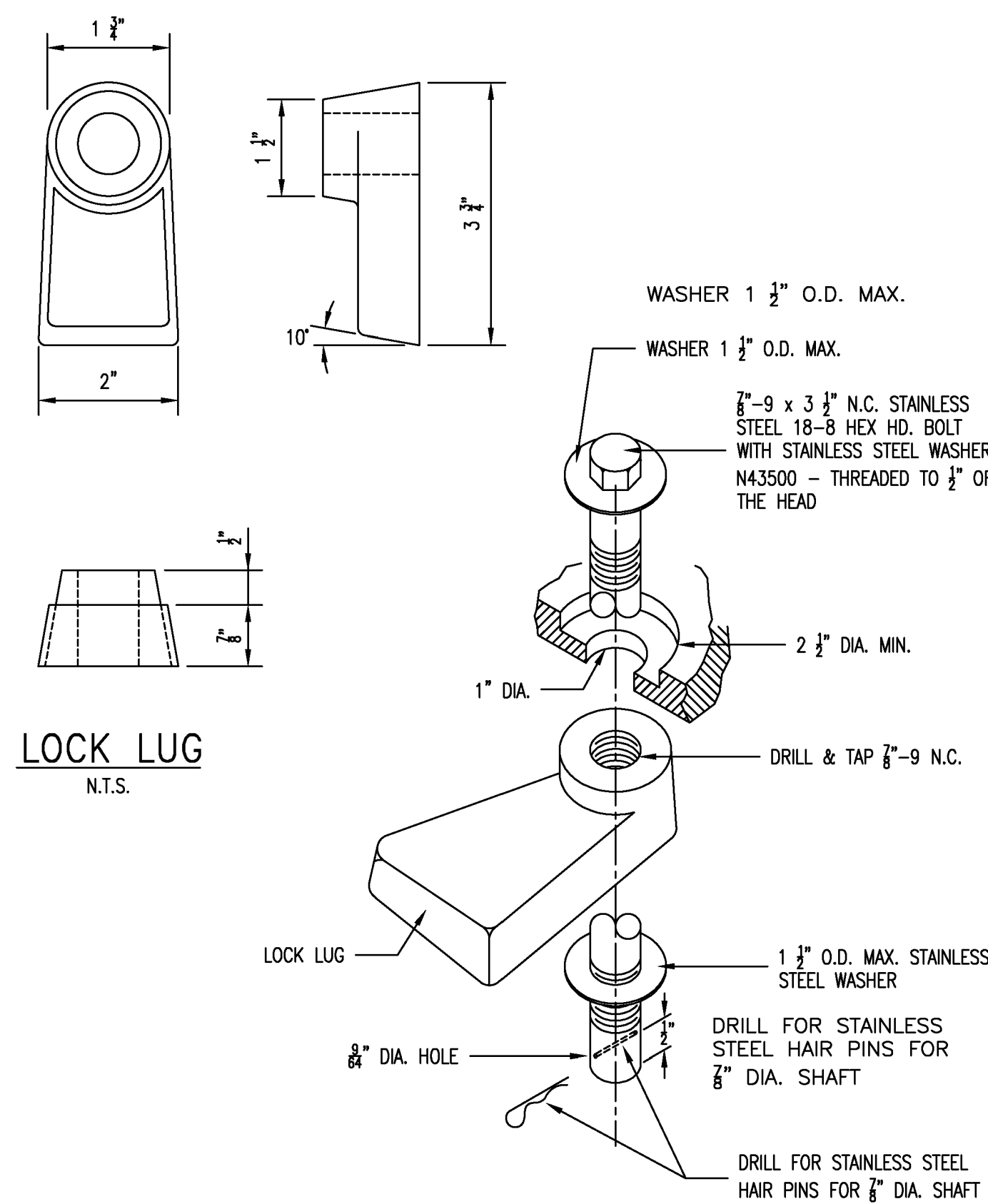


NOTE B:
PROVIDE 1/8" RAISED LETTERING APPROXIMATELY 3/4" TO 1" HIGH
B1: DUCKETT CREEK SANITARY DISTRICT
B2: SANITARY SEWER

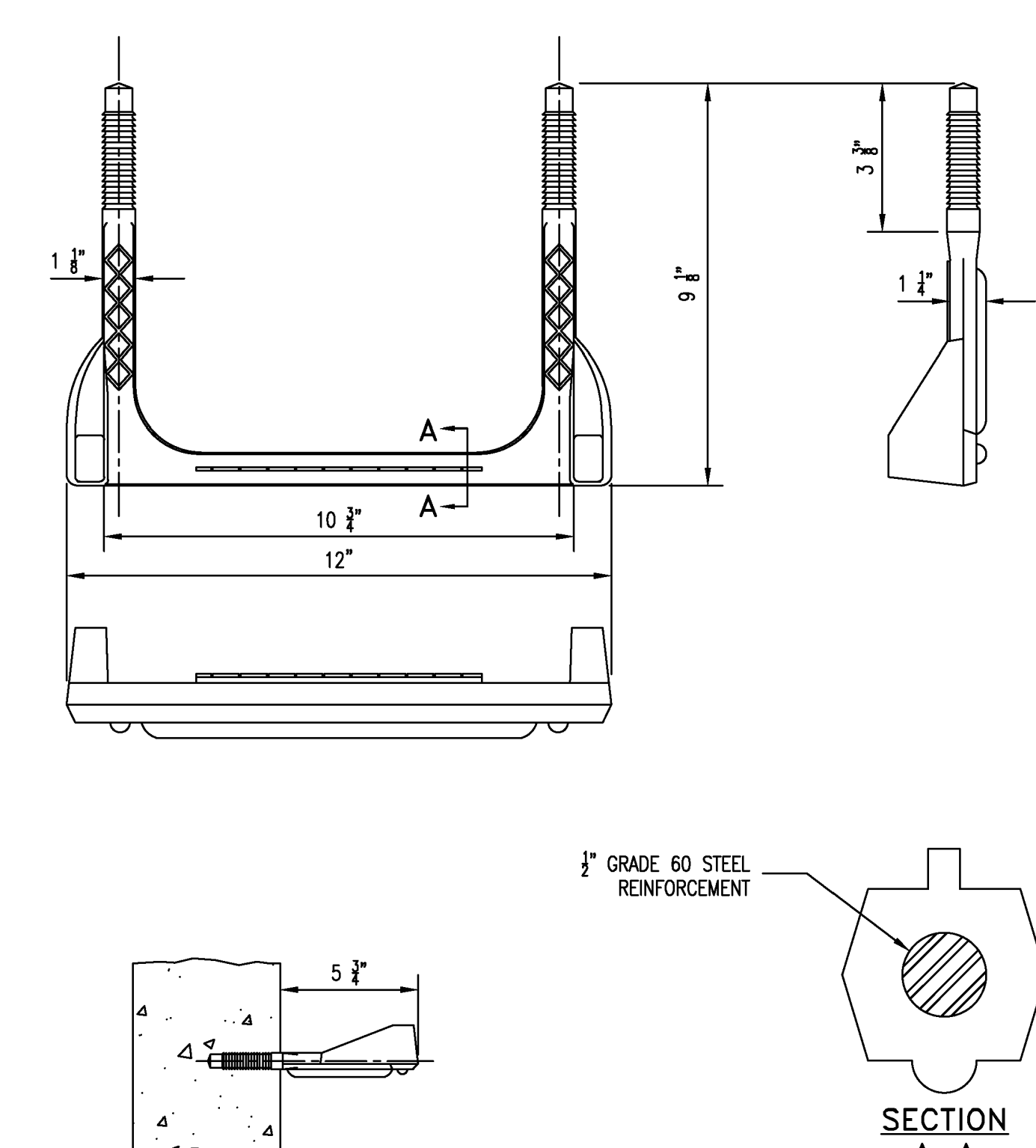
TYPE "T"



TYPE "N"



LOCK LUG
N.T.S.



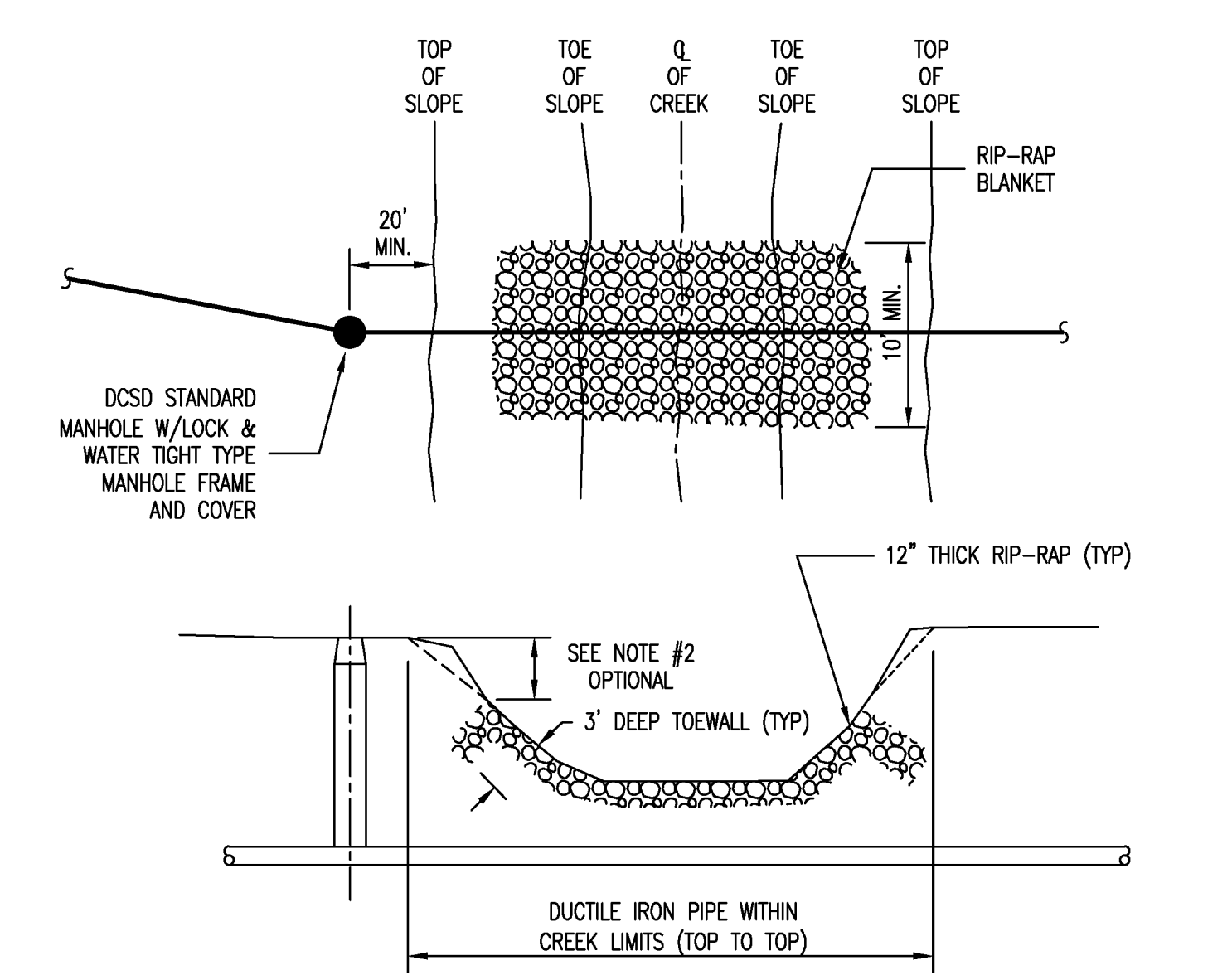
COPOLYMER POLYPROPYLENE PLASTIC

	Duckett Creek Sanitary District			
	MANHOLE FRAME AND COVER	Down By: BSM Ckd By: MDOB	App By: KLA Date: DEC. 2015	Detail No: 12

	Duckett Creek Sanitary District			
	CAST IRON MANHOLE COVERS (LOCK TYPE)	Down By: BSM Ckd By: MDOB	App By: KLA Date: DEC. 2015	Detail No: 14

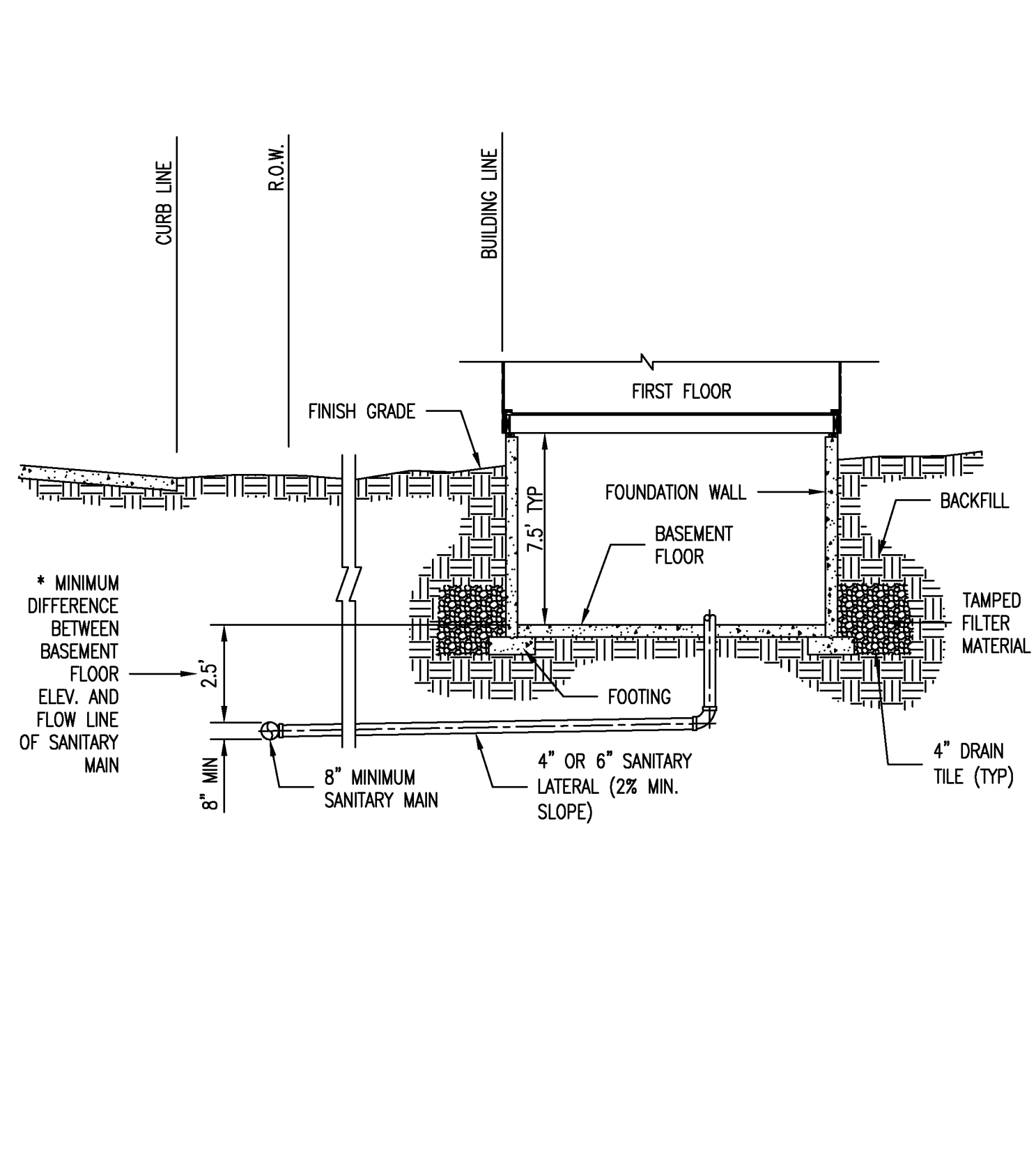
	Duckett Creek Sanitary District			
	LOCKING DEVICE FOR TYPE "N" LOCK TYPE MANHOLE COVER	Down By: BSM Ckd By: MDOB	App By: KLA Date: DEC. 2015	Detail No: 16

	Duckett Creek Sanitary District			
	MANHOLE STEP FOR PRECAST MANHOLE	Down By: BSM Ckd By: MDOB	App By: KA Date: DEC. 2015	Detail No: 18



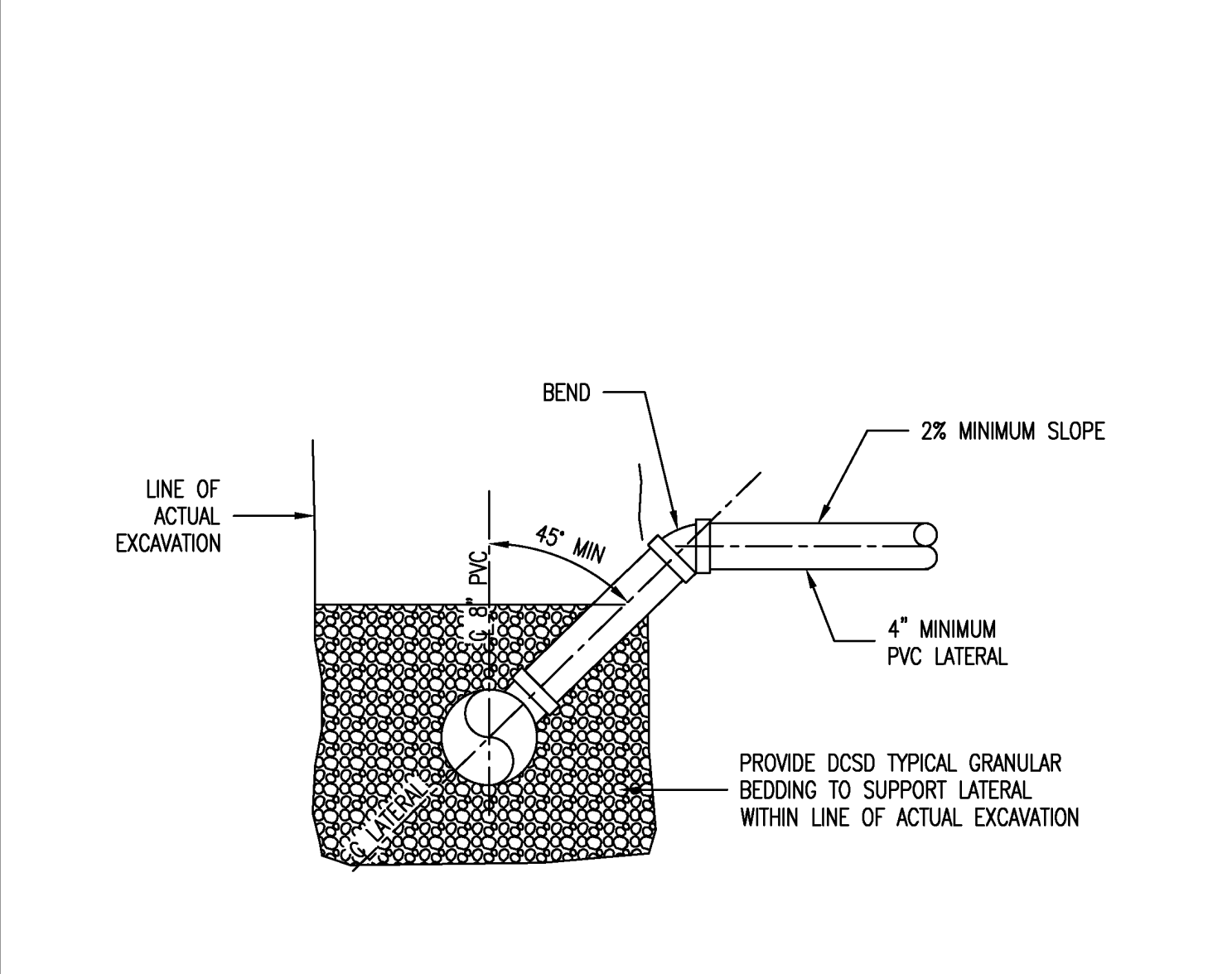
- NOTES:
- RIP-RAP IS REQUIRED AT ALL CREEK CROSSINGS WHERE THE EMBANKMENTS CROSSED ARE STEEPER THAN 1 VERTICAL TO 2 HORIZONTAL RATIO SLOPE; AND ALSO WHERE THERE IS 3 FEET OR LESS COVER OVER THE TOP OF THE SEWER MAIN.
 - PLACE RIP-RAP ON LOWER 3/4 OF SLOPE, GRADE UPPER 1/4 OF SLOPE AT 1 VERTICAL TO 2 HORIZONTAL SLOPE FOR SOD OR 1 VERTICAL TO 2.5 HORIZONTAL SLOPE FOR SEED AND STRAW.
 - RIP-RAP TO BE "MSD 5" GRADATION, MINIMUM 12" THICK.
 - INCORPORATE A 3 FEET DEEP TOE WALL ON EMBANKMENT'S UPPER EDGE OF RIP-RAP.
 - TOP SURFACE OF RIP-RAP SHOULD NOT BE HIGHER THAN ADJACENT GROUND SURFACE.
 - IF PIPE HAS LESS THAN 12" COVER, A PAVED CHANNEL MAY BE REQUIRED.
 - DUCTILE IRON PIPE IS REQUIRED WITHIN THE CREEK LIMITS.
 - EXPOSED AREAS SHALL NOT REMAIN UNPROTECTED FOR MORE THAN SEVEN (7) DAYS FOR PROTECTION OF THE STREAM.

	Duckett Creek Sanitary District			
	TYPICAL CREEK CROSSING	Down By: BSM Ckd By: MDOB	App By: KA Date: OCT. 2016	Detail No: 24



NOTE:
DIFFERENCE IN DEPTH INCREASES WITH PIPE SIZE

	Duckett Creek Sanitary District			
	TYPICAL SANITARY SEWER LATERAL PROFILE	Down By: BSM Ckd By: MDOB	App By: KLA Date: DEC. 2015	Detail No: 26



	Duckett Creek Sanitary District			
	SANITARY SEWER LATERAL RISER DETAIL	Down By: BSM Ckd By: MDOB	App By: KA Date: DEC. 2015	Detail No: 27

Installation Techniques - Link-Seal® Modular Seals

Online Installation Video
Visit www.linkseal.com

- Center the pipe, cable or conduit in well opening or riser. Make sure the pipe is adequately supported on both ends. Link-Seal® modular seals are designed to support the weight of the pipe.
- Loosen rear pressure plate with nut just enough so links move freely. Connect both ends of Link-Seal® modular seal assembly at the 6 O'Clock position and work both sides up toward the 12 O'Clock position in the annular space.
- Check to be sure all bolt heads are facing the installer. Extra slack or sag is normal. Do not remove links if extra slack exists. Note: On smaller diameter pipe, links may need to be stretched.
- Slide belt assembly into annular space. For larger size belts, start inserting Link-Seal modular seal assembly at the 12 O'Clock position and work both sides up toward the 6 O'Clock position in the annular space.
- LS-200 thru LS-315 Using a hand socket allen head or off-set wrench ONLY start at 12 O'Clock. Do not tighten any bolt more than 4 turns at a time. Continue in a clockwise manner until links have been uniformly compressed. (Approx. 2 or 3 rotations)
- LS-325 thru LS-650 Using a hand socket or off-set wrench ONLY, start at 12 O'Clock. Do not tighten any bolt more than 4 turns at a time. Continue in a clockwise manner until links have been uniformly compressed. (Approx. 2 or 3 rotations)
- If the seal doesn't appear to be correct using the instructions provided. Call PSI at 800-423-2410.

Link-Seal® Model	Tool Size/ Type Req.
LS-200, LS-275	4mm, Allen
LS-300, LS-315	6mm, Allen
LS-325, LS-340, LS-360	13mm, Hex
LS-400, LS-410, LS-425, LS-475	17mm, Hex
LS-500, LS-525, LS-575	19mm, Hex
LS-600	30mm, Hex
LS-650	19mm, Hex

Installation Notes: The Link-Seal® modular seal bolt heads are usually recessed below the wall opening or the edge of casing pipe and therefore a socket or offset wrench must be used. Hand Tools: Reviv'v provided chart above. (Tools not provided.) Tools can be purchased from hardware store, auto parts store, or home improvement store.

Always Wear Safety Equipment When Using Link-Seal® Modular Seals!

Link-Seal® Modular Seal - Do's

- Make sure pipe is centered.
- Install the belt with the pressure plates evenly spaced.
- Install the exact number of links indicated in sizing charts.
- Check to make sure pipe is supported properly during backfill operations. Note: Link-Seal modular seals are not intended to support the weight of the pipe.
- Make sure seal assembly and pipe surfaces are free from dirt.
- For tight fits, use non-polluting liquid detergent to assist installation.

Link-Seal® Modular Seal - Don'ts

- Don't install Link-Seal® modular seals where wet-beds or other irregular surfaces exist without consideration of the sealing requirements.
- Don't torque each bolt completely before moving on to the next.
- Don't use high speed power tools (450 rpm or more).
- Do not use power tools on Link-Seal modular seal 316 stainless steel bolts.
- Don't use grease in installing Link-Seal modular seals.
- Don't install the belt with the pressure plates aimed in irregular directions. (Staggered)

If the seal doesn't appear to be correct using the techniques provided, call PSI at 713-747-6943 or 800-423-2410.

636-594-0540 (tel.)
636-594-0512 (fax)
mailto:ochran@ochran.com

UCHRAN
Civil Engineering
Land Surveying
Architecture
Site Development
General Consulting
Master Planning

Missouri State Certificate of Authority Numbers:
Survey : 000380
Engineering : 001555
Architecture : 2002014240

Three working days prior to the start of any excavation call 1-800-423-2410 for utility location information.

All OSHA rules & regulations apply to all construction projects. All construction projects shall be strictly followed (ie. trenching, blasting, etc.)

THE STREETS OF CALEDONIA
PHASE 3 RESIDENTIAL
O'FALLON, MISSOURI

DATE:	
DATE:	JMM
DATE:	ERR
SCALE:	NO SCALE
PROJ. NO.:	17-6821
DWG. NO.:	C14.11

OWNER/DEVELOPER:
DD LAND DEVELOPMENT, LLC
10407 BAUR BLVD, SUITE B
ST. LOUIS, MO 63132

C14.11