

HARRIS COUNTY MUNICIPAL UTILITY DISTRICT NO. 191 GENERAL CONSTRUCTION NOTES:

- POLY-VINYL-CHLORIDE (PVC) PIPE SHALL CONFORM TO ASTM SPECIFICATIONS D3034 AND BE INSTALLED ACCORDING TO ASTM D2321.
- ALL SANITARY SEWER SERVICE LINES SHALL BE CONSTRUCTED TO TRUE ALIGNMENT AND GRADE. WARPED AND SAGGING LINES WILL NOT BE PERMITTED.
- BUILDING TIE-ON CONNECTION WILL BE MADE DIRECTLY TO THE STUB-OUT FROM THE BUILDING PLUMBING AT THE FOUNDATION ON ALL WASTES OUTLETS.
- WATER-TIGHT ADAPTERS OF A TYPE COMPATIBLE WITH THE MATERIALS BEING JOINED WILL BE USED AT THE POINT OF CONNECTION OF THE SERVICE LINE TO THE BUILDING PLUMBING. NO CEMENT GROUT MATERIALS ARE PERMITTED.
- NO BENDS OR TURNS AT ANY POINT WILL BE GREATER THAN 45 DEGREES.
- EACH CLEANOUT WILL BE INSTALLED SO THAT IT OPENS IN A DIRECTION OPPOSITE TO THE FLOW OF THE WASTE AND, EXCEPT IN THE CASE OF "WYE" BRANCH AND END-OF-THE-LINE CLEANOUTS, CLEANOUTS WILL BE INSTALLED VERTICALLY ABOVE THE FLOW LINE OF THE PIPE.
- CLEANOUT WILL BE MADE WITH AIRTIGHT MECHANICAL FLUG.
- APPLICATION FOR WATER AND SEWER SERVICE MUST BE FILED PRIOR TO CONSTRUCTION OF THE SERVICE LINE, AND ALL APPLICABLE FEES AND DEPOSITS (AND A SIGNED SERVICE AGREEMENT) SHOULD ACCOMPANY THIS APPLICATION (FORMS ARE AVAILABLE FROM THE DISTRICT'S OPERATOR, HAYS UTILITY SOUTH, (281)-353-9809). CONSTRUCTION MUST NOT BEGIN UNTIL AUTHORIZED BY THE DISTRICT'S OPERATOR.
- WHEN FACILITIES HAVE BEEN INSTALLED BUT NOT YET COVERED, THE APPLICANT MUST ARRANGE AND OBTAIN AN INSPECTION OF THE INSTALLATION BY THE DISTRICT'S OPERATOR. REQUESTS FOR INSPECTIONS SHALL BE MADE TO THE DISTRICT'S OPERATOR, HAYS UTILITY SOUTH, (281)-353-9809 AT LEAST TWENTY-FOUR HOURS IN ADVANCE OF THE INSPECTION.
- THE PHYSICAL CONNECTION TO THE DISTRICT'S FACILITIES MAY ONLY BE MADE BY THE DISTRICT'S OPERATOR (UNLESS OTHERWISE EXPRESSLY APPROVED IN WRITING BY THE OPERATOR) AND MUST BE BY USE OF AN ADAPTER OF A TYPE COMPATIBLE WITH MATERIALS BEING JOINED. THE CONNECTION SHALL BE WATER-TIGHT. NO CEMENT GROUT MATERIALS ARE PERMITTED.
- BACKFILLING OF SERVICE LINES TRENCHES MUST BE ACCOMPLISHED WITHIN TWENTY-FOUR (24) HOURS OF INSPECTION AND APPROVAL. NO DEBRIS WILL BE PERMITTED IN THE TRENCH.
- BEFORE CONNECTION TO ANY DISTRICT FACILITIES, ALL REQUIREMENTS OF THE DISTRICT'S RULES AND REGULATIONS MUST BE MET, IN THE OPINION OF THE DISTRICT'S OPERATOR.
- THE USE OF PIPE OR PIPE FITTINGS THAT CONTAIN MORE THAN 0.25 PERCENT LEAD, OR SOLDERS AND FLUX THAT CONTAIN MORE THAN 0.2 PERCENT LEAD, ARE PROHIBITED FOR INSTALLATION OR REPAIR OF ANY PLUMBING IN ANY FACILITY PROVIDING WATER FOR HUMAN CONSUMPTION AND CONNECTED TO THE DISTRICT'S WATER SUPPLY SYSTEM.
- THE CUSTOMER IS RESPONSIBLE FOR ARRANGING FOR THE DISTRICT'S OPERATOR TO INSTALL AND TEST ANY BACKFLOW PREVENTION ASSEMBLY REQUIRED TO BE INSTALLED AT ANY CONNECTION AND TO CONDUCT ANNUAL TESTS OF THE

NO.	REVISIONS	DATE

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINE CAN BE MARKED. THIS VERIFICATION DOES NOT FULFILL YOUR OBLIGATION TO CALL 811.

PRIVATE UTILITY LINES SHOWN

N/A Date: _____

AT&T TEXAS/SWB FACILITIES
Approved for AT&T/SBC underground conduit facilities ONLY
SIGNATURE VALID FOR ONE YEAR.

N/A Date: _____

CENTERPOINT ENERGY/NATURAL GAS FACILITIES VERIFICATION ONLY.
(THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES - NOT TO BE USED FOR CONFLICT VERIFICATION.) (GAS SERVICE LINES ARE NOT SHOWN.) SIGNATURE VALID FOR SIX MONTHS.

N/A Date: _____

CENTERPOINT ENERGY/UNDERGROUND ELECTRIC FACILITIES VERIFICATION ONLY.
(THIS SIGNATURE VERIFIES EXISTING UNDERGROUND FACILITIES - NOT TO BE USED FOR CONFLICT VERIFICATION.) SIGNATURE VALID FOR SIX MONTHS.



HEIGHTS ENGINEERING LLC
CONSULTING ENGINEERS
7324 SOUTHWEST FWY SUITE 995 HOUSTON, TX 77074
PHONE: (713) 333-0393 FAX: (281) 274-9153
www.HEGHTSENGINEERING.COM TEXAS FIRM F-12333

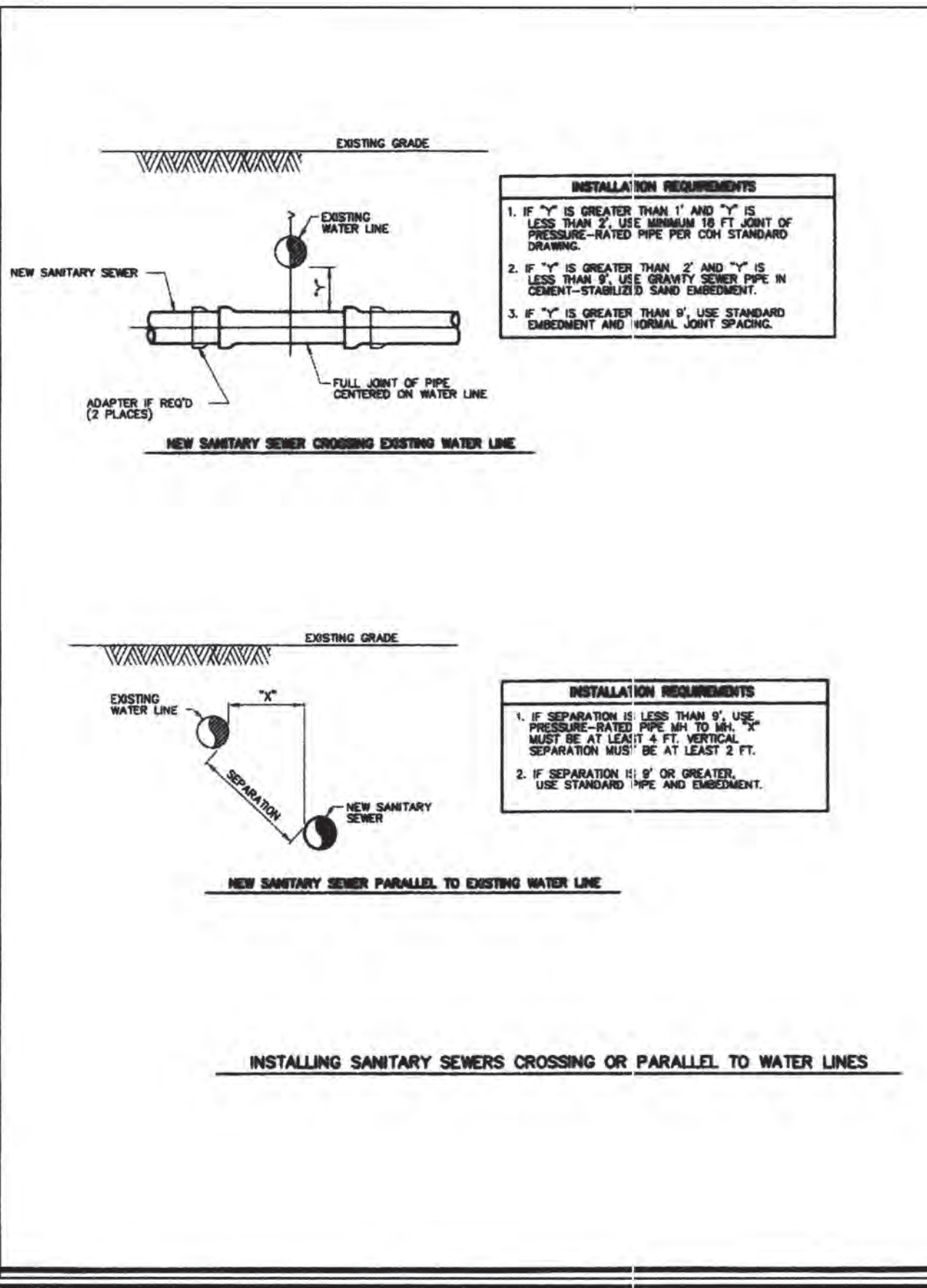
PROP. 8" WATER LINE & 8" SANITARY SEWER
ALONG HARGRAVE ROAD & S.H. 249
TO SERVE HARRIS COUNTY MUD #191
SANITARY SEWER CONSTRUCTION DETAILS
HEIGHTS PROJ. NO: 14-190 DRAWING NO: 14190502
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WATER	TRAFFIC & TRANSPORTATION
WASTEWATER	STORM WATER QUALITY
STORM	FACILITIES
STREET & BRIDGE	

CITY DWG NO. 55439
DRAWING SCALE: HORIZ: NTS
VERT: _____
DRAWN BY: SA
CHECKED BY: RM
COH LOG# 15-1136
SHEET NO. 10 OF 11

AS-BUILT



NOTES:

- SANITARY SEWER MUST BE BELOW WATER LINE UNLESS OTHERWISE PROVIDED. MINIMUM 18" BELOW THE SANITARY SEWER PROVIDED. MINIMUM 24" SEPARATION AND 12" FROM DRIVEWAY IN ACCORDANCE TO CHAPTER 7 TABLE 7.3 OF COH DESIGN MANUAL.
- WHEN PRESSURE-RATED PIPE IS REQUIRED, PROVIDE PIPE WITH MINIMUM 150 PSI PRESSURE RATING.
- ADAPTERS MUST BE FACTORY MOLDED OR FABRICATED. NEW TRENCH SEWER PIPE AND USING RESILIENT GASKET OR SEAL MATERIAL. FLEXIBLE RUBBER "ROOT" TYPE ADAPTERS WILL NOT BE ACCEPTED.
- INSTALL FORCE MAINS SAME AS FOR GRAVITY SEWER, USING SPECIFIED PRESSURE PVC.
- "Y" MUST ALWAYS BE GREATER THAN OR EQUAL TO 1 FT FOR PRESSURE RATED SE AND 2 FT FOR NON-PRESSURE RATED SE.
- "X" MUST BE GREATER THAN OR EQUAL TO 4 FT.
- ALTERNATIVES MAY BE SHOWN ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS.
- SEPARATION REQUIREMENTS SHOWN HERE DO NOT APPLY TO SERVICE CONNECTIONS - REFER TO PLUMBING CODE FOR APPLICABLE REQUIREMENTS.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
SANITARY SEWER INSTALLING SANITARY SEWERS CROSSING OR PARALLEL TO WATER LINES (NOT TO SCALE)
APPROVED BY: [Signature] CITY ENGINEER
APPROVED BY: [Signature] DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010 DWG NO: 02531-05

