

CITY OF LEWISVILLE, TEXAS

CONSTRUCTION PLANS FOR CDBG MORNINGSIDESANITARYSEWERREHAB

MORNINGSIDEDRIVE

PROJECT NO. R4801.2017.11

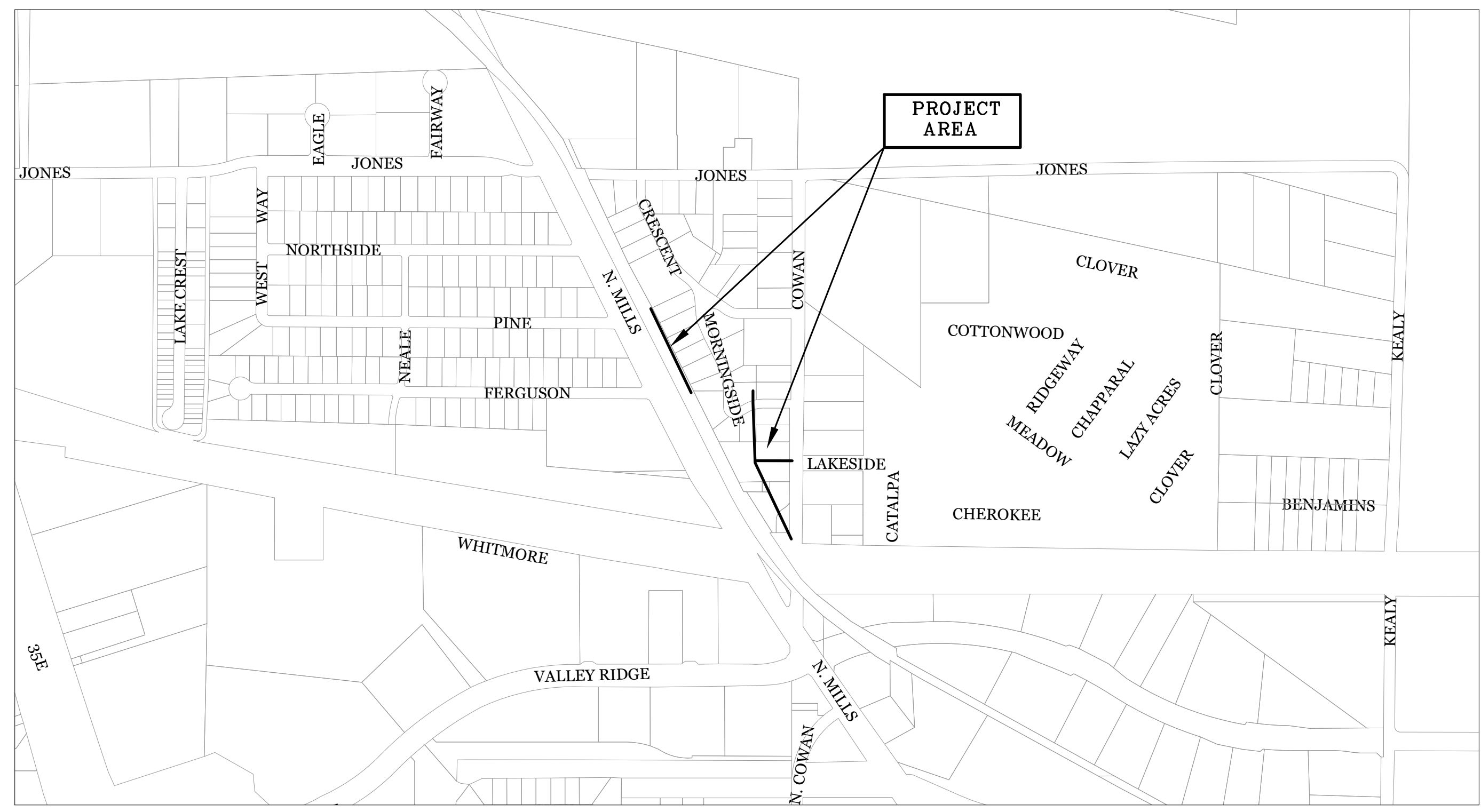
BID SUBMITTAL

MAYOR
RUDY DURHAM
MAYOR PRO TEM
BRANDON JONES

CITY COUNCIL
R. NEIL FERGUSON
TJ GILMORE
BRENT DANIELS
BOB TROYER

CITY MANAGER
DONNA BARRON

CITY ENGINEER
DAVID SALMON, P.E.



LOCATION MAP
N.T.S.

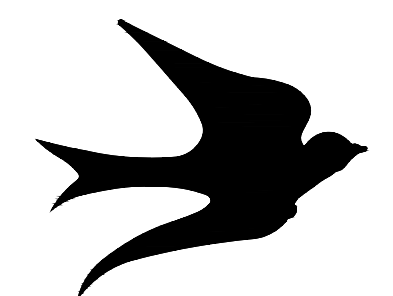


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CITY OF LEWISVILLE
ENGINEERING DEPT.
151 W. CHURCH ST.
LEWISVILLE, TX 75029



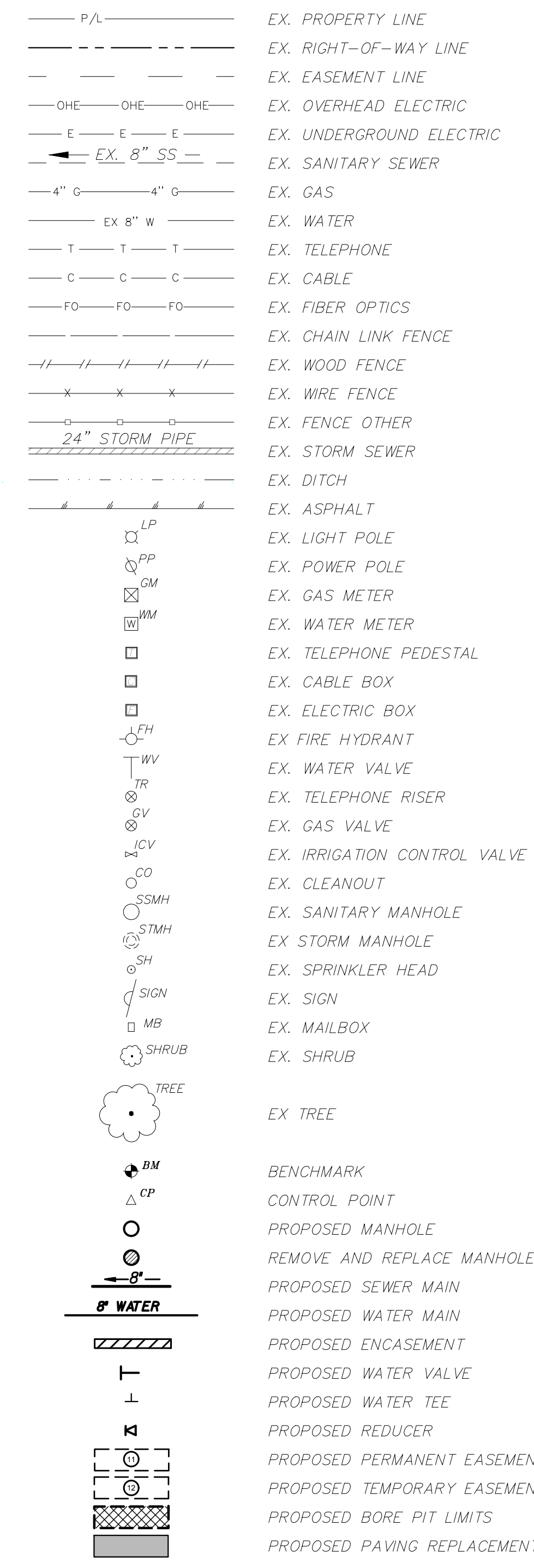
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14755 PRESTON ROAD, SUITE 710
DALLAS, TEXAS 75254

August 2019

RJN GROUP INC.
The Choice For Collection System Solutions
Texas Registered Engineering Firm F-3260
14755 Preston Rd, Suite 710
Dallas TX 75254

STATE OF TEXAS
MARK D. HINTON
80210
LICENSED
PROFESSIONAL ENGINEER
Mark D. Hinton
08/12/19

LEGEND



GENERAL NOTES FOR ALL CONSTRUCTION ACTIVITIES

- ALL CONSTRUCTION, TESTING, AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY'S CURRENT STANDARDS, DETAILS AND SPECIFICATIONS.
- TESTING AND INSPECTION OF MATERIALS SHALL BE PERFORMED BY A COMMERCIAL TESTING LABORATORY APPROVED BY THE CITY. CONTRACTOR SHALL FURNISH MATERIALS OR SPECIMENS FOR TESTING, AND SHALL FURNISH SUITABLE EVIDENCE THAT THE MATERIALS PROPOSED TO BE INCORPORATED INTO THE WORK ARE IN ACCORDANCE WITH THE SPECIFICATIONS.
- CONTRACTOR SHALL NOTIFY THE CITY AT LEAST 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION.
- THE CITY OF LEWISVILLE'S INSPECTOR OVERTIME POLICY ALLOWS THE CONTRACTOR TO WORK FROM 7:00 A.M. TO 7:00 P.M., MONDAY THROUGH SATURDAY. ANY REQUEST TO WORK ON A SATURDAY MUST BE MADE PRIOR TO 12:00 P.M. ON THURSDAY AFTERNOON AND WILL REQUIRE A MINIMUM OF FOUR (4) HOUR CHARGE. THE CONTRACTOR SHALL PAY OVERTIME CHARGES OF \$45.00 PER HOUR TO THE CITY OF LEWISVILLE FOR WORK OUTSIDE THE NORMAL WORK WEEK (8:00 A.M. TO 5:00 P.M. MONDAY THROUGH FRIDAY). NO WORK IS ALLOWED ON SUNDAYS OR CITY HOLIDAYS WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER OR DESIGNEE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A TWO (2) YEAR, 100% MAINTENANCE BOND TO THE CITY OF LEWISVILLE FOR ALL PUBLIC IMPROVEMENTS (WATER, SANITARY SEWER, STORM DRAINAGE, PAVEMENT, SIDEWALK, SCREENING WALLS, TRAFFIC SIGNALS, PAVEMENT MARKINGS, AND EXCAVATION/FILL) WITHIN RIGHT-OF-WAYS OR EASEMENTS.
- NO WATER JETTING IS ALLOWED FOR WATER, SANITARY SEWER, OR STORM SEWER DRAINAGE CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO BEGINNING ANY CONSTRUCTION.
- CONTRACTOR MUST KEEP AVAILABLE ON-SITE AT ALL TIMES APPROVED CONSTRUCTION PLANS AND COPIES OF ANY REQUIRED PERMITS ALONG WITH THE CURRENT VERSIONS OF THE FOLLOWING REFERENCES: CITY OF LEWISVILLE ENGINEERING STANDARDS AND NCTCOG SPECIFICATIONS.
- ALL SHOP DRAWINGS, WORKING DRAWINGS, OR OTHER DOCUMENTS WHICH REQUIRE REVIEW BY THE CITY SHALL BE SUBMITTED BY THE CONTRACTOR SUFFICIENTLY IN ADVANCE OF SCHEDULED CONSTRUCTION TO ALLOW NO LESS THAN 14 CALENDAR DAYS FOR REVIEW AND RESPONSE BY THE CITY.
- ALL TRENCHES THAT ARE EXCAVATED TO A DEPTH IN EXCESS OF FIVE (5) FEET SHALL BE EXCAVATED AND MAINTAINED IN A MANNER THAT MEETS ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS. PRIOR TO THE EXCAVATION AND CONSTRUCTION OF THE TRENCH(ES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TWO (2) COPIES OF THE TRENCH SAFETY PLANS PREPARED BY A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH OSHA STANDARDS.
- ALL EMBEDMENT AND BACKFILL SHALL BE WETTED TO APPROXIMATE OPTIMUM MOISTURE AND COMPACTED IN EIGHT (8) INCH LIFTS TO 95% STANDARD PROCTOR DENSITY. DENSITY TESTS SHALL BE OBTAINED FOR EACH LIFT AND FOR EACH 150 LINEAL FEET OF TRENCH OR INCREMENT THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A COPY OF ALL GEOTECHNICAL LABORATORY REPORTS/TEST RESULTS TO THE CITY OF LEWISVILLE.
- THERE SHALL BE NO FILLING IN THE FLOODPLAIN OR DUMPING WITHIN THE CITY OF LEWISVILLE WITHOUT AN APPROVED GRADING PLAN AND/OR FILL PERMIT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING ALL FIELD CHANGES TO THE PLANS. THE PROJECT ENGINEER SHALL INCORPORATE THESE CHANGES IN THE "RECORD DRAWINGS".
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CONSTRUCTION SURVEYING AND STAKING AND SHALL NOTIFY THE CITY OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH ANY WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL SURVEY MARKERS INCLUDING IRON RODS, PROPERTY CORNERS, OR SURVEY MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE ROW DURING CONSTRUCTION. ANY SURVEY MARKERS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE CITY.
- CONTRACTOR SHALL PROVIDE A CONSTRUCTION SCHEDULE WITH WEEKLY PROGRESS REPORTS AND THE CONTRACTOR SHALL PERIODICALLY REVISE AND RESUBMIT THE CONSTRUCTION SCHEDULE AS REQUIRED.
- CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND DRIVEWAYS ADJACENT TO THE PROJECT FREE OF MUD AND DEBRIS AT ALL TIMES. CONTRACTOR SHALL CLEAN UP AND REMOVE ALL LOOSE MATERIAL RESULTING FROM CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST.
- THE EXISTENCE AND LOCATIONS OF THE PUBLIC AND FRANCHISE UTILITIES SHOWN ON THE DRAWING WERE OBTAINED FROM THE AVAILABLE RECORDS AND ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATING, TRENCHING, OR DRILLING AND SHALL BE REQUIRED TO TAKE ANY PRECAUTIONARY MEASURE TO PROTECT ALL LINES SHOWN AND / OR ANY OTHER UNDERGROUND UTILITIES NOT OF RECORD OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PUBLIC AGENCIES AND FRANCHISE UTILITIES 48 HOURS PRIOR TO CONSTRUCTION. (DIG-TESS 1-800-344-8377) THE CONTRACTOR MAY BE REQUIRED TO EXPOSE THESE FACILITIES AT NO COST TO THE CITY. THE CONTRACTOR WILL BE RESPONSIBLE FOR DAMAGES TO UTILITIES IF THE DAMAGE IS CAUSED BY NEGLIGENCE OR FAILURE TO HAVE LOCATES PERFORMED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES OR ADJACENT PROPERTIES DURING CONSTRUCTION. ANY REMOVAL OR DAMAGE TO EXISTING FACILITIES SHALL BE REPLACED OR REPAIRED TO EQUAL OR BETTER CONDITION BY THE CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND TXDOT BARRICADE AND CONSTRUCTION STANDARDS.
- CONTRACTOR SHALL NOT IMPEDE TRAFFIC ON EXISTING STREETS, DRIVEWAYS, ALLEYS, OR FIRE LANES OPEN TO THE PUBLIC. IN THE EVENT THE CONSTRUCTION WORK REQUIRES THE CLOSURE OF AN EXISTING STREET, DRIVEWAY, ALLEY OR FIRE LANE, THE CONTRACTOR SHALL REQUEST THE ROAD CLOSURE FROM THE CITY A MINIMUM OF 48 HOURS IN ADVANCE OF THE REQUESTED CLOSURE. CONTRACTOR MUST OBTAIN PERMISSION PRIOR TO ANY ROAD CLOSURES. CLOSURES WILL NOT BE ALLOWED PRIOR TO 9:00 A.M. OR AFTER 3:30 P.M., MONDAY THROUGH FRIDAY UNLESS OTHERWISE APPROVED BY THE CITY.
- CONTRACTOR SHALL NOT STORE MATERIALS, EQUIPMENT, OR OTHER CONSTRUCTION ITEMS ON ADJACENT PROPERTIES OR RIGHT-OF-WAY WITHOUT THE PRIOR WRITTEN CONSENT OF PROPERTY OWNER AND THE CITY.
- UNUSABLE EXCAVATED MATERIAL, OR CONSTRUCTION DEBRIS SHALL BE REMOVED AND DISPOSED OF OFFSITE AT AN APPROVED DISPOSAL FACILITY BY THE CONTRACTOR AT HIS EXPENSE.
- CONTRACTOR SHALL AVOID DAMAGE TO EXISTING TREES. WHEN NECESSARY, TREES AND SHRUB TRIMMING FOR CONSTRUCTION SHALL BE PERFORMED BY A CERTIFIED TREE WORKER OR UNDER THE DIRECTION OF A REGISTERED LANDSCAPE ARCHITECT OR CERTIFIED ARBORIST. NO TREE TRIMMING OR TREE REMOVAL IS PERMITTED PRIOR TO CITY APPROVAL OF EACH TREE.
- CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING LANDSCAPE IRRIGATION SYSTEMS. DAMAGE TO EXISTING IRRIGATION SYSTEMS AND LANDSCAPE MATERIALS SHALL BE RESTORED TO EQUAL OR BETTER CONDITION AT NO COST TO CITY BY A LICENSED IRRIGATION INSTALLER.
- CONTRACTOR SHALL REPLACE ALL SIGNS, MAIL BOXES, LIGHT POLES, ELECTRIC AND UTILITY BOXES, AND ALL OTHER STRUCTURES THAT ARE DAMAGED OR REMOVED DURING CONSTRUCTION (NO SEPARATE PAY ITEM).
- CONTRACTOR SHALL REPLACE ALL DAMAGED SOD WITH BLOCK SOD WITH 4-INCH TOP SOIL IN ALL AREAS DISTURBED ALONG THE LENGTH OF THE PROJECT.
- DAMAGED CURB AND GUTTER SHALL BE REPLACED WITH 6-INCH REINFORCED CONCRETE CURB AND GUTTER (SEE STANDARD DETAIL).

GENERAL NOTES FOR PAVING

- PROPOSED PAVING OR PAVING REMOVED FOR CONSTRUCTION TO BE REPLACED SHALL BE 4,200 PSI CONCRETE AT 3 DAYS (#4 BARS AT 18-INCHES) WITH A 6-INCH SUBGRADE SCARIFIED AND COMPACTED TO 95% PROCTOR DENSITY AT OPTIMUM MOISTURE CONTENT OF +/- 2%.
- ALL PAVING CONSTRUCTION, TESTING, AND MATERIALS, INCLUDING CONCRETE, REINFORCEMENT, JOINTING, AND SUBGRADE PREPARATIONS AND TREATMENT SHALL BE IN ACCORDANCE WITH THE CITY'S CURRENT STANDARDS, DETAILS, AND SPECIFICATIONS AND THE NCTCOG STANDARD CONSTRUCTION SPECIFICATIONS, 5TH EDITION UNLESS OTHERWISE NOTED.
- ABSOLUTELY NO EARTHWORK OR OTHER PREPARATION OF THE SUBGRADE FOR PAVING STREETS, ALLEYS, OR FIRE LANES SHALL BE INITIATED WITHOUT AUTHORIZATION FROM THE CITY. THE CITY WILL AUTHORIZE THE SUBGRADE WORK IN PREPARATION FOR PAVING AFTER UTILITY TRENCH BACKFILL TESTING HAS BEEN COMPLETED AND VERIFIED TO MEET CITY REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL PEDESTRIAN WORK MEETS OR EXCEEDS THE CURRENT AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) AND THE TEXAS ACCESSIBILITY STANDARDS (TAS). THE CONTRACTOR SHALL REMOVE AND REPLACE ANY CONSTRUCTED OR INSTALLED ITEMS NOT MEETING THE CURRENT ADAAG AND TAS REQUIREMENTS AT NO ADDITIONAL COST TO THE CITY.

- THE CONTRACTOR SHALL REMOVE AND REPLACE ANY CONCRETE PAVEMENT (DRIVE APPROACHES / STREET PANELS) WITHIN FIVE (5) DAYS OF SAW CUTTING THE PAVEMENT. CONCRETE PAYMENT SUBJECT TO VEHICULAR TRAFFIC SHALL HAVE COMPRESSIVE STRENGTH OF 4,200 PSI AT 3 DAYS.
- THE USE OF FLY ASH IS NOT ALLOWED IN THE CONCRETE MIX DESIGN.

GENERAL NOTES FOR EROSION CONTROL AND STORM WATER

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING EROSION CONTROL IN ACCORDANCE WITH THE EROSION CONTROL IN ACCORDANCE WITH THE EROSION CONTROL PLAN PREPARED BY THE ENGINEER AND AS IDENTIFIED ON THE STORM WATER POLLUTION PREVENTION PLAN (S.W.P.P.P.) PREPARED BY THE CONTRACTOR. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL DEVICES WHEN FIELD CONDITIONS WARRANT OR AS DIRECTED BY THE CITY OF LEWISVILLE INSPECTOR.
- THE PERMITTED OPERATOR SHALL SUBMIT COPIES OF THE SWPPP, NOTICE OF INTENT (N.O.I.) AND THE NOTICE OF TERMINATION (N.O.T.) AND THE NOTICE OF TERMINATION (N.O.T.) TO THE CITY OF LEWISVILLE FOR APPROVAL AS PART OF THE SUBMITTAL TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ).
- STEEL POST SHALL NOT BE USED TO INSTALL EROSION CONTROL MEASURES WITHIN CITY ROW.
- NO EQUIPMENT SHALL BE CLEANED ON-SITE, OR OTHER LIQUIDS DEPOSITED AND ALLOWED TO FLOW OVERLAND OR SUBTERRANEAN WITHIN THE LIMITS OF THE CRITICAL ROOT ZONE OF TREES THAT REMAIN ON SITE. THIS INCLUDES PAINT, OIL, SOLVENTS, ASPHALT, CONCRETE, CONCRETE EQUIPMENT WASH WATER, MORTAR OF SIMILAR MATERIALS. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH ALL GOVERNING AGENCIES, ENTITIES, AND CITY ORDINANCES AND REGULATIONS.
- EROSION CONTROL DEVICES SHALL BE INSTALLED ON ALL PROJECTS AS PER PLAN PRIOR TO BEGINNING CONSTRUCTION AND SHALL BE MAINTAINED THROUGHOUT THE PROJECT IN A CONDITION ACCEPTABLE TO THE CITY.
- CONTRACTOR SHALL PROVIDE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AT CONTRACTOR'S EXPENSE AND DELIVER TO PRE-CONSTRUCTION MEETING. ALL SWPPP COST SHALL BE SUBSIDIARY TO EROSION CONTROL BID ITEMS.

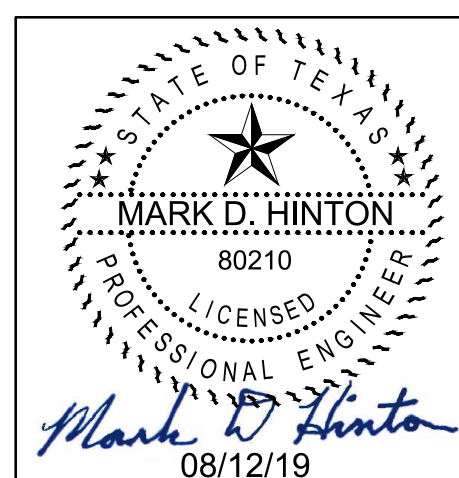
GENERAL NOTES FOR WATER AND WASTEWATER

- WATER LINES OF TWELVE (12) INCHES (NOMINAL) OR LESS IN DIAMETER SHALL BE AWWA STANDARD C900, CLASS 235 (DR-18).
- ALL WATER MAINS SHALL HAVE A 42-INCH MINIMUM COVER FROM FINISHED GRADE TO TOP OF PIPE.
- ALL WATER MAIN PIPE FITTINGS WILL BE IN ACCORDANCE WITH THE CITY OF LEWISVILLE STANDARD DETAILS AND SPECIFICATIONS.
- FITTINGS SHALL BE EITHER GRAY OR DUCTILE CAST IRON AND SHALL BE CEMENT LINED INSIDE AND BITUMINOUS COATED ON THE OUTSIDE. WHERE CONNECTIONS ARE MADE TO PIPES OF DISSIMILAR MATERIALS, SUITABLE ADAPTORS SHALL BE USED.
- ALL DUCTILE IRON FITTINGS SHALL BE OF MECHANICAL JOINT TYPE OR SLIP JOINT TYPE AND SHALL BE CLASS D OR CLASS 2500N SIZES 12" OR SMALLER IN ACCORDANCE WITH AWWA SPECIFICATION C-110-12 AND SPECIFICATION C-111-12.
- ALL FIRE HYDRANTS SHALL MEET THE CITY OF LEWISVILLE STANDARD FIRE HYDRANT SPECIFICATIONS. FIRE HYDRANT SHALL BE MUELLER SUPER CENTURION, CLOW MEDALLION, WATEROUS WB-67, OR EQUAL WITH CITY APPROVAL.
- THE LOCATION OF ALL NEW FIRE HYDRANTS SHALL BE REVIEWED IN THE FIELD AND APPROVED BY THE CITY INSPECTOR.
- ALL EXISTING FIRE HYDRANTS ON WATER LINES THAT WILL BE PLUGGED/KILLED AS PART OF THIS PROJECT SHALL BE REMOVED, SALVAGED AND DELIVERED TO A LOCATION ACCEPTABLE TO THE CITY.
- PIPE JOINTS SHALL BE OF THE "PUSH-ON" TYPE UNLESS OTHERWISE NOTED.
- VALVES 12-INCH AND SMALLER SHALL BE GATE VALVES. ALL VALVES SHALL BE FLANGED. GATE VALVES ON LATERALS SHALL BE ATTACHED TO A FLANGED OUTLET, TEE OR CROSS. VALVES SHALL CONFORM TO AWWA C-509.
- VALVES, VAULT LIDS, FIRE HYDRANTS AND METER BOXES SHALL BE LOCATED OUTSIDE OF SIDEWALK AREAS.
- CONTRACTOR SHALL NOT OPERATE EXISTING VALVES. CONTACT THE CITY'S PUBLIC WORKS DEPARTMENT TO REQUEST VALVE CHANGE.
- ALL VALVES SHALL BE ABANDONED ON EXISTING WATER LINES THAT WILL BE KILLED/ABANDONED AS PART OF THIS PROJECT. CONTRACTOR SHALL REMOVE EACH VALVE COVER/LID AND FILL THE VALVE STACK WITH SAND OR 2 SACK CONCRETE MIX. (NO SEPARATE PAY ITEM).
- ALL VERTICAL AND HORIZONTAL BENDS SHALL BE REVIEWED IN THE FIELD AND APPROVED BY THE CITY INSPECTOR.
- SANITARY SEWER LINES SHALL BE PVC SDR 35 OR AS NOTED ON THE CONSTRUCTION PLANS.
- MANHOLES SHALL BE PRECAST, UNLESS OTHERWISE APPROVED BY THE CITY.
- THE CONTRACTOR SHALL PERFORM A TELEVISION INSPECTION OF THE NEW SANITARY SEWER LINE AS PER THE CITY OF LEWISVILLE GENERAL DEVELOPMENT ORDINANCES.
- ALL PIPE BURSTING PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) PIPE AND CONFORMS TO ASTM D3350 WITH THE CELL CLASSIFICATION OF 445574C AND IS LISTED WITH THE PLASTIC PIPE INSTITUTE (PP). ALL PIPE SHALL BE IPS SDR-17, GREY IN COLOR WITH GREEN STRIP WITH SIZES SHOWN ON THE PLANS BASED ON MINIMUM INSIDE DIAMETER.
- ALL WATER AND WASTEWATER CONSTRUCTION, TESTING, AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY'S CURRENT STANDARDS, DETAILS, AND SPECIFICATIONS UNLESS OTHERWISE NOTED, AND WITH NCTCOG STANDARD CONSTRUCTION SPECIFICATIONS, 4TH EDITION.
- ALL TRENCHING, EMBEDMENT, AND BACKFILL WILL BE INCIDENTAL TO THE UNIT COST OF PIPE.
- CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL EXISTING ACTIVE WATER SERVICES AND SHALL CONSTRUCT NEW SERVICE LINES FROM THE NEW WATER MAIN TO THE METER PRIOR TO KILLING THE EXISTING WATER MAIN. EACH METER SHALL HAVE A DEDICATED SERVICE LINE FROM THE NEW MAIN. THE SERVICE LINE SHALL INCLUDE CORPORATION AND CURB STOPS, AS SHOWN ON THE CITY OF LEWISVILLE STANDARD DETAIL. THE EXISTING METERS AND METER BOXES WILL NOT BE REPLACED.
- ALL EXISTING WATER MAINS THAT WILL BE KILLED AND ABANDONED SHALL BE FILLED WITH FLOWABLE GROUT AFTER NEW MAIN IS PLACED IN SERVICE.

Company Contact Phone and email

| COMPANY | CONTACT | PHONE | EMAIL |
|-------------------------|----------------|--------------|------------------------------|
| AT&T | . | . | . |
| ATMOS ENERGY | GARY WOOLSEY | 214-206-2717 | gary.woolsey@atmosenergy.com |
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RJN GROUP INC.
The Choice for Collection System Solutions
 Texas Registered Engineering Firm F-3260
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 Dallas TX 75254



| REV. | COMMENTS | BY | DATE |
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| CITY OF LEWISVILLE, TEXAS ENGINEERING DEPARTMENT | | | |
| CDBG MORNINGSIDE SANITARY SEWER REHAB | | | |
| GENERAL NOTES AND LEGEND | | | |
| rjngroup <small>Texas Registered Engineering Firm F-3260</small> | | <small>RJN GROUP, INC.</small> 14755 PRESTON RD. STE #710 DALLAS, TEXAS 75254 | |
| DESIGN: MF | DATE: August 2019 | SCALE: N.T.S. | PROJECT NO. R4801.2017.11 |
| DRAWN: MES, PRR | CHECKED: MDH | | SHEET 2 OF 12 |

RAILROAD GENERAL NOTES

RAILROADS

THE DENTON COUNTY TRANSIT AUTHORITY (DCTA) IS HEREINAFTER REFERRED TO AS THE "RAILROAD".

NOTIFICATION OF WORK

THE CONTRACTOR IS REQUIRED TO GIVE THE RAILROAD A MINIMUM OF 30 CALENDAR DAYS ADVANCE NOTICE, IN WRITING, BEFORE ANY WORK IS STARTED ON THE SITE AND WHEN FLAGGING SERVICES WILL BE REQUIRED. TO AVOID HAZARDS, THE RAILROAD MAY HAVE A REPRESENTATIVE PRESENT IF DEEMED NECESSARY, FOR THE PURPOSE OF INSPECTION AND THE ISSUANCE OF ANY APPROPRIATE INSTRUCTIONS FOR RAILWAY OPERATIONS DURING THE CONSTRUCTION OF THIS WORK PACKAGE AS IT RELATES TO THE RAILROAD.

THE CONTRACTOR SHALL NOTIFY THE RESPONSIBLE PERSONNEL AT:

DCTA

MR. DANNY BAILEY
AVP, RAIL OPERATIONS
PHONE 512-848-7399

ROADWAY WORKER PROTECTION COURSE

ALL PERSONNEL WORKING WITHIN THE RAILROAD RIGHT-OF-WAY MUST ATTEND AND COMPLETE THE ROADWAY WORKER PROTECTION COURSE PRIOR TO ENTERING THE RAILROAD RIGHT-OF-WAY.

NO WORK OR ACTIVITY SHALL BE CONDUCTED LESS THAN TWENTY-FIVE FEET (25.0') FROM THE CLOSEST RAIL OF ANY DCTA TRACK (ALSO REFERRED TO AS "THE FOUL ZONE") OR PERFORM ANY WORK IN WHICH A CATASTROPHIC EVENT COULD CAUSE EQUIPMENT, PEOPLE OR MATERIALS TO ENTER INTO THE FOUL ZONE UNLESS DCTA REPRESENTATIVE FLAGGERS ARE PRESENT AND ALSO WITHIN THE LAST 365 DAYS HAVE COMPLETED A CREDITABLE ROADWAY WORKER PROTECTION COURSE.

THE ROADWAY WORKER PROTECTION COURSE CAN BE SCHEDULED BY CALLING ALEX ISON (817) 471-7132 OR MARK RICHROATH (817) 374-3092. THE COURSE COST IS \$1,000.00 AND CAN HAVE MULTIPLE ATTENDEES FOR NO ADDITIONAL CHARGE UP TO 50 PEOPLE. A TRAINING VENUE WILL NEED TO BE PROVIDED FOR CLASSES EXCEEDING 15 PEOPLE AT THE REQUESTOR'S EXPENSE.

PRE-WORK MEETING

PRIOR TO EACH EVENT OF WORKING WITHIN THE RAILROAD'S RIGHT-OF-WAY, OR IN THE VICINITY OF IT'S TRACKS, CONTACT MUST BE MADE WITH THE RAILROAD TO COORDINATE THE WORK. IT IS VITAL THAT THE RAILROAD BE CONTACTED PRIOR TO GETTING ON THE RAILROAD'S PROPERTY.

PROTECTION OF RAILROAD TRACK

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE RAILROAD TRACK BED DURING ALL CONSTRUCTION OPERATIONS.

COORDINATION WITH RAILROAD

THE CONTRACTOR IS REQUIRED TO GIVE THE RAILROAD AT LEAST 30 WORKING DAYS ADVANCE NOTICE, IN WRITING, BEFORE ANY WORK IS STARTED ON THE SITE. TO AVOID HAZARDS, THE RAILROAD MAY HAVE A REPRESENTATIVE PRESENT, IF DEEMED NECESSARY, FOR THE PURPOSE OF INSPECTION AND THE ISSUANCE OF ANY APPROPRIATE INSTRUCTIONS FOR RAILWAY OPERATIONS DURING THE CONSTRUCTION OF THIS WORK PACKAGE AS IT RELATES TO THE RAILROAD. THE CONTRACTOR SHALL CONDUCT CONSTRUCTION OPERATIONS IN A MANNER WHICH WILL NOT DELAY OR INTERFERE WITH TRAIN OPERATIONS. CONSTRUCTION ACTIVITY WITHIN 25' OF ACTIVE TRACKS WILL REQUIRE A FLAGMAN TO BE PROVIDED BY THE RAILROAD AT THE CONTRACTOR'S EXPENSE. PRIOR TO EACH EVENT OF WORKING ON THE RAILROAD RIGHT-OF-WAY, OR IN THE VICINITY OF IT'S TRACKS, CONTACT MUST BE MADE BY THE CONTRACTOR WITH THE RAILROAD TO COORDINATE THE WORK. IT IS VITAL THAT THE RAILROAD BE CONTACTED PRIOR TO GETTING ON THE RAILROAD'S PROPERTY. THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO THE RAILROAD, A MINIMUM OF 30 CALENDAR DAYS IN ADVANCE OF WHEN FLAGGING IS REQUIRED. SPECIAL PERMISSION MUST BE OBTAINED FROM THE RAILROAD BEFORE MOVING ANY EQUIPMENT OR OTHER OBJECTS WHICH COULD MAKE THE TRACK IMPASSABLE.

RAILROAD FLAGGERS, PROTECTIVE SERVICES, AND PROTECTIVE DEVICES WILL BE REQUIRED, BUT NOT BE LIMITED TO EVENTS WHEN:

- THE CONTRACTORS WORK ACTIVITIES ARE WITHIN TWENTY-FIVE (25') FEET OF THE TRACK, MEASURED FROM THE TRACK CENTERLINE.
- ACTIVITIES ARE OVER THE TRACK
- CRANES OR SIMILAR EQUIPMENT WILL BE POSITIONED WHERE THEY COULD FOUL THE TRACK IF THEY TIPPED OVER OR EXPERIENCED SOME OTHER CATASTROPHIC EVENT.
- IN THE OPINION OF THE RAILROAD REPRESENTATIVE:
 1. IT IS NECESSARY TO SAFEGUARD RAILROAD PROPERTY, EMPLOYEES, TRAINS, ENGINES, AND FACILITIES.
 2. WHEN ANY EXCAVATION IS PERFORMED BELOW THE BOTTOM OF TIE ELEVATIONS AND TRACK OR OTHER RAILROAD FACILITIES ARE SUBJECT TO MOVEMENT OR SETTLEMENT.
 3. WHEN WORK IN ANY WAY INTERFERES WITH THE SAFE OPERATION OF TRAINS AND TIMETABLE SPEEDS.
 4. WHEN ANY HAZARD IS PRESENTED TO RAILROAD TRACK, SIGNAL, COMMUNICATIONS, ELECTRICAL, OR OTHER FACILITIES EITHER DUE TO PERSONS, MATERIAL, EQUIPMENT, OR BLASTING IN THE AREA.

ALL FLAGMEN ARE TO BE PROVIDED BY THE RAILROAD. ALL FLAGGERS, PROTECTIVE SERVICES AND PROTECTIVE DEVICES SHALL BE PROVIDED AT CONTRACTOR'S EXPENSE.

DEVELOPER WILL ASSIGN A CONSTRUCTION MANAGER AND A CONSTRUCTION INSPECTOR DURING CONSTRUCTION OF THE PROJECT. CONTRACTOR SHALL COORDINATE WITH THE RAILROAD THRU THE ASSIGNED CONSTRUCTION MANAGER FOR THIS PROJECT.

PROTECTION OF RAILROAD TRACK

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE RAILROAD TRACK BED DURING ALL CONSTRUCTION OPERATIONS.

INSURANCE

CONTRACTOR SHALL PROVIDE A CURRENT CERTIFICATE EVIDENCING INSURANCE COVERAGE IN THE FOLLOWING AMOUNTS:

- COMMERCIAL GENERAL LIABILITY INSURANCE: COMBINED SINGLE LIMIT OF NOT LESS THAN \$2 MILLION
- BUSINESS AUTOMOBILE LIABILITY INSURANCE: COMBINED SINGLE LIMIT OF NOT LESS THAN \$2 MILLION
- WORKER'S COMPENSATION INSURANCE: COVERING THE STATUTORY LIABILITY DETERMINED BY STATE LAW.
- RAILROAD PROTECTIVE LIABILITY INSURANCE: \$2 MILLION FOR EACH OCCURRENCE AND AGGREGATE LIMIT OF \$6 MILLION.

THE CONTRACTOR WILL BE REQUIRED TO ENTER INTO A LIMITED RIGHT-OF-ENTRY (CONSTRUCTION) AGREEMENT WITH THE RAILROAD BEFORE BEING ALLOWED ON THE RAILROAD'S RIGHT-OF-WAY.

THE CONTRACTOR SHALL COMPLY WITH RAILROAD REQUIREMENTS STATED IN THE CONSTRUCTION AND MAINTENANCE (C&M) AGREEMENT PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

THE CONTRACTOR SHALL DEVELOP WORK PLANS THAT ENSURE THE TRACKS REMAIN OPEN TO TRAIN TRAFFIC PER RAILROAD REQUIREMENTS AS STATED IN THE C&M AGREEMENT AND MEET THE REQUIREMENTS OF THE RAILROAD RIGHT OF ENTRY AGREEMENT.

DESIGN & CONSTRUCTION

THE CONTRACTOR MUST SUBMIT A PROPOSED METHOD OF EROSION AND SEDIMENT CONTROL AND HAVE THE METHOD APPROVED BY THE RAILROAD.

ALL DEMOLITIONS WITHIN THE RAILROAD'S RIGHT-OF-WAY AND/OR DEMOLITION THAT MAY IMPACT THE RAILROAD'S TRACKS OR OPERATIONS SHALL BE IN COMPLIANCE WITH THE RAILROAD'S DEMOLITION GUIDELINES.

ALL CONSTRUCTION PHASING THAT MAY IMPACT THE RAILROAD OPERATION SHALL BE DESIGNED TO CAUSE NO INTERRUPTION TO THE RAILROAD'S OPERATION, ENABLING THE TRACK(S) TO REMAIN OPEN TO TRAFFIC PER THE RAILROAD'S REQUIREMENTS. COORDINATE CONSTRUCTION WORK WINDOWS WITH THE RAILROAD'S DESIGNATED REPRESENTATIVE.

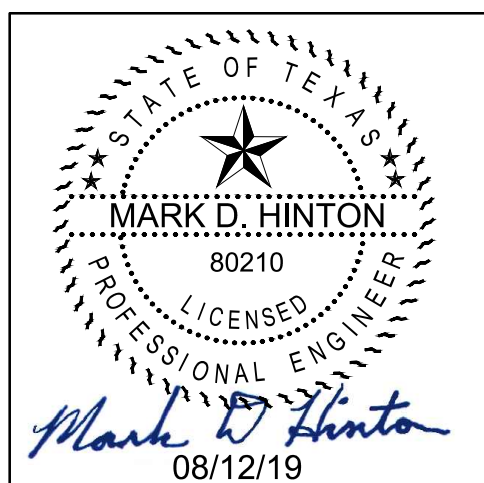
MODIFICATIONS/CHANGES

ALL PROPOSALS TO MODIFY OR CHANGE ANY PROPOSED WORK WILL BE SUBMITTED TO RAILROAD AND THE ENGINEER FOR APPROVAL

MEASUREMENT AND PAYMENT

THE COST FOR INSURANCE, CONTRACTOR'S RIGHT OF ENTRY AGREEMENT AND ANY OTHER RAILROAD REQUIREMENTS SHALL BE SUBSIDIARY TO APPROPRIATE WORK RELATED ITEMS.

FLAGGING FOR THE RAILROAD SHALL BE MEASURED AND PAID FOR ON A LUMP SUM BASIS.



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CITY OF LEWISVILLE, TEXAS
ENGINEERING DEPARTMENT

CDBG MORNINGSIDE SANITARY SEWER REHAB

RAILROAD GENERAL NOTES

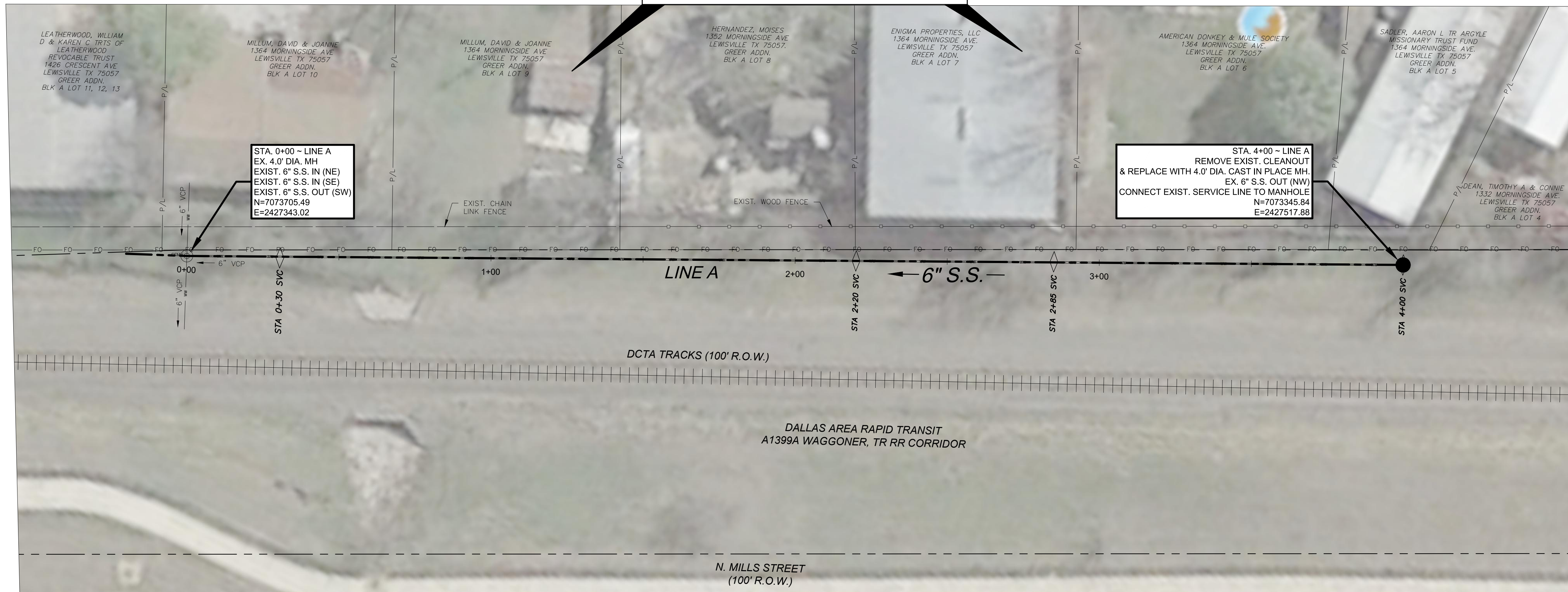
RJN GROUP INC.
The Choice for Collection System Solutions
Texas Registered Engineering Firm F-3260
14755 Preston Rd., Suite 710
Dallas TX 75254

rjngroup Texas Registered Engineering Firm F-3260 RJN GROUP, INC. 12160 ABRAMS RD. STE #400 DALLAS, TEXAS 75243

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| DESIGN: MF | DATE | SCALE | PROJECT NO. | SHEET |
| DRAWN: MES, PRR | August 2019 | N.T.S. | R4801.2017.11 | 3 OF 12 |
| CHECKED: MDH | | | | |

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 Mark D. Hinton, August 12, 2019
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INSTALL 400 LF OF 6" S.S. BY OPEN-CUT



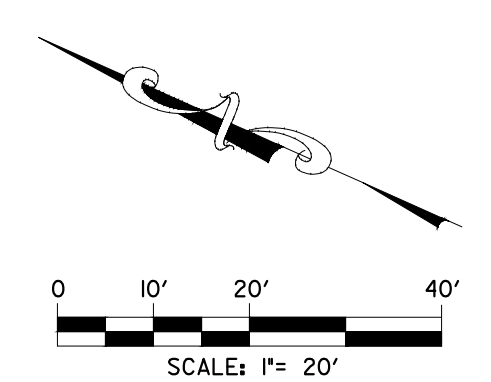
- NOTES:**
1. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION & REPORT ANY CONFLICTS TO THE ENGINEER PRIOR TO BEGINNING PIPELINE CONSTRUCTION AND/OR PURCHASING ANY MATERIALS.
 2. RECONNECT ALL ACTIVE SANITARY SEWER SERVICE CONNECTIONS.
 3. RECONNECT ALL ACTIVE LATERAL CONNECTIONS.
 4. SEE DETAILS SHEET FOR CLEANOUTS.

LEGEND:
 EXIST. LATERAL CONNECTION

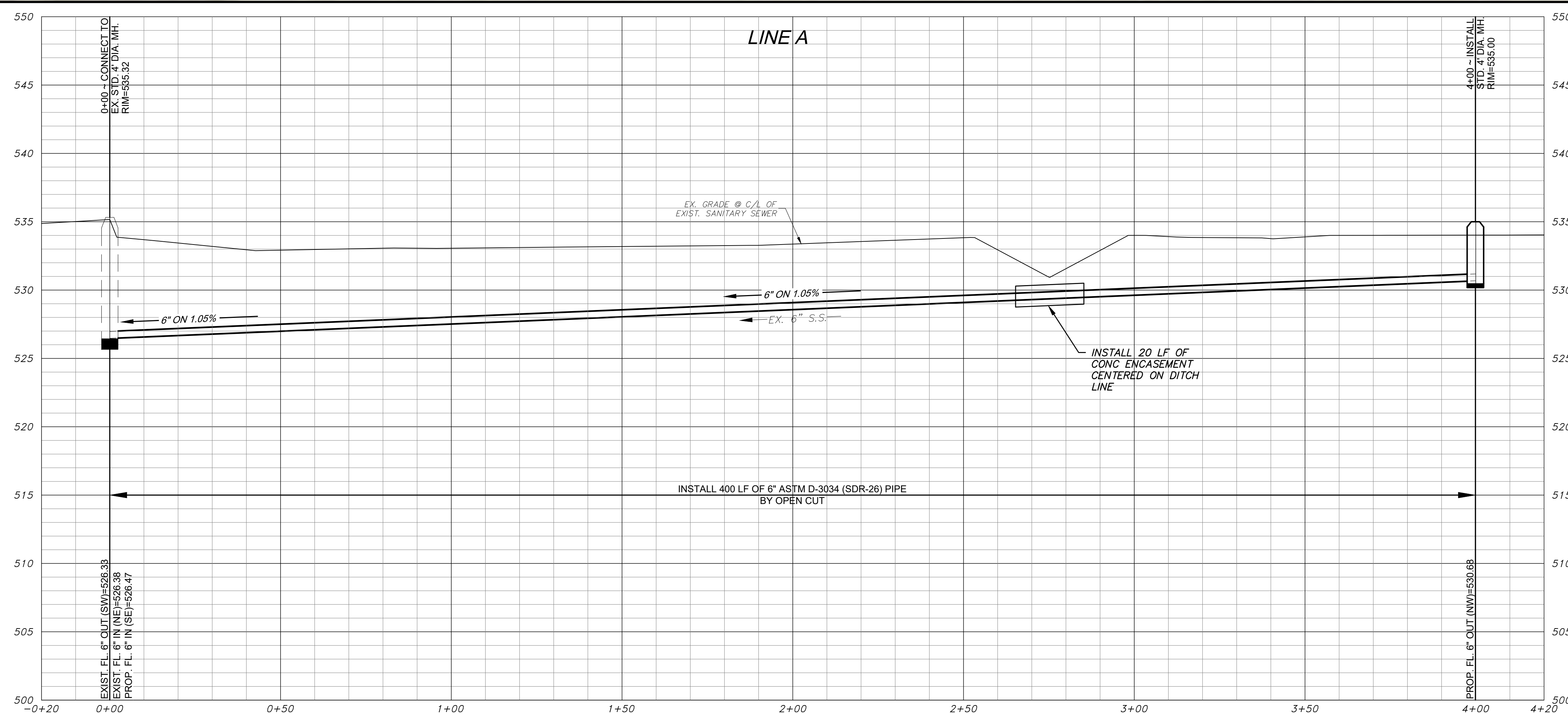
WARNING!!!
 EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC, GAS, AND OTHER UTILITIES IN AREA, CONTACT UTILITY LOCATOR 48 HOURS PRIOR TO CONSTRUCTION

RJN GROUP INC.
 The Choice for Collection System Solutions
 Texas Registered Engineering Firm F-3260
 14755 Preston Rd, Suite 710
 Dallas TX 75254

STATE OF TEXAS
 MARK D. HINTON
 80210
 LICENSED PROFESSIONAL ENGINEER
 Mark D. Hinton
 08/12/19



PROFILE SCALE:
 HORZ. 1"=20'
 VERT. 1"=4'



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CITY OF LEWISVILLE, TEXAS
 ENGINEERING DEPARTMENT

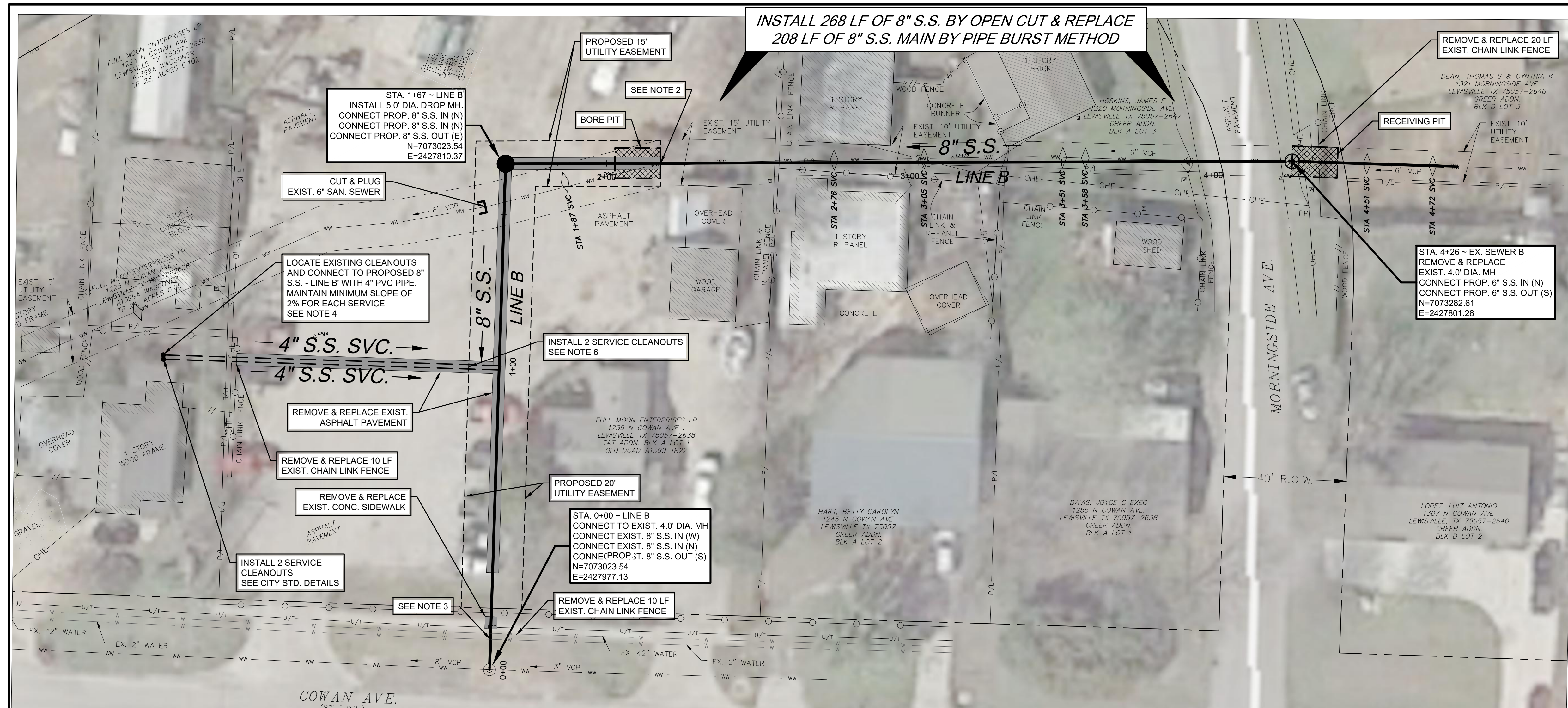
CDBG MORNINGSIDE SANITARY SEWER REHAB

PLAN AND PROFILE SHEETS
 LINE A - ALTERNATE B

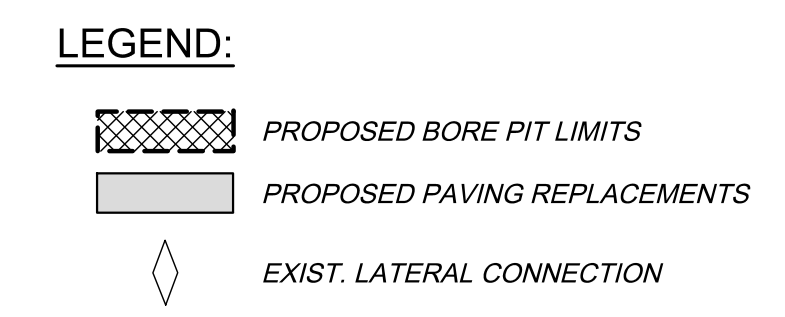
rjngroup Texas Registered Engineering Firm F-3260
 RJN GROUP, INC.
 14755 PRESTON RD. STE #710
 DALLAS, TEXAS 75254

| DESIGN: | DATE: | SCALE: | PROJECT NO.: | SHEET: |
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| MF | August 2019 | AS NOTED | R4801.2017.11 | 5 OF 12 |

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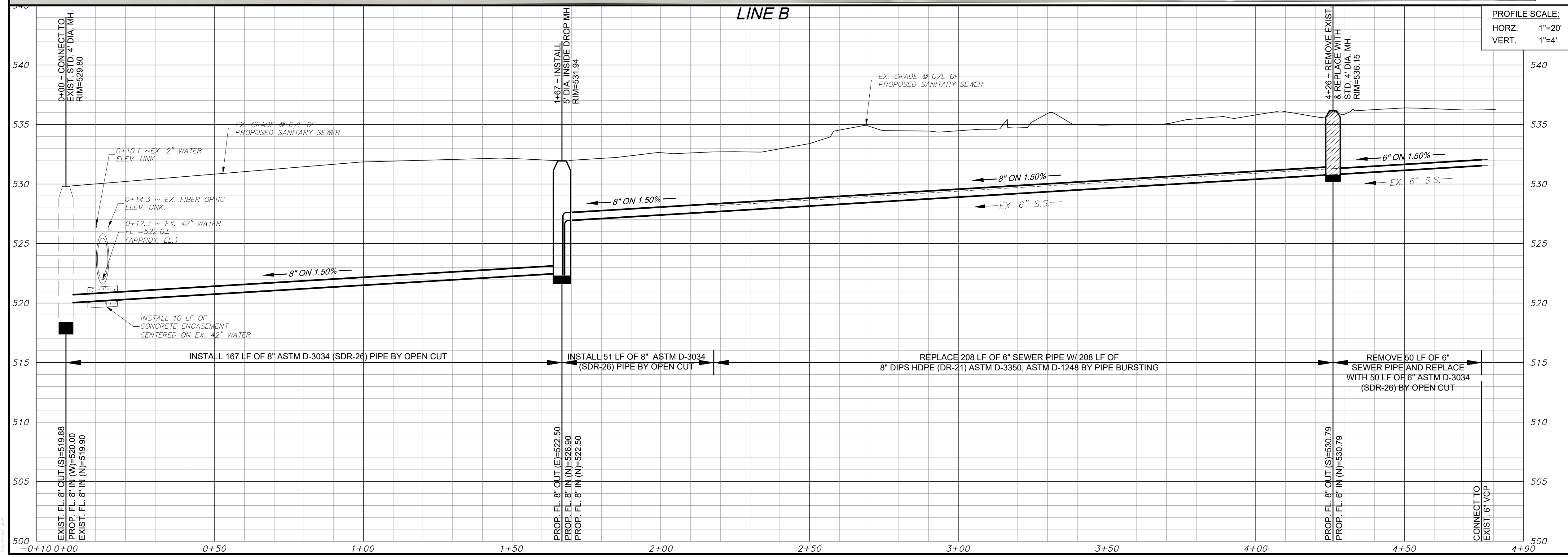


- NOTES:**
1. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND REPORT ANY CONFLICTS TO THE ENGINEER PRIOR TO BEGINNING PIPELINE CONSTRUCTION AND/OR PURCHASING ANY MATERIALS.
 2. PRIOR TO CONSTRUCTION, CONTRACTOR TO VERIFY FLOWLINE ELEVATION OF EXIST. SANITARY SEWER LINE.
 3. PRIOR TO CONSTRUCTION, CONTRACTOR TO VERIFY FLOWLINE & TOP OF PIPE ELEVATIONS OF EXIST. WATER LINE.
 4. PRIOR TO CONSTRUCTION, CONTRACTOR TO VERIFY FLOWLINE ELEVATION OF EXIST. SANITARY SEWER SERVICE LINES.
 5. RECONNECT ALL ACTIVE LATERAL CONNECTIONS.
 6. SEE DETAILS SHEET FOR CLEANOUT.



WARNING!!!
 EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC, GAS, AND OTHER UTILITIES IN AREA, CONTACT UTILITY LOCATOR 48 HOURS PRIOR TO CONSTRUCTION

RJN GROUP INC.
The Choice For Collection System Solutions
 Texas Registered Engineering Firm F-3260
 14755 Preston Rd., Suite 710
 Dallas TX 75254



PROFILE SCALE:
 HORZ. 1"=20'
 VERT. 1"=4'

0 10' 20' 40'
 SCALE: 1"= 20'

STATE OF TEXAS
 MARK D. HINTON
 80210
 LICENSED PROFESSIONAL ENGINEER
 Mark D. Hinton
 08/12/19

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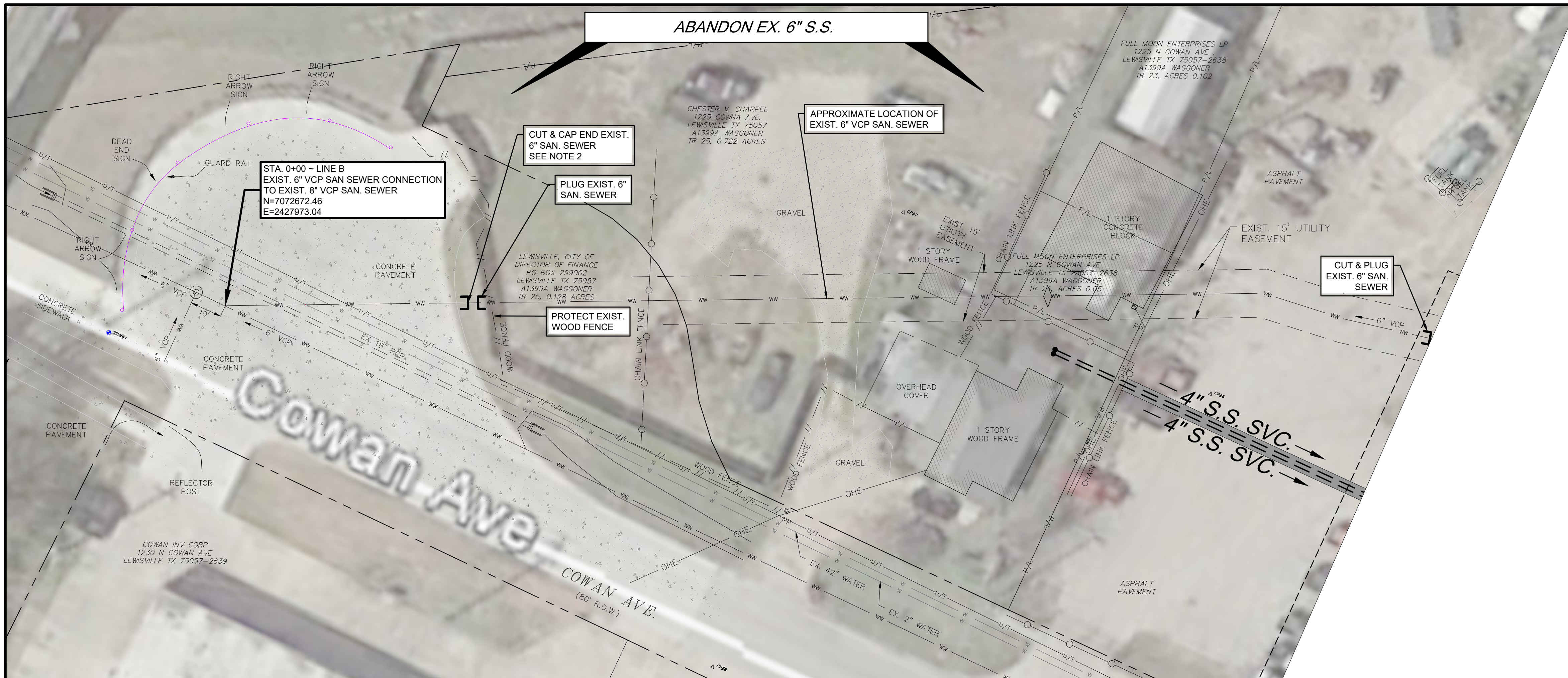
CITY OF LEWISVILLE, TEXAS
 ENGINEERING DEPARTMENT

CDBG MORNINGSIDE SANITARY SEWER REHAB

PLAN AND PROFILE SHEETS
LINE B

rjngroup Texas Registered Engineering Firm F-3260
 RJN GROUP, INC. 14755 PRESTON RD. STE #710 DALLAS, TEXAS 75254

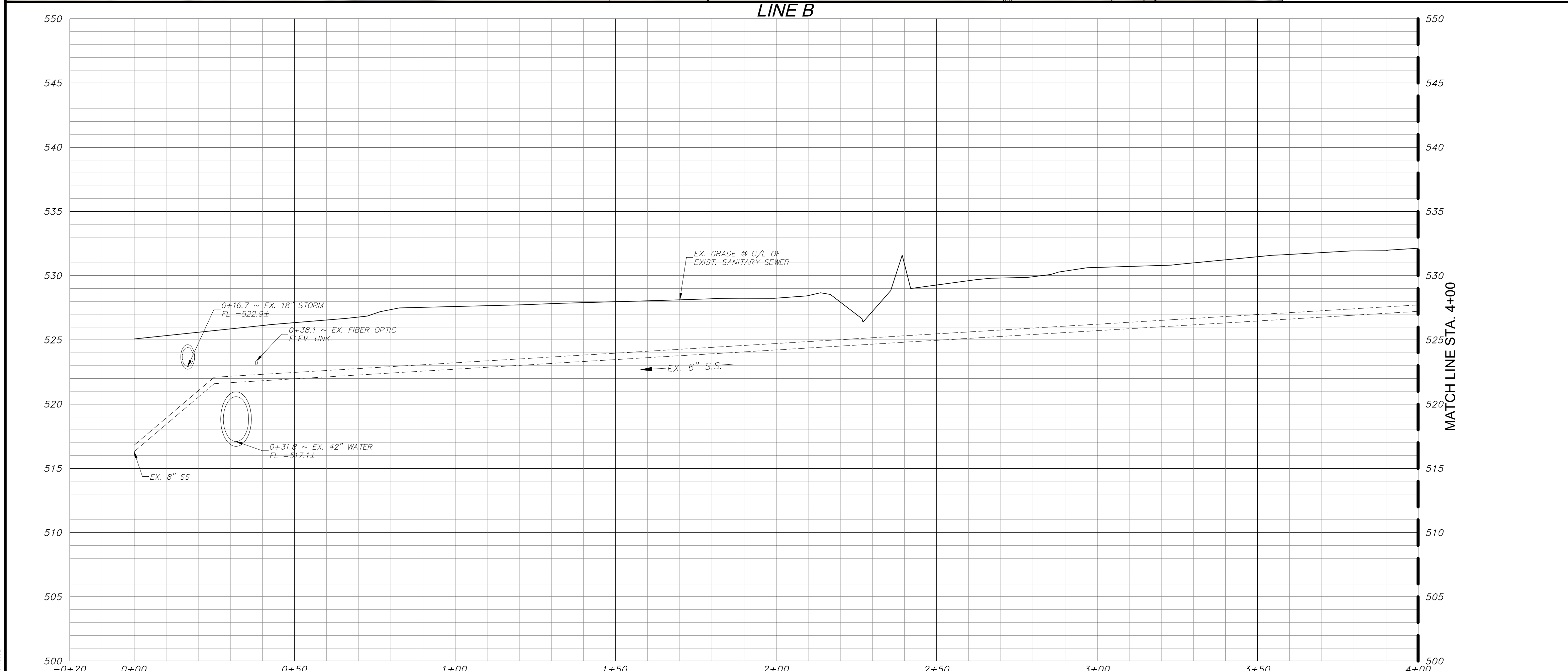
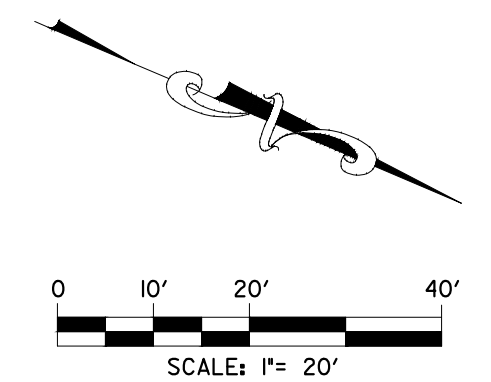
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| MF | August 2019 | AS NOTED | R4801.2017.11 | 6 OF 12 |



- NOTES:**
- CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION & REPORT ANY CONFLICTS TO THE ENGINEER PRIOR TO BEGINNING PIPELINE CONSTRUCTION AND/OR PURCHASING ANY MATERIALS.
 - CAP TO BE PER FERNCO OR EQUAL.

WARNING!!!
 EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC, GAS, AND OTHER UTILITIES IN AREA. CONTACT UTILITY LOCATOR 48 HOURS PRIOR TO CONSTRUCTION

RJN GROUP INC.
The Choice for Collection System Solutions
 Texas Registered Engineering Firm F-3260
 14755 Preston Rd., Suite 710
 Dallas TX 75254



PROFILE SCALE:
 HORZ. 1"=20'
 VERT. 1"=4'

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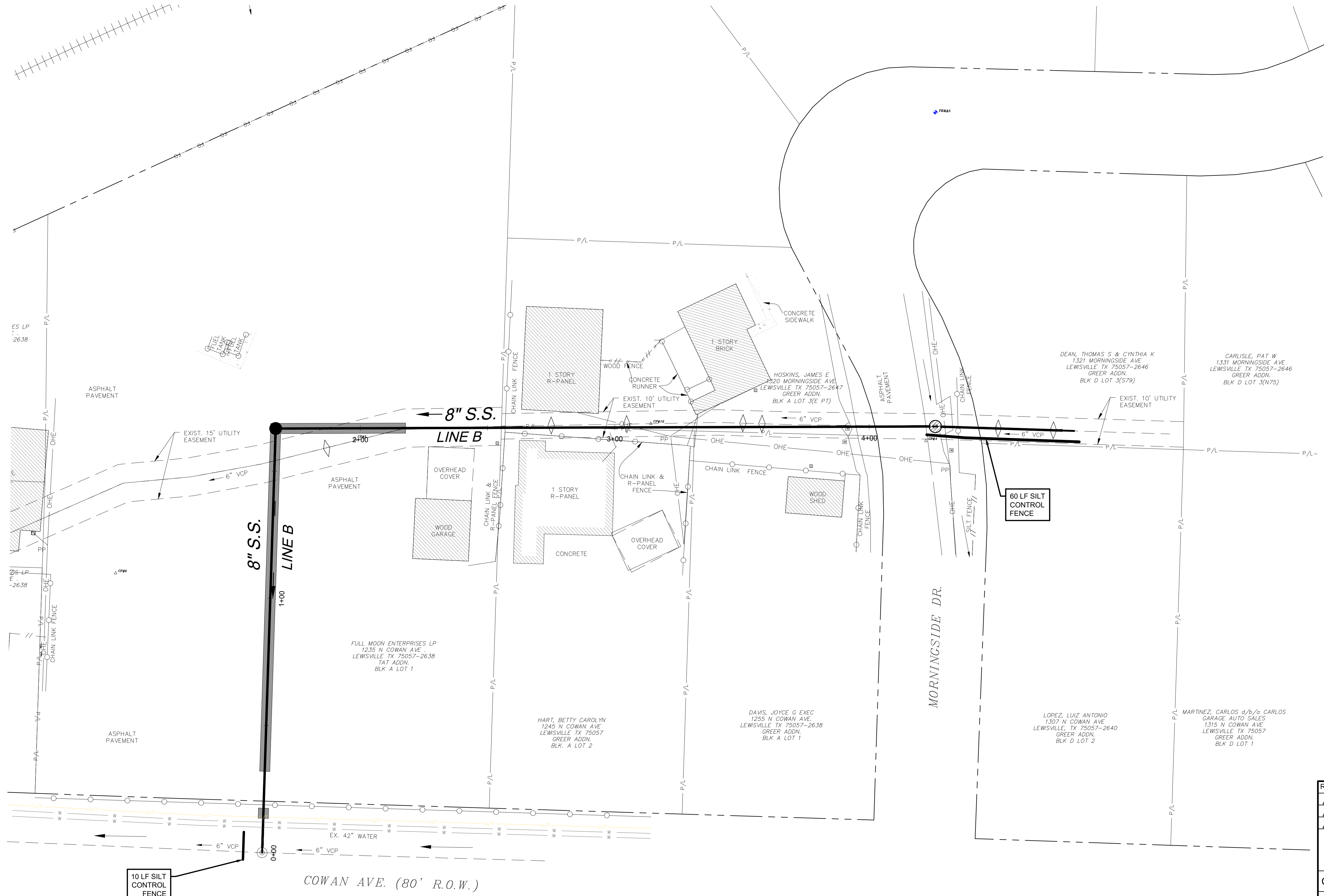
CITY OF LEWISVILLE, TEXAS
 ENGINEERING DEPARTMENT

CDBG MORNINGSIDE SANITARY SEWER REHAB

PLAN AND PROFILE SHEETS
 LINE ABANDONMENT

rjngroup Texas Registered Engineering Firm F-3260
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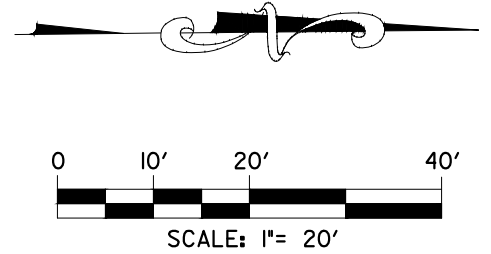
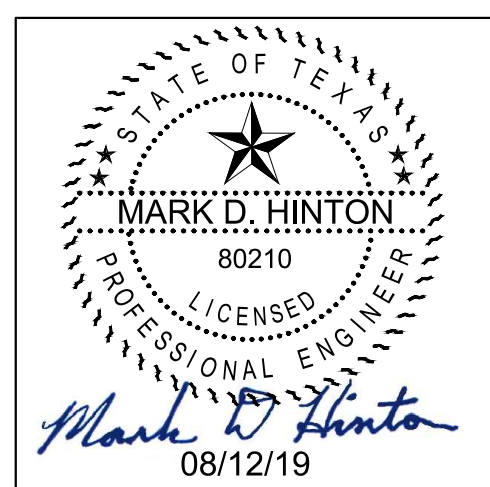
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| MF | August 2019 | AS NOTED | R4801.2017.11 | 7 OF 12 |



- NOTES:**
- CONSTRUCTION AND MAINTENANCE OF SILT FENCES IS CONSIDERED SUBSIDIARY TO EROSION CONTROL.
 - PROVIDE TREE PROTECTION FENCING ALONG ACCESS PATHS AND AROUND EXISTING TREES THAT ARE NOT IDENTIFIED FOR REMOVAL PRIOR TO SEWER CONSTRUCTION

- LEGEND:**
- PROPOSED PAVING REPLACEMENTS
 - EXIST. LATERAL CONNECTION
 - SILT FENCE
 - FLOW DIRECTION

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 Texas Registered Engineering Firm F-3260
 14755 Preston Rd., Suite 710
 Dallas TX 75254



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CITY OF LEWISVILLE, TEXAS
 ENGINEERING DEPARTMENT

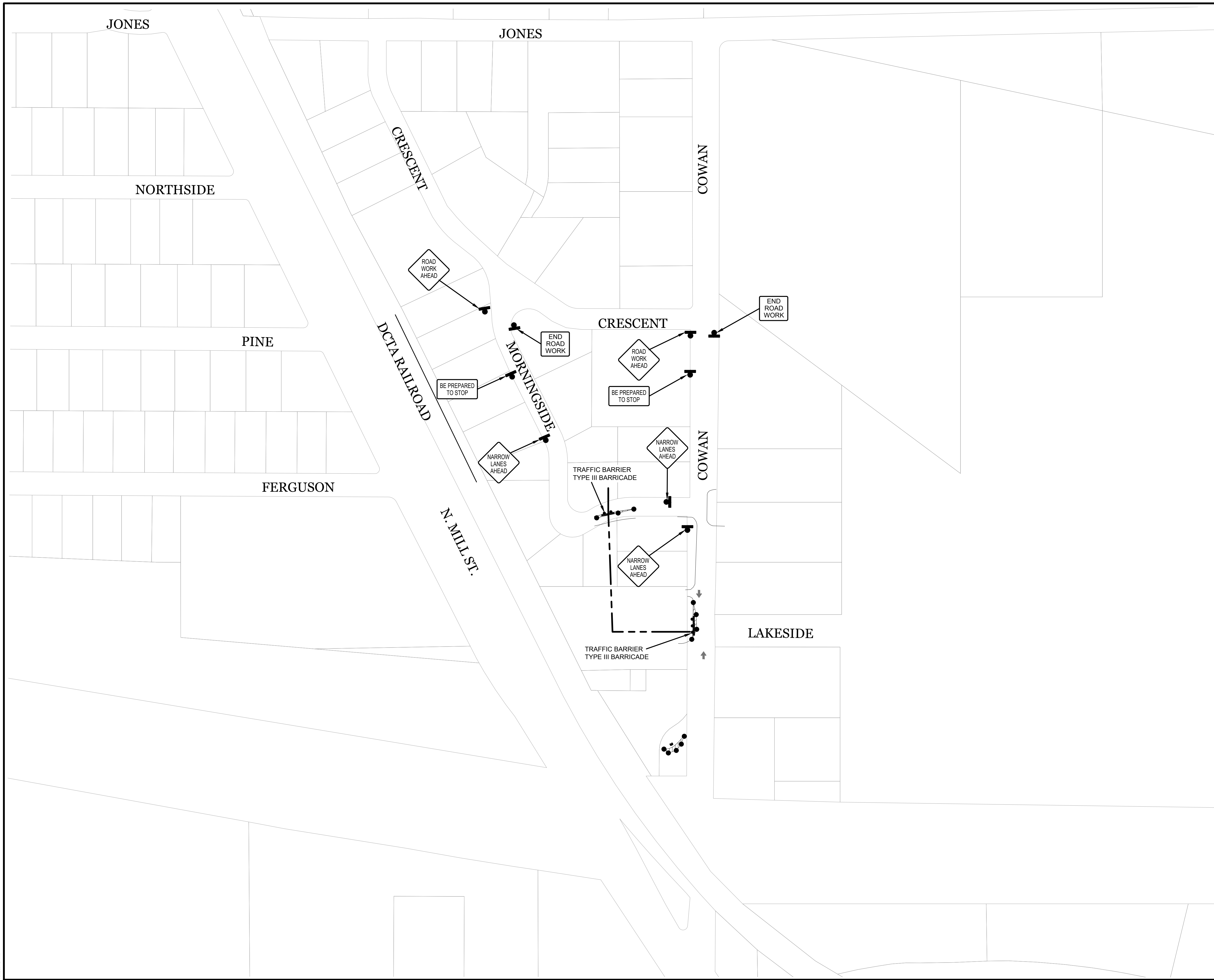
CDBG MORNINGSIDE SANITARY SEWER REHAB

EROSION CONTROL PLAN
SWPPP-LINE B

rjngroup Texas Registered Engineering Firm F-3260 RJN GROUP, INC. 14755 PRESTON RD. STE #710 DALLAS, TEXAS 75254

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NOTES:

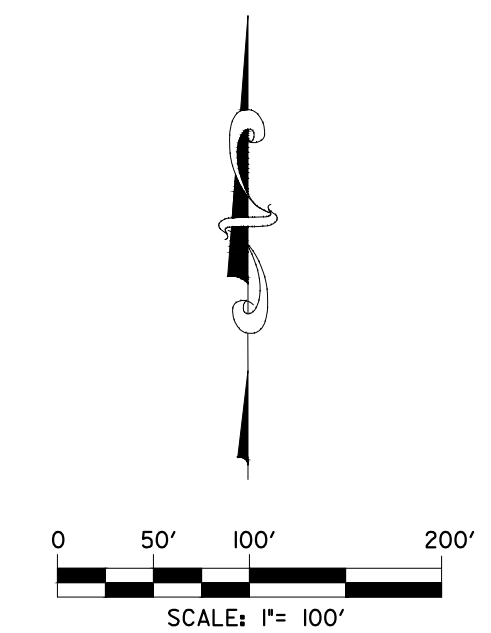
1. ALL OPEN TRENCHES MUST BE BACKFILLED AT THE END OF THE DAY OR PROPERLY PROTECTED BY BARRICADES OR STEEL PLATING. ANY TRENCH WITHIN A DRIVING SURFACE MUST BE COVERED WITH STEEL PLATING.

LEGEND

-  TEMPORARY SECONDARY LANE CLOSURE (WORK AREA)
-  BARREL
-  SIGN
-  TRAFFIC BARRIER TYPE III BARRICADE

WARNING!!!
 EXISTING UNDERGROUND TELEPHONE, OVERHEAD, UNDERGROUND ELECTRIC, GAS, AND OTHER UTILITIES IN AREA, CONTACT UTILITY LOCATOR 48 HOURS PRIOR TO CONSTRUCTION


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The Choice for Collection System Solutions
 Texas Registered Engineering Firm F-3260
 14755 Preston Rd., Suite 710
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CITY OF LEWISVILLE, TEXAS
 ENGINEERING DEPARTMENT 

CDBG MORNINGSIDE SANITARY SEWER REHAB

TRAFFIC CONTROL LINE B

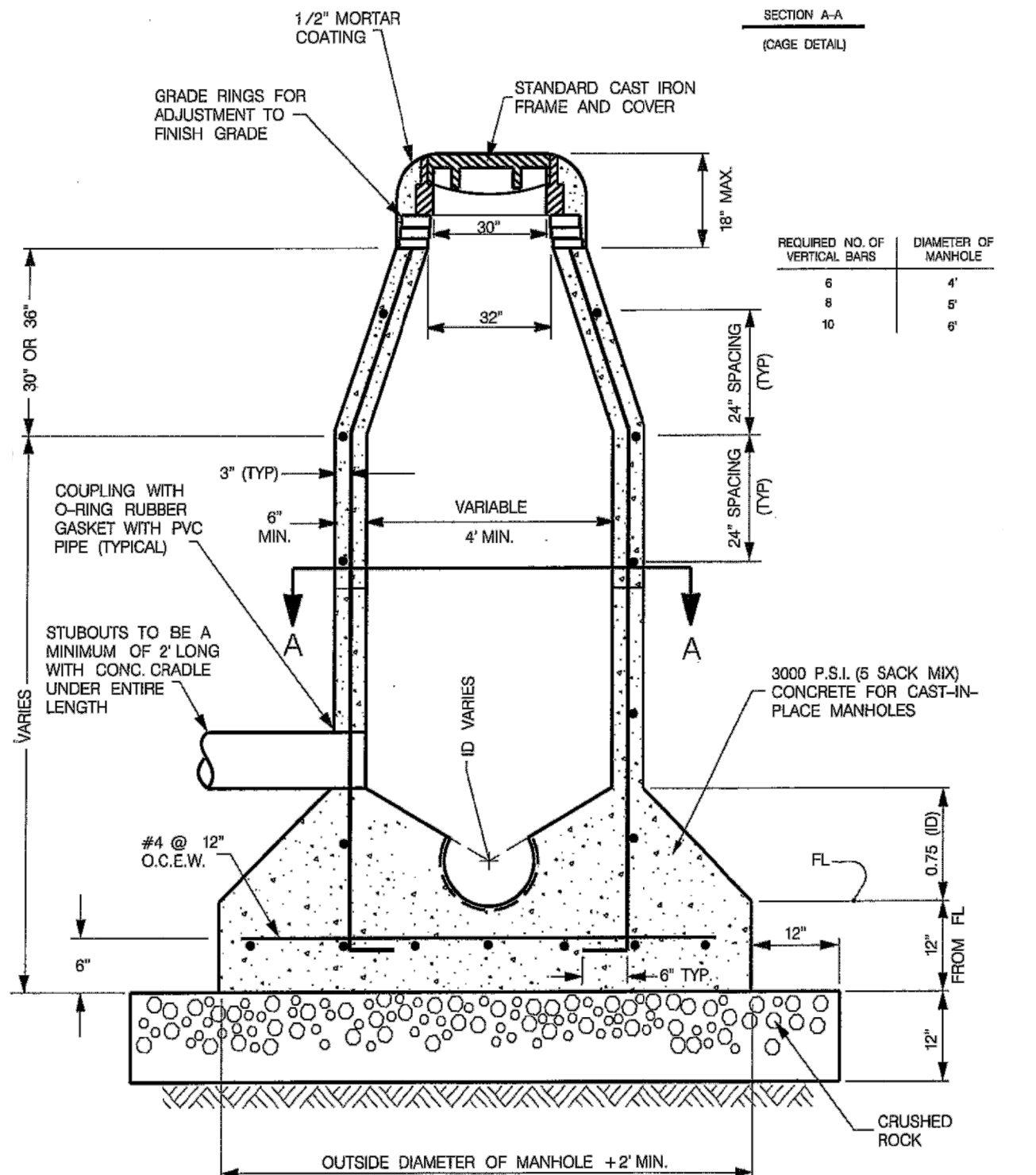
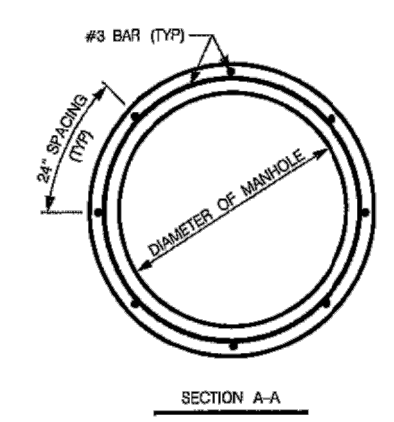
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|  | Texas Registered Engineering Firm F-3260 | RJN GROUP, INC. 14755 PRESTON RD. STE #710 DALLAS, TEXAS 75254 |
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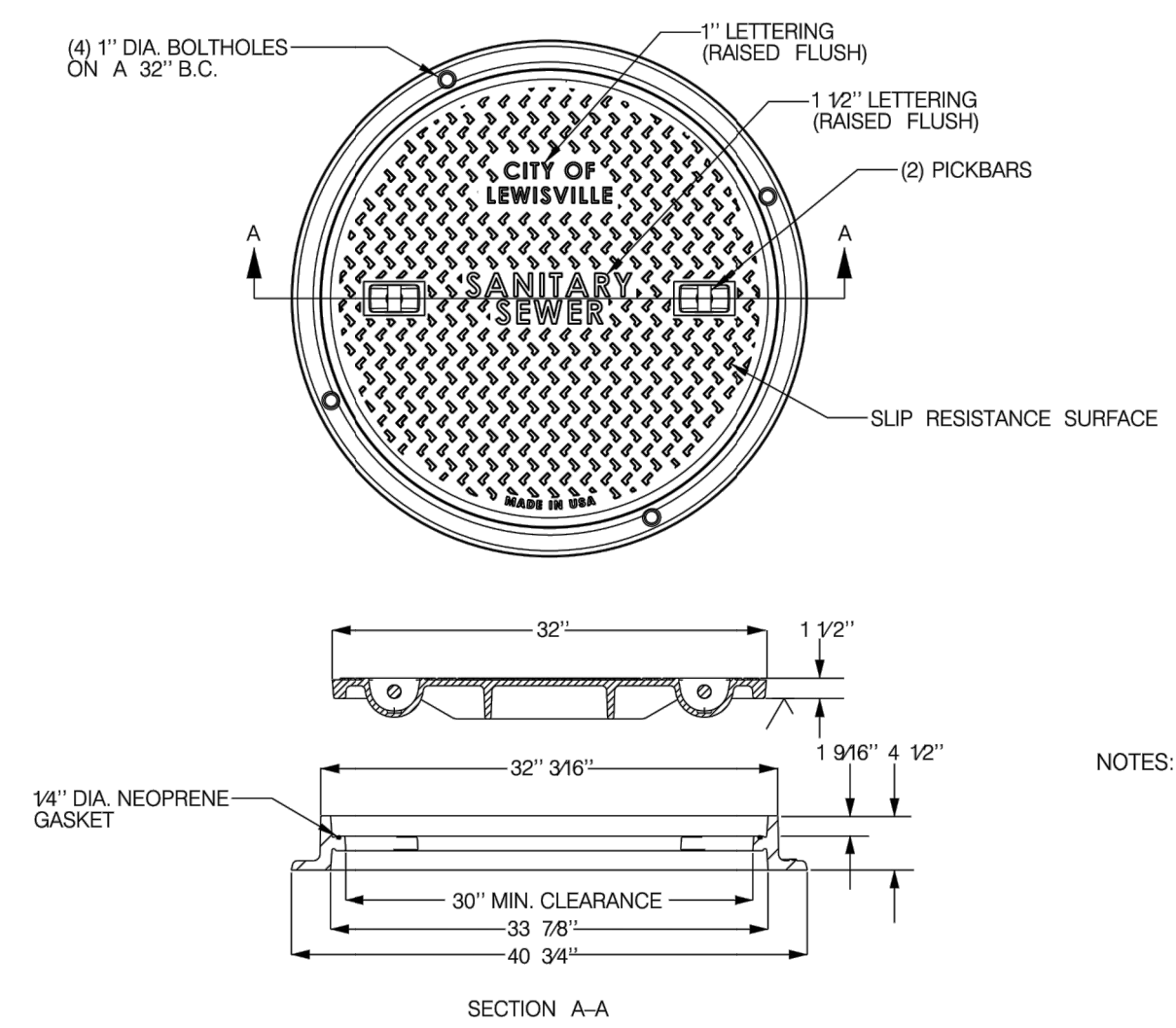
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*** MANHOLE NOTES**

MANHOLE NOTES:
 1. ALL SANITARY SEWER MANHOLES FOR SEWERS LARGER THAN 12" DIA. SHALL BE SPRAYED WITH THE FOLLOWING CORROSION RESISTANT COATING: RAVEN 405-100% SOLIDS SOLVENT FREE ULTRA HIGH-BUILD EPOXY SYSTEM FROM RAVEN LINING SYSTEMS WITH A MINIMUM THICKNESS OF 125 MILS.
 2. ALL MANHOLES SHALL BE PRECAST. NO CAST-IN-PLACE MANHOLES WILL BE ACCEPTED.



CAST IN PLACE MANHOLES CONCENTRIC
N.T.S.



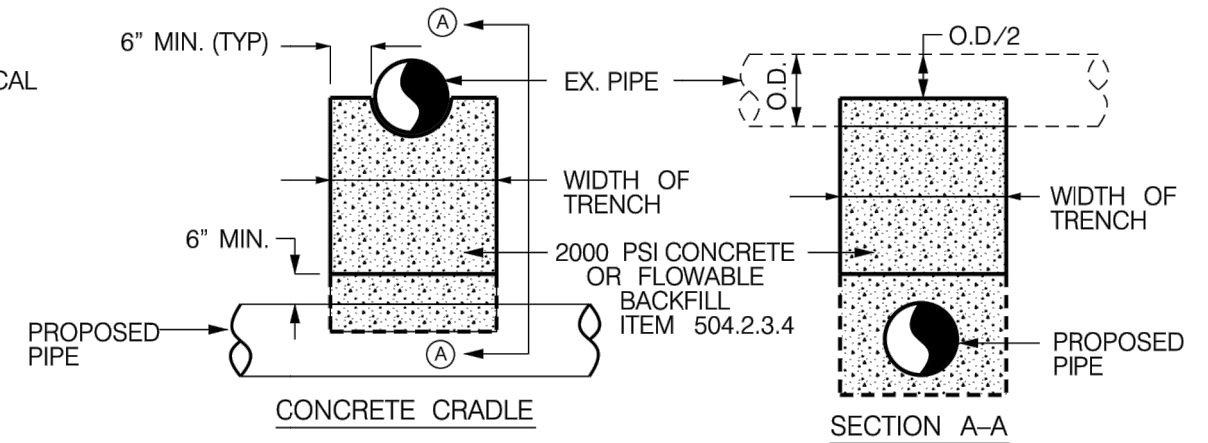
STANDARD MANHOLE FRAME & COVER
N.T.S.

*** MANHOLE NOTES**

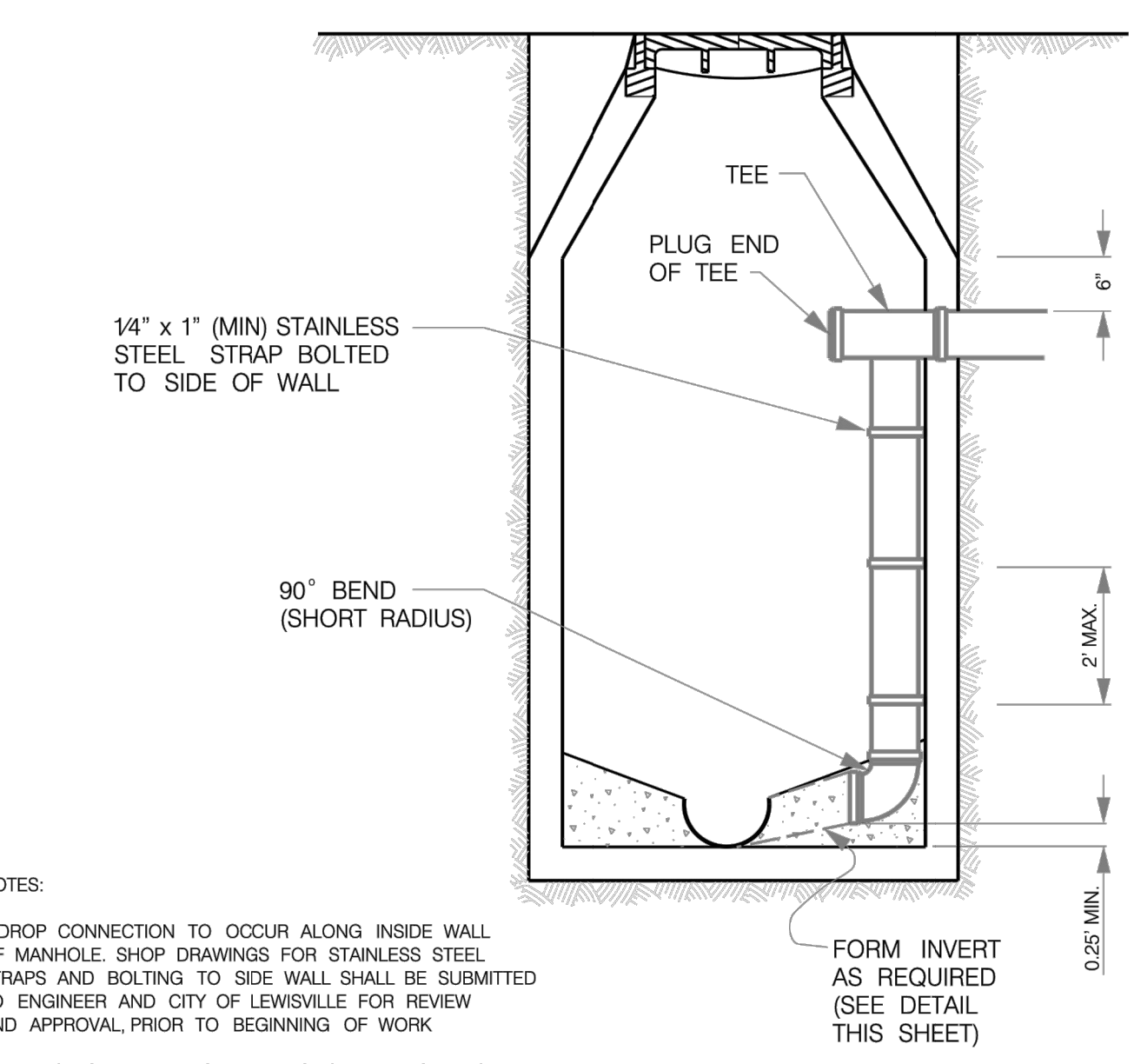
MANHOLE NOTES:
 1. ALL SANITARY SEWER MANHOLES FOR SEWERS LARGER THAN 12" DIA. SHALL BE SPRAYED WITH THE FOLLOWING CORROSION RESISTANT COATING: RAVEN 405-100% SOLIDS SOLVENT FREE ULTRA HIGH-BUILD EPOXY SYSTEM FROM RAVEN LINING SYSTEMS WITH A MINIMUM THICKNESS OF 125 MILS.
 2. ALL MANHOLES SHALL BE PRECAST. NO CAST-IN-PLACE MANHOLES WILL BE ACCEPTED.

- NOTES:
- COVER SHALL BE DUCTILE IRON ASTM A536 FRAME SHALL BE CAST IRON ASTM A48 CL35B.
 - MANHOLE COVER AND FRAME SHALL HAVE A MINIMUM TOTAL WEIGHT OF 300 POUNDS.
 - MANHOLE FRAME SHALL HAVE A MINIMUM CLEAR OPENING OF 30".
 - MANHOLE COVER AND FRAME SHALL HAVE MACHINED SURFACES WHERE SHOWN.
 - WHERE PRIVATE SANITARY SYSTEMS UTILIZE MANHOLES, "CITY OF LEWISVILLE" SHALL BE REMOVED.

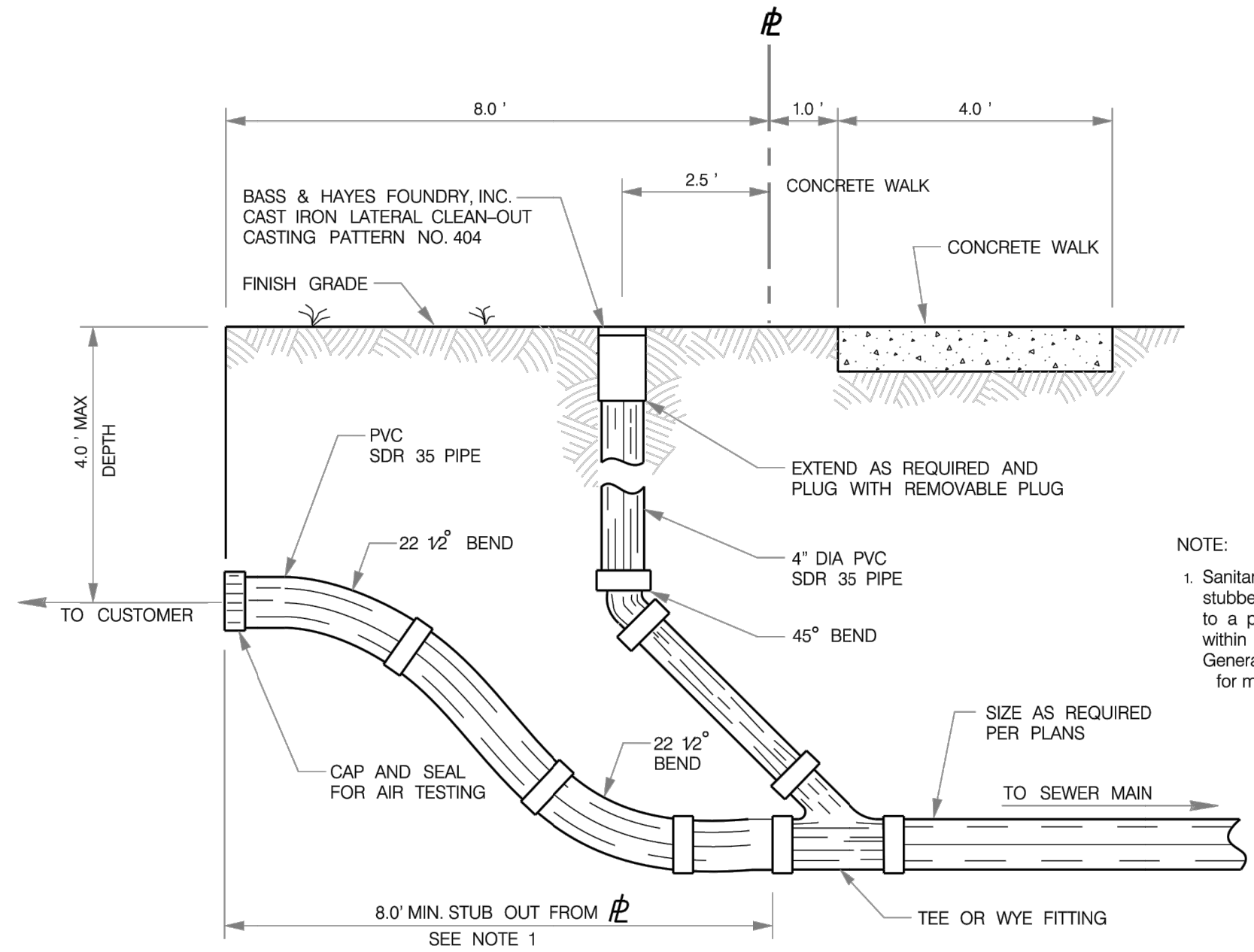
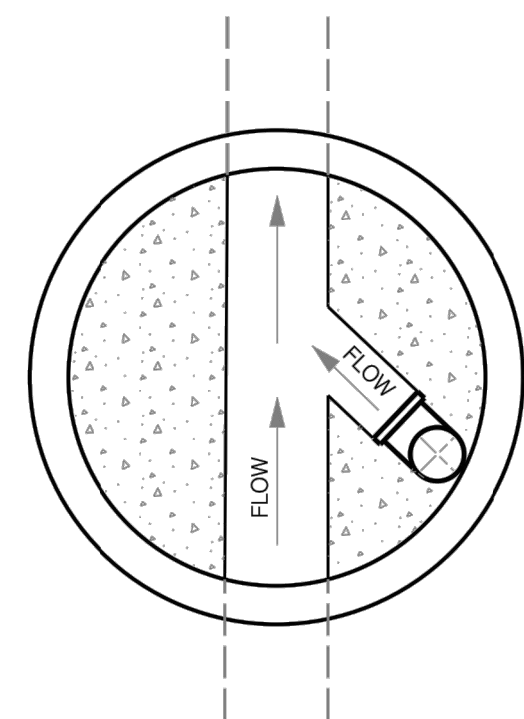
- A COMPACTION BY FLOODING OR JETTING IS NOT PERMITTED.
 B 95% STANDARD PROCTOR DENSITY, HAND OPERATED MECHANICAL TAMPERS MAY BE USED.
 C CLASS B+ EMBEDMENT. NOTE: SEE ITEM 504.5.2.4 OF THE "PUBLIC WORKS CONSTRUCTION STANDARDS"
 D EMBEDMENT BACKFILL
 E TRENCH BACKFILL
 F OD + 16" MINIMUM
 MAX. TRENCH WIDTH = OD + 24" (D=42" OR LESS)
 = OD + 48" (D OVER 42")



PIPE INSTALLATION DETAIL TYPICAL
N.T.S.



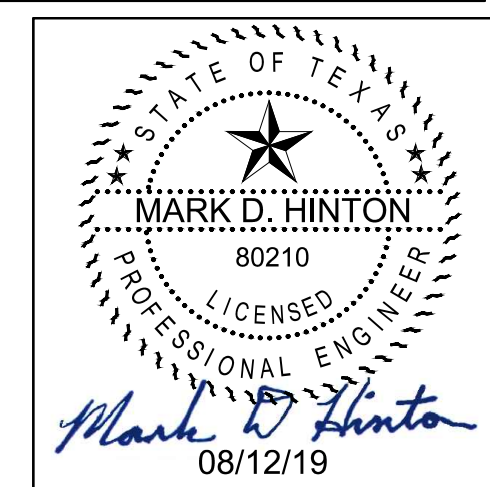
INSIDE DROP CONNECTION MANHOLE
N.T.S.



RESIDENTIAL CLEANOUT AND SERVICE
N.T.S.

NOTE:
 1. Sanitary sewer service shall be stubbed out to all residential lots to a point, eight (8.0') feet minimum within the lot. See "City of Lewisville General Development Ordinance" for more information.

RJN GROUP INC.
 The Choice for Collection System Solutions
 Texas Registered Engineering Firm F-3260
 14755 Preston Rd., Suite 710
 Dallas TX 75254



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CITY OF LEWISVILLE, TEXAS
 ENGINEERING DEPARTMENT

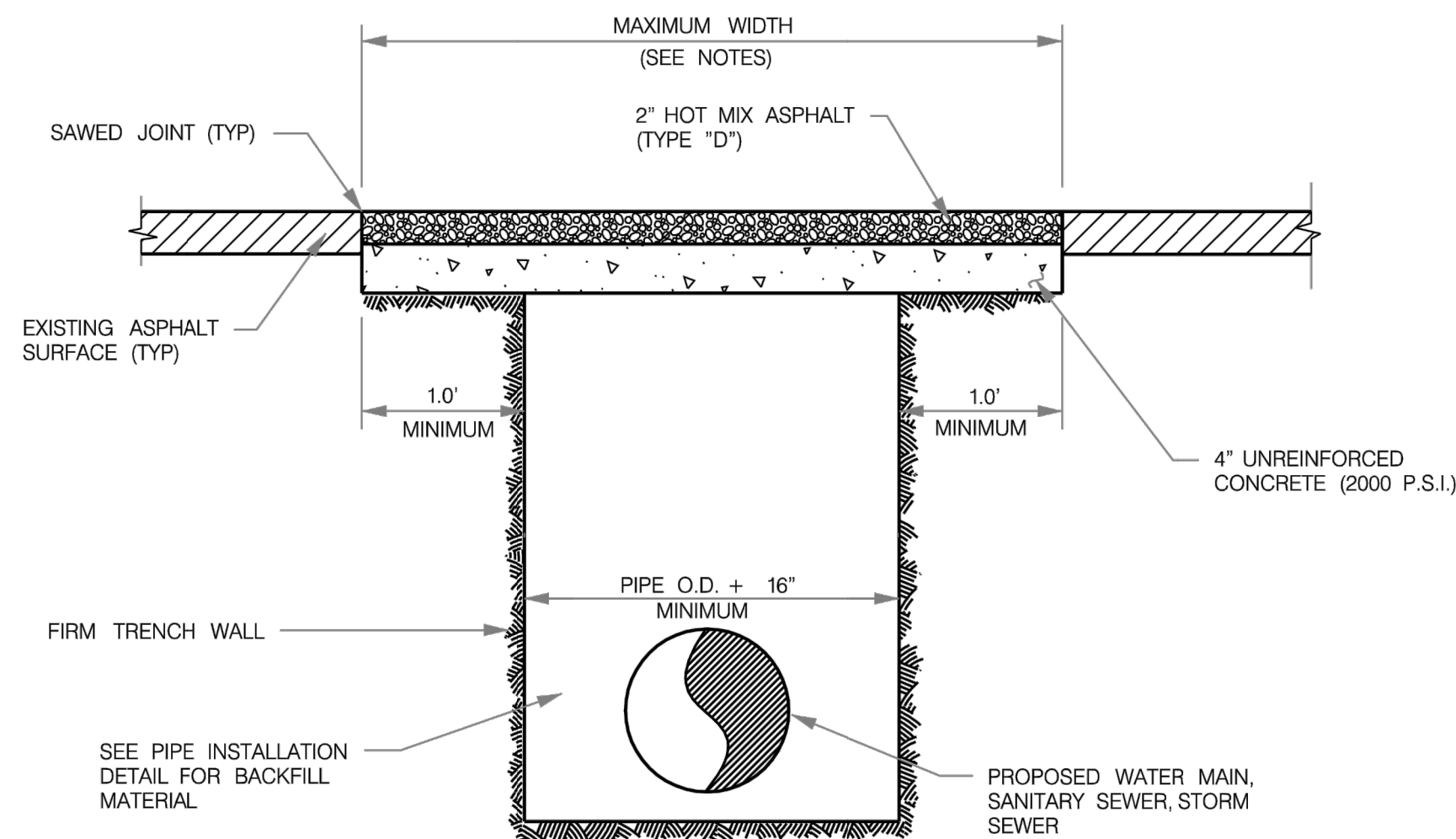
CDBG MORNINGSIDE SANITARY SEWER REHAB

DETAIL SHEET 1

rjngroup Texas Registered Engineering Firm F-3260
 RJN GROUP, INC. 14755 PRESTON RD. STE #710 DALLAS, TEXAS 75254

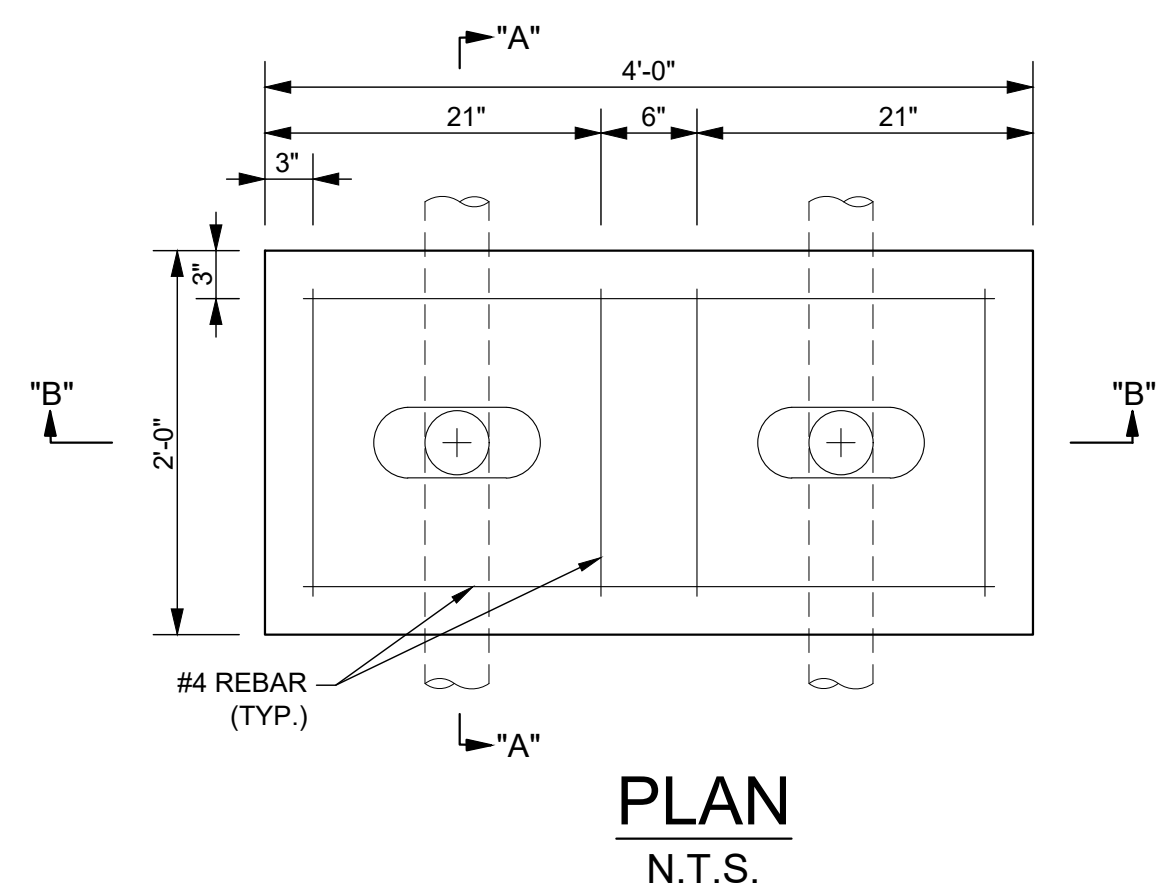
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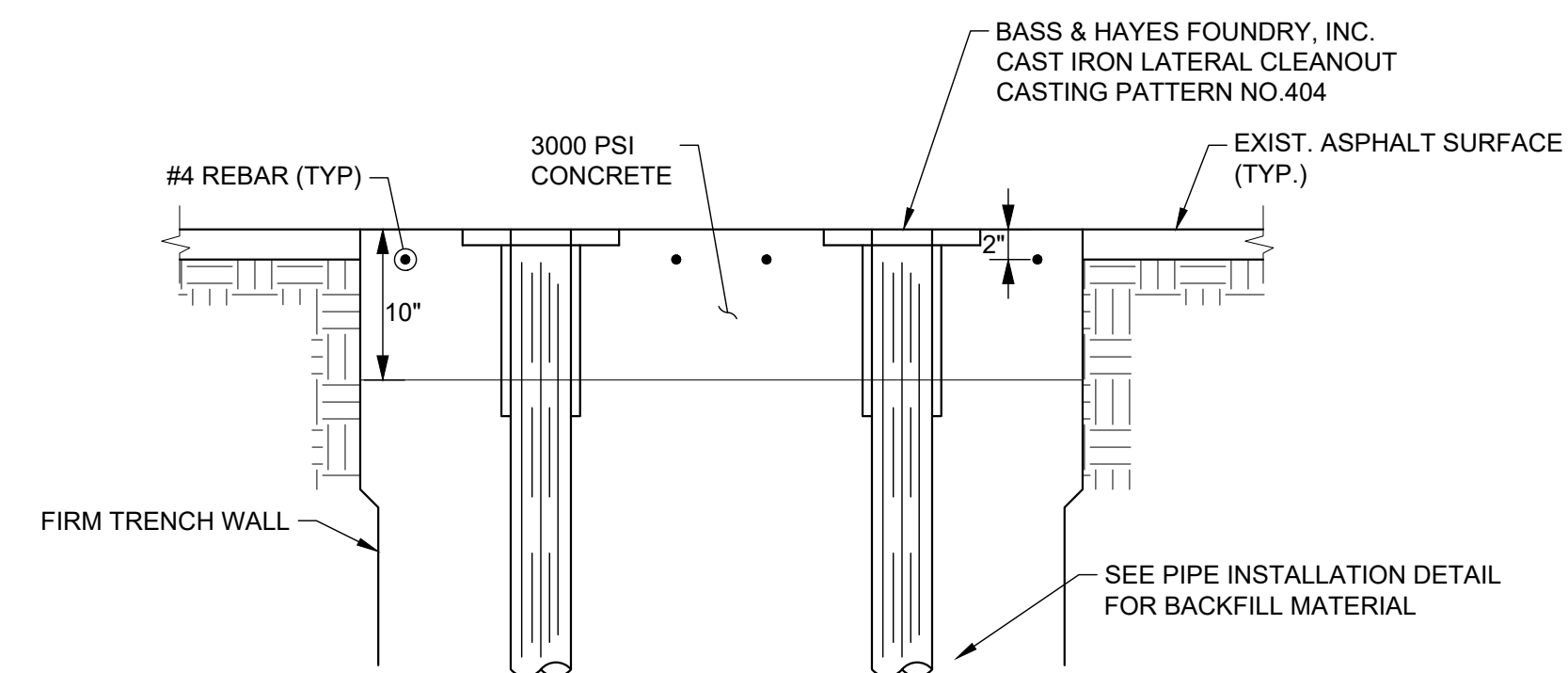


NOTE:
 1. PAYMENT TO THE CONTRACTOR FOR THE REPLACEMENT OF PAVEMENT AND/OR DRIVEWAYS WILL BE BASED UPON THE ACTUAL MEASUREMENTS UP TO A MAXIMUM WIDTH EQUAL TO THE SPECIFIED MAXIMUM TRENCH WIDTH PLUS TWO (2) FEET. ANY EXISTING PAVEMENT THAT IS DAMAGED OR REMOVED IN EXCESS OF THE MAXIMUM LIMITS, SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

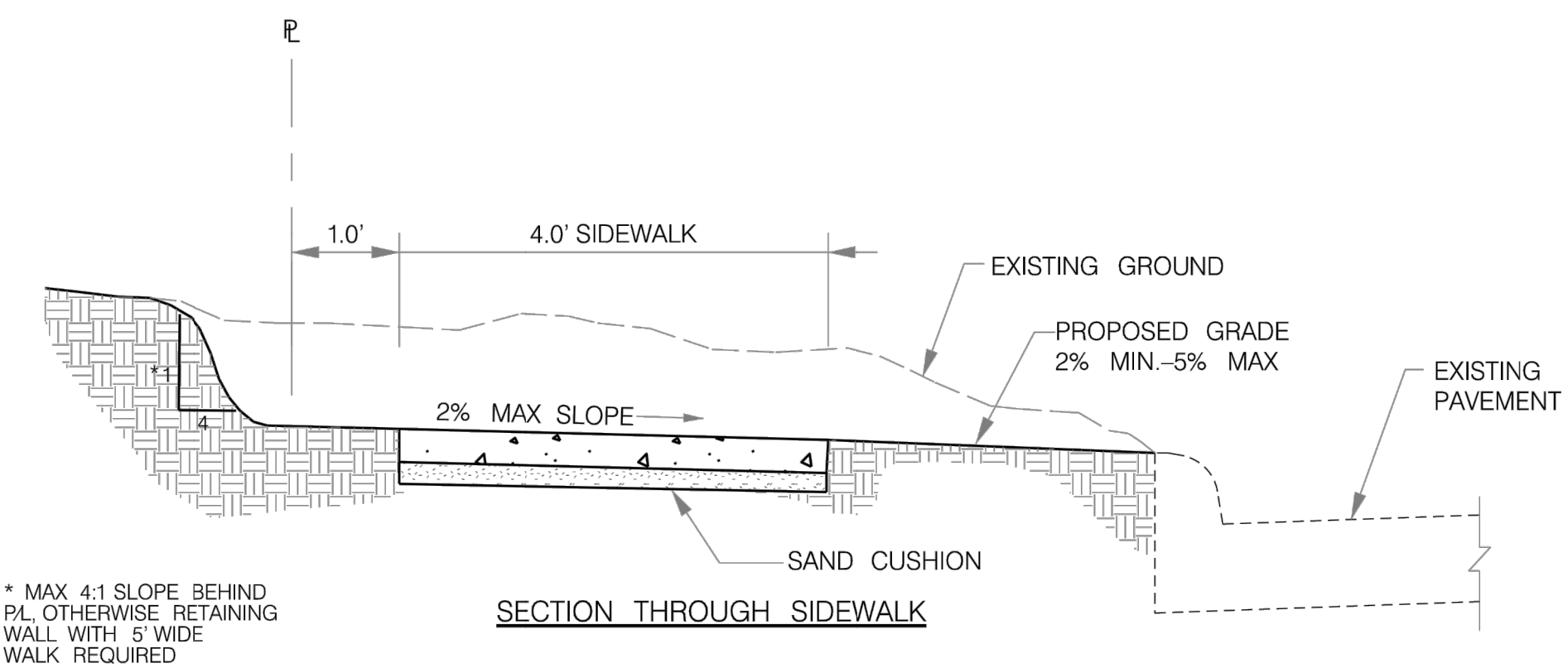
ASPHALT PAVEMENT REPLACEMENT
 N.T.S.



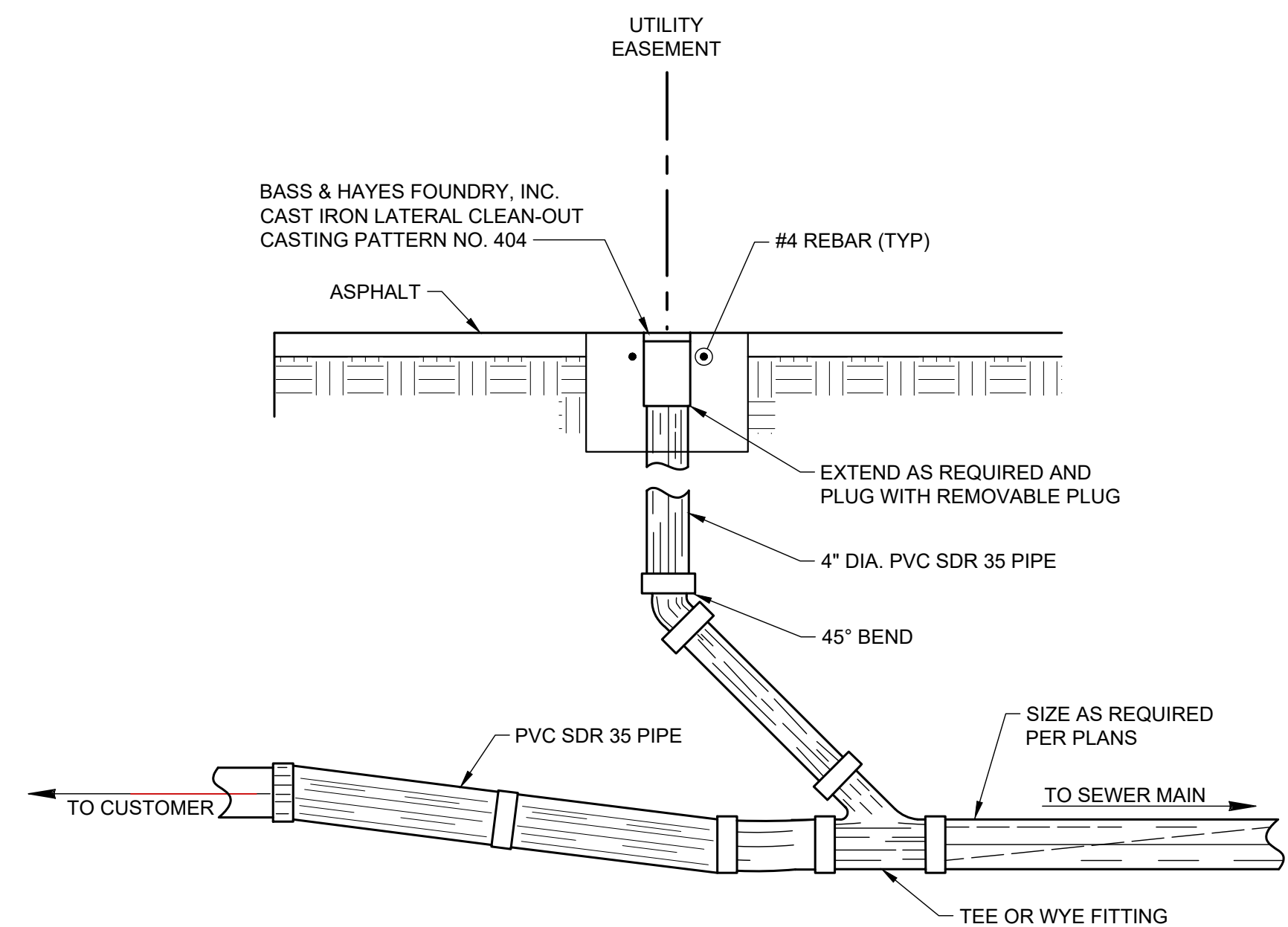
PLAN
 N.T.S.



CLEANOUT BOX IN PAVEMENT
SECTION B - B
 N.T.S.



PIPE INSTALLATION DETAIL TYPICAL
 N.T.S.



CLEANOUT BOX IN PAVEMENT
SECTION A - A
 N.T.S.

RJN GROUP INC.
The Choice for Collection System Solutions
 Texas Registered Engineering Firm F-3260
 14755 Preston Rd., Suite 710
 Dallas TX 75254

STATE OF TEXAS
 MARK D. HINTON
 80210
 LICENSED PROFESSIONAL ENGINEER
Mark D. Hinton
 08/12/19

| REV. | COMMENTS | BY | DATE |
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CITY OF LEWISVILLE, TEXAS
 ENGINEERING DEPARTMENT
 CDBG MORNINGSIDE SANITARY SEWER REHAB
 DETAIL SHEET 2

rjngroup Texas Registered Engineering Firm F-3260
 RJN GROUP, INC.
 14755 PRESTON RD. STE #710
 DALLAS, TEXAS 75254

| DESIGN: | CITY | DATE: | August 2019 | SCALE: | AS NOTED | PROJECT NO.: | R4801.2017.1 | SHEET: | 12 OF 12 |
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