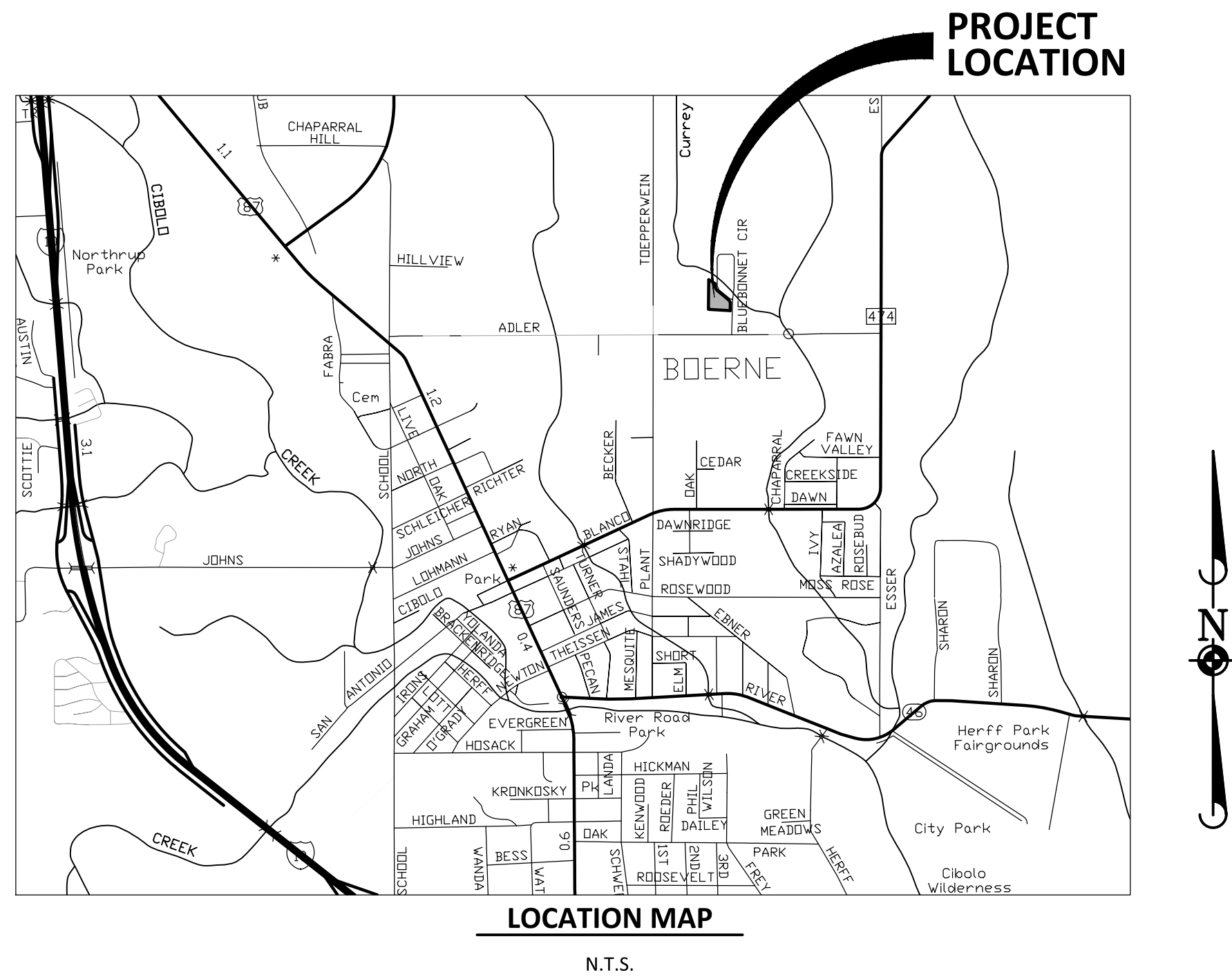


CONSTRUCTION PLANS FOR



SHEET NUMBER	SHEET I.D.	SHEET TITLE
1	C000	COVER SHEET
2	C010	GENERAL NOTES
3	C100	EXISTING CONDITIONS
4	C200	CIVIL SITE – DIMENSIONAL CONTROL PLAN
5	C210	CIVIL SITE DETAILS
6	C400	GRADING & DRAINAGE PLAN
7	C500	UTILITY PLAN
8	C510	UTILITY DETAILS
9	C511	Utility Details
10	C600	FIRE PROTECTION SITE PLAN
11	C800	EROSION CONTROL PLAN


ADJ	ADJUST	HWL	HIGH WATER LEVEL	ROW	RIGHT-OF-WAY
AGG	AGGREGATE GRAVEL	HYD	HYDRANT	RR	RAILROAD
BC	BACK OF CURB	INL	INLET	RT	RIGHT
BOP	BOTTOM OF PIPE	INV	INVERT	SN	SEWANTARY SEWER
BVC	BEGIN VERTICAL CURVE	LP	LOW POINT	SF	SQUARE FOOT
BW	BACK OF WALK	LT	LEFT	SHT	SHEET
CL	CENTERLINE	MAX	MAXIMUM	ST	STORM SEWER
CMF	CORRUGATED METAL PIPE	MH	STORM MANHOLE	STA	STATION
CONC	CONCRETE	MIN	MINIMUM	STD	STANDARD
CY	CUBIC YARD	OS	OFFSET FROM CENTERLINE	SW	SIDEWALK
D	DITCH	P	PAVEMENT	SY	SQUARE YARDS
DIA	DIAMETER	PC	POINT OF CURVE	T	TELEPHONE
DIP	DUCTILE IRON PIPE	PCP	POINT OF COMPOUND CURVE	TB	THRUST BLOCK
ELEV	ELEVATION	PI	POINT OF INTERSECTION	TBR	TO BE REMOVED
EV	EDGE OF PAVEMENT	PL	PROPERTY LINE	TC	TOP OF CURB
EXC	END VERTICAL CURVE	PP	POWER POLE	TEMP	TEMPORARY
EX	EXISTING	PROP	PROPOSED	TF	TOP OF FOUNDATION
FES	FLARED END SECTION	PT	POINT OF TANGENCY	TOP	TOP OF PIPE
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	TRANS	TRANSFORMER
FG	FINISHED GRADE	PVC	POINT OF VERTICAL CURVATURE	TW	TOP OF WALL
FL	FLOW LINE	PVI	POINT OF VERTICAL INTERSECTION	TY	TYPICAL
FM	FORCE MAIN	PVT	POINT OF VERTICAL TANGENCY	VB	VALVE BOX
GV	GATE VALVE	R	RADIUS	VV	VALVE VAULT
HDPE	HIGH DENSITY POLYETHYLENE	RCP	REINFORCED CONCRETE PIPE	WM	WATER MAIN
HP	HIGH POINT	REM	REMOVAL	WSE	WATER SURFACE ELEVATION

OWNER E3 DEVELOPMENT, LLC 215 WEST BANDERA RD, STE. 114-238, BOERNE, TX 78006 CONTACT: RENE GONZALES PHONE: 210.254.2369	REVIEW AGENCY CITY OF BOERNE 402 E. BLANCO BOERNE, TX 78006 CONTACT: PHONE: 830.249.9511
SANITARY SEWER CITY OF BOERNE PUBLIC WORKS DEPT. 400 E. BLANCO ROAD BOERNE, TX 78006 CONTACT: MIKE SHARP PHONE: 830.248.1538	WATER CITY OF BOERNE PUBLIC WORKS DEPT. 400 E. BLANCO ROAD BOERNE, TX 78006 CONTACT: MIKE SHARP PHONE: 830.248.1538
ELECTRIC CITY OF BOERNE PUBLIC WORKS DEPT. 400 E. BLANCO ROAD BOERNE, TX 78006 CONTACT: MIKE SHARP PHONE: 830.248.1538	GAS CITY OF BOERNE PUBLIC WORKS DEPT. 400 E. BLANCO ROAD BOERNE, TX 78006 CONTACT: MIKE SHARP PHONE: 830.248.1538
CABLE SPECTRUM CONTACT: LOCAL COORDINATOR PHONE: 210.352.4306	TELEPHONE GVTC COMMUNICATIONS CONTACT: LOCAL COORDINATOR PHONE: 1.800.367.4882

1. THE BOUNDARY LINES AND TOPOGRAPHY FOR THIS PROJECT ARE BASED ON A SURVEY PREPARED BY GE REAVES ENGINEERING, INC. DATED MAY 30, 2018. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY MANHARD CONSULTING AND THE CLIENT IN WRITING OF ANY DISCREPANCY OR CHANGING CONDITIONS. MANHARD CONSULTING HAS NOT VERIFIED THIS SURVEY AND IS NOT RESPONSIBLE FOR THE ACCURACY OF THE SURVEY BOUNDARY AND/OR TOPOGRAPHY.
2. MANHARD CONSULTING, LTD. IS NOT RESPONSIBLE FOR THE SAFETY OF ANY PARTY AT OR ON THE CONSTRUCTION SITE. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ANY OTHER PERSON OR ENTITY PERFORMING WORK OR SERVICES. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR THE JOB SITE SAFETY OF PERSONS ENGAGED IN THE WORK OR THE MEANS OR METHODS OF CONSTRUCTION.

TBM #1: TOP OF MAGNAIL SET ON STAUDT ST $\pm 94'$
NW FROM SW PROPERTY CORNER OF LOT 63
ELEVATION = 1441.46'

NOTE:
NOTED TBM'S (TEMP. BENCHMARKS) ON THESE PLANS ARE BASED ON EXISTING SURVEY INFORMATION PROVIDED TO ENGINEER BY SURVEYOR. CONTRACTOR TO FIELD VERIFY ACCURACY OF ANY NOTED / SUGGESTED TBM'S PRIOR TO CONSTRUCTION. SETTING ADDITIONAL TBM'S ARE RECOMMENDED AND SHALL BE COORDINATED WITH LISTED PROJECT SURVEYOR.

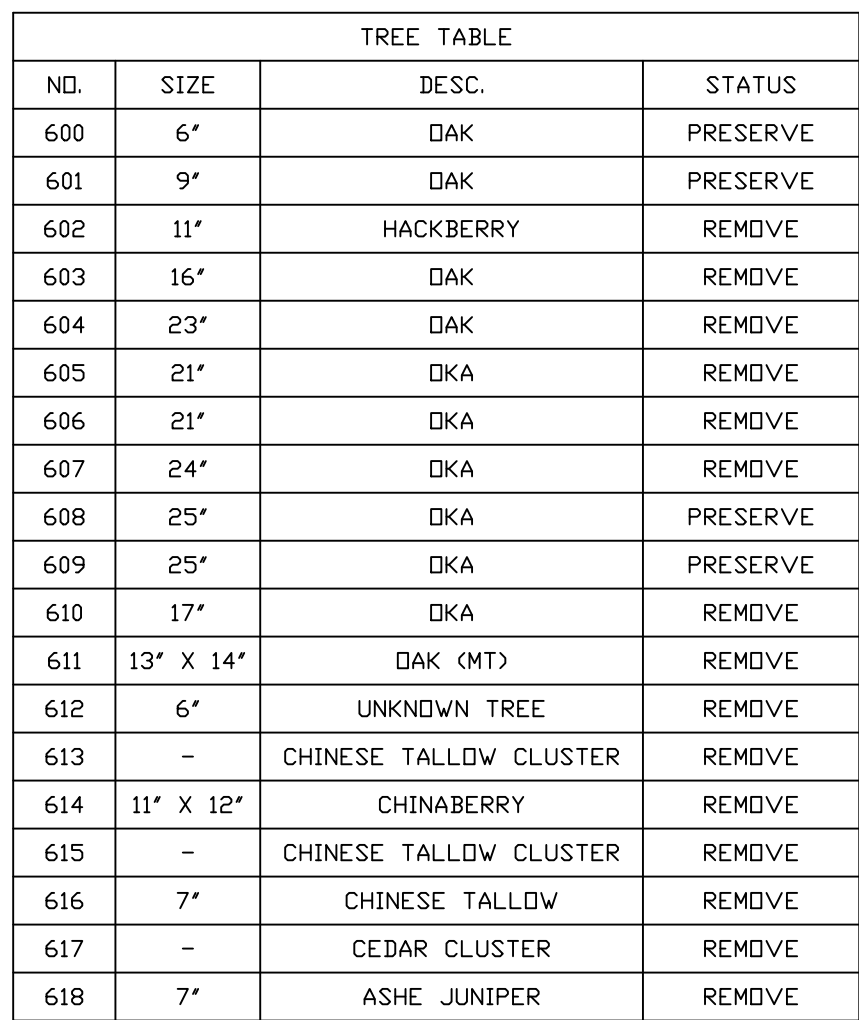
 **Manhard**
CONSULTING LTDTM

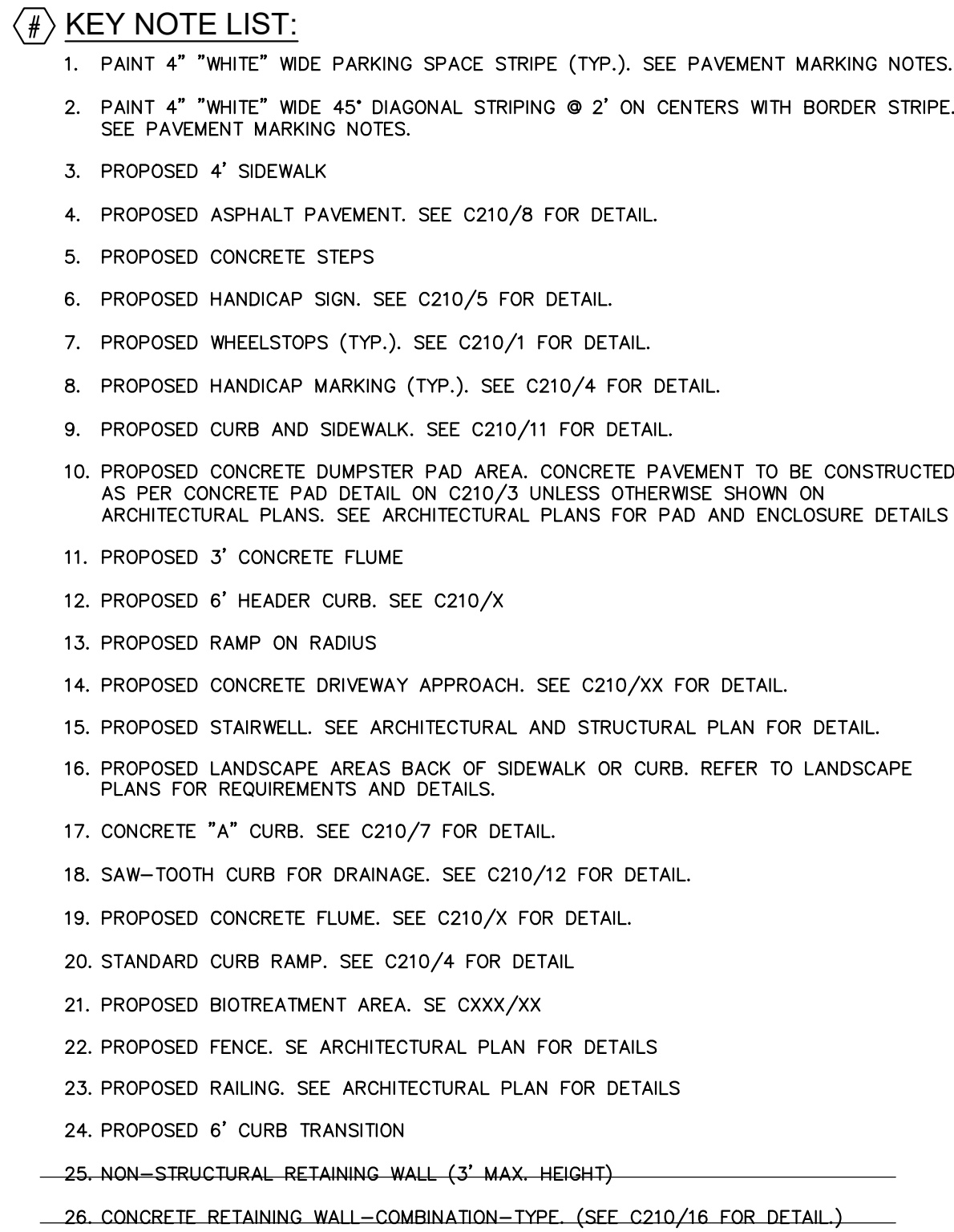
9901 Broadway St #117, San Antonio, TX 78217 ph:210.993.3883 fx: Reg No: F-18141
Environmental Engineers
Construction Management • Environmental Sciences • Landscape Architecture • Engineers

COVER SHEET

PROJ. MGR.: ATR
PROJ. ASSOC.: CW
DRAWN BY: _____
DATE: 06-08-18
PROJ #: 613.040.001

SHEET
C000
1 OF 11





CONTRACTOR AND SUBCONTRACTORS SHALL CONTRACT WITH SURVEYOR TO VERIFY PROJECT ELEVATIONS AND BENCHMARK ELEVATION(S) PRIOR TO CONSTRUCTION. "MARKERS" SHALL BE UNLESS OTHERWISE SPECIFIED, 1/2" DIA. GALV. VERTICAL AND HORIZONTAL ALIGNMENT. ALL FINISHED EARTHEN GRADES SHALL NOT EXCEED 3:1 (H:V) SLOPE.

ANY EXISTING IMPROVEMENT OR UTILITY REMOVED, DAMAGED OR UNDER CUT BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED AND APPROVED BY THE RESPECTIVE UTILITY AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL PROTECT EXISTING GRASS, LANDSCAPING AND TREES NOT IN DIRECT CONTACT WITH PROPOSED IMPROVEMENTS DURING CONSTRUCTION. GRASSED AREA DAMAGED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR WITH TOPSOIL AND SODDING AT THE CONTRACTORS EXPENSE.

CONTRACTOR SHALL COMPLY ALL RELEVANT BUILDING CODES, CONSTRUCTION SPECIFICATIONS FROM ANY POLITICAL SUBDIVISION HAVING JURISDICTION (INCLUDING BUT NOT LIMITED TO CITY OF SAN ANTONIO, BEXAR COUNTY, TxDOT, TEGG, AND THE TEXAS ACCESSIBILITY STANDARDS OF THE TEXAS DEPARTMENT OF LICENSING AND REGULATION).

CONTRACTOR SHALL SECURE ALL PERMITS REQUIRED FOR CONSTRUCTION AND SHALL OBTAIN RESPECTIVE APPROVALS FROM ALL UTILITY AGENCIES AFFECTED BY CONSTRUCTION PRIOR TO STARTING CONSTRUCTION.

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE OR CONTROL DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL BE RESPONSIBLE FOR UNLIMITED LIABILITY FOR DAMAGES AND LOSSES AND LIABILITY IN CONNECTION WITH THE WORK PERFORMED ON THIS PROJECT EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

WHERE CONSTRUCTION IS IN THE PROXIMITY OF AN EXISTING UTILITY, THE CONTRACTOR WILL TAKE PRECAUTIONS TO PROTECT AND/OR SUPPORT THE UTILITY AND ANY DAMAGE THAT MIGHT OCCUR SHALL BE REPAIRED IMMEDIATELY. IF AT ANY TIME DURING THE CONSTRUCTION OPERATION, A SEWER LINE HAS LESS THAN THREE (3) FEET OF COVER, IT SHALL BE ENCASED OR SADDLED WITH CONCRETE.

ALL TRENCHES OUT BENEATH PROPOSED SIDEWALKS AND PARKING OR STREET PAVEMENT ARE TO BE PROTECTED BY CURBS OR 18" LIFE SAFETY PROTECTED TO 95% OF THE MAXIMUM DRY DENSITY, AND BE SUBJECT TO DENSITY TESTING.

BARRICADES, WARNING SIGNS & LIGHTS SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ARE GENERALLY LOCATED TO AFFORD MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT AND TO ASSURE AN EXPEDITIOUS TRAFFIC FLOW AT ALL TIMES. DURING THE PROGRESS OF WORK, THE CONTRACTOR SHALL PROVIDE ACCESS FOR LOCAL TRAFFIC.

REFERENCE ARCHITECTURAL PLANS FOR ALL FENCE LOCATIONS AND DETAILS AS INFORMATION NOT PROVIDED BY THE CIVIL ENGINEER.

UNLESS OTHERWISE SHOWN ON THE PLANS OR APPROVED BY THE ENGINEER, CONCRETE AREAS SHALL COMPLY WITH THE FOLLOWING ITEMS WITHIN THE TEXAS DEPARTMENT OF TRANSPORTATION SECTION 1993 STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES:

- * ITEM 360 - CONCRETE PAVING
- * ITEM 421 - PORTLAND CEMENT CONCRETE

OTHERWISE, WORK SHALL BE IN CONFORMANCE WITH PUBLICATION 318 OF THE AMERICAN CONCRETE INSTITUTE (ACI).

A 2.166-ACRE TRACT OF LAND DESCRIBED AS LOT 2, GARDEN CREEK SUBDIVISION, UNIT II, CITY OF BOERNE, KENDALL COUNTY, TEXAS, ACCORDING TO PLAT THEREOF RECORDED IN VOLUME 1, PAGE 315, KENDALL COUNTY, PLAT RECORDS.

TEXAS ONE CALL PARTICIPANTS REQUESTS 48 HOURS NOTICE
BEFORE YOU DIG, DRILL, OR BLAST - STOP AND CALL

TEXAS ONE CALL SYSTEM
(800) 245-4545 OR
www.onecalltexas.com

1. ALL CURB RADIUS DIMENSIONS ARE TO FACE OF CURB. CONTRACTOR TO VERIFY ALL PLACEMENT DIMENSIONS PRIOR TO CONSTRUCTION.
2. CURB RADIUS DEPICTED ARE $\frac{3}{4}$ TO FACE OF CURB UNLESS OTHERWISE DIMENSIONED.
3. ALL SIDEWALKS SHALL HAVE 2% MAXIMUM CROSS SLOPE.
4. DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
5. CURB RAMPS MUST NOT EXCEED THE MAXIMUM SLOPE OF 1V:12H (8.33%) SLOPE SO RAMP LENGTH CAN EXCEED 6 FEET TO TRANSITION A MAXIMUM 6" HIGH DROP/CURB.

1. FURNISH AND INSTALL PAVEMENT MARKINGS OF THE TYPE AND SIZE SHOWN ON THE PLANS AND AS REQUIRED FOR COMPLIANCE WITH GOVERNING CODES. IF NO GOVERNING CODES APPLY, THEN USE TxDOT STANDARDS.
2. EXECUTION:
 - A. CONTRACTOR SHALL CLEAN PAVEMENT OF GREASE, DIRT, OIL, SAND, GRAVEL OR OTHER FOREIGN MATERIALS PRIOR TO APPLYING MARKINGS AS RECOMMENDED BY PAINT MANUFACTURER.
 - B. PAVEMENT MARKINGS SHALL BE APPLIED BY MACHINE AT A RATE OF ONE (1) GALLON/100 SQUARE FEET.
 - C. PAVEMENT MARKINGS SHALL NOT BE APPLIED DURING PERIODS OF EXCESS HUMIDITY OR PAVEMENT TEMPERATURES BELOW 50 DEGREES F.
 - D. MINIMUM LINE WIDTH IS 4 INCHES. PAVEMENT MARKINGS MUST COMPLY WITH LOCAL FIRE STANDARDS OF CURRENT ACCESSIBILITY CODE.
 - E. A MINIMUM OF TWO COATS SHALL BE REQUIRED UNLESS REJECTED BY OWNER IN WRITING. WAIT 30 DAYS AFTER PAVEMENT INSTALLATION BEFORE APPLYING THE SECOND COAT OF PAVEMENT MARKINGS.
 - F. CLOSE AREAS TO TRAFFIC FOR DURATION OF DRYING TIME, WHICH SHALL BE NO LESS THAN THE MINIMUM RECOMMENDED BY THE PAINT MANUFACTURER.
3. TRAFFIC PAINT SHALL BE SHERWIN WILLIAMS PRO-MAR TRAFFIC PAINT OR APPROVED EQUIVALENT AS SPECIFIED ON PLANS OR AS OTHERWISE INDICATED BY OWNER OR GENERAL CONTRACTOR.

[illegible]

Manhard
CONSULTING LTD.

9301 Broadway St #117, San Antonio, TX 78217 ph: 210.899.3989 fx: 210.899.3988
E-mail: info@manhard.com Website: www.manhard.com
Construction Management • Environmental Services • Landscaping • Architecture • Planning
Construction Management • Environmental Services • Landscaping • Architecture • Planning

GARDEN CREEK SUBDIVISION

110 BLUEBONNET CIRCLE, BOERNE, TX 78006

CIVIL SITE - DIMENSIONAL CONTROL PLAN

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FOR THE PURPOSE OF
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AUTHORITY OF

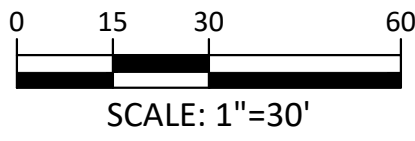
ANTHONY T. RECINE III, P.E.
(TX# 94575)

MANHARD CONSULTING, LLC
TBPE FIRM No. F-18141

IT IS NOT TO BE USED
FOR CONSTRUCTION
OR PERMITTING PURPOSES

PROJ. MGR.: ATR
 PROJ. ASSOC.: CW
 DRAWN BY: _____
 DATE: 06-08-18
 PROJ #: 613.040.001

SHEET
C200
4 OF 11



Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project area in order to implement contractor's trench excavation safety protection system, and the design and procedure shall comply with the following trench excavation safety protection system and shall comply with minimum OSHA standards for trench safety. Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the essence and activities of individuals working in and around trench excavation.

CURVE TABLE			
CURVE	RADIUS	LENGTH	DELTA
C1	90.00'	79.47'	50°35'23"
C2	63.37'	56.04'	50°40'00"

- ALL BOUNDARY SURVEY AND EXISTING SPOT ELEVATION & CONTOUR INFORMATION PRESENTED ON PLANS ARE FROM A SURVEY FILE PROVIDED BY:
- GE REAVES ENGINEERING
12508 JONES MALTSBERGER, SUITE 108
SAN ANTONIO, TX 78247
PHONE: (210) 490-4506
- ENGINEER DOES NOT CERTIFY TO SURVEY/TOPOGRAPHIC INFORMATION OR BENCHMARKS PREPARED BY SURVEYOR AND DEPICTED ON THIS PLAN. GENERAL CONTRACTOR & SUBCONTRACTORS SHALL REVIEW PROPOSED LAYOUT FOR CONFLICTS AS THEY APPLY TO WORK PERFORMED FROM SURVEY/TOPOGRAPHIC INFORMATION DEPICTED. IF CONFLICT IS FOUND CONTACT BOTH ENGINEER & GENERAL CONTRACTOR IN WRITING (MAIL, FAX, EMAIL) IMMEDIATELY FOR DIRECTION.
- IF ADDITIONAL BENCHMARKS BEYOND THOSE REFLECTED ON THESE PLANS ARE DESIRED BY GENERAL CONTRACTOR AND/OR SUBCONTRACTORS TO EXECUTE THEIR PROPOSED WORK THEY MAY CONTACT, COORDINATE, HIRE, AND PAY FOR SURVEYOR TO SET SAID ADDITIONAL ON-SITE REFERENCE BENCHMARKS THEY MAY DEEM NECESSARY.

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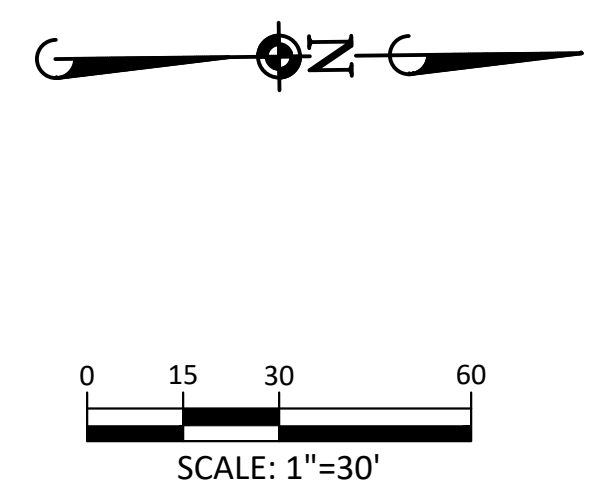
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!!! CALL BEFORE YOU DIG !!!

CONTRACTOR TO LOCATE EXISTING UTILITIES PRIOR TO WORK. ANY
CONFLICT WITH EXISTING UTILITIES SHALL BE REMEDIED BETWEEN
SAID CONFLICTING UTILITY AND CONTRACTOR. ENGINEER SHALL BE
NOTIFIED IN WRITING OF ANY CONFLICTS IMMEDIATELY UPON
DISCOVERY OF CONFLICT (LETTER, FAX, EMAIL).

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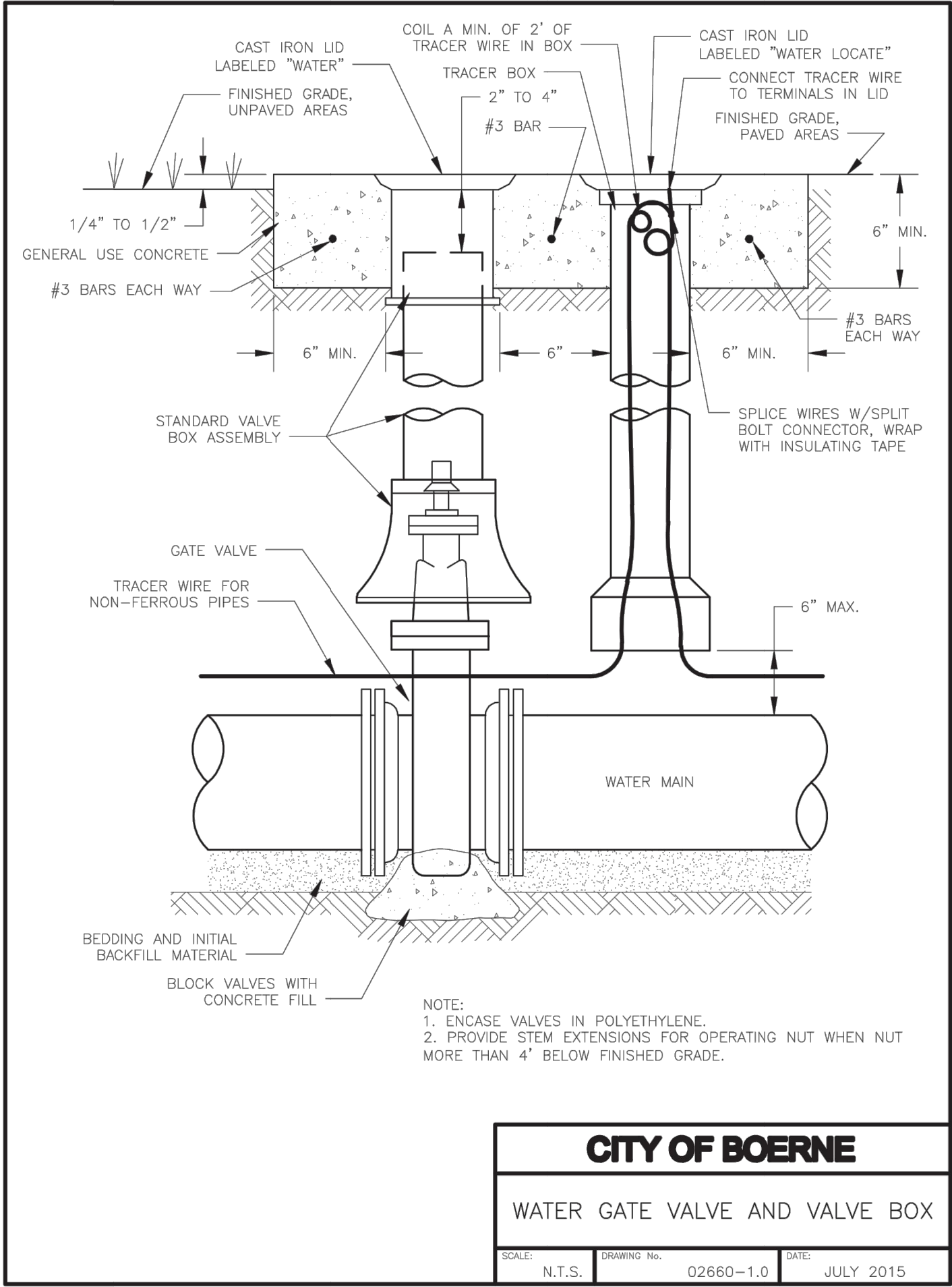
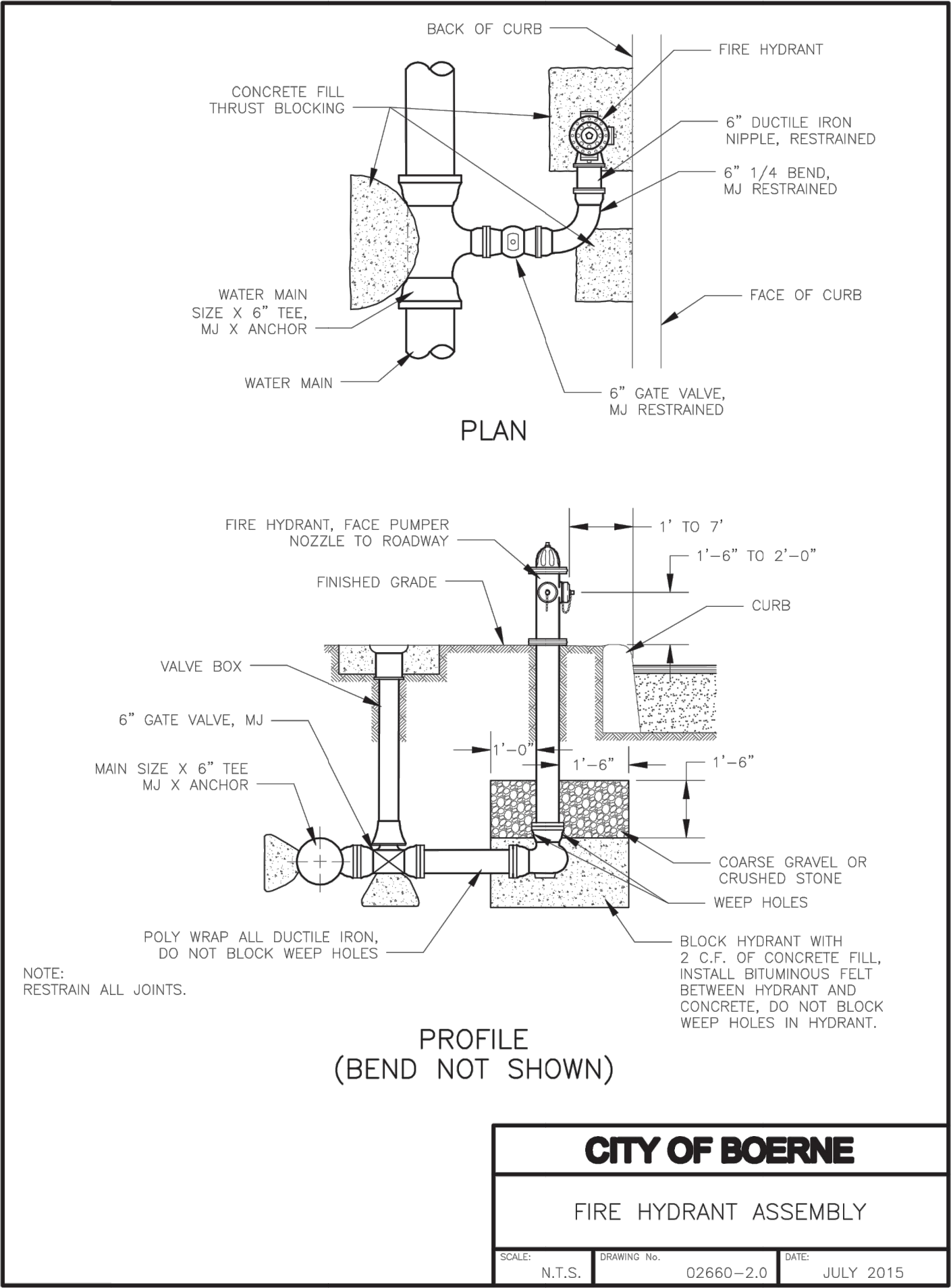
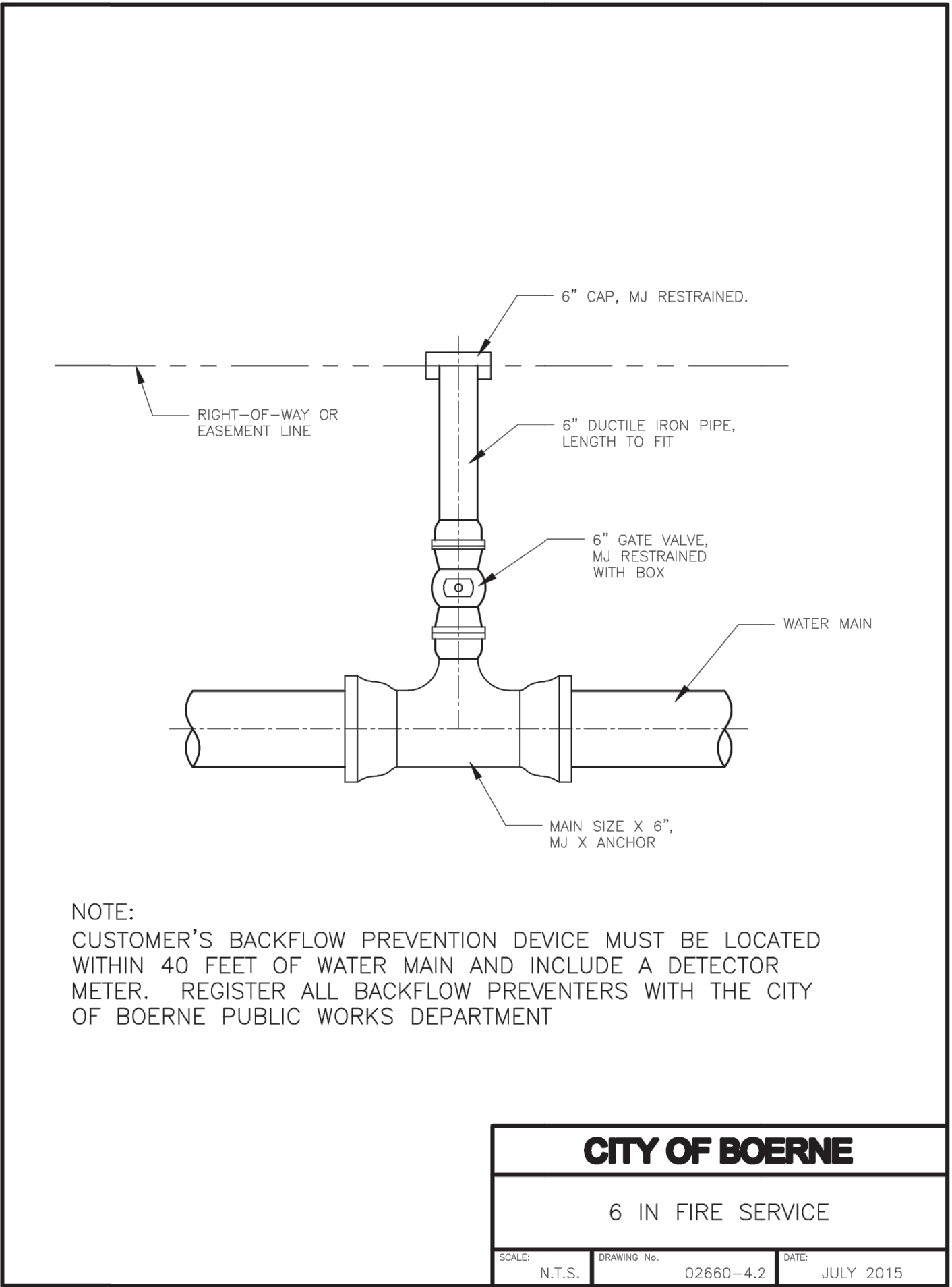
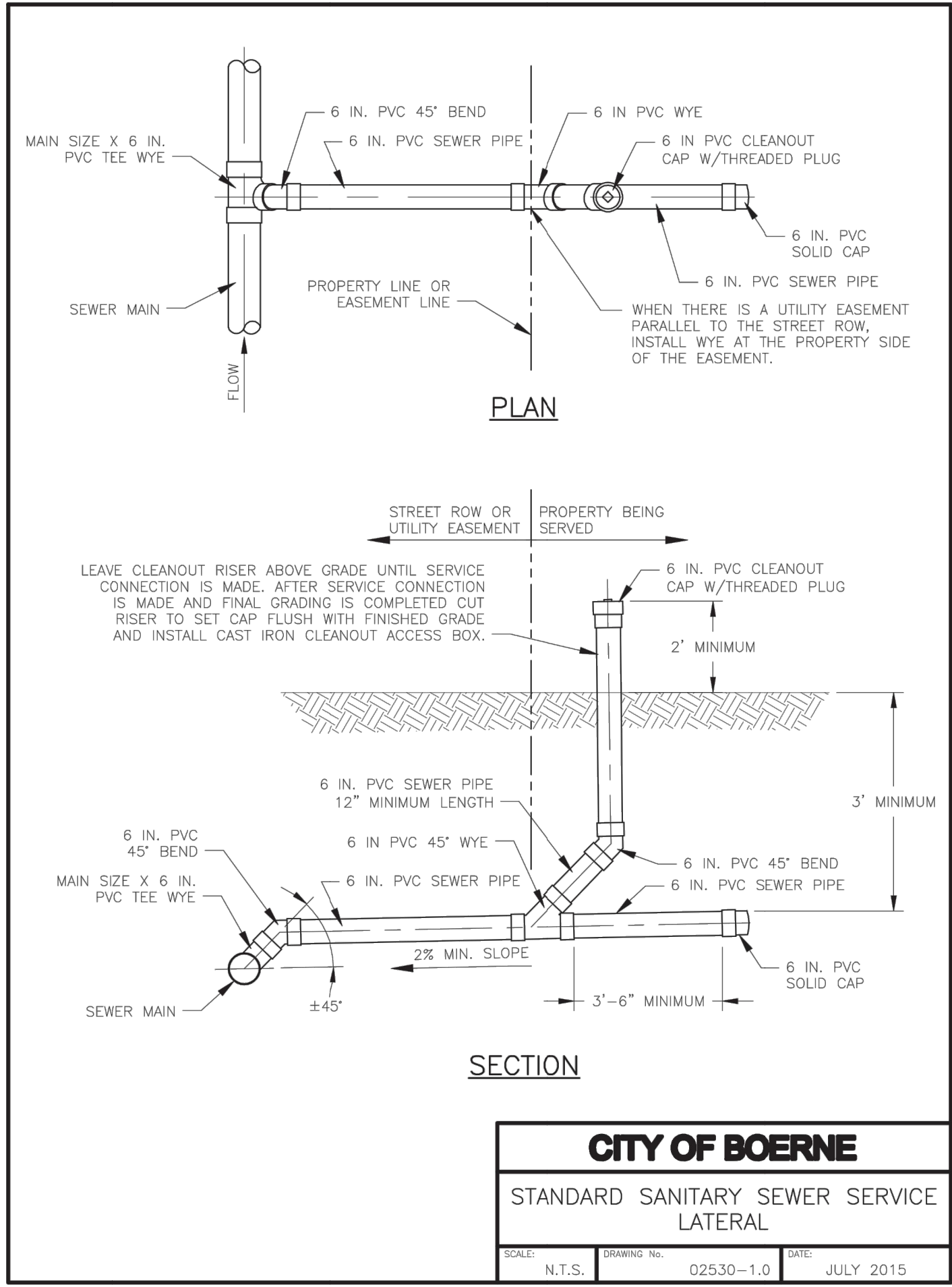
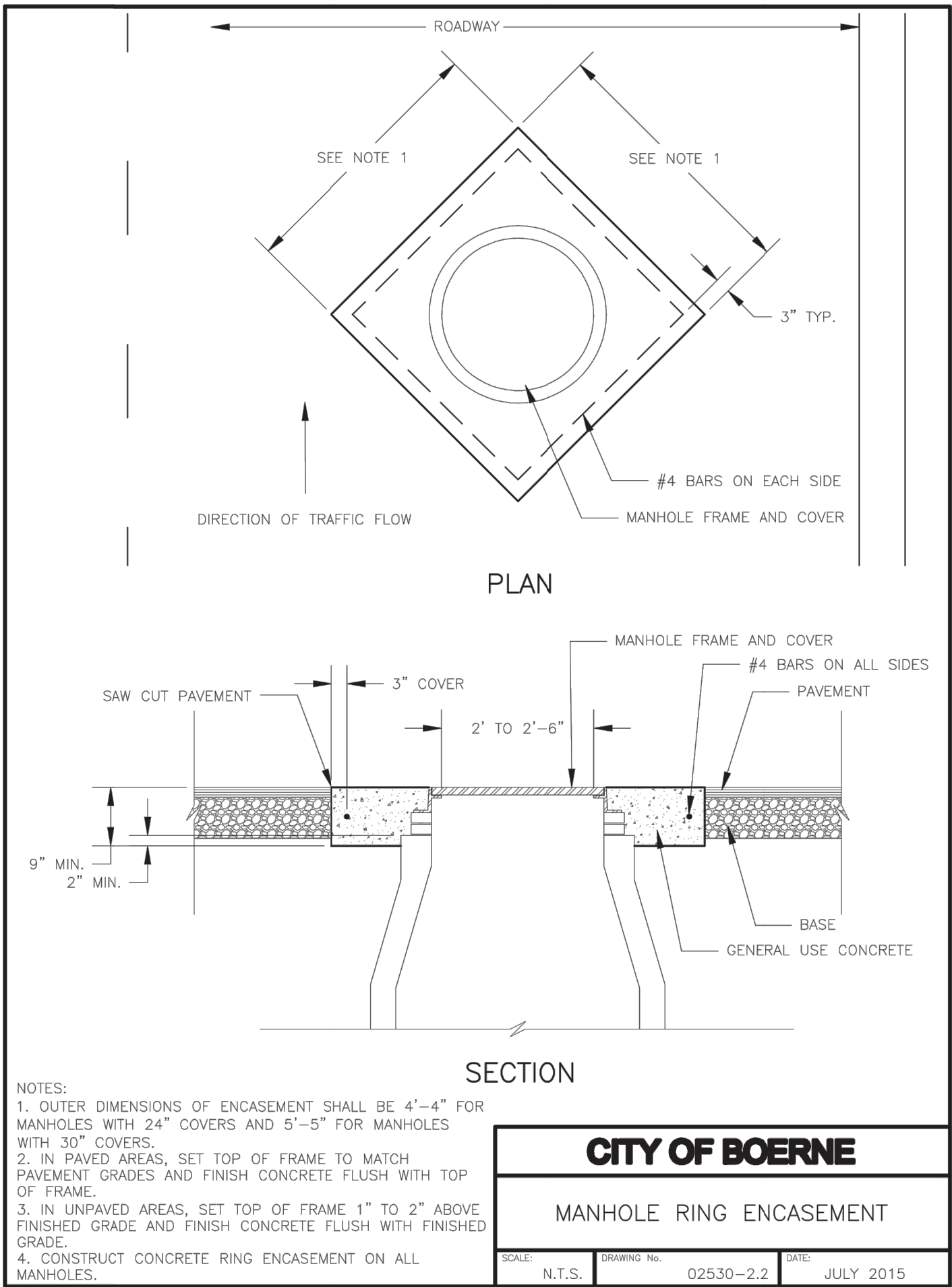
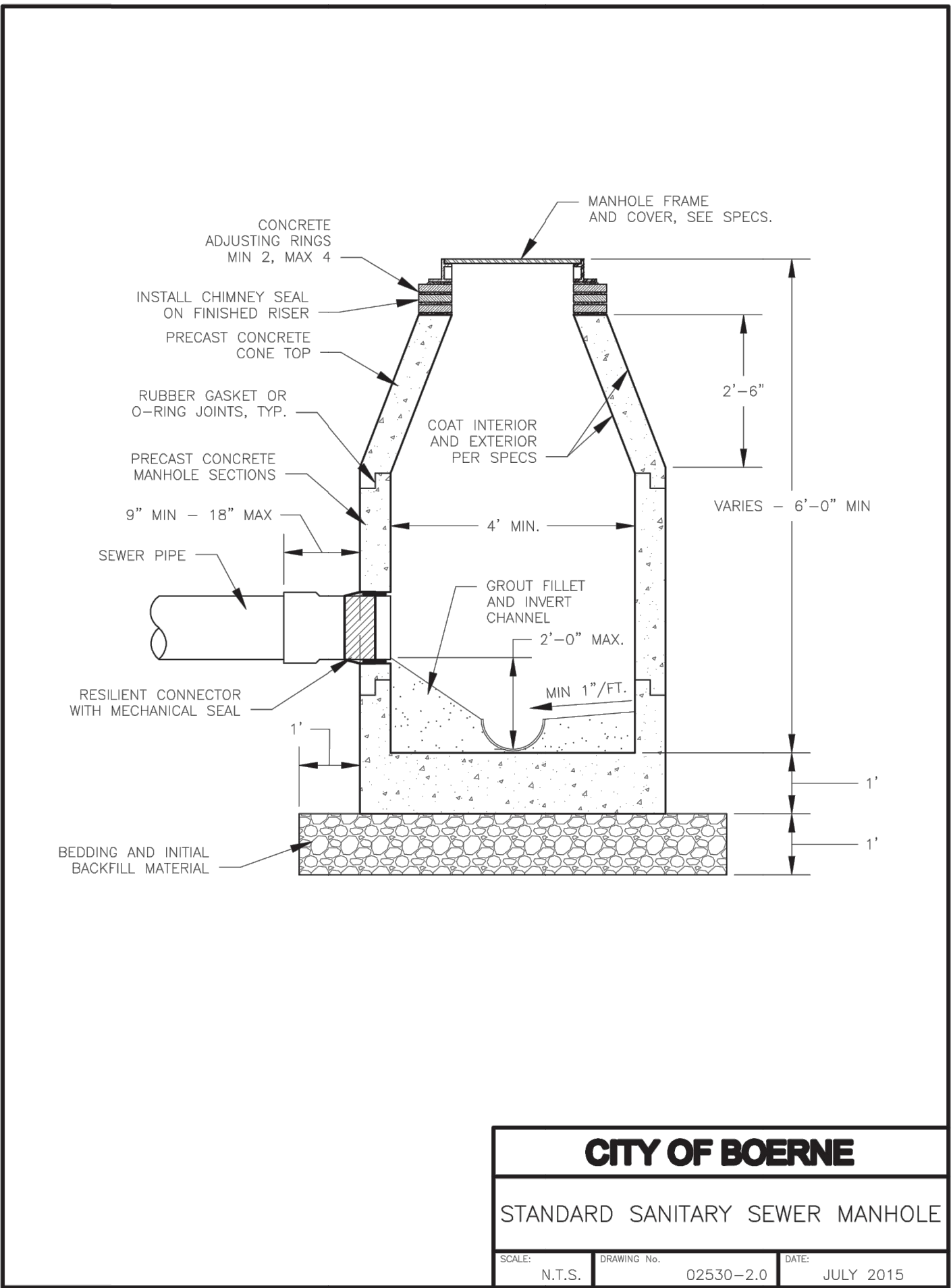
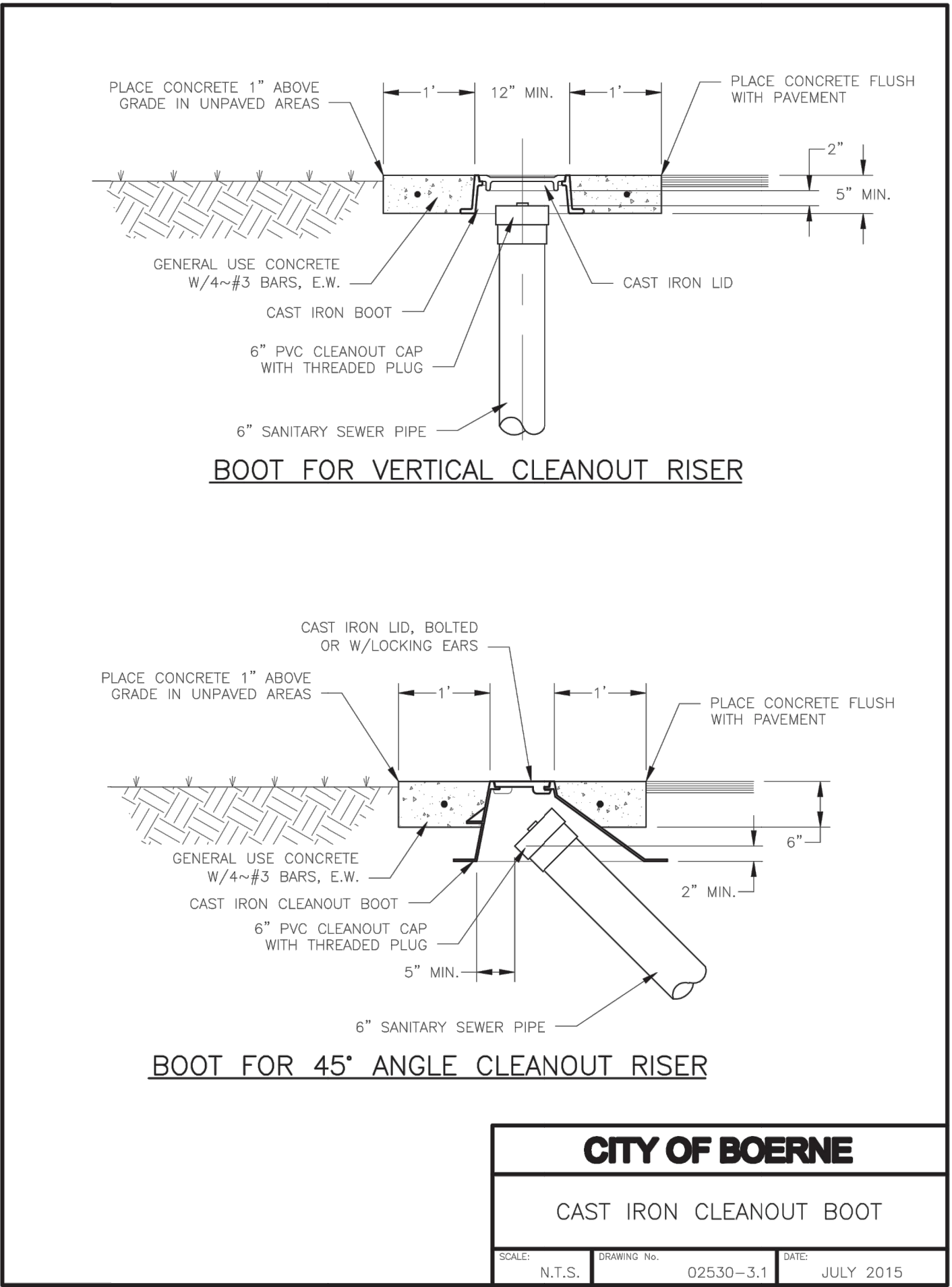
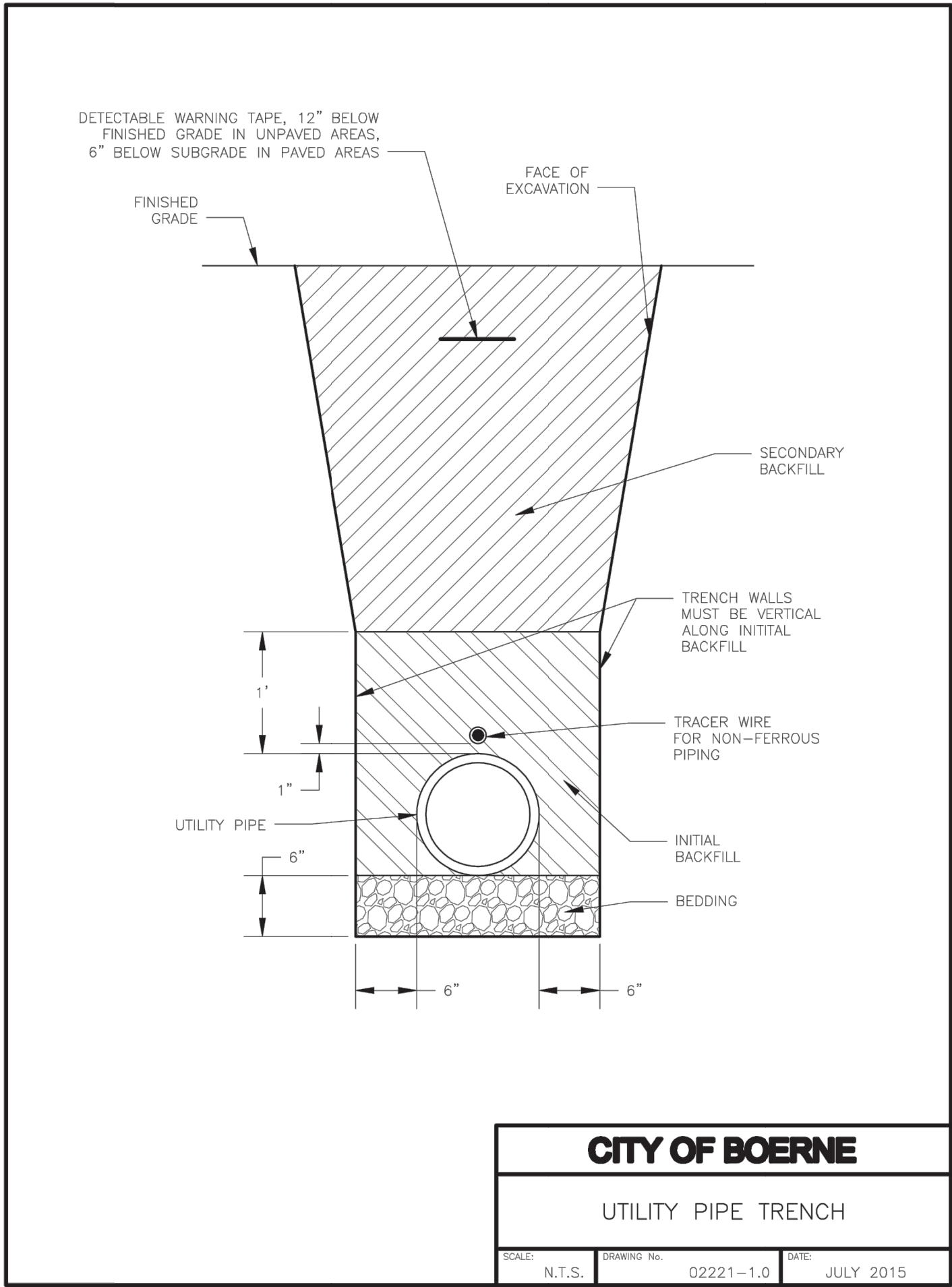
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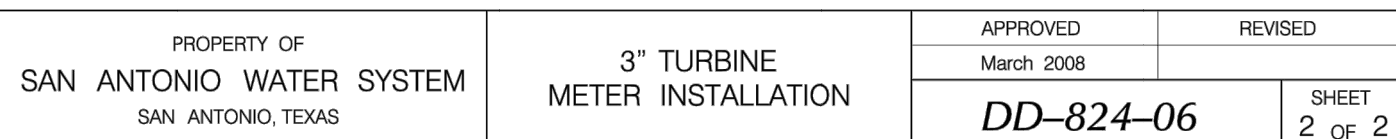
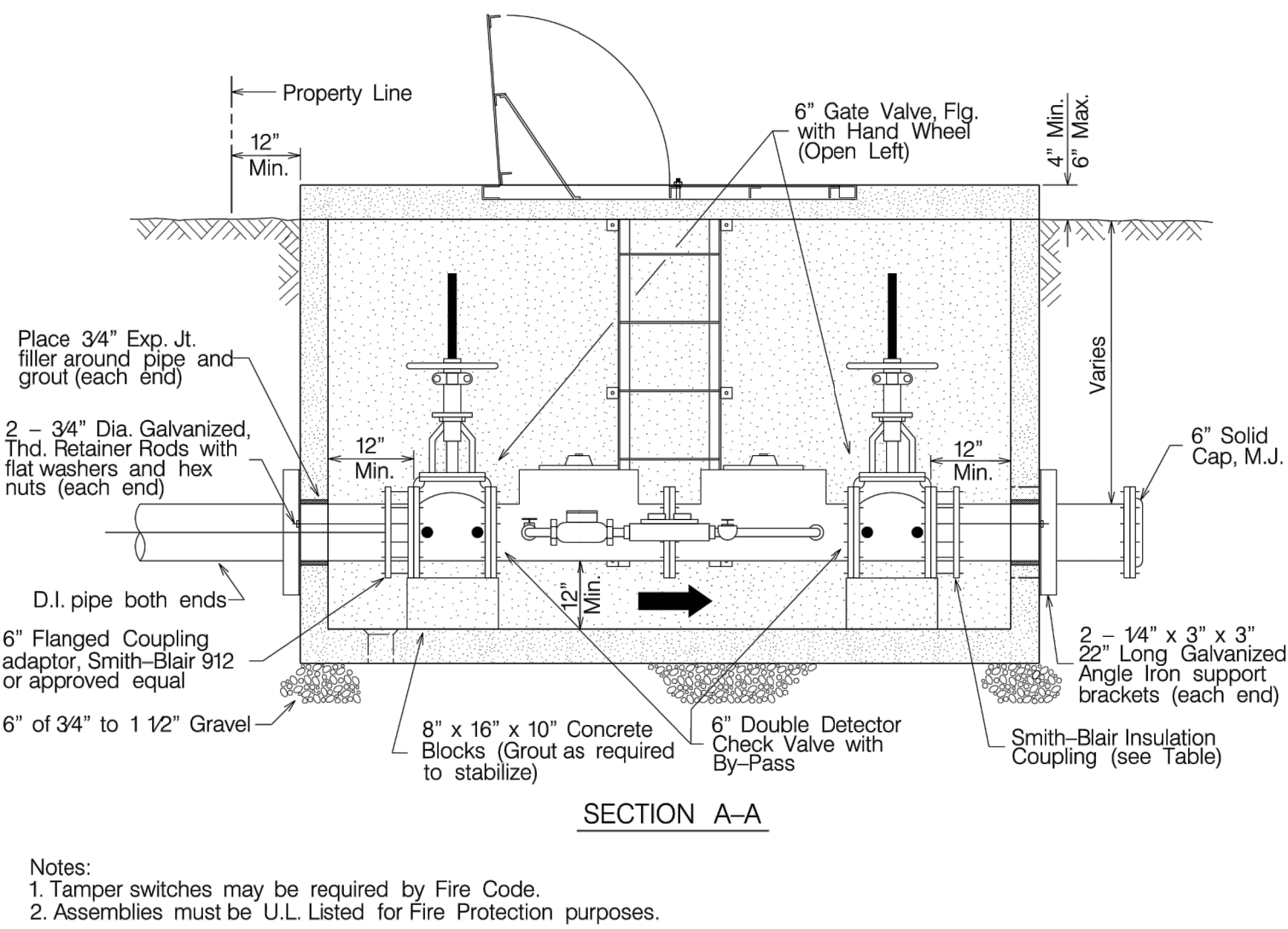
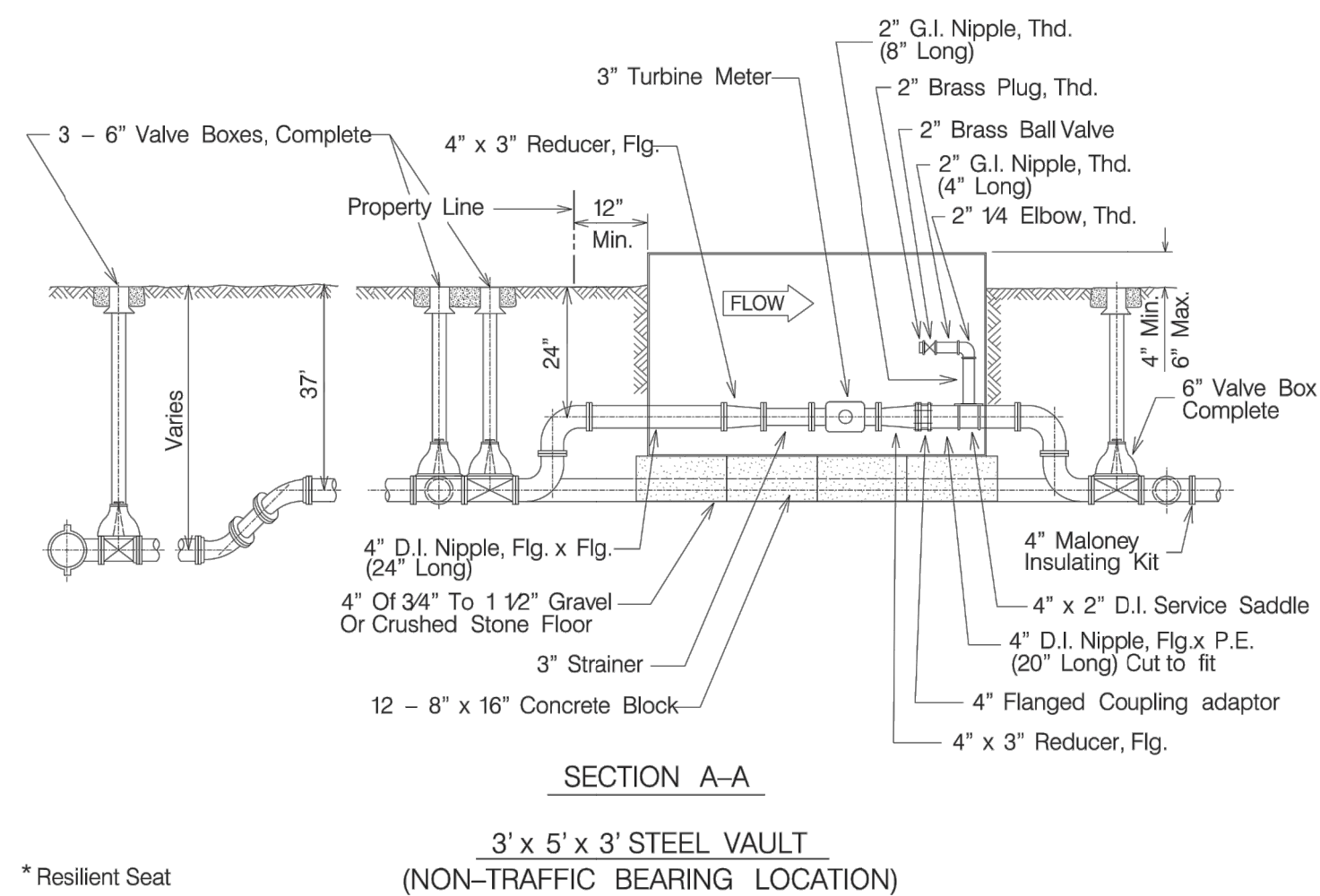
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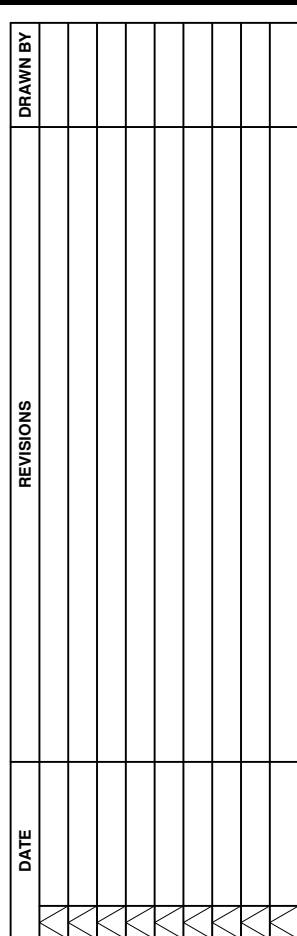
PROJ. MGR.:	<u>ATR</u>
PROJ. ASSOC.:	<u>CW</u>
DRAWN BY:	<u>JB</u>
DATE:	<u>06-08-18</u>
PROJ. #:	<u>613.040.001</u>

SHEET
C500
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Pipe Diameter	Double Detector Check	By-Pass Meter	Smith-Blair Coupling
6"	6"	5/8" - 3/4"	1932-6-690
8"	8"	5/8" - 3/4"	932-8-905



June 13, 2018 - 09:09 Two Name: P:\040 Garden Creek Subdivision\001 Lot 2 Unit 1\Two\Eng Plan Set Drawings\040 - C600 - Fire Protection Site Plan.dwg | Indicated By: | General

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ANTHONY T. RECINE III, P.E.
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C600
10 OF 11

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

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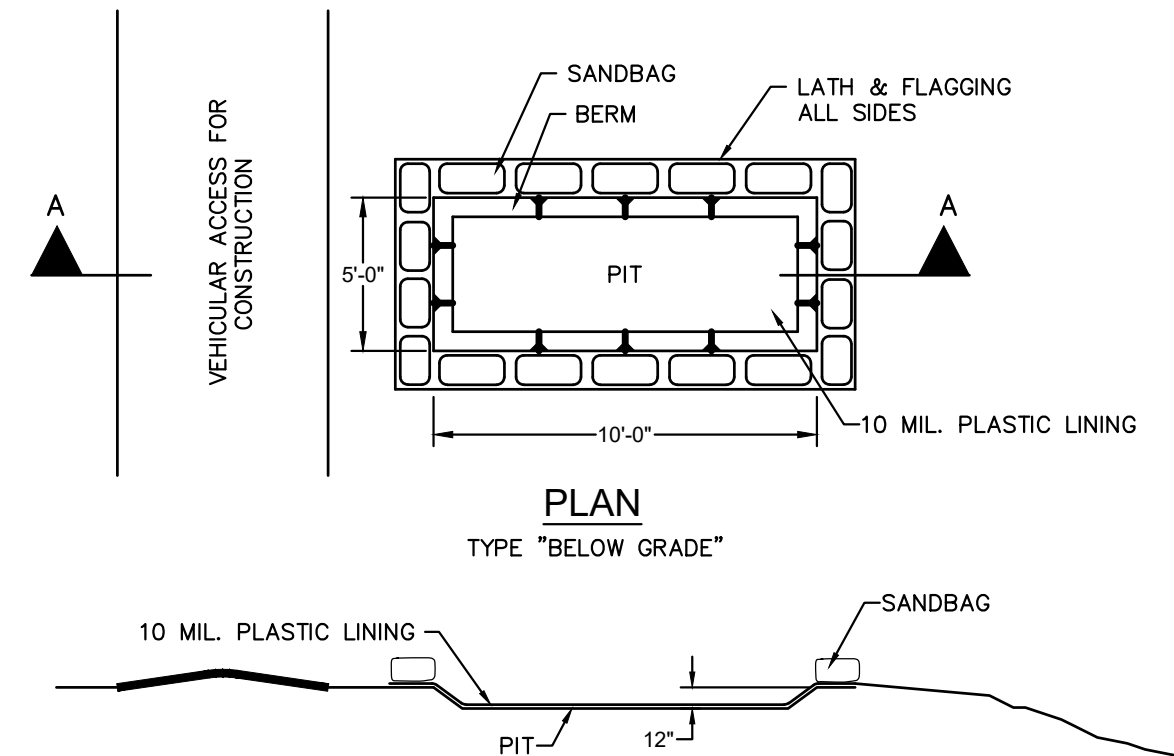
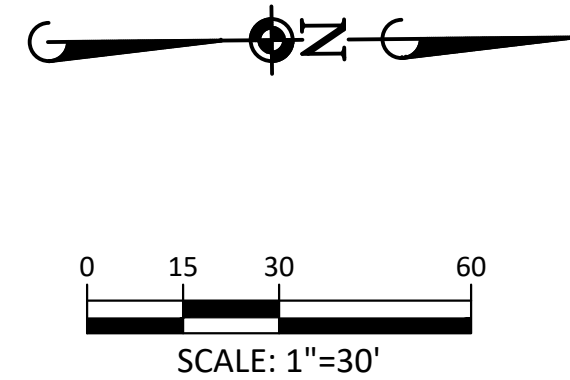
1. STEELPOSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FENCE. WHERE FENCE CAN NOT BE TREATED (e.g., pavement) WEIGHT FABRIC PLACED WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW 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 STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. CONTRACTOR SHALL PROVIDE TRIANGULAR SEDIMENT FILL DIKE PER DETAIL THIS SHEET WHERE SILT FENCE IS REQUIRED BUT NOT INSTALLABLE.

NOT TO SCALE

1. STONE SIZE - 3 TO 5 INCH OPEN GRADED ROCK.
2. LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN 8 INCHES.
4. WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC PROPERTY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED STRAP OR SEDIMENT BASIN. SEDIMENT SHALL BE REMOVED FROM ENTERING AND EXITING STORM DRAIN, DITCH, OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN CONDITION TO PREVENT TRUCKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS. THIS MAY BE DONE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF SEDIMENT TRAPS USED, TRACKS, AND/OR ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE - ENTRANCE MUST BE PROPERLY GRADED OR DRAINED TO PREVENT TRUCKING OR FLOWING OF SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.

NOT TO SCALE

 DRAINAGE FLOW (EXISTING)
 DISTURBED AREA



NOTES:

1. DETAIL ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.

NOT TO SCALE

1. TEMPORARY EROSION/SEDIMENTATION CONTROL AND TREE/NATURAL AREA PROTECTION MEASURES:

- THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR EXCAVATION).
- THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND REPORT ANY SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF DAMAGED AREAS SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.

2. PERMANENT EROSION CONTROL:

- ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW:
- A MINIMUM OF 1" OF TOPSOIL SHALL BE PLACED IN ALL DRAINAGE CHANNELS (EXCEPT ROCK) AND BETWEEN THE CURB AND R.O.W. LINE.

BROADCAST SEEDING:

- i. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF 2 POUNDS PER 1000 SF OF UNHULLED BERMUDA AND 7 POUNDS PER 1000 SF OF WINTER RYE WITH A PURITY OF 95% WITH 90% GERMINATION.
- ii. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 2 POUNDS PER 1000 SF WITH A PURITY OF 95% WITH 85% GERMINATION.

- FERTILIZER SHALL BE A PELLETED OR GRANULAR SLOW RELEASE WITH AN ANALYSIS OF 15-15-15 TO BE APPLIED ONCE AT PLANTING AND ONCE DURING THE PERIOD OF ESTABLISHMENT AT A RATE OF 1 POUND PER 1000 SF.

3. HYDRAULIC SEEDING:

- i. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF 1 POUND PER 1000 SF OF UNHULLED BERMUDA AND 7 POUNDS PER 1000 SF OF WINTER RYE WITH A PURITY OF 95% WITH 90% GERMINATION.
- ii. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 7 POUNDS PER 1000 SF WITH A PURITY OF 95% WITH 85% GERMINATION.

- FERTILIZER SHALL BE A WATER SOLUBLE FERTILIZER WITH AN ANALYSIS OF 15-15-15 AT A RATE OF 1 TO 1.5 POUNDS PER 1000 SF. (45-65 POUNDS PER ACRE)

- MULCH TYPE USED SHALL BE HAY, STRAW, OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1000 SF, WITH A SOIL TACKIFIER AT A RATE OF 1.4 POUNDS PER 1000 SF.

- THE PLANTED AREA SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF 6". THE IRRIGATION SHALL OCCUR AT TEN-DAY INTERVALS DURING THE FIRST TWO WEEKS. RAINFALL OCCURRENCES OF 1/2" OR MORE SHALL POSTPONE THE WATERING SCHEDULE FOR ONE WEEK. CONTRACTOR SHALL PROVIDE MEANS OF WATER VEGETATION BY CONTRACT, WATERING TRUCK, ON SITE CAPABILITIES, OR BY OTHER MEANS APPROVED BY OWNER.

- RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1-1/2" HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 10 SQUARE FEET EXIST.

3. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED AND GRADED TO DRAIN.

A 2.166-ACRE TRACT OF LAND DESCRIBED AS LOT 2, GARDEN CREEK SUBDIVISION, UNIT II, CITY OF BOERNE, KENDALL COUNTY, TEXAS, ACCORDING TO PLAT THEREOF RECORDED IN VOLUME 1, PAGE 315, KENDALL COUNTY, PLAT RECORDS.

!!! CALL BEFORE YOU DIG !!!

CONTRACTOR TO LOCATE EXISTING UTILITIES PRIOR TO WORK. ANY
CONTACT WITH EXISTING UTILITIES SHALL BE REMEDIATED
WITHOUT DELAY. CONTRACTOR, ENGINEER SHALL BE
NOTIFIED IN WRITING OF ANY CONFLICTS IMMEDIATELY UPON
DISCOVERY OF CONFLICT (LETTER, FAX, EMAIL).

TEXAS ONE CALL PARTICIPANTS REQUESTS 48 HOURS NOTICE
BEFORE YOU DIG, DRILL, OR BLAST – STOP AND CALL

TEXAS ONE CALL SYSTEM

(800) 244-6545 OR
www.onecalloftexas.com

[illegible][illegible]

GARDEN CREEK SUBDIVISION
110 BLUEBONNET CIRCLE, BOERNE, TX 78013
EROSION CONTROL PLAN

THIS DOCUMENT IS RELEASED
FOR THE PURPOSE OF
INTERIM REVIEW UNDER THE
AUTHORITY OF

ANTHONY T. RECINE III, P.E.
(TX# 94575)
MANHARD CONSULTING, LTD.
TBPE FIRM No. F-18141

IT IS NOT TO BE USED
FOR CONSTRUCTION
OR PERMITTING PURPOSES

PROJ. MGR.: ATR
PROJ. ASSOC.: CW

DRAWN BY: JB
DATE: 06-08-18
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SHEET
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C800
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