

# RIVERBEND CROSSING FILING NO. 1

## UTILITY CONSTRUCTION DRAWINGS

### EL PASO COUNTY, COLORADO

#### GENERAL NOTES FOR WASTEWATER COLLECTION SYSTEM CONSTRUCTION:

##### GENERAL

- ALL WORK SHALL BE IN ACCORDANCE WITH THE SECURITY SANITATION DISTRICT (SSD) SEWER USE REGULATIONS (SUR), THE SECURITY SANITATION DISTRICT DESIGN CRITERIA AND STANDARD SPECIFICATIONS AND THE SSD POLICIES, PROCEDURES AND AGREEMENTS PERTAINING TO THIS PROJECT.
- THE CONTRACTOR SHALL COORDINATE AND PROVIDE FOR DETERMINING THE LOCATION AND PROVIDING FOR PROTECTION OF EXISTING UTILITIES AND DRAINAGE STRUCTURES. THE UTILITY NOTIFICATION CENTER OF COLORADO SHALL BE CONTACTED BY DIALING 811 OR 1-800-922-1987.
- SUFFICIENT CLEARANCE SHALL BE MAINTAINED BETWEEN THE EXCAVATION FOR THE NEW WASTEWATER FACILITIES AND ANY POWER OR TELEPHONE POLE OR GUY WIRE, IN CASES WHERE FAILURE OF A POLE IS POSSIBLE, THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY FOR ASSISTANCE TO TEMPORARILY BRACE OR SUPPORT THE POLE AS REQUIRED. IN THE CASE WHERE A GUY WIRE OR ITS ANCHOR IS IN DIRECT CONFLICT WITH THE WORK PROPOSED, THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY FOR THE REMOVAL AND REINSTALLATION OF THE CONFLICTING GUY WIRE OR ANCHOR AS REQUIRED.
- NO EXCAVATED MATERIAL SHALL BE PLACED UNDER OVERHEAD ELECTRIC CONDUCTORS OR AROUND POLES OR TEMPORARILY STORED UNDER LINES WITHOUT FIRST CONSULTING WITH THE ELECTRIC UTILITY TO DETERMINE IF ADEQUATE CLEARANCES WILL BE MAINTAINED. NO PERSON, TOOL, OR EQUIPMENT SHALL OPERATE CLOSER THAN 10 FEET TO ANY PORTION OF ANY ENERGIZED LINE WITHOUT FIRST COMPLYING WITH THE PROVISIONS OF COLORADO REVISED STATUTES 1973, SECTION 1, TITLE 9, ARTICLE 2.5, 102 AND 103.
- THE CONTRACTOR SHALL NOT DISTURB ANY EXISTING UTILITIES UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL UTILITIES SHALL REMAIN IN SERVICE AT ALL TIMES DURING CONSTRUCTION UNLESS OTHER ARRANGEMENTS, ACCEPTABLE TO THE UTILITY OWNER, ARE MADE BETWEEN THE CONTRACTOR, THE RESPECTIVE UTILITY DEPARTMENT AND WHERE APPROPRIATE, THE PRIVATE PROPERTY OWNER(S).
- THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH APPLICABLE STANDARDS AND REGULATIONS AS SET FORTH BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

##### EARTHWORK

- ALL EXCAVATION, PIPE EMBEDMENT AND TRENCH BACKFILL SHALL BE IN ACCORDANCE WITH THE SECURITY SANITATION DISTRICT SEWER USE REGULATIONS AND THE DISTRICT DESIGN CRITERIA AND STANDARD SPECIFICATIONS AND SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL AUTHORITY GOVERNING WORK IN AND USE OF PUBLIC RIGHT-OF-WAYS.
- IN THOSE AREAS WHERE CONSTRUCTION ACTIVITY ALTERS EXISTING DRAINAGE CONFIGURATIONS, DRAINAGE PATTERNS SHALL BE RESTORED TO AS GOOD AS OR BETTER CONDITIONS THAN THOSE THAT EXISTED PRIOR TO THE CONSTRUCTION ACTIVITY.
- COMPACTION SHALL BE IN COMPLIANCE WITH THE SECURITY SANITATION DISTRICT SEWER USE REGULATIONS. IN THOSE AREAS WHERE CUT PERMITS ARE ISSUED BY AN OUTSIDE AUTHORITY OR IN CASE OF CONFLICT IN THE REFERENCED STANDARDS, COMPLY WITH THE MORE STRINGENT SPECIFICATION.
- ANY MATERIAL NOT SUITABLE FOR INCORPORATION INTO TRENCH BACKFILL OR STREET SUBGRADE SHALL BE REMOVED FROM THE SITE.
- ANY SOIL THAT IS DISTURBED BELOW THE DESIGNATED SUBGRADE ELEVATIONS BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED IN ACCORDANCE WITH THE SECURITY SANITATION DISTRICT DESIGN CRITERIA AND STANDARD SPECIFICATIONS.
- TRAFFIC CONTROL AND STREET SURFACE RESTORATION
- ALL STREET SURFACE RESTORATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE AGENCY HAVING JURISDICTION OVER THE ROADWAY, SUBJECT TO THE ACCEPTANCE BY THE SECURITY SANITATION DISTRICT.

##### SANITARY SEWER SERVICE LINES

- SANITARY SEWER SERVICE LINES MUST BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SECURITY SANITATION DISTRICT SEWER USE REGULATIONS AND THE SECURITY SANITATION DISTRICT DESIGN CRITERIA AND STANDARD SPECIFICATIONS.
- SANITARY SEWER SERVICE CONNECTIONS USING IN-LINE TEES OR SADDLE TAP TEES SHALL BE INSTALLED NO LESS THAN 3 FEET FROM ANY MANHOLE AND NO LESS THAN 3 FEET FROM ANY EXISTING SANITARY SEWER SERVICE LINE.
- THE CONTRACTOR SHALL NOTIFY THE SECURITY SANITATION DISTRICT 48 HOURS PRIOR TO COMMENCING EXCAVATION FOR A SANITARY SEWER SERVICE LINE AND COORDINATE THE REQUIRED INSPECTIONS.
- CLEANOUTS SHALL BE INSTALLED WHERE HORIZONTAL DEFLECTIONS IN ALIGNMENT OCCUR IN ACCORDANCE WITH THE SECURITY SANITATION DISTRICT DESIGN CRITERIA AND STANDARD SPECIFICATIONS.
- ALL SERVICE LINE INSTALLATIONS SHALL BE INSPECTED BY THE SECURITY SANITATION DISTRICT PRIOR TO BACKFILLING.
- SANITARY SEWER SERVICE LINES SHALL BE INSTALLED WITH AN ABSOLUTE MINIMUM SLOPE OF 2% UNLESS SPECIFICALLY AUTHORIZED BY THE SECURITY SANITATION DISTRICT IN WRITING.

##### GENERAL CONSTRUCTION NOTES

- SHOP DRAWING SUBMITTALS SHALL BE MADE TO THE SECURITY SANITATION DISTRICT FOR ALL MATERIALS TO BE INCORPORATED INTO THIS PROJECT.
- ALL SEWER MAIN AND SERVICE LINE WORK SHALL BE UNDERTAKEN UTILIZING CLASS "B" BEDDING, REFER TO THE SECURITY SANITATION DISTRICT DESIGN CRITERIA AND STANDARD SPECIFICATIONS FOR THE REQUIRED PIPELINE EMBEDMENT.
- ANY SIGNS, DELINEATOR POSTS, MAILBOXES, NEWSPAPER BOXES AND OTHER APPURTENANCES REMOVED DURING CONSTRUCTION SHALL BE REINSTALLED IN THE SAME LOCATION AND IN AN ACCEPTABLE CONDITION.
- IN THOSE AREAS WHERE NEW PIPELINE CONSTRUCTION IMPACTS EXISTING FENCING, THE CONTRACTOR SHALL REMOVE THE FENCING AS NECESSARY. ALL FENCING REMOVED DURING CONSTRUCTION SHALL BE REINSTALLED IN A CONDITION AS GOOD AS OR BETTER THAN ORIGINALLY FOUND.
- EXISTING PROPERTY CORNERS AND SECTION MONUMENTATION SHALL NOT BE DISTURBED. IN THE EVENT ANY EXISTING PROPERTY MONUMENTATION IS DISTURBED DURING THE COURSE OF CONSTRUCTION, IT SHALL BE REPLACED BY A SURVEYOR LICENSED IN THE STATE OF COLORADO.
- THE CONTRACTOR SHALL SET ALL MANHOLE RINGS AND COVERS OUTSIDE OF PAVED ROADWAYS OR HARDCAPPED AREAS 2-INCHES ABOVE THE FINISH GRADE AND INSTALL A CARBONITE MARKER POST AT EACH MANHOLE. THE CONTRACTOR SHALL COORDINATE WITH THE SECURITY SANITATION DISTRICT FOR THE PLACEMENT OF THE CARBONITE MARKERS AT ALL OFF-ROAD MANHOLE LOCATIONS.
- IN PAVED ROADS OR HARDCAPPED SURFACES, MANHOLE RINGS SHALL BE SET 3/4-INCH BELOW FINISH GRADE. CARE SHALL BE TAKEN IN FINAL GRADING TO PRECLUDE PONDING OF SURFACE WATER OVER MANHOLE RINGS AND COVERS.
- THE CONTRACTOR SHALL REVIEW THE DETAILS IN THE SECURITY SANITATION DISTRICT SEWER USE REGULATIONS AND STANDARD DRAWINGS FOR MANHOLE WALL THICKNESS, BASE DIAMETER AND THICKNESS, STEEL PIPE REQUIREMENTS AND WATERPROOFING REQUIREMENTS. MANHOLE BASES SHALL BE PRECAST UNITS UNLESS APPROVED IN ADVANCE BY THE SECURITY SANITATION DISTRICT.
- THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF CONCRETE/GROUT FILLETS IN THE MANHOLES WITH THE SECURITY SANITATION DISTRICT TO ENSURE PROPER PERFORMANCE AND ACHIEVEMENT OF DESIGN INTENT. FULL DEPTH, EQUAL TO THE PIPE DIAMETER, FLOW CHANNELS ARE REQUIRED.
- THE CONTRACTOR IS TO UNDERTAKE HIS WORK IN ACCORDANCE WITH OSHA'S CONFINED SPACE ENTRY REQUIREMENTS.
- NEW MATERIALS SHALL BE USED FOR ALL WORK UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- POSITIVE DRAINAGE SHALL BE PROVIDED AWAY FROM ALL STRUCTURES. FINAL GRADING IS SUBJECT TO REVIEW AND APPROVAL.
- THE SUBGRADE UNDERNEATH ALL STRUCTURES SHALL BE ADEQUATELY STABILIZED IN ACCORDANCE WITH THE SECURITY SANITATION DISTRICT SEWER USE REGULATIONS.
- ALL SANITARY SEWER COLLECTION SYSTEM COMPONENTS ARE SUBJECT TO PRESSURE TESTING IN ACCORDANCE WITH THE SECURITY SANITATION DISTRICT DESIGN CRITERIA AND STANDARD SPECIFICATIONS PRIOR TO FINAL ACCEPTANCE BY THE DISTRICT. ALL SANITARY SEWER LINES SHALL BE PROFESSIONALLY INSPECTED BY INTERNAL VIDEO CAMERA AND WRITTEN RECORDS AND DIGITAL VIDEO DISK (DVD) RECORDINGS FURNISHED TO THE SECURITY SANITATION DISTRICT FOR REVIEW AND APPROVAL.
- THE PIPELINE INSTALLATION SHALL GENERALLY BE ACCOMPLISHED FROM THE LOWEST PORTION OF THE PROJECT PROCEEDING UPHILL.
- FLAT TOP UDS OR PRECAST CONCRETE MANHOLES ARE REQUIRED FOR ALL MANHOLES 5.0 FEET AND LESS IN DEPTH. EXISTING CONES ARE TO BE INSTALLED ON ALL MANHOLES WITH DEPTHS GREATER THAN 5.0 FEET.
- THE CONTRACTOR SHALL THICKEN FILLETS IN MANHOLES AT THE DIRECTION OF THE SECURITY SANITATION DISTRICT WHERE THE UPSTREAM LINES HAVE EXCESSIVE GRADES.
- ALL POLYVINYLCHLORIDE (PVC) PIPE SHALL BE IN CONFORMANCE WITH ASTM D3034 (GREEN IN COLOR) AND BE INSTALLED PER ASTM D2321, PIPE STANDARD DIMENSION RATIO (SDR) OR PIPE STIFFNESS (PS) MAY VARY AND SHALL BE SHOWN ON THE CONSTRUCTION DRAWINGS.
- WHERE THE NEW SANITARY SEWER MAIN IS LESS THAN 18 VERTICAL INCHES UNDER A WATER MAIN, THE CONTRACTOR SHALL INSTALL A 20-FOOT LONG SEGMENT OF DUCTILE IRON PIPE (DIP) IN THE SANITARY SEWER MAIN CENTERED UNDER THE WATER MAIN CROSSING. THE DIP SHALL BE CONNECTED TO THE PVC SANITARY SEWER MAIN WITH WATER TIGHT FERRIC PIPE COUPLINGS ENCASED IN REINFORCED CONCRETE 12-INCHES LONG, 6-INCHES THICK. MATCH INVERTS OF THE DIP AND PVC PIPE.
- ALL DUCTILE IRON PIPING UTILIZED WITHIN THE SECURITY SANITATION DISTRICT SHALL HAVE AN INTERIOR COATING OR LINING IN ACCORDANCE WITH THE REQUIREMENTS OF THE SECURITY SANITATION DISTRICT DESIGN CRITERIA AND STANDARD SPECIFICATIONS SPECIFICALLY DESIGN, APPLIED AND INSTALLED FOR CORROSION CONTROL.
- THE SANITARY SEWER PIPELINE SHALL BE INSTALLED IN STRAIGHT ALIGNMENTS BETWEEN MANHOLES UNLESS OTHERWISE APPROVED BY THE SECURITY SANITATION DISTRICT.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING WASTEWATER PIPELINES OR MANHOLES AS A RESULT OF THEIR CONSTRUCTION ACTIVITY.
- ALL PIPELINES SHALL BE "AS BUILT" SURVEYED AND "AS BUILT" DRAWINGS SUBMITTED TO THE SECURITY SANITATION DISTRICT FOR REVIEW AND ACCEPTANCE. PAPER OR "HARD COPY" DRAWINGS AND ELECTRONIC AUTOCAD FILES ARE REQUIRED. REFER TO THE SECURITY SANITATION DISTRICT DESIGN CRITERIA AND STANDARD SPECIFICATIONS FOR THE REQUIRED ELECTRONIC FILE FORMAT, HORIZONTAL COORDINATE SYSTEM AND VERTICAL DATUM.
- THE CONTRACTOR SHALL ACQUIRE AND FAMILIARIZE HIMSELF WITH THE SECURITY SANITATION DISTRICT (SSD) SEWER USE REGULATIONS (SURS), THE SECURITY SANITATION DISTRICT DESIGN CRITERIA AND STANDARD SPECIFICATIONS AND THE SSD POLICIES, PROCEDURES AND AGREEMENTS PERTAINING TO THIS PROJECT PRIOR TO COMMENCING CONSTRUCTION. A COPY OF THE DISTRICT'S SEWER USE REGULATIONS AND DESIGN CRITERIA AND STANDARD SPECIFICATIONS SHALL BE ON-SITE ANY TIME CONSTRUCTION IS BEING ACCOMPLISHED.
- MANHOLE ENTRY PERMIT: THE SECURITY SANITATION DISTRICT WILL AUTHORIZE THE CONTRACTOR TO ENTER DISTRICT-OWNED MANHOLES. HOWEVER, THE DISTRICT WILL NOT ISSUE AN "ENTRY PERMIT" TO THE CONTRACTOR FOR ANY CONFINED SPACE. PRIOR TO ANY ENTRY, THE CONTRACTOR SHALL PROVIDE HIS OWN PERSONNEL CAPABLE AND QUALIFIED TO ISSUE AN ENTRY PERMIT FOR ENTRY INTO CONFINED SPACES. THE SECURITY SANITATION DISTRICT WILL ASSUME NO RESPONSIBILITY FOR THE CONTRACTOR'S ENTRY INTO DISTRICT-OWNED MANHOLES.
- ALL MANHOLES SHALL HAVE A FOUR (4) FOOT INSIDE DIAMETER UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
- THE WARRANTY FOR COMPLETED WORK SHALL EXTEND FOR A TWO-YEAR PERIOD FROM THE DATE OF ACCEPTANCE OF THE PROJECT BY THE DISTRICT.
- ALL SANITARY SEWER MAINS AND SERVICE LINES SHALL HAVE A 12 GAUGE COPPER CLAD STEEL INSULATED TRACER WIRE TAPED TO THE TOP OF PIPE. THE INSULATED COVERING SHALL HAVE A 45 MI. HIGH MOLECULAR WEIGHT, POLYETHYLENE MATERIAL, COLORED GREEN. THE TRACER WIRE SHOULD HAVE A MINIMUM VOLT RATING OF 30.

#### GENERAL NOTES FOR WATER DISTRIBUTION SYSTEM CONSTRUCTION:

##### A. GENERAL

- "DISTRICT MAINS" AS DEFINED IN SECTION 2.01 (A) OF THE SECURITY WATER DISTRICT (SWD) STANDARD SPECIFICATIONS WILL BE LOCATED WITHIN PUBLIC RIGHT-OF-WAY AND/OR EASEMENTS AS DETERMINED BY THE SECURITY WATER DISTRICT. PUBLIC RIGHT-OF-WAYS MUST BE APPROVED BY THE LOCAL LAND USE AUTHORITY IN THE SUBDIVISION PLAT OR OTHERWISE BY DEDICATION AND RECORD.
- THE SECURITY WATER DISTRICT MUST RECEIVE SIGNED AND RECORDED COPIES OF ALL EASEMENT AGREEMENTS PRIOR TO THE START OF CONSTRUCTION.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE SECURITY WATER DISTRICT STANDARD SPECIFICATIONS, THE SECURITY WATER DISTRICT DESIGN CRITERIA AND THE SECURITY WATER DISTRICT POLICIES, PROCEDURES AND AGREEMENTS PERTAINING TO THIS PROJECT.
- THE CONTRACTOR SHALL COORDINATE AND PROVIDE FOR DETERMINING THE LOCATION AND PROVIDING FOR PROTECTION OF EXISTING UTILITIES AND DRAINAGE STRUCTURES. THE UTILITY NOTIFICATION CENTER OF COLORADO SHALL BE CONTACTED BY DIALING 811 OR 1-800-922-1987.
- SUFFICIENT CLEARANCE SHALL BE MAINTAINED BETWEEN THE EXCAVATION FOR THE NEW WATER FACILITIES AND ANY POWER OR TELEPHONE POLE OR GUY WIRE, IN CASES WHERE FAILURE OF A POLE IS POSSIBLE, THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY FOR ASSISTANCE TO TEMPORARILY BRACE OR SUPPORT THE POLE AS REQUIRED. IN THE CASE WHERE A GUY WIRE OR ITS ANCHOR IS IN DIRECT CONFLICT WITH THE WORK PROPOSED, THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY FOR THE REMOVAL AND REINSTALLATION OF THE CONFLICTING GUY WIRE OR ANCHOR AS REQUIRED.
- NO EXCAVATED MATERIAL SHALL BE PLACED UNDER OVERHEAD ELECTRIC CONDUCTORS OR AROUND POLES OR TEMPORARILY STORED UNDER LINES WITHOUT FIRST CONSULTING WITH THE ELECTRIC UTILITY TO DETERMINE IF ADEQUATE CLEARANCES WILL BE MAINTAINED. NO PERSON, TOOL, OR EQUIPMENT SHALL OPERATE CLOSER THAN 10 FEET TO ANY PORTION OF ANY ENERGIZED LINE WITHOUT FIRST COMPLYING WITH THE PROVISIONS OF COLORADO REVISED STATUTES 1973, SECTION 1, TITLE 9, ARTICLE 2.5, 102 AND 103.
- THE CONTRACTOR SHALL NOT DISTURB ANY EXISTING UTILITIES UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL UTILITIES SHALL REMAIN IN SERVICE AT ALL TIMES DURING CONSTRUCTION UNLESS OTHER ARRANGEMENTS, ACCEPTABLE TO THE UTILITY OWNER, ARE MADE BETWEEN THE CONTRACTOR, THE RESPECTIVE UTILITY DEPARTMENT AND WHERE APPROPRIATE, THE PRIVATE PROPERTY OWNER(S).
- THE CONTRACTOR IS RESPONSIBLE TO INSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH APPLICABLE STANDARDS AND REGULATIONS AS SET FORTH BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

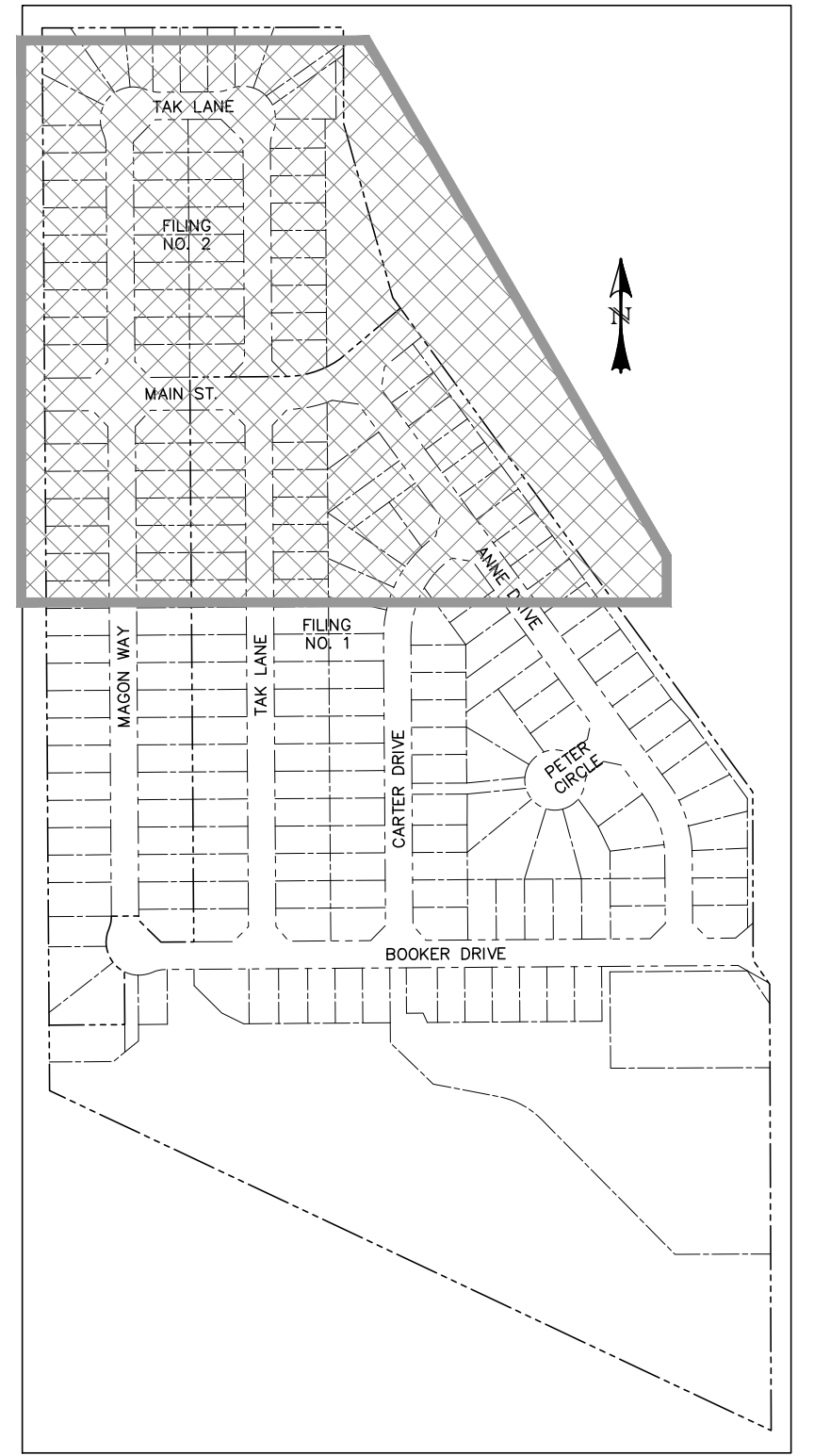
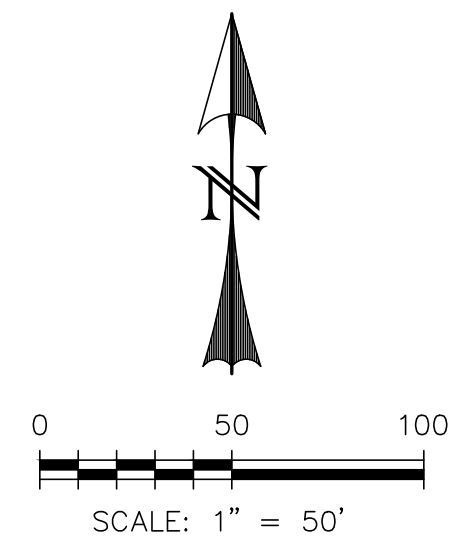
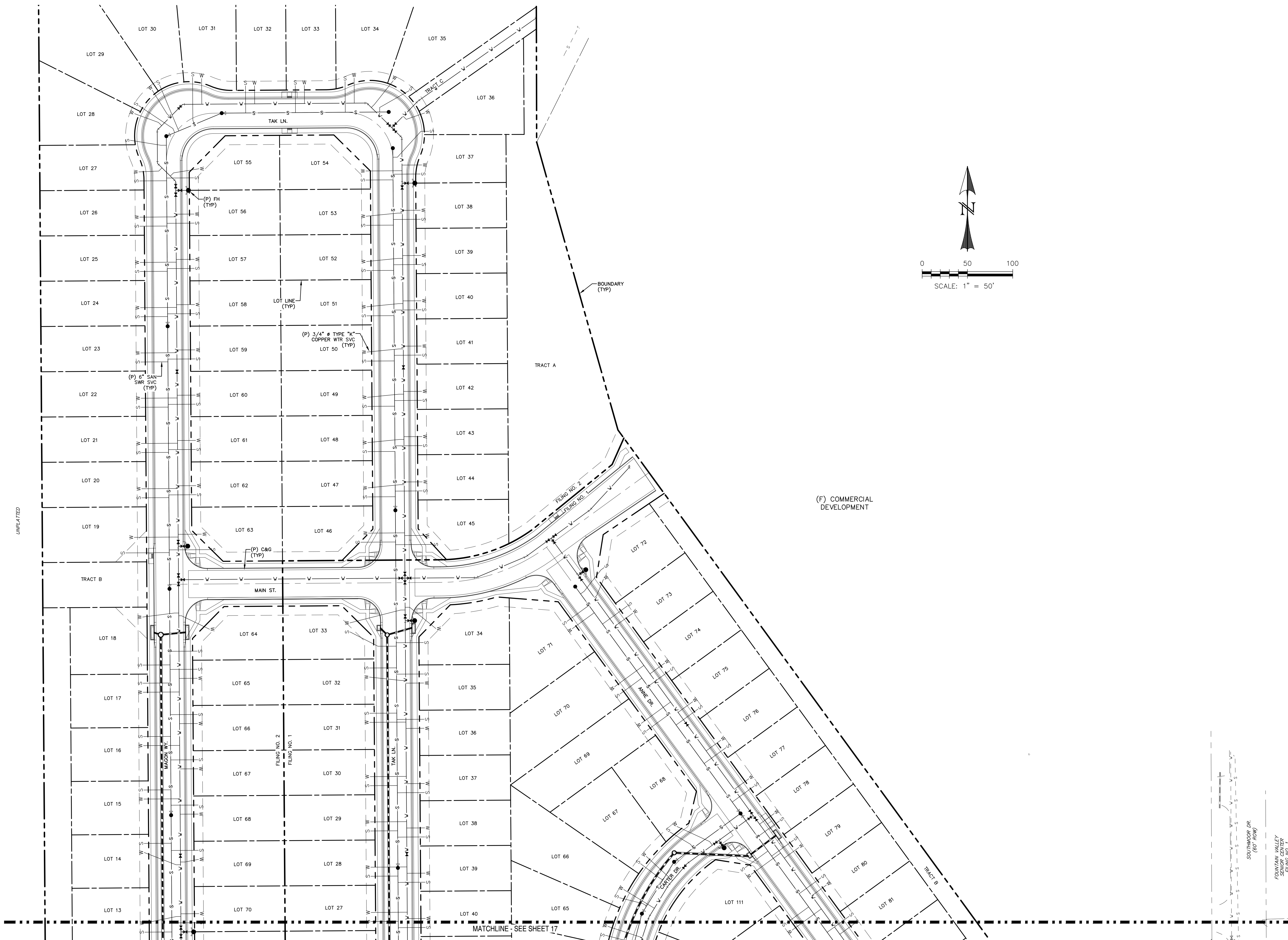
##### B. EARTHWORK

- ALL EXCAVATION, PIPE EMBEDMENT AND TRENCH BACKFILL SHALL BE IN ACCORDANCE WITH THE SECURITY WATER DISTRICT STANDARD SPECIFICATIONS AND SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL AUTHORITY GOVERNING WORK IN AND USE OF PUBLIC RIGHT-OF-WAYS.
- IN THOSE AREAS WHERE CONSTRUCTION ACTIVITY ALTERS EXISTING DRAINAGE CONFIGURATIONS, DRAINAGE PATTERNS SHALL BE RESTORED TO AS GOOD AS OR BETTER CONDITIONS THAN THOSE THAT EXISTED PRIOR TO THE CONSTRUCTION ACTIVITY.
- COMPACTION SHALL BE IN COMPLIANCE WITH THE SECURITY WATER DISTRICT SPECIFICATIONS. IN THOSE AREAS WHERE CUT PERMITS ARE ISSUED BY AN OUTSIDE AUTHORITY OR IN CASE OF CONFLICT IN THE REFERENCED STANDARDS, COMPLY WITH THE MORE STRINGENT SPECIFICATION.
- ANY MATERIAL NOT SUITABLE FOR INCORPORATION INTO TRENCH BACKFILL OR STREET SUBGRADE SHALL BE REMOVED FROM THE SITE.
- ANY SOIL THAT IS DISTURBED BELOW THE DESIGNATED SUBGRADE ELEVATIONS BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED IN ACCORDANCE WITH THE SECURITY WATER DISTRICT STANDARD SPECIFICATIONS.
- TRAFFIC CONTROL AND STREET SURFACE RESTORATION
- ALL STREET SURFACE RESTORATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE AGENCY HAVING JURISDICTION OVER THE ROADWAY, SUBJECT TO THE ACCEPTANCE BY THE SECURITY WATER DISTRICT.

##### C. WATER MAINS & APPURTENANCES

- POTHOLES OR EXCAVATION FOR WATER MAINS CROSSING, EXISTING UTILITIES OR OBSTRUCTIONS SHALL BE PERFORMED AS NEARLY AS POSSIBLE PRIOR TO THE START OF CONSTRUCTION. THE LOCATION OF CONNECTION OF NEW WATER MAINS TO THE EXISTING DISTRIBUTION SYSTEM FACILITIES SHALL BE EXISTING AND HORIZONTAL AND VERTICAL LOCATION OF EXISTING FACILITIES DETERMINED BY PRECISE SURVEY. THE POTHOLE AND SURVEY DATA SHALL BE SHOWN ON THE FINAL APPROVED WATER MAIN PLANS AND/OR DRAWINGS.
- THE CONTRACTOR IS REQUIRED TO NOTIFY THE SECURITY WATER DISTRICT INSPECTOR OFFICE TWO WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION. THE SECURITY WATER DISTRICT WILL BE NOTIFIED FIVE WORKING DAYS PRIOR TO ANY SHUT DOWN OF EXISTING SERVICE DUE TO CONSTRUCTION.
- REUSE OF ANY MATERIALS OR REJECTION OF ANY NEW MATERIALS SHALL BE AT THE SOLE DISCRETION OF THE SECURITY WATER DISTRICT'S INSPECTOR. THE SECURITY WATER DISTRICT'S DECISION SHALL BE FINAL.
- ALL STREET VALVE BOXES SHALL BE 18" DIA. UNLESS OTHERWISE NOTED. 20" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 24" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 30" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 36" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 42" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 48" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 54" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 60" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 66" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 72" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 78" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 84" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 90" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 96" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 102" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 108" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 114" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 120" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 126" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 132" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 138" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 144" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 150" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 156" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 162" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 168" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 174" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 180" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 186" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 192" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 198" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 204" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 210" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 216" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 222" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 228" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 234" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 240" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 246" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 252" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 258" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 264" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 270" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 276" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 282" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 288" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 294" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 300" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 306" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 312" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 318" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 324" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 330" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 336" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 342" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 348" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 354" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 360" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 366" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 372" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 378" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 384" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 390" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 396" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 402" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 408" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 414" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 420" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 426" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 432" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 438" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 444" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 450" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 456" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 462" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 468" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 474" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 480" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 486" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 492" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 498" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 504" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 510" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 516" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 522" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 528" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 534" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 540" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 546" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 552" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 558" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 564" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 570" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 576" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 582" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 588" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 594" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 600" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 606" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 612" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 618" DIA. VALVE BOXES SHALL BE SET 1" BELOW FINISH GRADE. 624" DIA. 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LOCATION MAP  
SCALE: N.T.S.

LEGEND


- |  |      |
|--|------|
| EXISTING                                   | (E)  |
| PROPOSED                                   | (P)  |
| CURB AND GUTTER                            | C&G  |
| EASEMENT                                   | ESMT |
| FIRE HYDRANT                               | FH   |
| MANHOLE                                    | MH   |
| SANITARY                                   | SAN  |
| SEWER                                      | SWR  |
| STORM                                      | STM  |
| WATER                                      | WTR  |
| BOUNDARY                                   |      |
| RIGHT-OF-WAY                               |      |
| LOT LINE                                   |      |
| EASEMENT                                   |      |
| (E) SANITARY MAIN, MH                      |      |
| (E) WATER MAIN, BOV, VALVE, FH             |      |
| (E) UG ELECTRIC                            |      |
| (E) UG TELEPHONE                           |      |
| (E) STORM SEWER, INLET, MH                 |      |
| (P) SANITARY MAIN, MH                      |      |
| (P) SANITARY SEWER SERVICE                 |      |
| (P) SANITARY FORCE MAIN (DESIGN BY OTHERS) |      |
| (P) STORM SEWER, INLET, MH                 |      |
| (P) WATER MAIN, VALVE, FH                  |      |
| (P) WATER SERVICE                          |      |

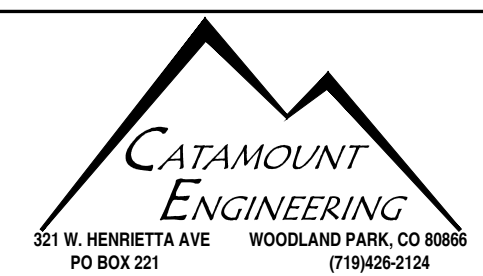
REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19



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PREPARED FOR:  
**AVATAR EQUITIES, LLC**  
  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
  
DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER #40510  
10/19/20  
DATE

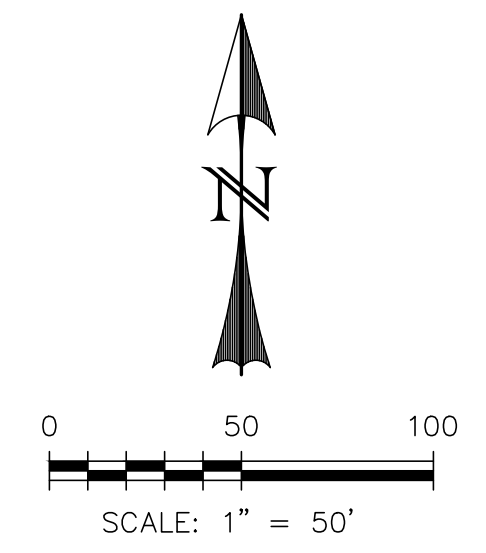
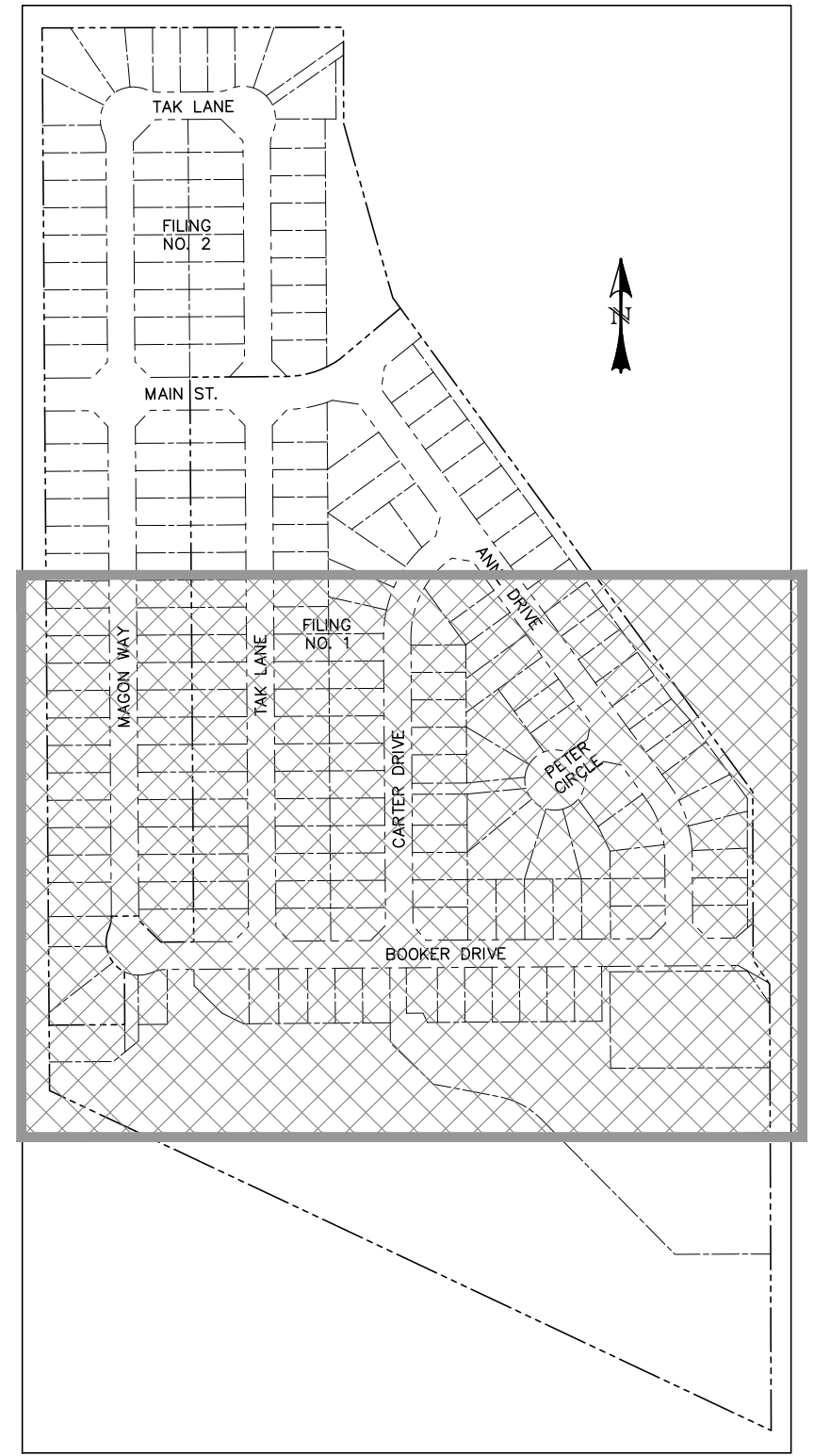
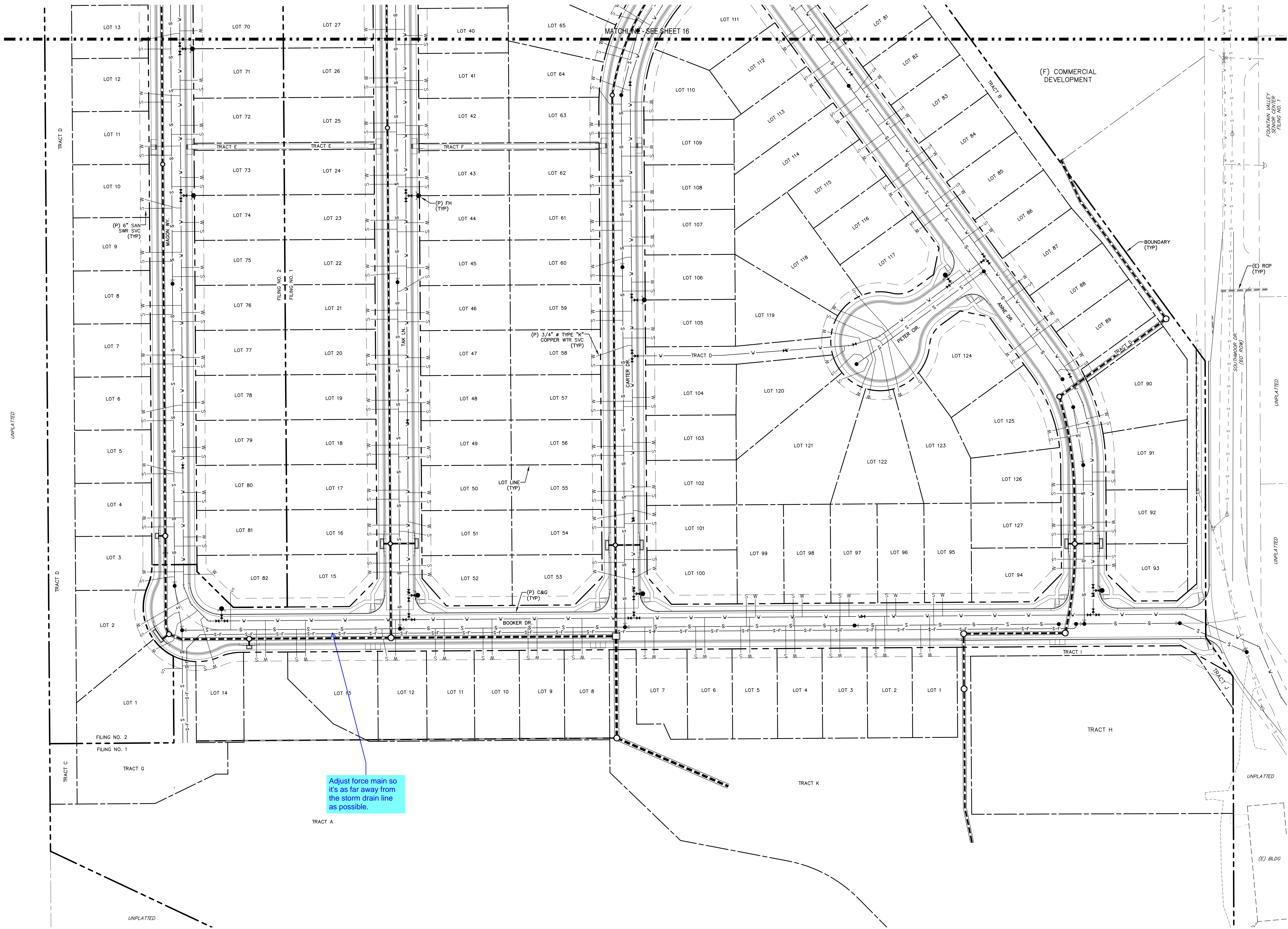


CATAMOUNT  
ENGINEERING  
321 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80866  
(719) 428-2124

RIVERBEND  
CROSSING  
  
UTILITY SERVICE PLAN

DESIGNED BY:	MGP	DRAWN BY:	MGP
SCALE:	1" = 50'	DATE:	10/19/20
JOB NUMBER	17-114	SHEET	2 OF 18





LEGEND	
EXISTING	(E)
PROPOSED	(P)
CURB AND GUTTER	C&G
EASEMENT	ESMT
FIRE HYDRANT	FH
MANHOLE	MH
SANITARY	SAN
SEWER	SWR
STORM	STM
WATER	WTR
BOUNDARY	
RIGHT-OF-WAY	
LOT LINE	
EASEMENT	
(E) SANITARY MAIN, MH	
(E) WATER MAIN, BOV, VALVE, FH	
(E) UG ELECTRIC	
(E) UG TELEPHONE	
(E) STORM SEWER, INLET, MH	
(P) SANITARY MAIN, MH	
(P) SANITARY SEWER SERVICE	
(P) SANITARY FORCE MAIN (DESIGN BY OTHERS)	
(P) STORM SEWER, INLET, MH	
(P) WATER MAIN, VALVE, FH	
(P) WATER SERVICE	

REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19

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PREPARED FOR:  
**AVATAR EQUITIES, LLC**  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
  
DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER  
10/19/20  
DATE

**CATAMOUNT ENGINEERING**  
321 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80866  
(719) 428-2124

**RIVERBEND CROSSING**  
**UTILITY SERVICE PLAN**

DESIGNED BY:	MGP	DRAWN BY:	MGP
SCALE:	1" = 50'	DATE:	10/19/20
JOB NUMBER	17-114	SHEET	3 OF 18

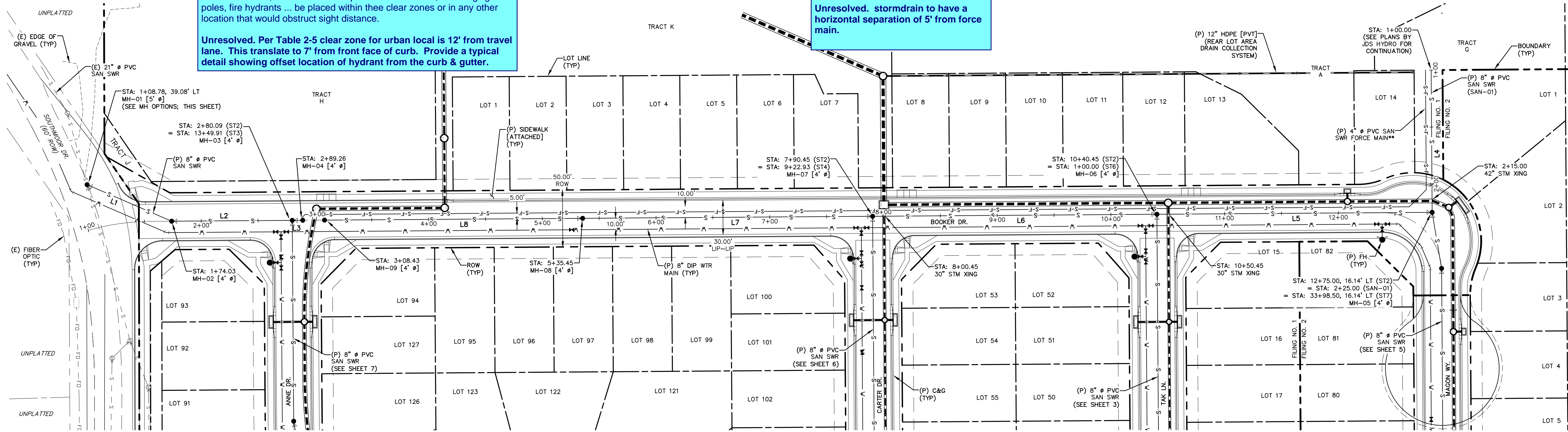


- Revise all hydrant location to be located outside the clear zone.  
- Provide a detail showing typical location of hydrant.  
- Per ECM 2.3.5, in no case shall a permanent structure, including light poles, fire hydrants ... be placed within these clear zones or in any other location that would obstruct sight distance.

Unresolved. Per Table 2-5 clear zone for urban local is 12' from travel lane. This translate to 7' from front face of curb. Provide a typical detail showing offset location of hydrant from the curb & gutter.

Provide a typical cross section for utility location in the roadway.

Unresolved. stormdrain to have a horizontal separation of 5' from force main.

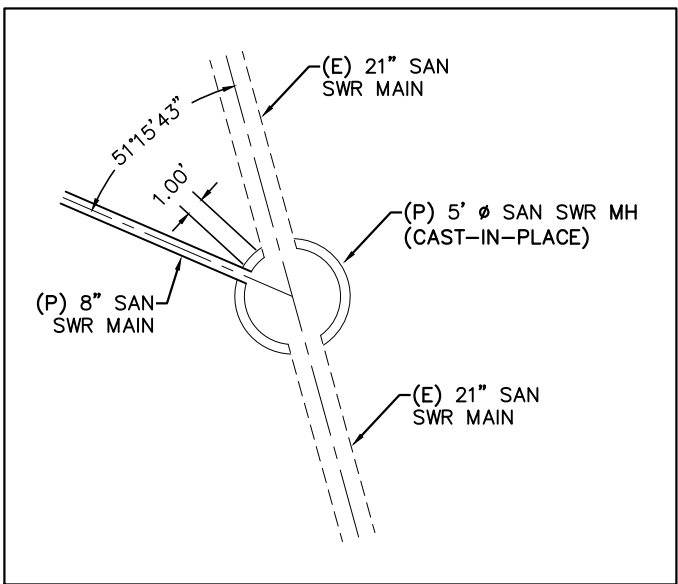
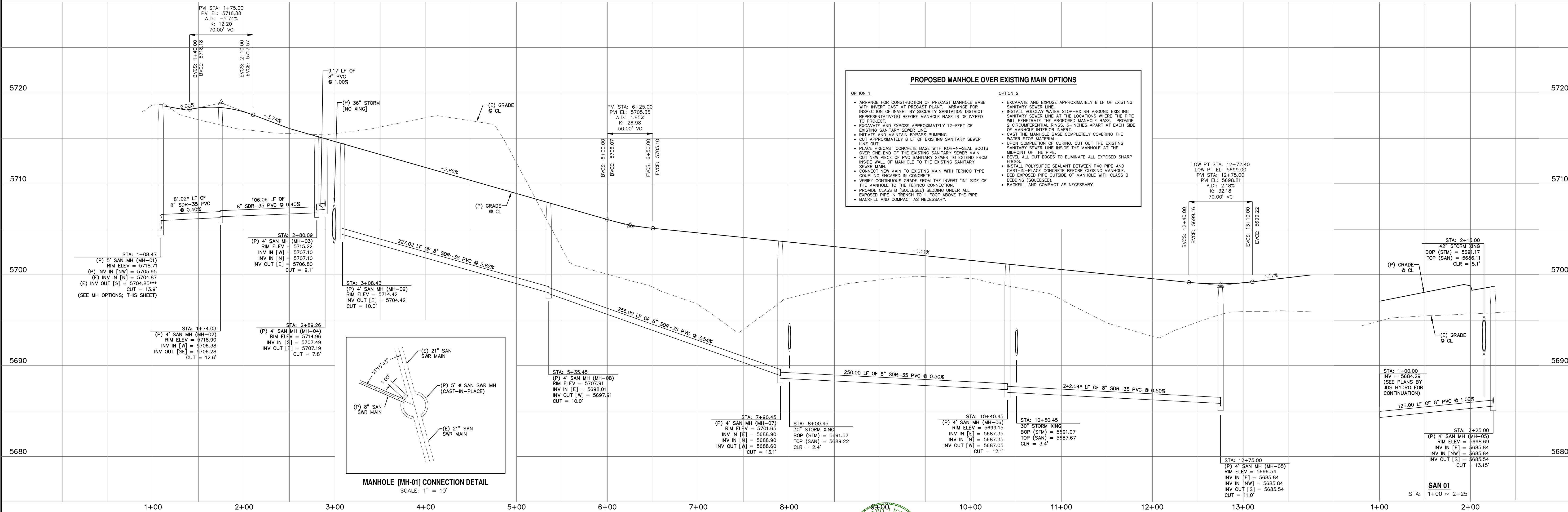
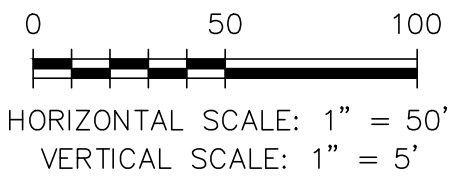


LINE TABLE		
LINE	BEARING	DISTANCE
L1	N66° 39' 45"W	81.02
L2	N89° 35' 49"E	106.06
L3	N89° 35' 49"E	9.18
L4	N0° 24' 11"W	125.00

LINE TABLE		
LINE	BEARING	DISTANCE
L5	S89° 35' 49"W	242.04
L6	S89° 35' 49"W	250.00
L7	N89° 35' 49"E	255.00
L8	N89° 35' 49"E	227.02

NOTES:

- ALL PROPOSED SANITARY SEWER TO BE SDR-35 PVC.
- PIPE LENGTH DOES NOT EQUAL DIFFERENCE IN STATIONING.
- PLANS BY JDS HYDRO; SHOWN FOR REFERENCE.
- THE LOCATION OF ALL EXISTING UTILITIES (HORIZONTAL & VERTICAL) SHALL BE FIELD VERIFIED PRIOR TO BEGINNING OF CONSTRUCTION.



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19



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STREET NAME ABBREVIATIONS:  
MAIN STREET = S11  
BOOKER DRIVE = S12  
ANNE DRIVE = S13  
CARTER DRIVE = S14  
PETER CIRCLE = S15  
TAK LANE = S16  
MAGON WAY = S17  
CUL-DE-SAC = FL

PREPARED FOR:  
AVATAR EQUITIES, LLC  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

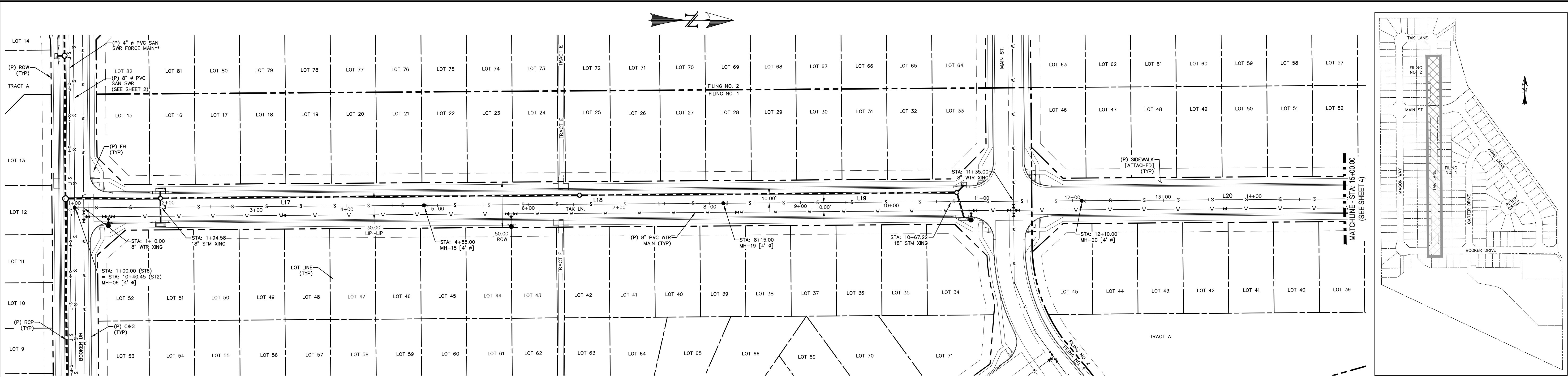
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
DAVID L. MIGARES, LICENSED PROFESSIONAL ENGINEER NO. 40510  
10/19/20  
DATE



RIVERBEND CROSSING  
BOOKER BLVD  
SANITARY SEWER PLAN & PROFILE

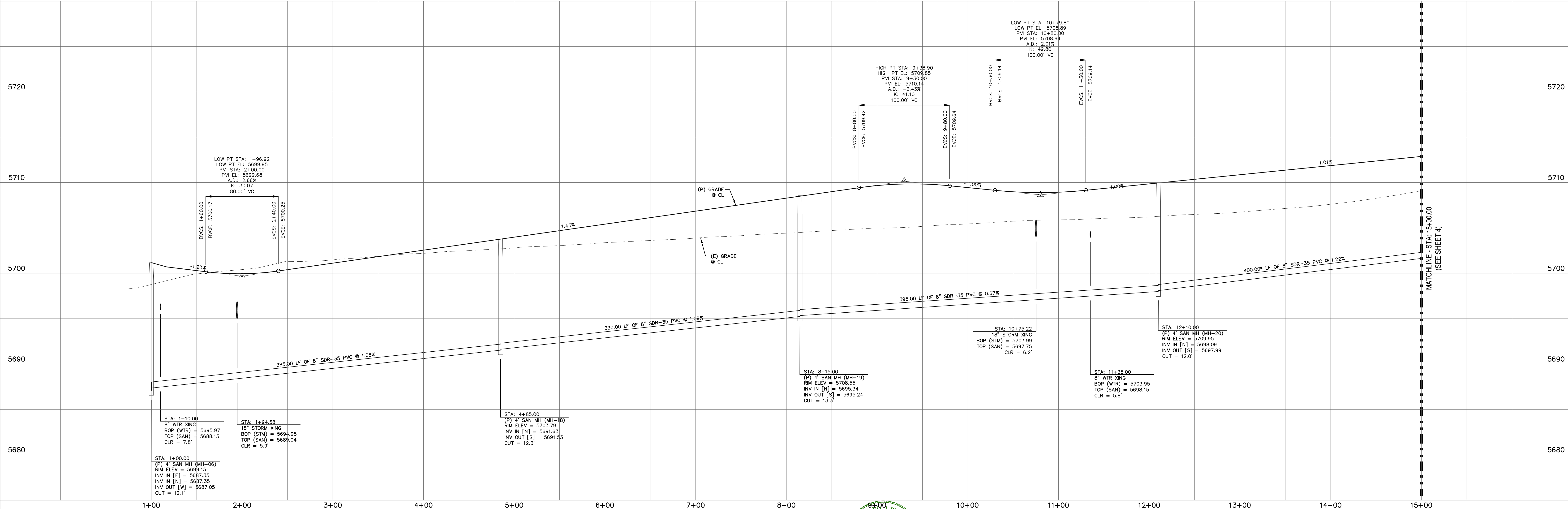
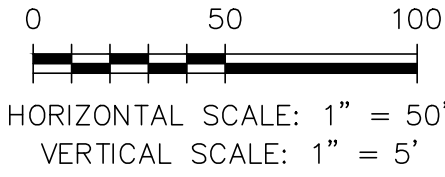
DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 10/19/20
JOB NUMBER	SHEET
17-114	4 OF 18





LINE TABLE		
LINE	BEARING	DISTANCE
L17	N0° 24' 10.53"W	385.00
L18	N0° 24' 10.53"W	330.00
L19	N0° 24' 10.53"W	395.00
L20	N0° 24' 10.53"W	400.00

- NOTES:**
- ALL PROPOSED SANITARY SEWER TO BE SDR-35 PVC.
  - PIPE LENGTH DOES NOT EQUAL DIFFERENCE IN STATIONING.
  - PLANS BY JDS HYDRO; SHOWN FOR REFERENCE.



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19

**811** Know what's below.  
Call 72 hours before you dig.  
For more details visit:  
www.call811.com

STREET NAME ABBREVIATIONS:  
MAIN STREET  
BOOKER DRIVE  
ANNE DRIVE  
CARTER DRIVE  
PETER CIRCLE  
TAK LANE  
WAGON WAY  
CUL-DE-SAC - FL

- = S11
- = S12
- = S13
- = S14
- = S15
- = S16
- = S17
- = CDS

PREPARED FOR:  
**AVATAR EQUITIES, LLC**  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

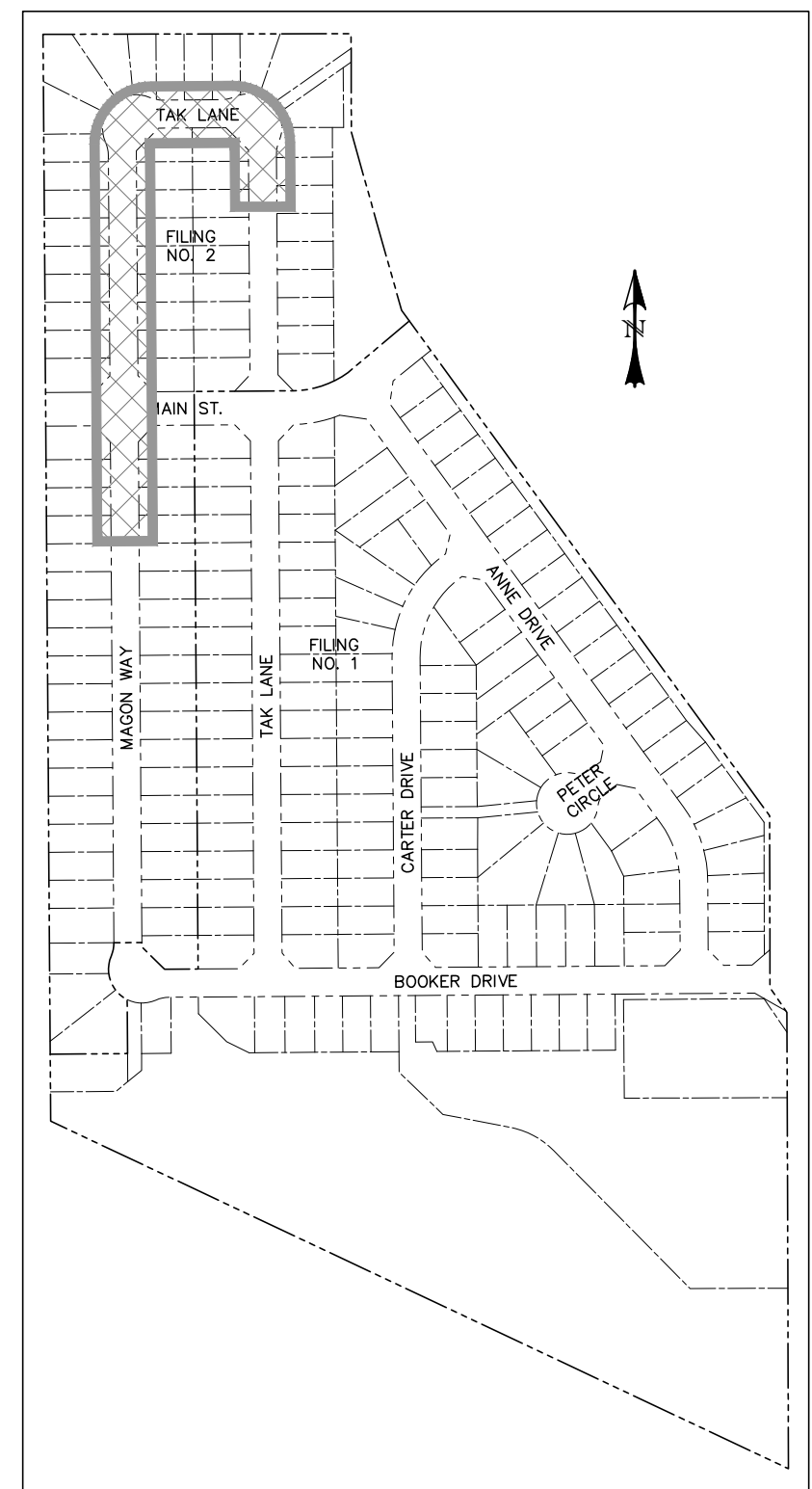
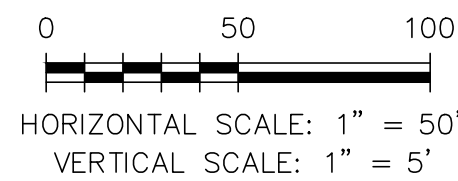
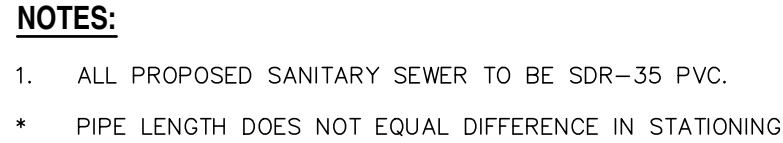
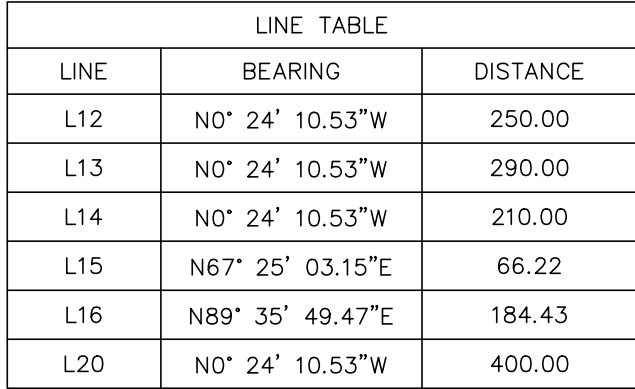
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
  
DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER NO. 40510  
10/19/20  
DATE

**CATAMOUNT ENGINEERING**  
321 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80866  
(719) 428-2124

**RIVERBEND CROSSING  
TAK LANE  
SANITARY SEWER PLAN & PROFILE**

DESIGNED BY:	MGP	DRAWN BY:	MGP
SCALE:	1" = 50'	DATE:	10/19/20
JOB NUMBER	17-114	SHEET	5 OF 18





**LOCATION MAP**  
SCALE: N.T.S.



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19



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For more details visit:  
[www.call811.com](http://www.call811.com)

STREET NAME ABBREVIATIONS:

- = ST1
- = ST2
- = ST3
- = ST4
- = ST5
- = ST6
- = ST7
- = CDS

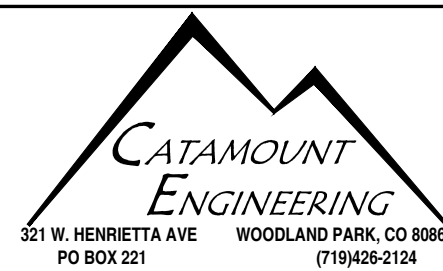
PREPARED FOR:  
TAR EQUITIES,

6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF CATAMOUNT ENGINEERING

DAVID L. MIARES, CALIFORNIA PE #40510

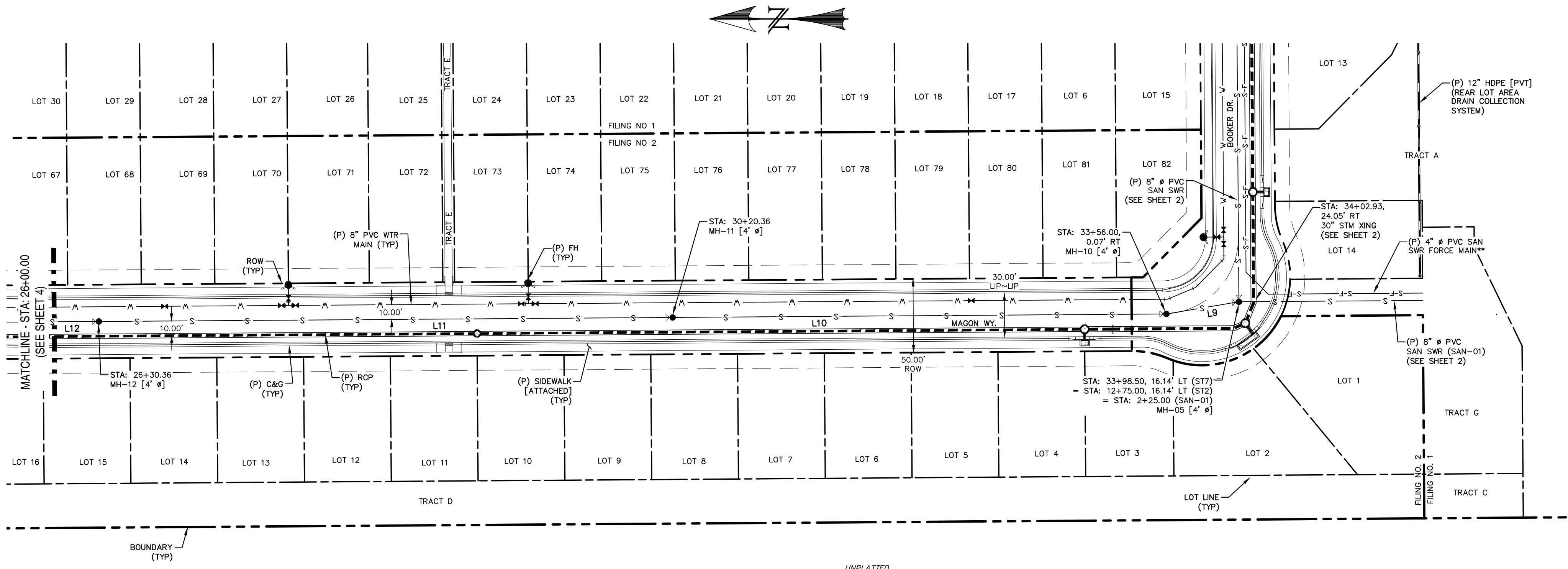
10/19/20  
DATE



# RIVERBEND CROSSING TAK LANE & MAGON WAY SANITARY SEWER PLAN & PROFILE

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 10/19/20
JOB NUMBER	SHEET
17-114	6 OF 18



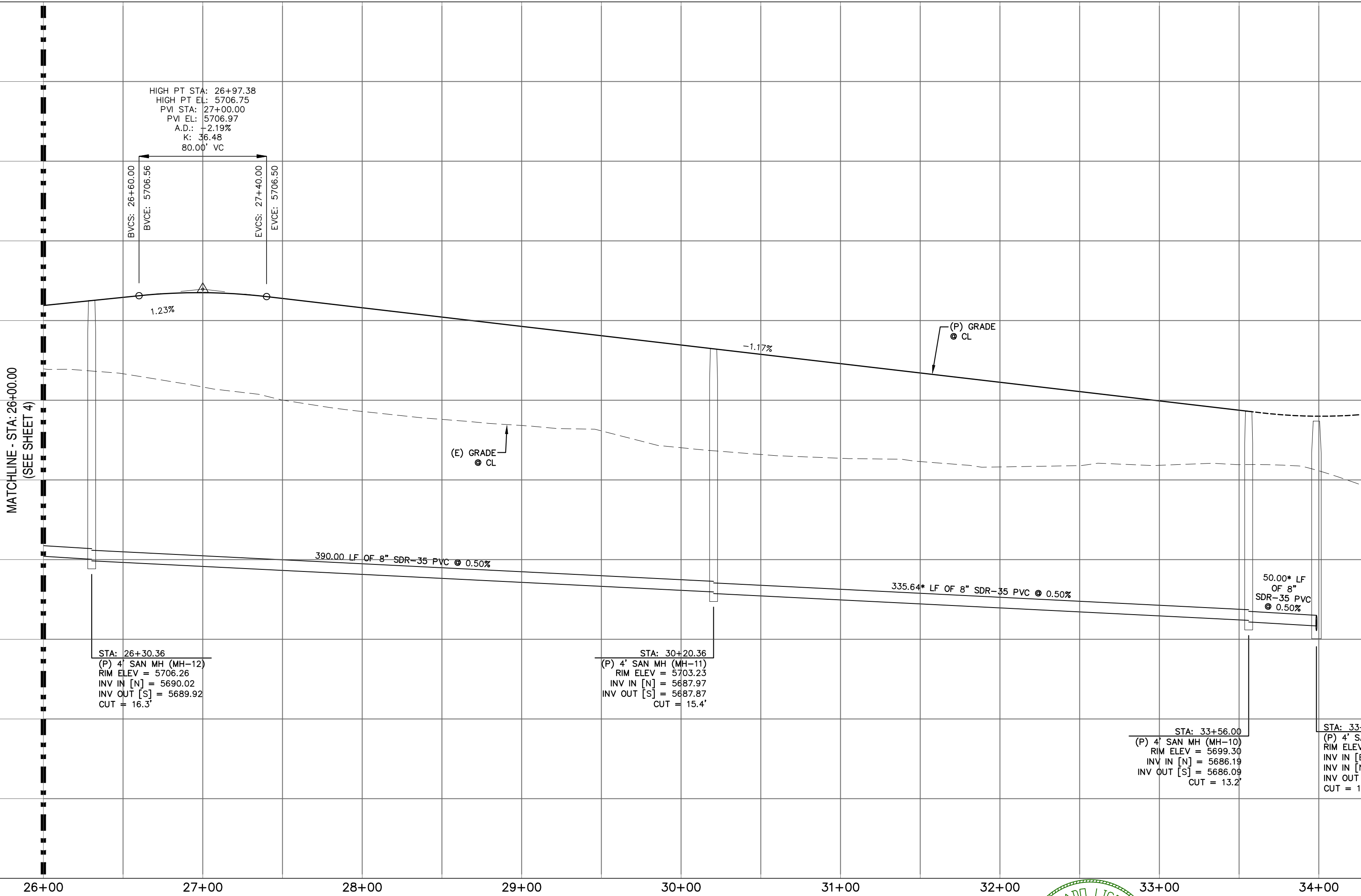
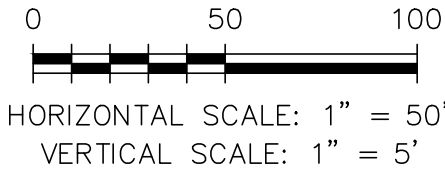


LINE TABLE		
LINE	BEARING	DISTANCE
L9	N9° 33' 41.17"W	50.00
L10	N0° 24' 10.53"W	335.64
L11	N0° 24' 10.53"W	390.00
L12	N0° 24' 10.53"W	250.00

MAGON WAY  
STA: 26+50 ~ 36+00

NOTES:

- ALL PROPOSED SANITARY SEWER TO BE SDR-35 PVC.
- PIPE LENGTH DOES NOT EQUAL DIFFERENCE IN STATIONING.
- PLANS BY JDS HYDRO; SHOWN FOR REFERENCE.



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19

**811** Know what's below.  
Call 72 hours before you dig.  
For more details visit:  
www.call811.com

STREET NAME ABBREVIATIONS:  
MAIN STREET  
BOOKER DRIVE  
ANNE DRIVE  
CARTER DRIVE  
PETER CIRCLE  
TAK LANE  
MAGON WAY  
CUL-DE-SAC - FL

= S11  
= S12  
= S13  
= S14  
= S15  
= S16  
= S17  
= CDS

PREPARED FOR:  
AVATAR EQUITIES, LLC  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

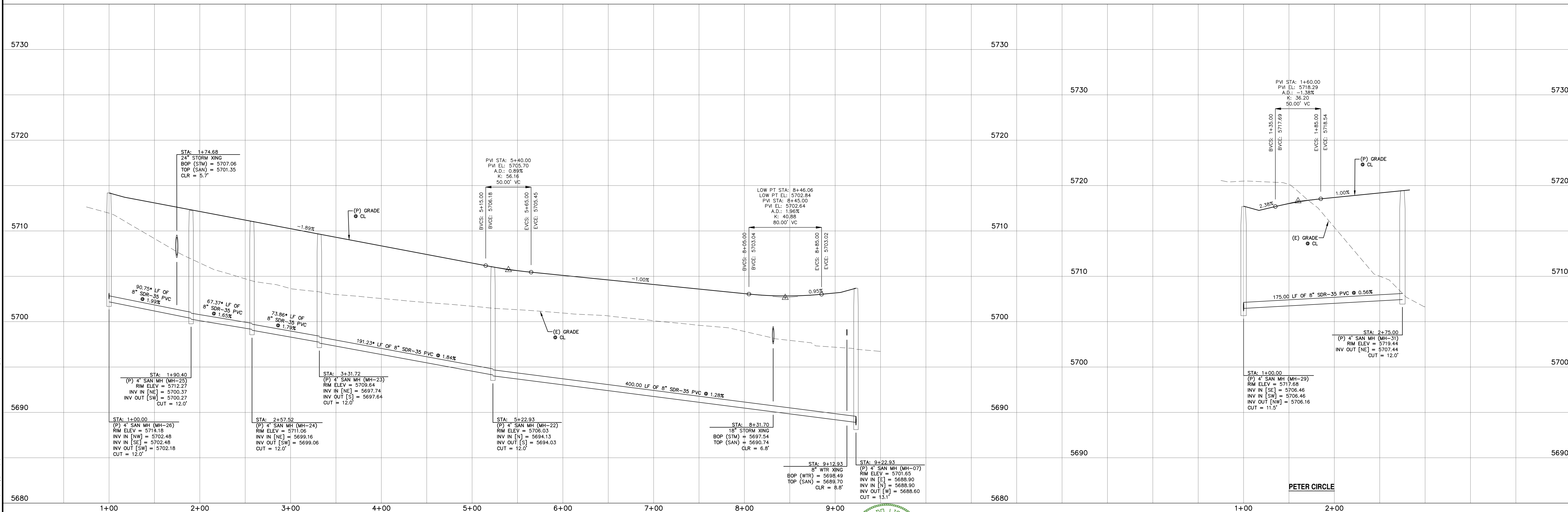
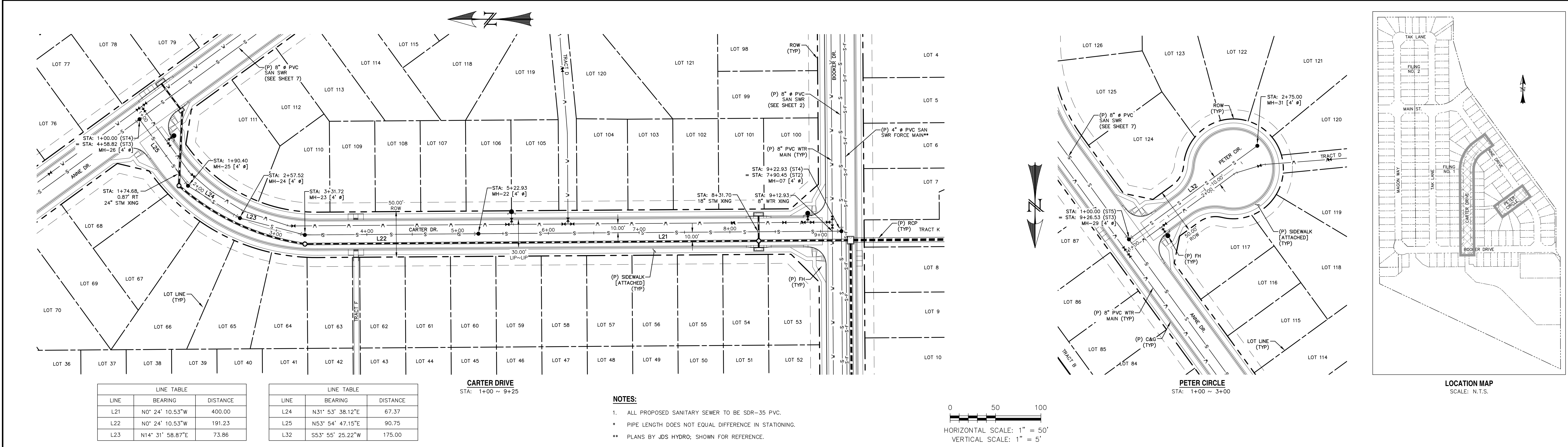
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER  
40510  
10/19/20  
DATE

**CATAMOUNT ENGINEERING**  
321 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80866  
(719) 428-2124

RIVERBEND  
CROSSING  
MAGON WAY  
SANITARY SEWER PLAN & PROFILE

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 10/19/20
JOB NUMBER: 17-114	SHEET: 7 OF 18





REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19

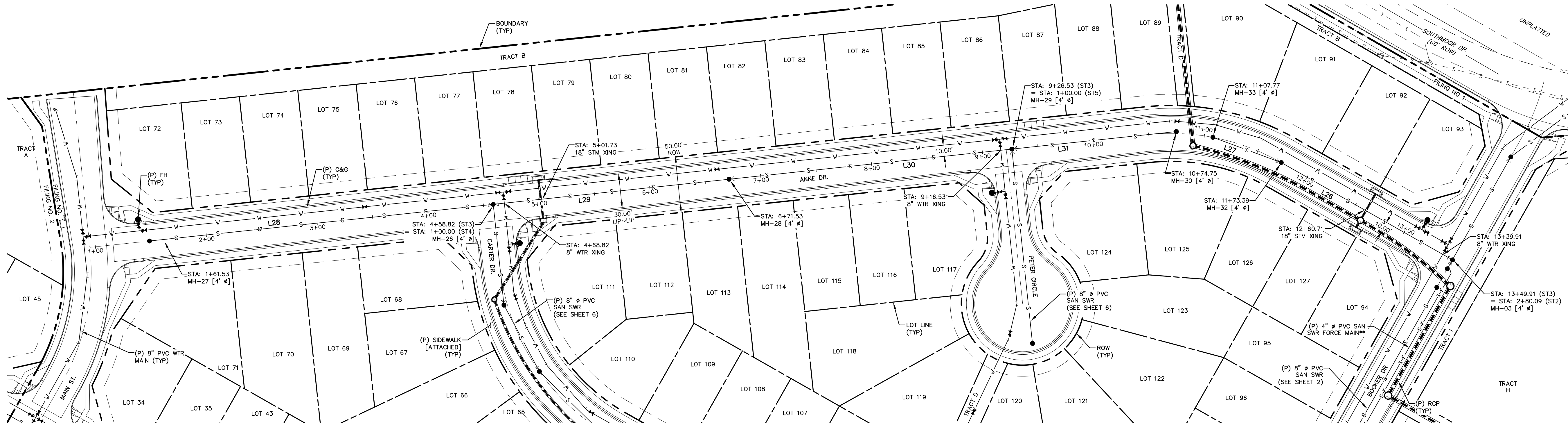
811	Know what's below. Call 72 hours before you dig. For more details visit: www.call811.com
-----	---

STREET NAME ABBREVIATIONS:	PREPARED FOR:	PREPARED UNDER:	CATAMOUNT ENGINEERING
MAIN STREET = S11 BOOKER DRIVE = S12 ANNE DRIVE = S13 CARTER DRIVE = S14 PETER CIRCLE = S15 TAK LANE = S16 MAGON WAY = S17 CUL-DE-SAC = FL	AVATAR EQUITIES, LLC 6800 JERICHO TURNPIKE SUITE 120W #204 SYOSSET, NY 11791	DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER 40510	321 W. HENRIETTA AVE WOODLAND PARK, CO 80866 (719) 428-2124

DESIGNED BY:	MGP	DRAWN BY:	MGP
SCALE:	1" = 50'	DATE:	10/19/20
JOB NUMBER	17-114	SHEET	8 OF 18

RIVERBEND CROSSING	CARTER DRIVE & PETER CIRCLE	SANITARY SEWER PLAN & PROFILE
--------------------	-----------------------------	-------------------------------





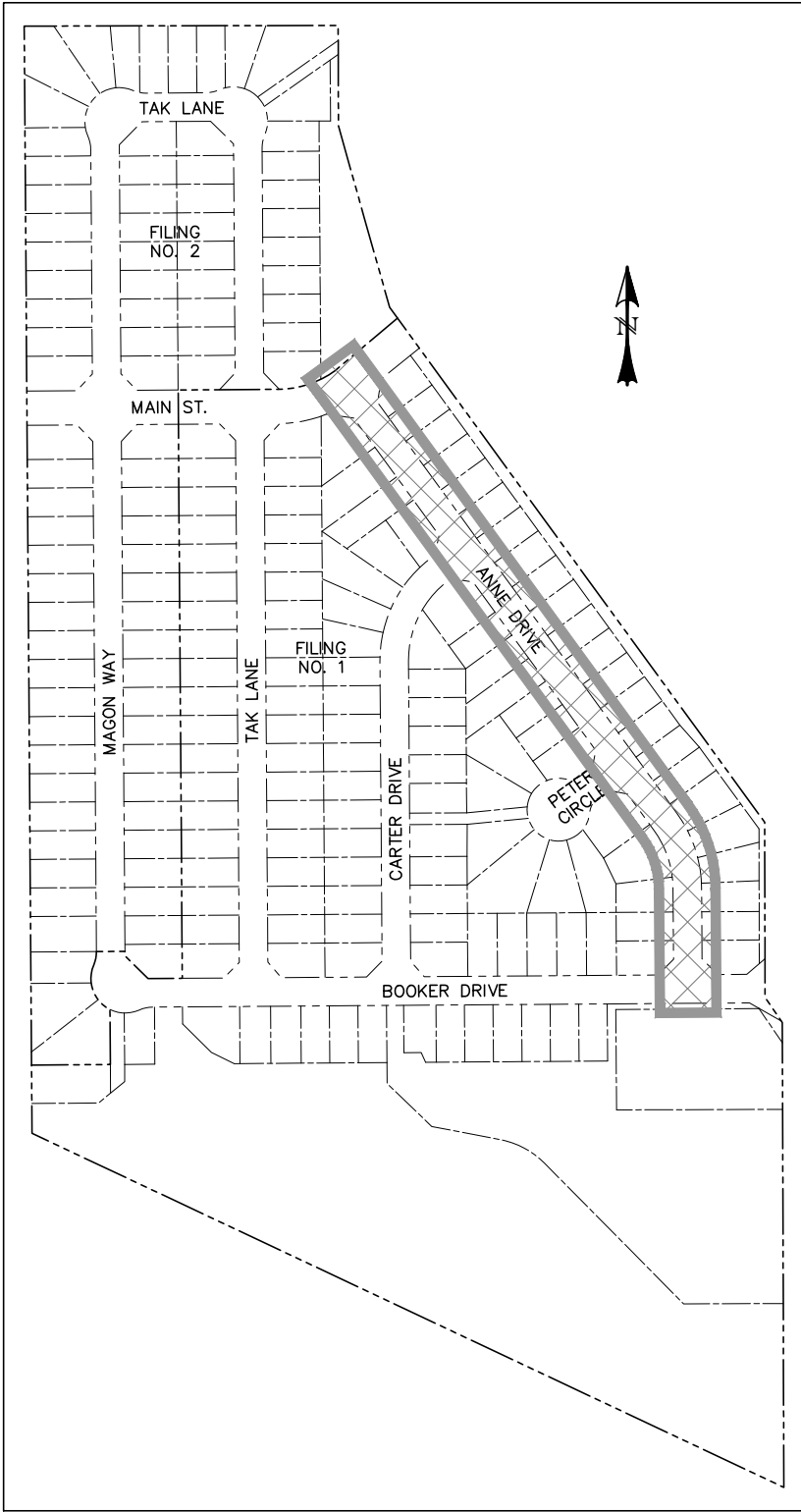
LINE TABLE		
LINE	BEARING	DISTANCE
L26	N0° 24' 10.53"W	160.00
L27	S9° 48' 07.66"E	65.32
L28	S36° 04' 34.78"E	297.30

LINE TABLE		
LINE	BEARING	DISTANCE
L29	S36° 04' 34.78"E	212.70
L30	S36° 04' 34.78"E	255.00
L31	N36° 04' 34.78"W	148.37

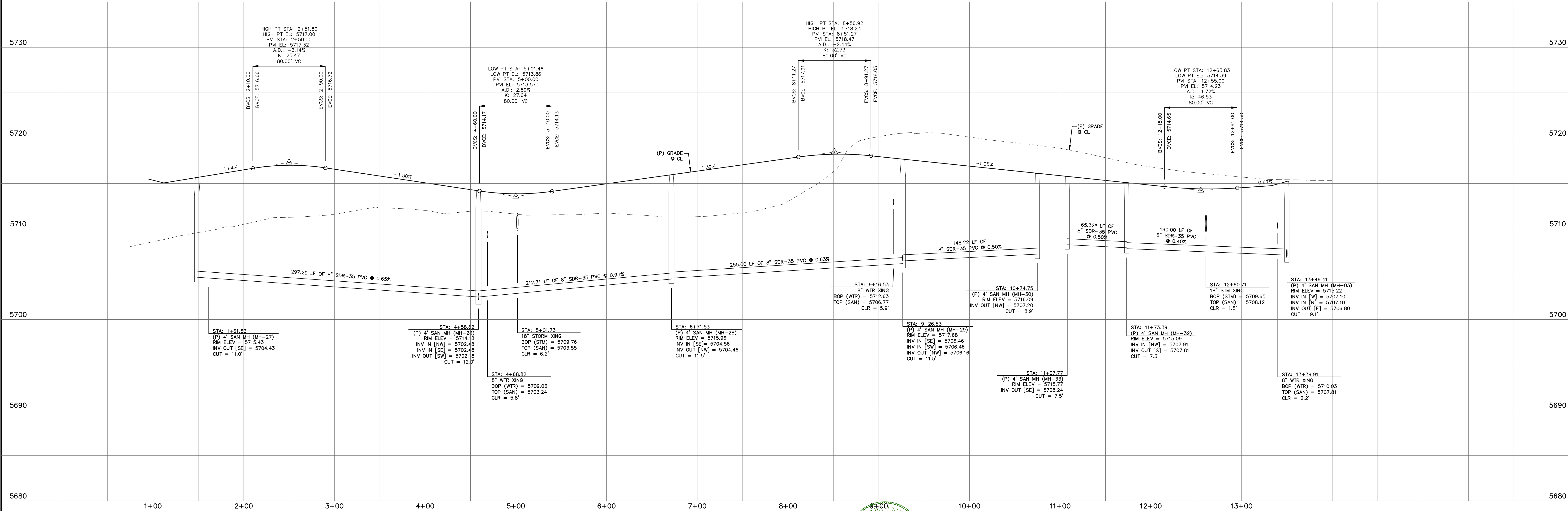
ANNE DRIVE  
STA: 1+00 ~ 13+40

- NOTES:
- ALL PROPOSED SANITARY SEWER TO BE SDR-35 PVC.
  - PIPE LENGTH DOES NOT EQUAL DIFFERENCE IN STATIONING.
  - PLANS BY JDS HYDRO; SHOWN FOR REFERENCE.

0 50 100  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



LOCATION MAP  
SCALE: N.T.S.



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19

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STREET NAME ABBREVIATIONS:  
MAIN STREET = S11  
BOOKER DRIVE = S12  
ANNE DRIVE = S13  
CARTER DRIVE = S14  
PETER CIRCLE = S15  
TAK LANE = S16  
MAZON WAY = S17  
CUL-DE-SAC = FL

PREPARED FOR:  
AVATAR EQUITIES, LLC  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

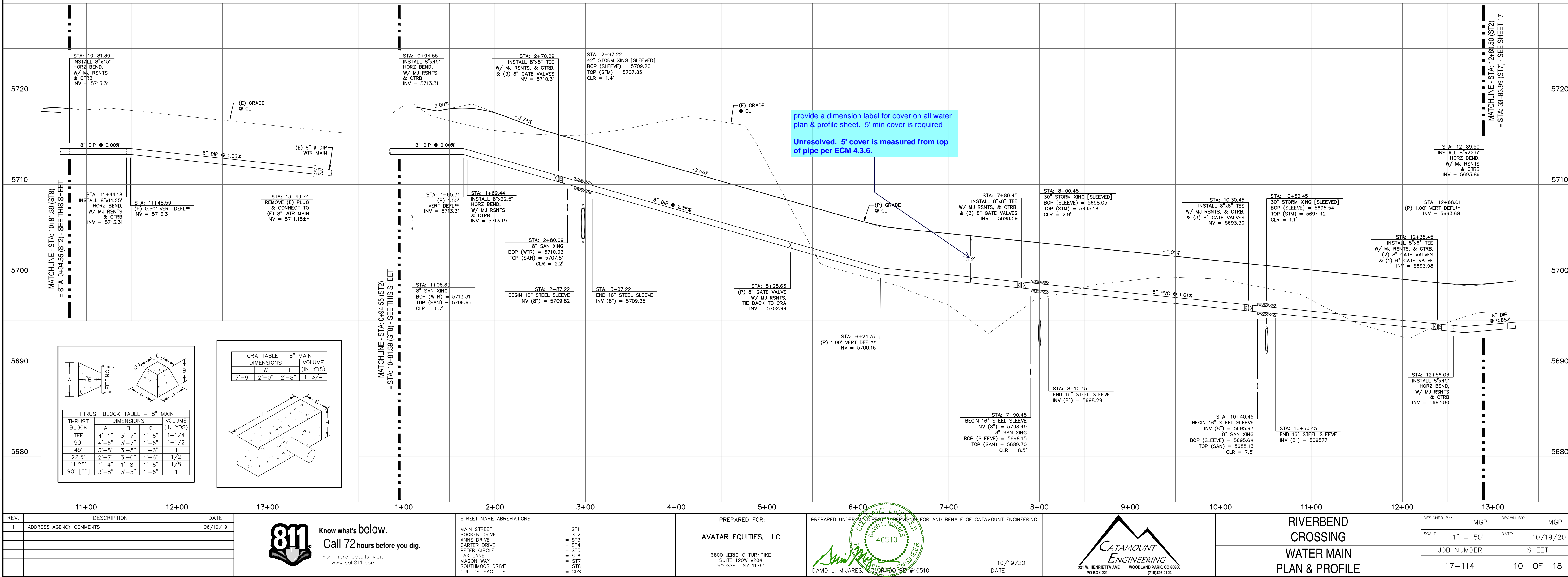
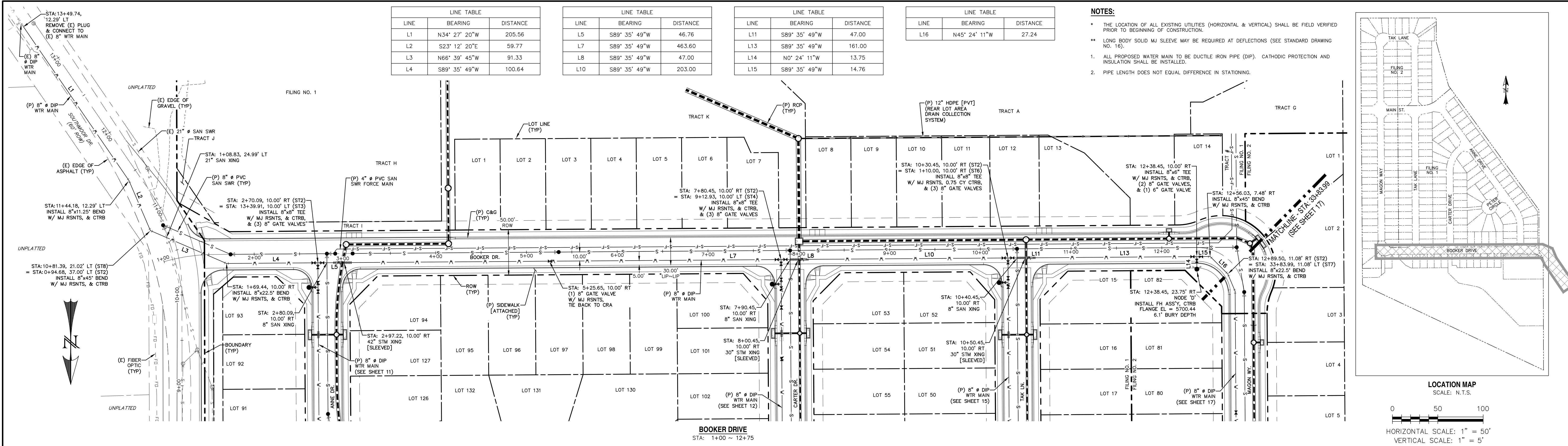
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER #40510  
10/19/20  
DATE

**CATAMOUNT ENGINEERING**  
321 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80666  
(719) 428-2124

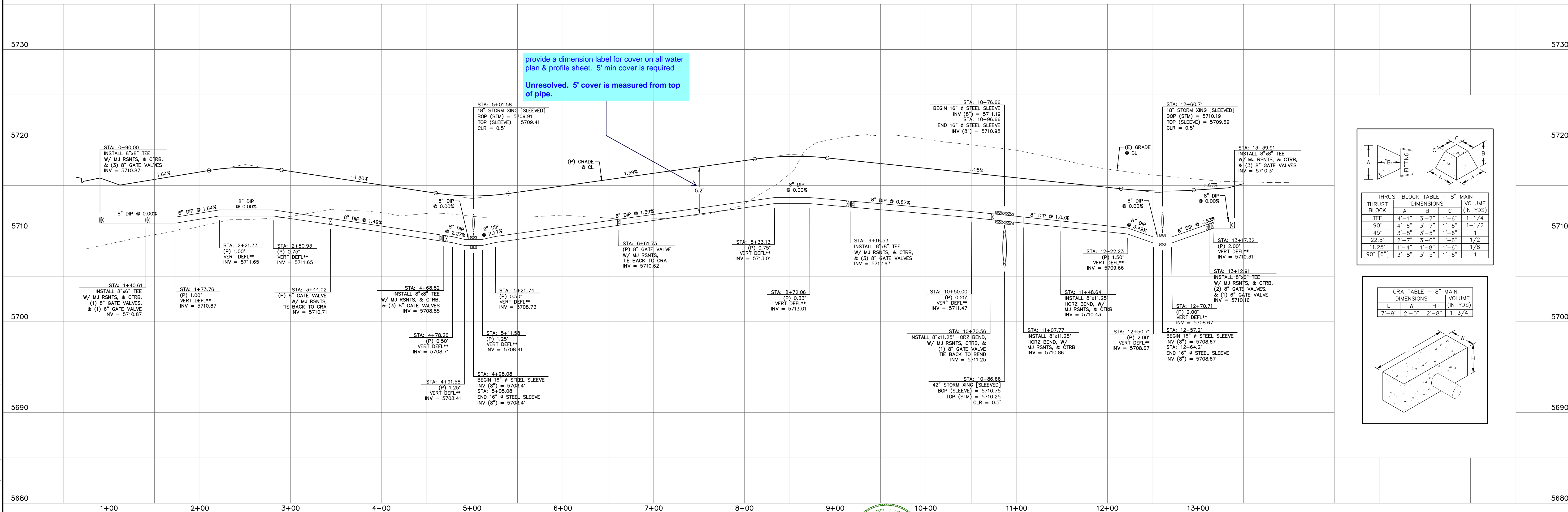
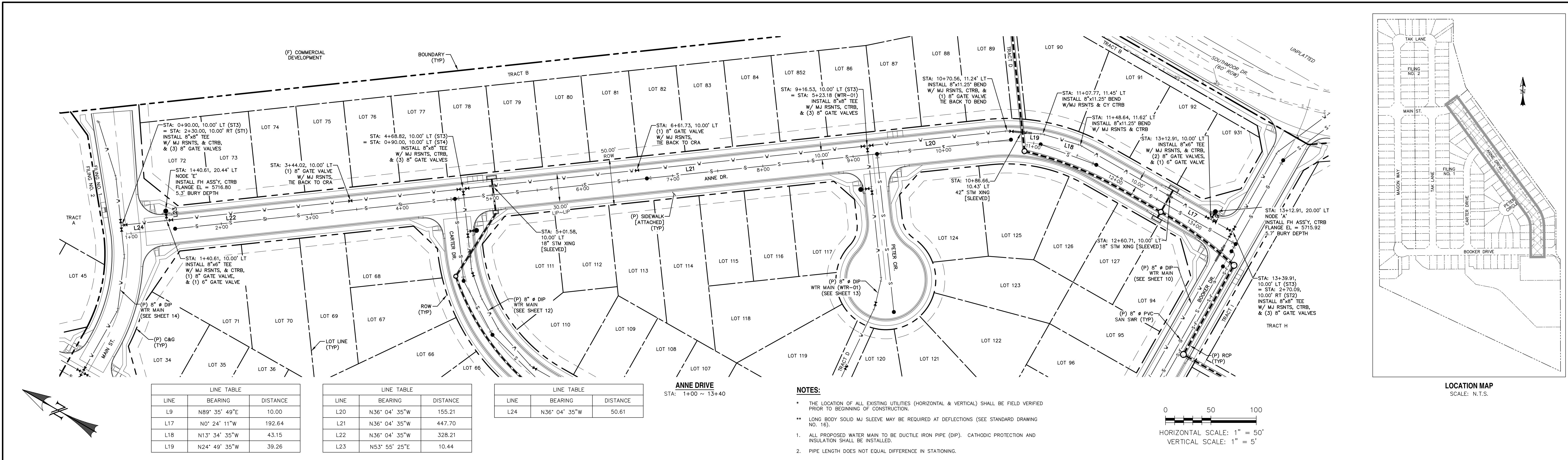
**RIVERBEND CROSSING**  
**ANNE DRIVE**  
**SANITARY SEWER PLAN & PROFILE**

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 10/19/20
JOB NUMBER	SHEET
17-114	9 OF 18



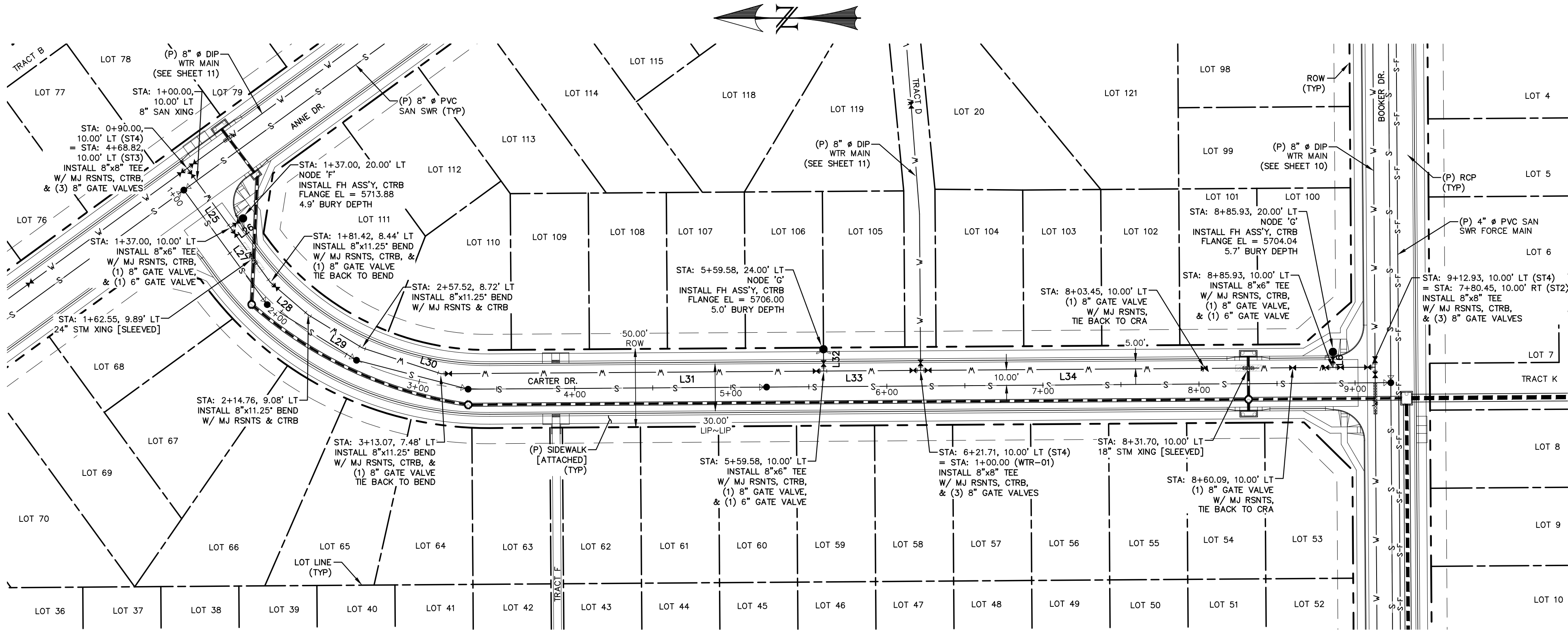






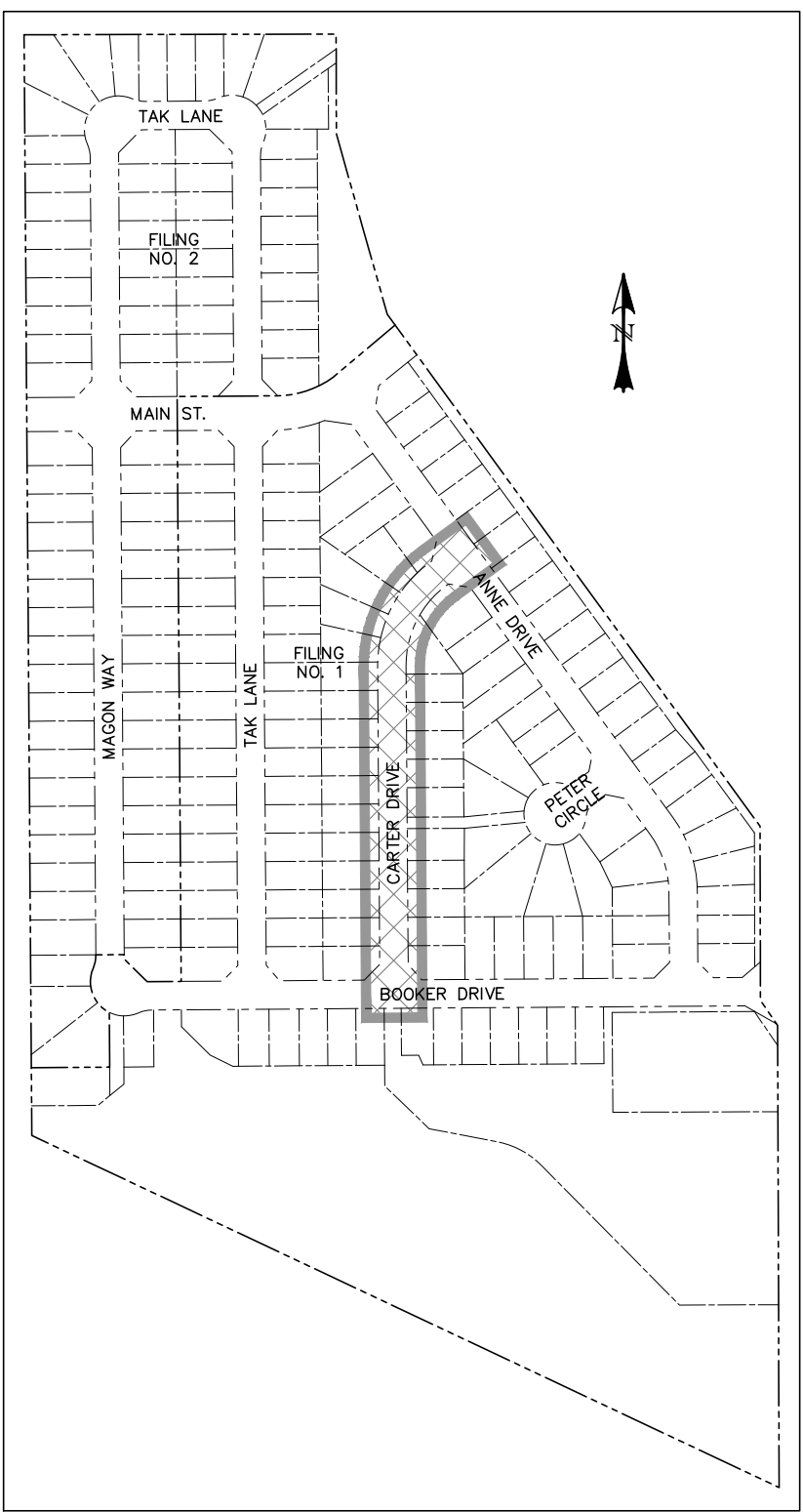
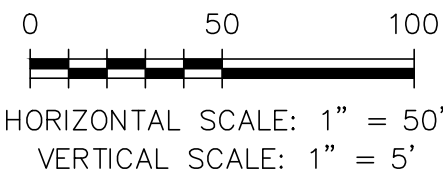


LINE TABLE		
LINE	BEARING	DISTANCE
L6	N89° 35' 49"E	10.00
L25	S53° 55' 25"W	47.00
L26	S36° 04' 35"E	10.00
L27	S53° 55' 25"W	43.27
L28	S40° 40' 25"W	31.86
L29	S31° 25' 25"W	40.78
L30	S18° 10' 25"W	53.14
L31	S0° 24' 11"E	245.16
L32	N89° 35' 49"E	14.00
L33	S0° 24' 11"E	62.13
L34	S0° 24' 11"E	291.22



THRUST BLOCK TABLE - 8" MAIN			
THRUST BLOCK	DIMENSIONS		
	A	B	C
TEE	4'-1"	3'-7"	1'-6"
90°	4'-6"	3'-7"	1'-6"
45°	3'-8"	3'-5"	1'-6"
22.5°	2'-7"	3'-0"	1'-6"
11.25°	1'-4"	1'-8"	1'-6"
90° [6"]	3'-8"	3'-5"	1'-6"

CRA TABLE - 8" MAIN			
L	DIMENSIONS		
	W	H	VOLUME (IN YDS)
7'-9"	2'-0"	2'-8"	1-3/4

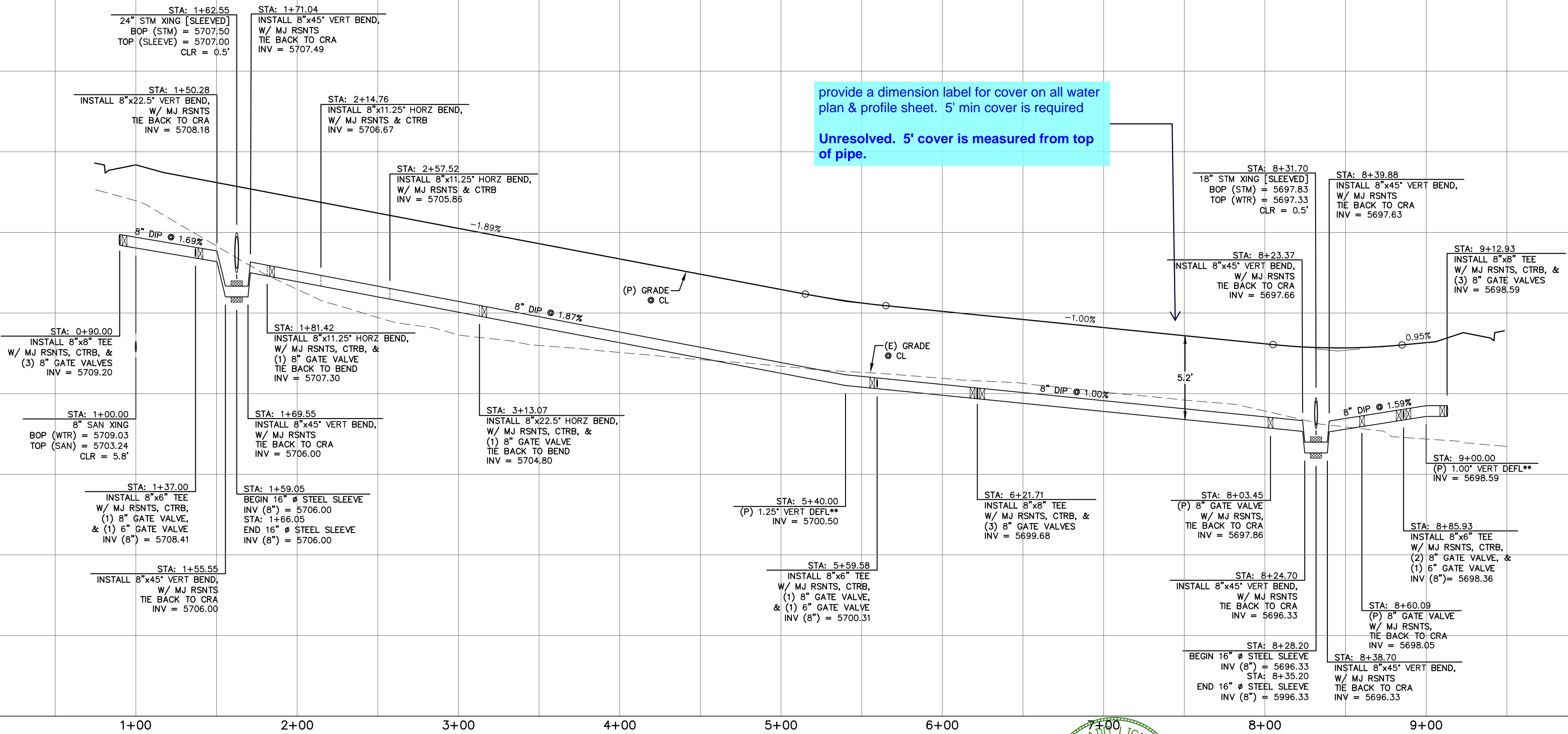


LOCATION MAP  
SCALE: N.T.S.

NOTES:

- THE LOCATION OF ALL EXISTING UTILITIES (HORIZONTAL & VERTICAL) SHALL BE FIELD VERIFIED PRIOR TO BEGINNING OF CONSTRUCTION.
- LONG BODY SOLID MJ SLEEVE MAY BE REQUIRED AT DEFLECTIONS (SEE STANDARD DRAWING NO. 16).
- ALL PROPOSED WATER MAIN TO BE DUCTILE IRON PIPE (DIP). CATHODIC PROTECTION AND INSULATION SHALL BE INSTALLED.
- PIPE LENGTH DOES NOT EQUAL DIFFERENCE IN STATIONING.

provide a dimension label for cover on all water plan & profile sheet. 5' min cover is required  
Unresolved. 5' cover is measured from top of pipe.



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19



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STREET NAME ABBREVIATIONS:

- = S11
- = S12
- = S13
- = S14
- = S15
- = S16
- = S17
- = CDS

PREPARED FOR:

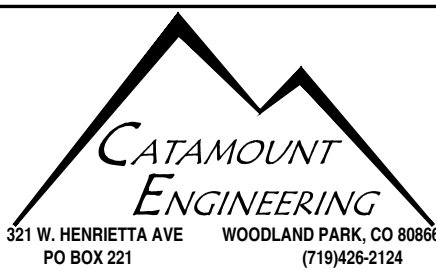
AVATAR EQUITIES, LLC

6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.



10/19/20  
DATE

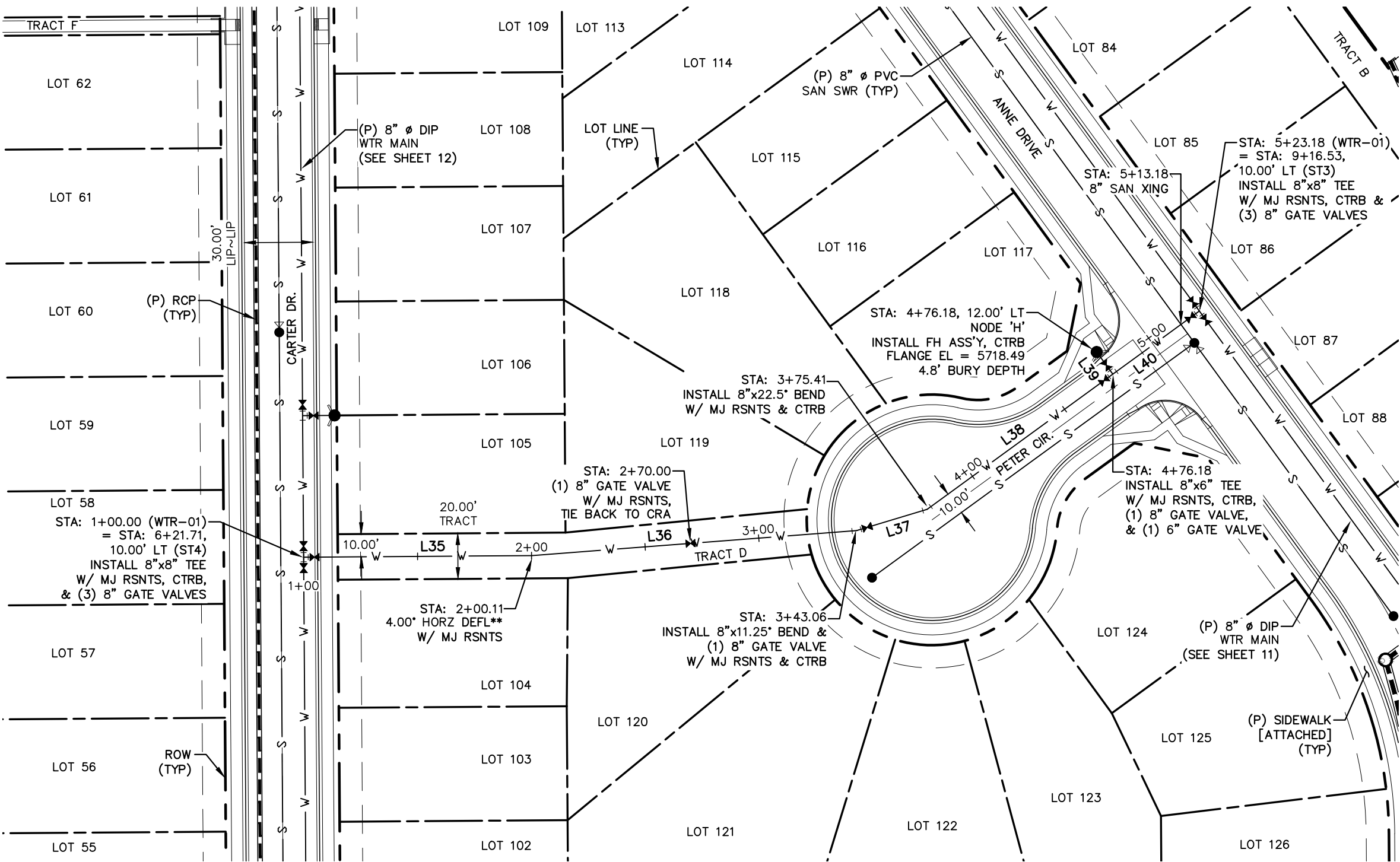


RIVERBEND  
CROSSING  
WATER MAIN  
PLAN & PROFILE

DESIGNED BY:	MGP	DRAWN BY:	MGP
SCALE:	1" = 50'	DATE:	10/19/20
JOB NUMBER	17-114	SHEET	12 OF 18



LINE TABLE		
LINE	BEARING	DISTANCE
L35	N89° 35' 49"E	100.11
L36	N85° 35' 49"E	142.95
L37	N73° 12' 02"E	32.35
L38	N53° 55' 25"E	100.76
L39	N36° 04' 35"W	12.00
L40	N53° 55' 25"E	47.00



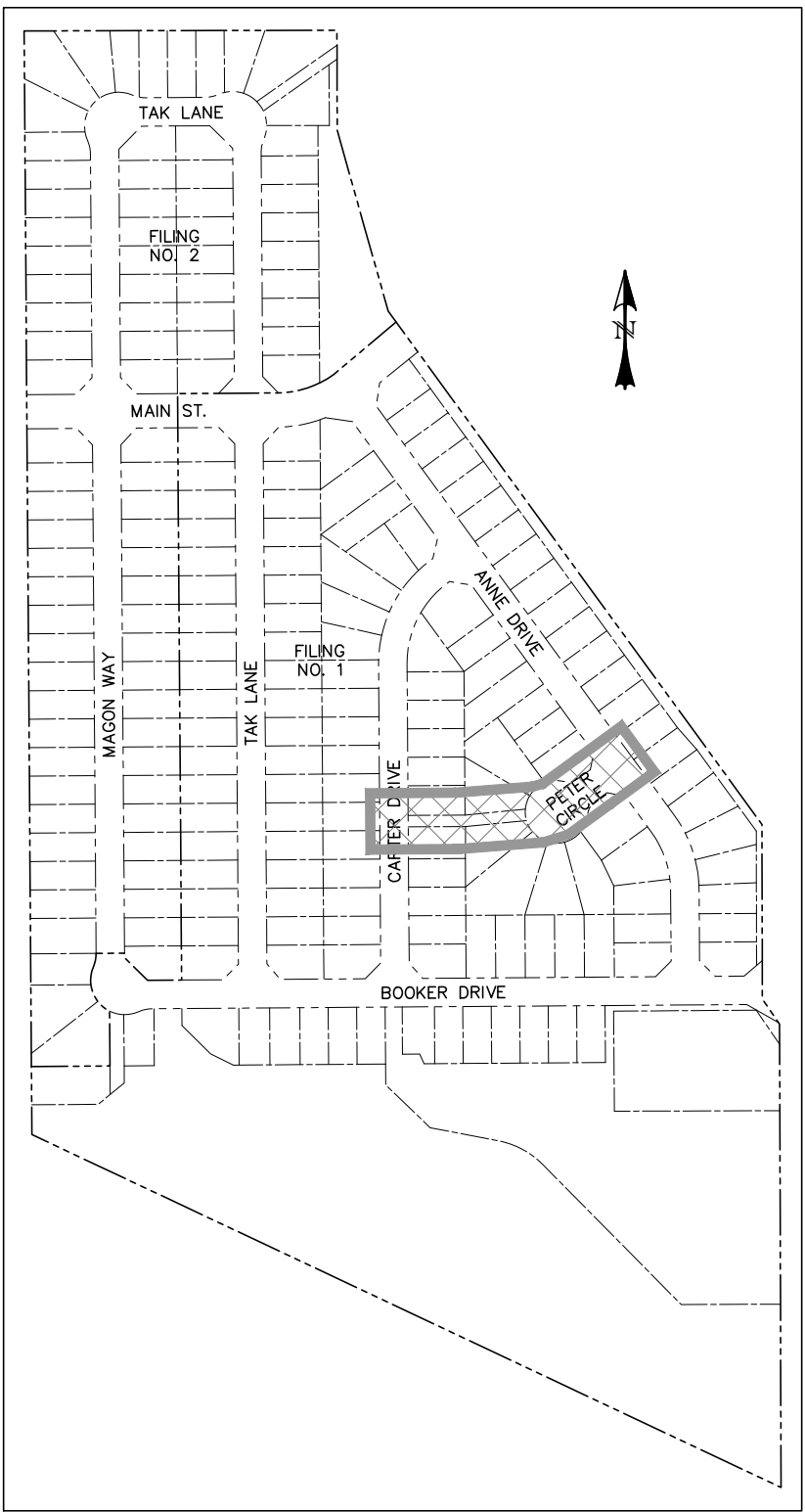
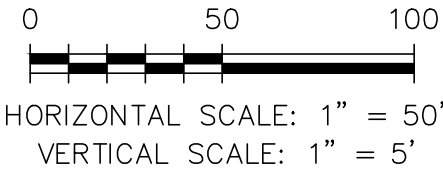
WTR-01  
STA: 1+00 ~ 5+25

NOTES:

- \* THE LOCATION OF ALL EXISTING UTILITIES (HORIZONTAL & VERTICAL) SHALL BE FIELD VERIFIED PRIOR TO BEGINNING OF CONSTRUCTION.
- \*\* LONG BODY SOLID MJ SLEEVE MAY BE REQUIRED AT DEFLECTIONS (SEE STANDARD DRAWING NO. 16).
- 1. ALL PROPOSED WATER MAIN TO BE DUCTILE IRON PIPE (DIP). CATHODIC PROTECTION AND INSULATION SHALL BE INSTALLED.
- 2. PIPE LENGTH DOES NOT EQUAL DIFFERENCE IN STATIONING.

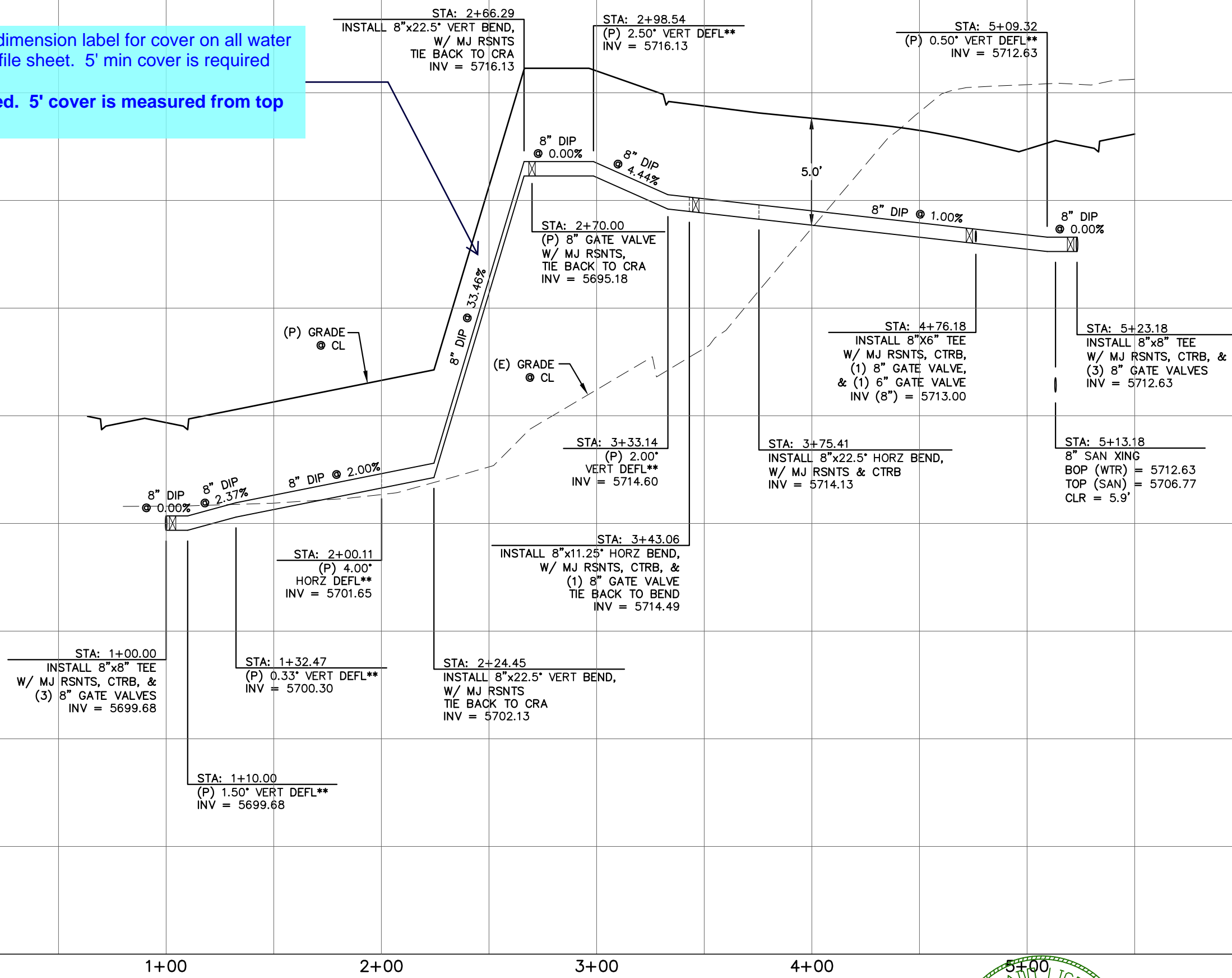
THRUST BLOCK TABLE - 8" MAIN				
THRUST BLOCK	DIMENSIONS			VOLUME (IN YDS)
	A	B	C	
TEE	4'-1"	3'-7"	1'-6"	1-1/4
90°	4'-6"	3'-7"	1'-6"	1-1/2
45°	3'-8"	3'-5"	1'-6"	1
22.5°	2'-7"	3'-0"	1'-6"	1/2
11.25°	1'-4"	1'-8"	1'-6"	1/8
90° [6"]	3'-8"	3'-5"	1'-6"	1

CRA TABLE - 8" MAIN			
DIMENSIONS			VOLUME (IN YDS)
L	W	H	
7'-9"	2'-0"	2'-8"	1-3/4



LOCATION MAP  
SCALE: N.T.S.

provide a dimension label for cover on all water plan & profile sheet. 5' min cover is required  
Unresolved. 5' cover is measured from top of pipe.



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19

**811** Know what's below.  
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STREET NAME ABBREVIATIONS:  
MAIN STREET = S11  
BOOKER DRIVE = S12  
ANNE DRIVE = S13  
CARTER DRIVE = S14  
PETER CIRCLE = S15  
TAK LANE = S16  
MAGON WAY = S17  
CUL-DE-SAC = FL

PREPARED FOR:  
AVATAR EQUITIES, LLC  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT NO. 19-001 FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER NO. 40510  
10/19/20  
DATE



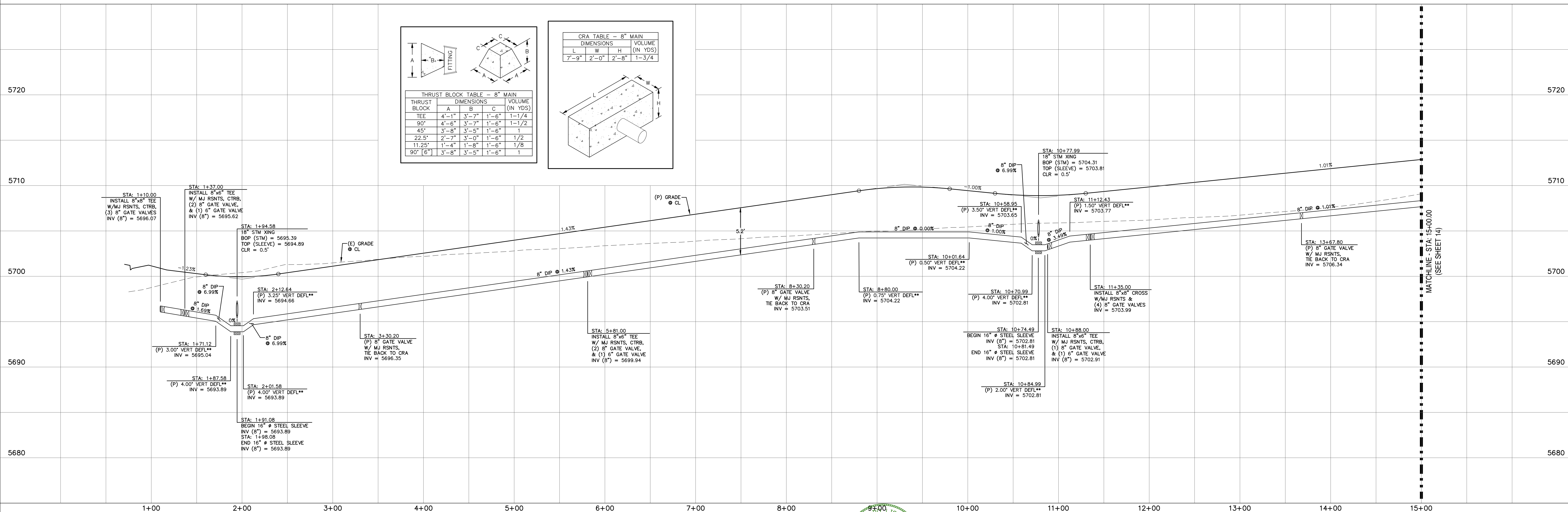
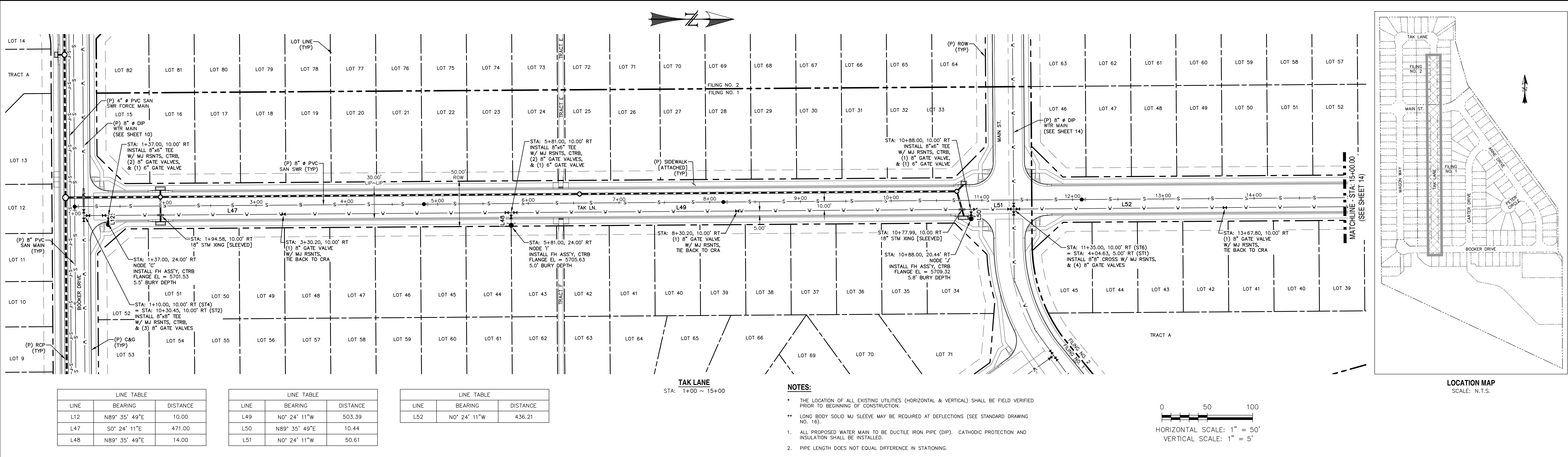
RIVERBEND  
CROSSING  
WATER MAIN  
PLAN & PROFILE

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 10/19/20
JOB NUMBER	SHEET
17-114	13 OF 18

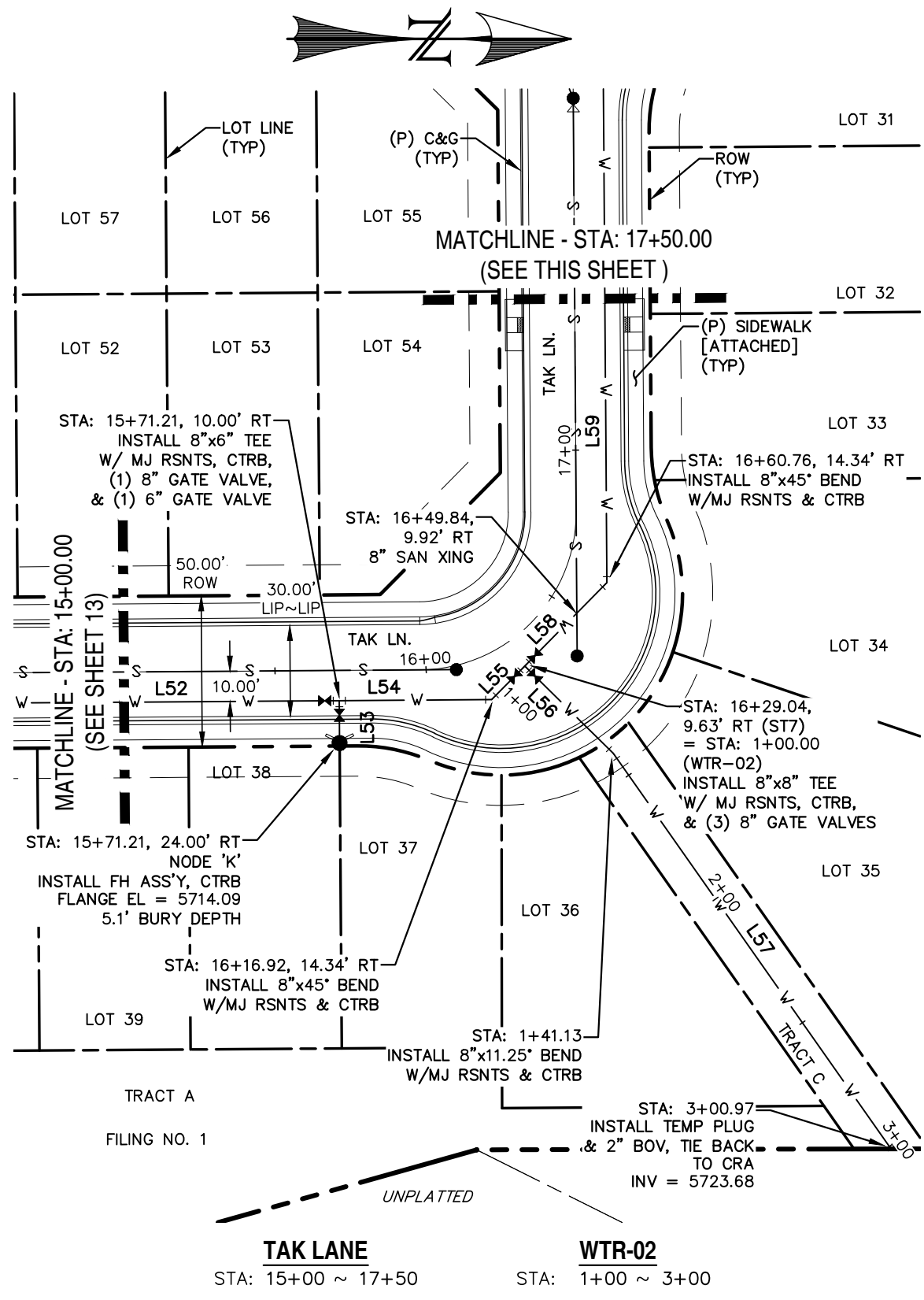






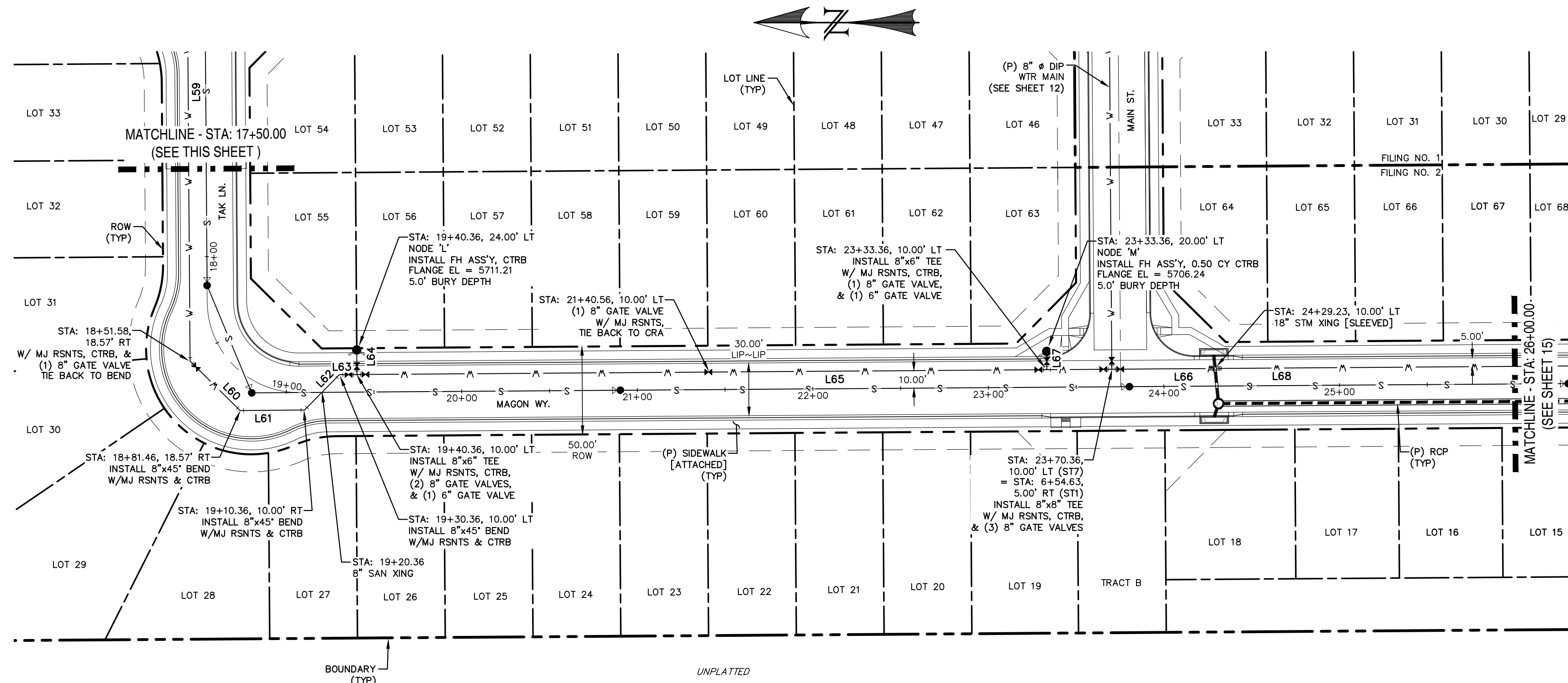




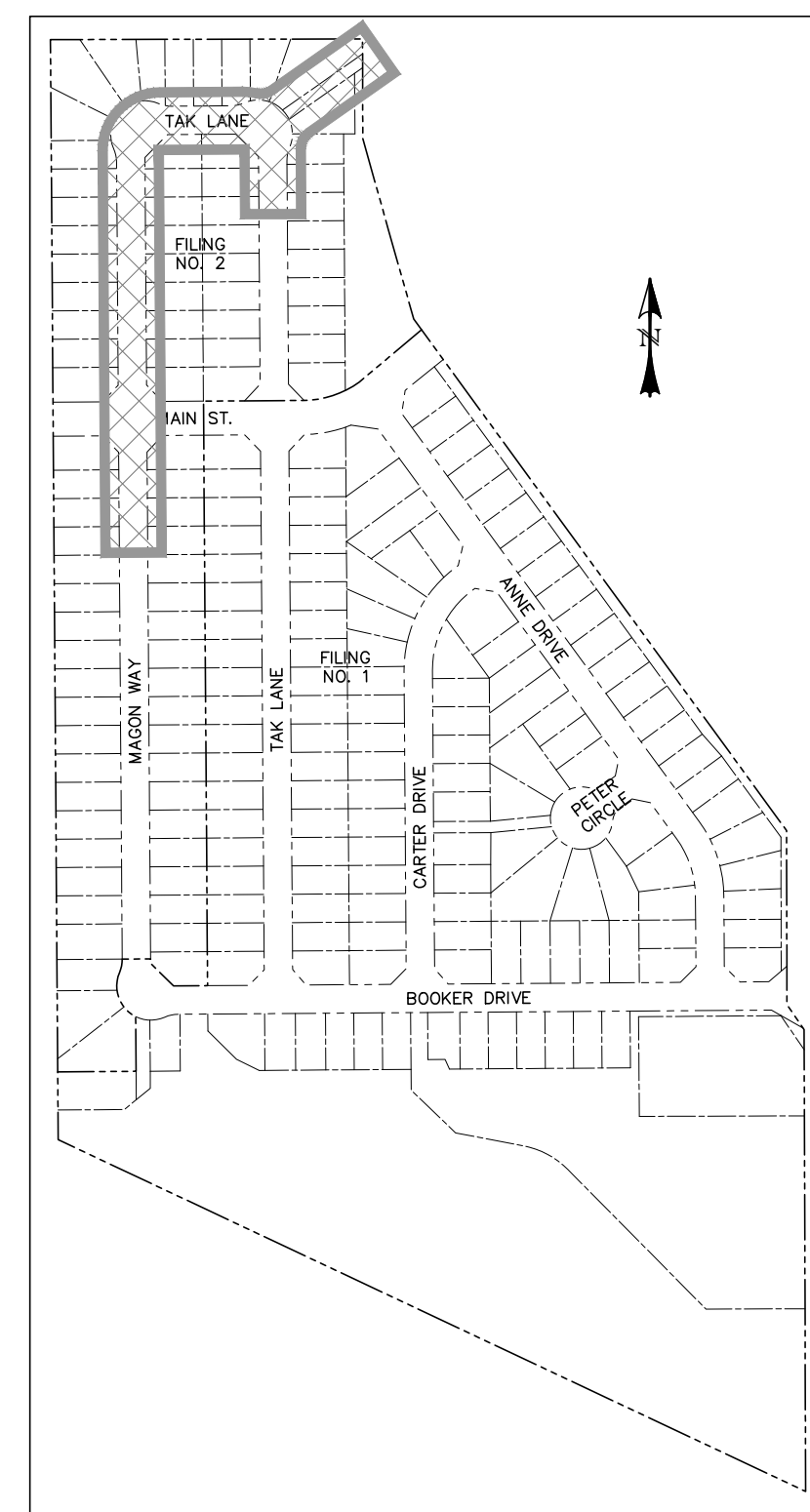
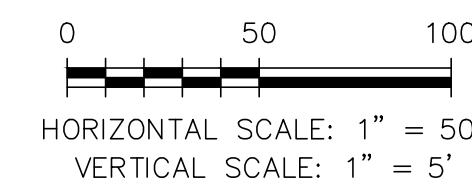


LINE	BEARING	DISTANCE
L52	N0° 24' 11"W	436.21
L53	N89° 35' 49"E	14.00
L54	N0° 24' 11"W	50.40
L55	N45° 24' 11"W	15.59
L56	N44° 35' 49"E	41.13
L57	N54° 54' 33"E	159.84
L58	N45° 24' 11"W	38.70
L59	S89° 35' 49"W	203.33
L60	S44° 35' 49"W	40.00
L61	S0° 24' 11"E	36.72
L62	S45° 24' 11"E	28.28
L63	S0° 24' 11"E	10.00
L64	N89° 35' 49"E	14.00
L65	S0° 24' 11"E	430.00
L66	S0° 24' 11"E	50.61
L67	N89° 35' 49"E	10.44
L68	S0° 24' 11"E	344.39

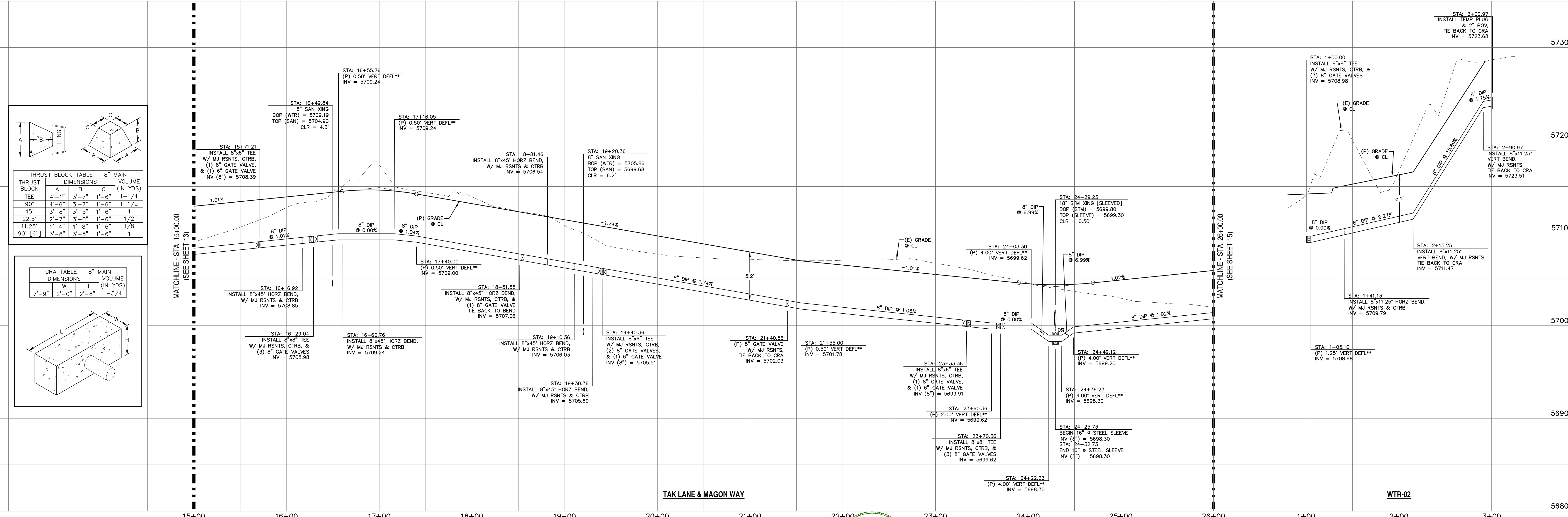
- NOTES:**
- \* THE LOCATION OF ALL EXISTING UTILITIES (HORIZONTAL & VERTICAL) SHALL BE FIELD VERIFIED PRIOR TO BEGINNING OF CONSTRUCTION.
  - \*\* LONG BODY SOLID MJ SLEEVE MAY BE REQUIRED AT DEFLECTIONS (SEE STANDARD DRAWING NO. 16).
  - 1. ALL PROPOSED WATER MAIN TO BE DUCTILE IRON PIPE (DIP). CATHODIC PROTECTION AND INSULATION SHALL BE INSTALLED.
  - 2. PIPE LENGTH DOES NOT EQUAL DIFFERENCE IN STATIONING.



**TAK LANE & MAGON WAY**  
STA: 17+50 ~ 26+00



**LOCATION MAP**  
SCALE: N.T.S.



**TAK LANE & MAGON WAY**

**WTR-02**

REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19

**811** Know what's below.  
Call 72 hours before you dig.  
For more details visit:  
www.call811.com

STREET NAME ABBREVIATIONS:
MAIN STREET = S11
BOOKER DRIVE = S12
ANNE DRIVE = S13
PETER CIRCLE = S14
TAK LANE = S15
MAGON WAY = S16
CLL-DE-SAC - FL = S17
CDL = S18

PREPARED FOR:  
**AVATAR EQUITIES, LLC**  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
**DAVID L. MIJARES**  
40510  
10/19/20  
DATE

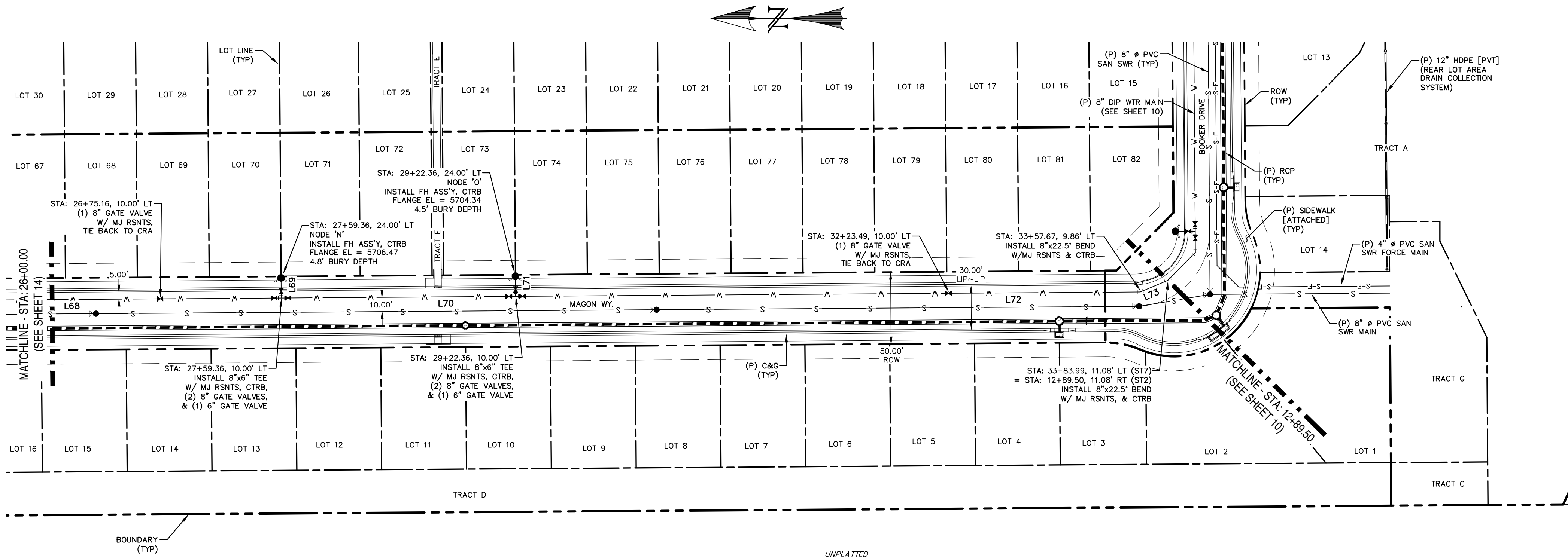
**CATAMOUNT ENGINEERING**  
321 W. HENRIETTA AVE  
PO BOX 221  
WOOLAND PARK, CO 80096  
(719) 428-2124

**RIVERBEND CROSSING WATER MAIN PLAN & PROFILE**

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 10/19/20
JOB NUMBER	SHEET
17-114	16 OF 18



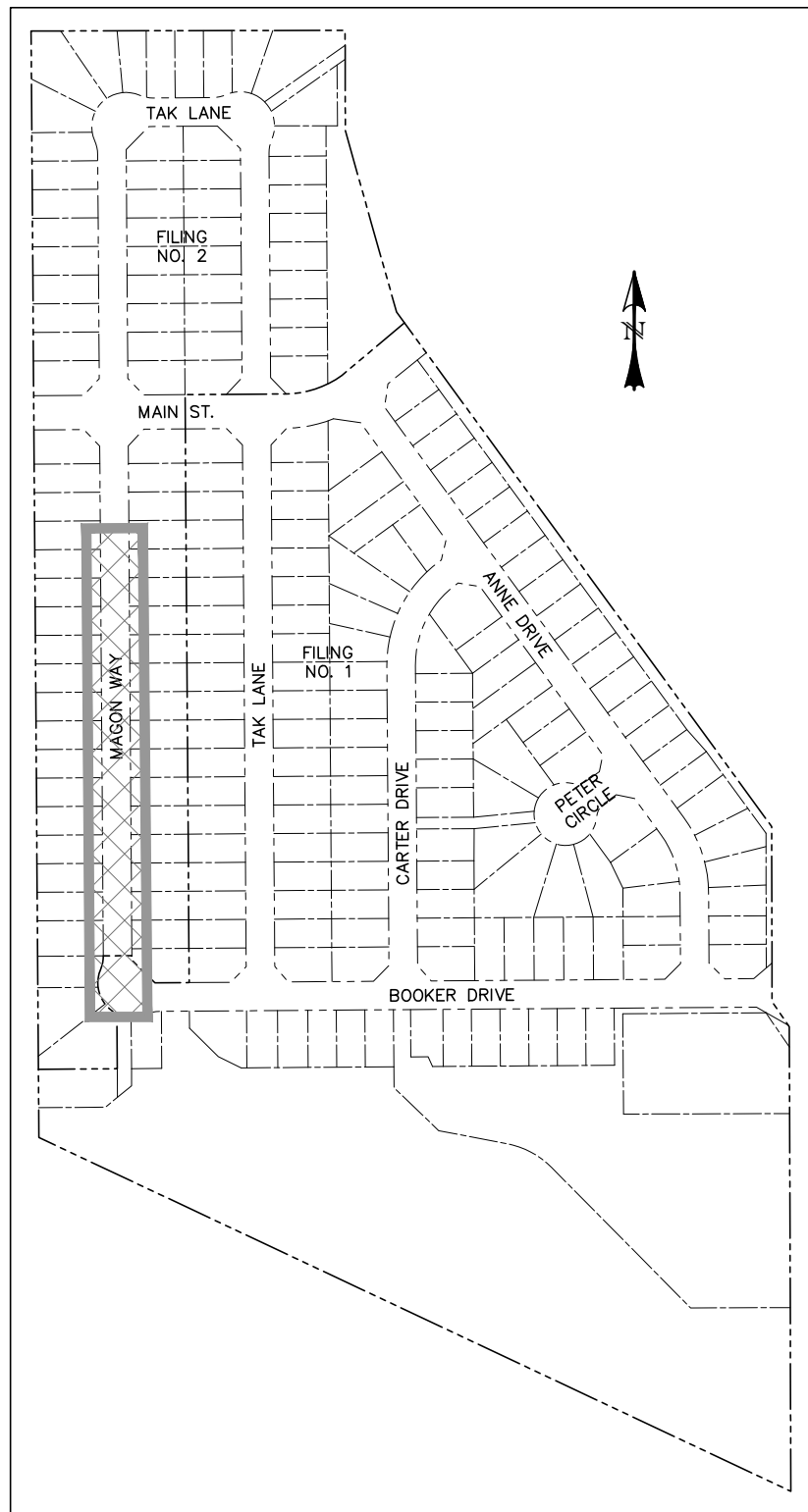
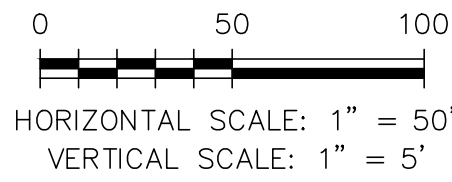
LINE TABLE		
LINE	BEARING	DISTANCE
L68	S0° 24' 10.53"E	338.39
L69	N89° 35' 49.47"E	14.00
L70	S0° 24' 10.53"E	163.00
L71	N89° 35' 49.47"E	14.00
L72	S0° 24' 10.53"E	434.49
L73	S22° 54' 10.53"E	20.83



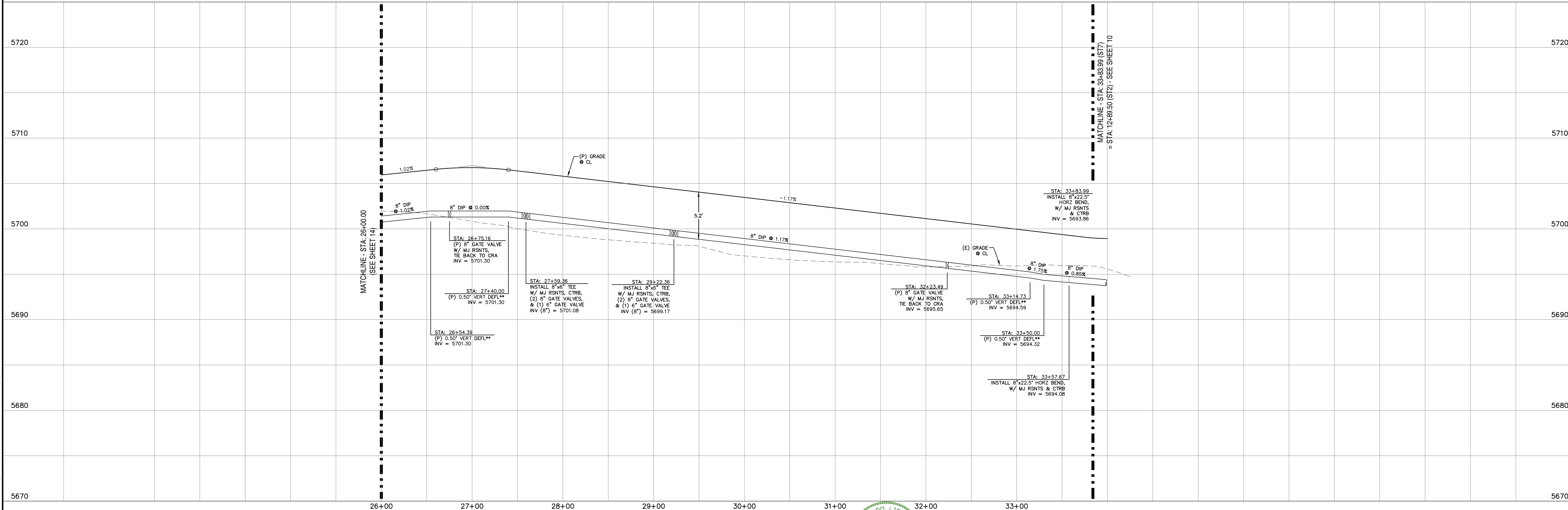
NOTES:

- \* THE LOCATION OF ALL EXISTING UTILITIES (HORIZONTAL & VERTICAL) SHALL BE FIELD VERIFIED PRIOR TO BEGINNING OF CONSTRUCTION.
- \*\* LONG BODY SOLID MJ SLEEVE MAY BE REQUIRED AT DEFLECTIONS (SEE STANDARD DRAWING NO. 16).
- 1. ALL PROPOSED WATER MAIN TO BE DUCTILE IRON PIPE (DIP). CATHODIC PROTECTION AND INSULATION SHALL BE INSTALLED.
- 2. PIPE LENGTH DOES NOT EQUAL DIFFERENCE IN STATIONING.

MAGON WAY  
STA: 26+00 ~ 33+50



LOCATION MAP  
SCALE: N.T.S.



REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19

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www.call811.com

STREET NAME ABBREVIATIONS:	
MAIN STREET	= S11
BOOKER DRIVE	= S12
ANNE DRIVE	= S13
CARTER DRIVE	= S14
PETER CIRCLE	= S15
TAK LANE	= S16
MAGON WAY	= S17
CLL-DE-SAC - FL	= CDS

PREPARED FOR:  
**AVATAR EQUITIES, LLC**  
6800 JERICHO TURNPIKE  
SUITE 120W #204  
SYOSSET, NY 11791

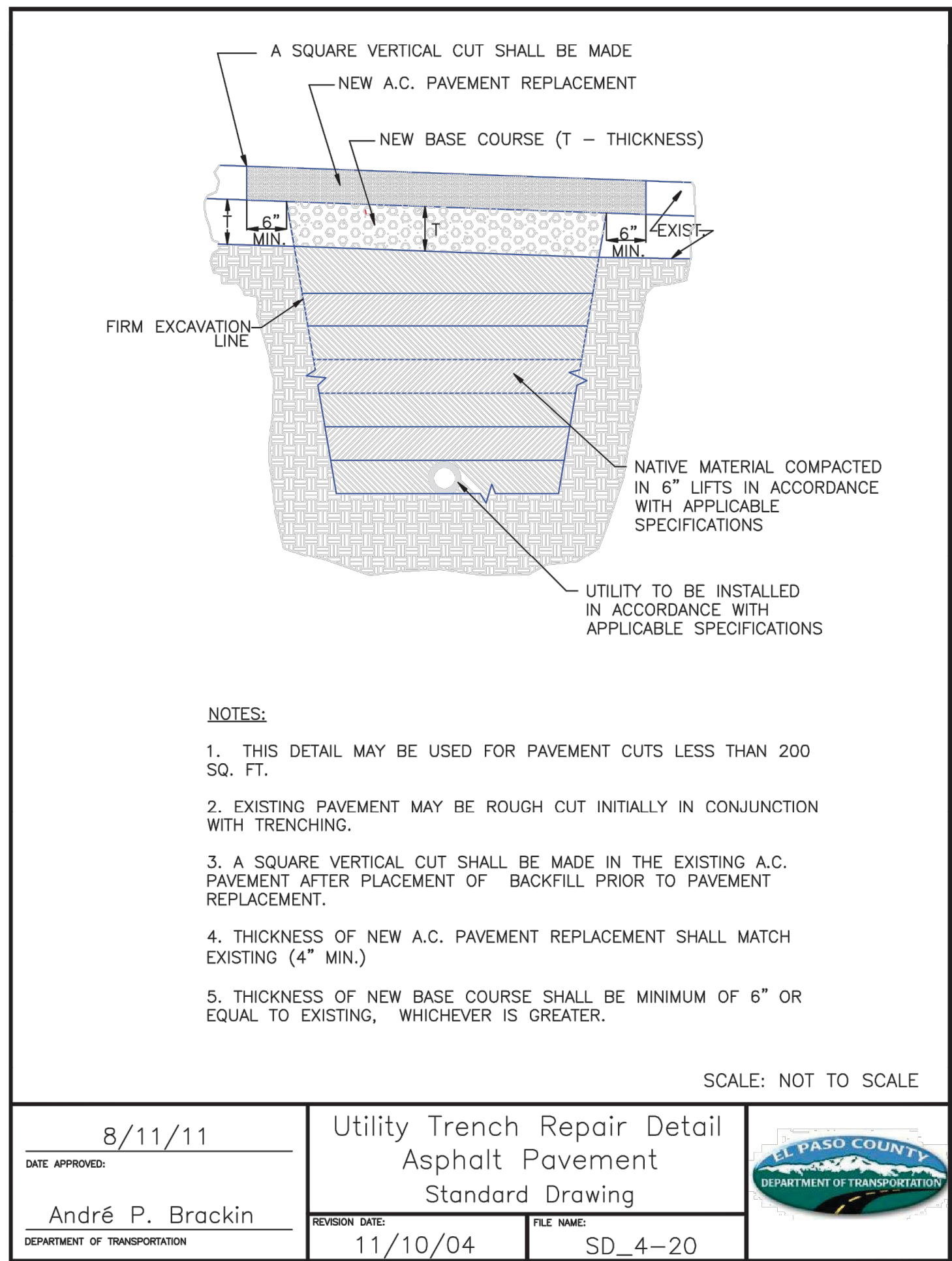
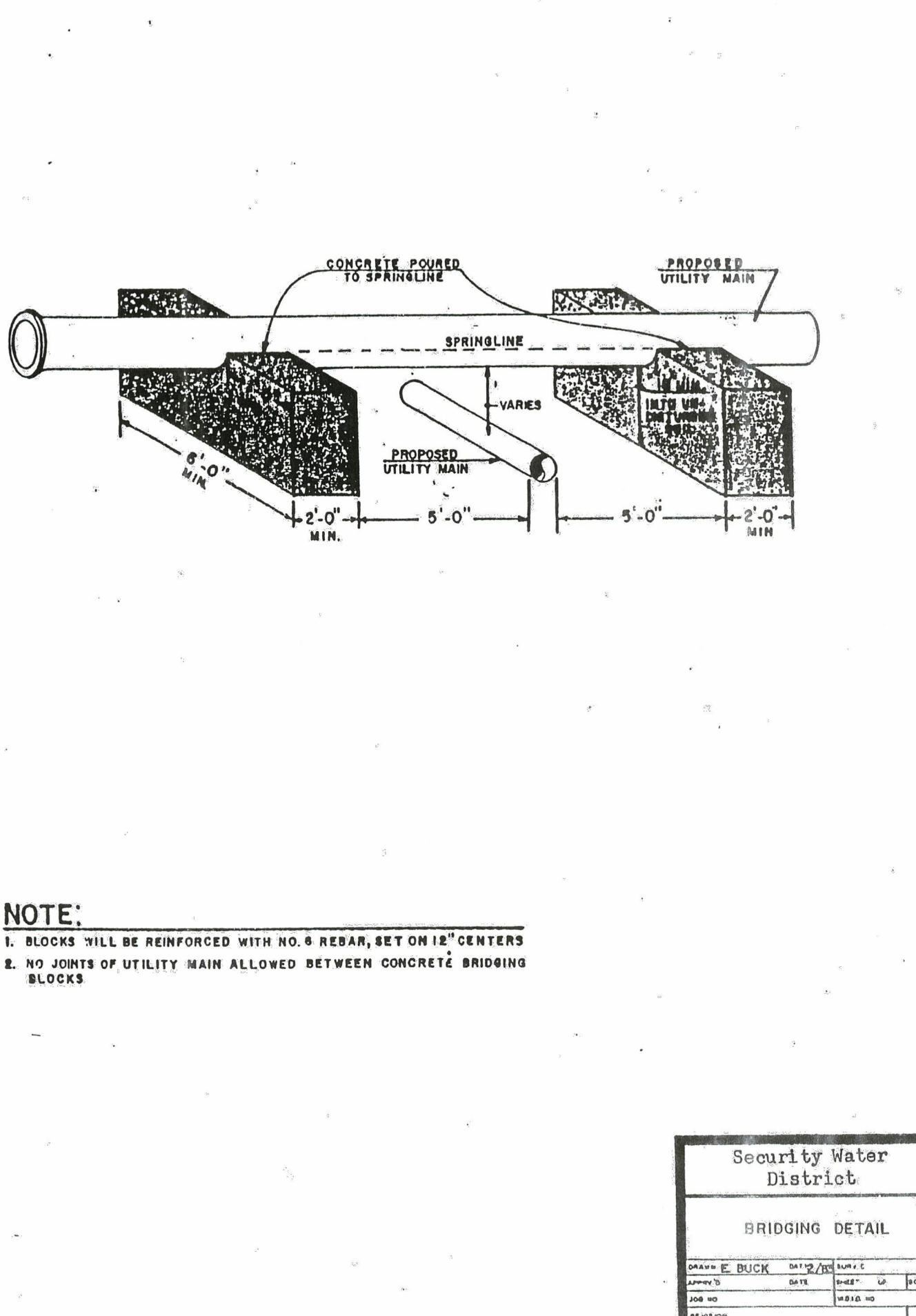
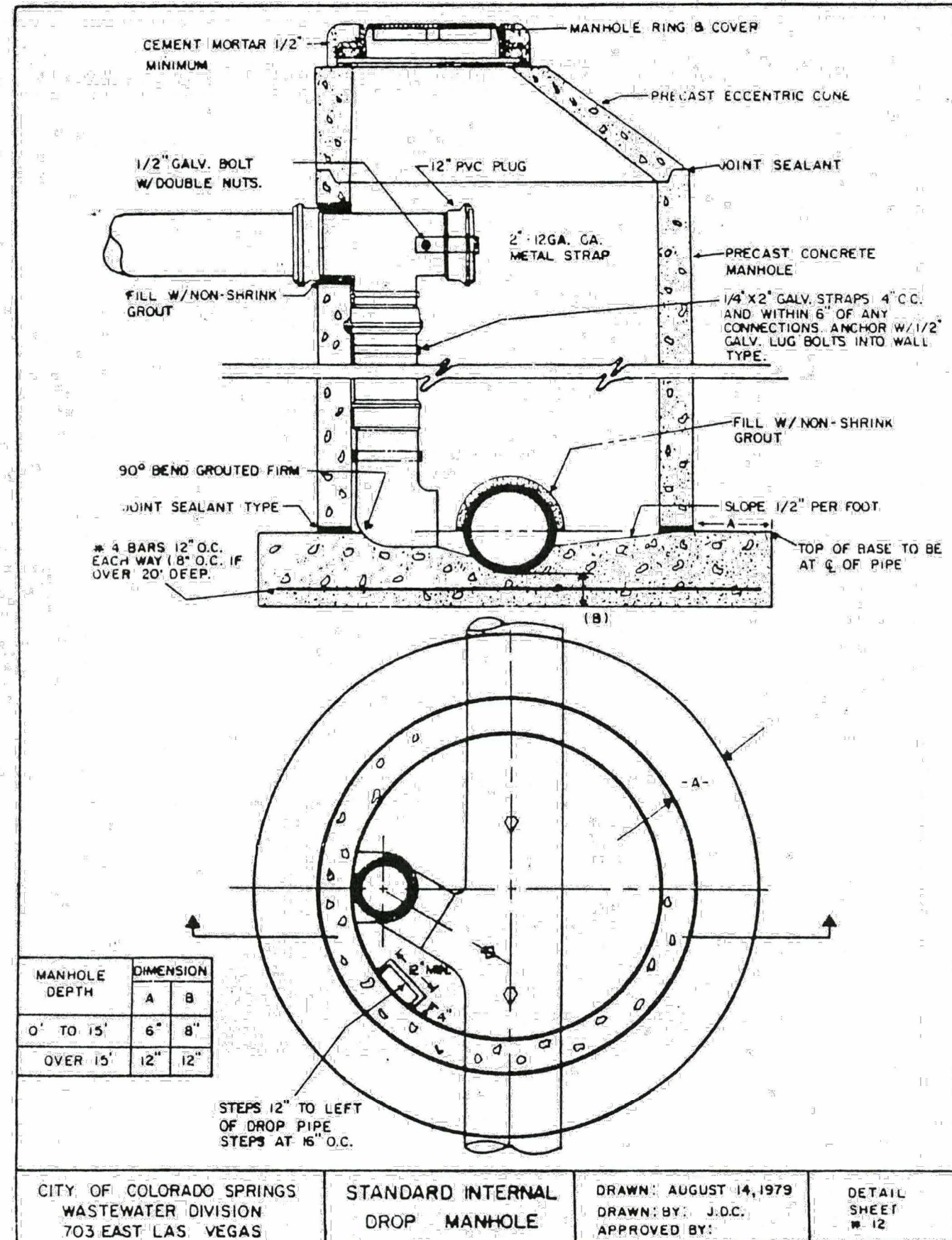
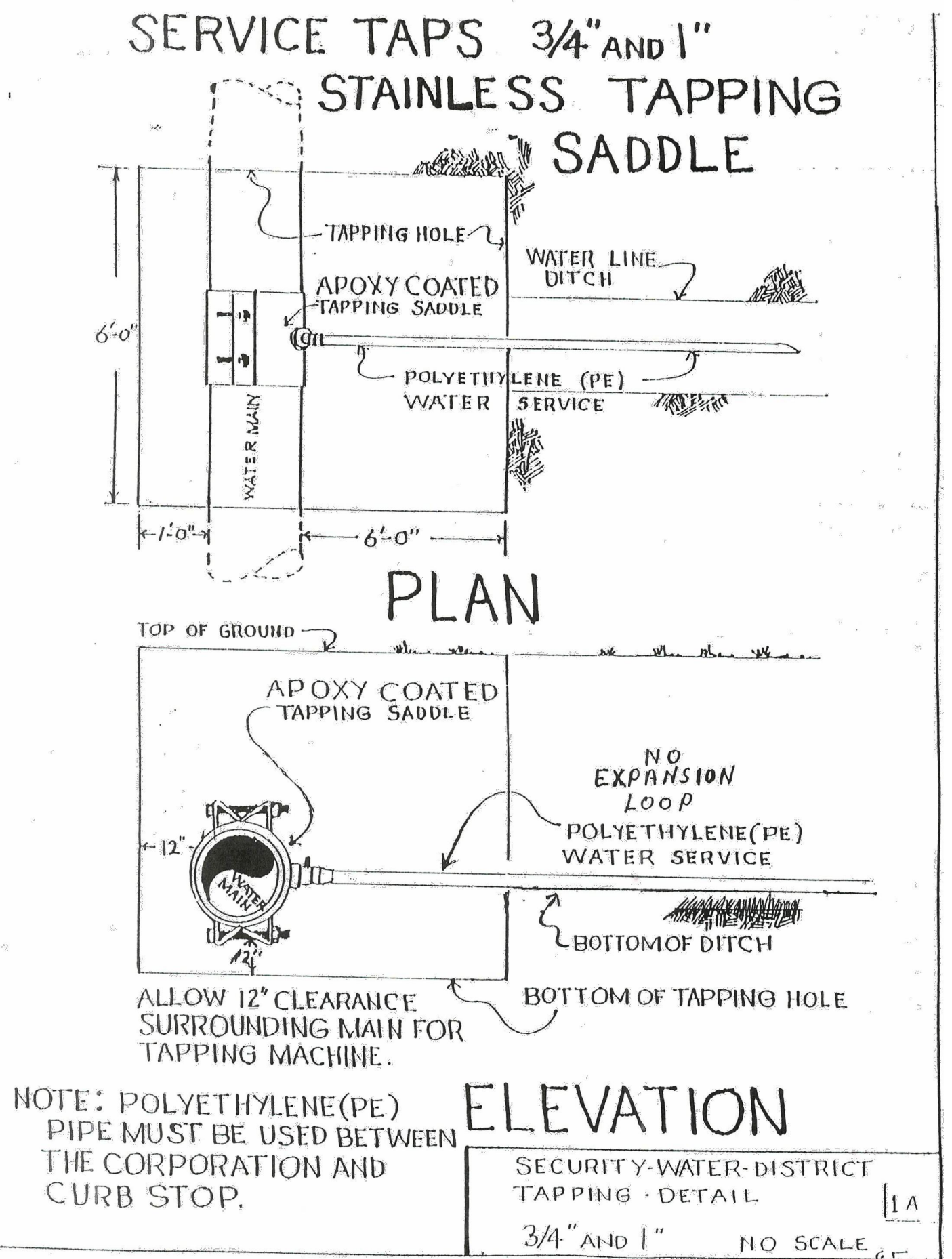
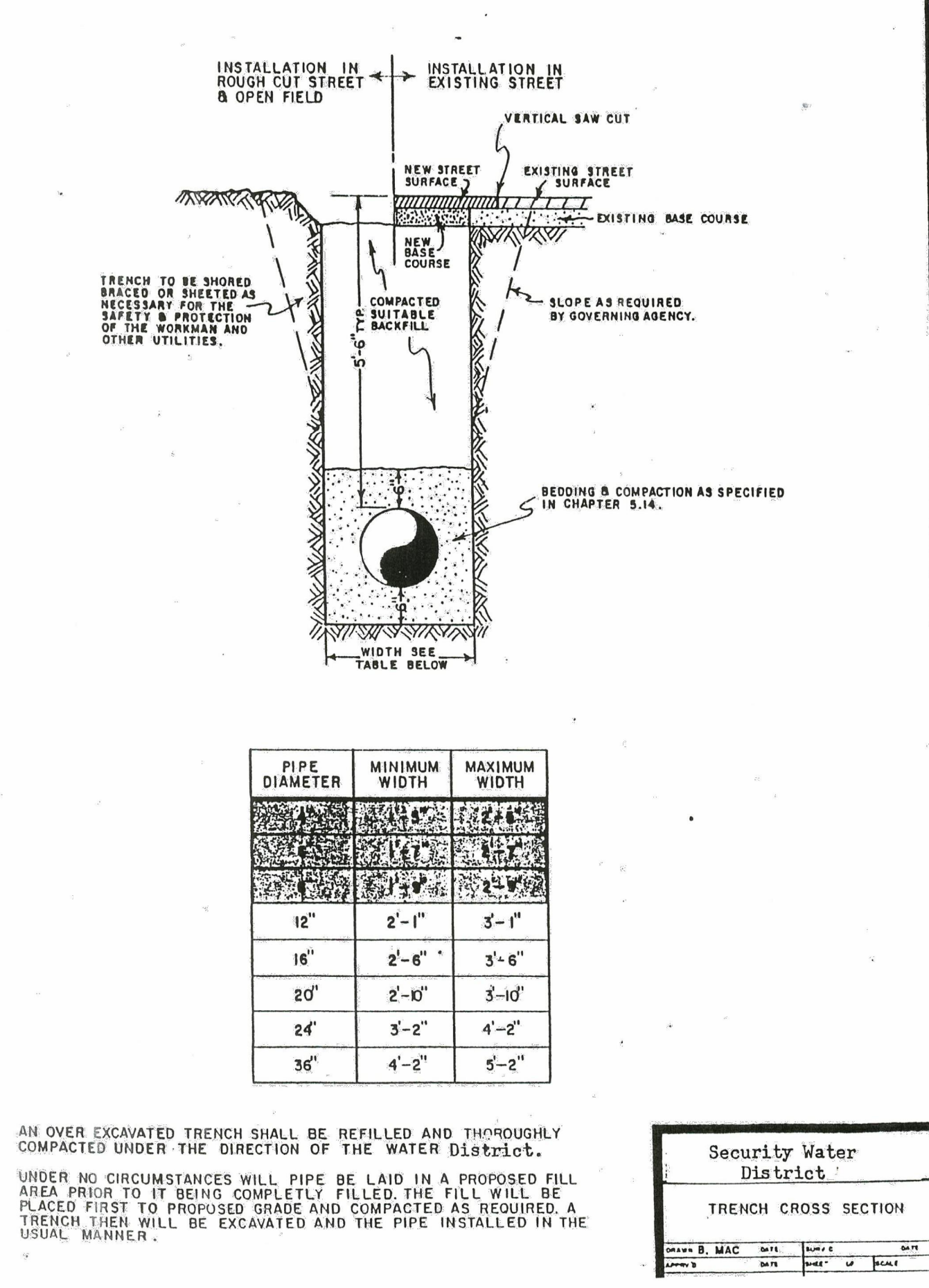
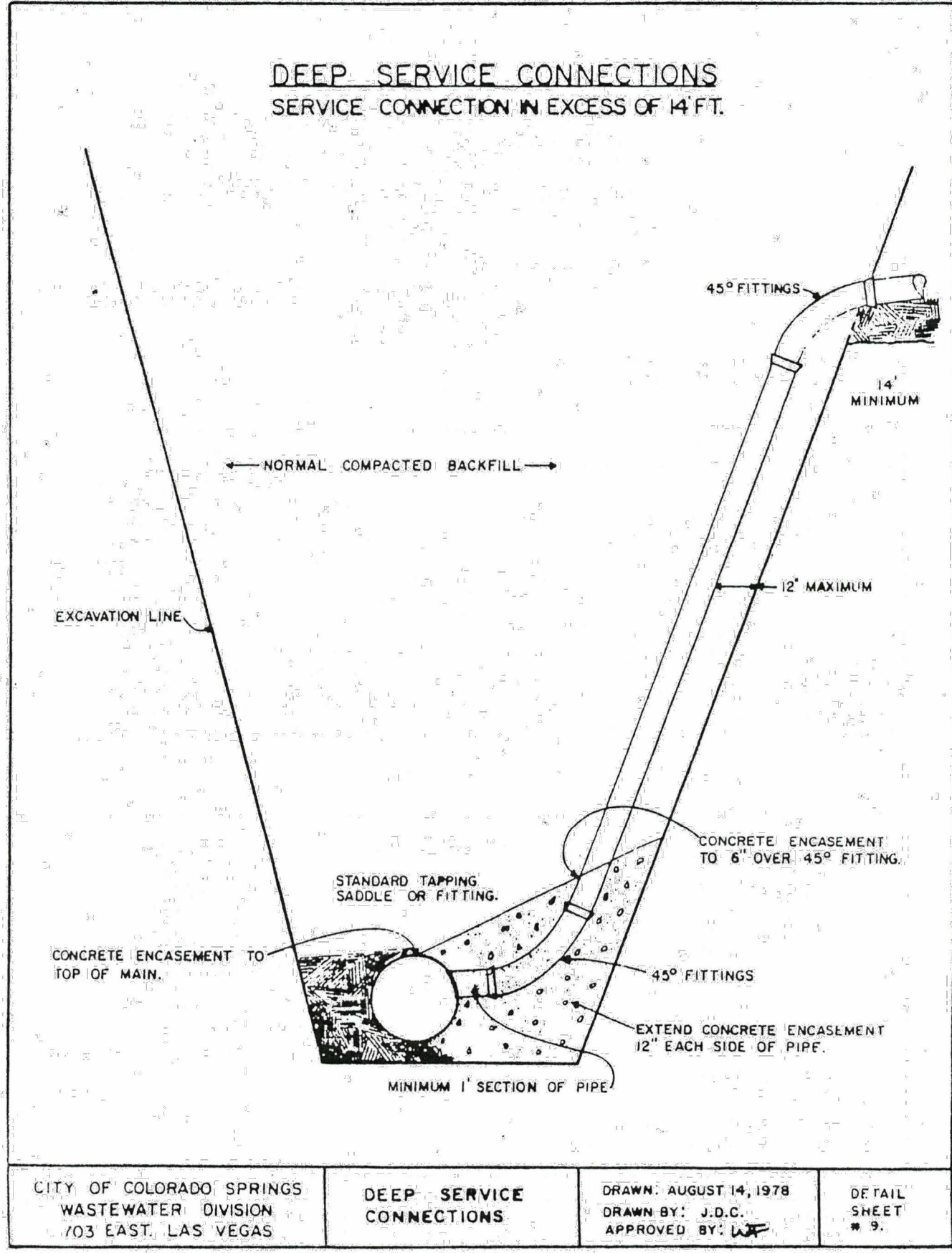
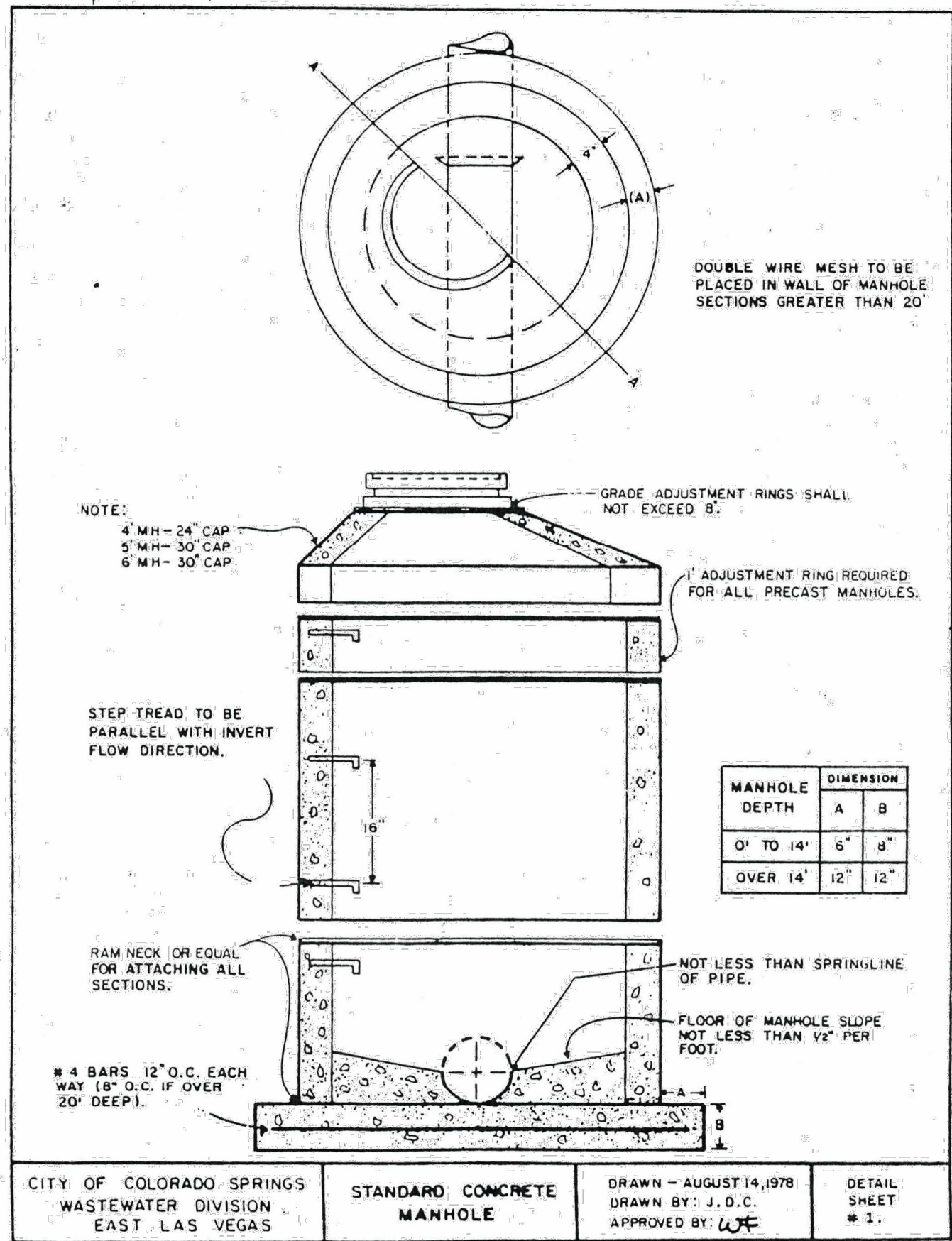
PREPARED UNDER CONTRACT FOR AND BEHALF OF CATAMOUNT ENGINEERING.  
**DAVID L. MIJARES, LICENSED PROFESSIONAL ENGINEER NO. 40510**  
10/19/20  
DATE

**CATAMOUNT ENGINEERING**  
321 W. HENRIETTA AVE  
PO BOX 221  
WOODLAND PARK, CO 80866  
(719) 428-2124

**RIVERBEND CROSSING  
WATER MAIN  
PLAN & PROFILE**

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1" = 50'	DATE: 10/19/20
JOB NUMBER	SHEET
17-114	17 OF 18





REV.	DESCRIPTION	DATE
1	ADDRESS AGENCY COMMENTS	06/19/19

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10/19/20  
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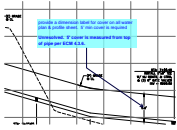
RIVERBEND CROSSING  
UTILITY DETAIL SHEET

DESIGNED BY: MGP  
SCALE: VARIES  
JOB NUMBER: 17-114  
DRAWN BY: MGP  
DATE: 10/19/20  
SHEET: 18 OF 18



# UtilityCD044\_V6.pdf Markup Summary

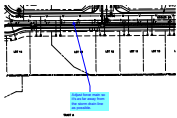
dsdlaforce (10)



**Subject:** Callout  
**Page Label:** [10] 17-114-UTs-10-Wtr - St B-Wtr - B  
**Author:** dsdlaforce  
**Date:** 5/17/2021 10:58:54 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

provide a dimension label for cover on all water plan & profile sheet. 5' min cover is required

Unresolved. 5' cover is measured from top of pipe per ECM 4.3.6.

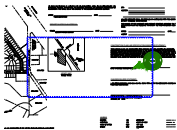


**Subject:** Callout  
**Page Label:** [3] 17-114-UTs-03-USP-USP-02  
**Author:** dsdlaforce  
**Date:** 5/17/2021 2:52:29 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

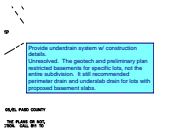
Adjust force main so it's as far away from the storm drain line as possible.



**Subject:** Image  
**Page Label:** [1] 17-114-UTs-01-Cover-\_Cover  
**Author:** dsdlaforce  
**Date:** 5/17/2021 3:05:47 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

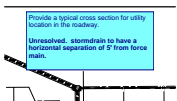


**Subject:** Cloud  
**Page Label:** [1] 17-114-UTs-01-Cover-\_Cover  
**Author:** dsdlaforce  
**Date:** 5/17/2021 3:05:52 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**



**Subject:** Text Box  
**Page Label:** [1] 17-114-UTs-01-Cover-\_Cover  
**Author:** dsdlaforce  
**Date:** 5/17/2021 3:06:11 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Provide underdrain system w/ construction details. Unresolved. The geotech and preliminary plan restricted basements for specific lots, not the entire subdivision. It still recommended perimeter drain and underslab drain for lots with proposed basement slabs.

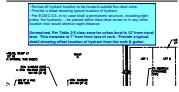


**Subject:** Text Box  
**Page Label:** [4] 17-114-UTs-04-San - St B-San - B  
**Author:** dsdlaforce  
**Date:** 5/17/2021 3:14:52 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Provide a typical cross section for utility location in the roadway.

Unresolved. stormdrain to have a horizontal separation of 5' from force main.

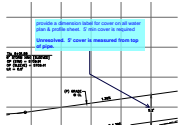




**Subject:** Text Box  
**Page Label:** [4] 17-114-UTs-04-San - St B-San - B  
**Author:** dsdlaforce  
**Date:** 5/17/2021 9:03:12 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

- Revise all hydrant location to be located outside the clear zone.
- Provide a detail showing typical location of hydrant.
- Per ECM 2.3.5, in no case shall a permanent structure, including light poles, fire hydrants ... be placed within the clear zones or in any other location that would obstruct sight distance.

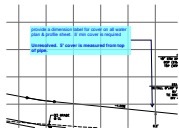
Unresolved. Per Table 2-5 clear zone for urban local is 12' from travel lane. This translates to 7' from front face of curb. Provide a typical detail showing offset location of hydrant from the curb & gutter.



**Subject:** Callout  
**Page Label:** [11] 17-114-UTs-11-Wtr - St C-Wtr - C  
**Author:** dsdlaforce  
**Date:** 5/17/2021 9:10:09 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

provide a dimension label for cover on all water plan & profile sheet. 5' min cover is required

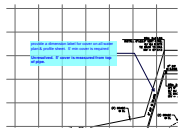
Unresolved. 5' cover is measured from top of pipe.



**Subject:** Callout  
**Page Label:** [12] 17-114-UTs-12-Wtr - St D-Wtr - D  
**Author:** dsdlaforce  
**Date:** 5/17/2021 9:10:17 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

provide a dimension label for cover on all water plan & profile sheet. 5' min cover is required

Unresolved. 5' cover is measured from top of pipe.



**Subject:** Callout  
**Page Label:** [13] 17-114-UTs-13-Wtr - St E-Wtr - E  
**Author:** dsdlaforce  
**Date:** 5/17/2021 9:10:53 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

provide a dimension label for cover on all water plan & profile sheet. 5' min cover is required

Unresolved. 5' cover is measured from top of pipe.