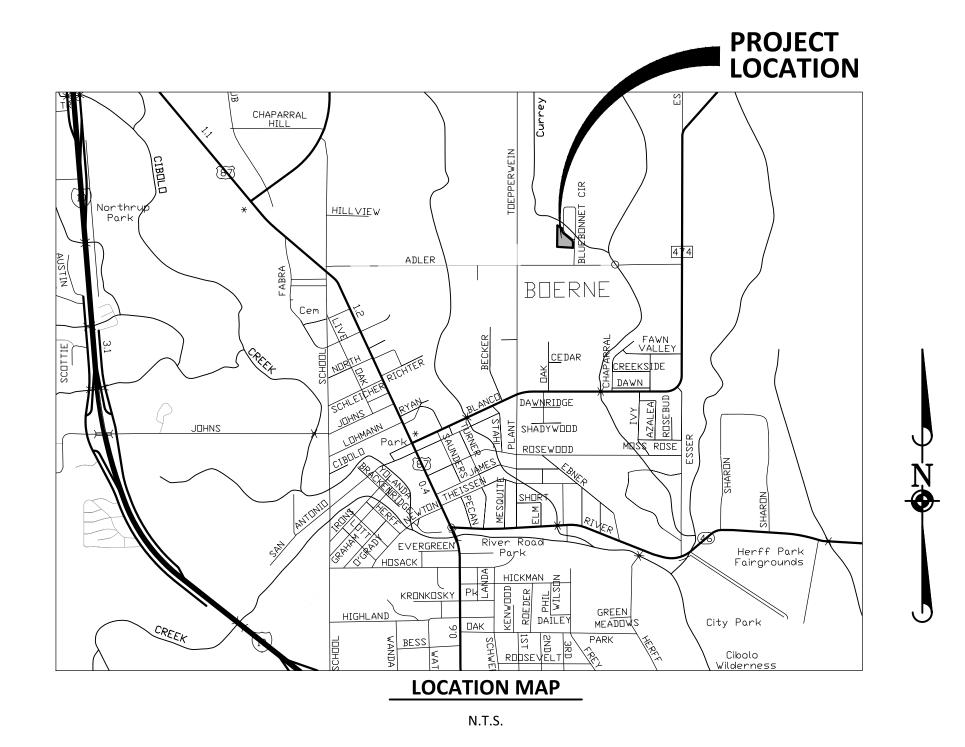
GARDEN CREEK SUBDIVISION

CONSTRUCTION PLANS FOR

STANDARD SYMBOLS

	STANDARD STINIDOLS	
EXISTING		PROPOSED
->>-	STORM SEWER	
-))-	SANITARY SEWER	->>
— — w — —	WATER MAIN	——w—
—·— E —·—	ELECTRIC	—— E ——
— · — G — · —	GAS	—— G ——
—·— Ţ —·—	TELEPHONE	<u></u>
©	SANITARY MANHOLE	©
© 	STORM MANHOLE STORM INLET (CURB & GUTTER)	⊚
	STORM INLET (LANDSCAPE) CLEANOUT	_
Φ.		/KCBA
	RIP RAP	
\bowtie	GATE VALVE	×
Ø	FIRE HYDRANT	
Θ	CURB STOP	⊕ .T. ∡ .
	FITTING	Д
	FLARED END SECTION	
	STREET LIGHT	-
	DIRECTION OF FLOW	→
	DIRECTION OF OVERFLOW RELIEF	\Rightarrow
764	1 FOOT CONTOURS	764_
===	CURB AND GUTTER (CATCH)	
	DEPRESSED CURB AND GUTTER	7//////
	CURB AND GUTTER (SPILL)	
	SIDEWALK	4 4 4
	PROPERTY LINE	
	R.O.W. LINE	
	EASEMENT LINE	
- O-	SIGN POWER POLE	<u> </u>
<u>-</u> Ф	GUY WIRE	
E © E	ELECTRICAL EQUIPMENT	
Т		
© T	TELEPHONE EQUIPMENT FENCE	
100000	SPOT ELEVATION	-
+		
	RETAINING WALL	BOTTOM SIDE
		20



9901 BROADWAY, SUITE 117, SAN ANTONIO, TX 78217 ph:210.899.38217 manhard.com Civil Engineers • Surveyors • Water Resources Engineers • Water & Wastewater Engineers Construction Managers • Envirionmnbetal Scientist • Landscape Architects • Planners Texas Board of Professional Engineers Registration No. F-18141

KEY CONTACTS				
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			

ABBREVIATIONS:

	OF-WAY
AGG AGGREGATE GRAVEL HYD HYDRANT RR RAILROA	AD .
BC BACK OF CURB INL INLET RIGHT	
BOP BOTTOM OF PIPE INV INVERT SAN SANITAF	RY SEWER
BVC BEGIN VERTICAL CURVE LP LOW POINT SF SQUARE	
ADJ ADJUST HWL HIGH WATER LEVEL ROW RIGHT—OF AGG AGGREGATE GRAVEL HYD HYDRANT RR RAILROW BC BACK OF CURB INL INLET RT RIGHT BOP BOTTOM OF PIPE INV INVERT SAN SANITAF BVC BEGIN VERTICAL CURVE LP LOW POINT SF SQUARE BW BACK OF WALK LT LEFT SHT SHEET	
CL CENTERLINE MAX MAXIMUM ST STORM	
ADJ ADJUST HWL HIGH WATER LEVEL ROW RIGHT—OF AGG AGGREGATE GRAVEL HYD HYDRANT RR RAILROA BC BACK OF CURB INL INLET RT RIGHT BOP BOTTOM OF PIPE INV INVERT SAN SANITAF BVC BEGIN VERTICAL CURVE LP LOW POINT SF SQUARE BW BACK OF WALK LT LEFT SHT SHEET CL CENTERLINE MAX MAXIMUM ST STORM CMP CORRUGATED METAL PIPE MH STORM MANHOLE STA STATION CONC CONCRETE MIN MINIMUM STD STANDA CY CUBIC YARD OS OFFSET FROM CENTERLINE SW SIDEWALD DITCH P PAVEMENT SY SQUARE DIA DIAMETER PC POINT OF CURVE T TELEPHOLD DIP DUCTILE IRON PIPE PCC POINT OF COMPOUND CURVE TB THRUST ELEV ELEVATION PI POINT OF INTERSECTION TBR TO BE IN TORSE TO BE IN TORSE TO BE IN THE SAN T	1
CONC CONCRETE MIN MINIMUM STD STANDA	(RD
CY CUBIC YARD OS OFFSET FROM CENTERLINE SW SIDEWAL	_K
D DITCH P PAVEMENT SY SQUARE	YARDS
DIA DIAMETER PC POINT OF CURVE T TELEPHO	ONE
DIP DUCTILE IRON PIPE PCC POINT OF COMPOUND CURVE TB THRUST	BLOCK
ELEV ELEVATION PI POINT OF INTERSECTION TBR TO BE INTERSECTION TO BE INTERSECTION.	REMOVED
EP EDGE OF PAVEMENT PL PROPERTY LINE TC TOP OF	CURB
EVC END VERTICAL CURVE PP POWER POLE TEMP TEMPOR	RARY
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 TRANSF	ORMER
FG FINISHED GRADE PVC POINT OF VERTICAL CURVATURE TW TOP OF	WALL
FL FLOW LINE PVI POINT OF VERTICAL INTERSECTION TYP TYPICAL	_
FM FORCE MAIN PVT POINT OF VERTICAL TANGENCY VB VALVE (GV GATE VALVE VV VALVE (BOX
GV GATE VALVE R RADIUS VV VALVE '	VAULT
HDPE HIGH DENSITY POLYETHYLENE RCP REINFORCED CONCRETE PIPE WM WATER	MAIN
	SURFACE ELEVATION



NOTE:

MANHARD CONSULTING, LTD. IS TO BE NOTIFIED AT LEAST THREE (3) DAYS PRIOR TO STARTING CONSTRUCTION AND SHALL BE INCLUDED IN THE PRECONSTRUCTION MEETINGS

Sheet List Table

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

NOTES:

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 DIFFERING 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.

BENCHMARK

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

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.



SUBDIVISION BOERNE, CIRCLE,

CREEK **UEBONNET** ARDEN В 0

FOR THE PURPOSE OF INTERIM REVIEW UNDER TH AUTHORITY OF

ANTHONY T. RECINE III, P.E

(TX# 94575) MANHARD CONSULTING, LTE TBPE FIRM No. F-18141 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMITTING PURPOSES.

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

DEMOLITION / SITE CLEARING NOTES:

DEMOLITION NOTES:

- 1. FOLLOWING APPROPRIATE SAFETY PROCEDURES, DEMOLISH EXISTING FACILITIES AS SHOWN ON THE PLANS, PROTECTION OF PUBLIC AND PRIVATE PROPERTY AND SAFE DISPOSITION OF SPOIL MATERIAL IS INCLUDED IN THIS ITEM.
- EXECUTION: DEMOLITION CONTRACTOR SHALL SUBMIT FOR APPROVAL TO GOVERNMENTAL AGENCIES AND THE OWNER A DEMOLITION PLAN INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - A. METHODS, EQUIPMENT AND SEQUENCE OF OPERATION. B. CREDENTIALS OF INDIVIDUALS PERFORMING DEMOLITION OPERATIONS, INCLUDING SUBCONTRACTORS
 - C. SAFETY MEASURES TO PROTECT WORKERS, PERSONNEL AND THE PUBLIC. D. SAFETY MEASURES TO PROTECT ADJACENT PROPERTIES, LANDSCAPING,
 - IMPROVEMENTS TO REMAIN OR PUBLIC RIGHTS OF WAY. E. ASBESTOS OR OTHER HAZARDOUS MATERIAL ABATEMENT PLAN.
 - STORAGE, REMOVAL AND DISPOSITION OF SPOIL MATERIAL. G. EROSION CONTROL MEASURES, INCLUDING NPDES PROCEDURES AND REGULATIONS.
 - H. POLLUTION AND AIR QUALITY CONTROL MEASURES (DUST CONTROL ETC.). HEALTH DEPARTMENT NOTICE.
 - J. UTILITY COORDINATION WITH ALL AFFECTED UTILITIES, INCLUDING LOCATION OF FACILITIES, PROTECTION DURING DEMOLITION, DAMAGE REPAIRS AND DISRUPTION
- 3. THE USE OF EXPLOSIVES WILL NOT BE PERMITTED.
- 4. THE PROJECT SITE SHALL BE CLEANED DAILY. DEBRIS, RUBBISH AND CONTRACTORS SALVAGED MATERIAL SHALL BE REMOVED PROMPTLY.
- 5. ALL SPOIL MATERIAL REMAINING AFTER OWNER SALVAGE IS COMPLETE AND RESULTING FROM DEMOLITION OPERATIONS BECOMES THE PROPERTY OF THE CONTRACTOR PERFORMING THE DEMOLITION WORK. APPROPRIATE DISPOSAL OF SPOIL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING THE DEMOLITION WORK AT HIS OWN EXPENSE. OWNER WILL PROVIDE LIST OF ITEMS TO BE SALVAGED.

SITE CLEARING NOTES:

- 1. CONDUCT SITE CLEARING OPERATIONS TO THE EXTENT SHOWN ON THE DRAWINGS INCLUDING BUT NOT LIMITED TO: REMOVAL OF TREES AND OTHER VEGETATION, TOPSOIL, STRIPPING. CLEARING AND GRUBBING. AND REMOVAL ALL IMPROVEMENTS ABOVE OR BELOW GRADE. REFER TO THE GEOTECHNICAL REPORT FOR THIS PROJECT FOR ADDITIONAL SITE PREPARATION REQUIREMENTS.
- A. SITE CLEARING OPERATIONS SHALL NOT DAMAGE OR INTERFERE WITH THE PUBLIC USE OF ROADS, WALKS, ADJACENT LAND OR FACILITIES AND EXISTING IMPROVEMENTS INTENDED TO REMAIN.
- B. EXISTING TREES TO REMAIN SHALL BE PROTECTED IN COMPLIANCE WITH -LANDSCAPE PLANS.
- C. CONTRACTOR SHALL REMOVE TREES, SHRUBS, GRASS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH THE INSTALLATION OF NEW CONSTRUCTION OR AS SHOWN ON PLANS. CLEARING OPERATIONS SHALL INCLUDE REMOVAL OF STUMPS AND ROOTS.
- D. CONTRACTOR SHALL STRIP TOPSOIL IN A MANNER APPROPRIATE TO SEGREGATE FROM UNDERLYING SUBSOIL TOPSOIL STRIPPING NEAR TREES INTENDED TO REMAIN SHALL BE COMPLETED IN COMPLIANCE LANDSCAPE PLANS.
- 3. SPOIL SHALL BE STORED ONLY IN AREAS SHOWN ON THE PLANS AND SHALL BE MAINTAINED IN ACCORDANCE WITH APPUCABLE POLLUTION PREVENTION PLANS OR
- 4. WASTE MATERIAL OR EXCESS TOPSOIL GENERATED AS A RESULT OF CLEARING AND GRADING OPERATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. APPROPRIATE DISPOSAL OF ALL SPOIL MATERIAL SHALL BE AT THE CONTRACTOR'S EXPENSE. BURNING ON THE OWNER'S PROPERTY IS NOT PERMITTED.

GENERAL CONSTRUCTION NOTES:

GENERAL NOTES:

- 1. ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THESE APPROVED PLANS. ANY ADDITIONAL IMPROVEMENTS WILL REQUIRE PLAN REVISIONS AND APPROVAL OF THE
- 2. CONTRACTOR SHALL NOTIFY THE TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO STARTING WORK IN THE STATE
- 3. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION.
- 4. ALL REQUIRED RELOCATION'S OR ALTERATIONS OF TELEPHONE POLES, UNDERGROUND CONDUIT, POWER POLES AND ANY OTHER FACILITIES SHALL BE DONE BY THIS CONTRACTOR, UNLESS NOTED AS "BY OTHERS". THIS CONTRACTOR SHALL SCHEDULE AND COORDINATE HIS WORK WITH THAT OF OTHER CONTRACTORS AND UTILITY COMPANIES SO AS NOT TO DELAY THE PROJECT.
- 5. THE INFORMATION CONTAINED ON THESE DRAWINGS IN REGARDS TO EXISTING UTILITIES, TOPOGRAPHY, CONTOURS, OR SUBSURFACE CONDITIONS IS FURNISHED SOLELY AS THI BEST INFORMATION AVAILABLE AT THIS TIME. ITS ACCURACY IS NOT GUARANTEED AND ITS USE IN NO WAY RELIEVES THE CONTRACTOR OF ANY RESPONSIBILITY FOR LOSSES DUE TO ANY INACCURACIES.

NOTES TO CONTRACTOR:

- 1. BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.
- 2. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY, FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

CONSTRUCTION NOTES

- 1. CONTRACTOR AND SUBCONTRACTORS SHALL CONTRACT WITH SURVEYOR TO VERIFY PROJECT ELEVATIONS AND BENCHMARK ELEVATION(S) PRIOR TO CONSTRUCTION. "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH VERTICAL AND HORIZONTAL ALIGNMENT. ALL FINISHED EARTHEN GRADES SHALL NOT EXCEED 3:1 (H: V) SLOPE.
- 2. 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.
- 3. THE CONTRACTOR SHALL PROTECT EXISTING GRASS, LANDSCAPING AND TREES NOT IN DIRECT CONFLICT WITH PROPOSED IMPROVEMENTS DURING CONSTRUCTION. GRASSED AREA DAMAGED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR WITH TOPSOIL AND SODDING AT THE CONTRACTORS EXPENSE.
- 4. CONTRACTOR SHALL COMPLY ALL RELEVANT BUILDING CODES, CONSTRUCTION SPECIFICATIONS FROM ANY POLITICAL SUBDIVISION HAVING JURISDICTION (INCLUDING BUT NOT LIMITED TO CITY OF BOERNE, KENADALL COUNTY, TXDOT, TCEQ, AND THE TEXAS ACCESSIBILITY STANDARDS OF THE TEXAS DEPARTMENT OF LICENSING AND REGULATION).
- 5. CONTRACTOR SHALL SECURE ALL PERMITS REQUIRED FOR CONSTRUCTION AND SHALL NOTIFY ALL RESPECTIVE GOVERNMENTAL OR UTILITY AGENCIES AFFECTED BY CONSTRUCTION PRIOR TO STARTING CONSTRUCTION.
- 6. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS 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 TH CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER HARMLESS FROM ANY AND ALL LIABILITY IN CONNECTION WITH THE WORK PERFORMED ON THIS PROJECT EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR
- 7. 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.
- 8. ALL TRENCHES CUT BENEATH PROPOSED SIDEWALKS AND PARKING OR STREET PAVEMENT AREAS SHALL BE BACK FILLED IN 8" LIFTS, COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY, AND BE SUBJECT TO DENSITY TESTING.
- 9. 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.
- 10. REFERENCE ARCHITECTURAL PLANS FOR ALL FENCE LOCATIONS AND DETAILS AS INFORMATION NOT PROVIDED BY THE CIVIL ENGINEER.
- 11. 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 (TXDOT) 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 INSTITURE (ACI).

PAVING NOTES:

HOT MIX ASPHALT PAVEMENT NOTES:

- HOT MIX ASPHALT CONCRETE PAVING PROVIDE NECESSARY LABOR AND MATERIALS TO INSTALL THE HOT MIX ASPHALT PAVING SHOWN ON THE PLANS, GEOTECHNICAL REPORT AND IN THE PAVEMENT DESIGN DETAILS. THIS INCLUDES THE SUBGRADE PREPARATION, AGGREGATE, ASPHALT MATERIALS, MINERAL FILLER, PRIME COAT, TACK COAT AND FINAL
- 2. ALL ASPHALT MUST MEET A RETAINED STRENGTH OF AT LEAST 70% ON THE TXDOT 531-C TEST OR HAVE ALL LIMESTONE AGGREGATE. IF SILICEOUS AGGREGATES (WHICH INCLUDE GRAVEL, CRUSHED GRAVEL OR GRANITE) ARE USED, ADD HYDRATED LIME (AT LEAST 1%) OR ANTI-STRIP AGENT TO THE MIX TO MEET THE RETAINED STRENGTH REQUIREMENTS. THE MIXTURE MUST BE DESIGNED FOR 97% OF OPTIMUM LABORATORY DENSITY. ASPHALT GRADE SHALL BE PG 64-22.
 - A. START OF THIS WORK ITEM INDICATES ACCEPTANCE BY THE CONTRACTOR OF THE
 - SUBGRADE PREPARATION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE FINAL RESULTS.
 - B. CONTRACTOR SHALL ESTABLISH AND MAINTAIN REFERENCE POINTS TO HOLD PROPER ELEVATIONS AND GRADES. ALL PAVEMENT SHOULD BE WITHIN 0.5 INCH OF
 - PROPOSED GRADES. C. UNLESS OTHERWISE SHOWN ON THE PLANS, RECOMMENDED BY THE GEOTECHNICAL ENGINEER OR APPROVED BY THE ENGINEER, MATERIALS AND INSTALLATION OF SUCH SHALL COMPLY WITH THE FOLLOWING ITEMS WITHIN THE TEXAS DEPARTMENT OF TRANSPORTATION 2004 STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES:
 - * ITEM 247 FLEXIBLE BASE, GRADE 1 OR 2 * ITEM 340 - HOT MIX ASPHALTIC CONCRETE PAVEMENT. HMAC SHOULD ACHIEVE AT LEAST 70% STRENGTH WHEN TESTED IN ACCORDANCE WITH TEX
- 4. IN PLACE COMPACTED THICKNESS WILL NOT BE ACCEPTABLE IF EXCEEDING THE FOLLOWING ALLOWABLE VARIATION FROM REQUIRED THICKNESS:
 - * HMAC SURFACE COURSE: 1/4", PLUS OR MINUS * SURFACE SMOOTHNESS: TEST FINISHED SURFACE OF EACH ASPHALT CONCRETE COURSE FOR SMOOTHNESS, USING 10' STRAIGHTEDGE APPLIES PARALLEL WITH AND AT RIGHT ANGLES TO CENTERLINE OF PAVED AREA. SURFACE SMOOTHNESS WILL NOT BE ACCEPTABLE IF THE WEARING COURSE SURFACE EXCEEDING 3/16".
- 5. THE INITIAL QUALITY CONTROL TESTING SHALL BE PERFORMED AT THE OWNER'S COST. ANY NECESSARY REPAIRS OR REPLACEMENTS, ALONG WITH ADDITIONAL TESTING, SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE. TESTING PROCEDURES SHALL BE IN COMPLIANCE WITH OWNER'S STANDARD SPECIFICATION FOR MATERIAL TESTING.
- 6. CONTRACTOR SHALL ENSURE THE FOLLOWING: A. TESTING LAB TO VERIFY THICKNESS OF BASE MATERIAL INSTALLED.
- B. VERIFY APPROVED MIX DESIGN MATCHES DELIVERY TICKETS IN FIELD. C. RECORD ARRIVAL TIMES OF TRUCKS AND MIX TEMPERATURE UPON ARRIVAL RECORD
- LIST OF EQUIPMENT USED TO LAY AND COMPACT ASPHALT. D. RECORD AIR TEMPERATURE & MIX TEMPERATURE AT TIME OF LAYDOWN. E. GEO-TECH ENGINEER OF RECORD TO MAKE MIN. OF THREE SITE VISITS. F. ASPHALT JOB MIX FORMULA APPROVED IN ADVANCE (WITH ACCOMPANYING LAB TEST DATA) MINIMUM 21 DAYS PRIOR TO PAVING. THIS INCLUDES VERIFYING THE AGGREGATE MEETS ITEM 340 REQUIREMENTS AND ALL OTHER SPECIFICATIONS
- 7. HMAC SURFACE COURSE SHALL BE ORIENTED SUCH THAT JOINTS OR SEAMS ARE PARALLEL WITH THE DIRECTION OF TRAFFIC.

PORTLAND CEMENT CONCRETE PAVEMENT NOTES:

- 1. DESIGN MIX SUBMITTALS SHALL BE PROVIDED FOR REVIEW BY THE GEOTECHNICAL AND/OR CIVIL ENGINEER AT LEAST 14 DAYS PRIOR TO PLACEMENT.
- 2. DO NOT UNLOAD OR USE ANY HEAVY CONSTRUCTION EQUIPMENT ON NEW CONCRETE FOR AT LEAST 14 DAYS AFTER CONCRETE IS POURED.
- 3. GENERAL CONTRACTOR OR APPLICABLE SUB-CONTRACTOR IS RESPONSIBLE FOR COORDINATING WORK SUCH THAT UTILITIES ARE INSTALLED PRIOR TO PAVEMENT BASE BEING INSTALLED OR ELSE LOCATE AND PLACE LINES FOR PROPOSED UNDERGROUND
- 4. ALL CONCRETE WORK SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF ACI 330. FLY ASH CAN BE USED IN MIX DESIGNS WHERE SUITABLE UNLESS OTHERWISE NOTED.
- 5. FURNISH AND INSTALL THE PORTLAND CEMENT CONCRETE PAVING AND PREPARED BASE COURSE TO THE EXTENT SHOWN ON THE DRAWINGS. THESE AREAS ALSO INCLUDE CURBS, GUTTERS, WALKS AND PAVING AGGREGATE.
- 6. FXFCUTION: ALL CONCRETE ITEMS SHALL COMPLY WITH THE REQUIREMENTS OF APPLICABLE DIVISION 3 SECTIONS FOR CONCRETE MIX DESIGN, SAMPLING AND TESTING, CURING AND QUALITY CONTROL. AND AS HEREIN SPECIFIED.
- 7. UNLESS OTHERWISE SHOWN ON THE PLANS, RECOMMENDED BY THE GEOTECHNICAL ENGINEER OR APPROVED BY THE ENGINEER. CONCRETE AREAS SHALL COMPLY WITH THE FOLLOWING ITEMS WITHIN THE TEXAS DEPARTMENT OF TRANSPORTATION 1993 STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES:
- * ITEM 247 FLEXIBLE BASE * ITEM 360 - CONCRETE PAVING
- * ITEM 421 PORTLAND CEMENT CONCRETE * ITEM 529 - CONCRETE CURBS, GUTTER AND COMBINED CURB AND GUTTER * ITEM 5.31 - SIDEWALKS
- 8. UNLESS OTHERWISE SHOWN ON THE PLANS OR RECOMMENDED BY THE GEOTECHNICAL ENGINEER, DESIGN MIX SHALL PRODUCE NORMAL-WEIGHT CONCRETE WITH THE FOLLOWING
- A. COMPRESSIVE STRENGTH: 4000 PSI FOR PAVEMENTS AND 3000 PSI FOR ALL OTHER FLATWORK, MINIMUM AT 28 DAYS. B. SLUMP RANGE: 4" TO 6"
- C. AIR CONTENT: 3 TO 5%
- FORMS WILL BE SET TO GRADE LINES WITHIN THE FOLLOWING TOLERANCES: A. TOP OF FORMS NOT MORE THAN 1/8" IN 10'.
- B. VERTICAL FACE ON LONGITUDINAL AXIS, NOT MORE THAN 1/4" IN 10'.
- 9. LOCATE, PLACE AND SUPPORT REINFORCEMENT AS SPECIFIED IN THE APPLICABLE GEOTECHNICAL REPORT AND/OR CIVIL PLANS AND IN COMPLIANCE WITH TXDOT ITEM 440.
- 10. JOINTS SHALL BE PLACED IN ANY PROPOSED CONCRETE PAVEMENT AND CURBING AS RECOMMENDED IN THE APPLICABLE GEOTECHNICAL STUDY FOR THIS PROJECT. IF A GEOTECHNICAL STUDY WAS NOT PERFORMED OR IF DESIGN IS NOT INCLUDED IN CIVIL PLANS, THE JOINT LAYOUT AND DESIGN SHALL CONFORM TO THE AMERICAN CONCRETE PAVEMENT ASSOCIATION (ACPA) TECHNICAL PUBLICATION 150 61.01P, TABLE Z AND
- 11. ALL CONCRETE PAVING AND FLATWORK SHALL BE CURED IN CONFORMANCE WITH CURRENT AMERICAN CONCRETE PAVEMENT ASSOCIATION GUIDELINES.

PAVEMENT MARKING NOTES:

- 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.
- 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 AND 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 EQUAL - COLOR AS SPECIFIED ON PLANS OR AS OTHERWISE INDICATED BY OWNER OR GENERAL CONTRACTOR.

GRADING NOTES:

EARTHWORK NOTES:

- PREPARE SUBGRADE BY EXCAVATION OR EMBANKMENT FOR BUILDING SLABS, WALKS AND PAVEMENTS. EXCAVATION AND BACKFILL FOR UNDERGROUND UTILITIES AND DRAINAGE FILL COURSE FOR SUPPORT OF BUILDING SLABS ARE INCLUDED IN THIS ITEM.
- ALL EXCAVATION, BACKFILL AND COMPACTION SHALL BE PERFORMED AS SHOWN IN THE

PLANS AND APPLICABLE GEOTECHNICAL REPORT FOR THE SITE.

- EXCESS MATERIAL RESULTING FROM EXCAVATION OPERATIONS IS THE PROPERTY OF THE EXCAVATION CONTRACTOR. APPROPRIATE DISPOSAL SHALL BE AT SAID CONTRACTOR'S
- 4. ALL EXCAVATION SHALL BE PERFORMED AS DIRECTED IN THE PLANS AND IN COMPLIANCE WITH OSHA STANDARDS.
- OWNER WILL ENGAGE, AT THE OWNER'S COST, SOIL TESTING AND INSPECTION SERVICE IN ACCORDANCE WITH MATERIAL TESTING SPECIFICATION TO VERIFY COMPLIANCE WITH THE PLANS & SPECIFICATIONS. REPLACEMENT AND RETESTING OF DEFICIENT WORK SHALL BE DONE BY EXCAVATION CONTRACTOR AT NO ADDITIONAL COMPENSATION.
- DATA ON SUBSURFACE CONDITIONS, IF AVAILABLE, WILL BE MADE AVAILABLE TO THE CONTRACTOR BY THE OWNER AS REQUESTED. THE OWNER MAKES NO WARRANTY AS TO THE CORRECTNESS OF THESE REPORTS PREPARED BY OUTSIDE CONSULTANTS. THE CONTRACTOR MAY, AT HIS OWN EXPENSE, PERFORM ADDITIONAL TEST BORINGS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ALL AFFECTED UTILITY COMPANIES. THIS SHALL INCLUDE LOCATION OF FACILITIES, PROTECTION DURING CONSTRUCTION, DAMAGE REPAIRS AND DISRUPTION OF SERVICE.
- 8. THE EXCAVATION IS UNCLASSIFIED, AND CONTRACTOR SHALL PERFORM EXCAVATION TO THE ELEVATIONS INDICATED IN THE PLANS, REGARDLESS OF CHARACTER OF MATERIAL WITH NO ADDITIONAL COMPENSATION FROM THE OWNER. USE OF EXPLOSIVE IS
- 9. CONTRACTOR IS RESPONSIBLE FOR PROVIDING BARRICADES REQUIRED TO WARN AND/OR PREVENT ACCESS TO CONSTRUCTION AREA.
- 10. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ADJACENT FACILITIES FROM DAMAGE.
- 11. EARTHWORK SHALL BE PERFORMED IN COMPLIANCE WITH LANDSCAPE PROTECTION REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION (CITY, COUNTY, TXDOT, ETC.).
- 12. OVER-EXCAVATION IS NONCOMPENSABLE, AND SHALL BE BACKFILLED AND COMPACTED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COMPENSATION.
- 13. CONTRACTOR SHALL PROVIDE ALL LABOR AND EQUIPMENT NECESSARY TO PROPERLY DEWATER EXCAVATION AREAS - AS REQUIRED.
- 14. EXCAVATED MATERIAL SHALL BE STOCKPILED WHERE DIRECTED IN THE PLANS. STOCKPILE SHALL BE MAINTAINED IN COMPLIANCE WITH ALL RELEVANT POLLUTION PREVENTION PLANS.
- 15. EARTHWORK SHALL BE PERFORMED TO THE TOLERANCES SHOWN IN THE PLANS AND/OR SPECIFIED IN THE APPLICABLE GEOTECHNICAL REPORT FOR THE PROJECT.
- 16. TRENCHES SHALL BE BACKFILLED ONLY AFTER INSPECTION AND APPROVAL OF THE TESTING LAB. BACKFILL MATERIAL AND PROCEDURES FOR TRENCHES SHALL BE IN COMPLIANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION 1993 STANDARD SPECIFICATION FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES, ITEM 400 -EXCAVATION AND BACKFILL FOR STRUCTURES.

GRADING NOTES:

- 1. ALL SIDEWALKS, STRIPED PEDESTRIAN WALKS, OR ANY OTHER PEDESTRIAN PATH OF TRAVEL SHALL BE 2% MAX CROSS SLOPE.
- 2. CHANGE IN DIRECTIONS AT ANY PEDESTRIAN ROUTE, ACCESSIBLE OR OTHERWISE, SHALL BE BE AT 2% MAX SLOPE ANY DIRECTION.
- 3. ACCESSIBLE PARKING SPACES AND ASSOCIATED ACCESS AISLES SHALL BE 2% MAX SLOPE IN ANY DIRECTION.
- 4. DWELLING UNIT PORCH LANDINGS SHALL BE 2% MAX SLOPE IN ANY DIRECTION.
- 5. ANY CHANGE IN LEVEL EXPERIENCED FROM ONE GROUND/FLOOR SURFACE TO AN ADJOINING GROUND/FLOOR SURFACE, SUCH AS ENTRY FROM DWELLING UNIT PORCHES ACROSS THRESHOLD AND INTO THE DWELLING UNIT, SHALL BE LIMITED TO 1/4" (OR 1/2" IF BEVELED 1:2).
- 6. 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.
- 7. SEE LANDSCAPE AND IRRIGATION PLANS FOR ALL PROPOSED LANDSCAPE AND FINISHED NATURAL GROUND AREAS. IF LANDSCAPE PLANS ARE NOT PROVIDED, CONTRACTOR SHALL RESOD EXISTING GRASS AREAS AND/OR RESTORE EXISTING LANDSCAPE AREAS.
- 8. CONTRACTOR AND SUBCONTRACTORS SHALL CONTRACT WITH SURVEYOR TO VERIFY PROJECT ELEVATIONS AND BENCHMARK ELEVATION(S) PRIOR TO CONSTRUCTION. "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH VERTICAL AND HORIZONTAL ALIGNMENT. ALL FINISHED EARTHEN GRADES SHALL NOT EXCEED 3:1 (H:V) SLOPE.

UTILITY / STORM DRAIN NOTES:

GENERAL UTILITY NOTE:

- 1. ALL WATER AND SANITARY SEWER IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE BOERNE WATER SYSTEM REQUIREMENTS AND THESE APPROVED PLANS. ANY ADDITIONAL IMPROVEMENTS WILL REQUIRE PLAN REVISIONS AND APPROVAL OF THE BOERNE WATER SYSTEM AND/OR TXDOT AS APPLICABLE.
- 2. THRUST BLOCKING SHALL BE IN ACCORDANCE WITH THE BOERNE WATER SYSTEM.
- 3. THE TOP OF PROPOSED MANHOLES SHALL MATCH THE FINISHED GRADE ELEVATIONS UNLESS OTHERWISE NOTED.
- 4. SEE MEP PLANS FOR EXACT LOCATION OF WATER AND SANITARY SEWER CONNECTIONS
- 5. ALL ON-SITE WATER AND SANITARY SEWER LINES WILL BE EXTENDED TO A MINIMUM OF 5 FEET FROM THE BUILDING.

BOERNE, 0 DIVISIO

 $\mathbf{\omega}$

SU

R

C

CIRC Z W

G

UEBONNET Z E N 四 0

FOR THE PURPOSE OF

INTERIM REVIEW UNDER TH

AUTHORITY OF <u> ANTHONY T. RECINE III, P.E</u> (TX# 94575) MANHARD CONSULTING, LT

TBPE FIRM No. F-18141 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMITTING PURPOSES

PROJ. MGR.: ATR PROJ. ASSOC.: <u>CW</u> 06-08-18 613.040.00 PROJ#:

SHEET





LINE TABLE				
LINE	LINE LENGTH BEARING			
L1	32.30′	200*3	'31'57 " W	
CORVE LABLE				
CURVE	RADIUS	LENGTH	DELTA	
C1	90.00′	79.47′	50°35′23″	
CS	63.37′	56.04′	50°40′00″	
	L1 CURVE C1	LINE LENGTH L1 32.30' CURVE CURVE RADIUS C1 90.00'	LINE LENGTH BEA L1 32.30' \$00°3 CURVE TABLE CURVE RADIUS LENGTH C1 90.00' 79.47'	

TREE TABLE			
N□.	SIZE	DESC.	SUTATS
600	6 "	□AK	PRESERVE
601	9″	DAK	PRESERVE
602	11″	HACKBERRY	REM□∨E
603	16″	□AK	REM□∨E
604	23″	□AK	REM□∨E
605	21″	□KA	REM□∨E
606	21″	□KA	REM□∨E
607	24"	□KA	REM□∨E
608	25 ″	□KA	PRESERVE
609	25 <i>"</i>	□KA	PRESERVE
610	17″	ПКА	REM□∨E
611	13" X 14"	□AK (MT)	REM□∨E
612	6 "	UNKNOWN TREE	REM□∨E
613	1	CHINESE TALLOW CLUSTER	REM□∨E
614	11" X 12"	CHINABERRY	REM□∨E
615	1	CHINESE TALLOW CLUSTER	REM□∨E
616	7"	CHINESE TALLOW	REM□∨E
617	_	CEDAR CLUSTER	REM□VE
618	7"	ASHE JUNIPER	REM□VE

SURVEY NOTES:

 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

- 2. 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.

 3. 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.

LEGAL DESCRIPTION:

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.

BENCHMARK

TBM #1: TOP OF MAGNAIL SET ON STAUDT ST ±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.



- B. CREDENTIALS OF INDIVIDUALS PERFORMING DEMOLITION OPERATIONS, INCLUDING SUBCONTRACTORS.
 C. SAFETY MEASURES TO PROTECT WORKERS, PERSONNEL AND THE PUBLIC.
 D. SAFETY MEASURES TO PROTECT ADJACENT PROPERTIES, LANDSCAPING,
- IMPROVEMENTS TO REMAIN OR PUBLIC RIGHTS OF WAY.

 E. ASBESTOS OR OTHER HAZARDOUS MATERIAL ABATEMENT PLAN.

 F. STORAGE, REMOVAL AND DISPOSITION OF SPOIL MATERIAL.

 G. EROSION CONTROL MEASURES, INCLUDING NPDES PROCEDURES AND REGULATIONS.
- H. POLLUTION AND AIR QUALITY CONTROL MEASURES (DUST CONTROL ETC.).
 I. HEALTH DEPARTMENT NOTICE.
 J. UTILITY COORDINATION WITH ALL AFFECTED UTILITIES, INCLUDING LOCATION OF FACILITIES, PROTECTION DURING DEMOLITION, DAMAGE REPAIRS AND DISRUPTION OF SERVICE.
- 3. THE USE OF EXPLOSIVES WILL NOT BE PERMITTED.
- 4. THE PROJECT SITE SHALL BE CLEANED DAILY. DEBRIS, RUBBISH AND CONTRACTORS SALVAGED MATERIAL SHALL BE REMOVED PROMPTLY.
- 5. ALL SPOIL MATERIAL REMAINING AFTER OWNER SALVAGE IS COMPLETE AND RESULTING FROM DEMOLITION OPERATIONS BECOMES THE PROPERTY OF THE CONTRACTOR PERFORMING THE DEMOLITION WORK. APPROPRIATE DISPOSAL OF SPOIL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING THE DEMOLITION WORK AT HIS OWN EXPENSE. OWNER WILL PROVIDE LIST OF ITEMS TO BE SALVAGED.

- A. SITE CLEARING OPERATIONS SHALL NOT DAMAGE OR INTERFERE WITH THE PUBLI USE OF ROADS, WALKS, ADJACENT LAND OR FACILITIES AND EXISTING IMPROVEMENTS INTENDED TO REMAIN.
- B. EXISTING TREES TO REMAIN SHALL BE PROTECTED IN COMPLIANCE WITH LANDSCAPE PLANS.
- C. CONTRACTOR SHALL REMOVE TREES, SHRUBS, GRASS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH THE INSTALLATION OF NEW CONSTRUCTION OR AS SHOWN ON PLANS. CLEARING OPERATIONS SHALL INCLUDE REMOVAL OF STUMPS AND ROOTS.
- D. CONTRACTOR SHALL STRIP TOPSOIL IN A MANNER APPROPRIATE TO SEGREGATE FROM UNDERLYING SUBSOIL TOPSOIL STRIPPING NEAR TREES INTENDED TO REMAIN SHALL BE COMPLETED IN COMPLIANCE LANDSCAPE PLANS.
- 3. SPOIL SHALL BE STORED ONLY IN AREAS SHOWN ON THE PLANS AND SHALL BE MAINTAINED IN ACCORDANCE WITH APPUCABLE POLLUTION PREVENTION PLANS OR DEPARTS
- 4. WASTE MATERIAL OR EXCESS TOPSOIL GENERATED AS A RESULT OF CLEARING AND GRADING OPERATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. APPROPRIATE DISPOSAL OF ALL SPOIL MATERIAL SHALL BE AT THE CONTRACTOR'S EXPENSE. BURNING ON THE OWNER'S PROPERTY IS NOT PERMITTED.

DATE REVISIONS

TM

Vio. F-18141

Engineers
Planners



SUBDIVISION LE, BOERNE, TX 78006

CREEK

ARDEN

UEBONNET CIRCLE, BOERNE,

THIS DOCUMENT IS RELEASE 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

IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMITTING PURPOSES.

PROJ. MGR.: ATR

ROJ. MGR.: ATK

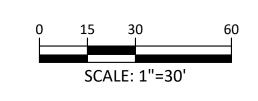
ROJ. ASSOC.: CW

RAWN BY:

ATE: 06-08-18

ROJ #: 613.040.001

C100



(#) KEY NOTE LIST:

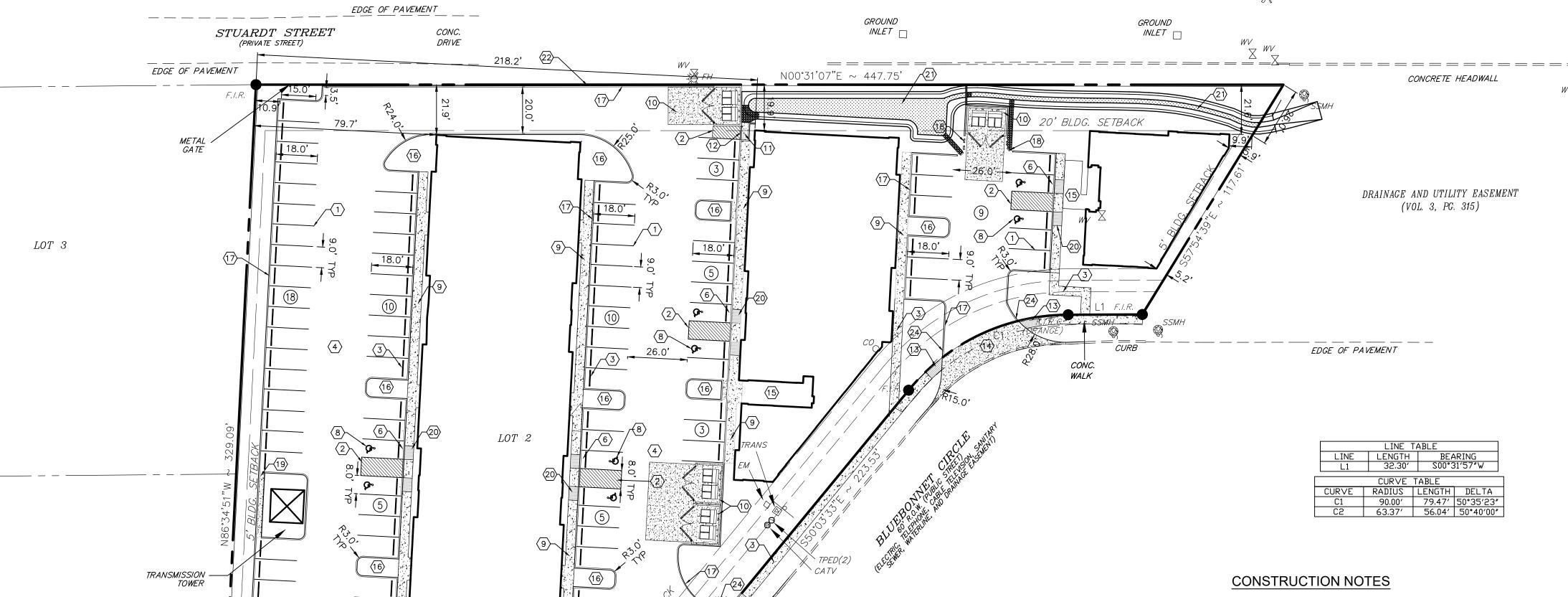
- 1. PAINT 4" "WHITE" WIDE PARKING SPACE STRIPE (TYP.). SEE PAVEMENT MARKING NOTES.
- 2. PAINT 4" "WHITE" WIDE 45" DIAGONAL STRIPING @ 2' ON CENTERS WITH BORDER STRIPE. SEE PAVEMENT MARKING NOTES.
- 3. PROPOSED 4' SIDEWALK
- 4. PROPOSED ASPHALT PAVEMENT. SEE C210/8 FOR DETAIL.
- 5. PROPOSED CONCRETE STEPS
- 6. PROPOSED HANDICAP SIGN. SEE C210/5 FOR DETAIL.
- 7. PROPOSED WHEELSTOPS (TYP.). SEE C210/1 FOR DETAIL.
- 8. PROPOSED HANDICAP MARKING (TYP.). SEE C210/4 FOR DETAIL.
- 9. PROPOSED CURB AND SIDEWALK. SEE C210/11 FOR DETAIL.
- 10. PROPOSED CONCRETE DUMPSTER PAD AREA. CONCRETE PAVEMENT TO BE CONSTRUCTED AS PER CONCRETE PAD DETAIL ON C210/3 UNLESS OTHERWISE SHOWN ON ARCHITECTURAL PLANS. SEE ARCHITECTURAL PLANS FOR PAD AND ENCLOSURE DETAILS
- 11. PROPOSED 3' CONCRETE FLUME
- 12. PROPOSED 6' HEADER CURB. SEE C210/X
- 13. PROPOSED RAMP ON RADIUS
- 14. PROPOSED CONCRETE DRIVEWAY APPROACH. SEE C210/XX FOR DETAIL.
- 15. PROPOSED STAIRWELL. SEE ARCHITECTURAL AND STRUCTURAL PLAN FOR DETAIL.
- 16. PROPOSED LANDSCAPE AREAS BACK OF SIDEWALK OR CURB. REFER TO LANDSCAPE PLANS FOR REQUIREMENTS AND DETAILS.
- 17. CONCRETE "A" CURB. SEE C210/7 FOR DETAIL.
- 18. SAW-TOOTH CURB FOR DRAINAGE. SEE C210/12 FOR DETAIL.
- 19. PROPOSED CONCRETE FLUME. SEE C210/X FOR DETAIL.
- 20. STANDARD CURB RAMP. SEE C210/4 FOR DETAIL
- 21. PROPOSED BIOTREATMENT AREA. SE CXXX/XX
- 22. PROPOSED FENCE. SE ARCHITECTURAL PLAN FOR DETAILS
- 23. PROPOSED RAILING. SEE ARCHITECTURAL PLAN FOR DETAILS
- 25. NON-STRUCTURAL RETAINING WALL (3' MAX. HEIGHT)
- 26. CONCRETE RETAINING WALL—COMBINATION—TYPE. (SEE C210/16 FOR DETAIL.)

SITE PLAN NOTES:

- 1. ALL CURB RADIUS DIMENSIONS ARE TO FACE OF CURB. CONTRACTOR TO VERIFY ALL PLAN DIMENSIONS PRIOR TO CONSTRUCTION.
- 2. CURB RADIUS DEPICTED ARE 3 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.

PAVEMENT MARKING NOTES

- 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.
- 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 AND 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 EQUAL - COLOR AS SPECIFIED ON PLANS OR AS OTHERWISE INDICATED BY OWNER OR GENERAL CONTRACTOR.



5' UTILITY ESMT.

(VOL. 245, PG. 533 OFFICIAL RECORDS)

LOT 4

TRÁNS

10' UTILITY

ESMT. (PLAT)

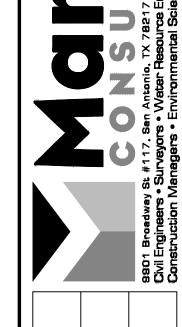
CATV

- CONTRACTOR AND SUBCONTRACTORS SHALL CONTRACT WITH SURVEYOR TO VERIFY PROJECT ELEVATIONS AND BENCHMARK ELEVATION(S) PRIOR TO CONSTRUCTION. "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH VERTICAL AND HORIZONTAL ALIGNMENT. ALL FINISHED EARTHEN GRADES SHALL NOT EXCEED 3:1 (H: V) SLOPE.
- 2. 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
- 3. THE CONTRACTOR SHALL PROTECT EXISTING GRASS, LANDSCAPING AND TREES NOT IN DIRECT CONFLICT WITH PROPOSED IMPROVEMENTS DURING CONSTRUCTION. GRASSED AREA DAMAGED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR WITH TOPSOIL AND SODDING AT THE CONTRACTORS EXPENSE.
- 4. 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, TCEQ, AND THE TEXAS ACCESSIBILITY STANDARDS OF THE TEXAS DEPARTMENT OF LICENSING AND REGULATION).
- 5. CONTRACTOR SHALL SECURE ALL PERMITS REQUIRED FOR CONSTRUCTION AND SHALL NOTIFY ALL RESPECTIVE GOVERNMENTAL OR UTILITY AGENCIES AFFECTED BY CONSTRUCTION PRIOR TO STARTING CONSTRUCTION.
- 6. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS 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 DEFEND, INDEMNIFY AND HOLD THE OWNER HARMLESS FROM ANY AND ALL LIABILITY IN CONNECTION WITH THE WORK PERFORMED ON THIS PROJECT EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
- 7. 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.
- 8. ALL TRENCHES CUT BENEATH PROPOSED SIDEWALKS AND PARKING OR STREET PAVEMENT AREAS SHALL BE BACK FILLED IN 8" LIFTS, COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY, AND BE SUBJECT TO DENSITY TESTING.
- 9. 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.
- 10. REFERENCE ARCHITECTURAL PLANS FOR ALL FENCE LOCATIONS AND DETAILS AS
- INFORMATION NOT PROVIDED BY THE CIVIL ENGINEER.
- 11. 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 (TXDOT) 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 INSTITURE (ACI).

LEGAL DESCRIPTION:

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.





7800 × SUBDIVISION BOERNE, CIRCLE, CREEK UEBONNET D **ARDEN** SIT

HIS DOCUMENT IS RELEAS FOR THE PURPOSE OF INTERIM REVIEW UNDER TH

В

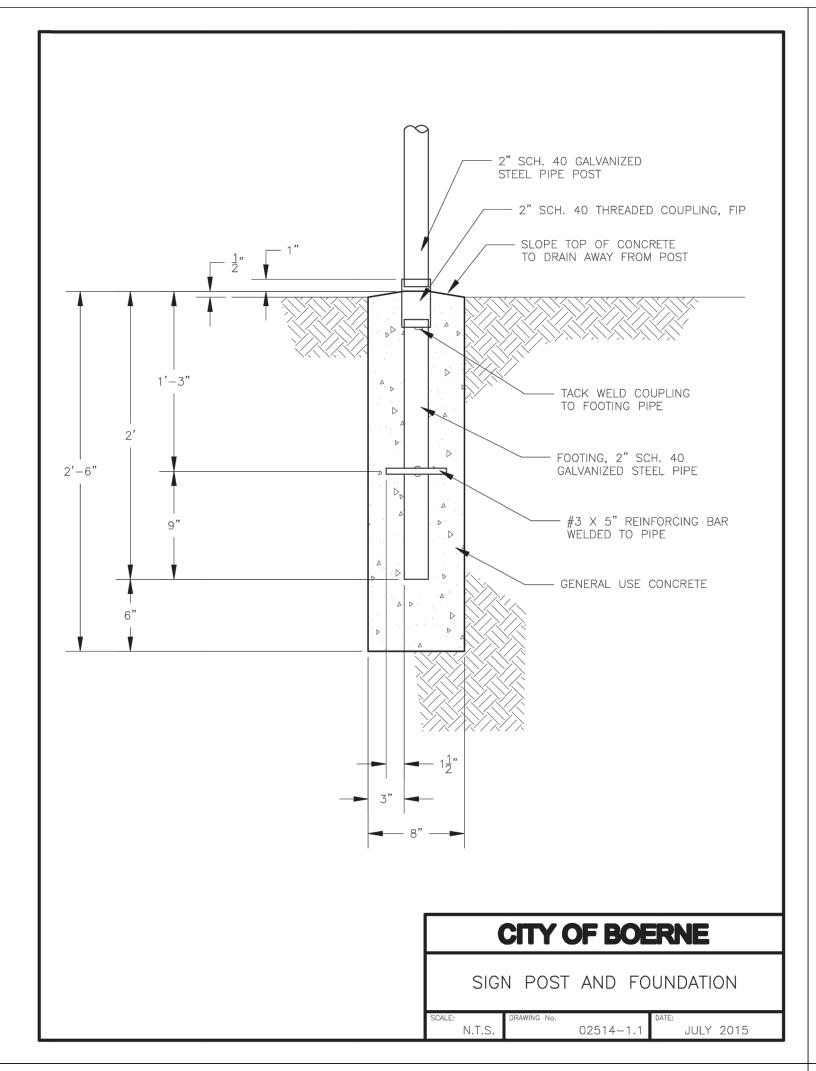
0

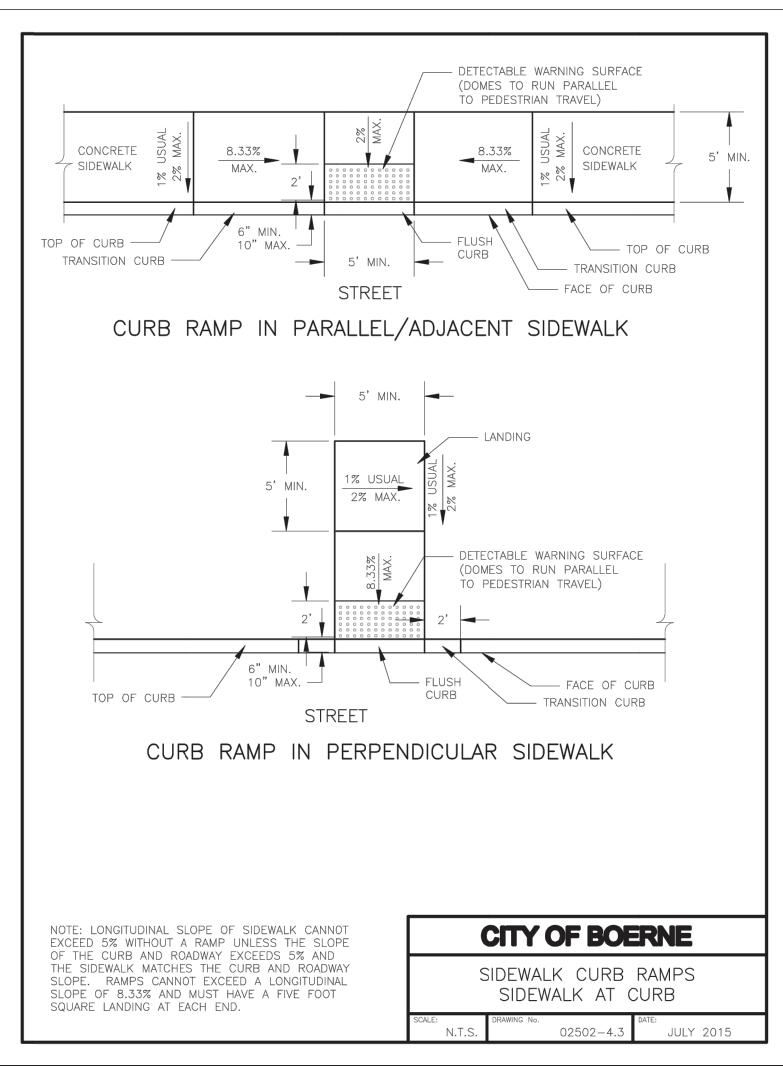
AUTHORITY OF ANTHONY T. RECINE III, P.E (TX# 94575) MANHARD CONSULTING, LTE TBPE FIRM No. F-18141

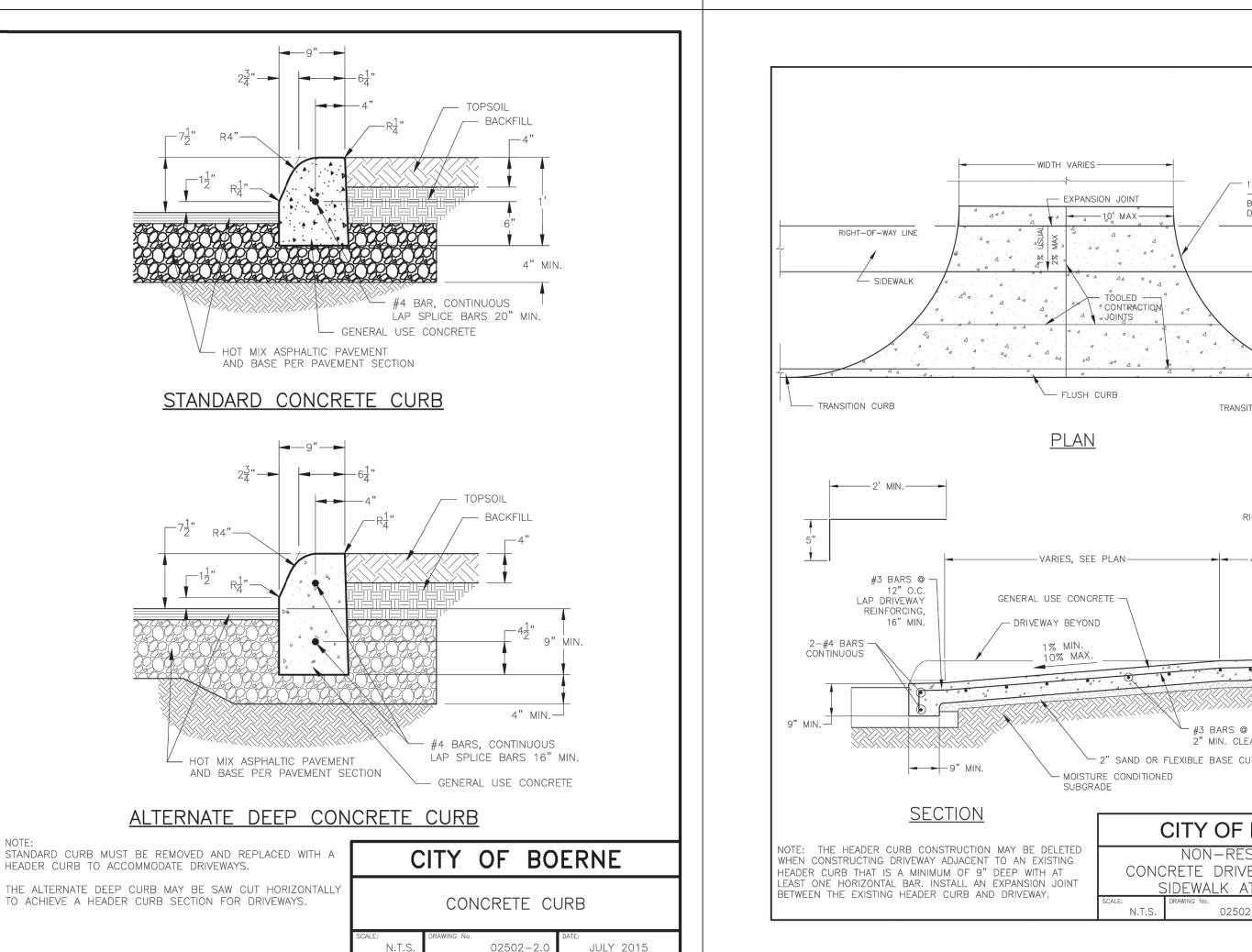
IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMITTING PURPOSES

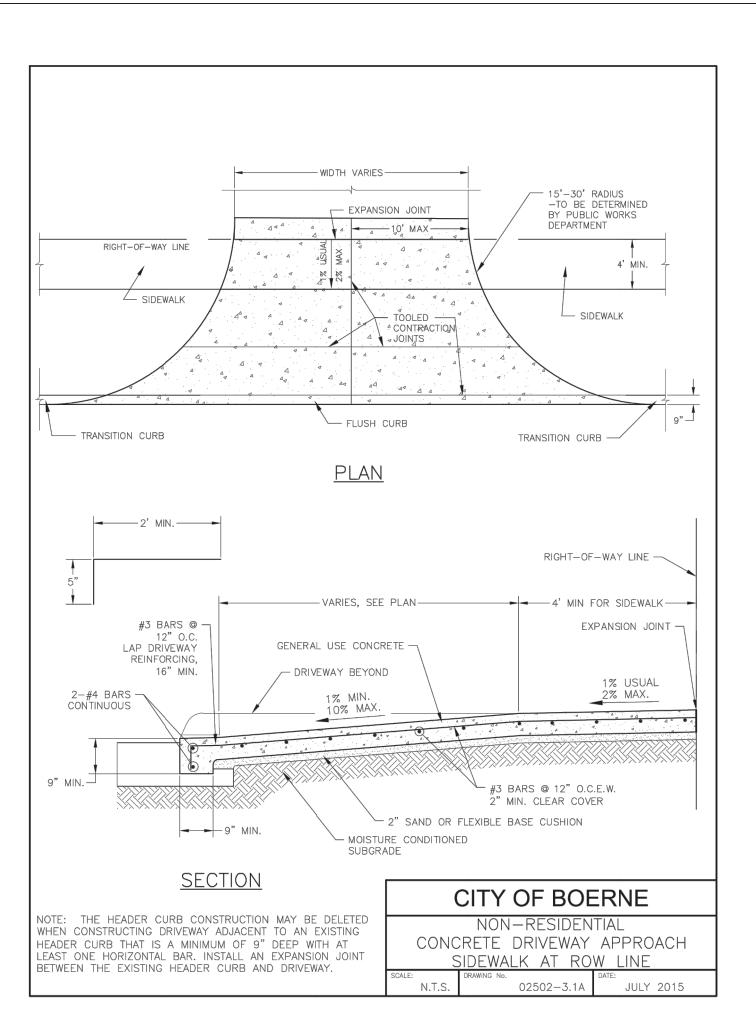
PROJ. MGR.: ATR PROJ. ASSOC.: CW

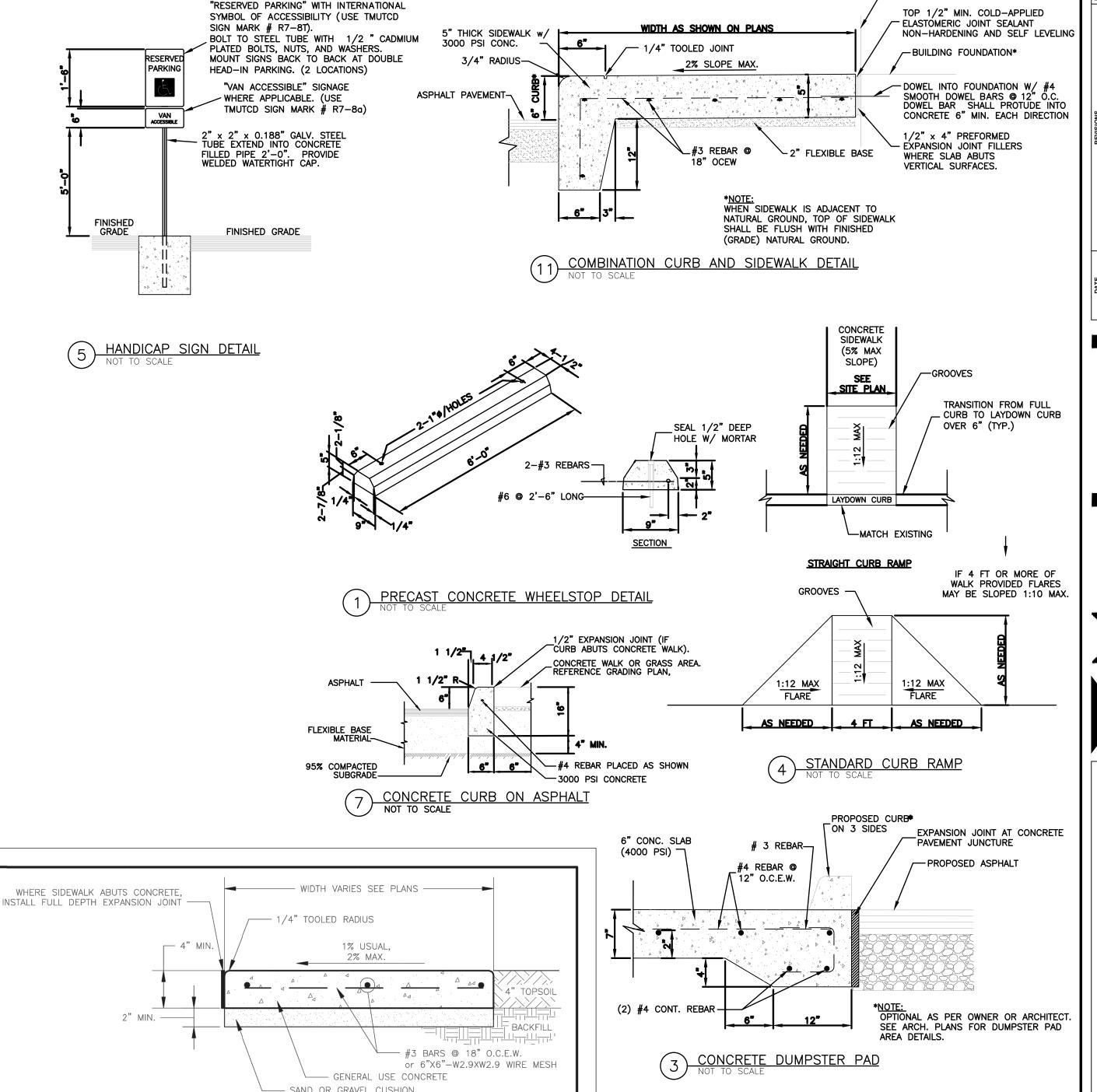
__06-08-18 613.040.001 PROJ#: SHEET

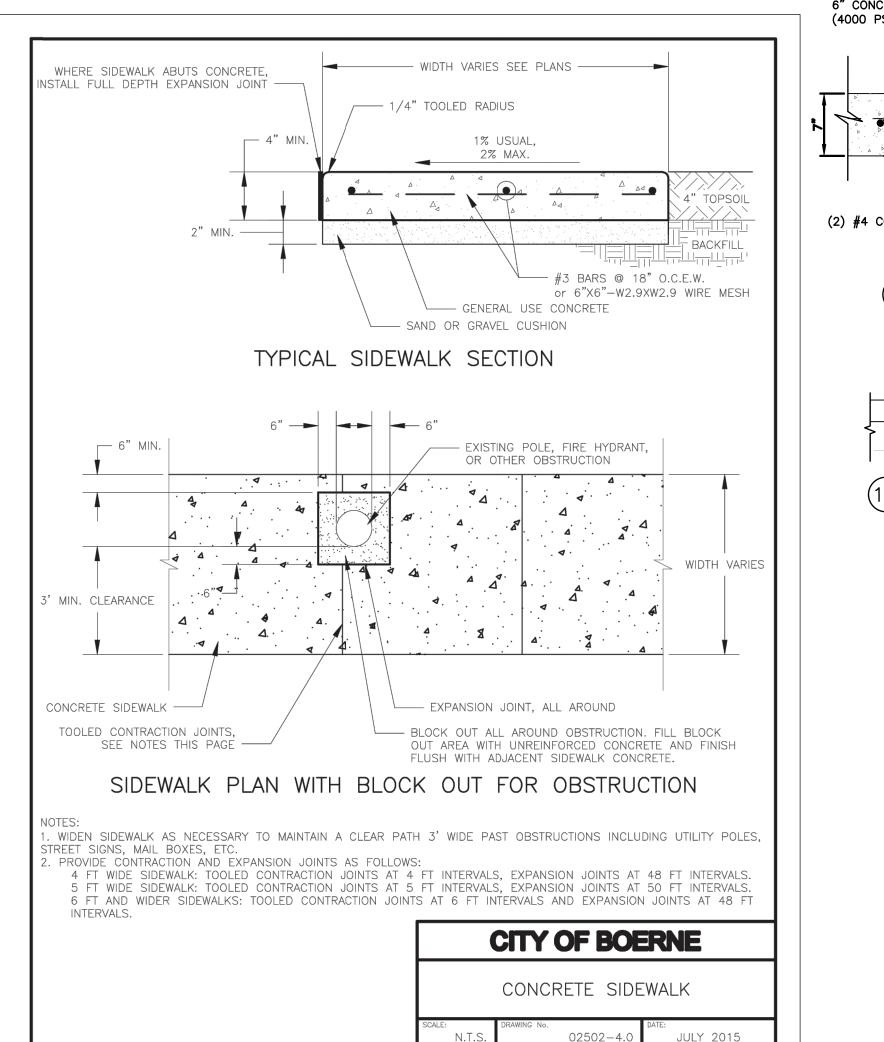






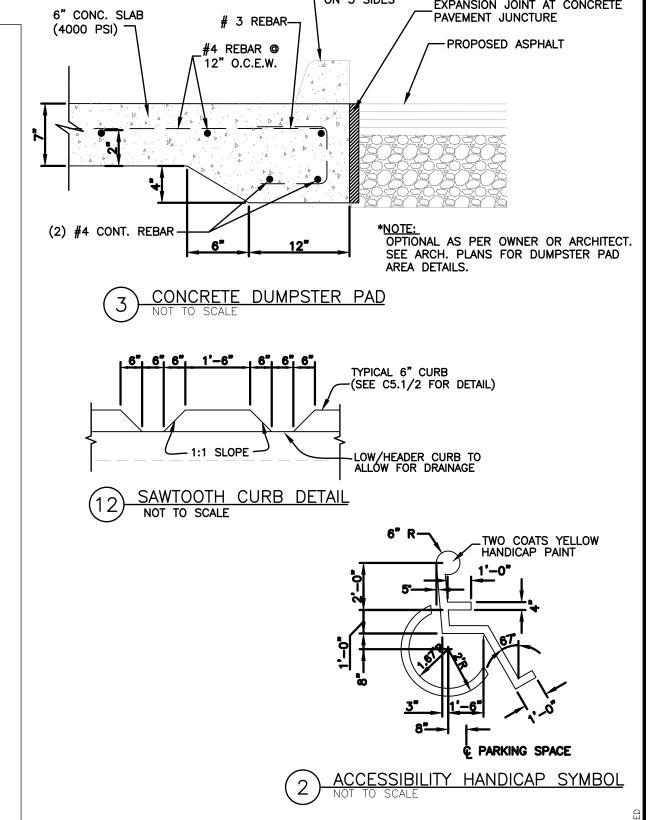






1'-0" X 1'-6" X 0.080" ALUMINUM

HANDICAPPED PARKING SIGN. SIGN TO READ



-BUILDING WALL

SUBDIVISION BOERNE CIRCLE, CREEK UEBONNET ARDEN BL 0 HIS DOCUMENT IS RELEAS FOR THE PURPOSE OF INTERIM REVIEW UNDER TH AUTHORITY OF <u>anthony t. recine III, p.e</u> (TX# 94575) MANHARD CONSULTING, LT TBPE FIRM No. F-18141 IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMITTING PURPOSES PROJ. MGR.: ATR PROJ. ASSOC.: CW

<u>06-08-18</u>

PROJ #: 613.040.00

SHEET



GRADING NOTES:

- 1. ALL SIDEWALKS, STRIPED PEDESTRIAN WALKS, OR ANY OTHER PEDESTRIAN PATH OF TRAVEL SHALL BE 2% MAX CROSS SLOPE.
- 2. CHANGE IN DIRECTIONS AT ANY PEDESTRIAN ROUTE, ACCESSIBLE OR OTHERWISE, SHALL BE BE AT 2% MAX SLOPE ANY DIRECTION.
- 3. ACCESSIBLE PARKING SPACES AND ASSOCIATED ACCESS AISLES SHALL BE 2% MAX SLOPE IN ANY DIRECTION.
- 4. DWELLING UNIT PORCH LANDINGS SHALL BE 2% MAX SLOPE IN ANY DIRECTION.
- 5. ANY CHANGE IN LEVEL EXPERIENCED FROM ONE GROUND/FLOOR SURFACE TO AN ADJOINING GROUND/FLOOR SURFACE, SUCH AS ENTRY FROM DWELLING UNIT PORCHES ACROSS THRESHOLD AND INTO THE DWELLING UNIT, SHALL BE LIMITED TO 1/4" (OR 1/2" IF BEVELED 1:2).
- 6. 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.
- 7. SEE LANDSCAPE AND IRRIGATION PLANS FOR ALL PROPOSED LANDSCAPE AND FINISHED NATURAL GROUND AREAS. IF LANDSCAPE PLANS ARE NOT PROVIDED, CONTRACTOR SHALL RESOD EXISTING GRASS AREAS AND/OR RESTORE EXISTING LANDSCAPE AREAS.
- 8. CONTRACTOR AND SUBCONTRACTORS SHALL CONTRACT WITH SURVEYOR TO VERIFY PROJECT ELEVATIONS AND BENCHMARK ELEVATION(S) PRIOR TO CONSTRUCTION. "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH VERTICAL AND HORIZONTAL ALIGNMENT. ALL FINISHED EARTHEN GRADES SHALL NOT EXCEED 3:1 (H: V) SLOPE.
- 9. ALL SPOT ELEVATIONS AND CONTOURS ARE FINAL, TOP OF FINISHED SURFACE ELEVATIONS.

 CONTRACTOR SHALL SUBTRACT PAVEMENT, BASE, TOPSOIL, MULCH, ETC. TO OBTAIN PROPER SUBGRADE ELEVATIONS.
- 10. THE CONTRACTOR SHALL GRADE SMOOTHLY BETWEEN PROPOSED SPOT ELEVATIONS AND BETWEEN FINISHED CONTOURS.
- 11. CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY VERTICAL AND HORIZONTAL ALIGNMENT.
- 12. FINISHED EARTH SLOPES SHALL NOT EXCEED 3:1.
- 13. THE PROPOSED GRADES SHOWN ARE CRITICAL, EXTREME CARE SHALL BE TAKEN TO ACCOMPLISH THE PROPOSED GRADES SHOWN.
- 14. IF CONFLICTS WITH SPOT ELEVATIONS OR CONTOURS EXIST ON PLAN, NOTIFY ENGINEER PRIOR TO CONSTRUCTION.
- 15. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST ALL PROPOSED AND EXISTING VALVES, CLEANOUTS, MANHOLES, VAULT TOPS, ETC. TO THE FINISHED GRADES AS SHOWN ON THE
- 16. THE CONTRACTOR SHALL COMPACT AREAS TO RECEIVE LANDSCAPING AND/OR GRASS TO 85% MAXIMUM DRY DENSITY.
- 17. THE CONTRACTOR SHALL PLACE FOUR (4) INCHES OF TOPSOIL TO BRING DISTURBED AREAS TO FINAL GRADE PRIOR TO APPLYING SOD.
- 18. THE ENTIRE SITE AREA DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE COVERED WITH SOD AND SHALL HAVE 85% COVERAGE OF LIVE GRASS PRIOR TO FINAL ACCEPTANCE.
- 19. ALL CONSTRUCTION AREAS WITHIN THE SITE SHALL BE STRIPPED OF ALL VEGETATION AND TOPSOIL CONTAINING ORGANIC MATERIAL. ANY SPOTS OF DEBRIS ENCOUNTERED SHALL BE REMOVED.
- 20. THE SITE AREAS REQUIRING FILL PLACEMENT SHALL BE SCARIFIED TO A DEPTH OF SIX (6) INCHES AND MOISTURE ADJUSTED TO WITHIN $\pm 2\%$ OF OPTIMUM MOISTURE CONTENT. COMPACT SUBGRADE TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 STANDARD PROCTOR).
- 21. ALL SITE FILL MATERIAL SHALL BE PLACED IN MAXIMUM EIGHT (8) INCH LIFTS AND COMPACTED TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR) WITH MOISTURE CONTENT WITHIN $\pm 2\%$ OF OPTIMUM.
- 22. SITE AREAS REQUIRING CUTS SHALL HAVE THE SUBGRADE SCARIFIED TO A DEPTH OF SIX (6) INCHES AND COMPACTED TO 95% MAXIMUM DRY DENSITY, WITH MOISTURE CONTENT WITHIN $\pm 2\%$ OF OPTIMUM.
- 27. CONSTRUCT SITE GRADING IMPROVEMENTS TO THE FOLLOWING ELEVATION TOLERANCES:

SHOULD ANY ABOVE MENTIONED ELEVATIONS BE FOUND TO BE OUT OF LEVEL BEYOND THE STATED TOLERANCE AFTER THE CONTRACTOR'S OPERATIONS, IT SHALL BE CORRECTED AND ALL EXCESS MATERIALS REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

28. IF GROUNDWATER OR SEEPAGE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY.

DRAINAGE:

- THE CONTRACTOR IS REQUIRED TO FURNISH AND INSTALL ALL NECESSARY FITTINGS AND APPURTENANCES REQUIRED TO COMPLETE THE INSTALLATION OF THE STORM WATER DETENTION AND DRAINAGE SYSTEM AS SHOWN ON THE PLANS.
- 2. THE CONTRACTOR IS TO MAINTAIN UNRESTRICTED DRAINAGE OF THE PROJECT SITE AND ADJACENT AREAS DURING CONSTRUCTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR ALLOW STORM WATER TO POND AND SATURATE ANY PREPARED SUBGRADE, EXCAVATION OR EMBANKMENT SOILS. THE CONTRACTOR SHALL IMMEDIATELY PUMP ALL WATER OUT OF AREAS WHICH CANNOT DRAIN BY GRAVITY FLOW WITH SPECIAL ATTENTION REQUIRED TO THE BUILDING PAD AND PAVEMENT SUBGRADE AREAS. ANY LAYER DETERMINED TO BE SATURATED MUST BE DRIED OUT, RE—COMPACTED OR REMOVED AND REPLACED PRIOR TO CONTINUING CONSTRUCTION OF NEXT EMBANKMENT LAYER.

TRENCH EXCAVATION SAFETY PROTECTION

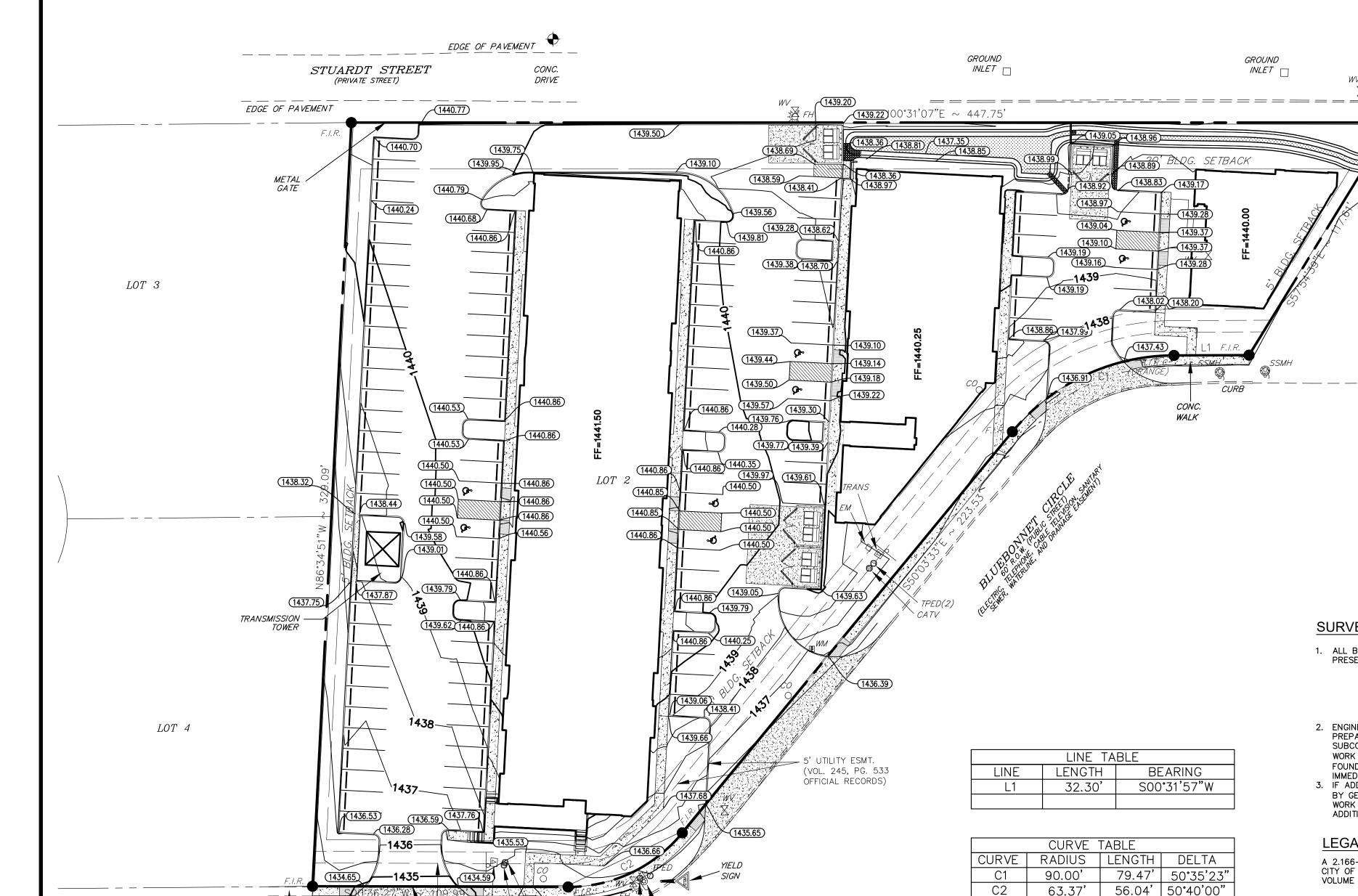
Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement contractor's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

A 2.975 ACRE TRACT OUT

OF SURVEY

180 M I LEAL

(VOL. 1, PG. 281)



CONC. WALK

10' UTILITY

ESMT. (PLAT)

SURVEY NOTES:

 ALL BOUNDARY SURVEY AND EXISTING SPOT ELEVATION & CONTOUR INFORMATION PRESENTED ON PLANS ARE FROM A SURVEY FILE PROVIDED BY:

EDGE OF PAVEMENT

GE REAVES ENGINEERING 12508 JONES MALTSBERGER, SUITE 108 SAN ANTONIO, TX 78247 PHONE: (210) 490-4506

CONCRETE HEADWALL

DRAINAGE AND UTILITY EASEMENT (VOL. 3, PG. 315)

2. 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.

3. 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.

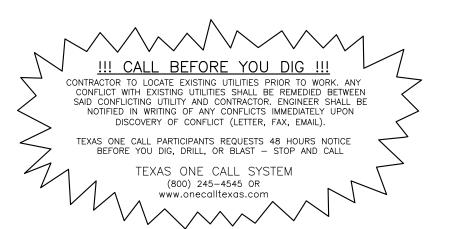
LEGAL DESCRIPTION:

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.

BENCHMARK

TBM #1: TOP OF MAGNAIL SET ON STAUDT ST ±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.





S901 Broadway St. #117. Givil Engineers • Surveyo

78006

UEBONNET CIRCLE, BOERNE, TY GRADING & DRAINAGE PLAN

SUBDIVISI

C

ARD

IS DOCUMENT IS RELEAS

0

INTERIM REVIEW UNDER TH AUTHORITY OF

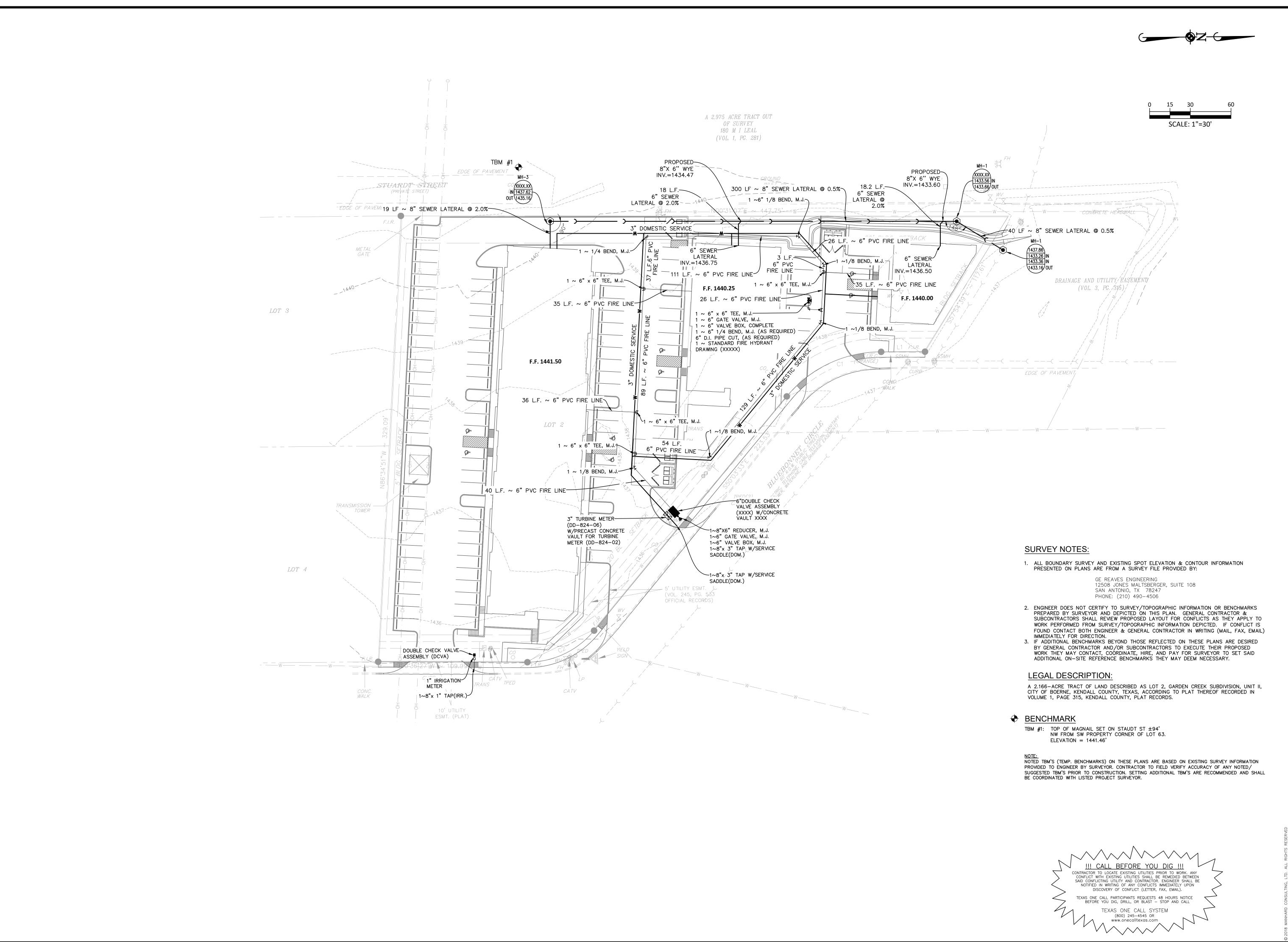
ANTHONY T. RECINE III, P.E. (TX# 94575)

MANHARD CONSULTING, LTE

TBPE FIRM No. F-18141

IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMITTING PURPOSES

C400



PATE DATE REVISION FOR TANGE OF THE PROPERTY OF Engineers - Water & Wastewater Engineers Scientists - Landscape Architects - Planners

9901 Broadway St #117, San Antonio, TX 78

SUBDIVISION -E, BOERNE, TX 78006

IET CIRCLE, BOERN UTILITY PLAN

GARDEN CREEK 110 BLUEBONNET CIRCI

HIS DOCUMENT IS RELEASE FOR THE PURPOSE OF INTERIM REVIEW UNDER TH

ANTHONY T. RECINE III, P.E

(TX# 94575)

MANHARD CONSULTING, LTD

MANHARD CONSULTING, LTD
TBPE FIRM No. F-18141

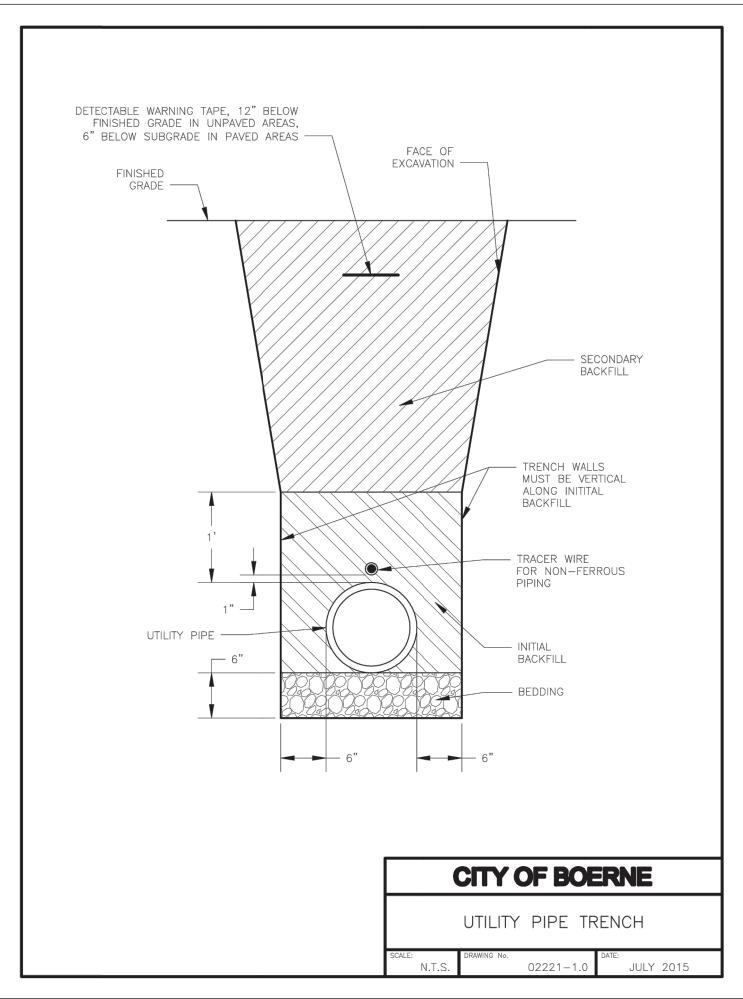
IT IS NOT TO BE USED
FOR CONSTRUCTION
OR PERMITTING PURPOSES.

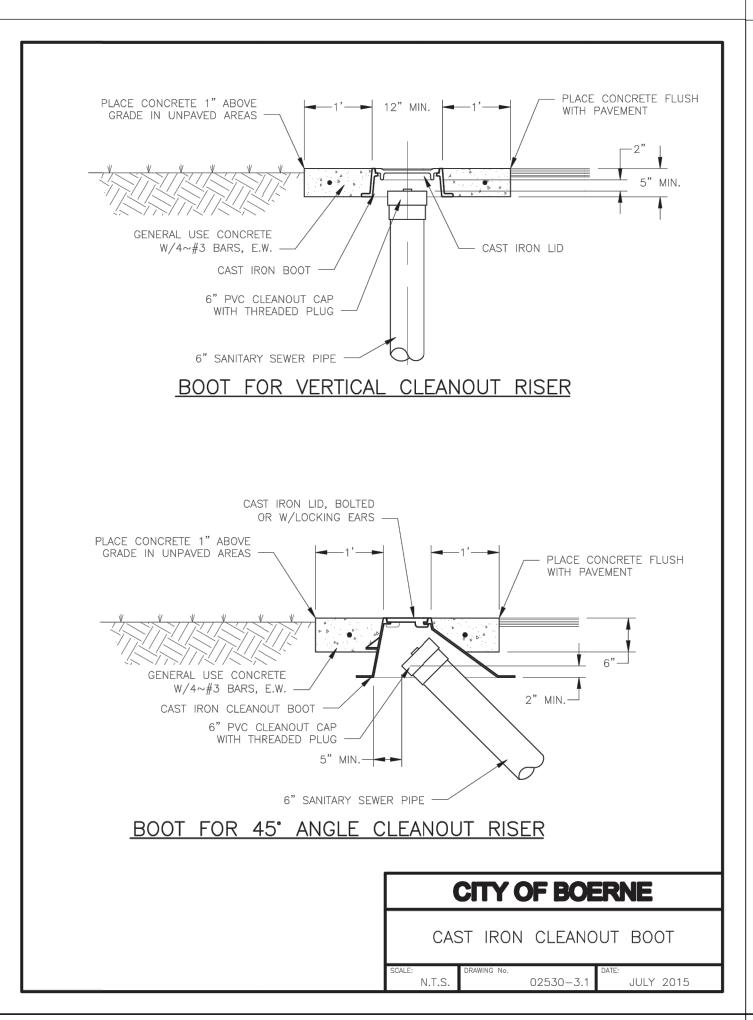
PROJ. MGR.: <u>ATR</u>
PROJ. ASSOC.: <u>CW</u>

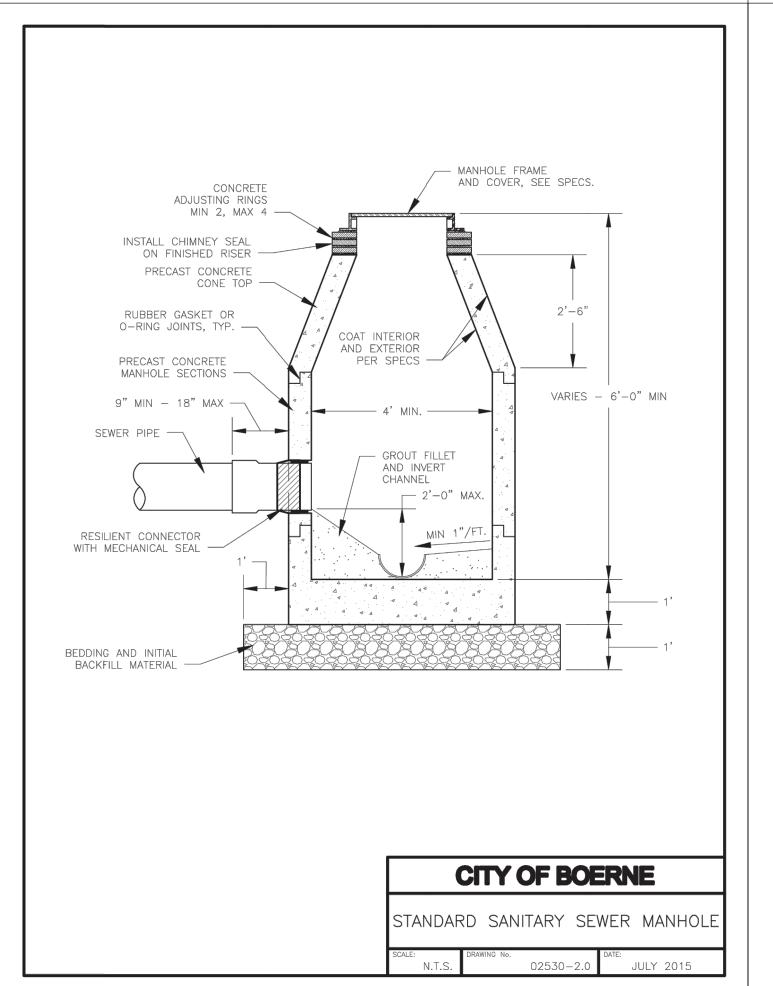
DRAWN BY: <u>JB</u>

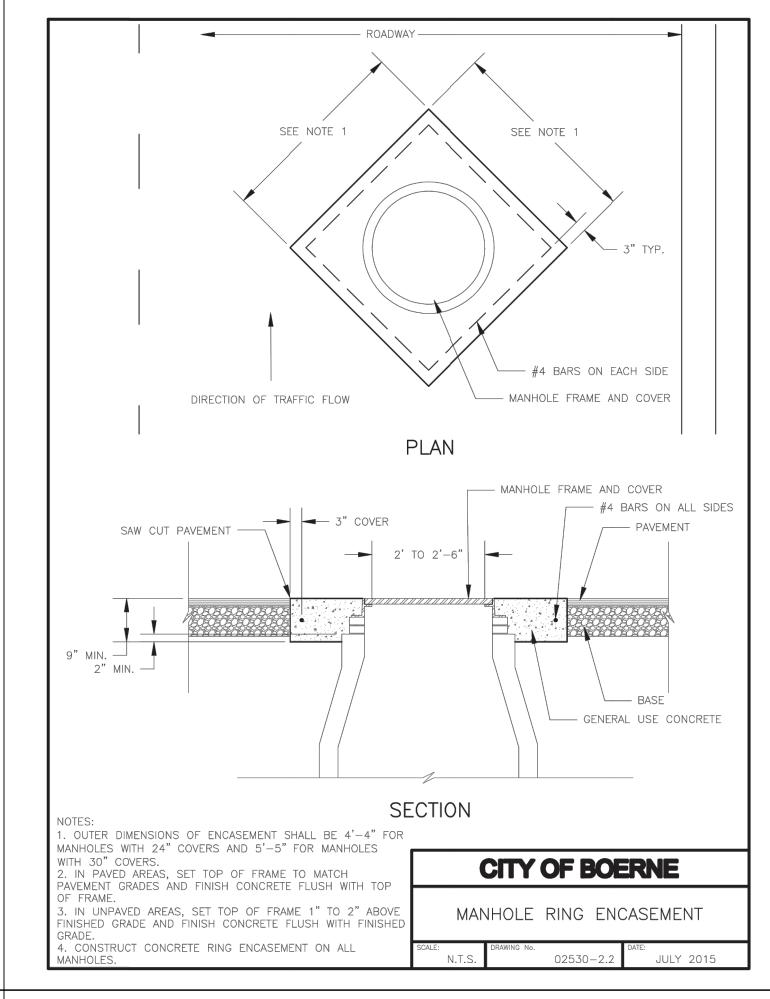
DATE: <u>06-08-18</u>

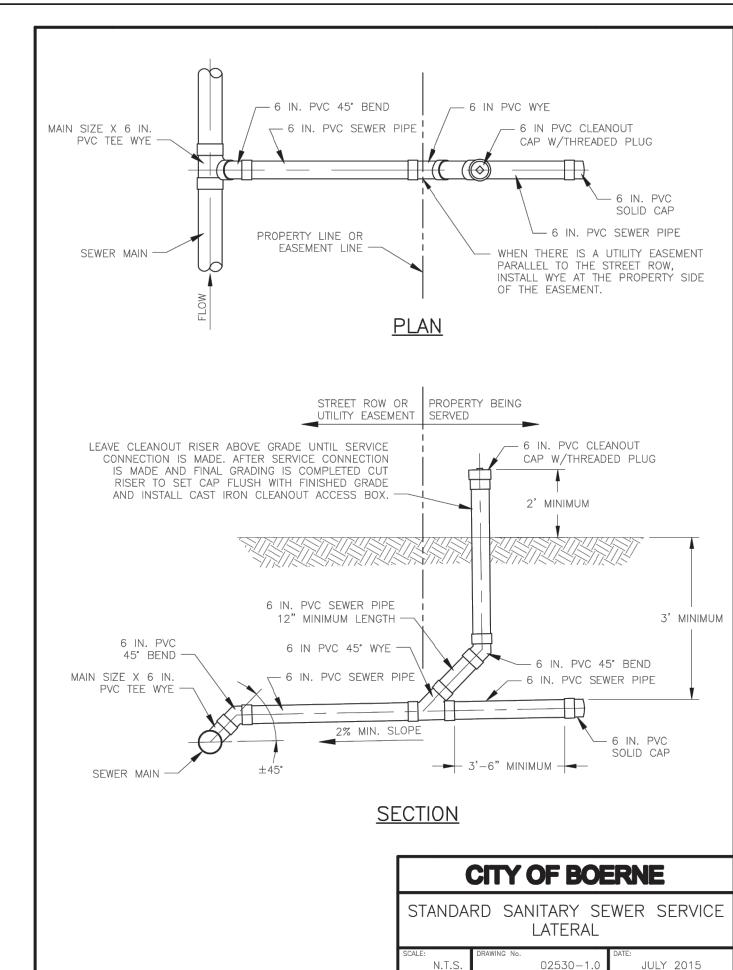
SHEET C500

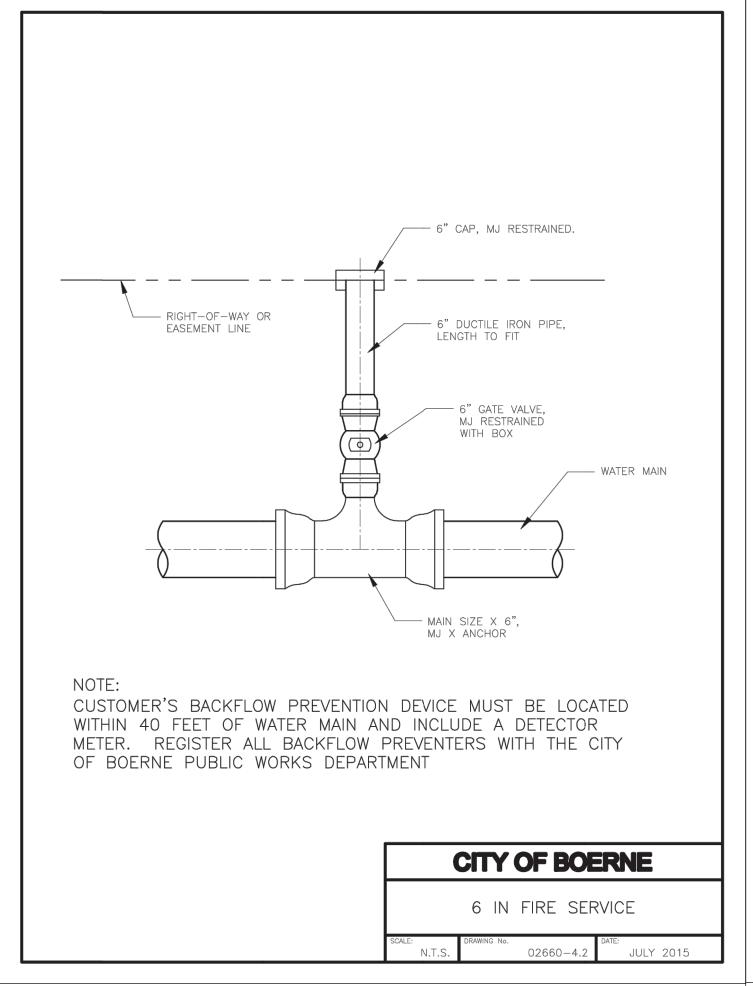


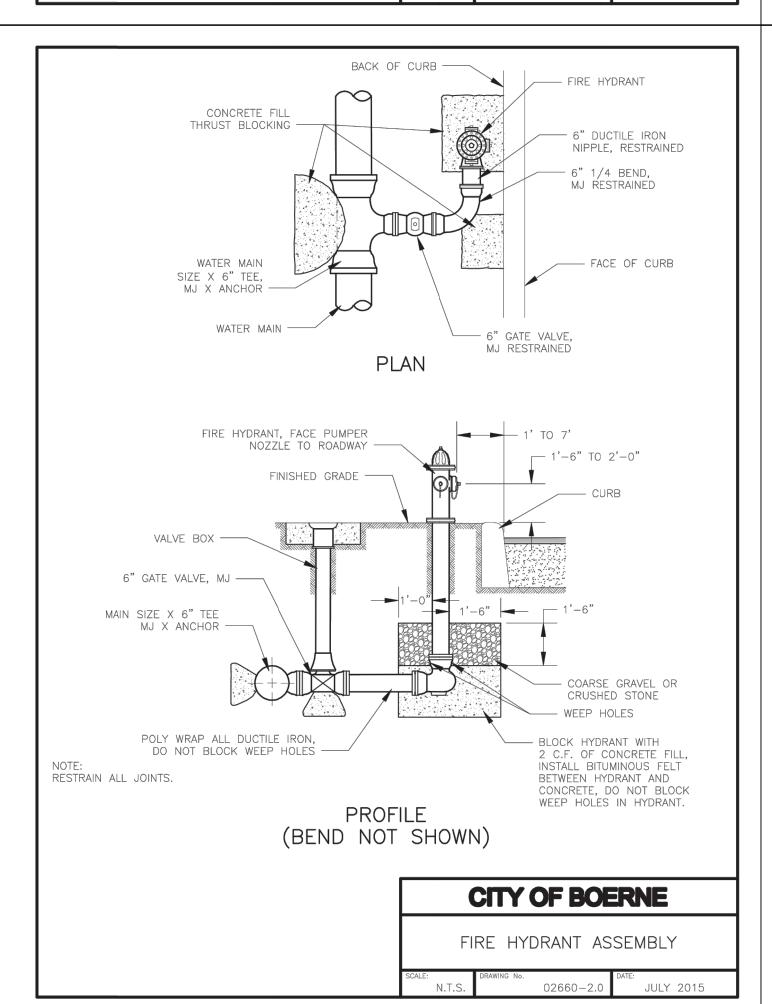


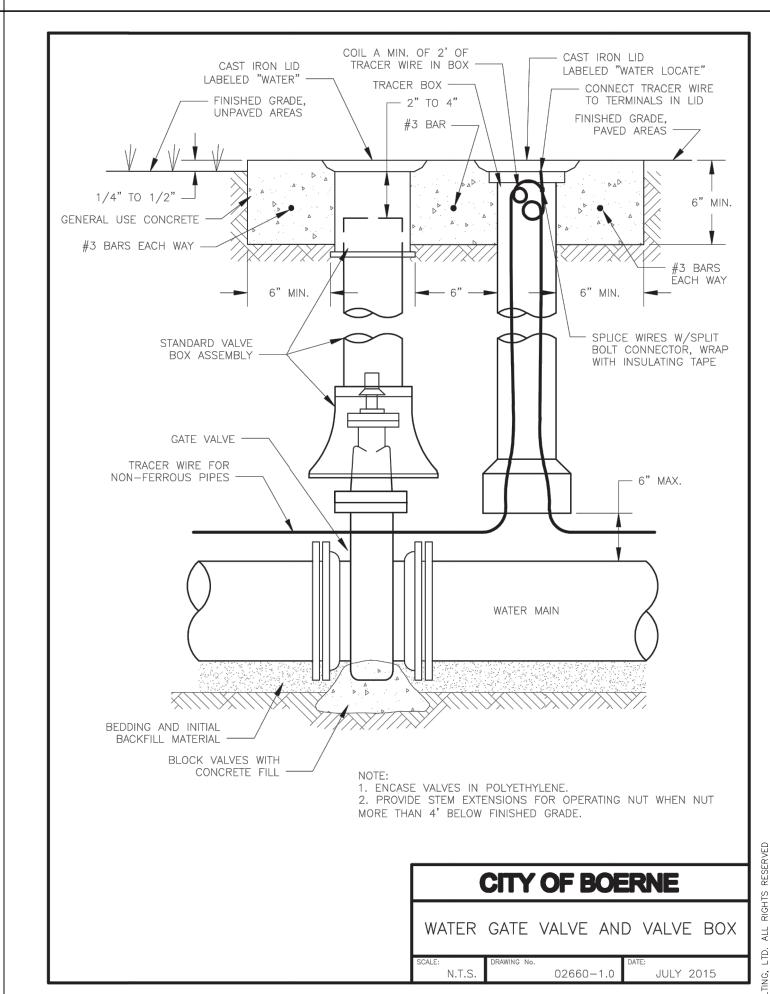


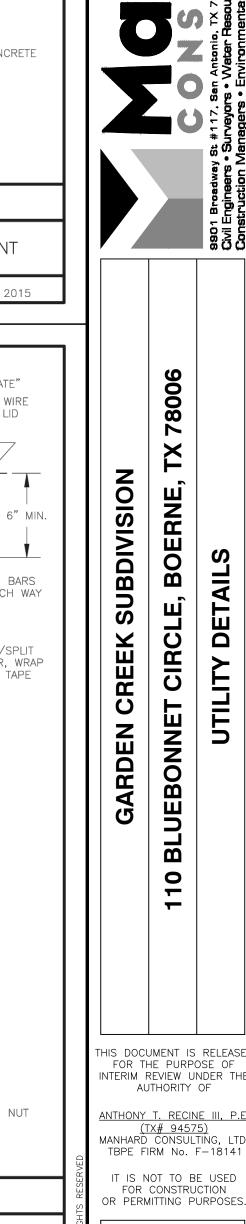












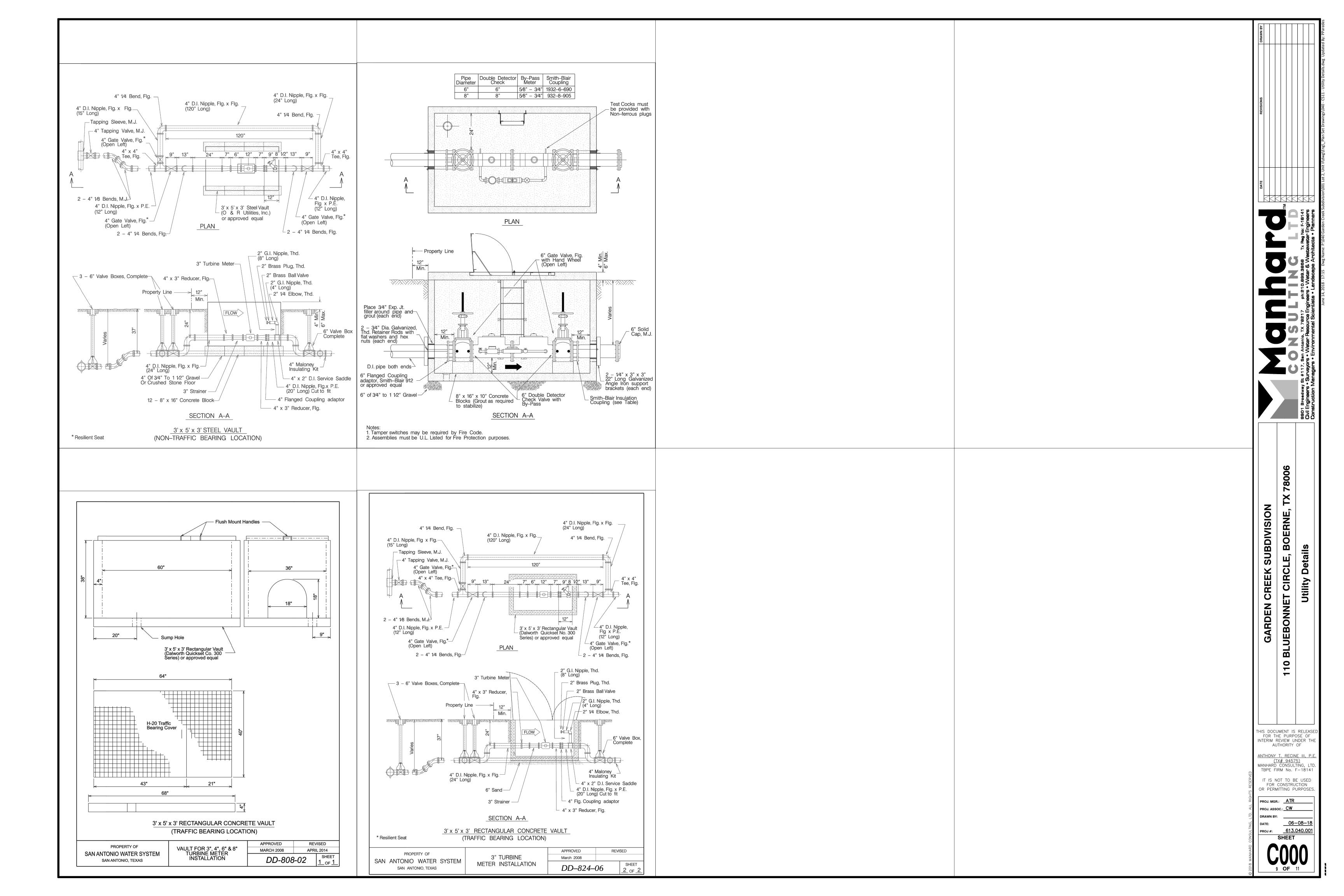
PROJ. MGR.: ATR

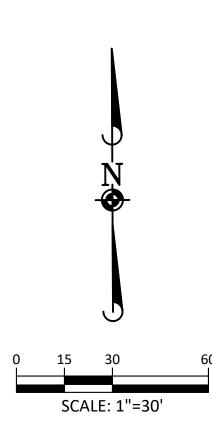
PROJ. ASSOC.: CW

PROJ #: 613.040.00 SHEET

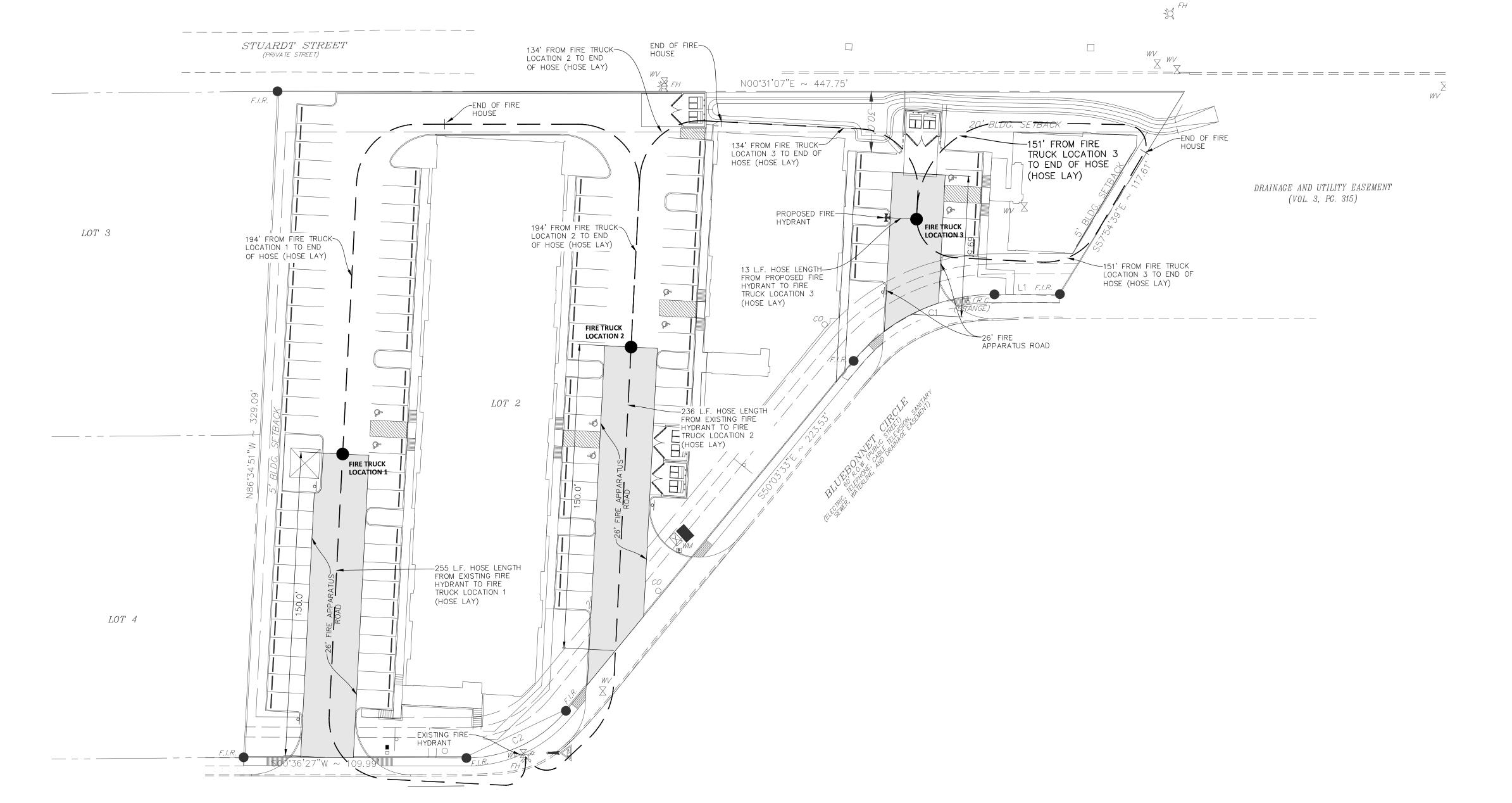
<u>06-08-18</u>

DETAILS





A 2.975 ACRE TRACT OUT
OF SURVEY
180 M I LEAL
(VOL. 1, PG. 281)

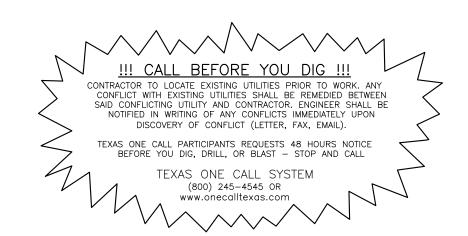


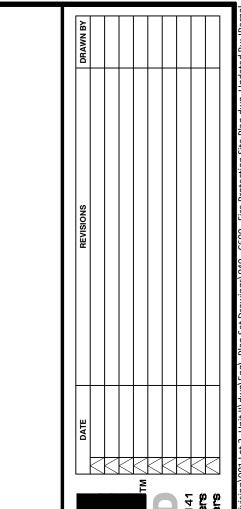
FIRE APPARATUS ACCESS ROAD SIGNAGE

- INSTALL ONE (1) 18" X 24" STANDARD SIZE SIGN LETTERED "FIRE LANE NO PARKING AT ANY TIME. ORD. 5457" ALONG PROPOSED FIRE APPARATUS ACCESS ROAD AS AT LOCATIONS INDICATED ON THIS PLAN.
- SIGN SHOULD HAVE RED LETTERS AND BORDER ON WHITE BACKGROUND WITH RIGHT/LEFT AND DOUBLE ARROWS IN THE MIDDLE.
- THE BOTTOM EDGE OF SIGN MUST BE AT LEAST SEVEN (7) FEET ABOVE FINISHED GRADE WHERE THE SIGN IS INSTALLED AND AT LEAST TWO (2) FEET FROM CURB OR PAVEMENT EDGE.

REFERENCES:

- CITY FIRE LANE ORDINANCE ORD. NO. 90-12, § 12, 5-8-90; ORD. NO. 2000-22, § 12, 8-22-00; ORD. NO. 2008-03, § 1, 2-12-08, SECTION 8-72.
- TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS CODE -R7-35
- 2009 INTERNATIONAL FIRE CODE CHAPTER 5, SECTION 503 AND APPENDIX D, SECTION D103





Broadway St #117, San Antonio, TX 78217 ph:210.899.3868 Tx Reg No: F-1815. Surveyors • Water Resource Engineers • Water & Wastewater Enginee struction Managers • Environmental Scientists • Landscape Architects • Planne

GARDEN CREEK SUBDIVISION
UEBONNET CIRCLE, BOERNE, TX 78
FIRE PROTECTION SITE PLAN

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

B

0

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

PROJ #: 613.040.001
SHEET
C600

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE

8. CONTRACTOR SHALL PROVIDE TRIANGULAR SEDIMENT FILTER DIKE PER DETAIL THIS SHEET

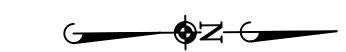
SILT FENCE DETAIL

NOT TO SCALE

CONTRIBUTE TO ADDITIONAL SILTATION.

WHERE SILT FENCE IS REQUIRED BUT NOT INSTALLABLE.

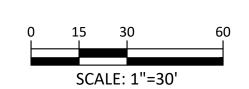
SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT

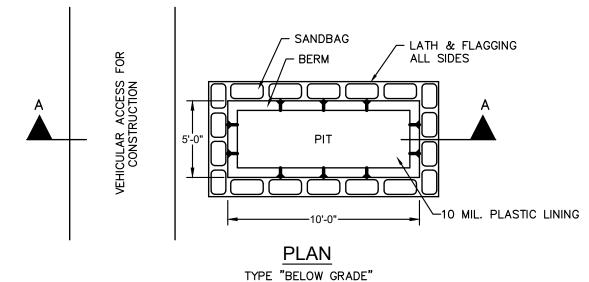


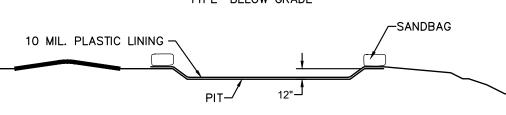
<u>LEGEND</u>

DRAINAGE FLOW (EXISTING)

DISTURBED AREA







SECTION A-A

- 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.

CONCRETE TRUCK WASHOUT PIT

NOT TO SCALE

SOIL EROSION CONTROL NOTES

- 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 AFTER 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 4" OF TOPSOIL SHALL BE PLACED IN ALL DRAINAGE CHANNELS (EXCEPT ROCK) AND BETWEEN THE CURB AND R.O.W. LINE.
- (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.
- HYDRAULIC SEEDING:

 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.
 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

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 MONTHS. 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.

LEGAL DESCRIPTION:

ROADWAY MUST BE REMOVED IMMEDIATELY.

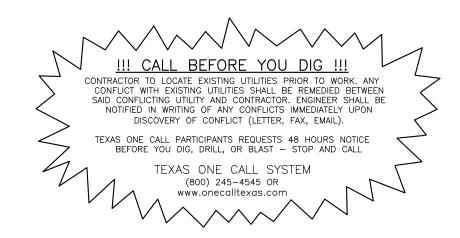
FROM LEAVING THE CONSTRUCTION SITE.

7. DRAINAGE — ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

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.



CONSTITUTION OF THE PROPERTY OF THE CONSTRUCTION OF THE CONSTRUCTI

UEBONNET CIRCLE, BOERNE, EROSION CONTROL PLAN

SUBDIVISION

CREEK

ARDEN

HIS DOCUMENT IS RELEAS

0

FOR THE PURPOSE OF INTERIM REVIEW UNDER TH AUTHORITY OF

ANTHONY T. RECINE III, P.E

(TX# 94575)

MANHARD CONSULTING, LTE

TBPE FIRM No. F-18141

IT IS NOT TO BE USED

IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMITTING PURPOSES.

PROJ. MGR.: ATR

ROJ. ASSOC.: CW

RAWN BY: JB

ATE: 06-08-18

ROJ #: 613.040.001

C800