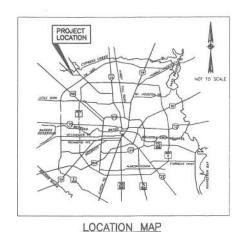
NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY PROJECT 28-B

PROPOSED 60" AND 54" WATER LINE ALONG GRANT ROAD AND COPELAND ROAD





VICINITY MAP



TEXAS WATER

DEVELOPMENT BOARD

REVIEWED Mathing young P.E.

APPROVED Mathing grang P.E.

DATE: May 21, 2020

GENERAL MANAGER

JIMMIE SCHINDEWOLF, P.E.

BOARD MEMBERS

ALAN J. RENDL KELLY P. FESSLER LENOX A. SIGLER RON GRAHAM JAMES D. PULLIAM 48 Hour Notice: Contractor shall notify Harris County prior To Commencing Construction and/or Backfilling any utilities. Contractor(S) to contact Public Review Department @ (713-274-3931) or public review@hcpid.org

A Notification issued by HC Infrastructure Department-Permits Office- is required for proposed work within Harris County Right-of-Way. The project must be approved prior to obtaining the required Notification. A Notification must be obtained separately from a site development permit package. For additional information please visit: http://hcpid.org/permits/ pr_notification_of_construction.html or contact Public Review Inspections Department @ (713)274-3931

*Construction in Harris County Flood Control District right-Of-Way

Site plans must be approved prior to obtaining the required HCFCD Right-of-way Notification. Be advised that the HCFCD Right-of-way Notification is separated from the site development permit package

- 1.) HCFCD Right-of-Way Notification (permit)
- 2.) HCFCD 48-hr Pre-Construction Notice

Both are required prior to entering or working within Harris County Flood Control District right-of-way. The HCFCD Right-of-Way Notification and 48-hour notice must be provided to HCFCD at decid@hcfcd.org.

To apply for the HCFCD Right-of-Way Notification please go to http://apps.harriscountytx.gov/EPermits and apply for the HCFCD ROW under ROW Notification.

Failure to provide both items could result in project delays.



CENEDAL MANAGED MORTH HARRIS COUNTY REGIONAL WATER AUTHORITY

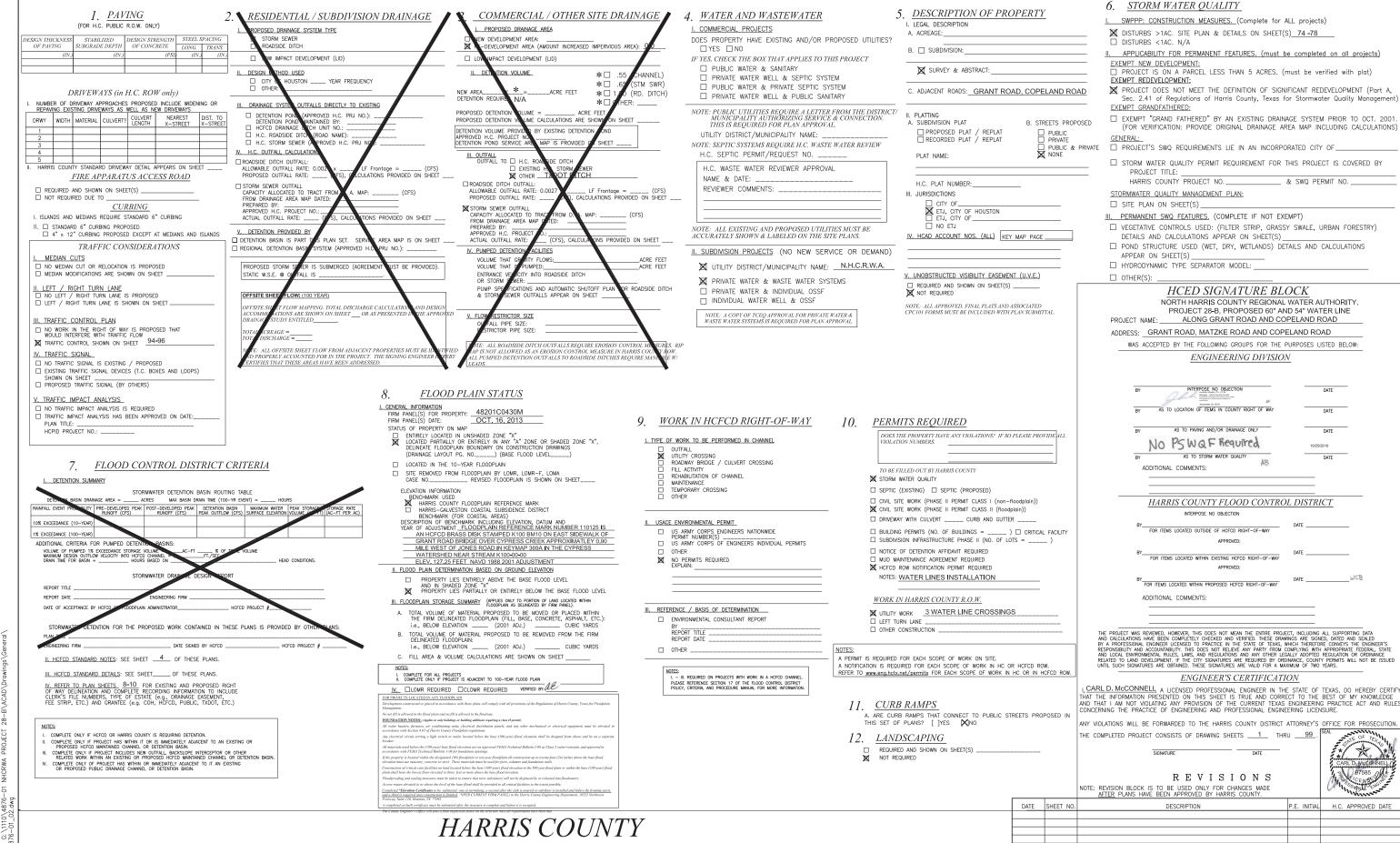
REF. NO.

OF

of 99

ISSUE DATE: MAY, 2020

REVISION DATE: 1/12/17



VERSION 13.0 JANUARY 20, 2016 ENGINEERING DEPARTMENT REVIEW SHEET

SHEET NUMBER $_2$ OF 99ARRIS COUNTY PROJECT NO. 1810010060

- CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING FACILITIES PRICE TO CONSTRUCTION OF PREPOSED FACILITIES. ANY SHAME TO EXISTING FACILITIES, INCLUDING POLIC OR PRIVATE UTILITIES, INCURRED AS A RESULT OF CONSTRUCTION EPERATIONS SHALL OF REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- CENTRACTOR SHALL VERBY LIEATION OF UNDERGROUND UTILITY LINES AND SHALL NOTIFY THE FOLLOWING AGENCIES 48 HOURS PRIOR TO EKCAVATING MEAR EXISTING FACILITIES
- AD TEXAS (INC CALL SYSTEM AT 1-800-845-4545 BD LONE STAR MODERICATION CONTER AT 703-823-4567 CD TEXAS EXCAVATION SAFETY SYSTEM (NC. AT 1-800-344-8377
- CONTRACTOR SHALL SCAPEY WITH ALL FEDERAL, STATE, AND LUCAL LAWS AND ALL REGREATIONS OF UTILITY COMPANIES CONCERNING SAFETY
- 5 OWNER SHALL PERFORM INSTAL LABORATORY TESTS. SUBSEQUENT TESTING OUR TO FAMILED DENSITIES SHALL BE AT CONTRACTOR'S EXPENSE. A COPY OF ALL TEST RESULTS SHALL BE SUBMITTED TO THE PROJECY HANAGER.
- CONTRACTOR SHALL REMOVE ALL MUD, DIRT AND DEBRIS BEPOSITED OR DROPPED ON EXISTING PAVEMENT BUE TO HIS CONSTRUCTION ACTIVITY DASEY, MATERIAL THAT IS HAZARDOUS TO TRAFFIC SHALL BE REMOVED
- THESE PLANS DO NOT EXTEND TO DR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED PROFESSIONAL EMBINEERS) HEREON DOES NOT EXTEND ITS AND SUCH SAFETY SYSTEMS THAT MAY NEW OR HEREAFTER BE INCORPORATED IN THESE PLANS. THE CONTRACTOR SHALL PREPARE OR DETAIN THE APPROPRIATE
- B. CONTRACTOR STALL PROTECT ALL TREES ADJACENT TO WORK AREA. NO TREES DUTSION THE WORK AREA SHALL DO REMOVED WITHOUT PERMISSION OF OWNER.
- CONTRACTOR SHALL GIVE MOTICE TO ALL AUTHORIZED IMPRESTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTELITIES OR RATLEDDS AFFECTED BY HIS OPERATIONS PRIER TO COMMENCEMENT OF VORK, CONTRACTOR SHALL CRIMIN ALL CONSTRUCTION PERMITS PRIOR TO STARTING CONSTRUCTION
- TO CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY REGULATION DI HARRIS COUNTY, TEXAS FOR FLIXED FLAIN HANAGEMENT PRIOR TO STARTING
- 1). CONTRACTOR WILL OBTAIN ALL PERMITS REQUIRED BY HARRIS COUNTY, TEXAS PRIDE TO STARTING CONSTRUCTION OF UTILITIES AND/OR COLVERIS WITHOU CHANTY HOAD RIGHTS-EF-WAY, IF APPLICABLE.
 - NOTE: AUTHORIZATION MOTICE ISSUED BY HARRIS COUNTY PUBLIC INFRASTRUCTURE ENGINEERING DEPARTMENT PERHIT OFFICE REQUIRED PRIDE TO CONSTRUCTION OF UTILITIES OR LEFT TURK LANES WITHIN HARRIS COUNTY RIGHT OF WAY. CONTACT HARRIS COUNTY PERMIT OFFICE (713-956-3000).
- AUTHORITY (201-440-3924) AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION.

VATER LINE CONSTRUCTION NOTES

- CONTRACTOR SHALL ALLOW A HINDRON OF 2-FOOT VERTICAL AND 4-FOOT HORIZONTAL CLEARANCE SETWERN PROPRIES OWNER CLASS AND OTHER UTILITIES UNLESS OTHERWISE SHOWN ON PLANS. IF EXISTING UTILITIES ARE FOUND IN A LOCATION OTHER THAN WHERE SHOWN ON PLANS AND MUM SEPARATION DISTANCE CAN NOT BE WET, CONTRACTOR SHALL NOTIFY
- 2 SEPARATION DISTANCES FOR DISTALLATION OF POTABLE MATER DISTRIBUTION LINES AND VANIEVATER COLLECTION LINES, VASTEVATER FIREC MAINS AND OTHER CONVEYANCES/APPURTENANCES IDENTIFIED AS POTENTIAL SOURCES IF CONTAKINATION MUST CONFORM TO CORRENT COMMISSION (TCCO) RULES.
- ALL WATER LINES WITHIN THE DEDISATED EASEMENTS SHALL HAVE A HIMMAN A-FOOT COVER FROM THE NATURAL GROUND.
 ALL WATER LINES WITHIN THE RIGHT OF WAY (ROW) WITH IMPROVED READWAY SHALL HAVE A KINIMUM 6-FORT COVER FROM THE EXISTING (IX PROPERCED FOR OF CURS LITES.

 ALL VATER LINES WITHIN THE ROW WITH UNIMPREVED ROADVAY SHALL HAVE A MINIMUM 8-FOOT COVER FROM THE NATURAL GROUND.
- 4. CONSTRUCT WATER LINES WITH DME JUINT OF PIPE BEYOND VALVES AND PLUG FOR FUTURE LINES, UNLESS SHOWN ON PLANS ITHERWISE.
- 5. VALVES SHALL BE EDUSTRES WITH EXCRATSING MIT EXTENSIONS TO WITHIN FOUR FEET OF NATURAL GROUND. 6. BACKFILL OF EXISTING STORM SEVERY WHEN CROSSING AN EXISTING STORM SEVER
- USING THE DEEM OUT METHOUS THE MATER THAT REACH ZONE SHALL BE BACKFILLER FOR 3 TO 5 FEET ETHER SIDE ITHE SIDEM SEVER WITH CEMENT STABILIZED SAND TO THE STORM SEVER. 7. ALL VATER COMES RE-INCHES AND SHAPLER SHALL BE PVC PEPC OR PROTECT
- B. ALL WATER LINES 24-INCHES TO BE-INCHES SHALL BE PRESTRESSED CONCRESS CHAINGER PIPE, BAR-WRAPPED CONCRETE CYLINDER PIPE, STEEL PIPE, DICTRE IREN PIPE, OR PVC PIPE.
- 9. ALL WATER LINES DE-INCHES AND LARGER SHALL BE PRESTRESSED COMPRETE CYLINDER PIPE OR STEEL PIPE.

CONTRACTOR WORK ZONE NOTES

- BRIVEVAY ACCESS WILL BE MAINTAINED OPEN AFTER WIRKING HEARS. A MAINMAN OF ONE DRIVEWAY ACCESS WILL BE MAINTAINED OPEN AT ALE, TIMES TO COMMERCIAL, APARTMENTS, AND/OR HON-RESIDENTIAL
- 8. THE LEMBIN OF THE WORK ZONE MUST BE MINIMIZED WITHIN THE HARRIS COUNTY ROW OR PASEMENTS. THERE SHALL NOT BE MORE THAN 200-FEET OF "REPORT SYEN AT ANY ONE THEE, THE CONSTRUCTION ZONE WILL BE A RELLING CONSTRUCTION ZONE WITH APPROPRIATE TRANSITIONS ON EACH END UNLESS DIMERVISE SHOWN IN PLANS AND SPECIFICATIONS.
- SIGNALIZED INTERSECTIONS: LAMES VILL NOT BE CLESTED AT A SIGNALIZED INTERSECTION, LANCESS APPROVED BY THE COURTY ENGINEER AND SHOWN BY THE PLANS AND SPECIFICATIONS.
- TEMPORARY PAVEMENT MARKERS: TEMPORARY SPOXY-GLIED SOTTING OR "CONSTRUCTION GRADE" TAPE PAVEMENT MARKERS SHERLD BE ISSN ON PERMAMENT PAVEMENT TO ELIMINATE GRINDING AND SCARRING OF THE
- PEDESTRIAN TRAFFICE CARE SHALL BE TAKEN THE PROVIDE FOR TEMPORARY PEDESTRIAN TRAFFIC AND CROSSING AT AREAS SUCH AS SCHOOLS, PARKS,

SANITARY SEVER CONSTRUCTION NOTES

ALL SANITARY SEVER MODIFICATION OR REPAIRS SHALL BE IN ACCORDANCE WITH TOER RULES AND REGULATIONS AS CURRENTLY AMENDED CONTRACTOR SHALL MOTIFY PROJECT MANAGER OF ANY NEED FOR MODIFICATIONS OR REPAIRS TO EXISTING SANITARY SEWERS.

STORM WATER QUALITY PRE-CONSTRUCTION INSPECTION REQUIREMENTS

DECCENTRACTOR SHALL CENTAUT THE HARRIS CREATY STORM WATER CHARLITY PERMITTING SECTION AT 7:3-956-3000 FOR A PRE-CONSTRUCTION INSPECTION PRIOR TO COMMENCING ANY CLEARING OR CONSTRUCTION

STORM SEVER CONSTRUCTION NOTES

- ALL STORM SEVERS SHALL BE INSTALLED IN ACCORDANCE WITH HARRIS COUNTY RULES, REGULATIONS AND REQUIREMENTS, AS CURRENTLY AMENDED.
- ALL STORM SEVER MANNELE RIMS LOCATED BUTSIDE THE PAVES AREAS SHALL BE SET TO MATCH FINISHED SROUND ELEVATION.
- ALL STORM SEVERS AND LEADS SHALL BE RUDGERGED COMPRETE PIPE RCPPLEASS ILLASSIM, C76), VSIH RUBBER GASKET JULINIS (ASTM C443), LALESS DIHERWISE METED ON PLANS.
- ADEQUATE BRAINAGE 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. ALL CHNSTRUCTION STORK RUMOFF SHALL COMPLY WITH THE STIDEN WATER HANAGENIT HANDERDE FOR CONSTRUCTION ACTIVITIES AS PREPARED BY HARRIS COUNTY, INCFO AND THE CITY OF REGISTRY AND SHALL SE IN COMPLIANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (APDES) RECORREMENTS.

PAVING CONSTRUCTION NOTES

- CONCRETE PAVEMENT TO BE CONSTRUCTED IN ACCORDANCE WITH HARRIS COUNTY RILES, REGULATIONS AND REQUIREMENTS, AS CHRRENICY AMENDED.
- ALL ROAD WIDTHS, CURB RADII AND CLRVE ALIGNMENT SHOWN INDICATE BACK OF CURB. T.C. DIDICATES TOP OF CURB ELEVATION AND T.P. INDICATES TOP OF PAVENENT ELEVATION.
- 3. CONTRACTOR SHALL USE CONTINUEDS LONGITUDINAL REINFORCING BAR FOR
- 4. SUBSPACE STABILIZATION SHALL BE PERFORMED AS PER SYMBARD SPECIFICATIONS AS ESTABLISHED BY LABORATORY TESTING IF SUBGRADE
- 5. VHERE PROPOSED PAVEMENT IS TO MATCH EXISTING PAVEMENT, EXISTING REBARS OF DIVELS PROJECTING FROM EXISTING PAYMENT TO BE CLEANED AND THE BYTO PROPOSED PAYMENT, IF NO RESPONDED STEEL CUSTS, USE HORIZINTAL DOWELS, KOMIZINTAL BOWELS SHALL BE 46 BARS, 24 INCHES LONG, BRILLED AND EMBEDDED B INCHES DATO THE CENTER OF THE EXISTING SLAB WITH "PE RDC" OR EQUAL AT 18 INCHES SENTER TO

CYPRESS-FAIRBANKS INDEPENDENT SCHOOL DISTRICT (CFISD) WATERLINE & TEMPORARY CONSTRUCTION EASEMENT AGREEMENT NOTES

- LINE AUTHORSTY AGREES TO PERFORM SHE PREMARY WATER LINE CONSTRUCTION, SUCH AS TREMEN EXCAVATION, CAYING SHE PIPE, AND FILLING SHE TREMEN WITH SOIL, WHEN SCHOOL IS NOT IN
- REXCEPT FOR EMERGENCY SITUATIONS, NO OPEN EXCAVATION WILL DOCUM DURING THE DAY WHILE
- BLANY GPEN EXCAVATION WILL BE SECURED BY COVERING WITH STEEL PLATES OR STARDUNGED WITH TEMPORARY FENCING BY THE CONTRACTOR AT THE END OF CACH VORK DAY.
- A-FINAL GRADING, VEGETATION RESTORATION AND UNDERGROUND TESTING VIAL TAKE PLACE AFTER PRIMARY WATER LINE CONSTRUCTION HAS DECURRED AND MAY TAKE PLACE BURNING PERIODIS WIEN SCHOOL, IS IN SESSION, PROJUDIED THERE IS NO INTERRIPTION TO MAY SCHEEL DEPARTION
- S. JORN AREAS ALONG THE COMMON PROPERTY LINE WITH THE MARRIS COUNTY PARK WELL HAVE TEMPORARY CONSTRUCTION FENCING ALONG 301H SIDES OF THE EASEMENT DURANG CONSTRUCTION A FEMPORARY CONSTRUCTION OF FENCING ALONG THE SCHUÖL SIDE OF THE CASCREN' ALONG COPELAND DRIVE. TEMPORARY FENCING ALONG THE SCHUÖL SIDE OF THE CASCREN' ALONG COPELAND DRIVE. TEMPORARY FENCING ALONG THE SCHOOL OF WAY STORY THE REINSTRUCTION.

STANDARD HOFOD NOTES FOR CONSTRUCTION DRAWINGS

- Obseta and comply with all applicable City, County, State, and Federal pointies and approvals, with fastistance force Regionar, I incornery, Obtain partitic (cartification) times. Hards County Edginger's enter Henris County Flood County District right-of-way.
- Notify the black Councy Flood Captrol Dignita's Development Coordination and languartest Department in writing at least 48 hours prior to construction. Submit the respective temperature in virtual as team as bound price to constitution, automation of RCPCO, 88 Hays for the Constitution Resilication forth, a supply of the apparent constitution despitable, and a oney of the Corps of Engineers individual Section 648 Portic or compliance wide Netheronic Paranti, if applicable, to MCPCO, 1998 Northwest Francisco, Housian, Team 17982, Artin Development Conditioning and Engineers Conditioning and Engineers Conditioning and Engineers Conditioning or fact to 713-684-8128
- Engineer chail eibmin certification into and resent drawings to the Herris County Flood Control District's Development Coordination and Inspection Section requesting inspection of inerts committed in Harris County Flood County District right-of-way. Proc to requesting inspection, the drainage right-of-way and/or executants shall be staked and
- 4. Protect, maintain, and restore existing backslope declarge systems
- 5. Sankatope ameli; and interceptor attreture elevations and inquiries alsons on pizza are approximate. Final elevations and locations shall be field verified by the Engineer prior to
- Metablish turf grans on all disturbed stress within the closured or defaution rigid-of-way,
 except the charged bootsm and where structured crosses recogners are used. Minimum
 exceptance critical are 75% coverage of live Bermuda grass and no enterior or rule deeper
- Perform all audivition within Harris County Flood Control District right-of-way in accordance with the must special Hartis County Flood Control District Standard Specifications Book.
- 8. Successes channel therefore to destign elevation as aboved on plans and decreations, as housevery, to andre on visite remains in the facility (action never), fessood channel, or dry bottom despected basis) undue named water surface conditions in the channel, so the facility will function as intended. For vest homore detention basius, conuce no water is above
- 9. Ministria flow in charged during construction and restore charges to original condition.
- ii) Remove all sucqueted material from the fiatrin County Flore: Crusted Distance or thainings right-of-way. Not till is as be planed within a designment flood plain area witerus first obsoluting a fill parmit from the appropriate jurisdictional authority.

Harris County Forod Charal District Policy, Cottoria, and Procedure Manual

TEXAS WATER DEVELOPMENT BOARD NOTES

PRIOR TO CONSTRUCTION WITHIN A 100-YEAR FLOCIEPLAIN, A FLOCIEPLAIN PERMIT OR WALVEST HIST BE USTAINED FROM THE LOCAL FLOCIEPLAIN ADMINISTRATOR CTARD Project No. 258780) ONAYERNAL FLESSE INSURANCE PROGRAM).

AS PER AGREEMENT WITH THE TEXAS PARKS AND VILBIDE BEPARTMENT AND TO ENSURE COMPLIANCE WITH THE MIGRATORY BIRD TEEATY ACT, CLEARING WILL BE CONDUCTED BUTSIDE THE MIGRATORY BIRD NESTING SEASON WHERE POSSIBLE IF CHARMS MUST BE PERFORMED DURING MISTING SEASON WHARCH STOM A SEPTEMBER ISTON, NEST SURVEYS WILL BE CONDUCTED PRIOR TO CLEARING, AND A 25-FDAY BUTSIN FOR VILL BE STABLISHED ARRAND ANY GENERVED ACTIVE MESTS UNTIL THE YOUNG HAVE FLEDGED.

THE DUNCE VILL COMPLY WITH THE TERMS AND CONSISTENCE OF THE LS. ARMY CORPS OF EMBREERS' NATIONATION FERRIT 12, UTILITY LINE ACTIVITIES DURING CONSTRUCTION OF THE PROPOSED PIPELINES, 198 PROLECT IS SESSIONED BURNES CONSTRUCTION ACTIVITIES SHOULD NO SERVICE PROLECT SHOULD NO SERVICE ACTIVITIES SHOULD NO SERVICE ACTIVITIES SHOULD BE STATES, DECLIONING WITHARDS, POR EACH SINGE AND COMPLETE PROLECT. SIZE—CASSED EARTHEN MATERIAL SERVICES FROM REACH EXCAVATION IS NOT ANTICIPATED TO DEFFERS. PRICE PROLECT SIZE PROSED AREAS SESSITION FROM CONSTRUCTION ACTIVITIES WILL BE STRUCK SIZE SHOULD SERVICE PROLECT SIZE CASSED AS PRACTICABLE, AND SUPPACE CONDITIES WILL BE STRUCKED FOR CONTINUED OF SECONDARY OF SERVICE SHOULD SHE WAS POSSIBLE. SHOULD SIZE AND SUPPACE SHOULD SHE SHOULD SHE WAS POSSIBLE SHOULD SHE WAS PROVIDED SHOULD SHOUL AVAIT PERMIT AUTHORIZATION PRIOR TO INITIATING PROLECT CONSTRUCTION

THE DUNER HAS PREVENDESLY COMPRIBATED WITH THE APPROPRIATE AGENCIES AND DWARTS TO KNOW COLTURAL OR ARCHERIDGICAL DEPOSITS HAVE SEEN AVOIDED OR MITGATED HOWEVER, THE CONTRACTOR MAY EMCOUNTER CHANTICIPATED OR MITGATED HOWEVER, THE CONTRACTOR MAY EMCOUNTER CHANTICIPATED OR HISTORIC STRUCTURES VICION BURIND CONSTRUCTION. A RACHERIDGICAL SITES OR HISTORIC STRUCTURES VICION HAV DURLEY FIR DISTORATION AS A STATE ARCHERIDGICAL LANDWARM ACCIDENDAY OF THE MITGATE AND IS LOCAMPERE FOR THAT MAY BE ELICIPLE FOR LISTING OR THE MATIBINAL REGISTRE OF HISTORIC PLACES IN ACCORDANCE WITH AS STRUCTURE DISSORDED AFTER CONSTRUCTION OPERATIONS ARE BEGIN, THE CONTRACTOR SHALL IMMEDIATELY CONSTRUCTION OPERATIONS ARE BEGIN, THE CONTRACTOR SHALL DIMEDIATELY AND THE TEXAS HISTORICAL COMMISSION, 151 IN COLDAND ST. P. O. BOX 12276. CAPTIOL STRUCTURE, THE CONTRACTOR SHALL THAT HAVE BECK RESPONDED TO PRODUCT AND PRESIDENCE BY DISCOVERIES UNTIL THEY HAVE SEEN RESPONDED THAT WE ARE MOST WITH THE VIRE THE TURB. THE TURB THE PROPERTY COORDINATE WITH THE STATE HISTORIC PRESERVATION DEFICER AND ANY THEM APPROPRIATE AGENCIES TO BUSINESS PRESERVANT OF THE TURB. THE SAML MITTER SAME OF THE STATE HISTORIC PRESERVATION DEFICER AND ANY THINK APPROPRIATE AGENCIES TO BUSINESS PRESERVANT OF THE STATE HISTORIC PRESERVATION DEFICER AND ANY THINK APPROPRIATE AGENCIES TO BUSINESS PRESERVANT OF THE STATE HISTORIC PRESERVATION DEFICER AND ANY THINK APPROPRIATE AGENCIES TO BUSINESS PRESERVANT OF THE STATE HISTORIC PRESERVATION DEFICER AND ANY THINK APPROPRIATE AGENCIES TO BUSINESS PRESERVANT OF THE STATE HISTORIC PRESERVANT OF THE STATE HISTORIC PRESERVATION DEFICER AND ANY THINK APPROPRIATE AGENCIES TO BUSINESS PRESERVANT OF THE STATE HISTORIC PRESERVATION DEFICER AND ANY THINK APPROPRIATE AGENCIES TO BUSINESS PROPERTY OF THE STATE HISTORIC PRESERVATION DEFICER AND ANY THE AREA OF THE DISCOVERY ONTO. ANTHERIZED TO DE SOUND THE THE PROPERTY OF THE DISCOVERY ONTO.

ND ACTIVITY IS AUTHORIZED THAT IS LIKELY TO DEOPARDIZE THE CONTINUED EXISTENCE OF A THREATENES OF ENDANGERED SPECIES AS LISTED OR PROPERSED FOR LISTING UNDER THE FEDERAL ENDANGERED SPECIES ACT (ESA), AND/OR THE STATE OF TEAS PARKS AND VEILLIFE COLDE ON ENDANGERED SPECIES, OR TO DESTROY OR ADVERSELY WODEY THE HABITAT OF SUCH SPECIES, IF A THREATENED SPECIES IS CONCINITIONED DRIVING CONTROLLING SIGNAL INFORMATION OF THE HABITATION OF THE ENDANGER SPECIES OF THE SECRETARY OF ADMINISTRATIVE THAT AND MILITY THE UNDER, WHO WILL DISCUSSE STATE STATULES WHIST ACTIONS AND INCOMPANCE UTH THE SAA AND AVAILABLE STATE STATULES WHIST ACTIONS AND INCOMPANCE UTH THE SAA AND AVAILABLE STATE STATULES WHIST ACTIONS THE SECRETARY OF THE THE SATULES OF THE UNDER SHOULD HELDER PROPERTION THE ENCOURAGE OF THE UNDER JIE US. SHOWN ONLY DEVELOP THE THE THAT AND THE TEXAS PARKS AND VIRILIFE REPARTMENT, URTANDED AND VIRILIFE SECRETARY APPROVALS OR PERMITS TO SHABLE THE WORK TO CONTROLLING DEPLEMENT OFFER MITTANTON ACTIONS. THE CONTRACTOR SHALL NOT RESULTED THE WITH A THE ACTION THE ENCOURAGE SHALL NOT RESULTED THE WITH A THE ACTION THE ENCOURAGE WHICH AND THE ENCOURAGE SHALL NOT RESULTED THE WITH A PAREA OF THE CONTRACTOR SHALL NOT RESULTED THE WITH A PAREA OF THE ENCOURAGE SHALL NOT RESULTED THE WITH THE AREA OF THE ENCOURAGE WHICH AND THE EXCLUSION OF THE MITTANTON THE ENCOURAGE WHICH AND THE AREA OF THE ENCOURAGE WHICH AND THE AREA OF THE ENCOURAGE SHALL NOT RESULTED TO THE WITH A PAREA OF THE ENCOURAGE WHICH AND THE AREA OF THE ENCOURAGE WHICH AND THE AREA OF THE ENCOURAGE.

CENTERPUINT ENERGY (GAS FACILITIES)

- 1. CONTRACTOR SHALL NOTIFY CONTERPOINT ENERGY GAS AT CORD 672-4896. AFTER CINCOVERING ANY GAS LINES MIT SHOWN IN THESE DRAWINGS. GAS LINES SHALL NOT BE DISTURBED BY THE CONTRACTOR WHITE. CENTERPOINT ENERGY GAS HAS VERIFIED THE STATUS BY THE LINE AND APPROPRIATE ACTEM APPROVED.
- 2. LEGATION OF CENTERPRINT ENERGY HARM LINES CTO ENCLUDE CENTERPRINT CHERGY, INFRASTATE PIPELINE LLC VIERGE APPLICABLE ARE SHOWN IN AN APPROXIMATE LOCATION DRLY, SERVICE LINES ARE ISUALLY NOT SHOWN. DUR SIGNATURE OR THESE PLANS DRLY INDICATES THAT OUR FACILITIES ARE SHOWN IN APPROXIMATE LOCATION.
 IT BEES NOT DIPLY THAT A COMPLICY ANALYSIS HAS BEEN MADE.
 THE CHNINACTOR SHALL CONTACT THE UTILITY COMPRISED COMMUNIC COMMUNICS.
 AT 150 0001 000 000 000 A HUMBER OF 89 HEARS. -1-80 545 PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD
 - WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT (#13-107-5463)
 STATUS OF LINE LOCATION REQUEST REFORE EXCAVATION REGIONS.
 - WHEN EXCAVATING WITHON EXCHTER INCHES (18") OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION HUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES
- EXCAVATION PROCEDURES

 VIAN CENTEMPORT PROFIT FACILITIES ARE CXXXXXXX

 SUFFICIENT SUPPORT MIST BE PROVIDED TO THE FACILITIES TO
 PROVENT EXCESSIVE STRESS ON THE PIPPING

 FOR SMITH SUPPLY RESPONSIBLE FOR ANY DAMAGES CAUSED

 VIAN FALLER TO EXACTLY LOCATE AND PRESERVE THESE
- CENTERPOINT ENERGY GAS ASSIMES NO RESPONSIBILITY FOR THE DUNIERSHIP OR THE ACCURACY OF THE ABANDONED GAS LINES SHOWN ON THESE PLANS. THE CONTRACTOR SHALL NUTLEY CENTERPOINT ENERGY GAS AT (28) 672-4936 AFTER EXPESSING ANY ABANDONED OR ACTIVE GAS LINES. THE GAS LINES SHALL NOT BE DESTURBED BY THE CONTRACTOR UNTIL CENTERPORAT EXERGY GAS HAS VERIFIED THE STATUS OF THE LINE.

SBC FACILITIES

- THE LOCATIONS OF SEC FACILITIES ARE SHOWN IN AN APPROXIMATE WAY DNLY. THE CONTRACTOR SMALL DETERMINE THE EXACT LOCATION SETORE COMMENCING WORK. HE AGREES TO BE FIRLY RESPONSIBLE FOR ANY AND ALL DAMAGES. WHICH HIGHT BE DESANDAND BY HES FAILURE TO EXACTLY LOCATE AND PRESERVE
- 2. THE CONTRACTUR SHALL CALL 1-800-344-8377 A MINIMUM OF 48 HIGHS PRIDE TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LICATED.
- 3. WHEN EXCAVATORS WITHIN EIGHTEEN INCHES (181) OF THE DIBICATED LECATION OF SEC FACILITIES, ALL EXCAVATIONS MIST BE ACCOMPLISHED. USING NIM-MECHANIZED EXCAVATION PROCEDURES. WHEN BERING, THE CONTRACTOR SHALL EXPUSE THE SEC FACILITIES.
- A. WHEN SEC FACHLITIES ARE EXPOSED, THE CONTRACTOR WILL PROMINE SUPPORT TO PREVENT DAMAGES TO THE CONDUCT DUCTS OR CABLES, WHEN EXCAVATING MEAR TELEPHONE POLES, THE CONTRACTOR SHALL BRACE THE POLE FOR SUPPORT

UTILITY NUTES CENTERPOINT ENERGY (ELECTRICAL FACILITIES)

- OVERHEAD LINES MAY EXIST ALDNG THE PROJECT ROUTE. WE HAVE HET ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE. CONTRACTOR SHALL LOCATE THEM PRIOR TO BESINNING ANY CONSTRUCTION, TEXAS LAW, SECTION 752, MEALTH AND SAFETY CORE, FORBIES ALL ACTIVITIES IN WHICH PERSING BE THRIES HAY COME WITHIN SIX (6) FEET OF LIVE BYERNEAD HIGH VOLTAGE LINES, PARTIES RESPONSIBLE FOR THE LINES LINESUPPRINCES, FARE LEGALLY RESPONSIBLE; FOR THE SAFETY OF CONSTRUCTION WERKERS LANGER THIS LAW, THIS LAW CARRIES BUTH CRIMDIAL AND CIVE LIABILITY, TO ARRANGE FOR LINES TO BE URNED OFF OR REMOVED CALL "CENTER POINT" ENERGY AT
- 2. CENTRACTOR SHALL COORDINATE WITH CENTERPOINT ENERGY ELECTRIC BEFORE VERKING WITHON TON (IO) FEET OF INVENEUD POWER LINES.
 CONTACT CENTERPOINT ENGINEY ELECTRIC REPRESENTATIVES AT
 (713) 207-7777 DR (713) 923-9292 FOR PELES TO BE BRACED AND LINES TO BE DE-ENERGIZED AND/OR HEVED. CONTRACTOR SHALL BE RESPONSIBLE TO "CENTER PRINT" ENERGY ELECTRIC FOR ANY COSTS ASSOCIATED WITH BRACING OF POWER POLES OR DE-EMERGIZING AND/OR MOVING ANY CLRELICTING
- TO STAKE CENTEMPHINT CHERGY CLECTRIC UNDERGROUND FACILITIES, PLEASE CALL
 THE LONG STAR INFORMATION CENTER AT (7/3) 223-4567, OR TOLL FREE AT
 (800 569-8344, AT LEAST 48 HOURS SUFFIRE STARTING EXCAVATION.
- PRIVATE INDERGRAND ELECTRICAL FACILITIES MAY EXIST IN THE AREA AND THESE WILL NOT BE STAKED BY CENTERPOINT ENERGY SLECTRIC PERSONNEL.

ACTIVITIES ON OF HERS CONTRADIUS THERE OF THE OR THROUGHT ENDERLY IN HARDINE TO USE CENS OR DELINY CONTRE BUT FEE UP EMPIRED PROJECTY IF SIZEN. IF YOU NEED TO USE CHATELETHY PROJECTY, PLEASE COURS ONE SURESPONDE FIGHT OF WHY CIVISTON AT (713) 207-6348 or (243) 204-5769.

ATET TEXAS/SWBT FACILITIES

- THE LOCATIONS OF ATET TEXAS/SWET FACELITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL BETERMINE THE EXACT LOCATION BEFORE COMMENIES VOICE. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE COCASIONED BY THIS FALLURE IT EXACTLY LIKEATE AND PRESERVE THESE UNDERGROUND UTILITIES.
- 2. THE CONTRACTOR SHALL CALL 1-800-344-8377 (TEXAS BIL) A MINIMUM 197 48 HOURS PRIDE TO CONSTRUCTION TO HAVE UNBERGROUND LINES FIELD LOCATED.
- WHEN EXCAVATING WITHIN EIGHTEEN INCHES (187) OF THE INDICATED LOCATION OF ATAT TEXAS/SVET FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING MEN-MECHANICED EXCAVATION PROCEDURES. WITHIN MIKING, THE CONTRACTOR SHALL EXPOSE THE ATAT TEXAS/SVET FACILITIES.
- 4. VHEN AT&T TEXAS/SVBT FACILITIES ARE EXPOSED, THE CONTRACTOR VILL PROVIDE SUPPORT TO PREVENT DAMAGE 70 TH COMBUST DUCTS OR CABLES. WHEN EXCAVATION NEAR FELEPHONE POLES THE CONTRACTOR SHALL BRACE THE POLE FOR SUPPERT.
- THE PRESENCE OR ABSENCE OF AT&T TEXAS/SWAY ENDERGRIDEND CONDUIT FACILITIES OR BURIED CABLE FACILITIES SWUNN ON THESE PLANS DIES HOT MEAN THAT TAKES ARE HE DIRECT BURIED CABLES OR LITHER CABLES IN CONDUIT IN THE AREA.
- PLEASE CONTACT THE ATAT TEXAS DAMAGE PREVENTION HANAGER RODSEVELT LEE UR. AT (7137657-4556 DR E-MAIL HOR AT RL72598ATT.COM, IF CABLE LOCATE REQUESTS) ARE NOT COMPLETED FOR DUR ATAT TEXAS/SURT FACELITIES.

PRIVATE UTBUTY LINES SHOWN arch J-23-10 The real company of the state of the set of 201-22-20 The Angelous of Waterpround country forther of HI C COM 1-23-20

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NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY PROJECT 28-B PROPOSED 60" AND 54" WATER LINE ALONG GRANT ROAD AND COPELAND ROAD

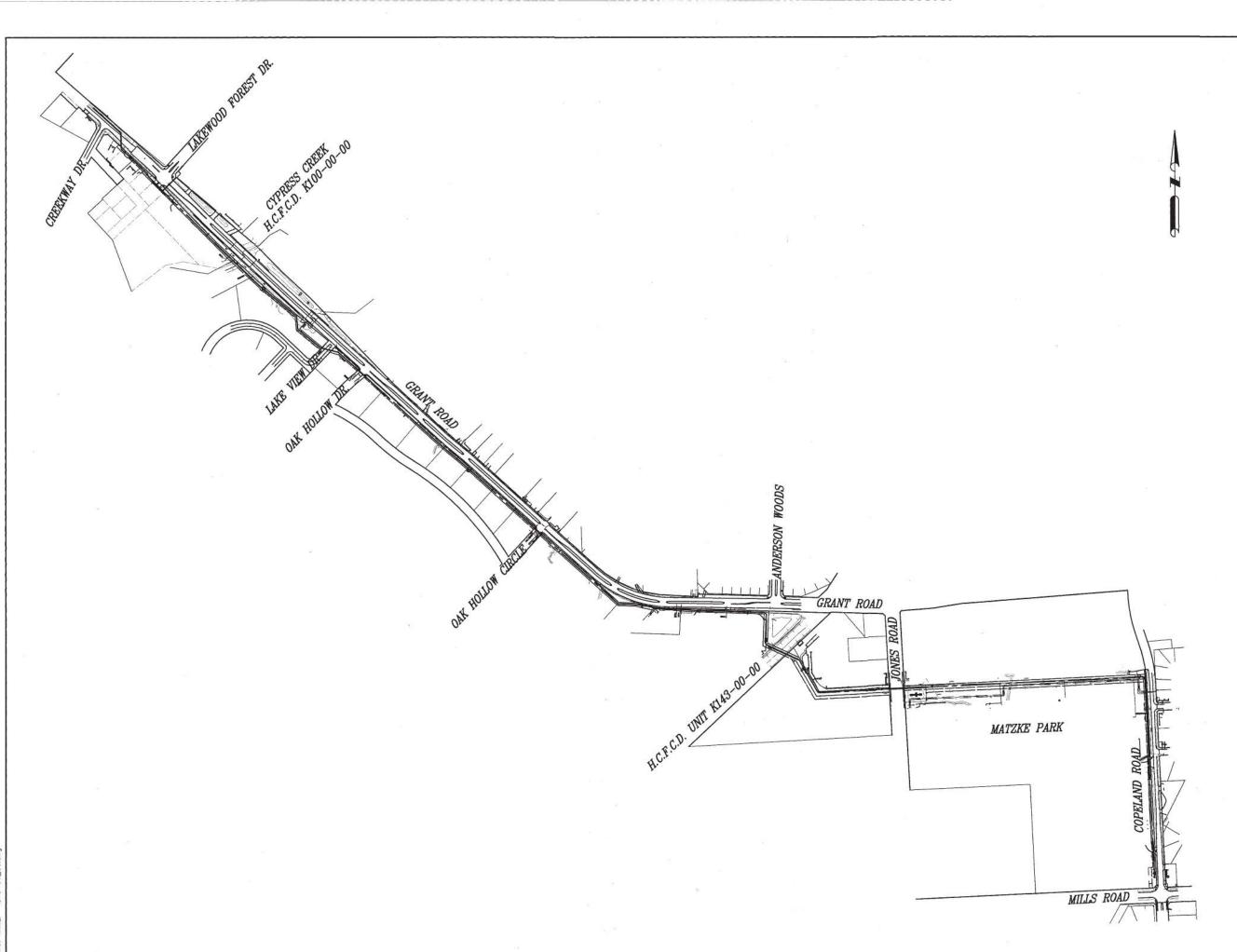
CONSTRUCTION NOTES



DANNENBAUM

ENGINEERING CORPORATION T.B.P.E. FIRM REGISTRATION #392 THE WEST ALABAMA, HER ISLESS TEXAS TYPES (703) SUBJECT

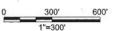
> SHEET *4 •* 99



BENCHMARK:

FLOODPLAIN REFERENCE MARK NUMBER 110125 IS A HCFCD BRASS DISK STAMPED K100 BM10 ON EAST SIDEWALK OF GRANT ROAD BRIDGE OVER CYPRESS CREEK APPROXIMATLEY 0.90 MILE WEST OF JONES ROAD IN KEYMAP 369A IN THE CYPRESS WATERSHED NEAR STREAM K100-00-00 ELEV. 127.25 FEET NAVO 1988 2001 ADJUSTMENT

HORIZONTAL DATUM:
ALL HORIZONTAL COORDINATES ARE BASED ON TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NADB3. THE COORDINATES & DISTANCES SHOWN ARE SURFACE AND MAY BE CONVERTED TO GRID BY MULTIPLYING BY A SCALE FACTOR OF 0.999870017 (TXDOT factor).





NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY PROJECT 28-B PROPOSED 60" AND 54" WATER LINE ALONG GRANT ROAD AND COPELAND ROAD

PROJECT OVERALL LAYOUT SHEET



ENGINEERING CORPORATION T.B.P.E. FIRM REGISTRATION #392 3100 WEST ALABAMA HOUSTON, TEXAS 77098 (713) 520-9570

SHEET No:

5 of 99

MODIFIED: Jan 21, 2020 – 9:50am BY USER: yimvy LOCATION: G:\1110\4876-01 NHCRWA PROJECT 28-B\ACAD\D! NAME: 4876-01_05.dwg

CAUTION:
EXISTING GAS PIPELINE LOCATIONS
AND ELEVATIONS HAVE NOT BEEN VERIFIED.
CONTRACTOR RESPONSIBLE FOR FIELD
VERIFICATION OF UNDERGROUND PIPELINES.

THE LOCATION OF THE BURIED CABLES WITHIN THE PROJECT LIMITS HAVE NOT BEEN VERIFIED. BEFORE COMMENCING WORK CALL 1-800-344-8377 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD-LOCATED.

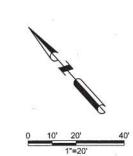
CAUTION: OVERHEAD POWER LINES

BENCHMARK:

FLOODPLAIN REFERENCE MARK NUMBER 110125 IS A HOFCD BRASS DISK STAMPED KIOO BMIO ON EAST SIDEWALK OF GRANT ROAD BRIDGE OVER CYPRESS CREEK APPROXIMATLEY 0.90 MILE WEST OF JONES ROAD IN KEYMAP 369A IN THE CYPRESS WATERSHED NEAR STREAM K100-00-00 ELEV. 127.25 FEET NAVD 1988 2001 ADJUSTMENT

HORIZONTAL DATUM:

ALL HORIZONTAL COORDINATES ARE BASED ON TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD83. THE COORDINATES & DISTANCES SHOWN ARE SURFACE AND MAY BE CONVERTED TO GRID BY MULTIPLYING BY A SCALE FACTOR OF 0.999870017 (TXDOT factor).



TO ANNAUSE FOR USES TO BE TURNED OFF OR MOVED CALL CONTERPOINT DESIGN AT 713-207-2222.

NOTICE:

FOR YOUR SETTY, YOU ARE REQUISED BY TOTAL USE TO CALL BY! AT 46 MOURS REFORM YOU CAS SO MAY UNDERSCORD USES OWN EE AMPRIES. THIS VERFEATION DOES NOT

PRIVATE UTILITY LINES SHOWN

Outs: 1-23-20
ENTERPOINT ENERGY/UNDERGROUND ELECTRICAL FACILITIES
ERIFICATION ONLY

RIFICATION ONLY

E SGWATURE VERIFIES EXISTING UNDERGROUND FACULTIES - NOT TO BE USED FOR VEHICL VERIFICATION.) SIGNATURE VALID FOR SIX MONTHS.

Date: 1 - 23 - 20
ERPOINT ENERGY/NATURAL GAS FACILITIES VERIFICATION ONLY.
SE USES FOR COMPLEX VERIFICATION.
SE USES FOR COMPLEX VERIFICATION.
WHITE SERVICE USES SERVICE SERVICES VERIFICATION.
Date: 1/22-20

Date: 1/22-20

North Harris County
REGIONAL WATER
Authority

AECOM

19219 KATY FREEWAY, SUITE 100 HOUSTON, TEXAS 77094-1009 281.646.2400 WWW.AECOM.COM TBPE REG. NO. F-3580

NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY PROJECT 28-B
PROPOSED 60" AND 54" WATER LINE ALONG GRANT ROAD AND COPELAND ROAD

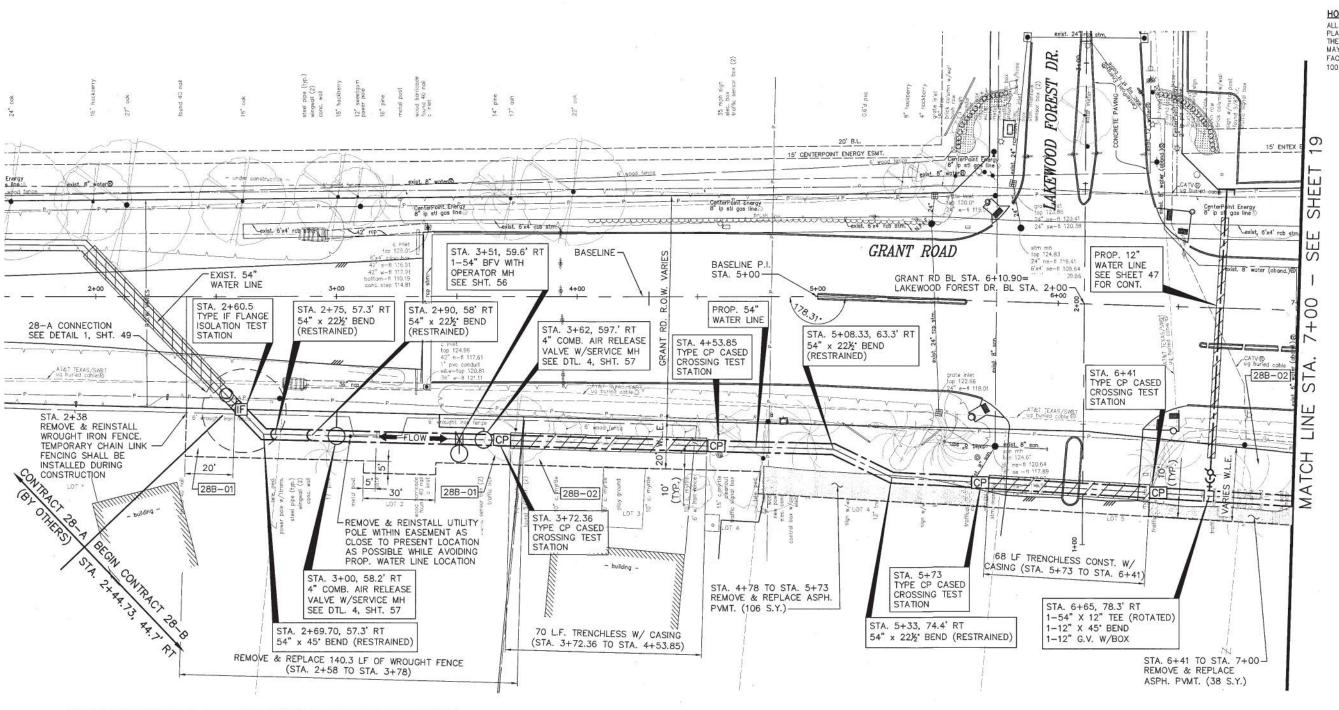
GRANT ROAD BASELINE PLAN STA. 2+00 TO 7+00



DANNENBAUM

ENGINEERING CORPORATION T.B.P.E. FIRM REGISTRATION #392 3100 WEST ALABAMA HOUSTON, TEXAS 77098 (713) 520-95

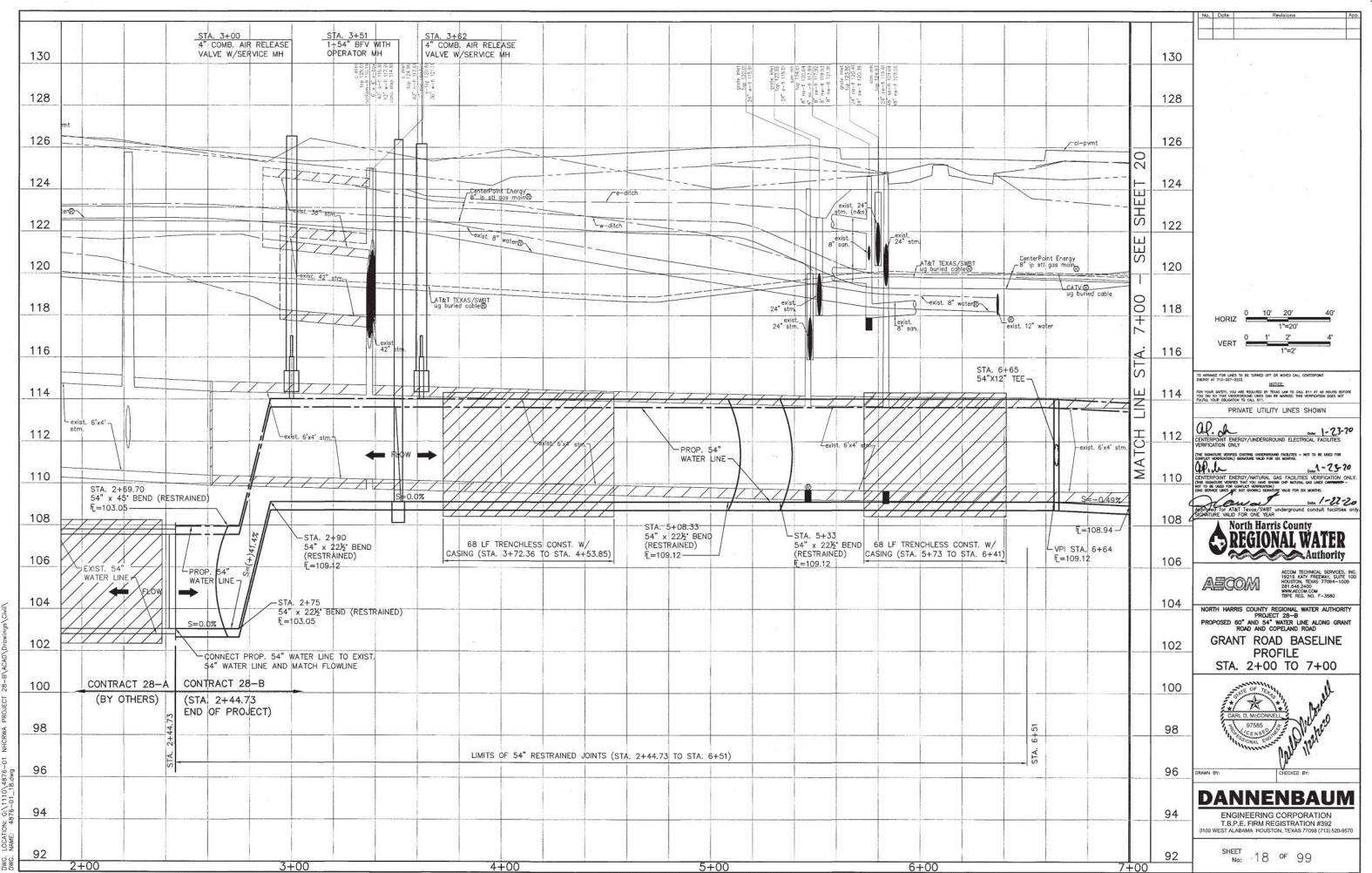
SHEET 17 OF 99



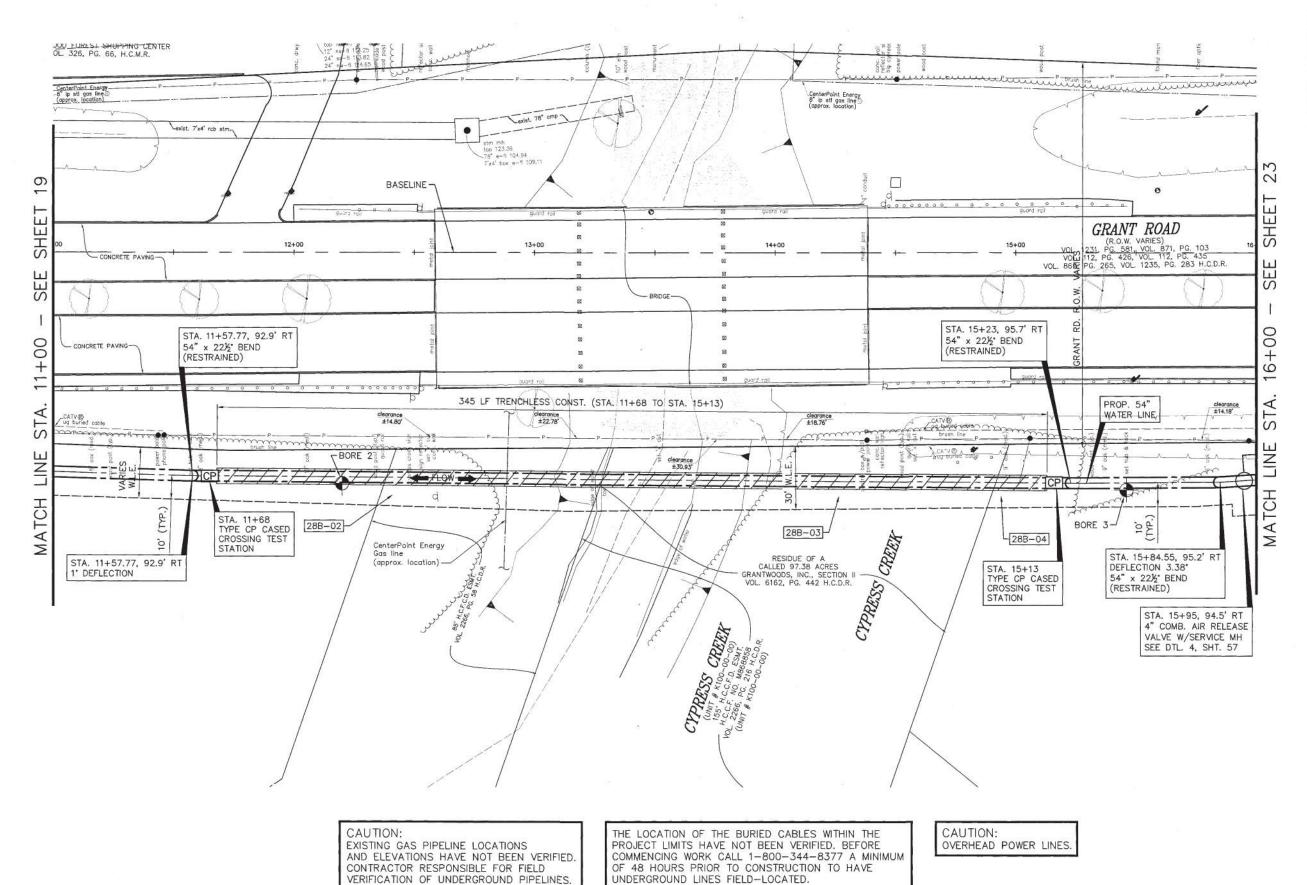
PROJECT 28-A PLANS WERE PREPARED USING NGDV 1929, 1973 ADJ. NGDV 1988, 2001 ADJ = NGDV 1929, 1973 ADJ - 2.45 FEET

(PROJECT 28-A)

(PROJECT 28-B)



BY USER: yimvy PROJECT 28-B\AC



BENCHMARK:

FLOODPLAIN REFERENCE MARK NUMBER 110125 IS A HCFCD BRASS DISK STAMPED K100 BM10 ON EAST SIDEWALK OF GRANT ROAD BRIDGE OVER CYPRESS CREEK APPROXIMATLEY 0.90 MILE WEST OF JONES ROAD IN KEYMAP 369A IN THE CYPRESS WATERSHED NEAR STREAM K100-00-00 ELEV. 127.25 FEET NAVD 1988 2001 ADJUSTMENT

HORIZONTAL DATUM:

ALL HORIZONTAL COORDINATES ARE BASED ON TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD83. THE COORDINATES & DISTANCES SHOWN ARE SURFACE AND MAY BE CONVERTED TO GRID BY MULTIPLYING BY A SCALE FACTOR OF 0.999870017 (TxDOT factor). 100 YR FL=125.00'



1"=20

PRIVATE UTILITY LINES SHOWN

CENTERPOINT ENERGY/UNDERGROUND ELECTRICAL FACILITIES VERIFICATION ONLY

North Harris County Authority

NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY PROJECT 28-B PROPOSED 60" AND 54" WATER LINE ALONG GRANT ROAD AND COPELAND ROAD

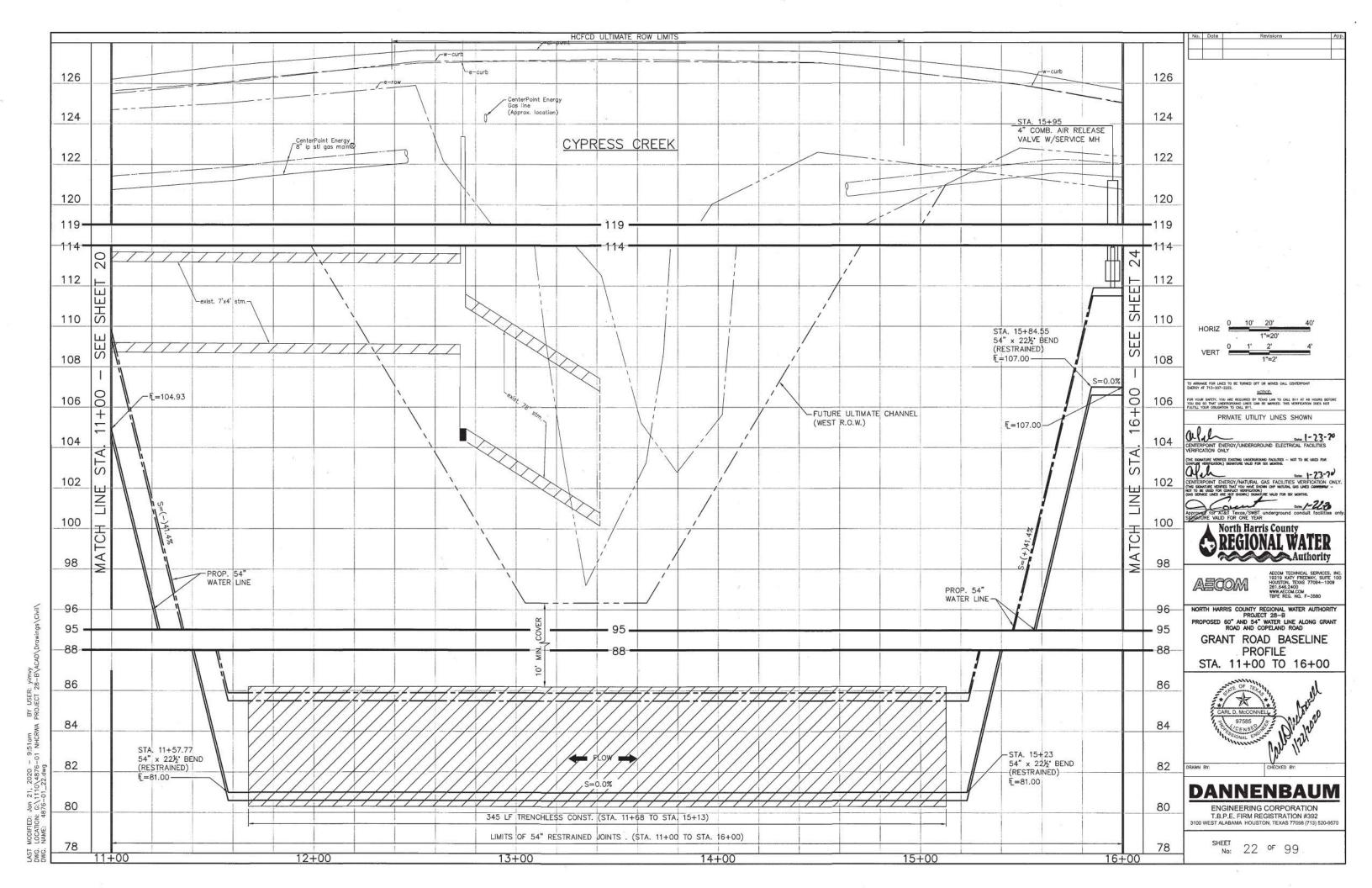
GRANT ROAD BASELINE PLAN STA. 11+00 TO 16+00



DANNENBAUM

ENGINEERING CORPORATION T.B.P.E. FIRM REGISTRATION #392 3100 WEST ALABAMA HOUSTON, TEXAS 77098 (713) 520-9570

SHEET No: 21 OF 99

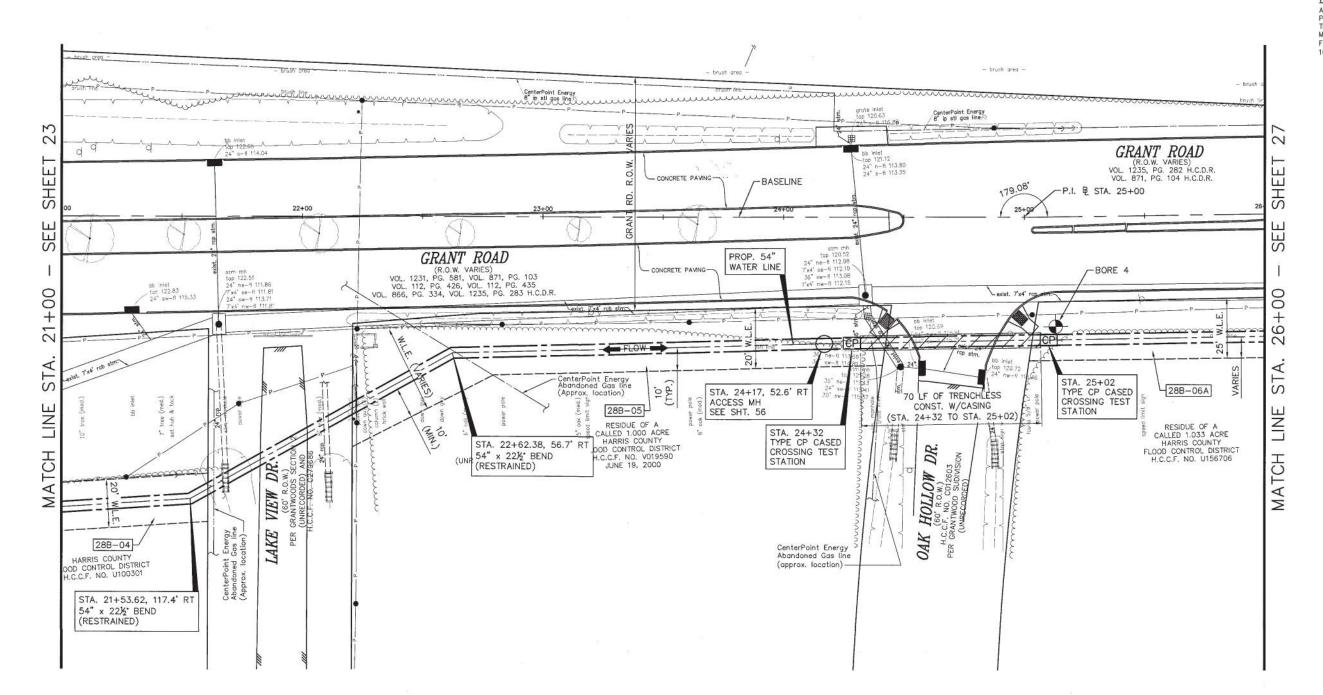


CAUTION:
EXISTING GAS PIPELINE LOCATIONS
AND ELEVATIONS HAVE NOT BEEN VERIFIED.
CONTRACTOR RESPONSIBLE FOR FIELD

VERIFICATION OF UNDERGROUND PIPELINES.

THE LOCATION OF THE BURIED CABLES WITHIN THE PROJECT LIMITS HAVE NOT BEEN VERIFIED. BEFORE COMMENCING WORK CALL 1-800-344-8377 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD-LOCATED.

CAUTION: OVERHEAD POWER LINES.



No.	Date	Revisions	App.
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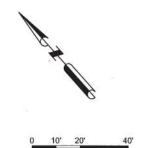
BENCHMARK:

FLOODPLAIN REFERENCE MARK NUMBER 110125 IS A HCFCD BRASS DISK STAMPED K100 BM10 ON EAST SIDEWALK OF GRANT ROAD BRIDGE OVER CYPRESS CREEK APPROXIMATLEY 0.90 MILE WEST OF JONES ROAD IN KEYMAP 369A IN THE CYPRESS WATERSHED NEAR STREAM K100-00-00 ELEV. 127.25 FEET NAVD 1988 2001 ADJUSTMENT

HORIZONTAL DATUM:

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100 YR FL=125.00'



TO ARRANGE FOR UNES TO BE TURNED OFF OR MOVED CALL CONTERPOINT HERGY AT 713-207-2222.

FOR YOUR SWITT, YOU ARE REQUIRED BY TEXAS LIW TO CALL 811 AT 48 HOURS BEFORE YOU DOE SO THAT UNDERGROUND LINES CAN BE MARKED. THIS VERFICATION DOES NOT FULFILL YOUR ORLIGATION TO CALL 811.

PRIVATE UTILITY LINES SHOWN

UTERPOINT ENERGY/UNDERGROUND ELECTRICAL FACILITIES

E SHARITHE VIDENCE DOZINA LABORATIONE PARALIES — NOT TO BE USED FOR PAPET VISITATION). SHARITHE LABORATION LAB

North Harris County
REGIONAL WATER
Authority

AECOL

AECOM TECHNICAL SERVICES, II 19219 KATY FREEWAY, SUITE 1 HOUSTON, TEXAS 77094-1009 281.646.2400 WWW.AECOM.COM TBPE REG. NO. F-3580

NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY
PROJECT 28-B
PROPOSED 60" AND 54" WATER LINE ALONG GRANT
ROAD AND COPELAND ROAD

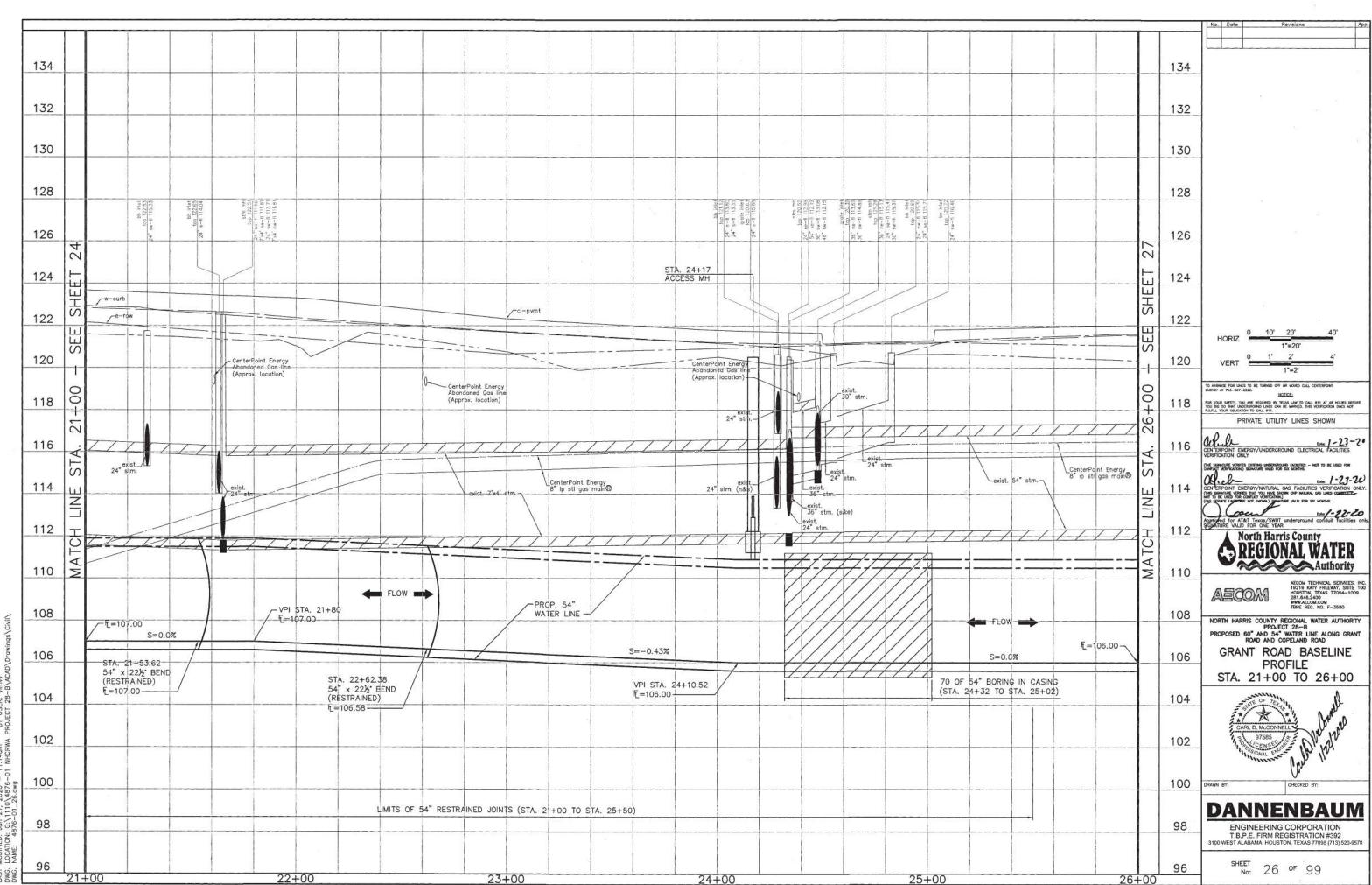
GRANT ROAD BASELINE PLAN STA. 21+00 TO 26+00



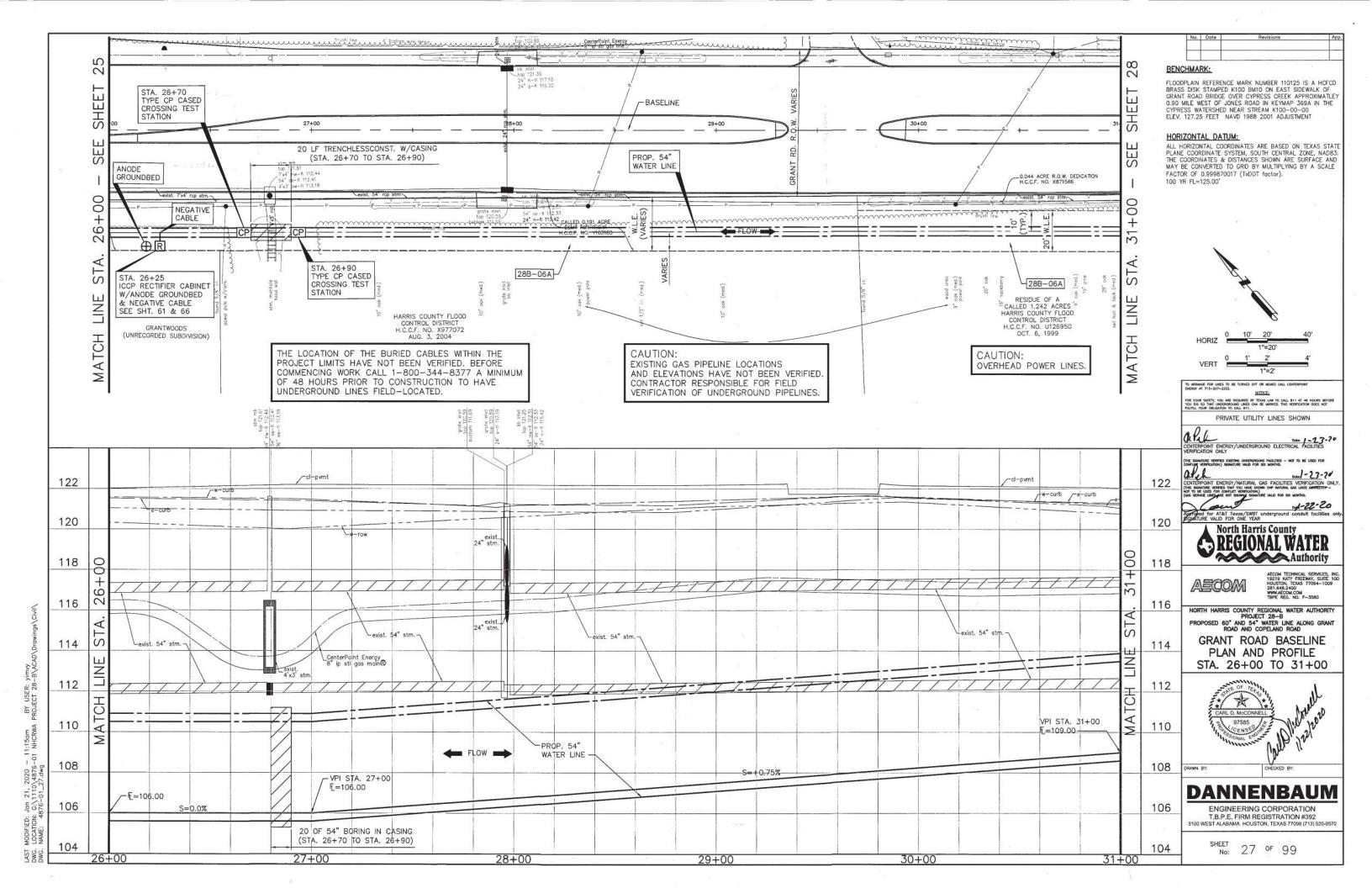
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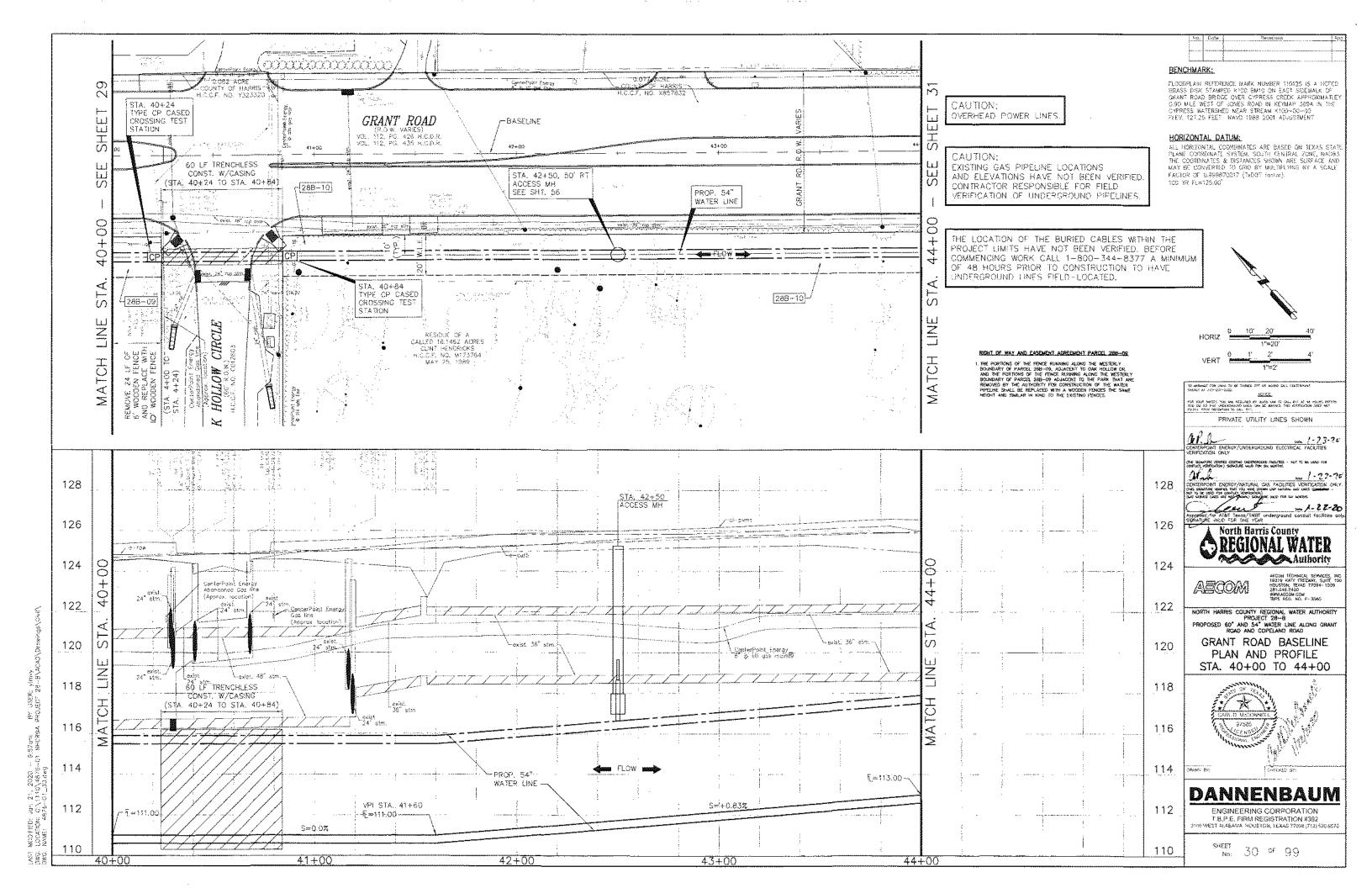
ENGINEERING CORPORATION T.B.P.E. FIRM REGISTRATION #392 3100 WEST ALABAMA HOUSTON, TEXAS 77098 (713) 520-957

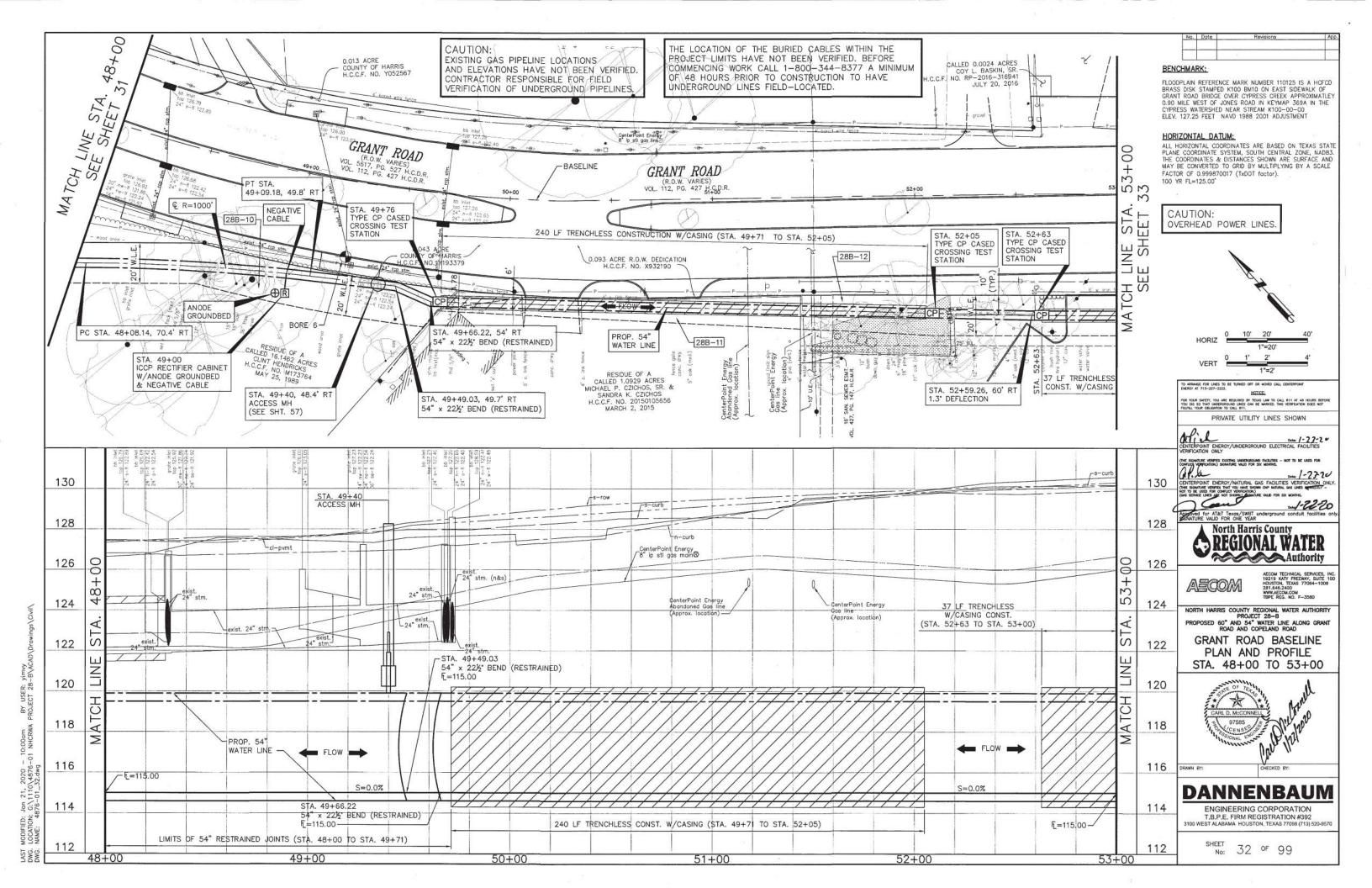
SHEET No: 25 OF 99

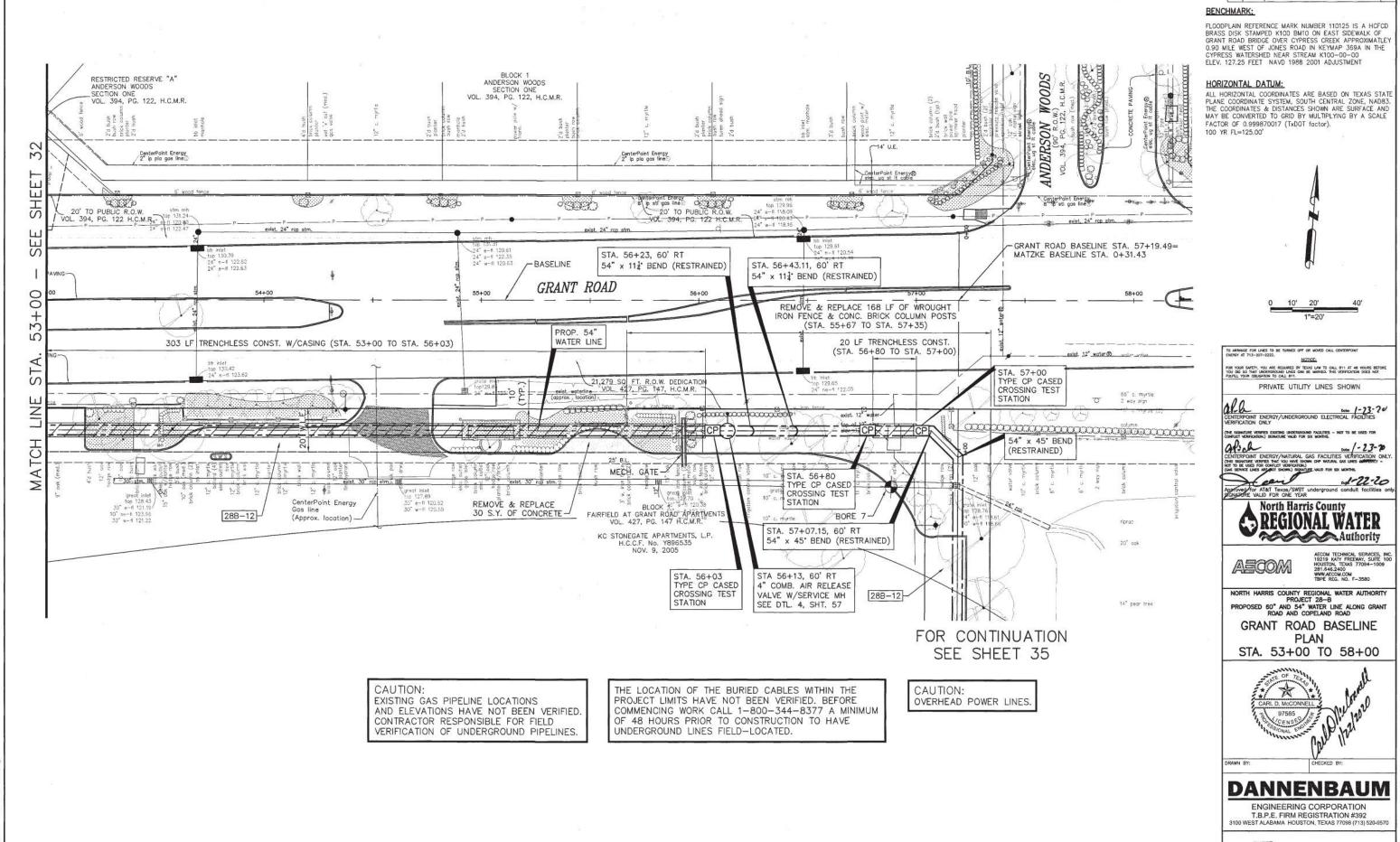


BY USER: yimvy PROJECT 28-B\AC



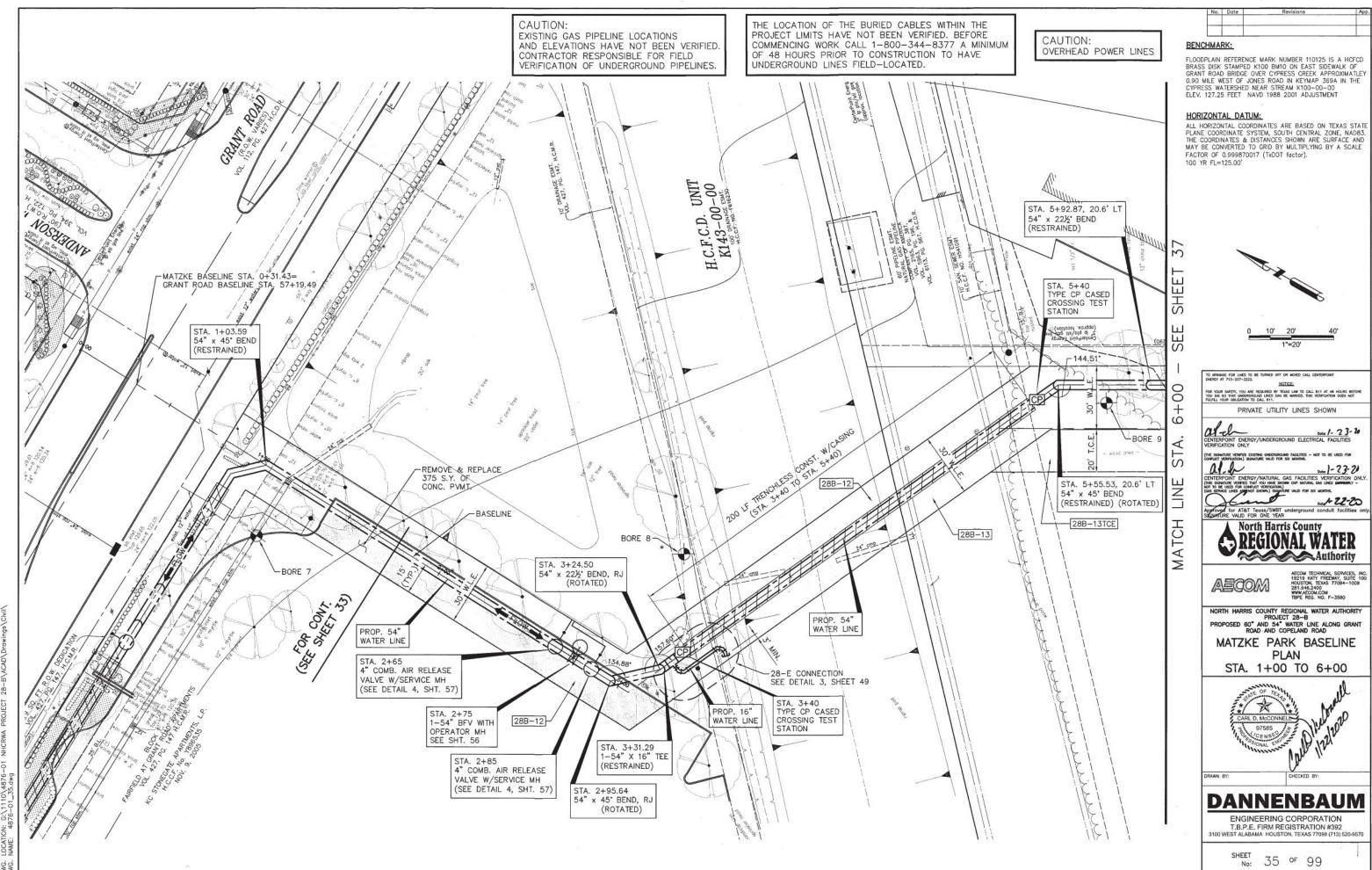




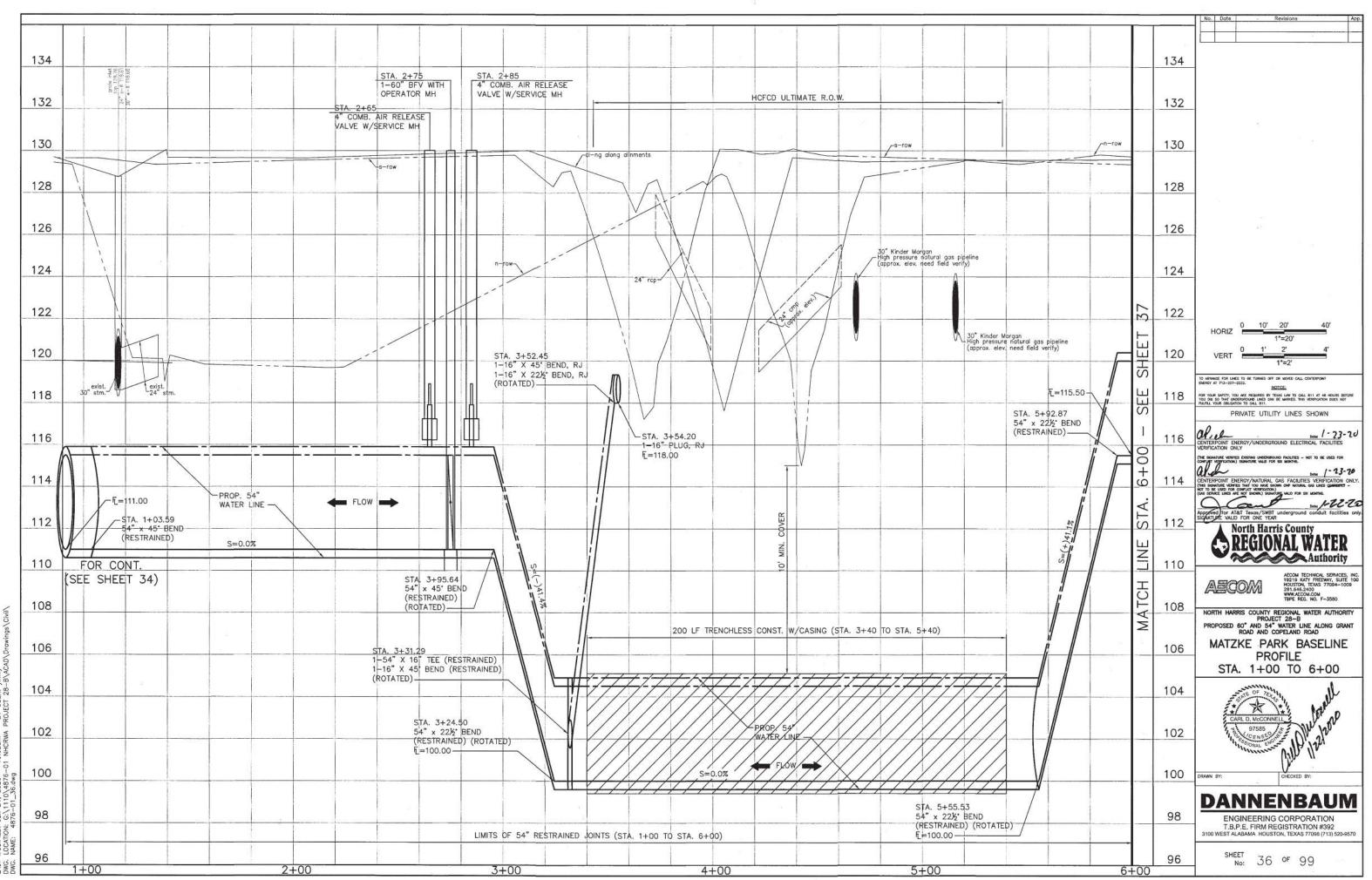


BY USER: yimvy PROJECT 28-B\ACAE ED: Jan 21, 2020 - 10:01am ION: G:\1110\4876-01 NHCRWA 4876-01 33.4wa

SHEET 33 OF 99



BY USER: yimvy PROJECT 28-B\ACAD\D

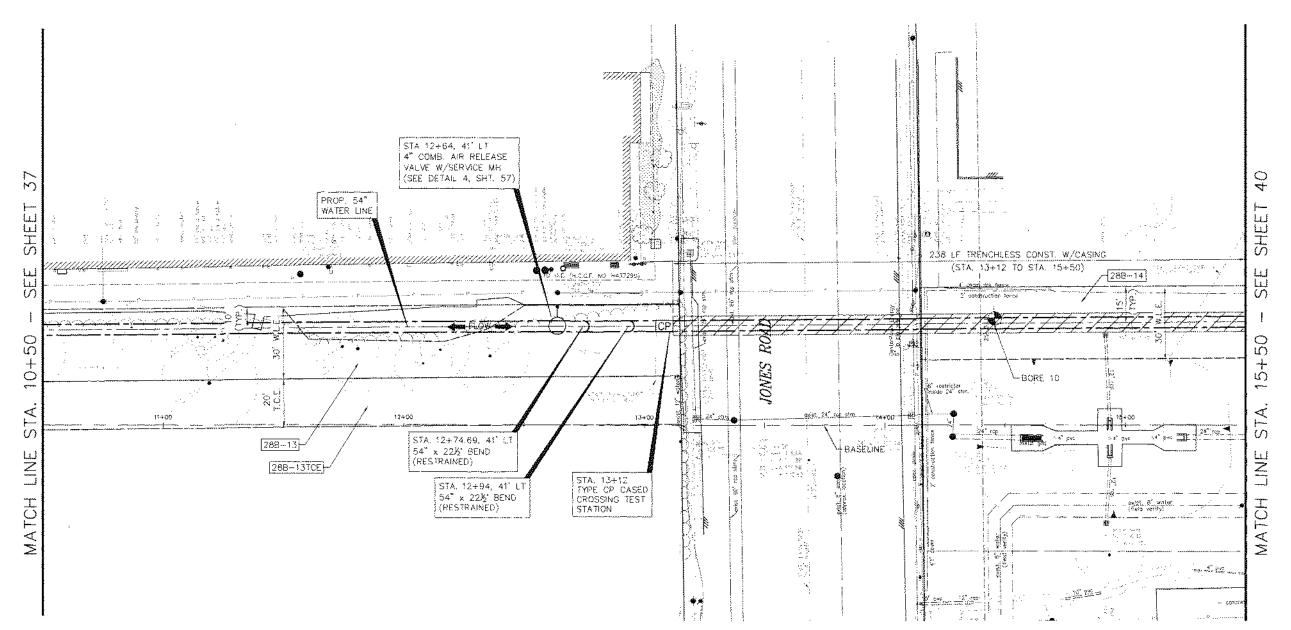


BY USER: yimvy PROJECT 28-B\ACAD\C Jan 21, 2020 - 10:02am G:\1110\4876-01 NHCRWA 376-01_36.dwg MODIFIED: J

EXISTING GAS PIPELINE LOCATIONS AND ELEVATIONS HAVE NOT BEEN VERIFIED. CONTRACTOR RESPONSIBLE FOR FIELD VERIFICATION OF UNDERGROUND PIPELINES

THE LOCATION OF THE BURSED CABLES WITHIN THE PROJECT LIMITS HAVE NOT BEEN VERIFIED, BEFORE COMMENCING WORK CALE 1-800-344-8377 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD-LOCATED.

CAUTION: OVERHEAD POWER LINES



BENCHMARK:

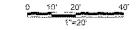
FLOODPLAIN REFERENCE MARK NUMBER 110125 IS A HOROD PLEMONTAIN REPORTED MARK REMARKS TROUD IS A FOLGO BRASS DEK STAMPSO KIDD BHID ON ÉAST SCHEMAR OF CRANT ROAD BROOT, OVER CYPRESS CREEK APPROXIMATIEV 0.80 MEE WATERSHED NA ROAD IN KEYMARP 358A IN THE CYPRESS WATERSHED NA RESTRAIN KNOW-00-00 ELEV. 127.28 FEET NAVO 1888 2001 ADJUSTMENT

HORIZONTAL DATUM:

ALL HORZONIA: CODROMATES ARE BASED ON FIXAS STATE PLANS CRUMENATE SYSTEM. SOUTH CENTRAL ZONE, NADBASTHE COORDANATES & DISTANCES SHOWN ARE SUBTACL AND MAY BE CONVERTED TO GREEN, THE THEY MAD BY A SCALE FACTOR OF 0.989870017 (TWOOT FOCTOR).



SEL CONSTRUCTION NOTES ON SHEET I FOR CONSTRUCTION REQUIREMENTS ON CYPRESS FAIRSAME SED FROPERTY.



North Harris County REGIONAL WATER

NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY PROJECT 28-8 PROPOSED BO" AND 54" WATER LINE ALONG GRANT ROAD AND COPELAND ROAD ROAD COPELAND ROAD

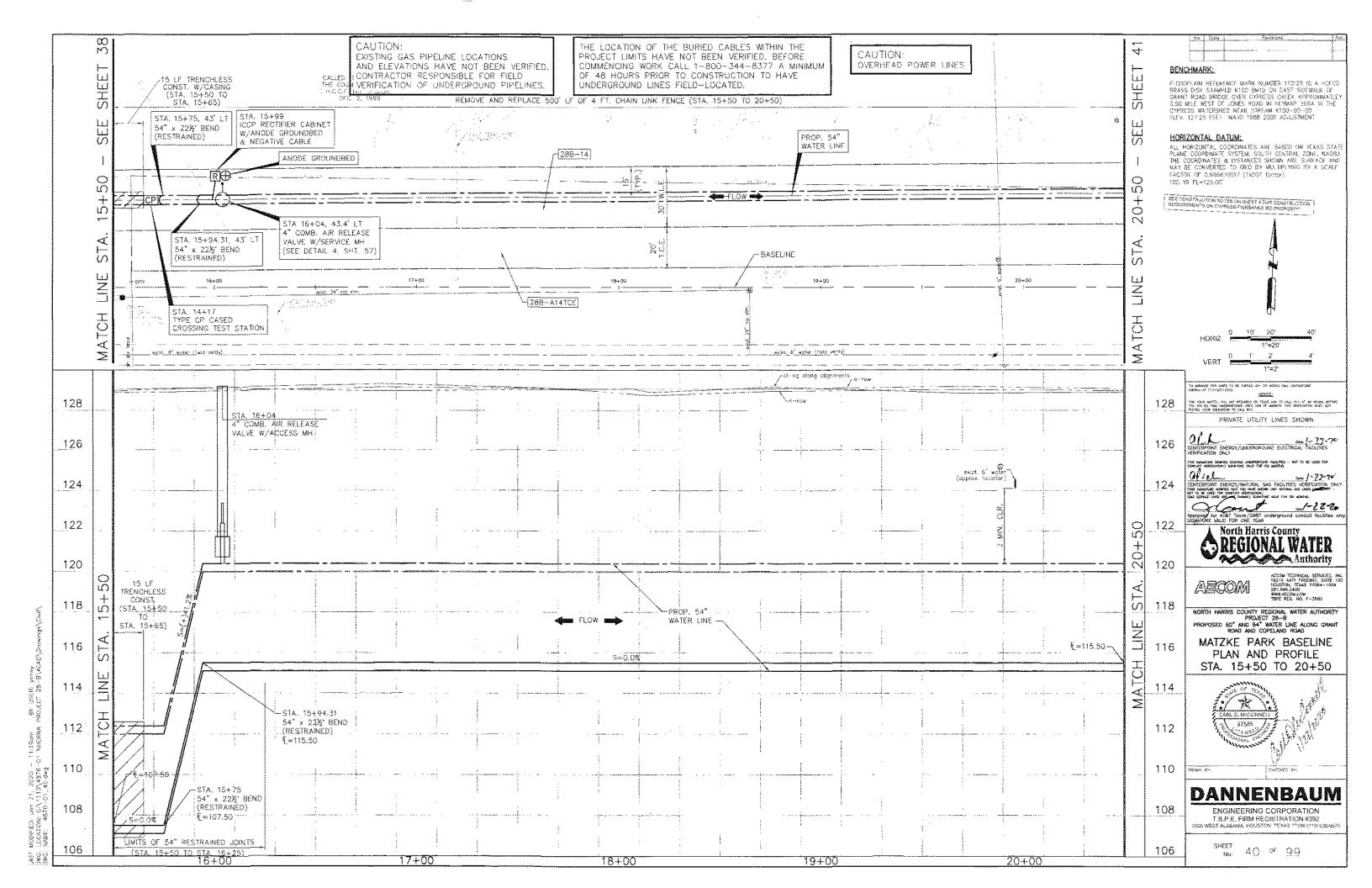
MATZKE PARK BASELINE PLAN STA. 10+50 TO 15+50

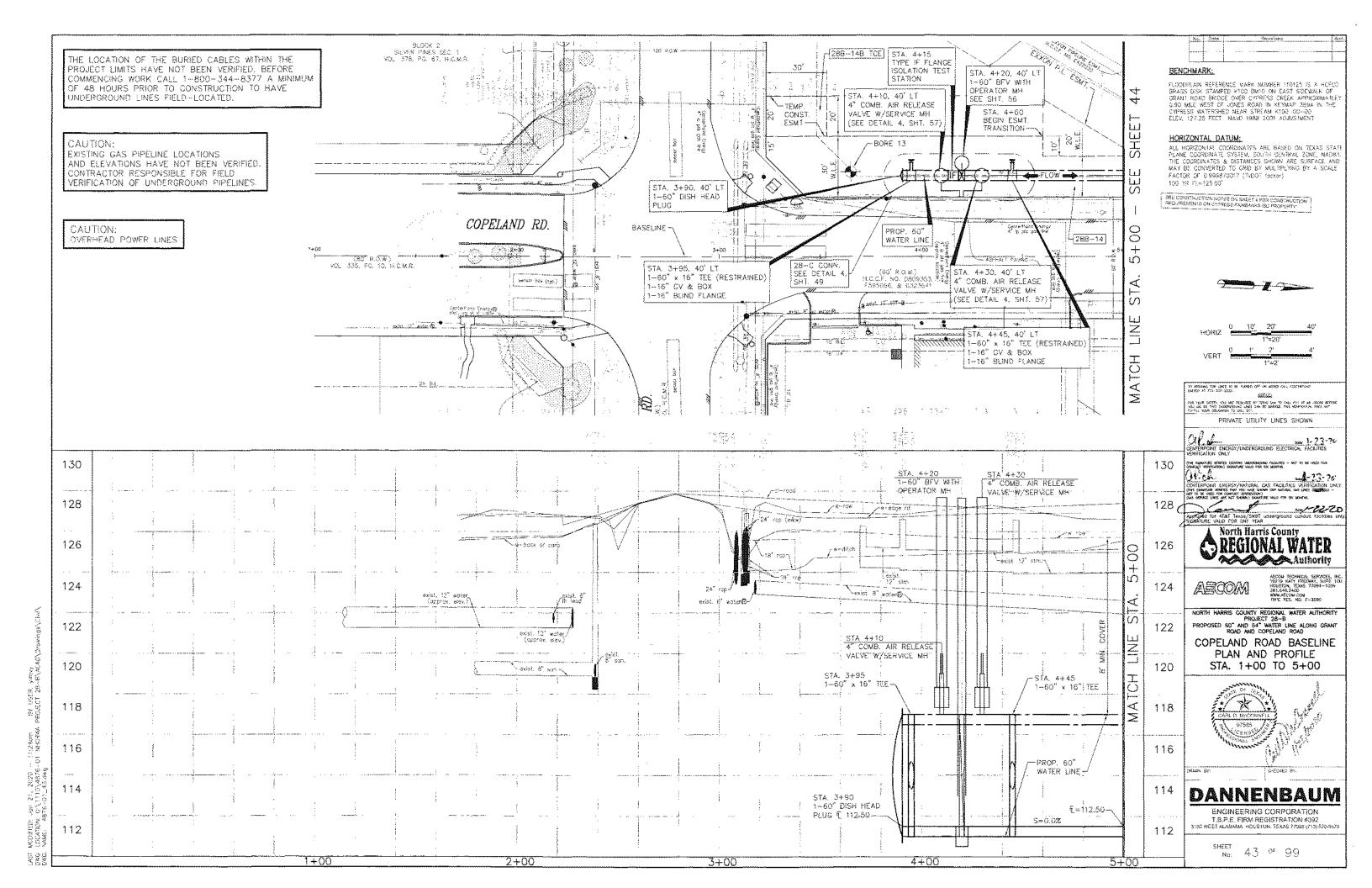


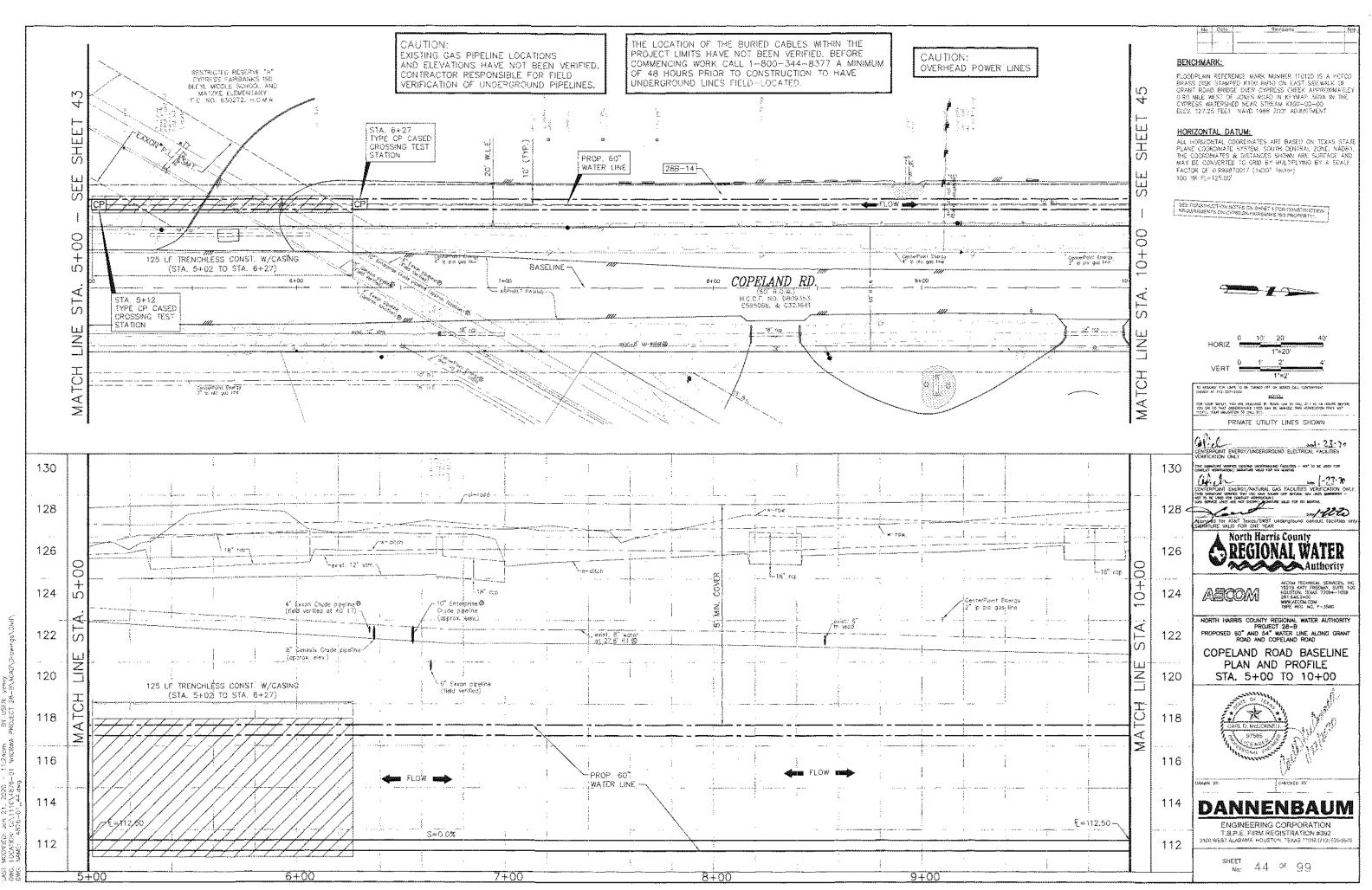
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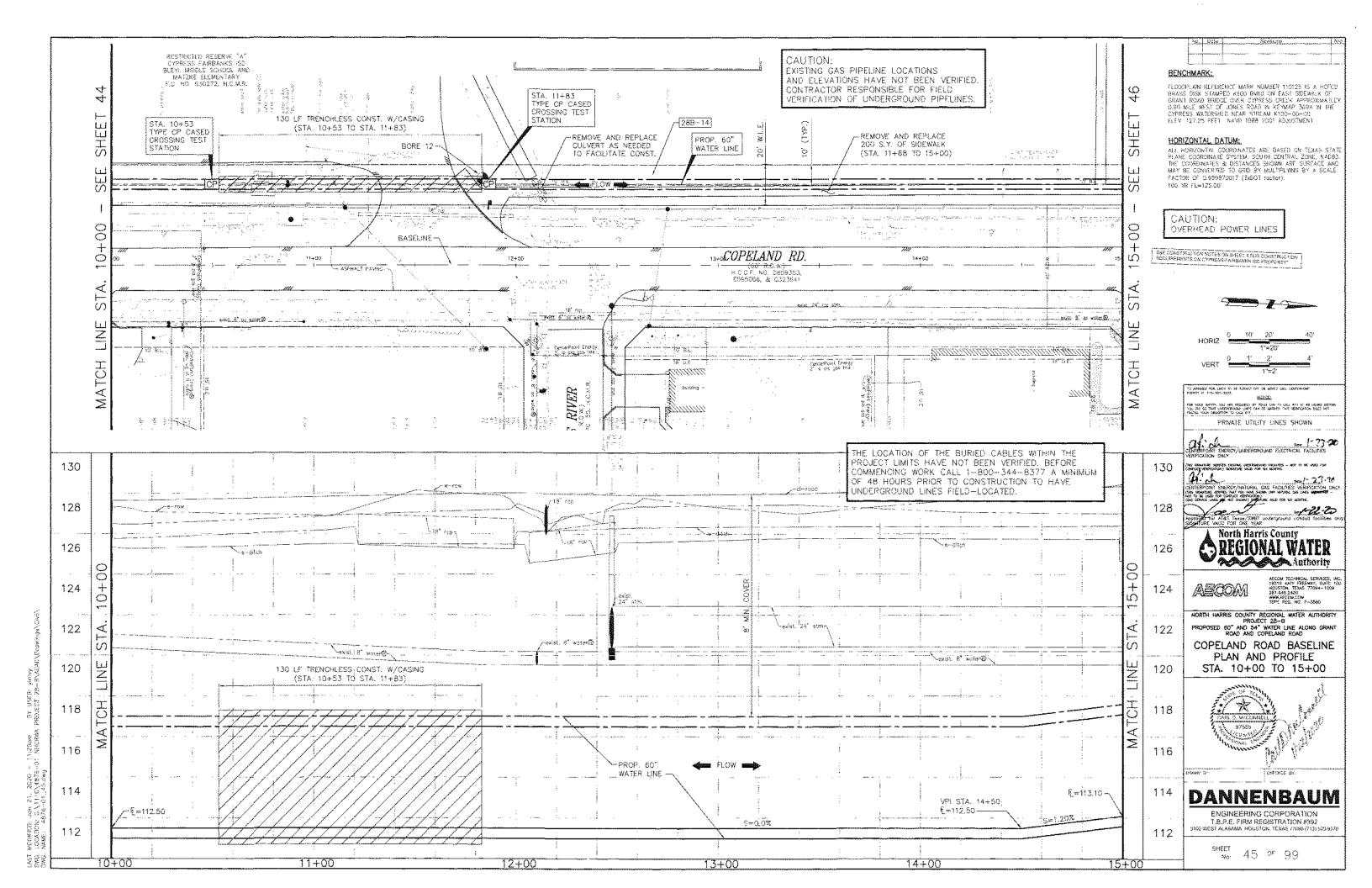
ENGINEERING CORPORATION 3100 WEST ALABAMA, HOUSTON, TEXAS 77098 (712; 529-957

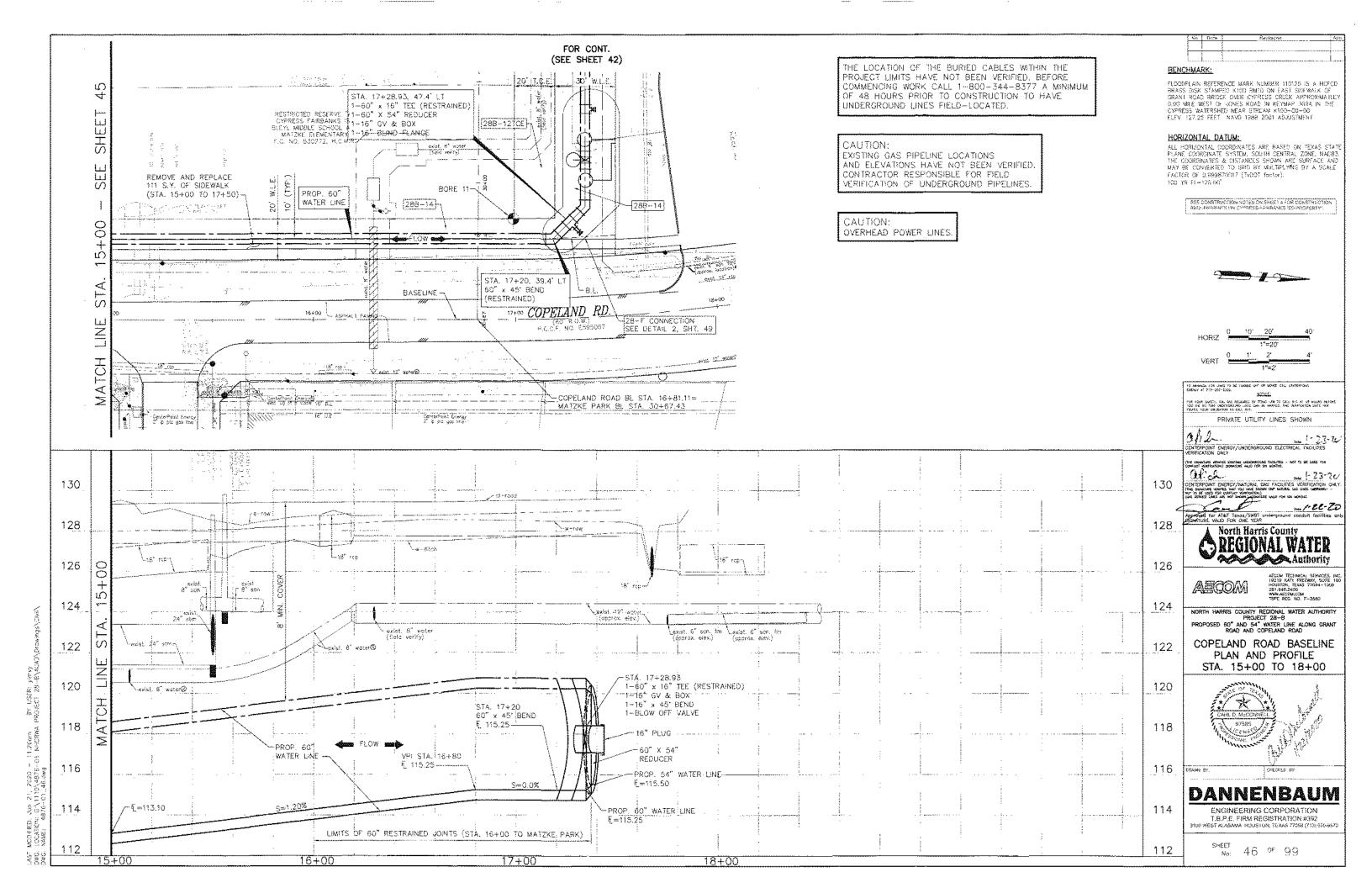
SHEET 38 of 99

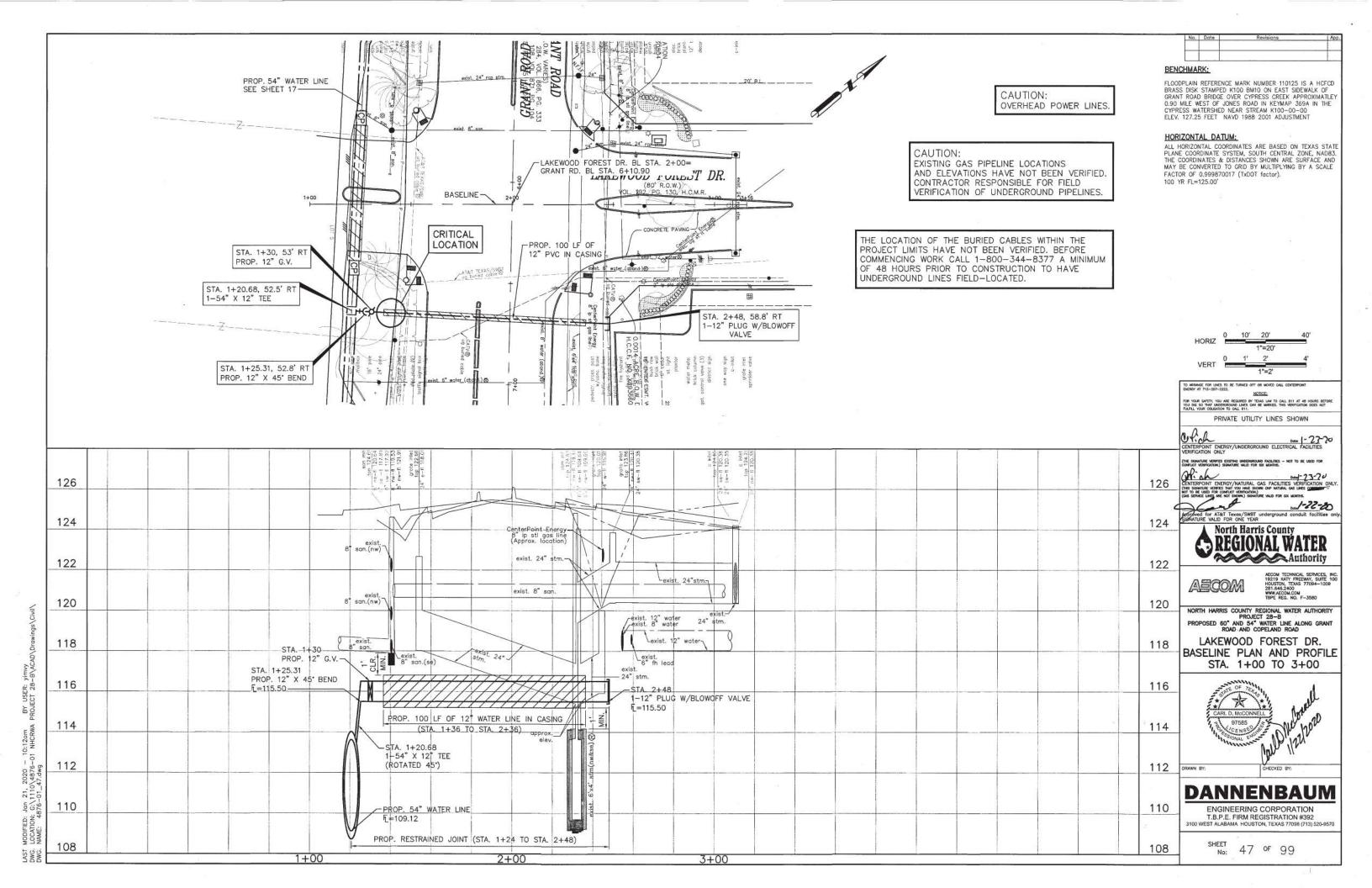


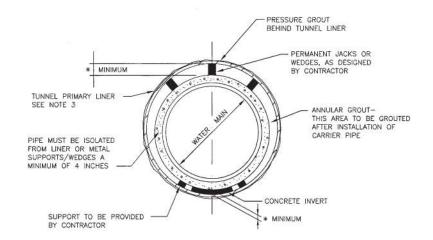










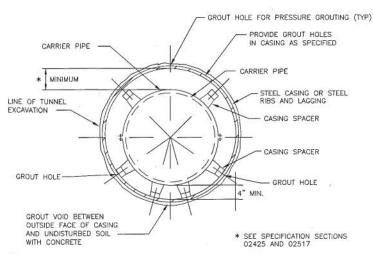


NOTES:

* SEE SPECIFICATION SECTIONS 02425 AND 02517

- DETAIL IS FOR PRESTRESSED CONCRETE CYLINDER PIPE (STEEL PIPE AND D.I.P. ALTERNATE SIMILAR).
- MINMUM CLEARANCES SHOWN ON THE PLAN & PROFILE DRAWINGS ARE TO THE O.D. OF TUNNEL LINER. ADJUST PROFILE AS REQUIRED TO MAINTAIN CLEARANCES IDENTIFIED. NO SEPARATE PAY.
- CONTRACTOR TO PROVIDE SUBMITTAL OF THE TUNNEL LINER DESIGN SIGNED AND SEALED BY A PROFESSIONAL ENGINEER.

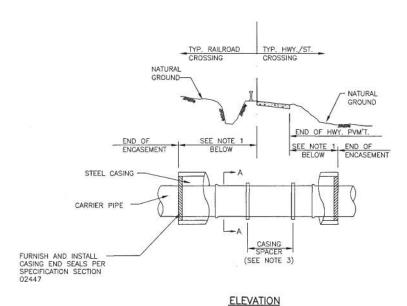




NOTES:

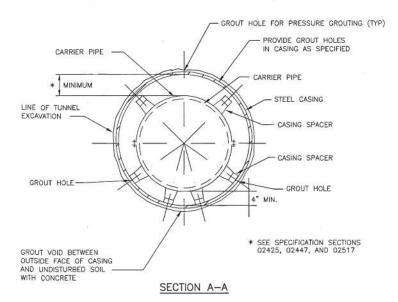
- DETAIL IS FOR PVC PIPE (PRESTRESSED CONCRETE CYLINDER PIPE, STEEL PIPE, AND D.I.P. ALTERNATE SIMILAR).
- MINMUM CLEARANCES SHOWN ON THE PLAN & PROFILE DRAWINGS ARE TO THE O.D. OF TUNNEL LINER. ADJUST PROFILE AS REQUIRED TO MAINTAIN CLEARANCES IDENTIFIED. NO SEPARATE PAY.
- CONTRACTOR TO PROVIDE SUBMITTAL OF THE TUNNEL LINER DESIGN SIGNED AND SEALED BY A PROFESSIONAL ENGINEER.





NOTES:

- LENGTH OF ENCASEMENT SHALL BE AS SHOWN ON THE PLAN & PROFILE DRAWINGS.
- 2. LAY CASING PIPE IN OPEN CUT, TUNNEL OR BORE, AS NOTED ON PLAN & PROFILE DRAWINGS.
- SEE SPECIFICATION SECTIONS 02447 AND 02517 FOR APPROPRIATE MODEL ACCORDING TO PIPE DIAMETER.



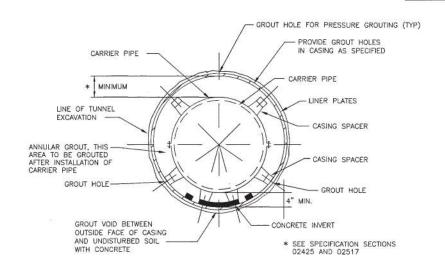
NOTE

1. ALL CASING IN PPCM AREA TO BE GROUTED.

CASING DETAIL FOR DRY SLURRY

AUGERING OF PIPE AND CONDUIT

(FOR WATER MAINS LESS THAN 36-INCHES IN DIAMETER)



3 TUNNEL DETAIL

(FOR WATER MAINS LESS THAN
36 INCHES WITH LINER PLATES)



NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY PROJECT 28-B
PROPOSED 60" AND 54" WATER LINE ALONG GRANT ROAD AND COPELAND ROAD

TUNNEL AND CASING DETAILS



DANNENBAUM

ENGINEERING CORPORATION T.B.P.E. FIRM REGISTRATION #392 3100 WEST ALABAMA HOUSTON, TEXAS 77098 (713) 520-957

SHEET No: 54 OF 99

REVISION DATE: 6/26/14