

GENERAL CONSTRUCTION NOTES

- ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE NOT GUARANTEED TO BE COMPLETED OR DEFINITE AND HAVE NOT BEEN FIELD VERIFIED, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE. CONTRACTOR HAS SOLE RESPONSIBILITY FOR FIELD VERIFICATION OF ALL EXISTING UTILITIES AND SHALL UNCOVER AND VERIFY EXISTING ELEVATIONS OF SAME AT ALL PROPOSED CROSSINGS AND PROPOSED CONNECTIONS BEFORE COMMENCING WORK. COST SHALL BE INCLUDED IN BID ITEM PRICE. ALL CONFLICTS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- CONTRACTOR SHALL NOTIFY THE CITY ENGINEER, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING AT 713-651-1450 FOR INSPECTION AT LEAST 48 HOURS PRIOR TO COMMENCING THE CONSTRUCTION.
- CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITY LINES AND SHALL REQUEST THE EXACT LOCATION OF THESE FACILITIES BY CALLING THE UTILITY COORDINATING COMMITTEE AT (713)223-4567 OR TOLL FREE 1-800-245-4545, AT LEAST 48 HOURS BEFORE COMMENCING WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH OCCUR DUE TO HIS FAILURE TO REQUEST THE LOCATION AND PRESERVATION OF THESE UNDERGROUND FACILITIES.
- CONTRACTOR SHALL COMPLY WITH "OSHA" REGULATIONS AND STATE OF TEXAS LAW CONCERNING TRENCHING AND SHORING.
- CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET AS A MINIMUM, THE REQUIREMENTS OF "OSHA" SAFETY AND HEALTH REGULATIONS, PART 1926, SUBPART P AS FURNISHED IN THE FEDERAL REGISTER, VOLUME 54, NO. 209, DATED OCTOBER 31, 1989.
- TEXAS LAW ARTICLE 1436C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN 6 FEET OF ENERGIZED OVERHEAD POWER LINES, AND FEDERAL REGULATIONS, TITLE 29, PART 1910.190(1) AND PART 1926.440(g)(15) REQUIRE A MINIMUM CLEARANCE OF 10 FEET FROM THESE FACILITIES. THE ABOVE LAWS CARRY BOTH CRIMINAL AND CIVIL LIABILITIES, WITH CONTRACTOR BEING LEGALLY RESPONSIBLE FOR THE SAFETY OF WORKERS UNDER THESE LAWS. IF CONTRACTOR MUST WORK NEAR OVERHEAD POWER LINES, HE MUST CALL (713)228-7400 FOR THE LINES TO BE DE-ENERGIZED AND OR MOVED AT HIS EXPENSE.
- WATERLINES, WASTEWATER COLLECTION SYSTEMS, PAVING, TRAFFIC SIGNALS AND DRAINAGE SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS & ENGINEERING'S "STANDARD CONSTRUCTION SPECIFICATIONS" (MOST RECENT ISSUE OCTOBER 2002), AND "STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING" (MOST RECENT OCTOBER 2002) WITH ALL REVISIONS AND AMENDMENTS ADDED THERETO UNLESS OTHERWISE NOTED AND APPROVED ON THESE PLANS. THE DESIGN MUST AGREE WITH THE MINIMUM STANDARDS ESTABLISHED IN THE LATEST ISSUE OF THE "INFRASTRUCTURE DESIGN MANUAL" (MOST RECENT ISSUE OCTOBER 2002). NOTE THAT PLAN SIGNATURES AND LETTERS OF CAPACITY AVAILABILITY FOR STORM, WASTEWATER AND WATER EXPIRES AFTER 1 YEAR & THE LATEST EDITIONS OF DESIGN RULES, SPECS, STANDARD DETAILS AND MANUALS SHALL GOVERN AS OF THE DATE OF RESIGNING.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING PUBLIC OR PRIVATE UTILITY LINES, INCLUDING BUT NOT LIMITED TO WATER LINES, WASTEWATER COLLECTION SYSTEMS AND STORM SEWERS, DURING CONSTRUCTION. ALL DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING "STANDARD CONSTRUCTION SPECIFICATIONS" WITH LATEST ADDENDA AND AMENDMENTS THERETO, WITH NO COST TO THE OWNER OR CITY OF HOUSTON.
- IF THE CONTRACTOR DOES NOT BEGIN WITHIN A YEAR AFTER THE PLANS HAVE BEEN SIGNED, NEW SIGNATURES MUST BE OBTAINED AND LETTERS OF AVAILABILITY MUST BE UPDATED.
- CONTRACTOR SHALL PREPARE A SET OF "AS-BUILT" DRAWINGS SHOWING ANY FIELD CHANGES MADE TO THE APPROVED ENGINEERING PLANS AND SUBMIT TO THE DESIGN CONSULTANT FOR SUBMISSION TO CITY AND HARRIS COUNTY MUD NO. 191 ENGINEER.
- CONTRACTOR SHALL REVIEW & BECOME THOROUGHLY FAMILIAR W/ THE CONTENTS OF REFERENCED SOILS REPORT, WHICH WILL BE CONSIDERED AN INTEGRAL PART OF THE CONSTRUCTION DOCUMENTS. ANY PROBLEMS ARISING FROM THE CONTRACTOR'S LACK OF FAMILIARITY WITH SOILS REPORT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR TO CONTACT PW&E OFFICE(S) @ 3300 MAIN STREET; AND/OR THE APPROPRIATE ON-LINE C/H PW&E WEBSITE(S), AS APPROPRIATE, TO OBTAIN ALL CORRECT C/H PW&E-TYPE PERMIT(S) REQUIRED BY THE PROPOSED CONSTRUCTION, REPLACEMENT, RELOCATION, UTILITY ABANDONMENT AND/OR TRAFFIC CONTROL WORK SHOWN (OR NOT) ON THESE PLANS. FOR ANY TREE-CUTTING PERMITS IN COMMERCIAL B.L. SETBACK AREAS &/OR EXISTING PAVED CITY ROAD(S)/R-O-W(S), CONTACT C/H FORESTRY @ 311 OR (713)-867-0379 @ (PARKS & REC.'S) URBAN FORESTRY'S MAIN OFFICE.

SANITARY SEWER CONSTRUCTION NOTES:

- SANITARY SEWER MATERIALS, CONSTRUCTION AND TESTING SHALL BE IN ACCORDANCE WITH APPLICABLE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES AND REGULATIONS.
- ALL SANITARY SEWERS SHALL BE CONSTRUCTED OF SDR 26 POLYETHYLENE CHLORIDE (P.V.C.) MEETING ASTM-D3034 WITH RUBBER GASKETED JOINTS EXCEPT WHEN PRESSURE RATED PIPE IS REQUIRED TO MEET THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CRITERIA FOR SANITARY SEWER IN PROXIMITY TO WATERLINES.
- ALL SANITARY SEWERS PIPES SHALL BE CEMENT SAND BEDDED AND BACKFILLED ACCORDING TO CITY OF HOUSTON DWG. 02317-03 FOR DRY STABLE TRENCH.
- ALL SEWER TRENCHES UNDER OR WITHIN 1' OF EXISTING OR FUTURE PAVEMENT SHALL BE BACKFILLED AND COMPACTED TO 95% STD. PROCTOR DENSITY WITH CEMENT STABILIZED SAND UP TO WITHIN 1' OF TOP OF PAVING SUBGRADE. INCLUDE COST OF CEMENT STABILIZED SAND BACKFILL IN UNIT PRICE BID PER LINEAR FOOT FOR SANITARY SEWER LINE.
- FOR THE CONSTRUCTION OF SANITARY SEWERS, SEPARATION DISTANCES WITH WATER LINES SHALL DETERMINE THE PROPOSED CONSTRUCTION METHODS AS GOVERNED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY- RULES AND REGULATIONS FOR "DESIGN CRITERIA FOR SEWERAGE SYSTEMS", TEXAS ADMINISTRATION CODE-CHAPTER 317 (CURRENT REVISION).
- MAINTAIN 12-INCH MINIMUM VERTICAL CLEARANCE AT CROSSINGS BETWEEN SANITARY SEWERS AND CULVERTS, UNLESS OTHERWISE NOTED.
- NATURAL GROUND ADJACENT TO UTILITY TRENCH EXCAVATION TO BE CLEARED AND GRUBBED PRIOR TO PLACEMENT OF EXCESS TRENCH MATERIAL.
- SANITARY SEWER MANHOLE RIMS SHALL BE ADJUSTED TO 3" ABOVE FINISHED GRADE WITHIN STREET R.O.W. AND 6" ABOVE GRADE ELEVATION WITHIN EASEMENTS. AFTER FINAL SITE GRADING HAS BEEN COMPLETED, CLEANER SHALL BE ADDED AND SLOPE AWAY FROM MANHOLE RIM FOR STORM WATER DRAINAGE AT NO SEPARATE PAY.
- WHENEVER SANITARY SEWER CROSSES WITHIN 9 FEET ABOVE OR BELOW A WATER LINE, THE SANITARY SEWER SHALL BE CONSTRUCTED OF P.V.C., AWWA C900, CLASS 150, DR-18, PRESSURE RATED PIPE FOR A MINIMUM DISTANCE OF 9 FEET ON EITHER SIDE OF THE WATER LINE. IN ALL CASES, BACKFILLING, PIPE MATERIAL AND APPURTENANCES SHALL BE GOVERNED BY TEXAS COMMISSION ON ENVIRONMENTAL QUALITY MINIMUM STANDARDS FOR WATER LINE/SANITARY SEWER SEPARATION.
- ALL SANITARY SEWER MANHOLE COVERS WITHIN THE PAVED AREA SHALL HAVE SEALED (BOLTED AND GASKETED) COVERS.
- CONTRACTOR TO PERFORM TCO2 AIR PRESSURE AND INFILTRATION TESTS ON ALL SANITARY SEWER LINES.
- ALL SANITARY SEWER BORE AND JACKING WORK IS TO USE EITHER AWWA C-900, DR 18, PVC PIPE OR POLYETHYLENE LINED & ENCASED D.I.P., THICK CL. 50-54, THICK-WALL HIGH PRESSURE TYPE(S) OF PIPE). USE SAME FOR ANY SAN. SWR. PIPE (IN THE ROAD R.O.W.) HAVING LESS THAN 6" OF TOP COVER FROM THE ADJACENT N.G./F.G. AT THE ADJACENT ROAD R.O.W. LINE.
- ANY AND ALL D.I.P. TO BE USED WILL HAVE BOTH EXTERNAL AND INTERNAL PROTECTION. EXTERNAL POLYETHYLENE TUBING OR DOUBLE WRAP WILL BE 8 MILS. THICK PER LAYER AND TIED TO PIPE AT 3' MAX. INTERVALS (IF LAD) OR Banded TO PIPE AT 1' MAX. INTERVALS (W/SCREW TIGHTENED STEEL BANDS) IF JACKED. INTERNAL POLYETHYLENE HEAT FUSED BONDED LINER (OR CERAMIC LINING) WILL BE 40 MILS. MIN. THICKNESS.

WATER CONSTRUCTION NOTES

- WATER MAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING "STANDARD SPECIFICATIONS" DATED OCTOBER 2002 AND "STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATERLINES, STORM DRAINAGE AND STREET PAVING" OCTOBER 2002.
- ALL WATERLINES SHALL BE ENCASED IN BANK SAND TO AT LEAST 12" ABOVE THE PIPE. COST OF BANK SAND TO BE INCLUDED IN UNIT PRICE OF WATERLINE.
- SANITARY PRECAUTIONS MUST BE TAKEN DURING WATERLINE CONSTRUCTION, AS CALLED FOR BY AWWA STANDARDS. PRECAUTIONS INCLUDE KEEPING PIPE CLEAN AND CAPPING OR OTHERWISE EFFECTIVELY COVERING OPEN PIPE ENDS TO EXCLUDE INSECTS, ANIMALS OR OTHER SOURCES OF CONTAMINATION FROM UNFINISHED PIPE LINES AT TIMES WHEN CONSTRUCTION IS IN PROGRESS.
- WATER MAINS SHALL HAVE MINIMUM OF 4" COVER FROM TOP OF CURB EXCEPT 16" AND LARGER WATER LINES SHALL HAVE MINIMUM OF 5" COVER FROM TOP OF CURB.
- ALL DUCTILE IRON PIPE WATERLINE SHALL HAVE BANK RUN SAND EMBEDMENT IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARD SPECIFICATION NO. S 02317-EXCAVATION AND BACKFILL FOR UTILITIES AND 02320- UTILITY BACKFILL MATERIALS.
- ALL WATER MAINS UNDER STREET PAVEMENT, IF NOT STEEL SECTION, SHALL BE P.V.C. PIPE. SIZES 4 THRU 12 INCH SHALL BE AWWA C-900 CLASS 150 DR-18.
- THIS PROJECT SHALL BE BUILT BY MEANS OF ALL AUGER EXCEPT AS NOTED ON THE DRAWINGS. CONTRACTOR TO DETERMINE THE LOCATIONS OF BORE PITS IN THE FILED SUBJECT TO THE CITY ENGINEER'S APPROVAL.
- CONTRACTOR SHALL PROVIDE ADEQUATE CONCRETE THRUST BLOCKING TO WITHSTAND TEST PRESSURE AS SPECIFIED IN CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING SPECIFICATIONS.
- PRIOR TO WATER MAIN ADJUSTMENTS, THE INSTALLATION OF WATER METERS AND LEADS OR UNMETERED SPRINKLER LINE, THE CONTRACTOR SHALL CONTACT CITY OF HOUSTON, FOR DETAILS OF PERMITS AND BONDS.
- PRIOR TO WATER MAIN CONSTRUCTION, THE CONTRACTOR SHALL CONTACT CAPITAL PROJECTS, PLAN REVIEW SECTION (713) 837-7024 AND COMPLY WITH ALL REQUIREMENTS NECESSARY FOR ISSUANCE OF A WORK ORDER FOR WATER MAIN CONSTRUCTION.
- WATER MAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING STANDARD SPECIFICATIONS WITH LATEST ADDENDA AND AMENDMENTS THERETO.

STREET, BRIDGE AND RIGHT-OF-WAY NOTES

- DEPARTMENT OF PUBLIC WORKS AND ENGINEERING'S "STANDARD CONSTRUCTION SPECIFICATIONS" AND "STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING" UNLESS OTHERWISE NOTED AND APPROVED ON THESE PLANS. THE DESIGN IS CONFORMANT WITH THE MINIMUM STANDARDS ESTABLISHED IN THE "INFRASTRUCTURE DESIGN MANUAL" REFERENCED AT <http://documents.publicworks.houstontx.gov/document-center/engineering-and-construction/index.htm>.
- FILL AREAS ON PLANS SHALL BE FILLED IN LAYERS NOT EXCEEDING 8" IN DEPTH AND EACH COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY PRIOR TO INSTALLATION OF WATER LINE AND FILL AREA SHALL BE SEEDED AND FERTILIZED WITHIN 10 WORKING DAYS.
- UTILITY CONTRACTOR SHALL PROVIDE TEMPORARY SILT BARRIER FENCE ON ALL NON-CURB INLETS WHICH WILL REMAIN IN PLACE AFTER UNDERGROUND CONTRACT IS COMPLETE.
- CONTRACTOR SHALL PROVIDE SILT BARRIER FENCE ON ALL STAGE 1 CURB INLETS.
- EXISTING PAVEMENTS, CURBS, DRIVEWAYS AND SIDEWALKS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO THE CITY OF HOUSTON STANDARDS, WITH LATEST ADDENDUMS AND AMENDMENTS THERETO.
- CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB SHALL BE AS GOOD AS OR BETTER THAN PRIOR TO STARTING WORK.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY.
- EXPOSE 15" OF REINFORCING STEEL AT PROPOSED SAWED JOINT, IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE #6 BARS, 24" LONG, 24" C-C, DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROC" OR EQUAL.
- CONTRACTOR TO MAKE NECESSARY PRECAUTIONS TO PROTECT ROOT SYSTEMS OF SHRUBS, PLANTS, AND TREES ALONG THE AREA OF EXCAVATION.
- CONTRACTOR SHALL COMPLY WITH OSHA REGULATIONS AND STATE OF TEXAS LAW CONCERNING EXCAVATION, TRENCHING AND SHORING AS SPECIFIED IN CITY OF HOUSTON ORDINANCE #87-1457.
- WHEELCHAIR RAMPS SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF HOUSTON STANDARDS AT ALL INTERSECTIONS WITH SIDEWALKS AND THE EXISTING CURB OR SIDEWALK IS DAMAGED OR REMOVED DURING CONSTRUCTION.
- WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING'S "STANDARD CONSTRUCTION SPECIFICATIONS" AND "STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING" UNLESS OTHERWISE NOTED AND APPROVED ON THESE PLANS. THE DESIGN SHOULD BE CONSISTENT WITH THE MINIMUM STANDARD ESTABLISHED IN THE "DESIGN MANUAL FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORMS DRAINAGE AND STREET PAVING".
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGES TO EXISTING WATER, WASTEWATER, STORM SEWER AND TRAFFIC SIGNAL CONDUITS. ALL DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE CITY OF HOUSTON, DEPT. OF PUBLIC WORKS AND ENGINEERING "STANDARD CONSTRUCTION SPECIFICATIONS" WITH LATEST ADDENDA AND AMENDMENTS THERETO, AT NO COST TO THE CITY OF HOUSTON.
- PRIOR TO STREET CONSTRUCTION, THE CONTRACTOR SHALL CONTACT DEPARTMENT OF PUBLIC WORKS AND ENGINEERING AT 832-394-9386 OR 832-394-8851 AND COMPLY WITH ALL REQUIREMENTS FOR THE ISSUANCE OF NECESSARY PERMITS/ WORK ORDERS FOR STREET CONSTRUCTION.
- DOUBLE REFLECTORIZED BLUE TRAFFIC MARKERS SHALL BE PLACED 6-INCHES OFFSET OF THE CENTERLINE OF ALL FIRE HYDRANT LOCATIONS BY THE PAVING CONTRACTOR. HYDRANTS LOCATED AT INTERSECTIONS SHALL HAVE A BUTTON PLACED ON EACH STREET.

TRAFFIC AND TRANSPORTATION NOTES

- CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TEXAS M.U.T.C.D., MOST RECENT EDITION WITH REVISIONS) DURING CONSTRUCTION.
- NO LINES SHALL BE CLOSED DURING THE HOURS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM MONDAY THRU FRIDAY ON MAJOR THROUGHFARES.
- NO WORK ON RESIDENTIAL STREETS FROM 7:00 PM TO 7:00 AM, SEVEN DAYS A WEEK.
- CONTRACTOR SHALL COVER OPEN EXCAVATIONS WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOUR AND OPEN LINES FOR NORMAL TRAFFIC FLOW.
- OFF DUTY UNIFORM POLICE OFFICER(S)/CERTIFIED FLAGGER(S) IS/ARE REQUIRED TO DIRECT TRAFFIC WHEN LANES ARE BLOCKED.
- IN THE EVENT WHEN NO "TRAFFIC CONTROL PLANS" EXIST AS A PART OF CONTRACT DRAWINGS, CONTRACTOR MAY PREPARE THE PLANS AND SUBMIT TO TRAFFIC PLAN REVIEW SECTION, FOR APPROVAL TEN WORKING DAYS PRIOR TO IMPLEMENTATION.
* THESE PLANS SHALL BE DRAWN TO SCALE ON REPRODUCIBLE MYLAR AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS. PLANS WILL BECOME A PART OF THE CONTRACT DRAWINGS.
- ALL TRAFFIC CONTROL DEVICES USED AT NIGHT SHALL BE REFLECTORIZED OR ILLUMINATED.
- CONTRACTOR SHALL MAINTAIN LOCAL DRIVEWAY ACCESS TO RESIDENTIAL AND COMMERCIAL PROPERTIES ADJACENT TO WORK AREA AT ALL TIMES.
- CONTRACTOR SHALL NOTIFY FIRE, POLICE, METROPOLITAN TRANSIT AUTHORITY, AND SCHOOLS FIVE WORKING DAYS PRIOR TO IMPLEMENTATION FOR TRAFFIC CONTROLS.
- APPROVED COPIES OF THE TRAFFIC CONTROL PLANS AND LANE CLOSURE PERMITS SHALL BE AVAILABLE FOR INSPECTION AT JOB SITE AT ALL TIMES.

*CONTRACTOR MUST SECURE "LANE/SIDEWALK CLOSURE PERMITS" FROM CITY'S TRAFFIC MANAGEMENT AND MAINTENANCE BRANCH BEFORE CLOSING A LANE/SIDEWALK. THE REQUEST MUST BE MADE AT LEAST TEN BUSINESS DAYS PRIOR TO THE DATE FOR WHICH THE CLOSURE IS SOUGHT. NOTE THAT WORKING HOURS MAY BE RESTRICTED OR THE REQUEST MAY BE DENIED. CALL 832-395-3020 FOR AN APPLICATION.

CENTERPOINT ENERGY GAS

CAUTION: UNDERGROUND GAS FACILITIES

LOCATIONS OF CENTERPOINT ENERGY MAIN LINES (TO INCLUDE CENTERPOINT ENERGY, INTRASTATE PIPELINE, LLC, WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. OUR SIGNATURE ON THESE PLANS ONLY INDICATES THAT OUR FACILITIES ARE SHOWN IN APPROXIMATE LOCATION. IT DOES NOT IMPLY THAT A CONFLICT ANALYSIS HAS BEEN MADE. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 1-800-545-6005 OR 811 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.

- WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (713)-945-9036 OR (713)-945-8037 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.
- WHEN EXCAVATING WITHIN EIGHTEEN (18") OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
- WHEN CENTERPOINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.
- FOR EMERGENCIES REGARDING GAS LINES CALL (713)-659-3552 OR (713)-207-4200.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

CENTERPOINT ELECTRIC

CAUTION: OVERHEAD ELECTRICAL FACILITIES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE FORBIDS ACTIVITIES THAT OCCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES, SPECIFICALLY:

- ANY ACTIVITY WHERE PERSON OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES; AND
- OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN 10 FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES.

PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL CENTERPOINT ENERGY AT (713) 207-2222.

ACTIVITIES ON OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY NO APPROVAL TO USE, CROSS OR OCCUPY CENTERPOINT FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT PROPERTY, PLEASE CONTACT OUR SURVEYING & RIGHT OF WAY DIVISION AT (713) 207-6248 OR (713) 207-5769.

STORM SEWER CONSTRUCTION NOTES

- STORM SEWERS SHALL BE REINFORCED CONCRETE PIPE (C-76, CLASS III), AND SHALL BE INSTALLED, BEDDED, AND BACKFILLED IN ACCORDANCE WITH THE CITY OF HOUSTON DRAWING NOS. 02317-02, 02317-03, 02317-05, 02317-06, AND 02317-07 (OCT. 20) AS APPLICABLE UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- ALL STORM SEWER CONSTRUCTED IN SIDELOT EASEMENT SHALL BE R.C.P. (C-76, CLASS III) AND SHALL BE BEDDED IN ACCORDANCE WITH THE CITY OF HOUSTON DRAWING NOS. 02317-02, 02317-03, 02317-05, 02317-06, AND 02317-07 AS APPLICABLE.
- ALL SEWER UNDER PROPOSED OR FUTURE PAVEMENT AND TO A POINT ONE (1) FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL BE BACKFILLED WITH 1-1/2 SACK GEMENT/C.Y. STABILIZED SAND TO WITHIN ONE (1) FOOT OF SUBGRADE. THE REMAINING DEPTH OF TRENCH SHALL BE BACKFILLED WITH SUITABLE EARTH MATERIAL.
- ALL TRENCH BACKFILLS SHALL BE IN 8" LIFTS, WITH TESTS TAKEN AT 100 FOOT INTERVALS ON EACH LIFT, AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698/AASTHO 199).
- CIRCULAR AND ELLIPTICAL REINFORCED CONCRETE PIPE SHALL BE INSTALLED USING RUBBER GASKET JOINTS CONFORMING TO ASTM C443 AND ASTM C877 RESPECTIVELY.
- ALL STORM SEWER PIPES AND INLET LEADS SHALL BE 24-INCH AND LARGER R.C.P. (C-76, CLASS III).
- ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES AND INLETS ARE TO BE PLUGGED WITH 8" BRICK WALLS UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL PROVIDE 12" MINIMUM CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS.
- ADJUST MANHOLE COVERS TO GRADE CONFORMING TO REQUIREMENTS OF SECTION 02086-ADJUSTMENTS MANHOLES, INLETS AND VALVE BOXES TO GRADE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACK SLOPE DRAINAGE SYSTEM DISTURBED AS A RESULT OF HIS WORK.
- ALL DITCHES SHALL BE REGRADED TO PROPOSED ELEVATIONS TO INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE PROPERLY BACKFILLED AND COMPACTED. ALL DISTURBED AREA SHALL BE REGRADED, SEEDED, AND FERTILIZED.
- ALL DRIVEWAYS WILL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURES.

SWPPP CONSTRUCTION NOTES

- CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES AND REINFORCED FILTER FABRIC BARRIER ALONG ROAD AND SITE DITCHES AT LOCATIONS SHOWN ON THE TYPICAL STORM WATER POLLUTION PREVENTION (SWPP) PLANS TO KEEP SILT AND/OR EXCAVATED MATERIALS FROM NETERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.
- DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATED MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM SPREADING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEEP BACK INTO THE EXCAVATED AREA.
- CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FROM THE EXCAVATED AREA.
- CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.
- CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER.
 - DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
 - AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
 - STRUCTURAL CONTROL MEASURES.
 - LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
- CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND/ OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION ON BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY SEEDING OR SODDING.SLOPES OR STEEPER SHALL BE REPLACED BY BLOCK SODDING.

CITY OF HOUSTON
Department of Public Works and Engineering

DESIGN MANUAL
Water Line Design Requirements

Table 7.3
PROTECTION REQUIREMENTS AT WATER LINE (WL) - SANITARY SEWER (SS) CROSSINGS

	PROPOSED WATER LINE		PROPOSED SANITARY SEWER		OVER	UNDER
	EXISTING SS	PROP SS	EXISTING SS	PROP SS		
Minimum 2 feet vertical clearance	√	√	√	√	√	√
Place 1 full section (min 18 ft) of WL centered at SS Crossing. Provide restrained joints on WL, spaced at least 9 ft horizontally from centerline of SS	√	√	√	√	√	√
Place 1 full section (min 18 ft) of SS centered at WL Crossing. Provide restrained joints on SS, spaced at least 9 ft horizontally from centerline of WL			√	√		
Replace 1 full section of existing SS with pressure-rated DIP or pressure-rated PVC pipe with adapters and restrained joints centered at WL crossing	√,2,3		√,3			
Provide DIP for small diameter WL (less than 24 inches), PVC pipe is only allowed if encased as per TAC § 290.44, and use restrained joints for both DIP and PVC pipe			√	√	√	√
Embed SS with CSS for the total length of 1 pipe segment plus 1 foot beyond the joints on each end	√,2,3	√,4	√,3	√,4	√,3	√,4
Place 1 full section (min 18 ft) of min 150 psi SS restrained at WL crossing. Provide restrained joints on SS, spaced at least 9 ft horizontally from centerline of WL or encase in a joint of 150 psi pressure pipe (min 18 ft) two nominal sizes larger with spacers at 5 ft interval.			√	√		

Not Allowed

- Minimum clearance is 2 feet for non-pressure rated SS and 1 foot for pressure rated SS
- Required if existing SS is disturbed and/or there is evidence of leakage
- Not required for augered WL unless there is evidence of leakage; completely fill augered hole with bentonite/clay mixture
- Not required for augered SS; completely fill augered hole with bentonite/clay mixture

Note:

- Both water lines and wastewater main or lateral must pass a pressure and leakage test as specified in AWWA C600 standards
- Sanitary sewers (SS) is applicable to both gravity sanitary sewers and force mains.

Appendix D
CONSTRUCTION NOTES TO BE ON ALL PROJECTS

- WATER LINES, WASTEWATER COLLECTION SYSTEMS, AND STORM DRAINAGE SYSTEMS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HOUSTON'S DEPARTMENT OF PUBLIC WORKS AND ENGINEERING "DESIGN MANUAL, STANDARD CONSTRUCTION SPECIFICATIONS, AND DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING", DATED (NOVEMBER 1, 2008).
- REINFORCED CONCRETE (C76 CLASS III) STORM SEWERS SHALL BE INSTALLED, BEDDED AND BACKFILLED IN ACCORDANCE WITH THE CITY OF HOUSTON'S DRAWINGS 02317-02, 02317-03, 02317-05, 02317-06 AND 02317-07 AS APPLICABLE.
- ALL STORM SEWERS CONSTRUCTED IN SIDE LOT EASEMENTS SHALL BE R.C.P., MINIMUM TWENTY (20) FOOT WIDE EASEMENTS SHALL BE PROVIDED.
- AN ALTERNATIVE TO CEMENT STABILIZED SAND MAY BE USED AS BACKFILL FOR PIPES FIFTY-FOUR (54) INCH AND LARGER, FROM 1-FOOT ABOVE THE TOP OF THE PIPE TO THE BOTTOM OF THE SUBGRADE. CONTRACTOR MAY BACKFILL WITH SUITABLE MATERIAL, PROVIDED THE BACK FILL MATERIAL IS PLACED IN EIGHT (8) INCH LIFTS AND MECHANICALLY COMPACTED TO NINETY-FIVE (95% STANDARD PROCTOR DENSITY. TESTS SHALL BE TAKEN AT ONE HUNDRED (100) FOOT INTERVALS ON EACH LIFT, BEDDING AND BACKFILL TO ONE (1) FOOT ABOVE THE TOP OF THE PIPE SHALL BE COMMENT-STABILIZED SAND.
- ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES OR INLETS ARE TO BE PLUGGED WITH EIGHT (8) INCH BRICK WALLS UNLESS OTHERWISE NOTED.
- THE CONTRACTOR(S) SHALL NOTIFY HARRIS COUNTY PUBLIC INFRASTRUCTURE DEPARTMENT - ARCHITECTURE AND ENGINEERING DIVISION - PERMIT OFFICE TWENTY-FOUR (24) HOURS IN ADVANCE OF COMMENCING UTILITY AND/OR PAVING CONSTRUCTION AT (713) 316-3561 AND WRITTEN NOTIFICATION FORTY-EIGHT (48) HOURS IN ADVANCE OF COMMENCING CONSTRUCTION AT 10555 NORTHWEST FREEWAY, SUITE 146, HOUSTON, TX 77092.
- PAVING SHALL BE IN ACCORDANCE WITH THE "REGULATIONS OF HARRIS COUNTY, TEXAS FOR THE APPROVAL AND ACCEPTANCE OF INFRASTRUCTURE" AND/OR AMENDMENTS OF THE SAME.
- GUIDELINES SET FORTH IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" SHALL BE OBSERVED.
- OWNER OR OWNER'S AGENT TO OBTAIN ALL PERMITS REQUIRED BY THE "REGULATIONS OF HARRIS COUNTY, TEXAS FOR FLOOD PLAIN MANAGEMENT" PRIOR TO STARTING CONSTRUCTION.
- OWNER OR OWNER'S AGENT TO OBTAIN ALL NOTIFICATIONS REQUIRED BY HARRIS COUNTY, TEXAS PRIOR TO STARTING CONSTRUCTION OF UTILITIES AND/OR CULVERTS WITHIN HARRIS COUNTY AND HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHTS-OF-WAY.

AT&T TEXAS/SWBT FACILITIES

- THE LOCATIONS OF AT&T TEXAS/SWBT FACILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL CALL 1-800-344-8377 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LOCATED.
- WHEN EXCAVATING WITHIN EIGHTEEN (18") OF THE INDICATED LOCATION OF AT&T TEXAS/SWBT FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING, THE CONTRACTOR SHALL EXPOSE THE AT&T TEXAS/SWBT FACILITIES.
- WHEN AT&T TEXAS/SWBT FACILITIES ARE EXPOSED, THE CONTRACTOR WILL PROVIDE SUPPORT TO PREVENT DAMAGE TO THE CONDUIT DUCTS OR CABLES. WHEN EXCAVATING NEAR TELEPHONE POLES THE CONTRACTOR SHALL BRACE THE POLE FOR SUPPORT.
- THE PRESENCE OR ABSENCE OF AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES OR BURIED CABLE FACILITIES SHOWN ON THESE PLANS DOES NOT MEAN THAT THERE ARE NO DIRECT CABLES OR OTHER CABLES IN CONDUIT IN THE AREA.
- PLEASE CONTACT THE AT&T TEXAS DAMAGE PREVENTION MANAGER MR. ROOSEVELT LEE JR. AT (713)87-4552 OR EMAIL HIM AT RT25@att.com. IF THERE ARE QUESTIONS ABOUT BORING OR EXCAVATING NEAR OUR AT&T TEXAS/SWBT FACILITIES.

HARRIS COUNTY MUD NO. 191 NOTES:

- CONTRACTOR SHALL CONTACT HARRIS COUNTY MUD NO. 191 DISTRICT ENGINEER, MR. RYAN A. ARD, PE WITH JONES AND CARTER, INC., AT (281)-363-4039, A MINIMUM OF 48 HOURS AND NO MORE THAN 72 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- CONTRACTOR SHALL CONTACT HARRIS COUNTY MUD NO. 191 DISTRICT OPERATOR, MR. HOWARD WILHITE WITH HAYS UTILITY SOUTH, AT 281-353-9809, A MINIMUM OF 48 HOURS AND NO MORE THAN 72 HOURS PRIOR TO COMMENCING CONSTRUCTION TO SET UP AN INSPECTION TO VERIFY DISTRICT'S FACILITIES.
- THE DISTRICT'S OPERATOR SHALL BE NOTIFIED 24 HOURS IN ADVANCE TO WITNESS AND INSPECT THE SANITARY SEWER LINE CONNECTION. NO SANITARY SEWER LINES SHALL BE COVERED IN THE GROUND BEFORE THE DISTRICT'S OPERATOR HAS INSPECTED THE CONNECTION.
- CONTRACTOR SHALL CONTACT THE DISTRICT OPERATOR TO OPERATE ALL VALVES. AT NO TIME IS THE CONTRACTOR OR CONTRACTOR'S REPRESENTATIVE TO OPERATE ANY PART OF THE HARRIS COUNTY MUD NO. 191 WATER SYSTEM.
- ALL CONNECTIONS TO HARRIS COUNTY MUD NO. 191 FACILITIES SHALL BE IN ACCORDANCE WITH THE DISTRICT'S CURRENT RATE ORDER.
- AFTER PLANS AND SPECIFICATIONS ARE APPROVED BY THE DISTRICT, NO CHANGE MAY BE EFFECTED OR PERMITTED, EXCEPT PURSUANT TO WRITTEN CHANGE ORDER APPROVED BY THE DISTRICT. SUCH CHANGE ORDERS SHALL CLEARLY STATE CHANGES TO BE MADE AND THE INCREASE OR DECREASE IN COST EXPECTED THEREBY.
- AFTER CONTRACTS, BONDS, INSURANCE, ETC. ARE APPROVED BY THE DISTRICT, NO CHANGE MAY BE EFFECTED OR PERMITTED, EXCEPT PURSUANT TO WRITTEN CHANGE ORDER APPROVED BY THE DISTRICT. SUCH CHANGE ORDERS SHALL CLEARLY STATE CHANGES TO BE MADE AND THE INCREASE OR DECREASE IN COST EXPECTED THEREBY.

Appendix E
CONSTRUCTION NOTES INVOLVING UTILITIES AND PAVING WORK LOCATED WITHIN A PUBLIC RIGHT-OF-WAY

"NOTIFICATIONS ISSUED BY HARRIS COUNTY PUBLIC INFRASTRUCTURE DEPARTMENT - ARCHITECTURE AND ENGINEERING DIVISION - PERMIT OFFICE - REQUIRED PRIOR TO CONSTRUCTION OF UTILITIES OR LEFT TURN LANES WITHIN HARRIS COUNTY AND HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHTS-OF-WAY." CONTACT HARRIS COUNTY PERMIT OFFICE (713) 316-3590.

NOTES:

- FULL SIZE PLAN SETS ARE REQUIRED TO OBTAIN THE APPROPRIATE C/H PW&E-TYPE PERMITS FOR SUCH WORK AS IS SHOWN ON OR REQUIRED FOR) THESE PLANS, INCLUDING ANY: STREET CUT-LANE/SIDEWALK CLOSURE; TRENCH SAFETY; AND/OR TRAFFIC CONTROL PLAN(S) & THEIR APPLICABLE PERMIT(S) REQUIRED FOR SAID WORK, WHETHER CONTAINED WITHIN THIS PLAN SET OR SUPPLEMENTAL PLAN SHEET(S) (OR SET(S)).
- TREE & PLANT PROTECTION: CONTRACTOR IS TO PRESERVE AND PROTECT EXISTING TREES AND PLANTS FROM FOLIAGE, BRANCH, TRUNK AND/OR ROOT DAMAGE THAT COULD RESULT FROM CONSTRUCTION OPERATIONS AS PER THE CITY OF HOUSTON STREET TREE ORDINANCE AND CITY OF HOUSTON SPECIFICATION 01562, INSIDE OF THE CITY'S EXISTING PAVED PUBLIC ROAD R-O-W'S AND ANY AFFECTED COMMERCIAL B.L. SETBACK AREAS.
- CITY INSPECTOR IS TO CONTACT THE CITY FORESTRY TREE INSPECTOR FOR ANY PROPOSED UTILITY/DRAINAGE WORK ABOUT EXISTING CITY TREES AND BUSHES. SOME LINES' WORK MAY REQUIRE: RE-ROUTING AROUND EXISTING TREES AND BUSHES SHOWN (OR NOT SHOWN) ON THESE PLANS; OR FINANCIAL REIMBURSEMENT FINES &/OR LEVIES FOR DAMAGES TO CITY PROPERTY TO THE CITY.

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

[Signature] Date: 1-20-16
AT&T TEXAS/SWBT FACILITIES
Approved for AT&T Texas/SWBT underground conduit facilities ONLY
SIGNATURE VALID FOR ONE YEAR.

[Signature] Date: 1-20-16
CENTERPOINT ENERGY/NATURAL GAS FACILITIES VERIFICATION ONLY.
(THIS SIGNATURE VERIFIES THAT YOU HAVE SHOWN ONP NATURAL GAS LINES CORRECTLY. NOT TO BE USED FOR CONFLICT VERIFICATION.) (GAS SERVICE LINES ARE NOT SHOWN.) SIGNATURE VALID FOR SIX MONTHS

[Signature] Date: 1-20-16
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.

STATE OF TEXAS
RANA F. MAHMOOD
101163
PROFESSIONAL ENGINEER
Ra
01/19/16

HEIGHTS ENGINEERING LLC
CONSULTING ENGINEERS
7324 SOUTHWEST FWY SUITE 995 HOUSTON, TX 77074
PHONE: (713) 333-0393 FAX: (281) 274-9153
www.HEIGHTSENGINEERING.com

PROP. 8" WATER LINE & 8" SANITARY SEWER
ALONG HARGRAVE ROAD & S.H. 249
TO SERVICE HARRIS COUNTY MUD #191
CONSTRUCTION NOTES
HEIGHTS PROJ. NO. 14-190 DRAWING NO. 14190500
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.:
FILE NO.:
DRAWING SCALE
HORIZ: 1" = NA
VERT: 1" = NA
DRAWN BY: AHS
CHECKED BY: RM
COH LOG# 15-1136
SHEET NO. 2 OF 11

ACCEPTED AND FILED
55439
CITY DRAWING NUMBER

AS-BUILT