

FHWA TEXAS DIVISION		FEDERAL AID PROJECT NO.		SHEET NO.	
				1	
STATE	DISTRICT	COUNTY			
TEXAS	DAL	ROCKWALL			
CONTROL	SECTION	JOB	HIGHWAY NO.		
0009	12	220	IH 30		

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PLANS FOR CITY OF ROCKWALL IH 30 UTILITY RELOCATIONS

UTILITY ID: U00008450
ROW CSJ 0009-12-223
CONSTRUCTION CSJ: 0009-12-215 & 220

IH 30 ROCKWALL COUNTY

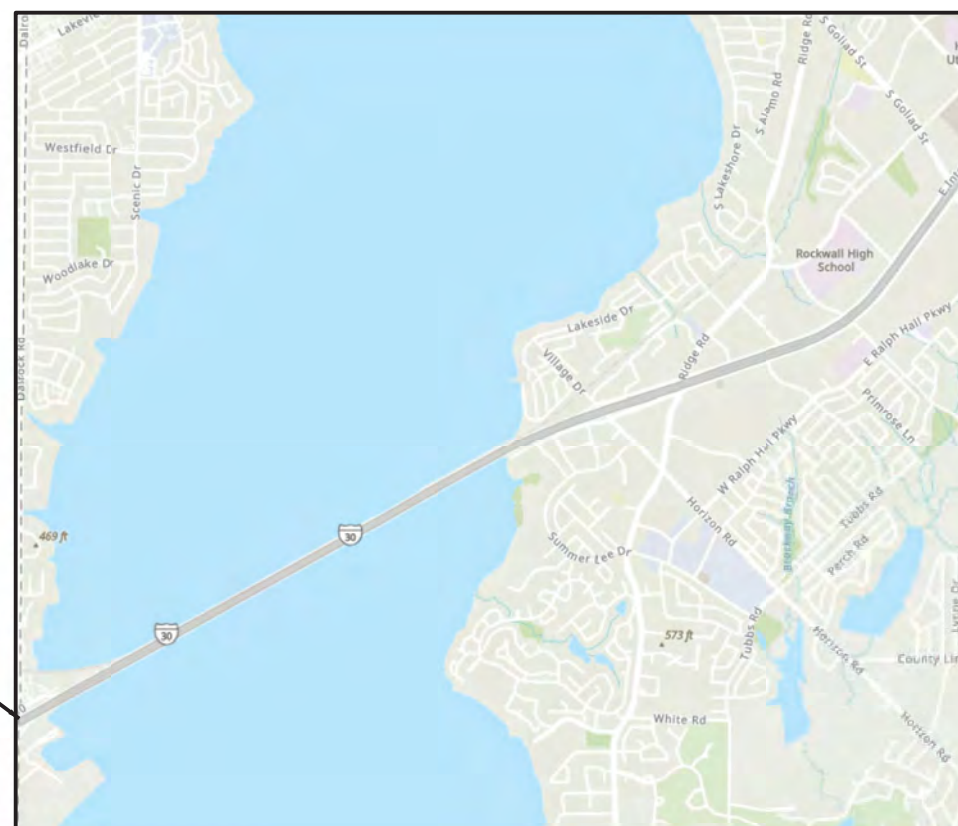
LIMITS: FROM DALROCK ROAD TO SH 205

MAYOR: KEVIN FOWLER

CITY COUNCIL: BENNIE DANIELS, JOHN HOHENSHELT, CLARENCE JORIF, TRACE JOHANNESSEN, DANA MACALIK, ANNA CAMPBELL

CITY MANAGER: MARY SMITH

CITY ENGINEER: AMY WILLIAMS P.E.



BEGIN PROJECT:
DALROCK ROAD

END PROJECT:
SH 205



VOLKERT

F - 12679
2850 SHORELINE TRL SUITE 201
ROCKWALL, TX 75032
972-961-4427



"RECORD DRAWING"
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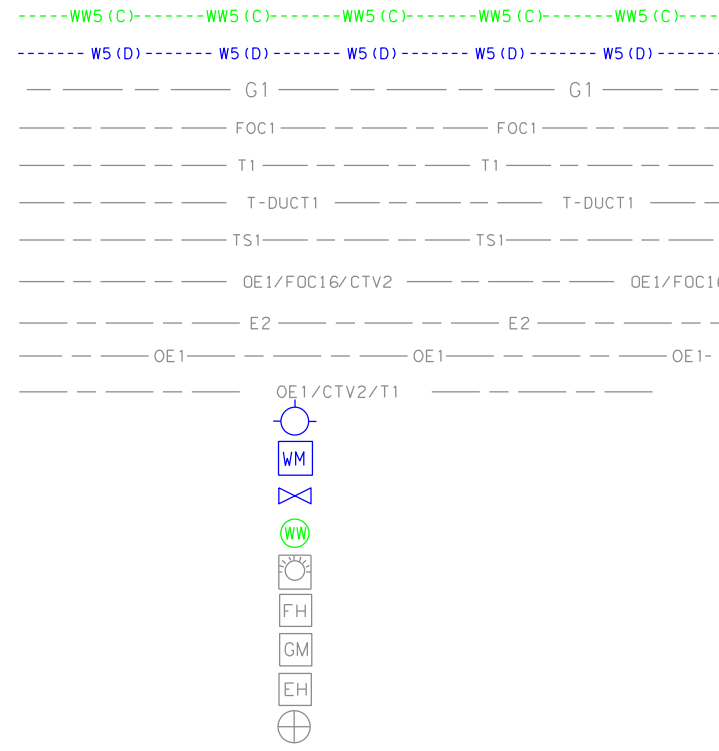
DATE: 7/13/2023 BY: SDH



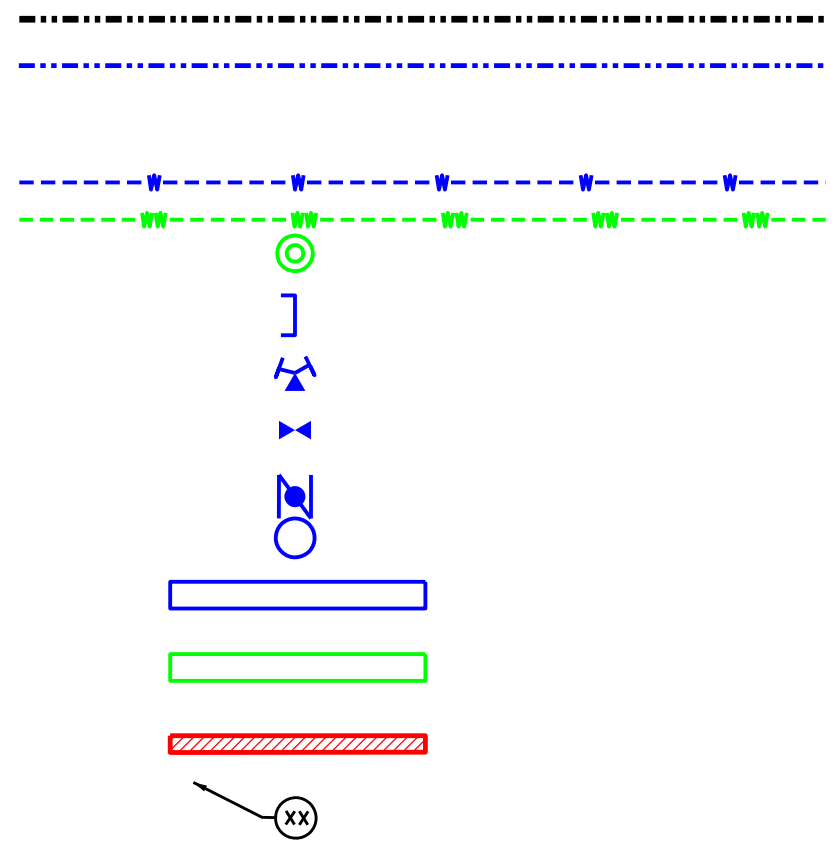
Revised Index of Sheets

The Standard Specifications for Public Works Construction, North Central Texas, November 2017, Fifth Edition, except where noted otherwise in the City of Rockwall's Supplemental Special Provisions, the Special Conditions included in the Specifications and Contract Documents shall govern on this project.

EXISTING WASTEWATER
 EXISTING WATER
 EXISTING GAS
 EXISTING FOC
 EXISTING TELCO
 EXISTING TELCO (DUCTILE)
 EXISTING TRAFFIC SIGNAL
 EXISTING ELECTRIC
 EXISTING ELECTRIC
 EXISTING ELECTRIC
 EXISTING ELECTRIC
 EXISTING FIRE HYDRANT
 EXISTING WATER METER
 EXISTING WATER VALVE
 EXISTING WASTEWATER MANHOLE
 EXISTING ELECTRIC LIGHT POLE
 EXISTING FOC HANDHOLE
 EXISTING GAS METER
 EXISTING ELECTRIC HANDHOLE
 EXISTING GAS VALVE



EXISTING ROW
 PROPOSED ROW
 PROPOSED WATER
 PROPOSED WASTEWATER
 PROPOSED WASTEWATER MANHOLE
 PROPOSED CAP
 PROPOSED TEE/BEND
 PROPOSED VALVE
 PROPOSED BUTTERFLY VALVE
 PROPOSED WATERLINE BORE
 PROPOSED WASTEWATER BORE
 UTILITY ABANDONMENT
 CONFLICT CALL OUT



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 DATE: 7/13/2023 BY: SDH

Sara Hutson
 11-5-2021
 STATE OF TEXAS
 SARA D. HUTSON
 142339
 LICENSED PROFESSIONAL ENGINEER



VOLKERT
 F-12679

**ROCKWALL IH 30
 LEGEND**

SHEET 2 OF 11

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	2	

DATE: sDATES
 FILE: sFILES

GENERAL ITEMS

- All construction shall conform to the requirements of the "Standard Specifications for Public Works Construction" by the North Texas Central Council of Governments, 5th edition amended by the City of Rockwall. The CONTRACTOR shall reference the latest City of Rockwall standard details provided in the Rockwall Engineering Departments "Standards of Design and Construction" manual for details not provided in these plans. The CONTRACTOR shall possess one set of the NCTCOG Standard Specifications and Details and the City of Rockwall's "Standards of Design and Construction" manual on the project site at all times
- The CONTRACTOR shall protect existing property monumentation and primary control. Any such points which the CONTRACTOR believes will be destroyed shall have offset points established by the CONTRACTOR prior to construction. Any monumentation destroyed by the CONTRACTOR shall be re-established at CONTRACTOR's expense by a registered professional land surveyor.
- CONTRACTOR shall stake and clearly label the existing and/or proposed right-of-way and easements for the project. These shall be maintained and or re-established if damaged during the duration of the project. At a minimum stakes shall be placed at a spacing of 100-ft, lot line, PC, PT and PI. (no separate pay)
- Upon the CITIES request the CONTRACTOR shall provide survey Northings, Eastings and Elevations by registered professional land surveyor for: any existing utilities that may be in conflict with the proposed improvements of the construction plans, and any proposed installation to verify it has been installed per plan. (no separate pay)
- Any item called out for on the plans that does not have a specific bid item shall be subsidiary to the project and no separate pay shall be given.
- The CONTRACTOR is solely responsible for performing all construction layouts from the site layout control points, and from the dimensions and centerlines shown. The CONTRACTOR must notify the engineer of any discrepancies before proceeding with the work.
- CONTRACTOR shall take all available precautions to control dust. CONTRACTOR shall control dust by sprinkling water (no separate pay), or as approved by the City and engineer.
- CONTRACTOR shall video record and provide a copy to the construction inspector of the entire job site before construction starts. Video record of the site will be used to dispute discrepancies of any preexisting conditions of the project site before construction begins.
- It is the CONTRACTOR's responsibility to maintain a neat and accurate redline record of construction for the City's records. The CONTRACTOR shall provide the City full size reproducible markups that record all construction deviating from the plans. These redline construction plan records shall be submitted to the City at the end of the job and sign by the CONTRACTOR. These records must be received or the City will not release final retainage or acceptance on the job.

TRAFFIC CONTROL

- A suggested traffic control sequence plan is provided in the plan set. At a minimum the CONTRACTOR will be required to use the suggested sequence plan. If the CONTRACTOR chooses to change the traffic control sequencing, a traffic control sequencing plan and traffic control sheets of each phase will have to be provided for review and approval by the City. All shall be signed and sealed by a Registered Professional Engineer with the State of Texas.
- All new Detouring or Traffic Control Plans submitted by the City for review and approval a minimum of 21 calendar days prior to planned day of implementation.
- CONTRACTOR shall notify the City 14 Calendar days prior to changing Detouring and Traffic Control for each Phase and Segment. This is to give time for Contractor to place Message Boards for warning of Detour Change and for City Notification to other departments, emergency services, mail delivery, school district, and trash services.
- Pedestrian and vehicular traffic flow, safety and access shall be maintained during all phases of construction. Barricading and traffic control during construction shall be the responsibility of the CONTRACTOR and shall conform to the "Texas Manual on Uniform Traffic Control Devices ", latest edition, Part IV in particular. Traffic flow and access shall be maintained during all phases of construction unless otherwise noted on the traffic control plan. The CONTRACTOR is responsible for providing traffic safety measures for work on the project. The CONTRACTOR shall assume full responsibility for public safety in the construction area during the duration of construction activities.
- The CONTRACTOR shall furnish, install, maintain and remove all necessary traffic control devices in conformance with the Texas Manual on Uniform Traffic Control Devices (Part 6). The CONTRACTOR shall provide access to properties at all times during each phase of construction to all local residents, businesses, mail service, trash pick-up and emergency services.
- No traffic signs shall be taken down without permission from the City. CONTRACTOR needing to move and replace traffic sign for construction purposes should be paid for under traffic control bid item.
- CONTRACTOR will furnish and install all signage in accordance with TMUTCD guidelines. Prior to installation of signage, CONTRACTOR shall stake locations and receive approval from City on locations. All signage that is removed by the CONTRACTOR shall be saved and delivered to municipal service center, streets division. All replaced signs shall be new. See City requirements for sign materials.
- The CONTRACTOR shall be responsible for coordination, scheduling and temporary equipment that is needed for all temporary traffic signal modifications during construction traffic control phasing. (Subsidiary to all traffic control pay items)
- The CONTRACTOR shall have a minimum of two (2) Portable Message Boards available for the duration of the project for notification of changes to the project. (Subsidiary to traffic control pay items)

DEMOLITION, REMOVAL, DISPOSAL AND EXCAVATION NOTES

- CONTRACTOR shall remove and properly dispose of all existing concrete and HMA/C pavement outside of the City limits as required for construction of the project. All cost shall be included in the appropriate item in the bid schedule.
- Payments for removal and replacement of street, driveway and sidewalk pavement shall be based on plan quantity and no adjustments will be made unless approved in writing by the City engineer.
- All pavements to be removed and replaced shall be saw cut to full depth along neat lines shown in the plans. Proposed concrete pavement shall be constructed with longitudinal butt construction joints at all connections to existing concrete pavement. Concrete Pavement to be removed and replaced shall be full panel replacement.
- The CONTRACTOR shall remove from the project area all surplus material. This work shall be incidental and not a separate pay item. Surplus materials from excavation include dirt, trash, rock measuring greater than 6" in the largest dimension, etc. Shall be properly disposed of at a site acceptable to the City of Rockwall if within the City limits. No excess excavated material shall be deposited in low areas or along natural drainage ways without written permission from the affected property owner and the City of Rockwall. If the CONTRACTOR places excess materials in these areas without written permission, he will be responsible for all damages resulting from such fill and he shall remove the material at his own cost.
- All excavation on the project is unclassified. If soil borings were conducted they are provided in the bid/contract documents.

FRANCHISE UTILITY NOTES

- Reasonable effort has been made to show the location of all known underground franchise utilities and service lines. However, the owner assumes no responsibility for failure to show any or all existing subsurface franchise utilities or utility line, or to show them in their exact location. The CONTRACTOR shall be responsible for the protection of all existing utilities, service lines or the like, which are exposed by the construction operation.
- Existing franchise utilities shown in these plans reflect approximate locations prior to relocations. Some relocations have occurred with utility pole, gas, phone and cable utilities. The CONTRACTOR shall contact 811/Dig-Tess to locate existing and new utilities not shown in these plans.
- CONTRACTOR shall support utilities where crossing with proposed storm sewer, water lines and sanitary sewers. Method of support shall be provided to the owner 24 hours prior to crossing.
- The location off all Atmos gas lines, AT&T, Charter/Spectrum and TXU/Oncor electric underground phone lines in these plans are approximate. The CONTRACTOR shall contact Atmos, TXU/Oncor, AT&T and Charter/Spectrum to verify location and depth of all existing gas, electric and phone lines prior to construction.
- CONTRACTOR shall have and pay for TXU/Oncor, AT&T and/or Charter/Spectrum support and protect all power, guy wires or cable and/or light poles in the work area.
- Any damage incurred to existing franchise utilities, appurtenances, utility poles, light standards, etc. By construction related activities shall be the sole responsibility of the CONTRACTOR

UTILITY NOTES

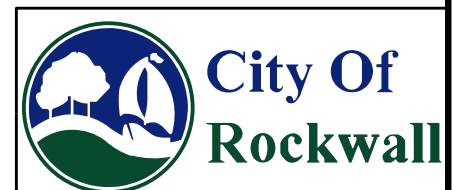
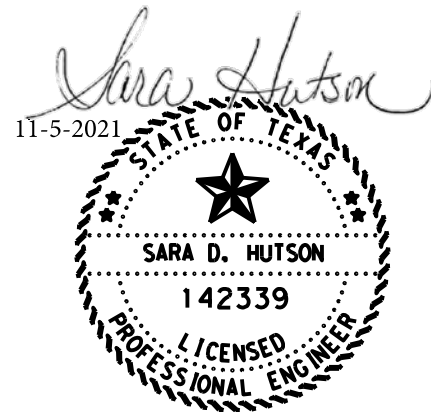
- Reasonable effort has been made to show the location and type of all known City of Rockwall underground wet utilities and service lines. However, the City of Rockwall assumes no responsibility for failure to show any or all existing City of Rockwall underground wet utilities and service lines, or to show them in their exact location. The CONTRACTOR shall be responsible for the protection of all existing utilities, service lines or the like, which are exposed by the construction operation.
- Bidders shall make any investigation of existing subsurface conditions as deemed necessary at no expense to the City of Rockwall. Neither the City of Rockwall nor the engineer will be responsible in any way for additional compensation for excavation work performed under this contract due to the CONTRACTOR's assumptions.
- CONTRACTOR shall adjust all City of Rockwall utilities to the final grades.
- CONTRACTOR shall be responsible for the protection of all existing service lines crossed or exposed by construction operations. Where existing service lines are cut, broken or damaged, the CONTRACTOR shall immediately replace the service line with same type of original construction or better.
- The CONTRACTOR shall excavate and field locate the horizontal and vertical location of existing utility crossing locations utilizing provided project control. The CONTRACTOR shall immediately notify the engineer of any discrepancies identified between the CONTRACTORs field verified existing utility location and proposed location of utilities for the project.
- The CONTRACTOR shall abide by all applicable federal, state, and local laws governing excavation. The CONTRACTOR shall provide detailed plans and specifications for trench safety systems that comply with applicable laws governing excavation. These plans shall be sealed by an engineer experienced in the design of trench safety systems, registered in the state of Texas. The CONTRACTOR shall submit completed trench safety plan to the engineer and City prior to commencing work. The CONTRACTOR shall be solely responsible for all aspects of work related to excavations.
- Dewatering of utility trenches, bores pits, and any other excavations shall be no separate pay and shall be subsidiary to the other pay items on the project.

HEALTH AND SAFETY

- CONTRACTOR shall provide for the safety and health of employees and abide by all OSHA Standards and Regulations.

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DATE: 7/13/2023 BY: SDH



**ROCKWALL IH 30
GENERAL NOTES**

SHEET 1 OF 2

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST		COUNTY	SHEET NO.
DALLAS		ROCKWALL	3

DATE: SDATES
FILE: SFILES

EROSION CONTROL, VEGETATION & SODDING

1. The CONTRACTOR or developer shall be responsible, as the entity exercising operational control, for all permitting as required by the Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ). This includes, but is not limited to, preparation of the Storm Water Pollution Prevention Plan (SWPPP), the Construction Site Notice (CSN), the Notice of Intent (NOI), the Notice of Termination (NOT) and any Notice of Change (NOC) and is required to pay all associated fees
2. Erosion control devices as shown on the erosion control plan for the project shall be installed prior to the start of land disturbing activities.
3. All erosion control devices are to be installed in accordance with the approved plans, specifications and Storm Water Pollution Prevention Plan (SWPPP) for the project. Erosion control devices shall be placed and in working order prior to start of construction. Changes are to be reviewed by the design engineer and the City of Rockwall prior to implementation.
4. If the Erosion Control Plans and Storm Water Pollution Prevention Plan (SWPPP) as approved cannot appropriately control erosion and off-site sedimentation from the project, the erosion control plan and/or the SWPPP is required to be revised and any changes reported to the Texas Commission on Environmental Quality (TCEQ), when applicable.
5. All erosion control devices shall be inspected weekly by the CONTRACTOR and after all major rain events, or more frequently as dictated in the project Storm Water Pollution Prevention Plan (SWPPP). CONTRACTOR shall provide copies of inspection's reports to the engineering inspection after each inspection.
6. The CONTRACTOR shall not dispose of waste and any materials into streams, waterways or floodplains. The CONTRACTOR shall secure all excavation at the end of each day and dispose of all excess materials. Disposal site shall be documented and provided to the City.
7. CONTRACTOR shall grade ground and ditches disturbed by construction to prevent ponding of storm water runoff. Grading shall be subsidiary to the appropriate bid item for unclassified street and unclassified channel excavation. Topsoil shall be stockpiled and replaced to a minimum depth of 6-inches and disc harrowed to a minimum depth of 4-inches (no pay item).
8. All parkways, medians, R.O.W. and other areas disturbed by construction activities shall be restored to existing ground cover type and to the City and/or property owners liking. CONTRACTOR shall replace grass areas disturbed by construction activities with solid sod and shall match existing type. These areas shall be tilled 6-inches and topped with 4-inch of clean top soil to final grade and have grass sod established immediately. Areas disturbed outside the R.O.W. or limits of construction shall have grass sod established immediately at the CONTRACTOR's expense. Sodded areas shall be watered and maintained until established. Payment shall be made under the appropriate sodding or bid schedule item.

WATER LINE NOTES

1. The CONTRACTOR shall maintain existing water service at all times during construction.
2. Proposed water lines shall be AWWA C900-16 PVC Pipe (blue in color) for all sizes, DR 14 (PC 305) for pipeline sizes 12-inch and smaller, and DR 18 (PC 235) for 14-inch and larger water pipelines unless otherwise shown on water plan and profiles sheets. Proposed water lines shall be constructed with minimum cover of 4 feet for 6-inch through 8-inch, 5 feet for 12-inch through 18-inch and 6 feet for 20-inch and larger.
3. Proposed water line embedment shall be NCTCOG Class 'B-3' as amended by the City of Rockwall's public works standards of design and construction manual.
4. CONTRACTOR shall coordinate the shutting down of all water lines with the City of Rockwall, Public Works, and Water Division. The City shall operate all water valves.
5. CONTRACTOR shall furnish and install gasket on water lines between all dissimilar metals and at valves (both existing and proposed).
6. All fire hydrants and valves removed and salvaged shall be returned to the City of Rockwall municipal service center.
7. Blue EMS pads shall be installed at every change in direction, valve, curb stop and service tap on the proposed water line and every 250'.
8. CONTRACTOR to install new meter boxes, all fittings and new meters per each service complete including connection to the main line. CONTRACTOR shall be responsible to coordinate with Utility Billing 972-771-7736 on which meters need to be replaced and which meters are to remain for the project. New meters will be supplied by the Utility Billing Department. CONTRACTOR shall give the Utility Billing Department ample Notice to make sure meters are on hand to be installed for the project.
9. Existing meter and meter boxes, and valve stem and covers not specifically called to be relocated shall be adjusted to match final grades (no pay item). Any meter in pavement shall have a traffic rated lid.
10. All water valve extensions, bolts, nuts and washers shall be 316 Stainless Steel.
11. All fire hydrants bolts, nuts and washers that are buried shall be 316 Stainless Steel.
12. Abandoned water lines to remain in place shall be cut and plugged and all void spaces within the abandoned line shall be filled with grout, flowable fill or an expandable permanent foam product. Valves to be abandoned in place shall have any extensions and the valve box removed and shall be capped in concrete

WASTEWATER LINE NOTES

1. The CONTRACTOR shall maintain existing wastewater service at all times during construction.
2. Wastewater line for 4-inch through 15-inch shall be Green PVC – SDR 35 (ASTM D3034) [less 10 ft cover] and SDR 26 (ASTM D3034) [10 ft or more cover]. For 18-inch and larger wastewater line shall be Green PVC – PS 46 (ASTM F679) [less 10 ft cover] and PS 115 (ASTM F679) [10 ft or more cover].
3. Proposed wastewater line embedment shall be NCTCOG Class 'H' as amended by the City of Rockwall's standard design and construction manual.
4. Green EMS pads shall be installed at every 250', manhole, clean out and service lateral on proposed wastewater lines.
5. All existing wastewater services shall be transferred from wastewater lines being abandoned to proposed wastewater lines. Transferring wastewater services shall include double clean outs at the property lines, caps, tees, wyes, plugs and connection. Payment for transferring wastewater services shall be paid per each, under the appropriate bid schedule item.
6. CONTRACTOR shall CCTV all existing wastewater lines that are to be abandoned to ensure that all laterals are accounted for and transferred to proposed wastewater lines. (no separate pay)
7. All abandoned wastewater and force main lines shall be cut and plugged and all void spaces within the abandoned line shall be filled with grout, flowable fill or an expandable permanent foam product.
8. Existing manholes and cleanouts not specifically called to be relocated shall be adjusted to match final grades (no pay item).
9. All wastewater pipes and public services shall be inspected by photographic means (television and DVD) prior to final acceptance. The contractor shall furnish a DVD to the Engineering Division Construction Inspector for review. Any sags, open joints, cracked pipes, etc. shall be repaired or removed by the contractor at the contractor's expense. An additional television survey will be performed as part of the final testing in the twentieth (20th) month of the maintenance period.
10. All manholes (public or private) shall be fitted with inflow prevention. The inflow prevention shall conform to the measures called out in standard detail R-5031.
11. All new or existing manholes that are to be placed in pavement shall be fitted with a sealed (gasketed) rim and cover to prevent inflow.
12. All new or existing manholes being modified shall have corrosion protection being Raven Liner 405 epoxy coating, ConShield, or approved equal. Conshield must have terracotta color dye mixed in the precast and cast-in-place concrete. Where connections to existing manholes are made the contractor shall rehab manhole as necessary and install a 125 mil thick coating of Raven Liner 405 or approved equal.

DRAINAGE / STORM SEWER NOTES

1. The CONTRACTOR shall maintain drainage at all times during construction. Ponding of water in streets, drives, trenches, etc. will not be allowed. Existing drainage ways shall not be blocked or removed unless explicitly stated in the plans or written approval is given by the City.

FENCES, TREES, LANDSCAPING, AND IRRIGATION NOTES

1. The removal, replacement or reconstruction of any fence for the convenience of construction shall be at the CONTRACTOR's expense (no separate pay). New materials shall match existing fences. All wood fences shall be replaced with new cedar with the post matching City requirements.
2. Temporary fencing shall be required where there is evidence of livestock and where damaged or removed fences are not to be replaced by the end of the same work day. Unless there is a specific pay item then temporary fencing shall be considered subsidiary to the main remove and replacement fence pay item.
3. All shrubs, plants, trees, etc. must be approved by the City before removal.
4. The removal and replacement of all shrubs, plants, trees, etc. for the convenience of construction shall be at the CONTRACTOR's expense (no separate pay). New shrubs, tree, etc. shall be equal to or better than existing ones.
5. CONTRACTOR shall replace any trees removed or destroyed that are not shown in these plans to be removed or shall pay fair market value to the owner as determined by the owner. (No Separate Pay).
6. The CONTRACTOR shall locate and record existing irrigation systems prior to construction. If irrigations systems are damaged during construction the CONTRACTOR shall repair to same or better condition. An irrigator licensed in the state of Texas shall repair all damaged caused by construction. CONTRACTOR shall coordinate any irrigation work with the City of Rockwall and property owners representatives. (No Separate Pay).
7. If an irrigation system is damaged between the months of March and October the Contractor shall repair the system back in working order within one week. The contractor shall be responsible for any damage to landscaping, trees, shrubs, foundations, etc. due to the lack of non-working irrigation systems. (No Separate Pay)

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F-12679

**ROCKWALL IH 30
GENERAL NOTES**

SHEET 2 OF 2			
CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST		COUNTY	SHEET NO.
DALLAS		ROCKWALL	4

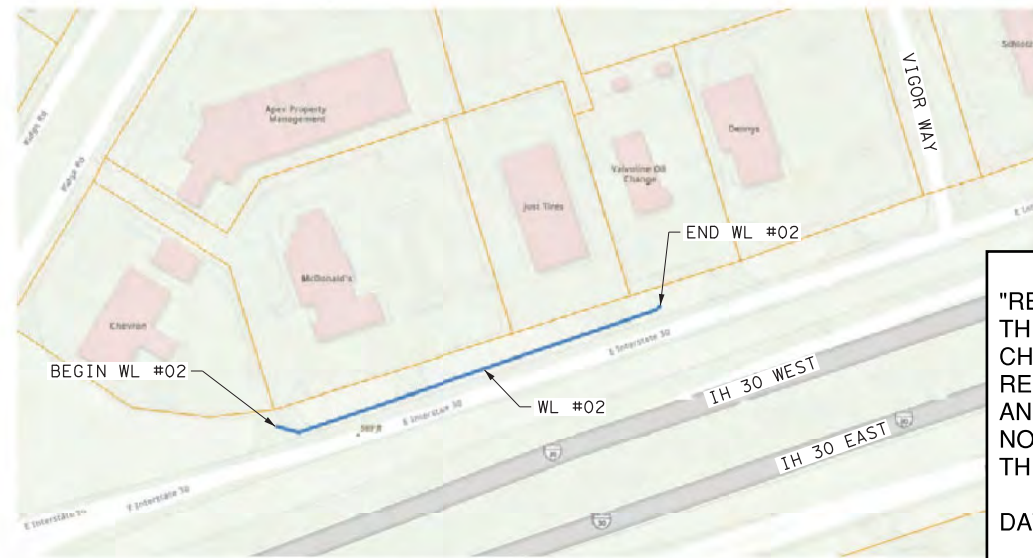
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FILE: SFILES

DATE: 14-NOV-2022 16:12
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WATER LINE #01



WATER LINE #02



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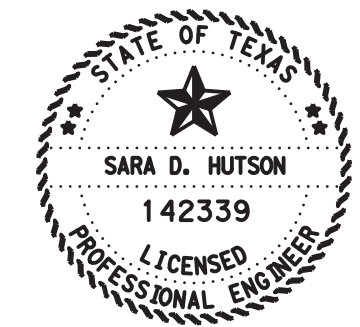
WATER LINE #03



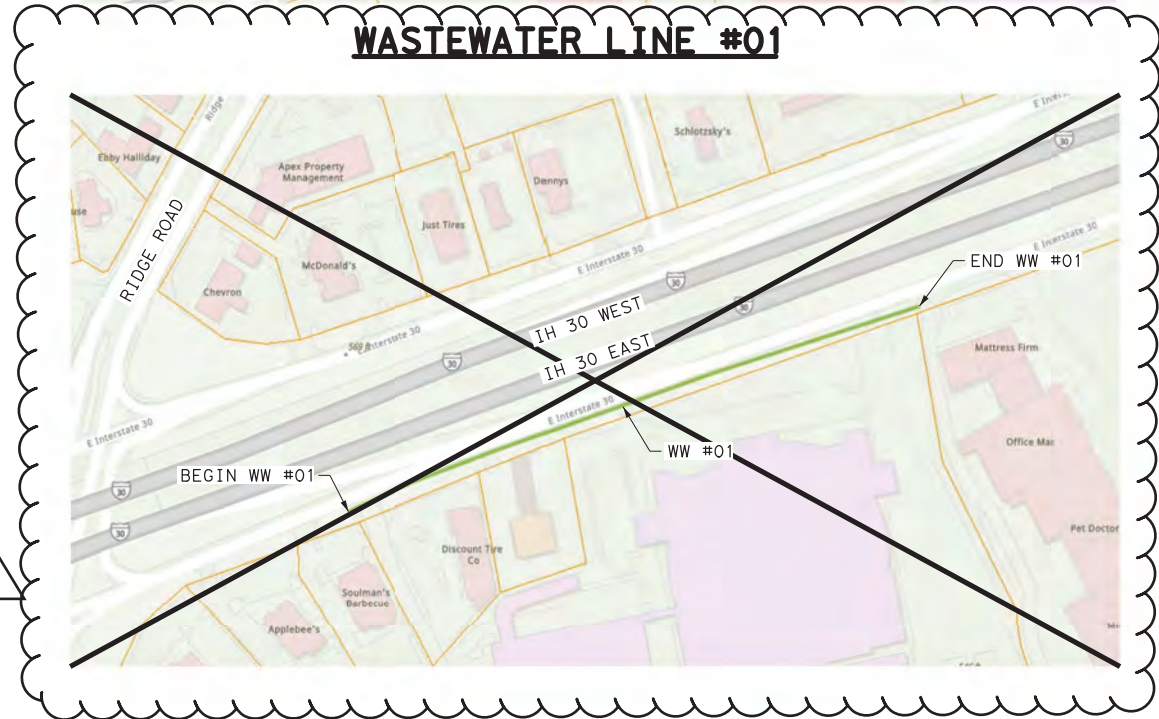
WATER LINE #04



1 Omitted Project Location



WASTEWATER LINE #01



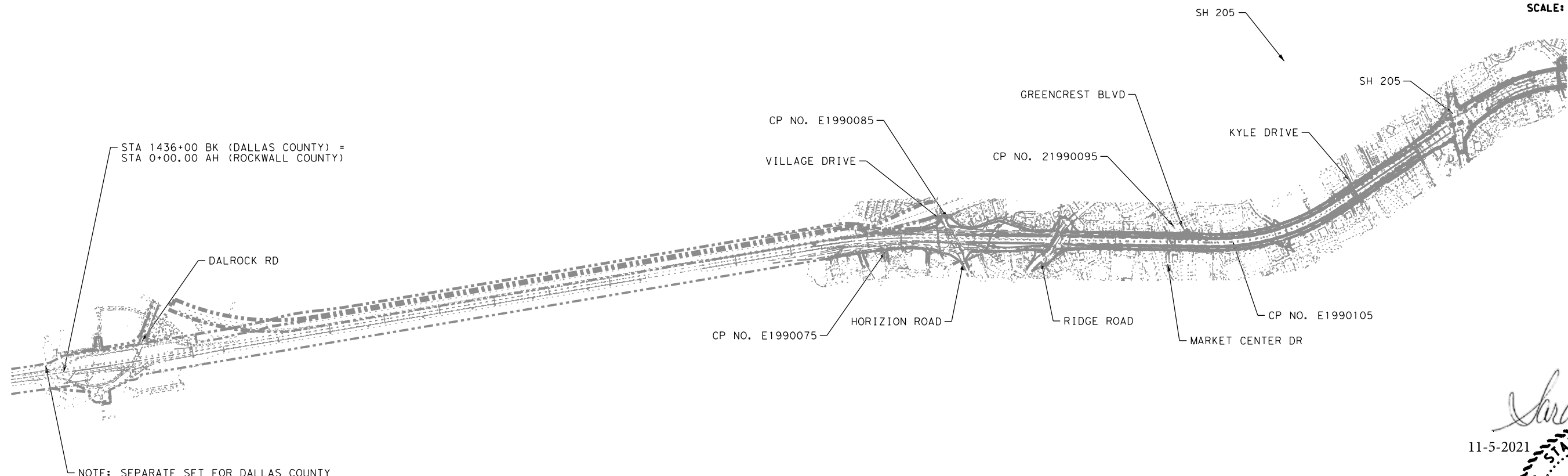
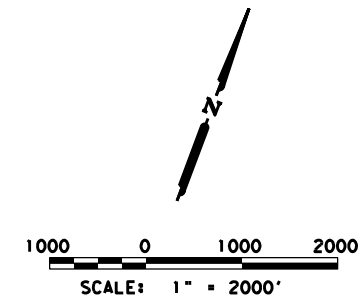
WATER LINE #05



VOLKERT
 F-12679

ROCKWALL IH 30 PROJECT LAYOUT

SHEET 1 OF 1			
CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST		COUNTY	SHEET NO.
DALLAS		ROCKWALL	5



Sara Hutson
 11-5-2021
 STATE OF TEXAS
 SARA D. HUTSON
 142339
 LICENSED PROFESSIONAL ENGINEER

NOTES:

1. SURVEY WAS NOT PERFORMED BY VOLKERT, INC.
2. HORIZONTAL AND VERTICAL CONTROL WAS PROVIDED BY TXDOT IN PLAN SET: PLANS OF EXISTING SUBSURFACE UTILITIES, DALLAS/ROCKWALL COUNTY, HIGHWAY: IH30 PREPARED BY LINA T. RAMSEY & ASSOCIATES, INC. DATED 8/4/2016.

ALL COORDINATES SHOWN HEREON ARE BASED ON RTK OBSERVATIONS UTILIZING THE TXDOT VRS NETWORK, AND REFERENCED TO THE TEXAS COORDINATE SYSTEM, NORTH CENTRAL ZONE (4202), NORTH AMERICAN DATUM 1983 (NAD83) 2011 ADJUSTMENT, EPOCH 2010.00 ALL COORDINATES ARE US SURVEY FEET, DISPLAYED IN SURFACE VALUES AND MAY BE CONVERTED TO GRID BY DIVIDING BY THE COMBINED ADJUSTMENT FACTOR OF 1.000146135 (ROCKWALL COUNTY)

ELEVATIONS ARE BASED ON NAVD 1988.

CONTROL POINT NO. E1990075
 NORTHING: 7014859.095
 EASTING: 2589452.905
 ELEVATION= 484.81'

CONTROL POINT NO. E1990085
 NORTHING: 7016158.632
 EASTING: 2590036.207
 ELEVATION: 528.48'

CONTROL POINT NO. E1990095
 NORTHING: 7017851.299
 EASTING: 2595327.345
 ELEVATION: 565.83'

CONTROL POINT NO. E1990105
 NORTHING: 7018729.879
 EASTING: 1596517.614
 ELEVATION= 563.69'

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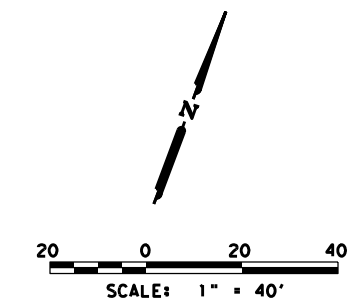
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VOLKERT
 F-12679

**ROCKWALL IH 30
 HORIZONTAL AND
 VERTICAL CONTROL**

SHEET 1 OF 1		
CONT	SECT	JOB
0009	12	220
DIST		HIGHWAY
DALLAS		IH 30
COUNTY		SHEET NO.
ROCKWALL		7



NOTES:

1. ABANDONED WATER LINE PIPES TO REMAIN IN PLACE SHALL BE PLUGGED AND ALL VOID SPACES WITHIN THE ABANDONED PIPE SHALL BE FILLED WITH GROUT, FLOWABLE FILL OR AN EXPANDABLE PERMANENT FOAM PRODUCT.
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LEGEND:

REMOVAL 

ABANDONMENT 

CUT/CAP 

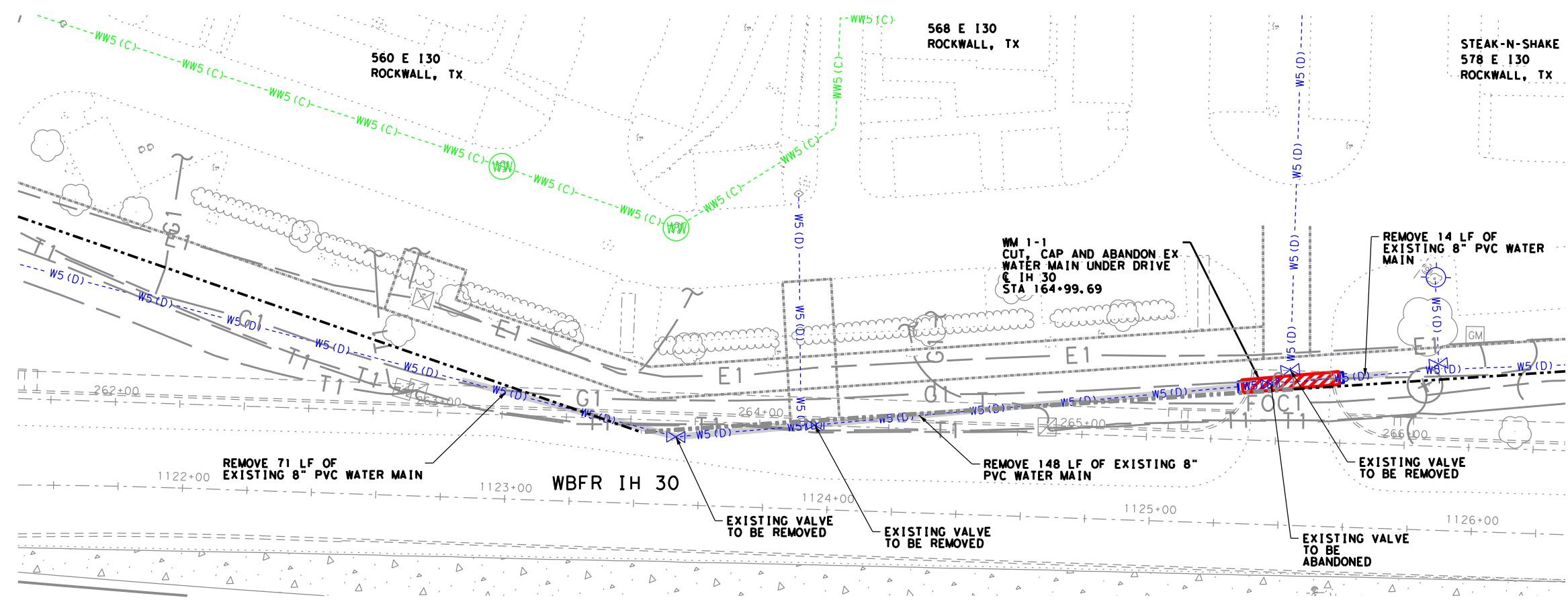
Sara Hutson
 11-5-2021
 STATE OF TEXAS
 SARA D. HUTSON
 142339
 LICENSED PROFESSIONAL ENGINEER



VOLKERT
 F-12679

**ROCKWALL IH 30
 EX. CONDITIONS/REMOVAL/
 ABANDONMENT PLAN
 WATER MAIN #01**

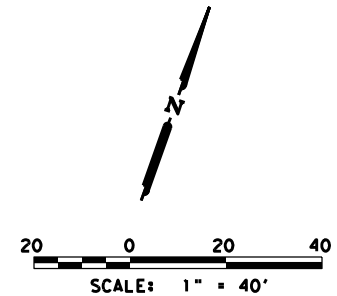
SHEET 1 OF 11			
CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST		COUNTY	SHEET NO.
DALLAS		ROCKWALL	8



LOCATION	UTILITY	AGE	CONDITION	CURRENT STATUS	SIZE (IN)	MATERIAL	LENGTH (FT)	APPROX. DEPTH (FT)
WATER MAIN #01 - 1	WATER	1977	UNKNOWN	IN USE	8	PVC	30	4

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 DATE: 7/13/2023 BY: SDH

DATE: sDATES STIMES
 FILE: sFILES



NOTES:

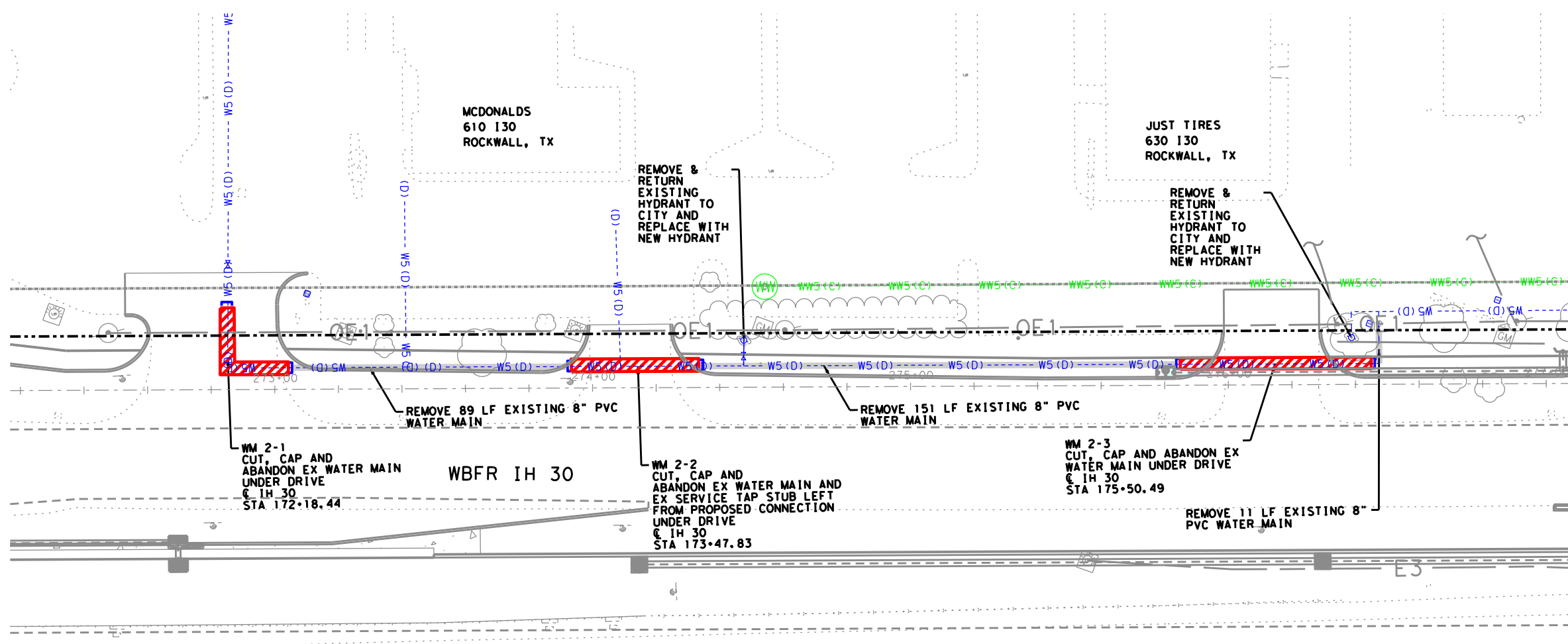
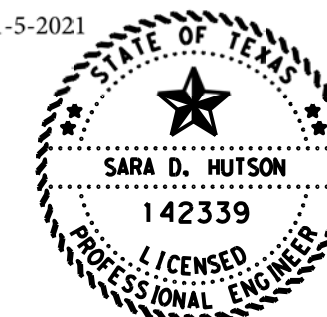
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LEGEND:

- REMOVAL
- ABANDONMENT
- CUT/CAP


Sara Hutson

11-5-2021




LOCATION	UTILITY	AGE	CONDITION	CURRENT STATUS	SIZE (IN)	MATERIAL	LENGTH (FT)	APPROX. DEPTH (FT)
WATER MAIN #02 - 1	WATER	2014	UNKNOWN	IN USE	8	PVC	40	4
WATER MAIN #02 - 2	WATER	2014	UNKNOWN	IN USE	8	PVC	40	4
WATER MAIN #02 - 3	WATER	2014	UNKNOWN	IN USE	8	PVC	60	4

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 DATE: 7/13/2023 BY: SDH



**City Of
Rockwall**

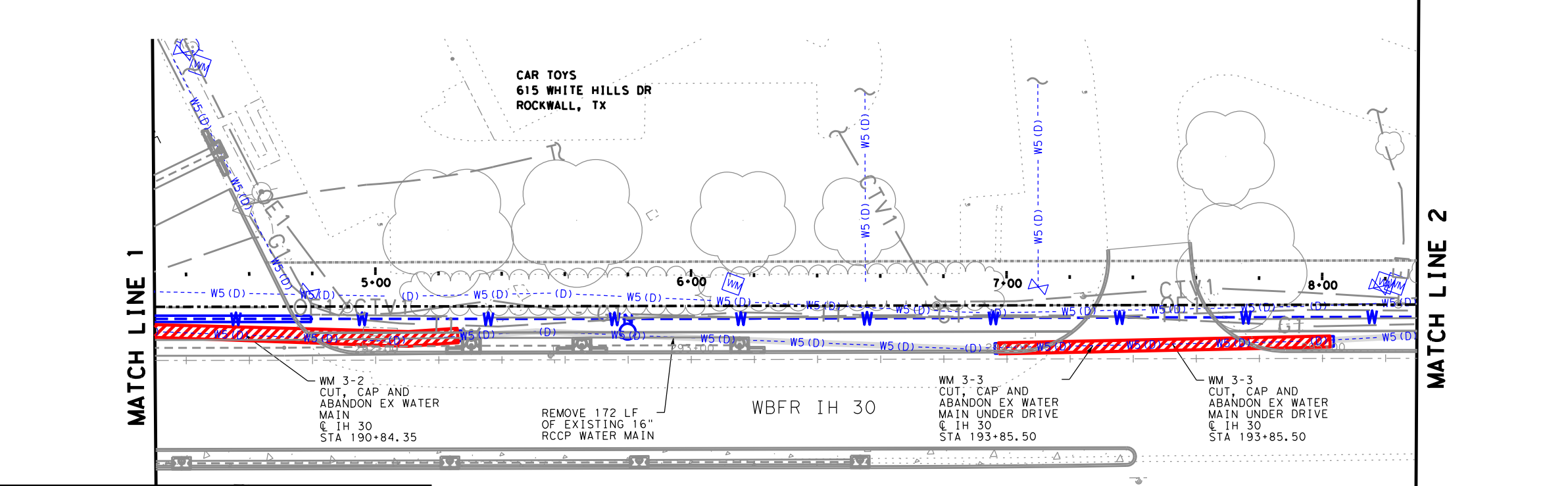
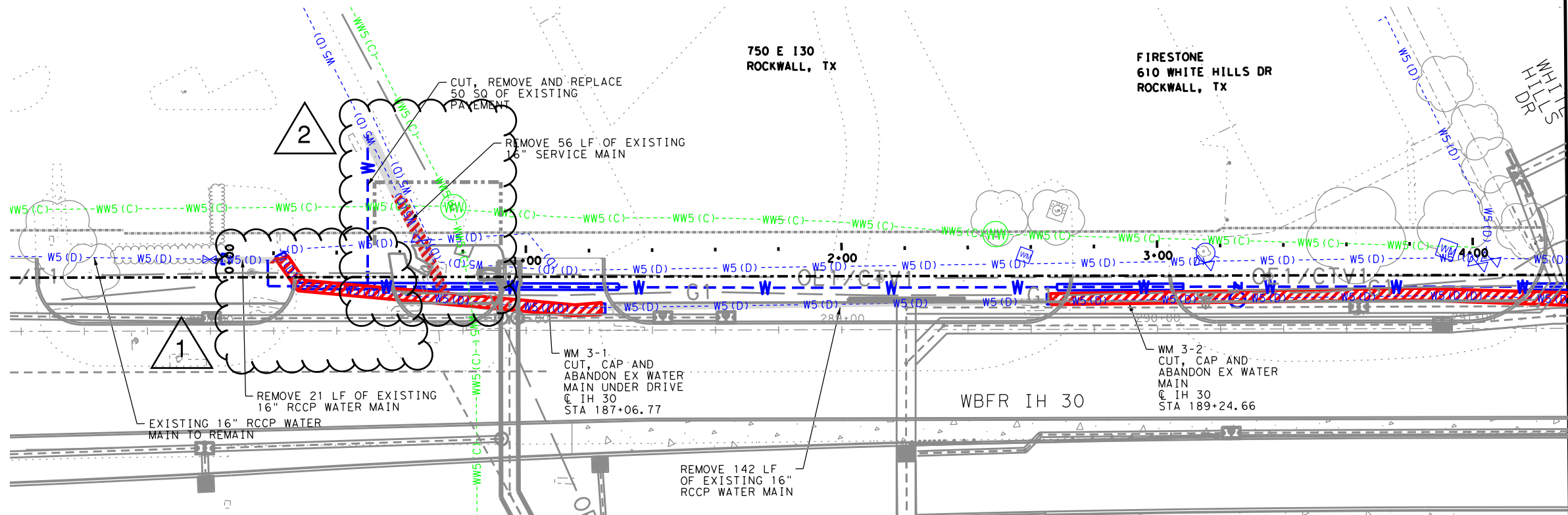
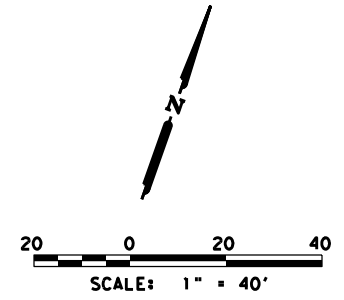


VOLKERT
F-12679

**ROCKWALL IH 30
EX. CONDITIONS/REMOVAL/
ABANDONMENT PLAN
WATER MAIN #02**

SHEET 2 OF 11			
CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST		COUNTY	SHEET NO.
DALLAS		ROCKWALL	9

DATE: SDATES STIMES
FILE: SFILES



NOTES:

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LEGEND:

REMOVAL

ABANDONMENT

CUT/CAP

Sara Hutson
 8/26/2022
 STATE OF TEXAS
 SARA D. HUTSON
 142339
 LICENSED PROFESSIONAL ENGINEER



VOLKERT
 F-12679

**ROCKWALL IH 30
 EX. CONDITIONS/REMOVAL/
 ABANDONMENT PLAN
 WATER MAIN #03**

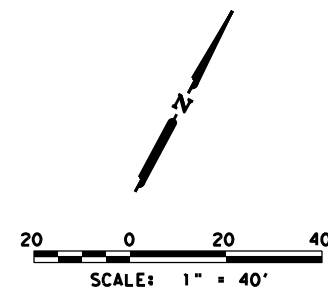
"RECORD DRAWING"
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DATE: 7/13/2023 BY: SDH

LOCATION	UTILITY	AGE	CONDITION	CURRENT STATUS	SIZE (IN)	MATERIAL	LENGTH (FT)	APPROX. DEPTH (FT)
WATER MAIN #03 - 1	WATER	1984	UNKNOWN	IN USE	16	PVC	110	4
WATER MAIN #03 - 2	WATER	1984	UNKNOWN	IN USE	16	PVC	260	4
WATER MAIN #03 - 3	WATER	1984	UNKNOWN	IN USE	16	PVC	105	4

DATE: SDATES STIMES
 FILE: SFILES

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	10	

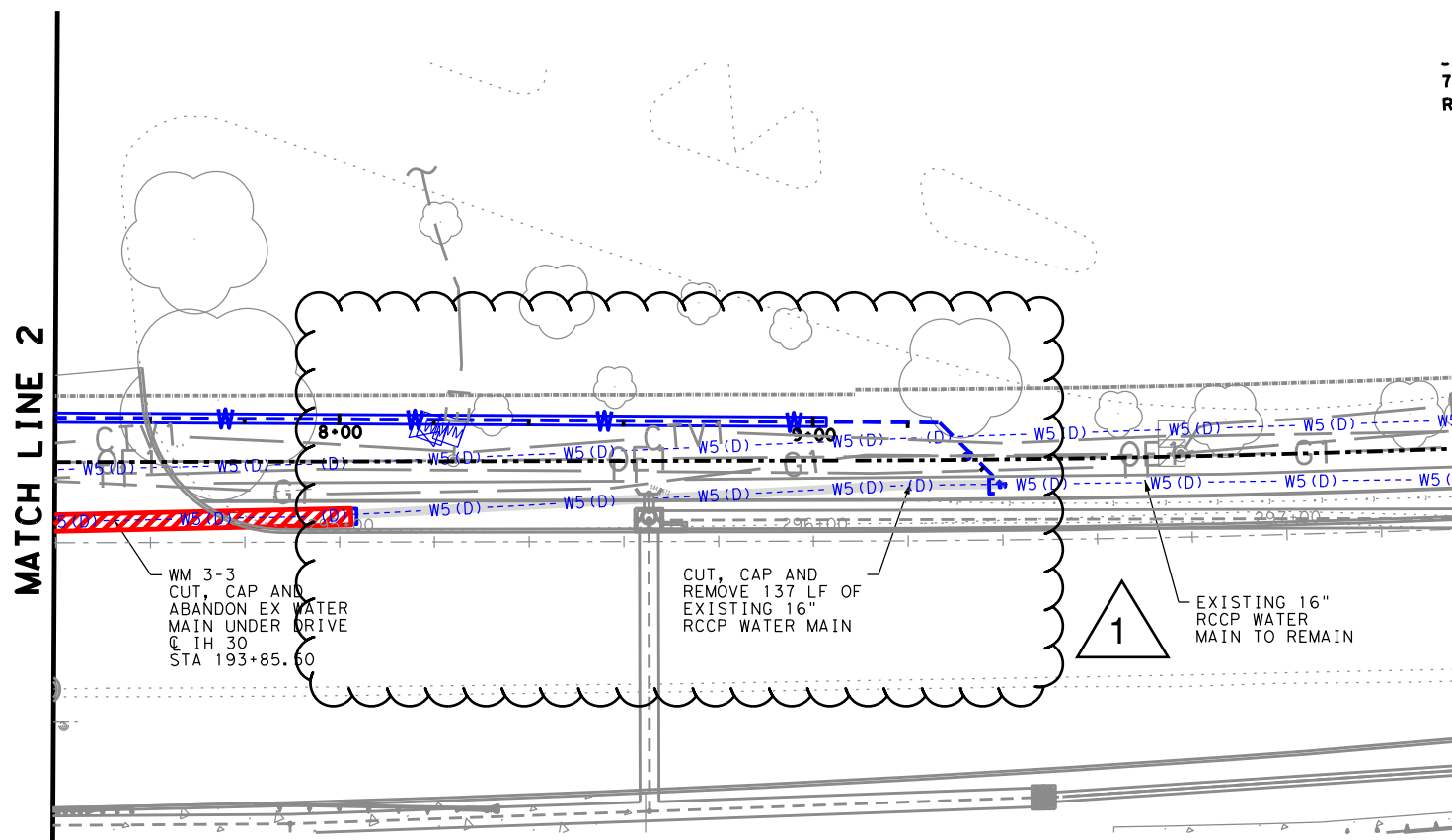


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LEGEND:

- REMOVAL
- ABANDONMENT
- CUT/CAP



LOCATION	UTILITY	AGE	CONDITION	CURRENT STATUS	SIZE (IN)	MATERIAL	LENGTH (FT)	APPROX. DEPTH (FT)
WATER MAIN #03 - 3	WATER	1984	UNKNOWN	IN USE	16	PVC	105	4

5/25/2022



F-12679
**ROCKWALL IH 30
 EX. CONDITIONS/REMOVAL/
 ABANDONMENT PLAN
 WATER MAIN #03**

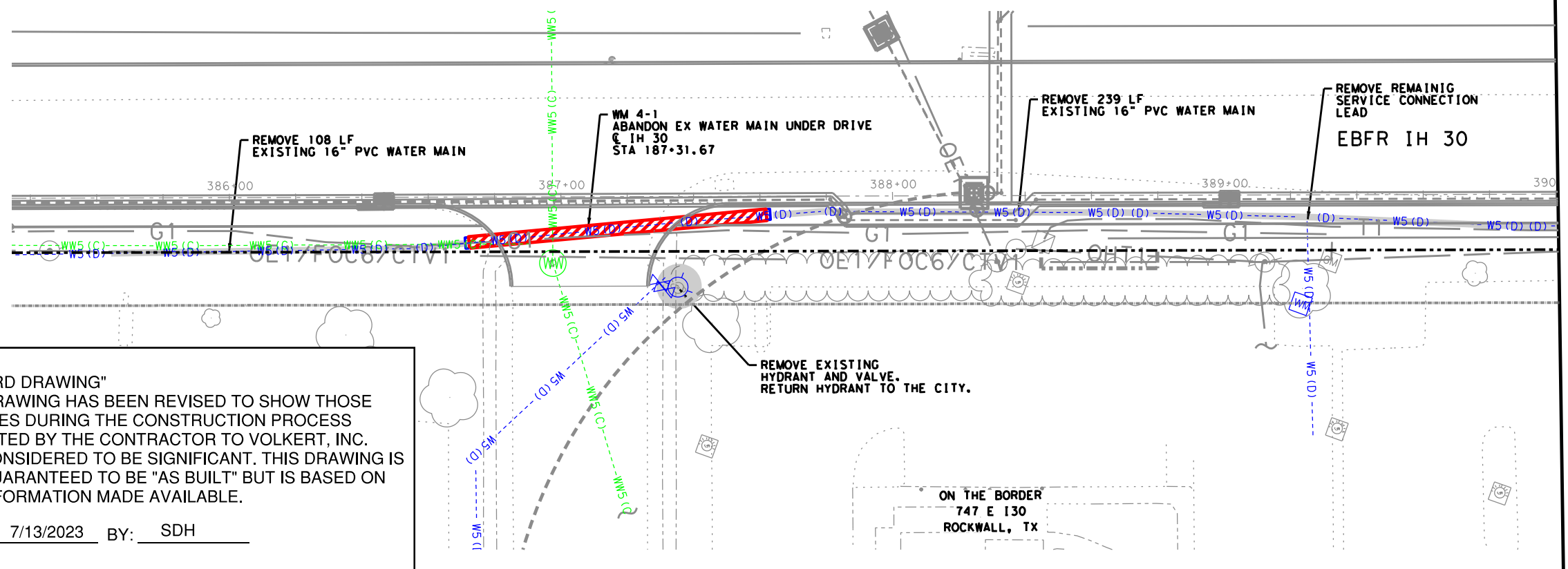
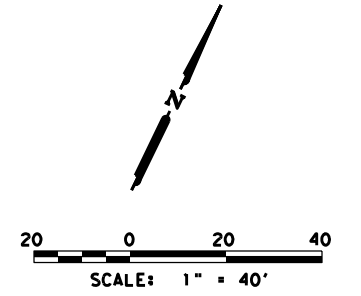
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SHEET 4 OF 11

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST		COUNTY	SHEET NO.
DALLAS		ROCKWALL	11

DATE: sDATES
 FILE: sFILES



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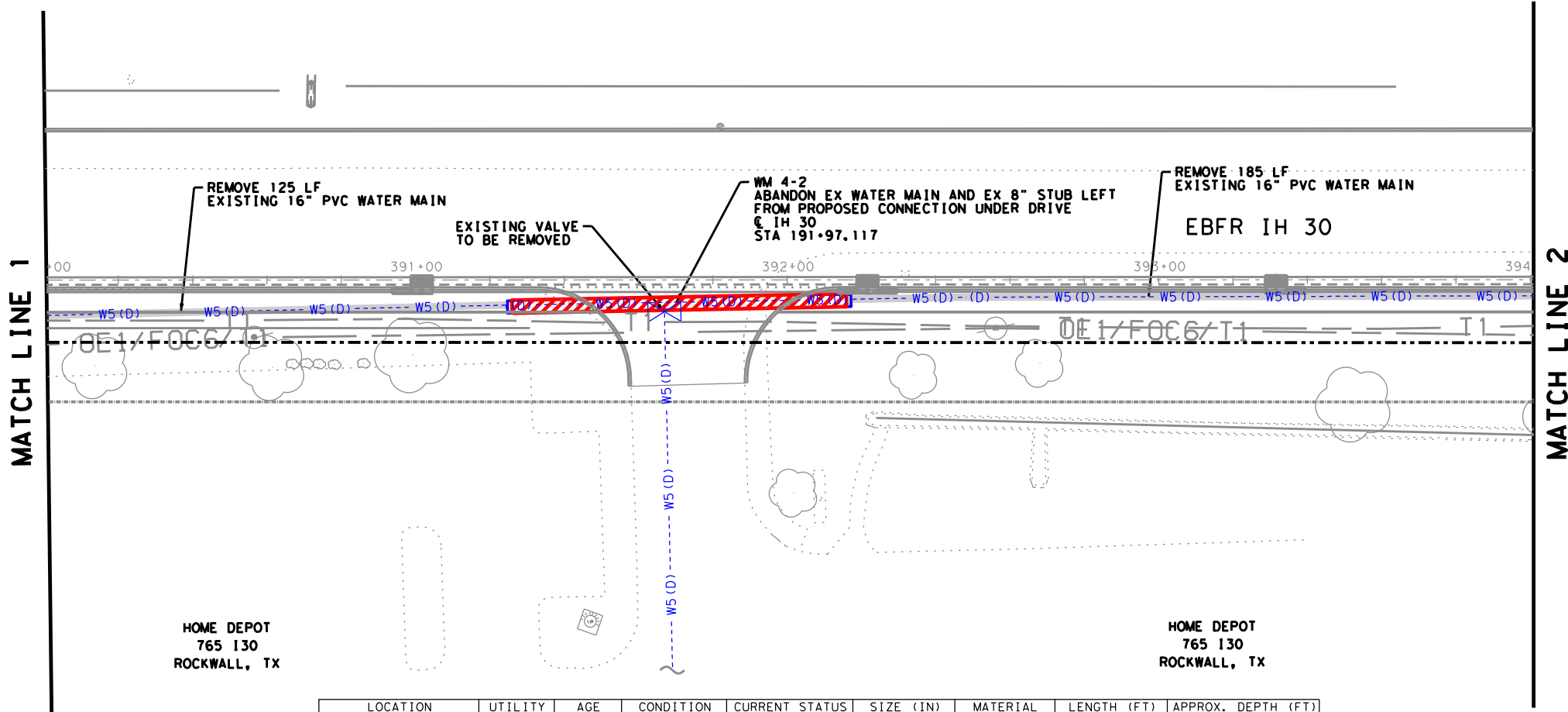
DATE: 7/13/2023 BY: SDH

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LEGEND:

REMOVAL	
ABANDONMENT	
CUT/CAP	

Sara Hutson
 11-5-2021
 STATE OF TEXAS
 SARA D. HUTSON
 142339
 LICENSED PROFESSIONAL ENGINEER



LOCATION	UTILITY	AGE	CONDITION	CURRENT STATUS	SIZE (IN)	MATERIAL	LENGTH (FT)	APPROX. DEPTH (FT)
WATER MAIN #04 - 1	WATER	1995	UNKNOWN	IN USE	16	PVC	90	4
WATER MAIN #04 - 2	WATER	1995	UNKNOWN	IN USE	16	PVC	90	4



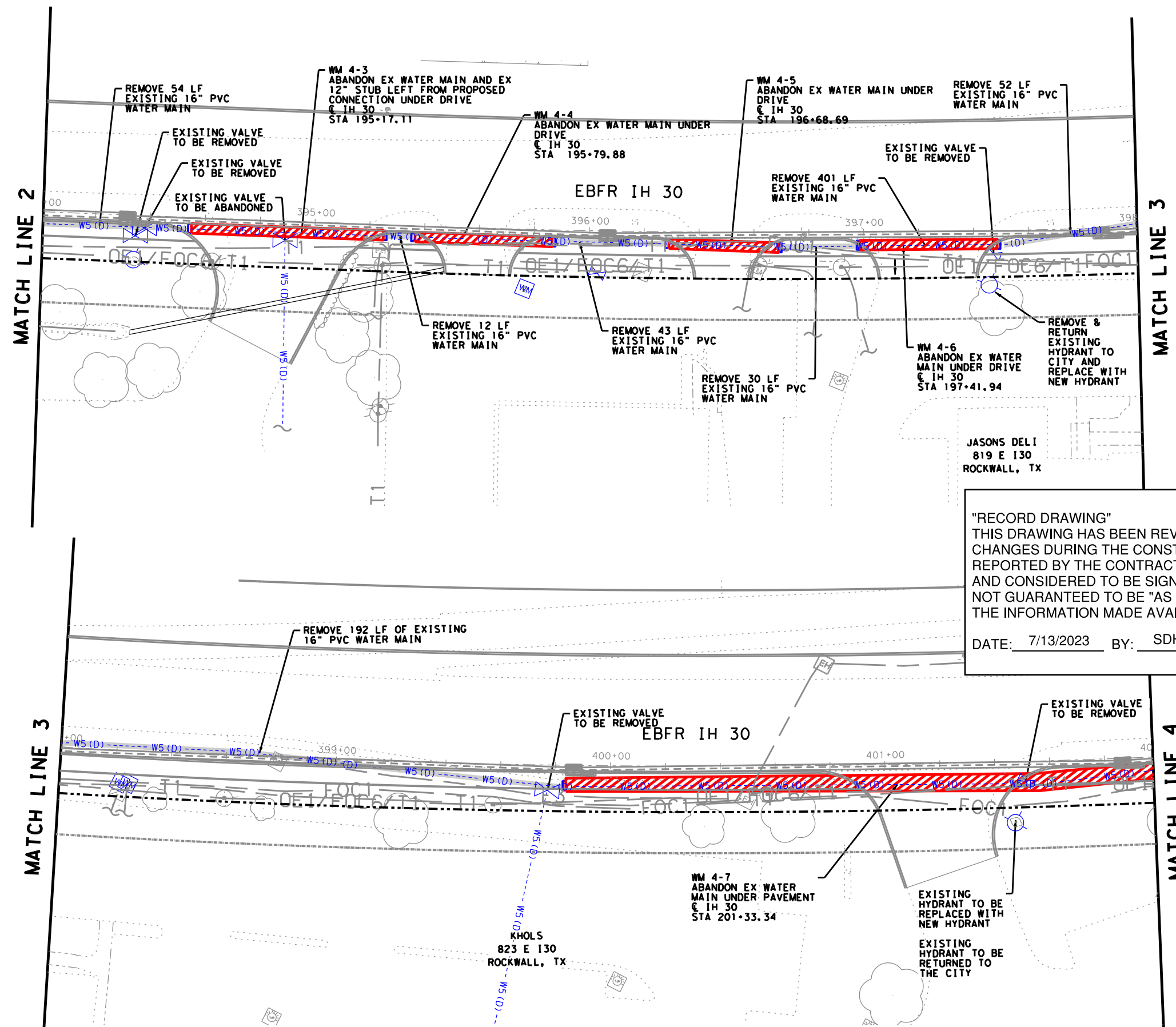
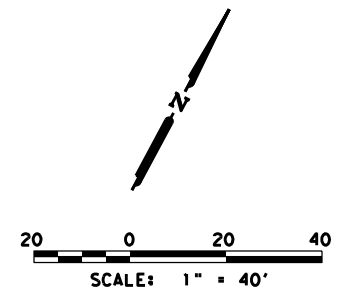
VOLKERT
 F-12679

**ROCKWALL IH 30
 EX. CONDITIONS/REMOVAL/
 ABANDONMENT PLAN
 WATER MAIN #04**

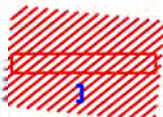
SHEET 6 OF 11


CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	13	


DATE: SDATES STIMES
 FILE: SFILES



LEGEND:

REMOVAL 

ABANDONMENT 

CUT/CAP 

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Sara Hutson
 11-5-2021

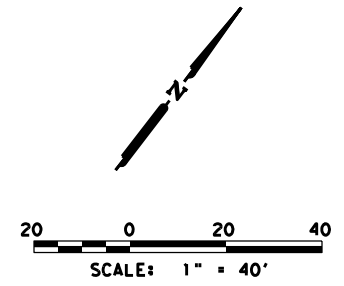



**ROCKWALL IH 30
 EX. CONDITIONS/REMOVAL/
 ABANDONMENT PLAN
 WATER MAIN #04**

LOCATION	UTILITY	AGE	CONDITION	CURRENT STATUS	SIZE (IN)	MATERIAL	LENGTH (FT)	APPROX. DEPTH (FT)
WATER MAIN #04 - 3	WATER	1995	UNKNOWN	IN USE	16	PVC	70	4
WATER MAIN #04 - 4	WATER	1995	UNKNOWN	IN USE	16	PVC	50	4
WATER MAIN #04 - 5	WATER	1995	UNKNOWN	IN USE	16	PVC	40	4
WATER MAIN #04 - 6	WATER	1995	UNKNOWN	IN USE	16	PVC	50	4
WATER MAIN #04 - 7	WATER	1995	UNKNOWN	IN USE	16	PVC	250	4

DATE: sDATES STIMES
 FILE: sFILES

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	14	



NOTES:

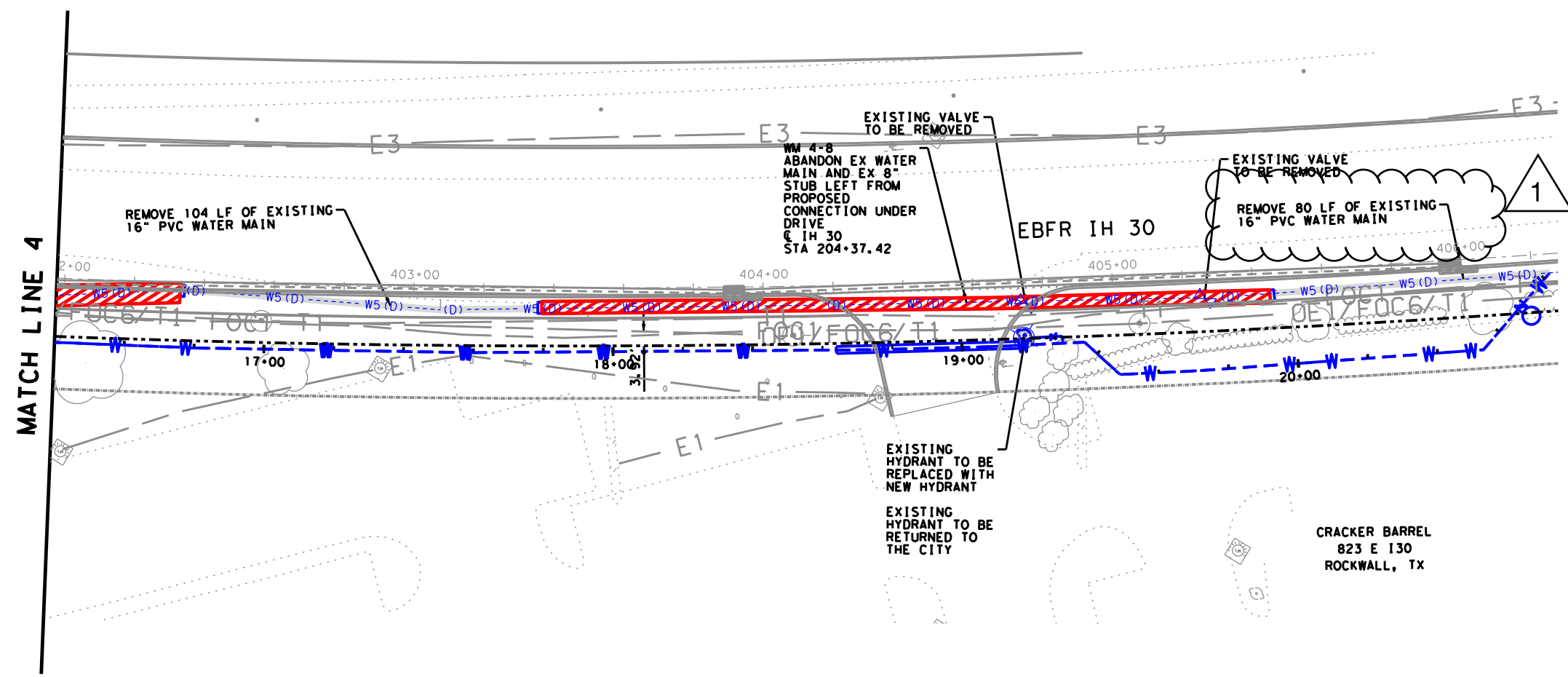
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LEGEND:

REMOVAL

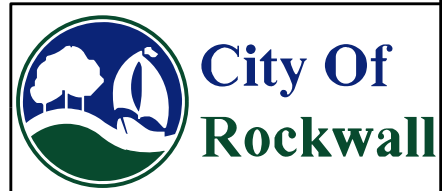
ABANDONMENT

CUT/CAP



WATER MAIN #04 - 8	WATER	1995	UNKNOWN	IN USE	17	PVC	210	4
LOCATION	UTILITY	AGE	CONDITION	CURRENT STATUS	SIZE (IN)	MATERIAL	LENGTH (FT)	APPROX. DEPTH (FT)

CRACKER BARREL
823 E 130
ROCKWALL, TX



F-12679

**ROCKWALL IH 30
EX. CONDITIONS/REMOVAL/
ABANDONMENT PLAN
WATER MAIN #04**

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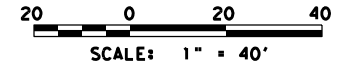
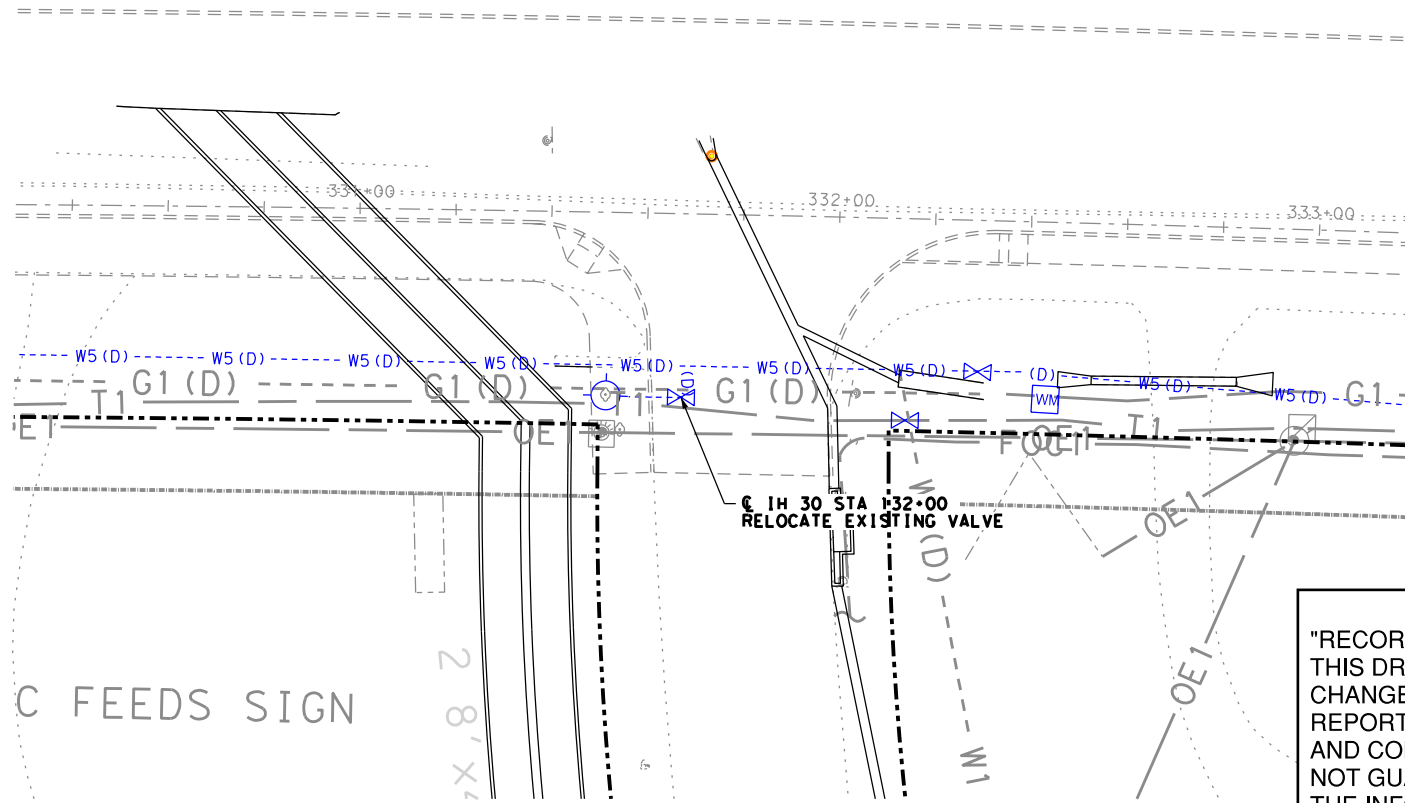
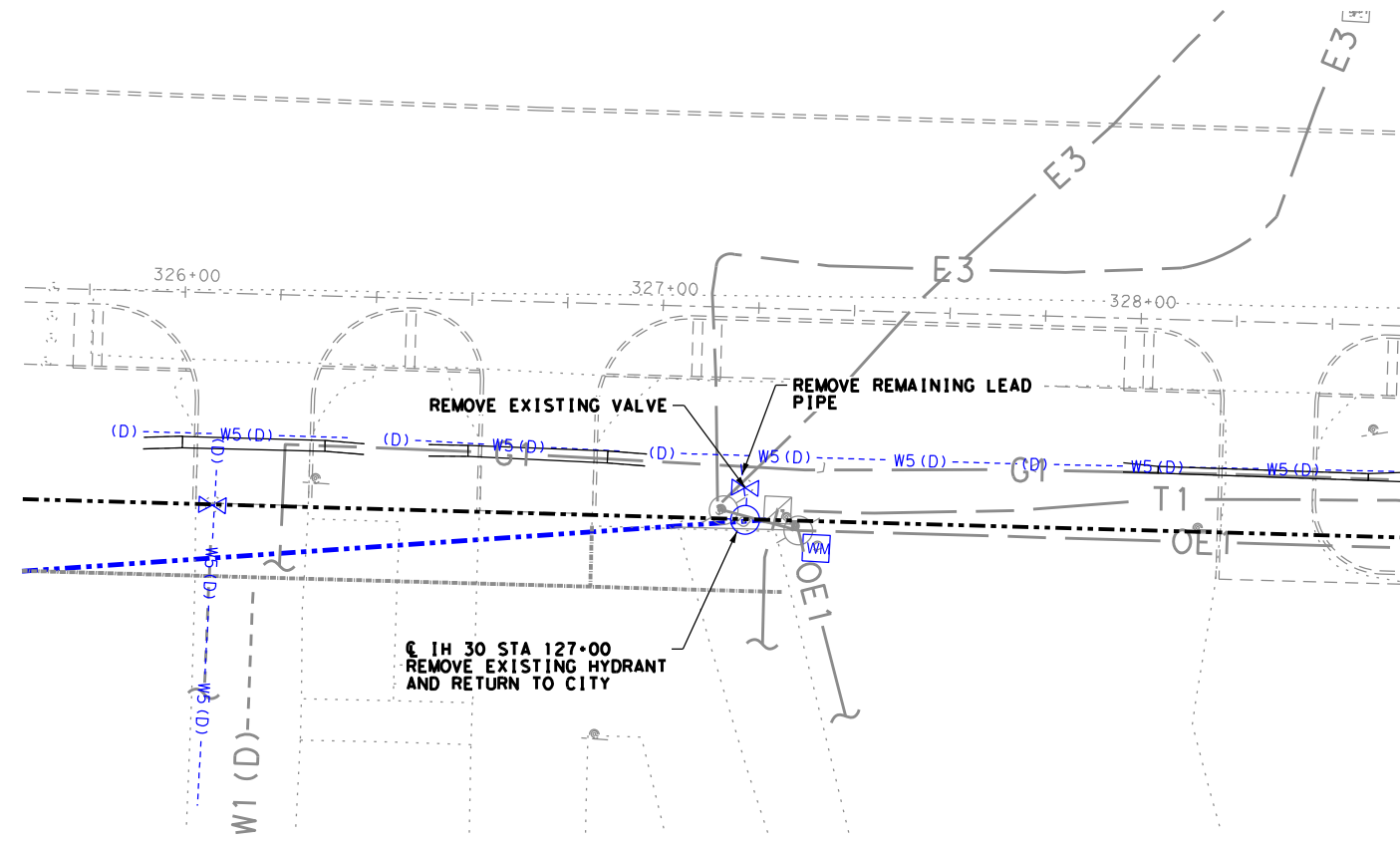
DATE: 7/13/2023 BY: SDH

SHEET 8 OF 11

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	15	

DATE: sDATES
FILE: sFILES

DATE: **SDATES**
 FILE: **SFILES**



NOTES:

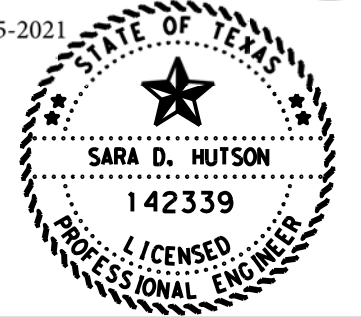
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LEGEND:

- REMOVAL
- ABANDONMENT
- CUT/CAP

Sara Hutson

11-5-2021



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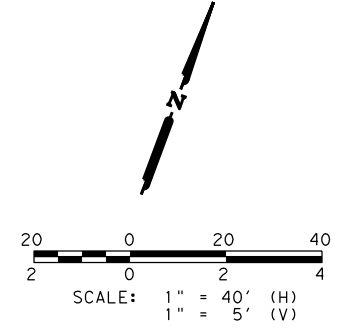
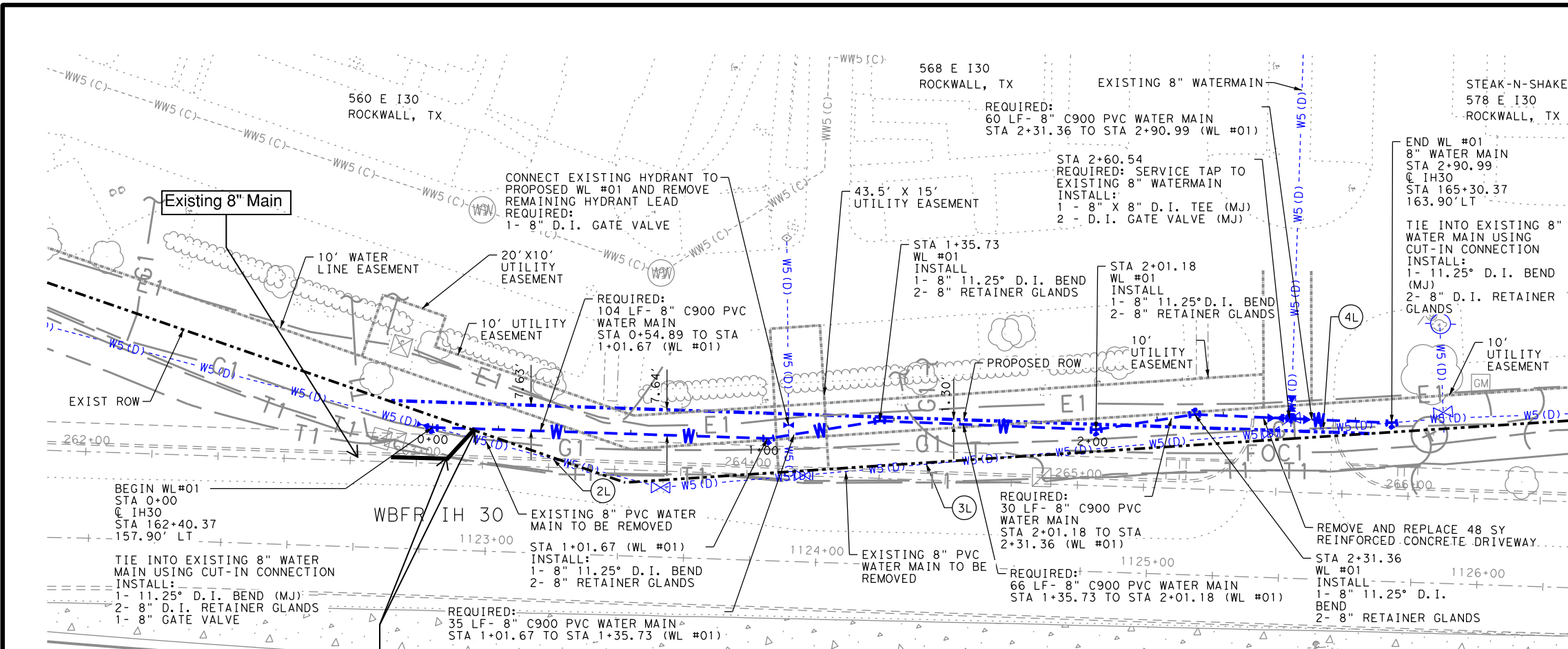
**ROCKWALL IH 30
 EX. CONDITIONS/REMOVAL/
 ABANDONMENT PLAN
 WATER MAIN #05**

SHEET 9 OF 11

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST		COUNTY	SHEET NO.
DALLAS		ROCKWALL	16

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DATE: 7/13/2023 BY: SDH



- NOTES:**
1. ALL WATERLINE BENDS, FITTINGS, AND VALVES TO BE RESTRAINED AND THRUST BLOCKED.
 2. CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITY ELEVATIONS PRIOR TO CONSTRUCTION AND MAINTAIN A 2 FT MINIMUM VERTICAL CLEARANCE.
 3. ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.
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 5. ALL WATER AND WASTEWATER MAIN TO BE INSTALLED IN STEEL CASING UNDER EXISTING ROADWAYS AND DRIVES UNLESS OTHERWISE NOTED. ALL BORING OF WATER AND WASTEWATER LINE SHALL BE DRY BORE METHODS. NO WET BORES WILL BE ALLOWED.

#	CONFLICT
2L	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT
3L	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT
4L	PROP PVMT > 2 FT CUT; EX WATER APPROX. 4 FT DEEP

Installed 2-45 degree bends

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Sara Hutson

6-23-2023



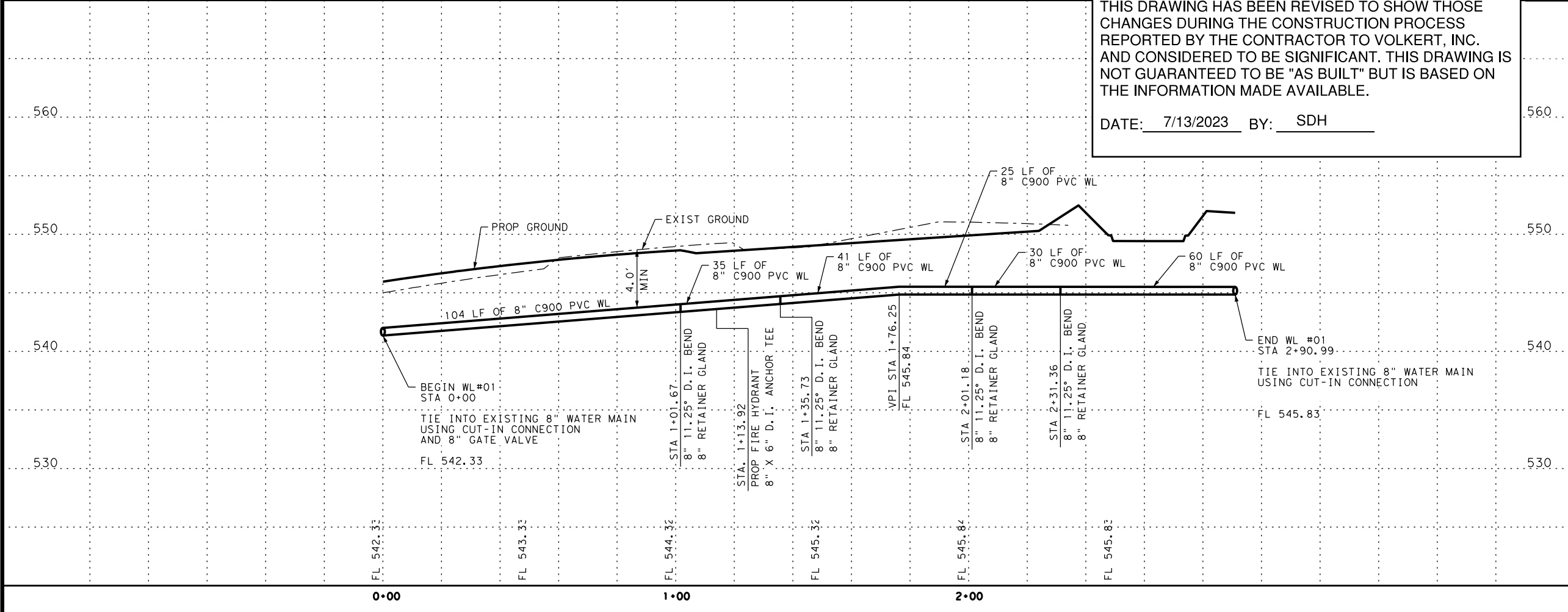
VOLKERT
 F-12679

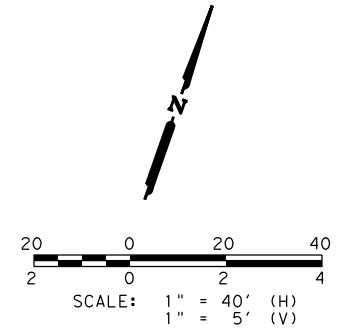
**ROCKWALL IH 30
 WATER MAIN #01
 PLAN AND PROFILE**

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	19	

DATE: sDATES STIMES
 FILE: sFILES

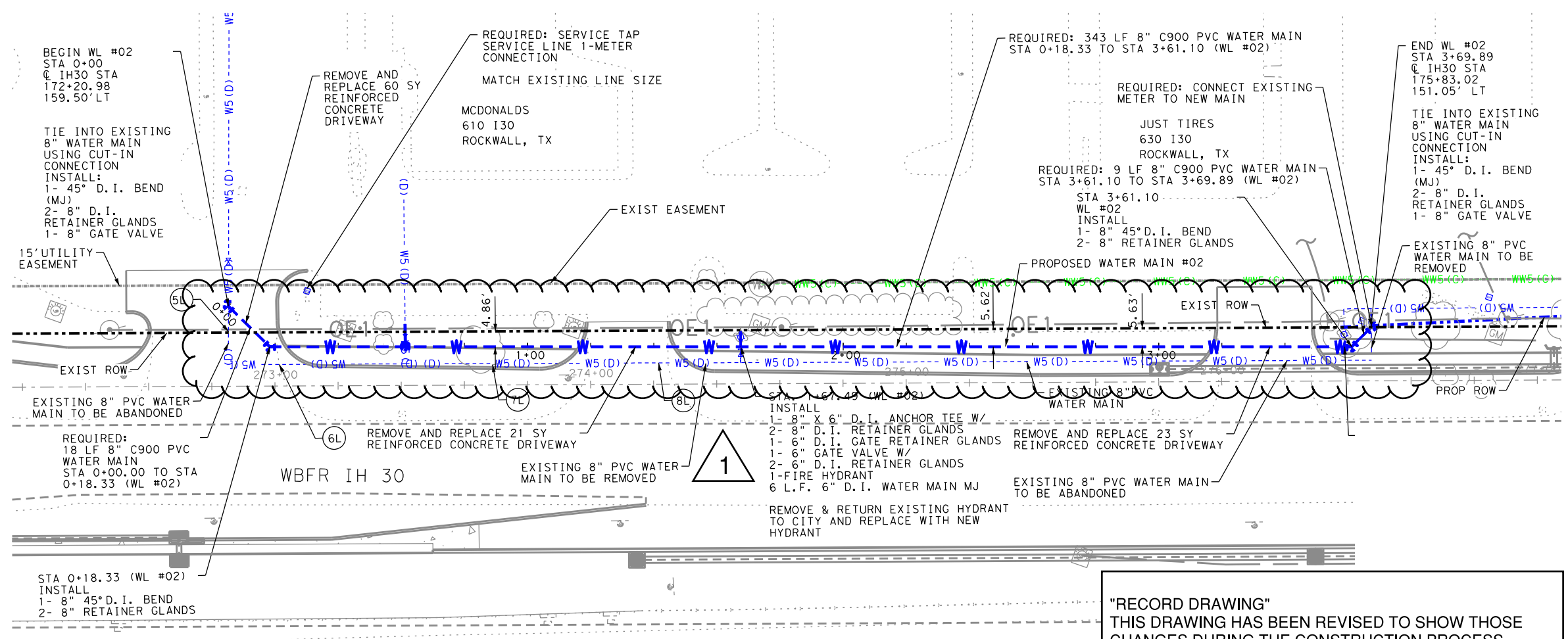




NOTES:

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6. PROPOSED ALIGNMENT CAN BE ADJUSTED AS NEEDED TO AVOID FRANCHISE UTILITIES.

#	CONFLICT
5L	PROP PVMT >2 FT CUT; EX WATER APPROX. 4 FT DEEP
6L	PROP PVMT >2 FT CUT; EX WATER APPROX. 4 FT DEEP
7L	EXISTING WATER LINE WITH ILLUM (BORE)
8L	PROP PVMT >2 FT CUT; EX WATER APPROX. 4 FT DEEP



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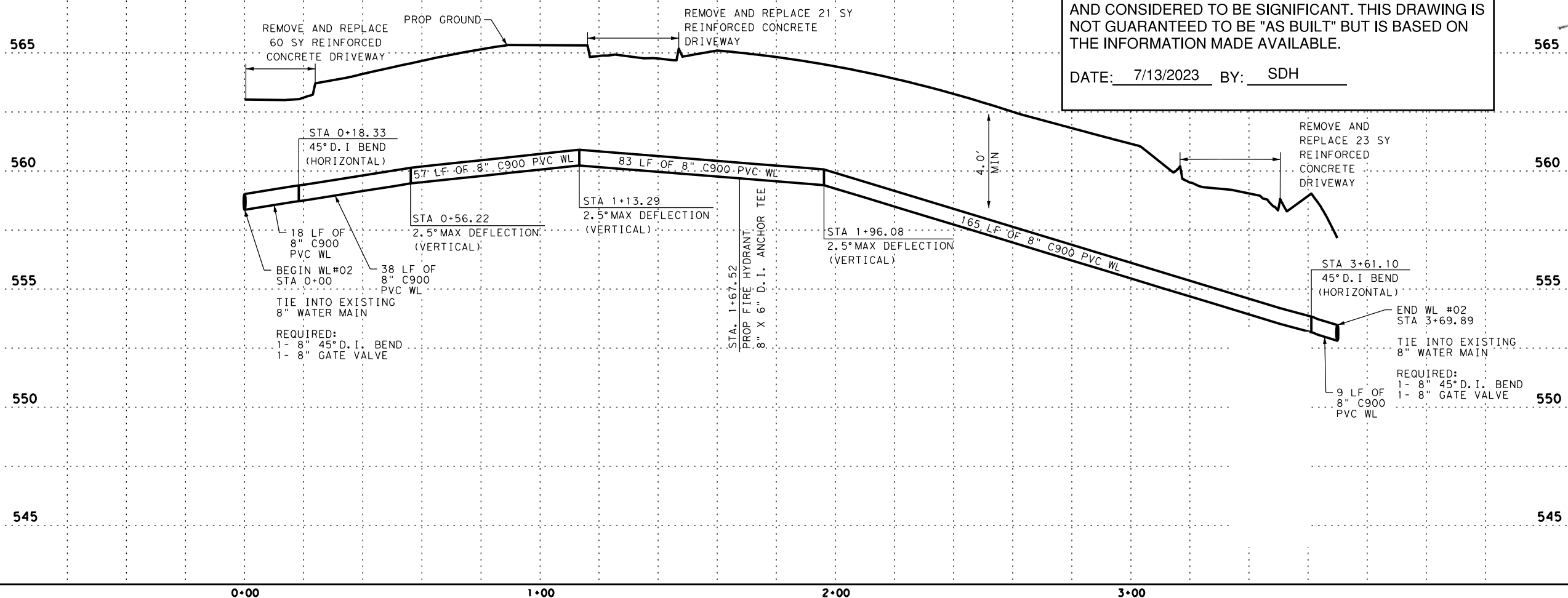
Sara D. Hutson
 STATE OF TEXAS
 SARA D. HUTSON
 142339
 LICENSED PROFESSIONAL ENGINEER
 6-23-2023



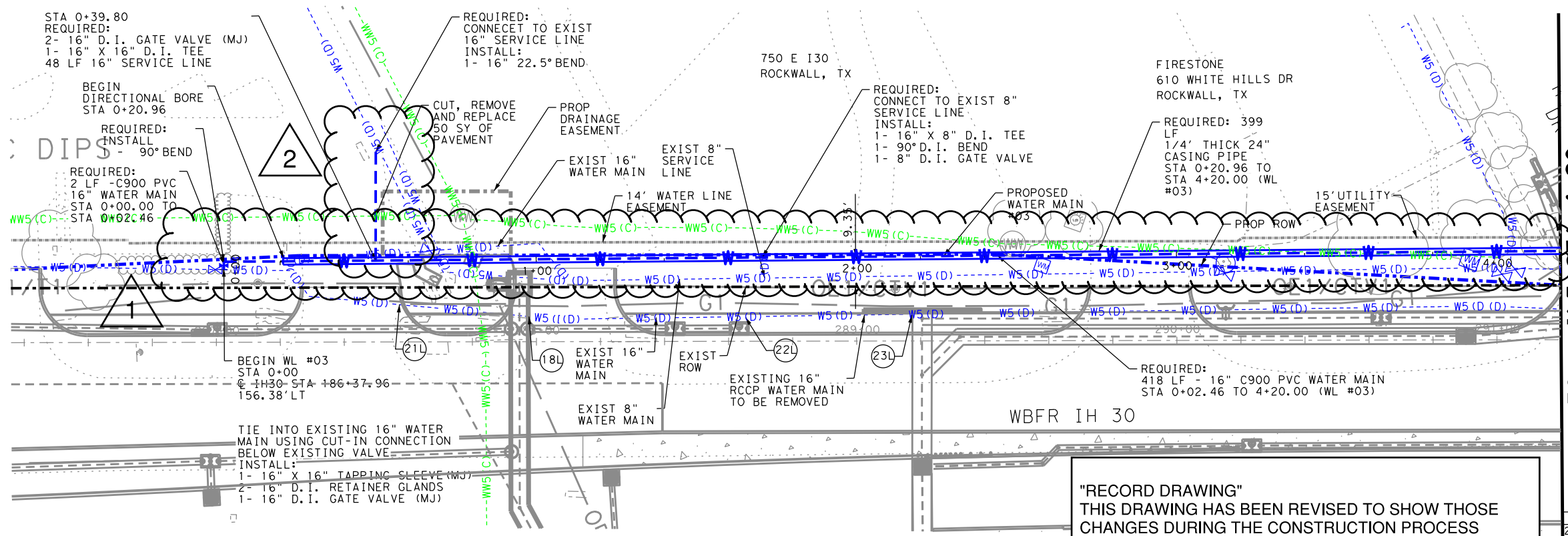
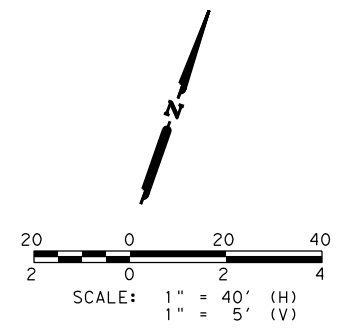
**ROCKWALL IH 30
 WATER MAIN #02
 PLAN AND PROFILE**

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	20	



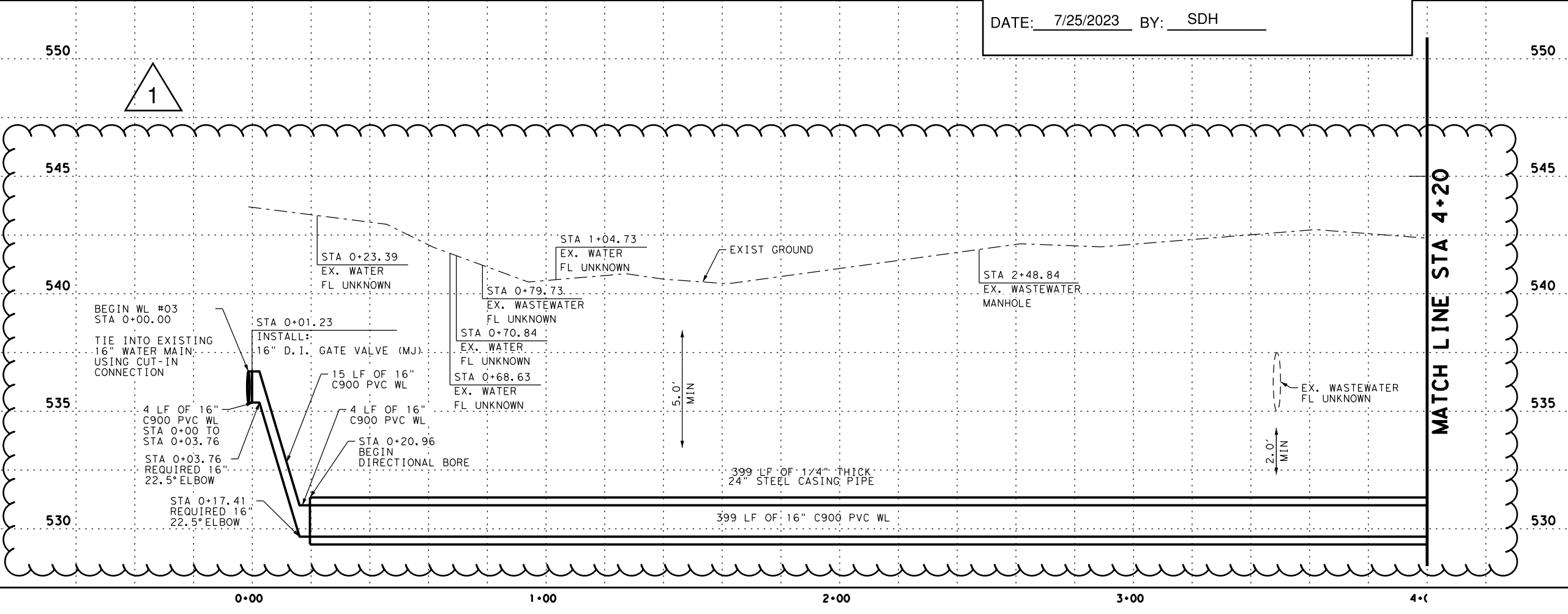
DATE: SDATES STIMES
 FILE: SFILES



- NOTES:**
1. ALL WATERLINE BENDS, FITTINGS, AND VALVES TO BE RESTRAINED AND THRUST BLOCKED.
 2. CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITY ELEVATIONS PRIOR TO CONSTRUCTION AND MAINTAIN A 2 FT MINIMUM VERTICAL CLEARANCE.
 3. ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.
 4. ABANDONED WATER LINES TO REMAIN IN PLACE SHALL BE CUT AND PLUGGED AND ALL VOID SPACES WITHIN THE ABANDONED LINE SHALL BE FILLED WITH GROUT, FLOWABLE FILL OR AN EXPANDABLE PERMANENT FOAM PRODUCT.
 5. ALL WATER AND WASTEWATER MAIN TO BE INSTALLED IN STEEL CASING UNDER EXISTING ROADWAYS AND DRIVES UNLESS OTHERWISE NOTED. ALL BORING OF WATER AND WASTEWATER LINE SHALL BE DRY BORE METHODS. NO WET BORES WILL BE ALLOWED.

"RECORD DRAWING"
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 DATE: 7/25/2023 BY: SDH

#	CONFLICT
21L	PROP STORM LINE WITH EX WATER LINE (APPROX. 4 FT DEEP)
22L	PROP STORM LINE WITH EX WATER LINE (APPROX. 4 FT DEEP)
18L	PROP STORM LINE WITH EX WATER LINE (APPROX. 4 FT DEEP)
23L	PROP STORM LINE WITH EX WATER LINE (APPROX. 4 FT DEEP)
24L	PROP STORM LINE WITH EX WATER LINE (APPROX. 4 FT DEEP)



City Of Rockwall

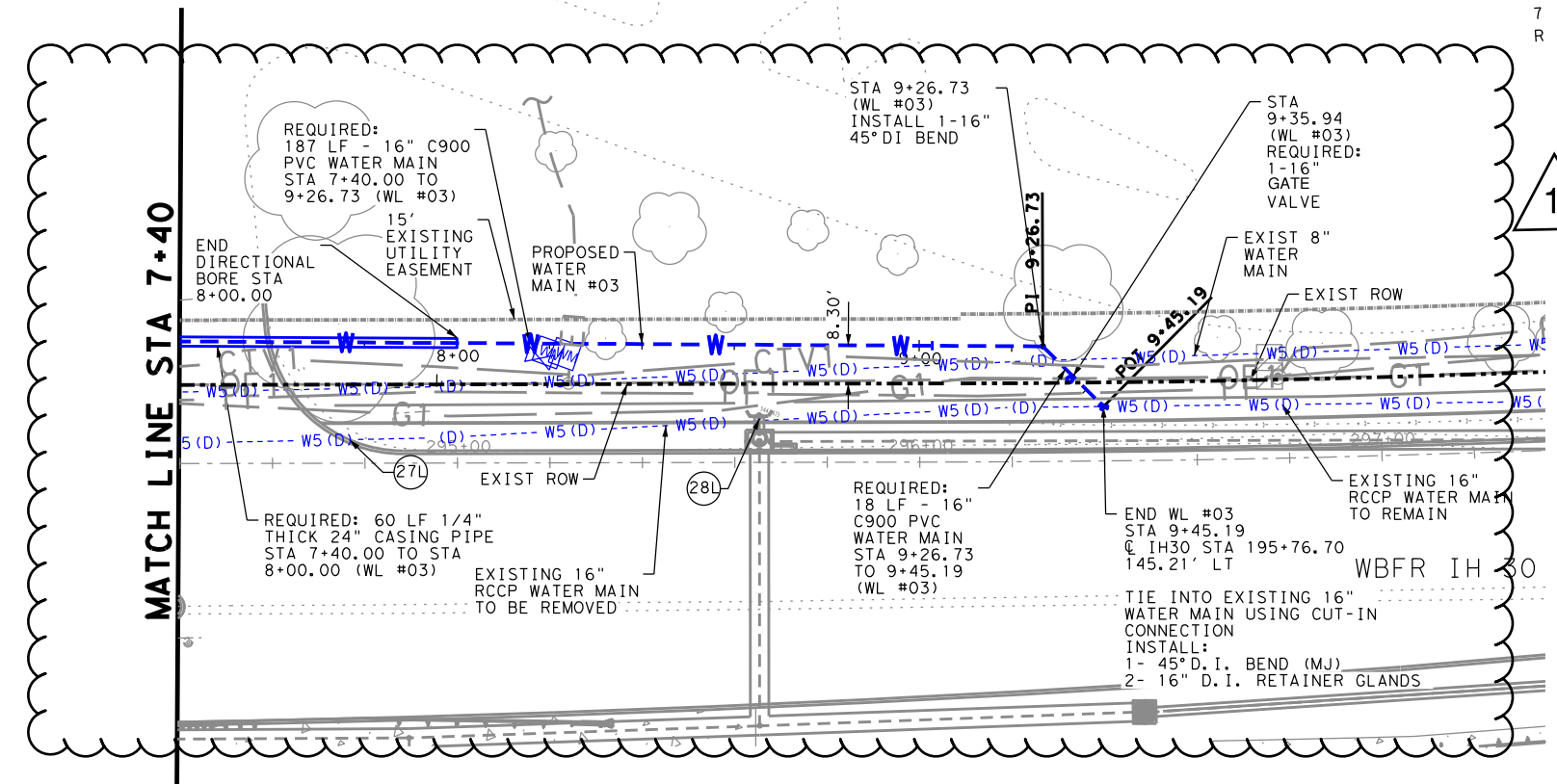
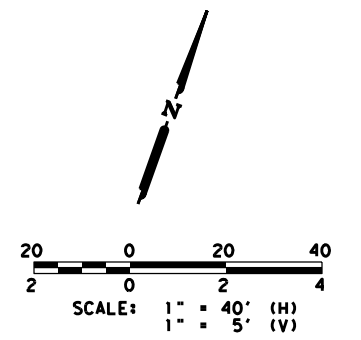
F-12679

**ROCKWALL IH 30
 WATER MAIN #03
 PLAN AND PROFILE**

SHEET 1 OF 3

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	21	

DATE: SDATES STIMES
 FILE: SFILES



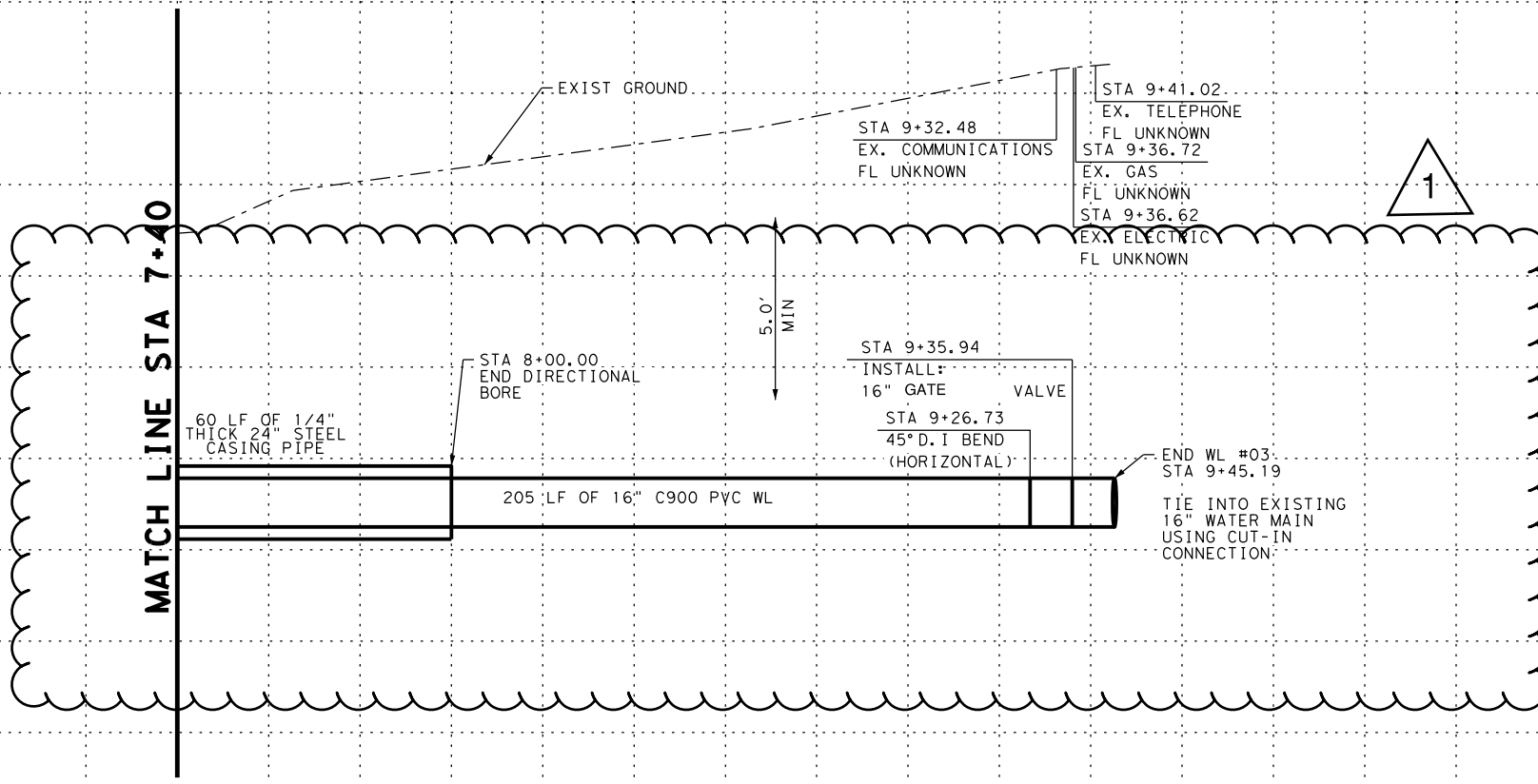
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 DATE: 7/13/2023 BY: SDH

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 2. CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITY ELEVATIONS PRIOR TO CONSTRUCTION AND MAINTAIN A 2 FT MINIMUM VERTICAL CLEARANCE.
 3. ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.
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#	CONFLICT
28L	PROP STORM LINE WITH EXISTING WATER LINE (APPROX 4 FT)

DATE: SDATES STIMES
FILE: SFILES

550
545
540
535
530



Sara D. Hutson
5/25/2022

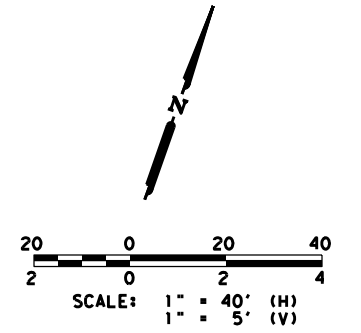
City Of Rockwall

VOLKERT
F-12679

**ROCKWALL IH 30
WATER MAIN #03
PLAN AND PROFILE**

SHEET 3 OF 3

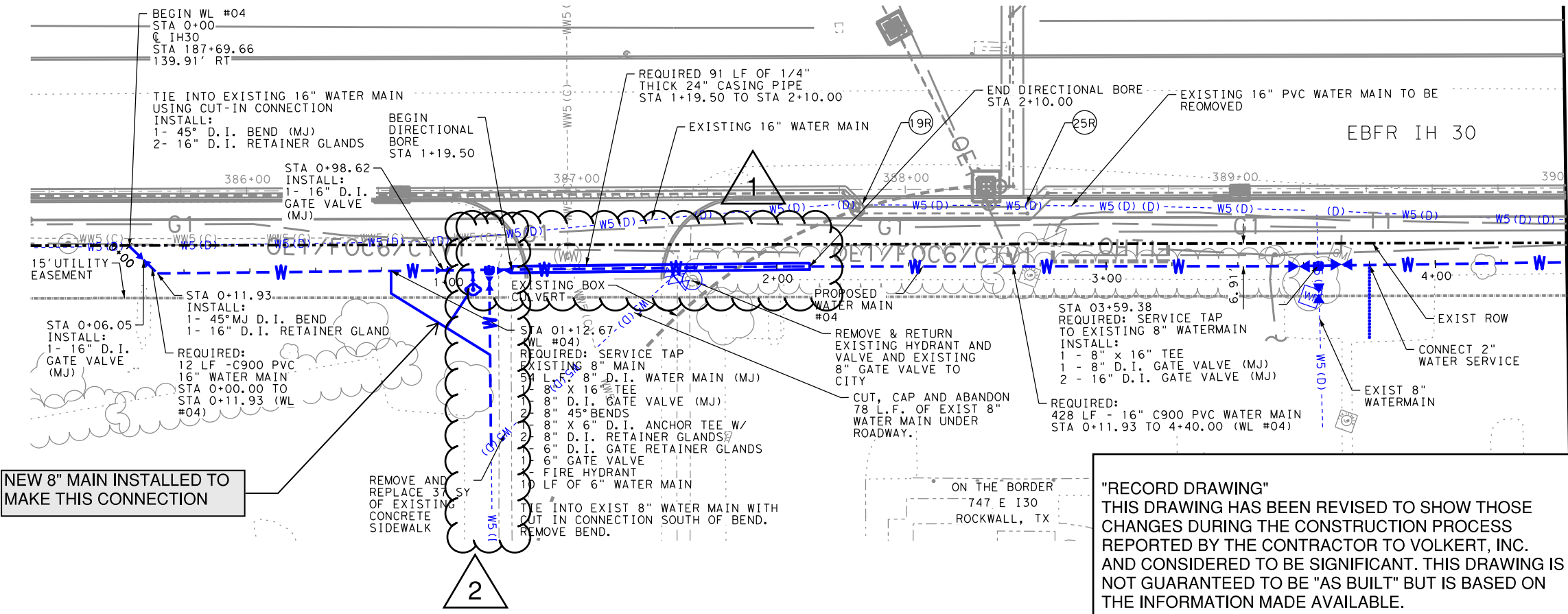
CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	23	



- NOTES:**
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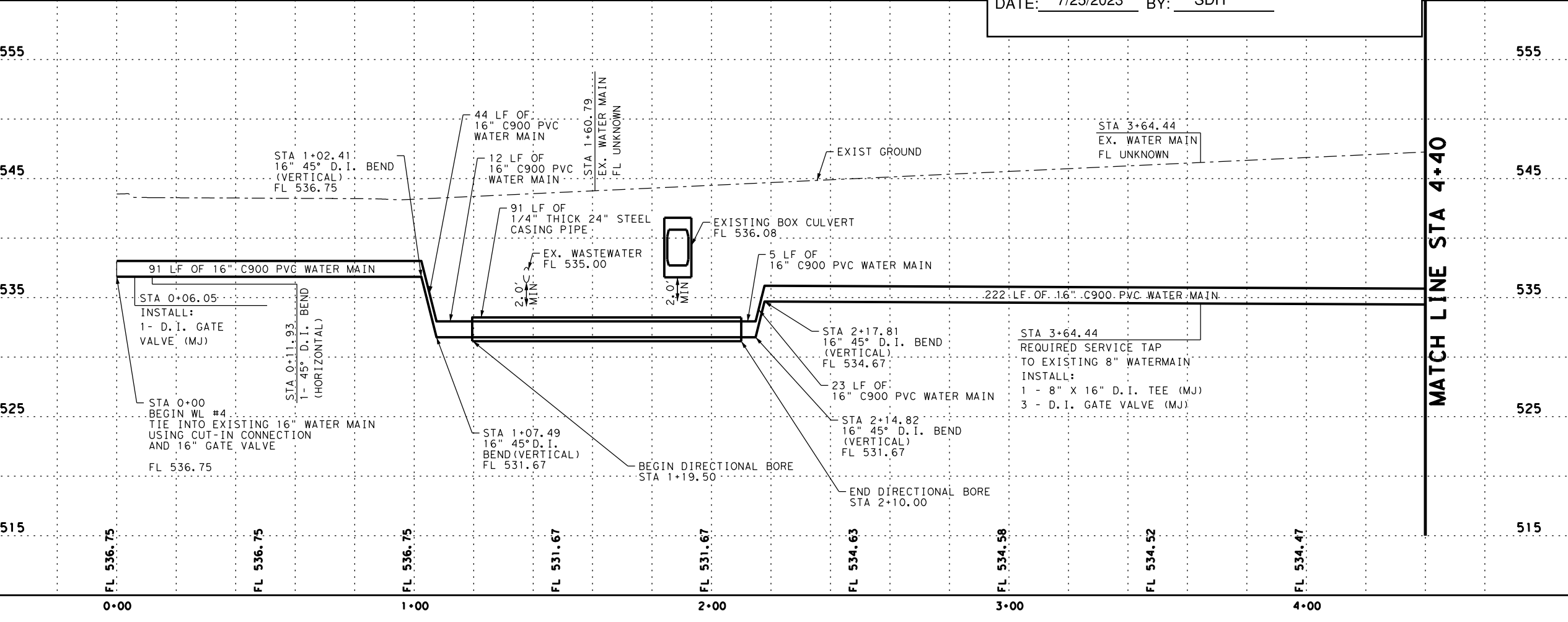
MATCH LINE STA 4+40

MATCH LINE STA 4+40



"RECORD DRAWING"
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 DATE: 7/25/2023 BY: SDH

#	CONFLICT
19R	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT
25R	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT



City Of Rockwall

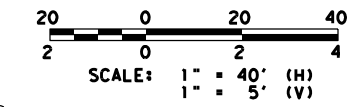
VOLKERT

F-12679

**ROCKWALL IH 30
 WATER MAIN #04
 PLAN AND PROFILE**

SHEET 1 OF 5			
CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST		COUNTY	SHEET NO.
DALLAS		ROCKWALL	26

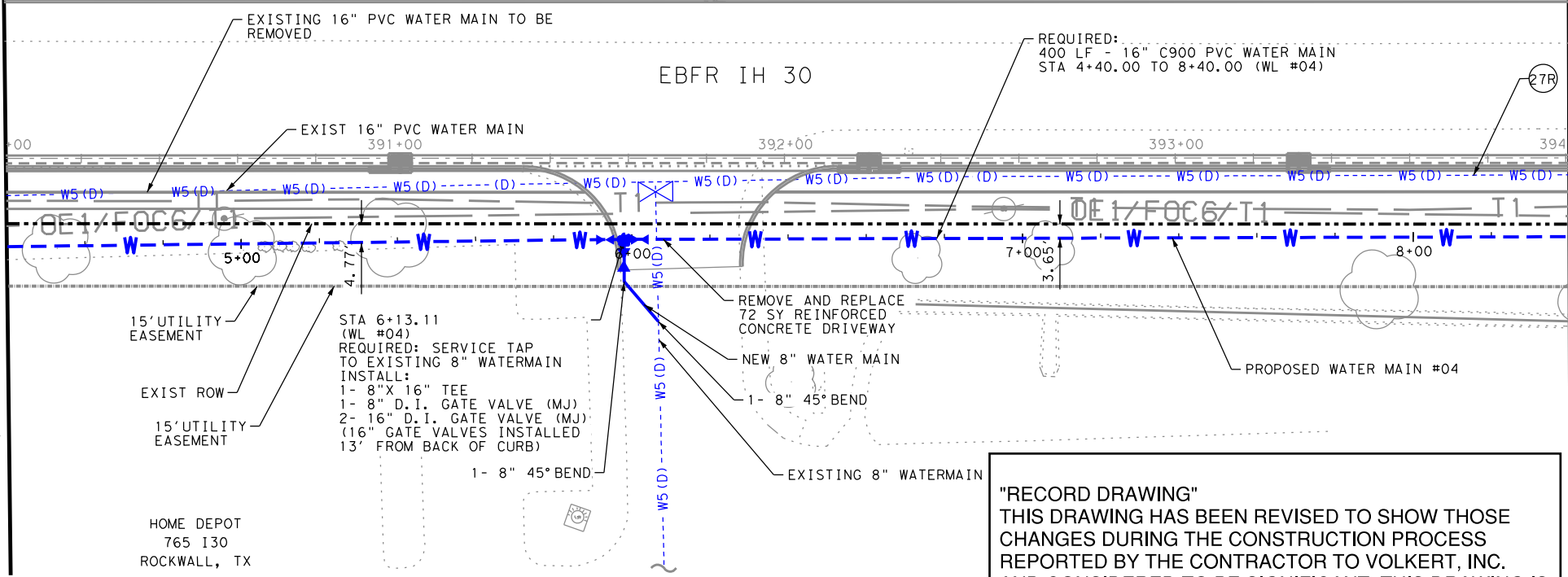
DATE: 8/15/23 STIMES
 FILE: 81515



- NOTES:**
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MATCH LINE STA 4+40

MATCH LINE STA 8+40



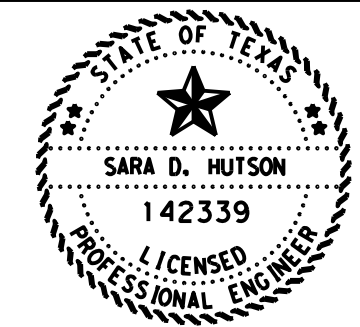
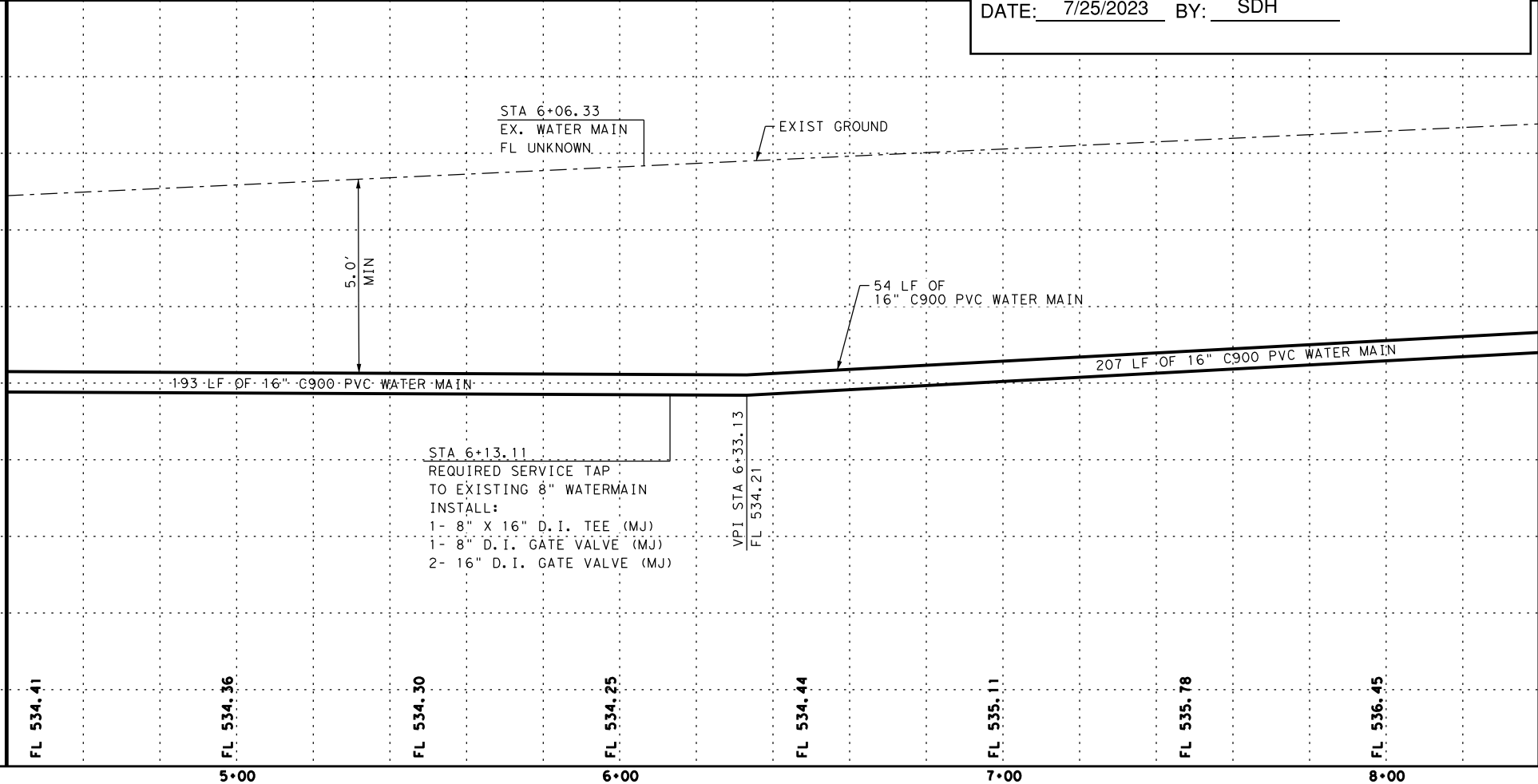
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DATE: 7/25/2023 BY: SDH

#	CONFLICT
27R	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT

MATCH LINE STA 4+40

MATCH LINE STA 8+40



**ROCKWALL IH 30
 WATER MAIN #04
 PLAN AND PROFILE**

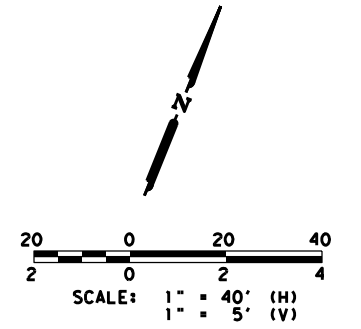
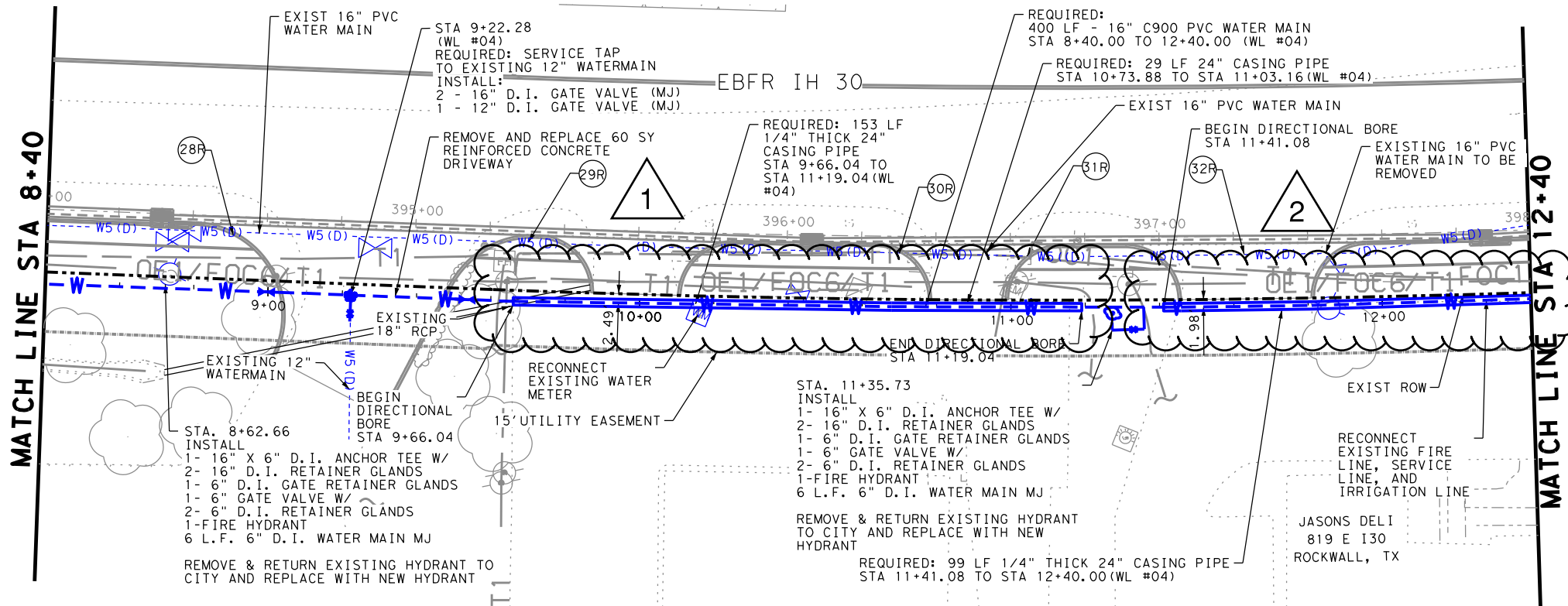
SHEET 2 OF 5

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	27	

DATE: SDATES STIMES
 FILE: SFILES

MATCH LINE STA 8+40

MATCH LINE STA 12+40

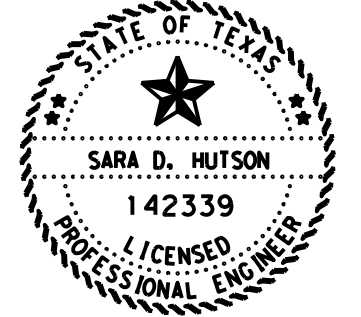
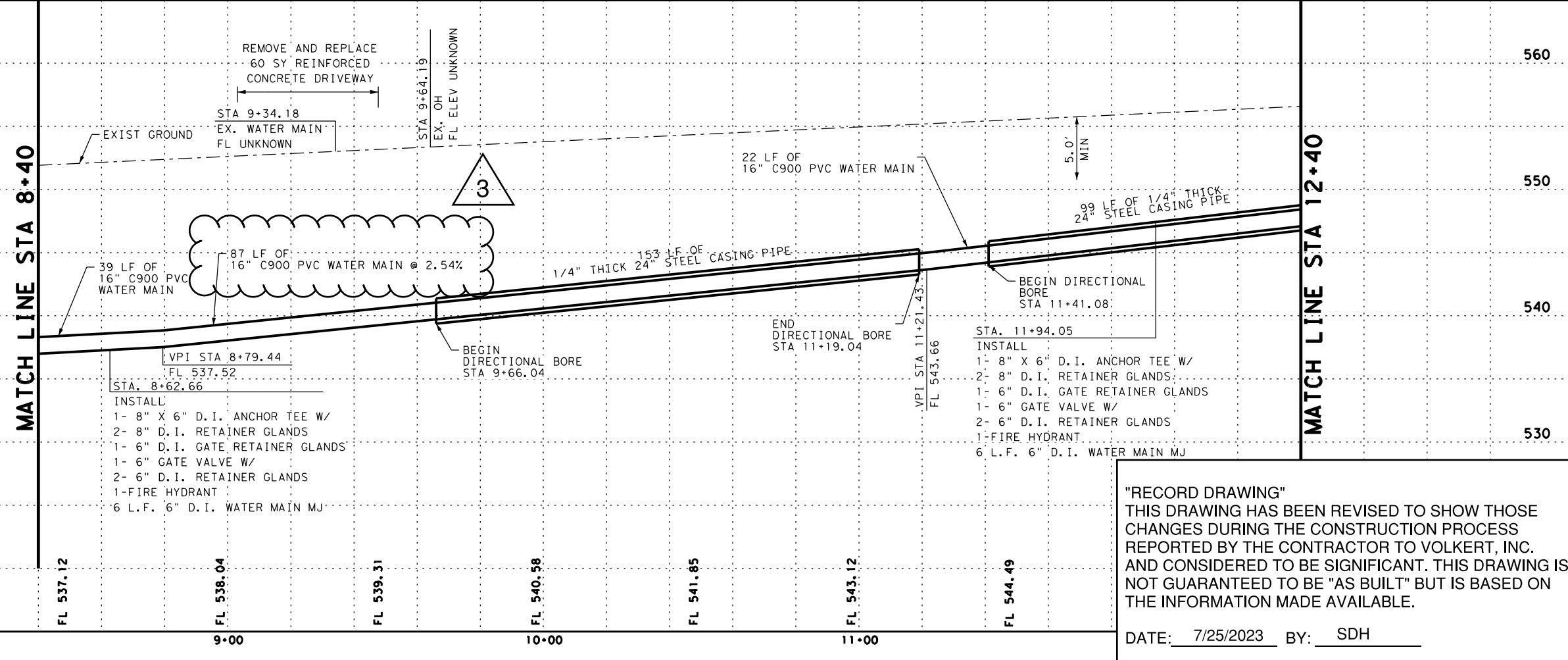


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#	CONFLICT
28R	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT
29R	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT
30R	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT
31R	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT
32R	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT

MATCH LINE STA 8+40

MATCH LINE STA 12+40



**ROCKWALL IH 30
WATER MAIN #04
PLAN AND PROFILE**

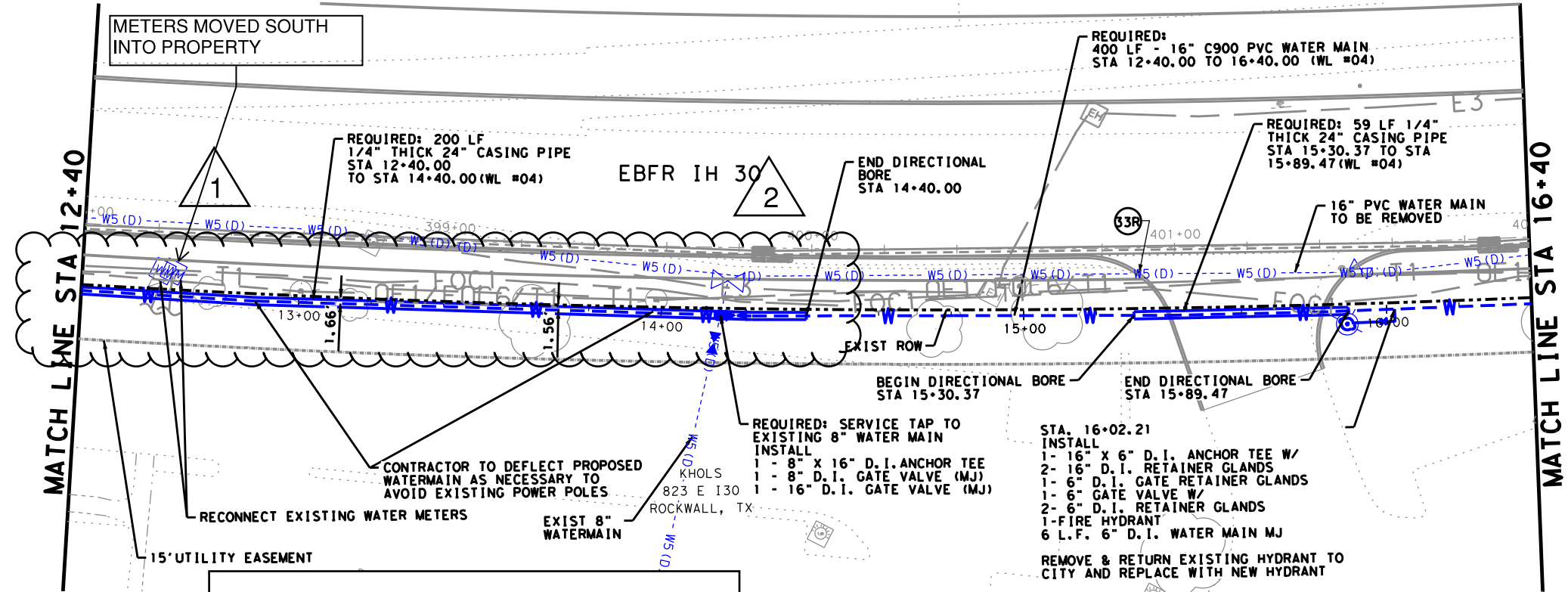
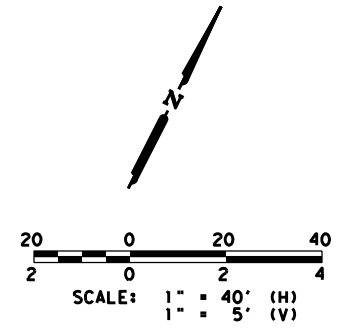
SHEET 3 OF 5

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	28	

"RECORD DRAWING"
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DATE: 7/25/2023 BY: SDH

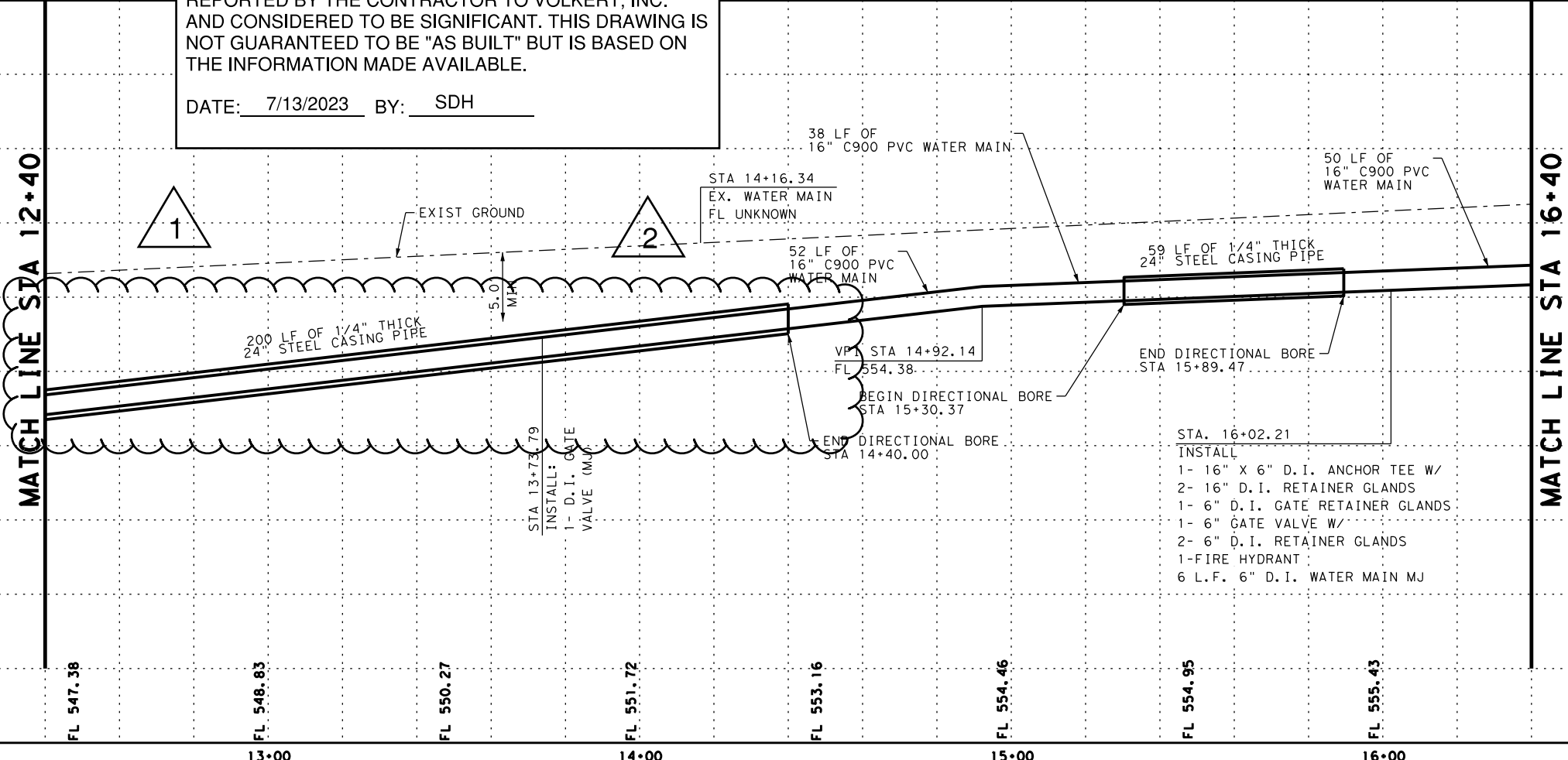
DATE: SDATES
FILE: SFILES



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#	CONFLICT
33R	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT



Sara Hutson

6-23-2023

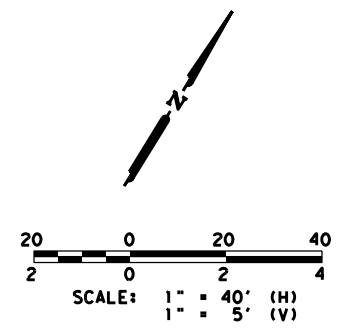


**ROCKWALL IH 30
 WATER MAIN #04
 PLAN AND PROFILE**

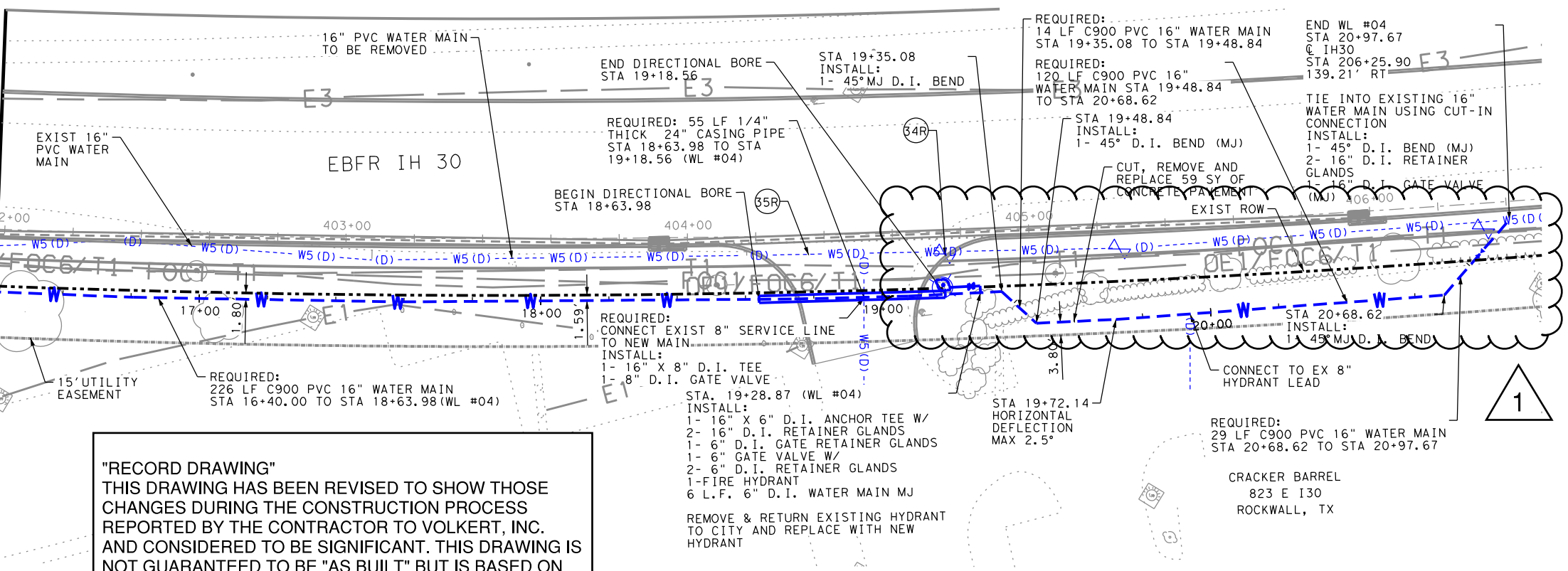
SHEET 4 OF 5

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	29	

DATE: SDATES STIMES
 FILE: SFILES



MATCH LINE STA 16+40



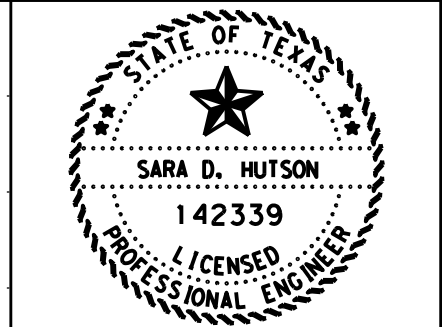
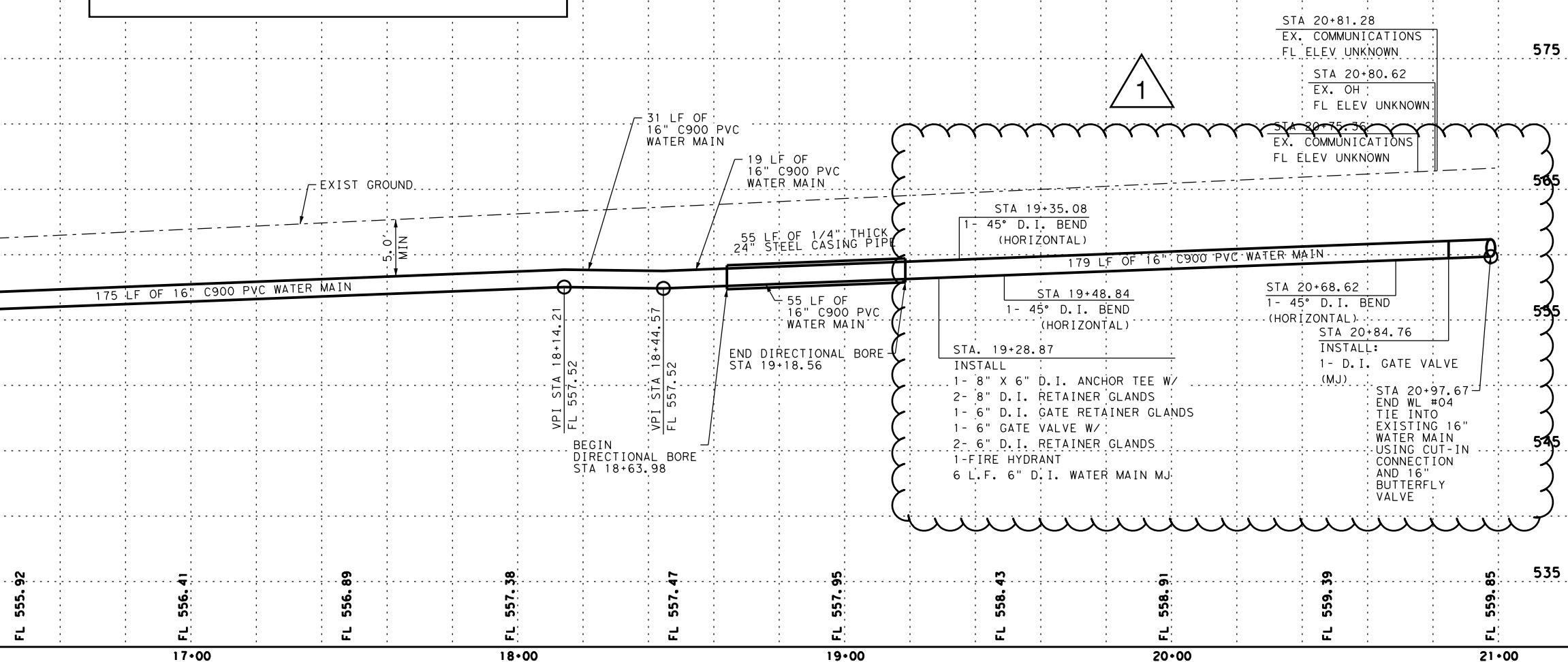
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DATE: 7/25/2023 BY: SDH

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 6. CONTRACTOR TO ADJUST PROPOSED WATER MAIN ALIGNMENT AS NECESSARY FOR MINIMAL IMPACT TO TREES, BUSHES, LANDSCAPING, ETC.

#	CONFLICT
34R	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT
35R	EXISTING WATER MAIN UNDER PROPOSED PAVEMENT

MATCH LINE STA 16+40



VOLKERT
 F-12679

**ROCKWALL IH 30
 WATER MAIN #04
 PLAN AND PROFILE**

SHEET 5 OF 5

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	30	

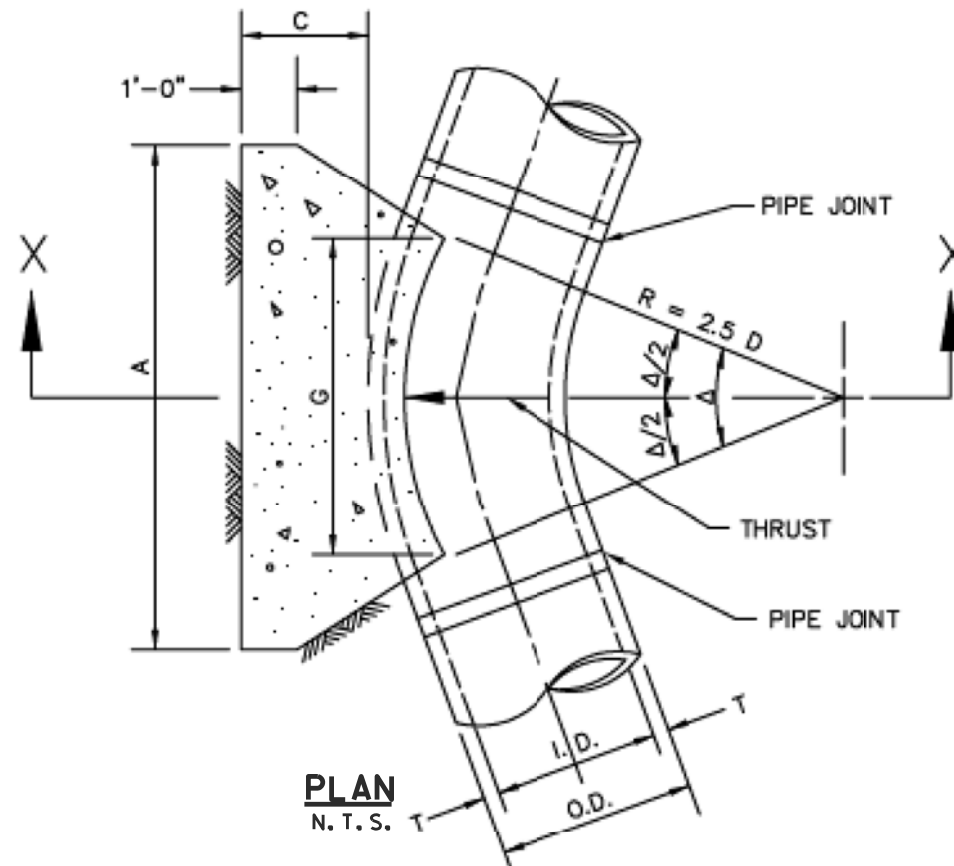
DATE: SDATES STIMES
 FILE: SFILES

I.D. (IN.)	T (IN.)	$\Delta = 11.25'$	$\Delta \geq 22.50'$	E (FT.)
		C (FT.)	C (FT.)	
4,6,8	0.4	1.5	1.5	0.9
10,12	0.5	1.5	1.5	1.2
16,18	0.6	1.5	1.5	1.6

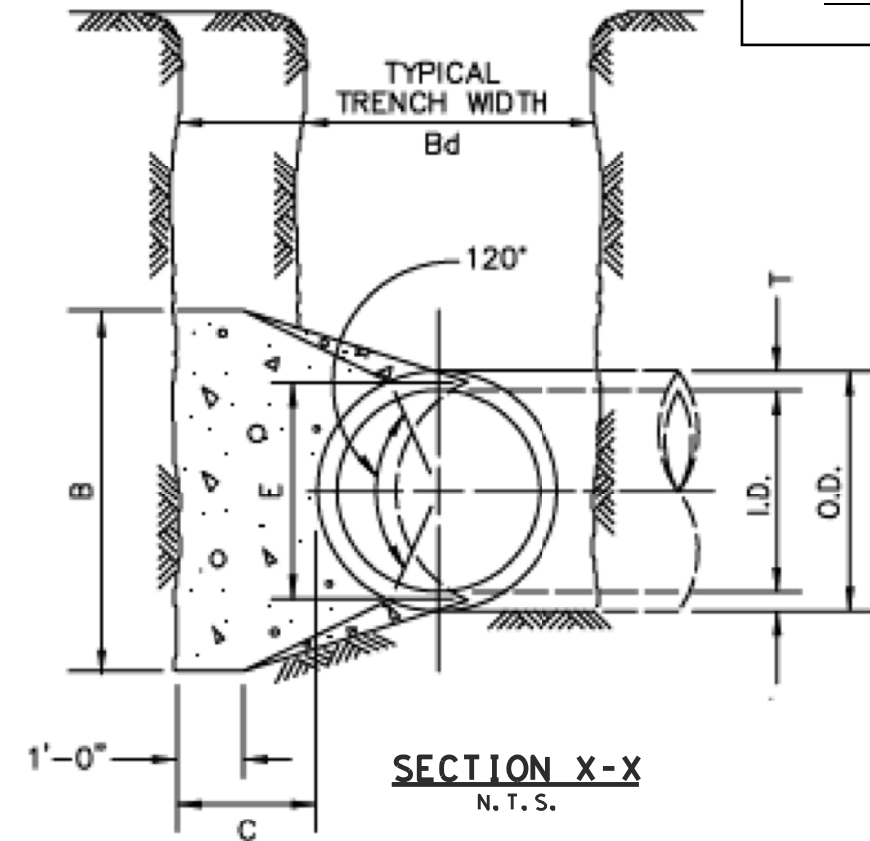
I.D. (IN.)	$\Delta = 11.25'$									I.D. (IN.)	$\Delta = 22.50'$								
	G (FT.)	THRUST (TONS)	EARTH			ROCK			G (FT.)		THRUST (TONS)	EARTH			ROCK				
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)				A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)		
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1		
10,12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1		
16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	16,18	1.6	9.9	3.0	3.5	0.6	2.0	2.5	0.3		

**HORIZONTAL THRUST BLOCK
AT PIPE BEND
TABLES OF DIMENSIONS AND QUANTITIES
4010B**

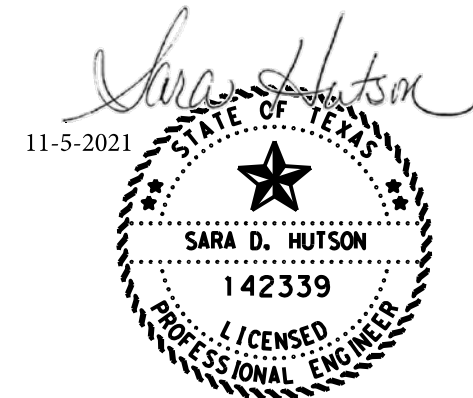
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DATE: 7/13/2023 BY: SDH



**HORIZONTAL THRUST BLOCK
AT PIPE BEND
4010A**



**HORIZONTAL THRUST BLOCK
AT PIPE BEND
4010A**



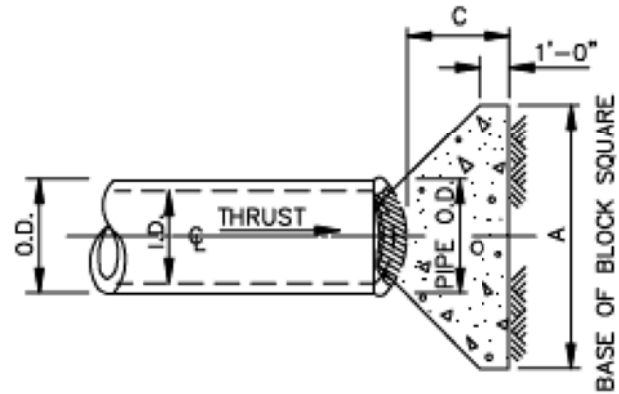
F-12679

**ROCKWALL IH 30
UTILITY
STANDARD DETAILS**

SHEET 2 OF 6

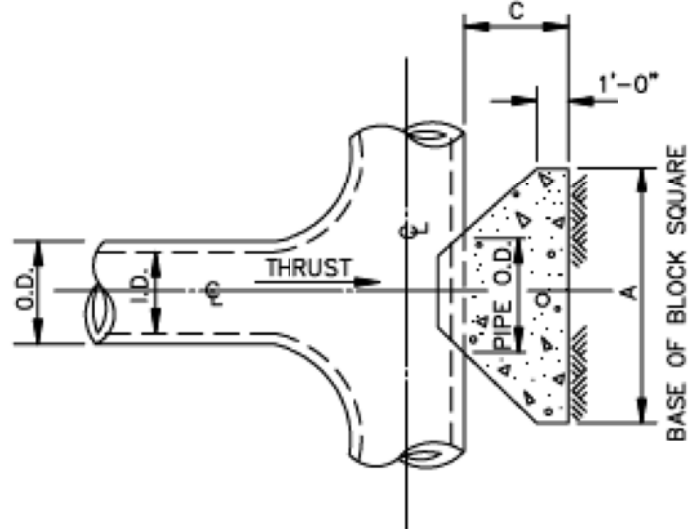
CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	36	

DATE:
FILE:



PLAN OF PLUG THRUST BLOCK

N.T.S.



PLAN OF TEE THRUST BLOCK

N.T.S.

I.D. (IN.)	THRUST (TONS)	C (FT.)	EARTH			ROCK	
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	VOL. (C.Y.)
4,6,8	5.1	1.5	2.5	0.3	2.0	0.2	
10,12	11.3	1.5	3.5	0.6	2.5	0.3	
16,18	25.5	2.0	5.5	1.6	4.0	0.9	

HORIZONTAL THRUST BLOCK

AT TEES AND PLUGS
4020

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES

I.D. (IN.)	$\Delta = 30^\circ$									I.D. (IN.)	$\Delta = 45^\circ$								
	G (FT.)	THRUST (TONS)	EARTH			ROCK			G (FT.)		THRUST (TONS)	EARTH			ROCK				
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)				A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)		
4,6,8	1.0	2.5	2.0	1.5	0.2	1.0	1.5	0.1	4,6,8	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1		
10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2	10,12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3		
16,18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.4	16,18	3.2	19.5	4.5	4.5	1.2	3.0	3.5	0.6		

I.D. (IN.)	$\Delta = 67.50^\circ$									I.D. (IN.)	$\Delta = 90^\circ$								
	G (FT.)	THRUST (TONS)	EARTH			ROCK			G (FT.)		THRUST (TONS)	EARTH			ROCK				
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)				A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)		
4,6,8	2.1	5.8	3.0	2.0	0.3	2.0	1.5	0.2	4,6,8	2.7	7.1	5.0	1.5	0.4	2.0	2.0	0.2		
10,12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10,12	4.0	16.0	6.5	2.5	1.0	3.5	2.5	0.5		
16,18	4.7	28.3	7.5	4.0	1.9	5.5	3.0	0.9	16,18	6.0	36.0	9.0	4.0	2.4	4.5	4.0	1.0		

HORIZONTAL THRUST BLOCK

AT PIPE BEND
TABLES OF DIMENSIONS AND QUANTITIES
4010C



11-5-2021



F-12679

ROCKWALL IH 30
UTILITY
STANDARD DETAILS

SHEET 3 OF 6

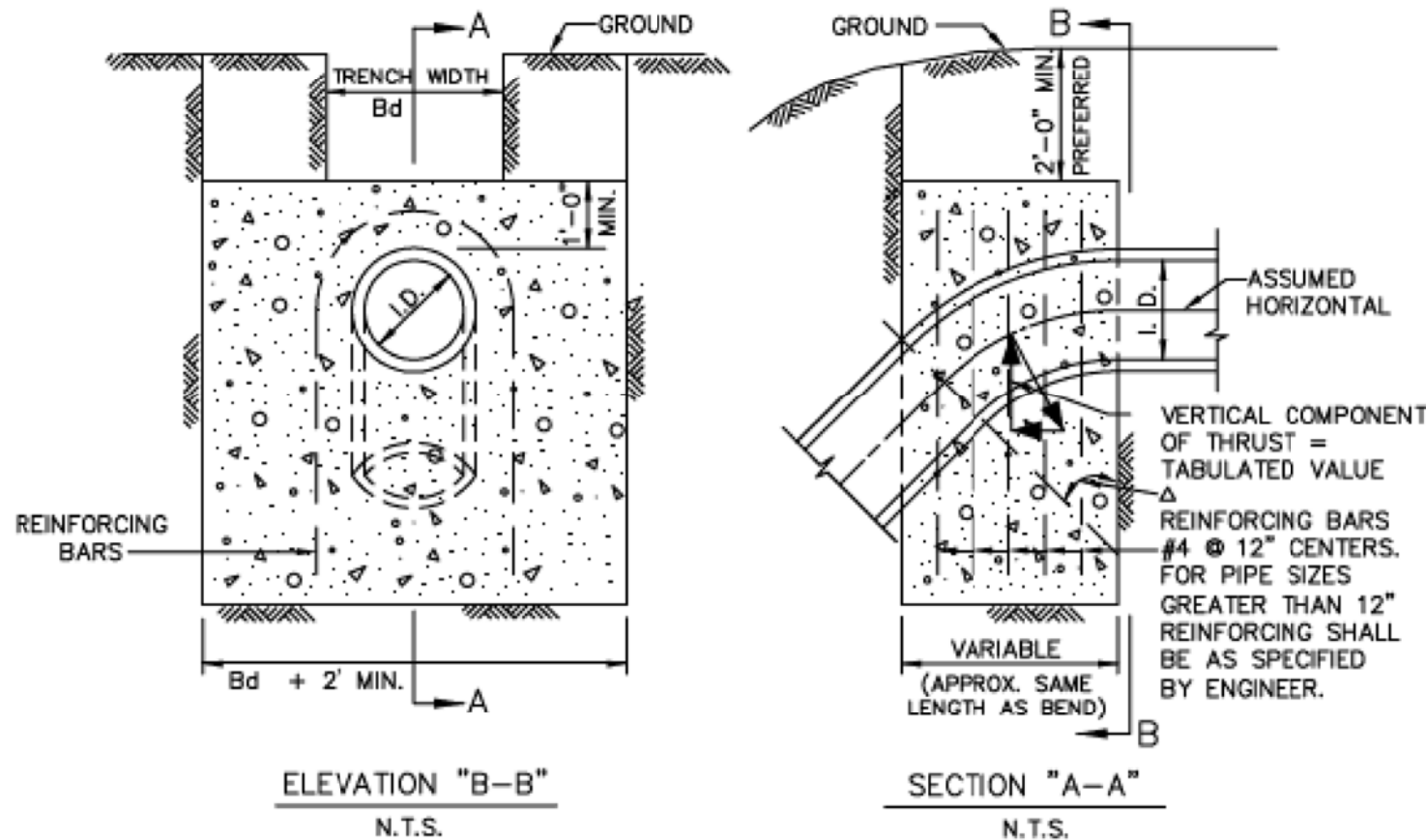
CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	37	

"RECORD DRAWING"
THIS DRAWING HAS BEEN REVISED TO SHOW THOSE CHANGES DURING THE CONSTRUCTION PROCESS REPORTED BY THE CONTRACTOR TO VOLKERT, INC. AND CONSIDERED TO BE SIGNIFICANT. THIS DRAWING IS NOT GUARANTEED TO BE "AS BUILT" BUT IS BASED ON THE INFORMATION MADE AVAILABLE.

DATE: 7/13/2023 BY: SDH

GENERAL NOTES FOR ALL THRUST BLOCKS:

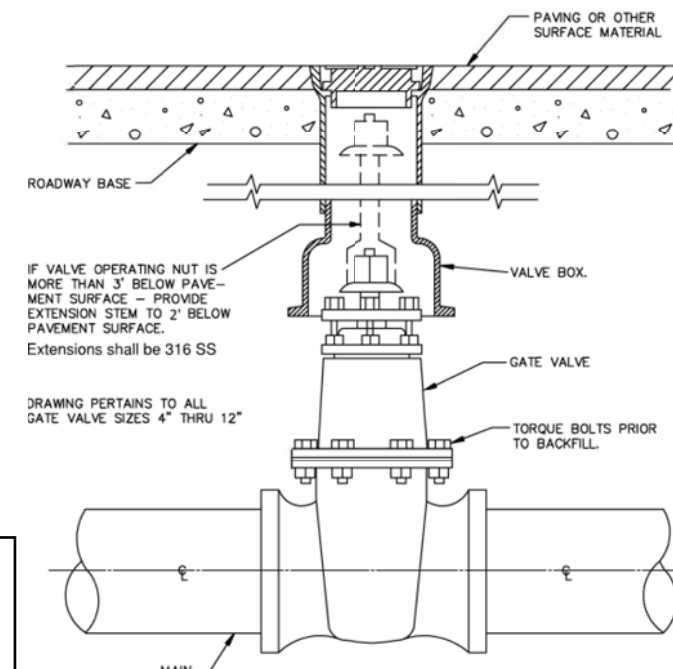
1. CONCRETE FOR BLOCKING SHALL BE CLASS "B".
2. ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE OF 200 PSI FOR DUCTILE IRON, P.V.C., AND 150 PSI FOR CONCRETE PIPE.
3. VOLUMES OF THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. THE CORRESPONDING WEIGHT OF THE CONCRETE (CLASS "B") IS EQUAL TO OR GREATER THAN THE VERTICAL COMPONENT OF THE THRUST ON THE VERTICAL BEND.
4. WALL THICKNESS (T) ASSUMED HERE FOR ESTIMATING PURPOSES ONLY.
5. POUR CONCRETE FOR BLOCK AGAINST UNDISTURBED EARTH.
6. DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER. THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE.
7. THE SOIL BEARING PRESSURES ARE BASED ON 1000 LBS./S.F. IN SOIL AND 2000 LBS./S.F. IN ROCK.
8. USE POLYETHYLENE WRAP OR EQUAL BETWEEN CONCRETE AND BEND, TEE, OR PLUG TO PREVENT THE CONCRETE FROM STICKING TO IT.
9. CONCRETE SHALL NOT EXTEND BEYOND JOINTS.



THRUST BLOCK
GENERAL NOTES
4040

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

NOTE:
IN UNPAVED AREAS, INSTALL 2' x 2' x 6" CONCRETE VALVE PAD FLUSH WITH THE TOP OF VALVE BOX. REINFORCE WITH #3 BARS ON 6" CENTERS BOTH WAYS.



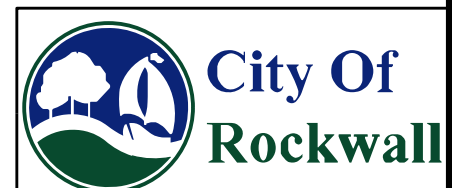
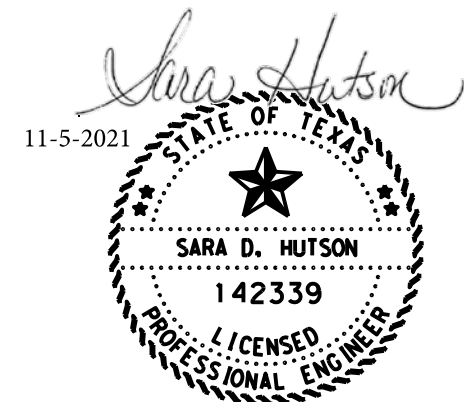
GATE VALVE 4" TO 12"
BOX & EXTENSION STEM
R-4050

Δ →	11.25°		22.50°		30°		45°		67.50°		90°		← Δ
I.D. (IN.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	I.D. (IN.)
4,6,8	1.0	0.5	2.0	1.0	2.5	1.3	3.6	1.8	4.6	2.3	5.0	2.5	4,6,8
10,12	2.2	1.1	4.3	2.2	5.7	2.8	8.0	4.0	10.5	5.2	11.3	5.7	10,12
16,18	5.0	2.5	9.7	4.9	12.7	6.4	18.0	9.0	23.5	11.8	25.5	12.7	16,18

VERTICAL THRUST BLOCK
AT PIPE BEND
4030

"RECORD DRAWING"
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DATE: 7/13/2023 BY: SDH

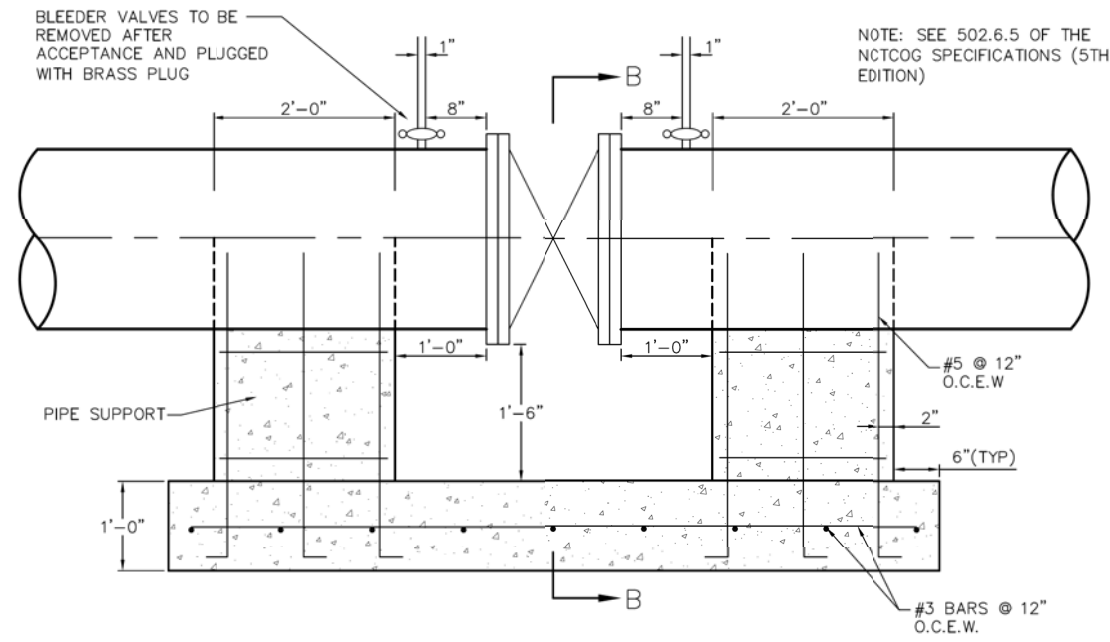


F-12679

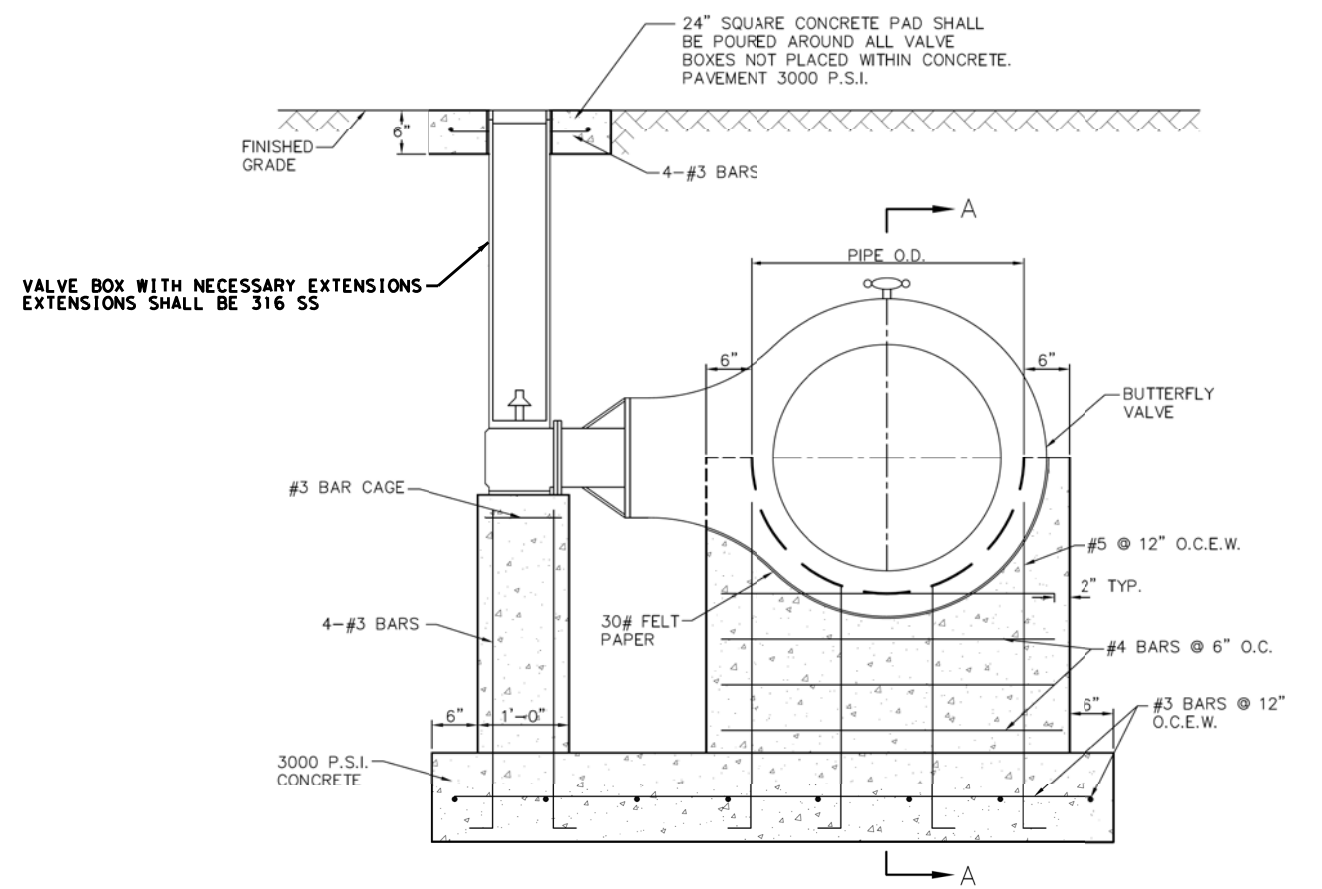
ROCKWALL IH 30
UTILITY
STANDARD DETAILS

SHEET 4 OF 6

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	38	



SECTION A-A

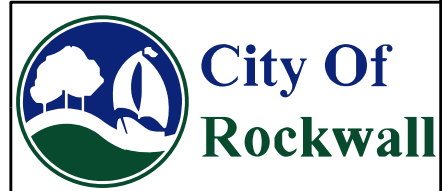


SECTION B-B

16" THRU 21"
HORIZONTAL BUTTERFLY VALVES

"RECORD DRAWING"
THIS DRAWING HAS BEEN REVISED TO SHOW THOSE CHANGES DURING THE CONSTRUCTION PROCESS REPORTED BY THE CONTRACTOR TO VOLKERT, INC. AND CONSIDERED TO BE SIGNIFICANT. THIS DRAWING IS NOT GUARANTEED TO BE "AS BUILT" BUT IS BASED ON THE INFORMATION MADE AVAILABLE.

DATE: 7/13/2023 BY: SDH

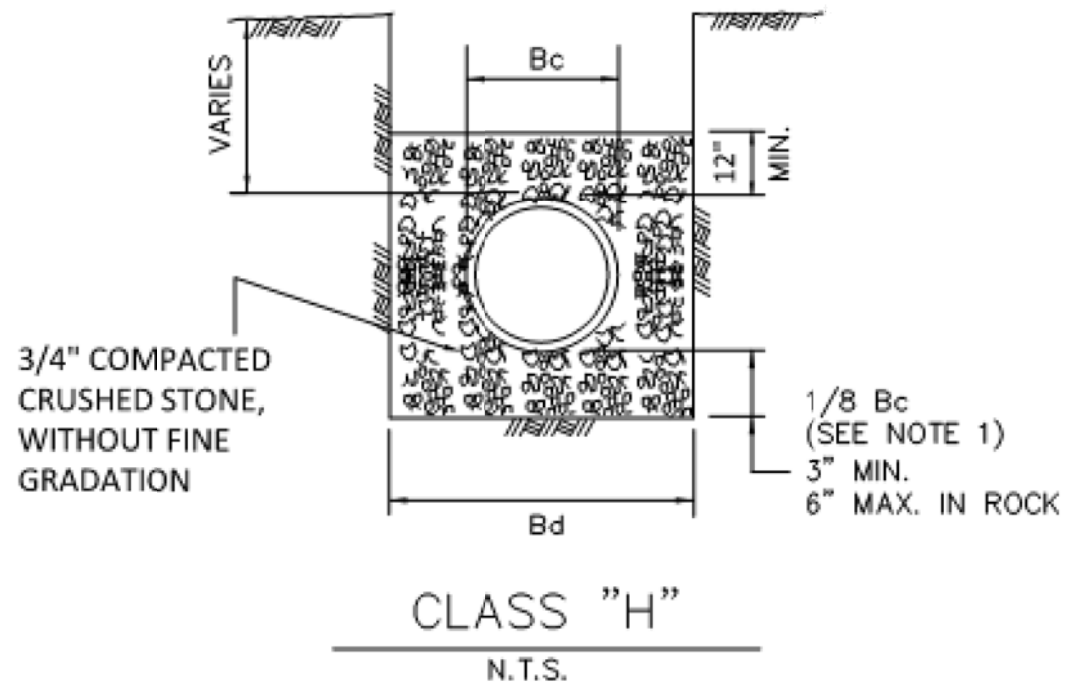


ROCKWALL IH 30
UTILITY
STANDARD DETAILS

SHEET 5 OF 6

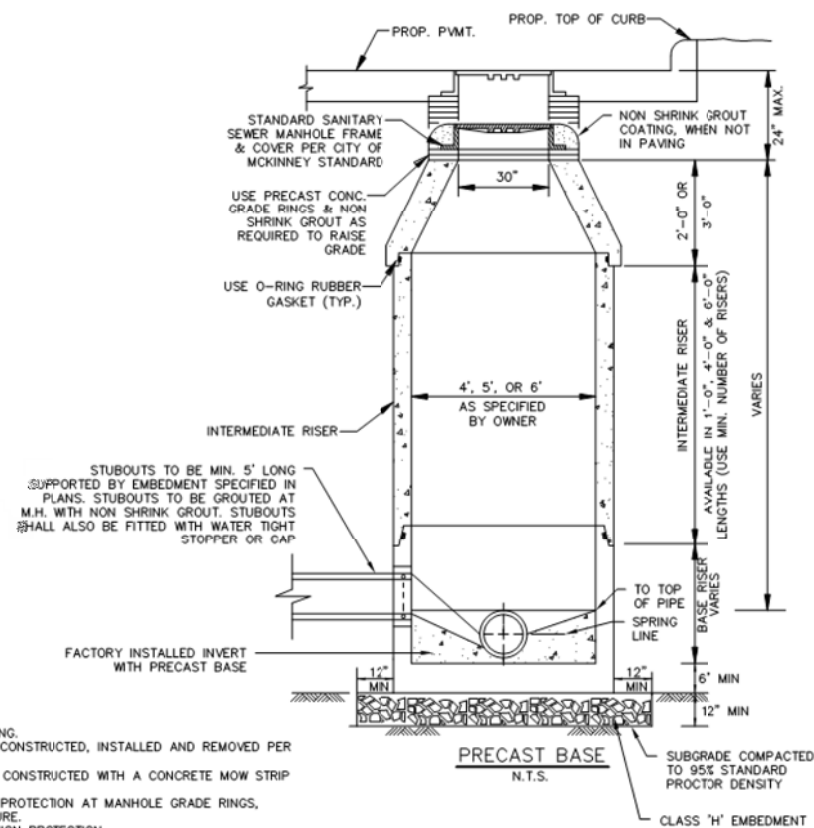
CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	39	

DATE:
FILE:



(TO BE USED FOR PVC WASTEWATER PIPE)

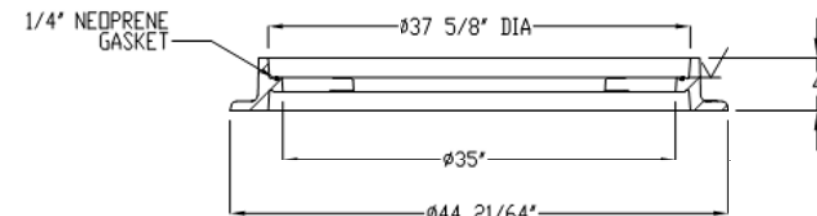
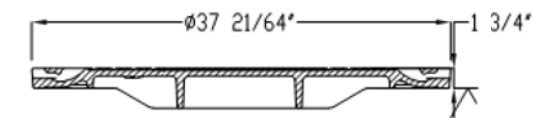
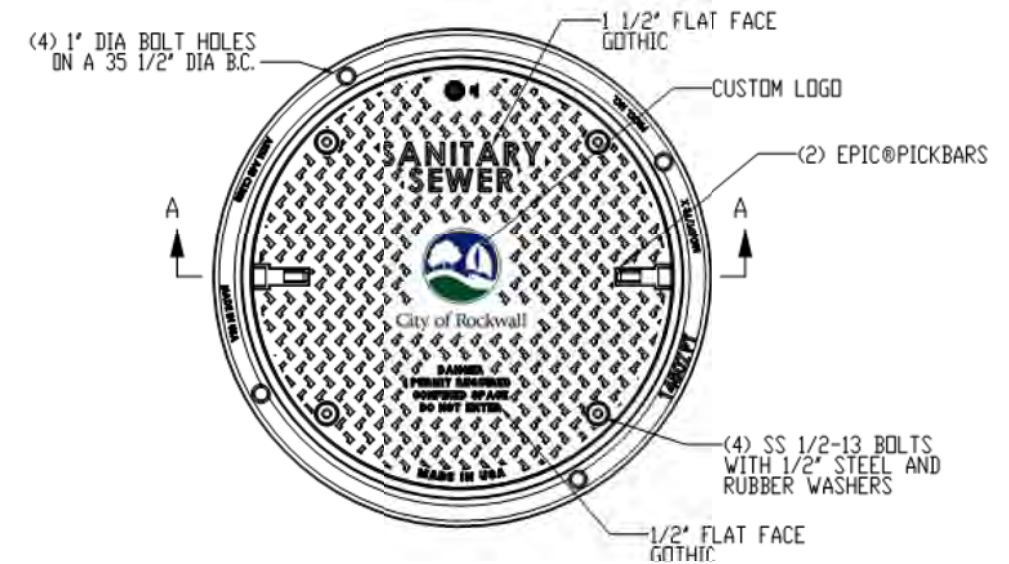
EMBEDMENT
R-3060



NOTES:

- FIRST MAIN LINE JOINT TO BE A MIN. OF 5' LONG.
- IF FALSE M.H. ARE REQUIRED, THEY SHALL BE CONSTRUCTED, INSTALLED AND REMOVED PER STD. DWG. NO. 5100.
- M.H.'S LOCATED OUTSIDE OF PAVING SHALL BE CONSTRUCTED WITH A CONCRETE MOW STRIP PER STD. DWG. NO. R-7005.
- REFER TO STD. DWG. NO. R-5031 FOR INFLOW PROTECTION AT MANHOLE GRADE RINGS, MANHOLE JOINTS AND ON OUTSIDE OF STRUCTURE.
- REFER TO STD. DWG. NO. R-5032 FOR CORROSION PROTECTION.
- CONCRETE SHALL BE 4,200 PSI (7.0 SACK/CY) 28 DAY STRENGTH.
- REINFORCING SHALL MEET OR EXCEED ASTM C478 REQUIREMENTS.
- INSTALL GREEN EMS DISK AT ALL MANHOLES.
- LIP TO BE PRECAST.

WASTEWATER MANHOLE
PRECAST
R-5020



SECTION A-A

WASTEWATER MANHOLE
BOLT AND GASKET RIM AND COVER
R-5102



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DATE: 7/13/2023 BY: SDH



VOLKERT

F-12679

ROCKWALL IH 30
UTILITY
STANDARD DETAILS

SHEET 6 OF 6

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST	COUNTY	SHEET NO.	
DALLAS	ROCKWALL	40	

DATE:
FILE:

DETOURS, BARRICADES, WARNING SIGNS, SEQUENCE OF WORK, ETC.

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF ITEM 7, "LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC", OF THE TxDOT STANDARD SPECIFICATIONS.

GENERAL

- (1) TRAFFIC MUST BE HANDLED THROUGHOUT THE PROJECT DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A SAFE AND COMFORTABLE PASSAGE FOR VEHICULAR AND PEDESTRIAN TRAFFIC WITH MINIMAL INCONVENIENCE TO THE PUBLIC, AS SHOWN IN THE PLANS OR AS DIRECTED/APPROVED BY THE ENGINEER.
- (2) THE CONTRACTOR MAY PROPOSE/RECOMMEND MODIFICATIONS TO THE SEQUENCE OF WORK FOR CONSIDERATION BY THE ENGINEER. ANY MAJOR RECOMMENDED MODIFICATION BY THE CONTRACTOR SHALL INCLUDE ANY CHANGES TO THE VARIOUS BID ITEMS, IMPACT TO TRAFFIC, EFFECT OF OVERALL PROJECT IN TIME AND COST, ETC. IF THIS PROPOSAL IS IMPLEMENTED, THE CONTRACTOR WILL BE RESPONSIBLE FOR DEVELOPING DETAILED PLAN SHEETS TO BE SEALED BY A LICENSED PROFESSIONAL ENGINEER FOR INCLUSION WITH THE CHANGE ORDER. THE CONTRACTOR CANNOT PROCEED WITH ANY CONSTRUCTION OPERATIONS BASED ON A REVISED PHASE/SEQUENCE UNTIL WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. IF AT ANY TIME DURING CONSTRUCTION THE CONTRACTOR'S PROPOSED PLAN OF OPERATION FOR HANDLING TRAFFIC DOES NOT PROVIDE FOR SAFE AND COMFORTABLE MOVEMENT, THE CONTRACTOR WILL IMMEDIATELY CHANGE THEIR OPERATION TO CORRECT THE UNSATISFACTORY CONDITION.
- (3) DO NOT STORE ANY CONSTRUCTION MATERIAL OR EQUIPMENT AT ANY LOCATION THAT WILL CONSTITUTE A HAZARD AND WILL ENDANGER TRAFFIC.
- (4) THE CONTRACTOR WILL PROVIDE ADVANCE NOTIFICATION TO THE ENGINEER OF IMPENDING / UPCOMING LANE CLOSURES FOR ALL TEMPORARY AND / OR PERMANENT LANE, RAMP, CONNECTOR, FRONTAGE, SHOULDER, ETC. CLOSURES OR DETOURS. SEE GENERAL NOTES FOR NOTIFICATION REQUIREMENTS.
- (5) ACCESS TO ADJOINING PROPERTY MUST BE MAINTAINED AT ALL TIMES.
- (6) TEMPORARY DRAINAGE IS THE RESPONSIBILITY OF THE CONTRACTOR.
- (7) AT NO TIME SHALL TWO CONSECUTIVE INTERSECTING ROADWAYS BE CLOSED AT ONE TIME DURING CONSTRUCTION.
- (8) UNLESS OTHERWISE NOTED IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER, DAILY LANE CLOSURES SHALL BE LIMITED ACCORDING TO THE FOLLOWING RESTRICTIONS:
 NIGHTTIME : ASK CITY ENGINEER AND CONSTRUCTION ENGINEER. (WITH UNIFORMED OFF DUTY LAW ENFORCEMENT OFFICERS)
 WEEKEND CLOSURES WHEN APPROVED BY THE ENGINEER: ASK CITY ENGINEER AND CONSTRUCTION ENGINEER.
- (9) COORDINATE WITH ADJACENT PROJECTS, IF ANY.
- (10) COVER PERMANENT SIGNS IF NOT USED.
- (11) COORDINATE WITH THE CITY OF ROCKWALL OR TxDOT FOR SIGNAL TIMING DEVISIONS, IF NECESSARY.

SEQUENCE OF WORK

- (1) THIS PROJECT WILL BE CONSTRUCTED IN TWO (2) PHASES. BEFORE THE COMMENCEMENT OF EACH PHASE, INSTALL ADVANCE WARNING SIGNS, TEMPORARY SIGNS AND BARRICADES AS SHOWN ON THE PLANS AND/OR AS DIRECTED/APPROVED BY THE ENGINEER. DAILY LANE CLOSURES WILL BE USED IN ACCORDANCE WITH STATE TCP STANDARDS. DROP OFF CONDITIONS OF GREATER THAN 2" MUST HAVE A 3:1 SLOPE AT THE END OF EACH DAY, AS WELL AS THROUGHOUT THE PROJECT WHERE ACCESS TO ADJACENT PROPERTIES IS ALLOWED TO DRIVEWAYS AND SIDE STREETS.
- (2) PREPARING ROW / REMOVAL OF EXISTING ITEMS TO BE DONE ONLY IN AREAS WHERE WORK IS OCCURING, AS PERTHE PHASES NOTED BELOW.
- (3) A BRIEF DESCRIPTION OF THESE PHASES ARE AS FOLLOWS:

PHASE 1

IN ADVANCE OF ROADWAY CONSTRUCTION, EXISTING WATER MAIN WILL BE REMOVED AND/OR ABANDONED AND NEW WATER MAIN INSTALL AT VARIOUS LOCATIONS ALONG THE WESTBOUND FRONTAGE ROAD OF IH 30 IN THE CITY OF ROCKWALL. NEW WATER MAINS TO BE INSTALLED AND CONNECTED BEFORE EXISTING WATER MAIN CAN BE REMOVED OR ABANDONED.

PHASE 1A

INSTALL WATER MAIN #01 AND REMOVE/ABANDON EXISTING FACILITIES.

PHASE 1B

INSTALL WATER MAIN #02 AND REMOVE/ABANDON EXISTING FACILITIES.

PHASE 1C

INSTALL WATER MAIN #03 AND REMOVE/ABANDON EXISTING FACILITIES.

PHASE 2

IN ADVANCE OF ROADWAY CONSTRUCTION, EXISTING WATER MAIN AND WASTEWATER MAIN WILL BE REMOVED AND/OR ABANDONED AND NEW WATER MAIN AND WASTEWATER MAIN INSTALLED AT VARIOUS LOCATIONS ALONG THE EASTBOUND FRONTAGE ROAD OF IH 30 IN THE CITY OF ROCKWALL. NEW WATER MAINS AND WASTEWATER MAINS TO BE INSTALLED AND CONNECTED BEFORE EXISTING WATER MAIN OR WASTEWATER MAIN CAN BE REMOVED OR ABANDONED.

PHASE 2A

INSTALL WATER MAIN #04 AND REMOVE/ABANDON EXISTING FACILITIES.

PHASE 2B

INSTALL WASTEWATER #01 AND REMOVE/ABANDON EXISTING FACILITIES.

PHASE 2C

RELOCATE EXISTING VALVE SHOWN FOR WATER MAIN #05.

PHASE 2D

REMOVE EXISTING FIRE HYDRANT AND VALVE AS SHOWN FOR WATER MAIN #06.

SAFETY

- (1) THE CONTRACTOR WILL PROVIDE, CONSTRUCT AND MAINTAIN BARRICADES AND SIGNS IN ACCORDANCE WITH STATE STANDARDS. ANY SIGNS REQUIRED THAT ARE NOT DETAILED IN THE STANDARD SHEETS SHALL BE IN CONFORMANCE WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND THE "STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS."
- (2) BARRICADES AND WARNING SIGNS SHALL BE PLACED AS INDICATED ON THE PLANS. THIS SHALL BE CONSIDERED THE MINIMUM REQUIRED TO PROVIDE FOR THE SAFETY OF TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN OTHER SUCH BARRICADES AND SIGNS DEEMED NECESSARY BY THE ENGINEER OR AS DIRECTED BY FIELD CONDITIONS, TO PROVIDE FOR THE PASSAGE OF TRAFFIC IN SAFETY AT ALL TIMES.
- (3) THE CONTRACTOR SHALL PROVIDE AND MAINTAIN FLAGGERS AS DIRECTED/APPROVED BY THE ENGINEER, AT SUCH POINTS, AND FOR SUCH PERIODS OF TIME AS MAY BE REQUIRED, TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC AND THE CONTRACTOR'S PERSONNEL.
- (4) THE CONTRACTOR SHALL KEEP THE ROADWAY CLEAN AND FREE OF DIRT OR OTHER MATERIALS DURING HAULING OPERATIONS. IF THE CONTRACTOR DOES NOT MAINTAIN A CLEAN ROADWAY, THEY SHALL CEASE ALL CONSTRUCTION OPERATIONS, WHEN DIRECTED BY THE ENGINEER, TO CLEAN THE ROADWAY TO THE SATISFACTION OF THE ENGINEER.

HAULING EQUIPMENT

- (1) THE USE OF RUBBER-TIRED EQUIPMENT WILL BE REQUIRED FOR MOVING DIRT OR OTHER MATERIALS ALONG OR ACROSS PAVEMENTED SURFACES. WHERE THE CONTRACTOR DESIRES TO MOVE ANY EQUIPMENT NOT LICENSED FOR OPERATION ON PUBLIC HIGHWAYS, ON OR ACROSS PAVEMENT. THEY SHALL PROTECT THE PAVEMENT FROM DAMAGE AS DIRECTED / APPROVED BY THE ENGINEER.
- (2) THROUGHOUT CONSTRUCTION OPERATIONS, THE CONTRACTOR WILL BE REQUIRED TO CONDUCT THEIR HAULING OPERATIONS IN A MANNER SUCH THAT VEHICLES WILL NOT HAUL OVER PREVIOUSLY RECOMPACTED SUBGRADE OR COMPACTED BASE MATERIAL, EXCEPT IN SHORT SECTIONS FOR DUMPING MANIPULATIONS.

FINAL CLEAN UP

UPON COMPLETION OF THE WORK AND BEFORE FINAL ACCEPTANCE AND FINAL PAYMENT IS MADE, THE CONTRACTOR SHALL CLEAR AND REMOVE FROM THE SITE ALL SURPLUS AND DISCARDED MATERIALS AND DEBRIS OF EVERY KIND AND LEAVE THE ENTIRE PROJECT IN A SMOOTH, NEAT AND SIGHTLY CONDITION. ALL RIGHT OF WAY AND EASEMENTS TO BE SODDED PRIOR TO FINAL ACCEPTANCE.



ROCKWALL IH 30 TRAFFIC CONTROL NARRATIVE

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0009	12	220	IH 30
DIST		COUNTY	SHEET NO.
DALLAS		ROCKWALL	41

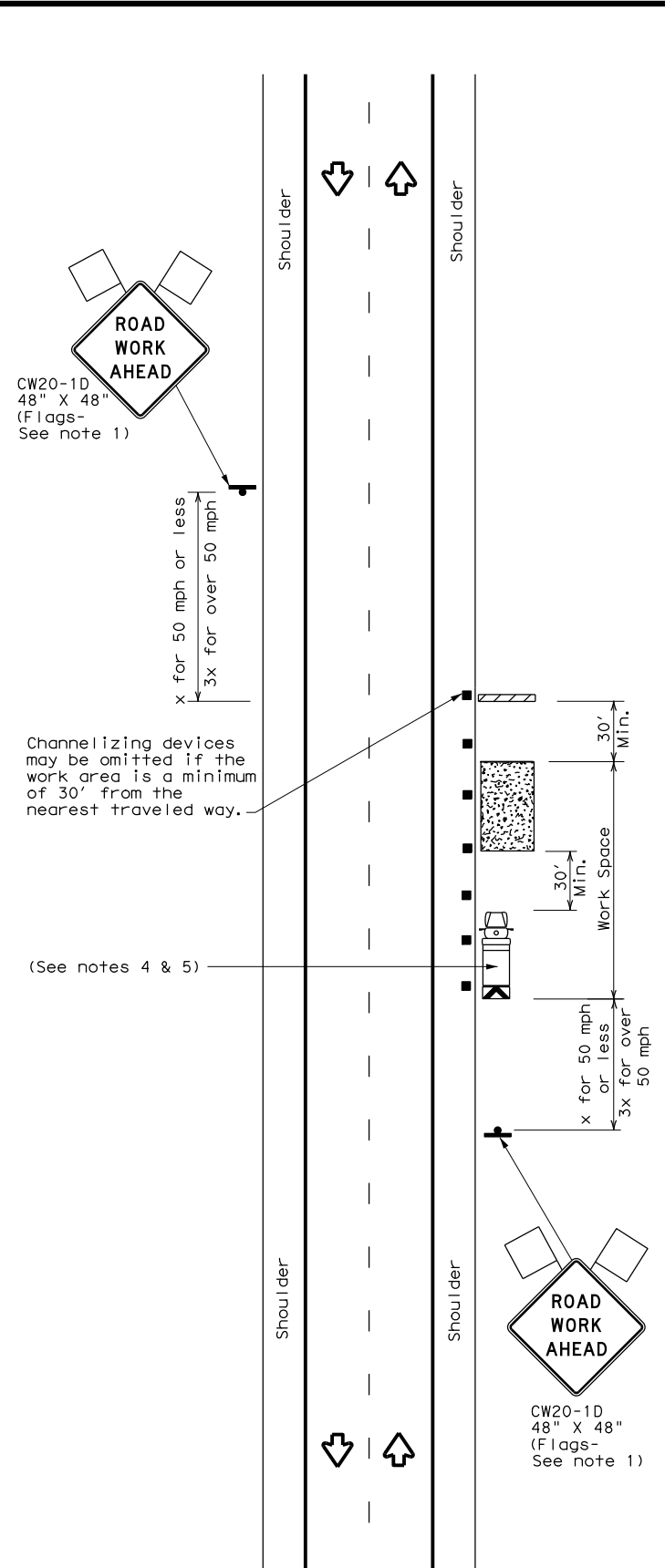
"RECORD DRAWING"
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DATE: 7/13/2023 BY: SDH

DATE: SDATES
FILE: SFILES

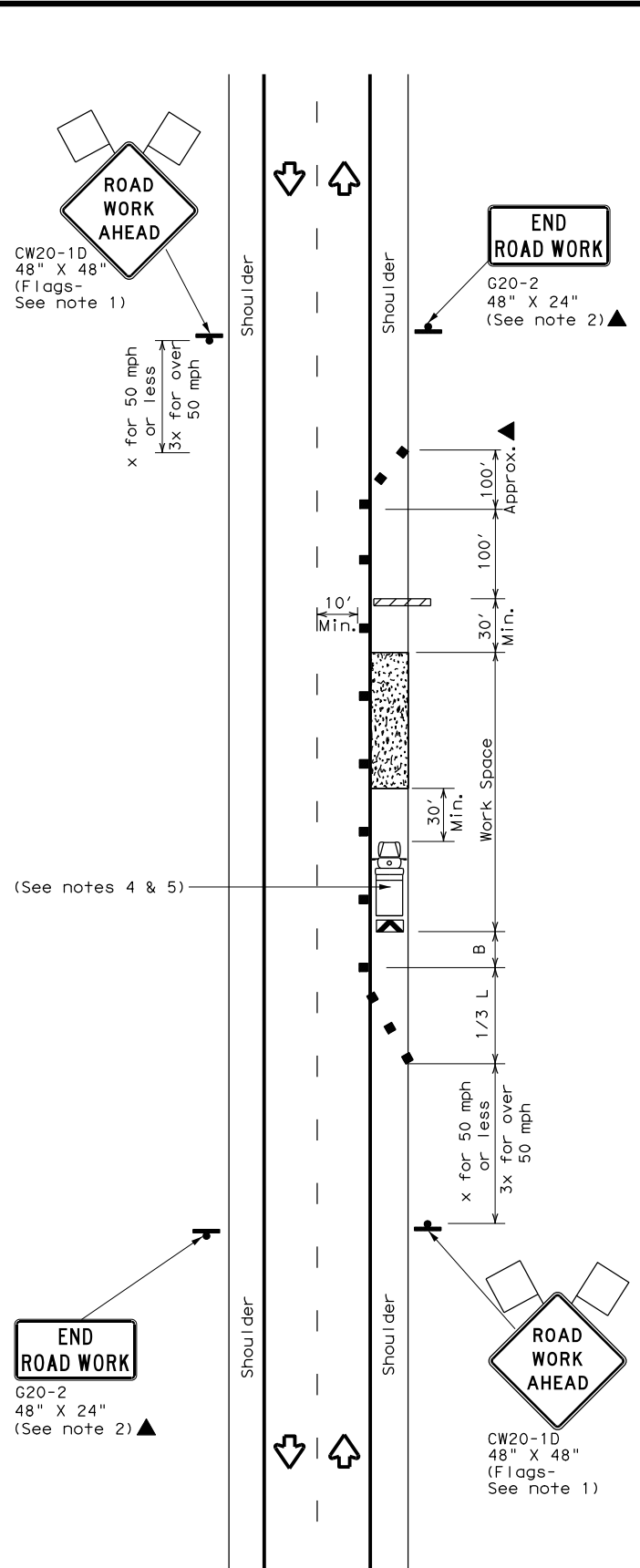
DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of units or the use of this standard in any project where the design engineer is responsible for the design.

DATE: 05-NOV-2021 15:37
 FILE: Projects\1066800 - Rockwall_IH_30 Widening- Utility Conflict Analysis.dwg



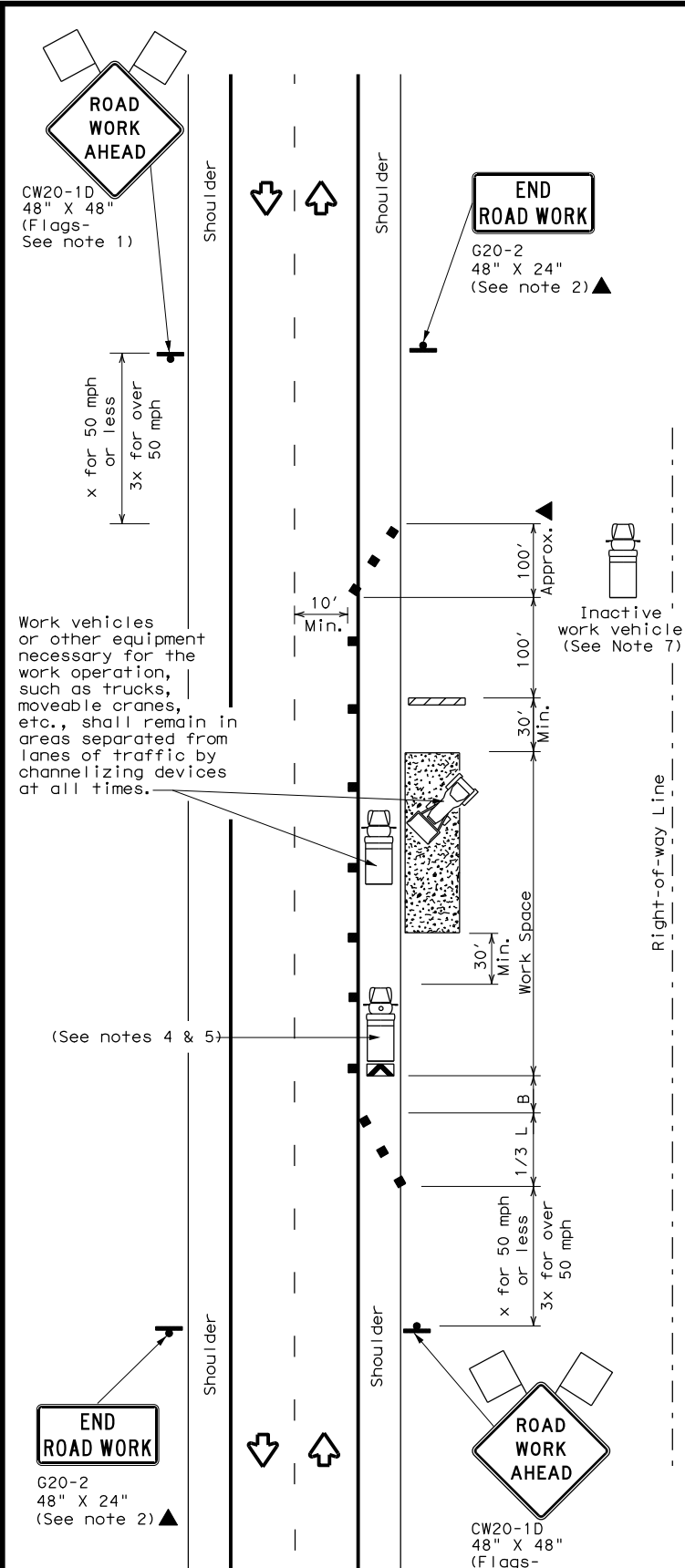
TCP (2-1a)

WORK SPACE NEAR SHOULDER
 Conventional Roads



TCP (2-1b)

WORK SPACE ON SHOULDER
 Conventional Roads



TCP (2-1c)

WORK VEHICLES ON SHOULDER
 Conventional Roads

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L = WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only
 ** Taper lengths have been rounded off.
 L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓	✓	✓

GENERAL NOTES

- Flags attached to signs where shown, are REQUIRED.
- All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated in the plans, or for routine maintenance work, when approved by the Engineer.
- Stockpiled material should be placed a minimum of 30 feet from nearest traveled way.
- Shadow Vehicle with TMA and high intensity rotating, flashing, oscillating or strobe lights. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
- Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect a wider work space.
- See TCP(5-1) for shoulder work on divided highways, expressways and freeways.
- Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
- CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.



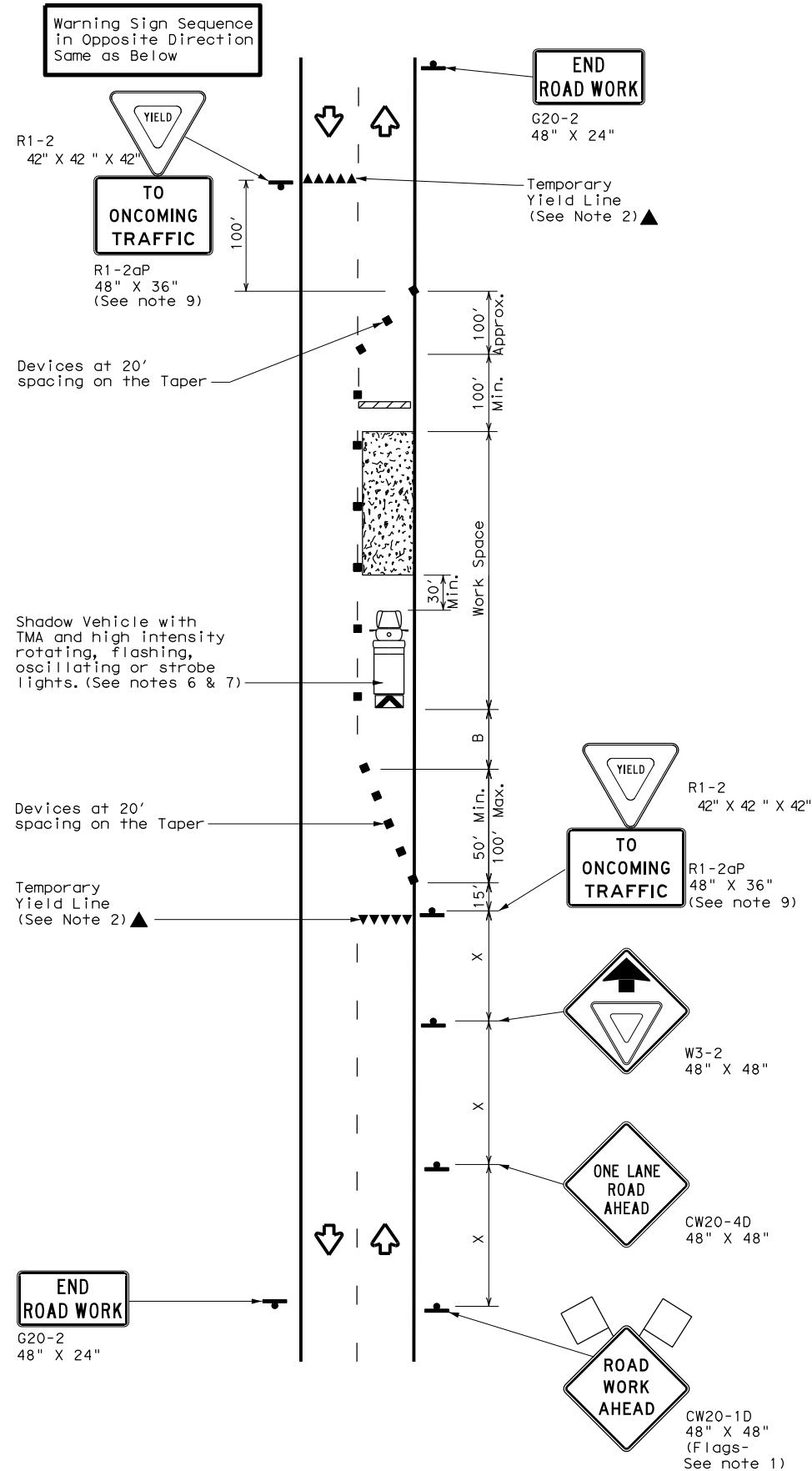
TRAFFIC CONTROL PLAN
CONVENTIONAL ROAD
SHOULDER WORK

TCP (2-1) - 18

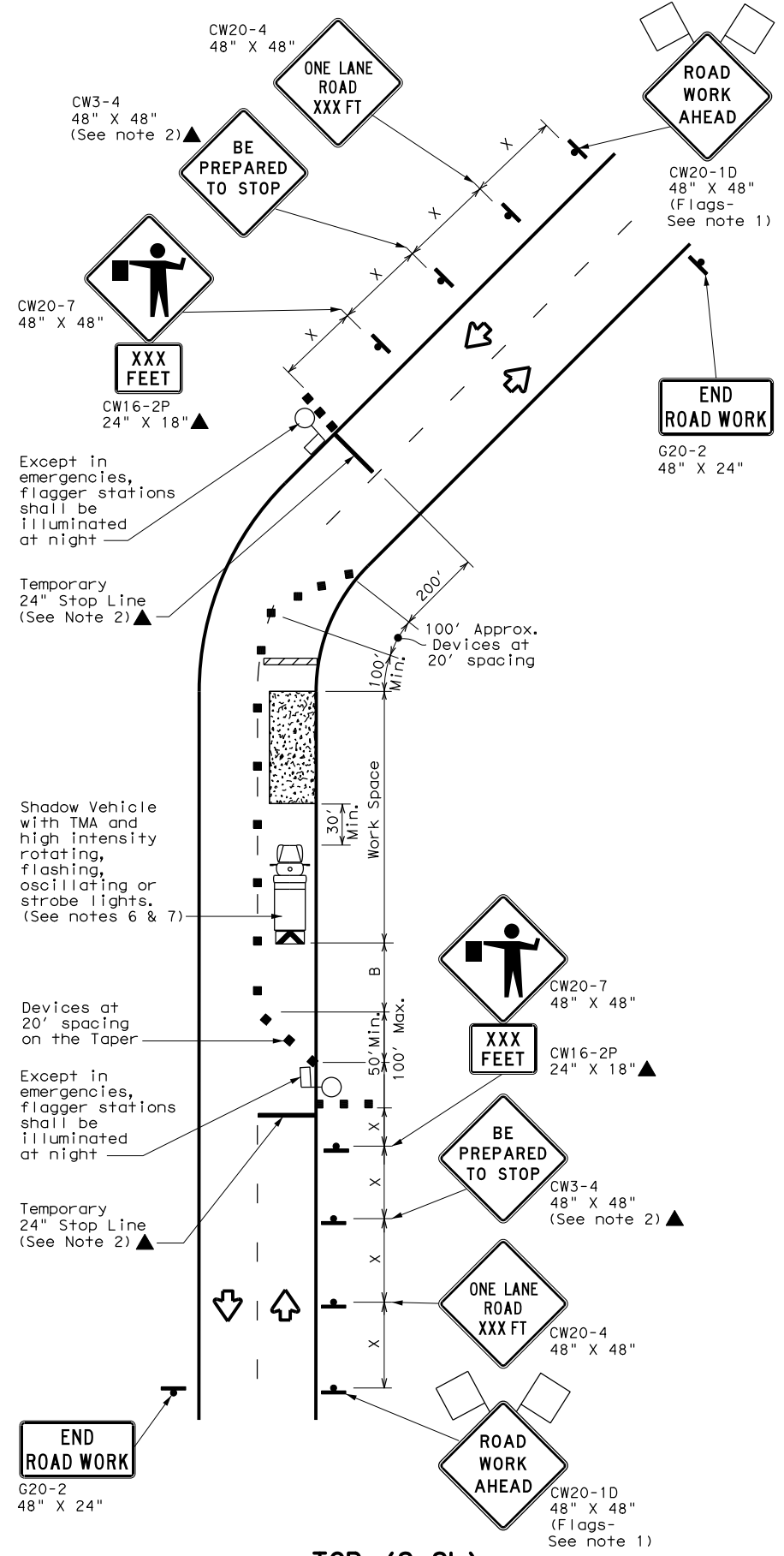
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© TxDOT December 1985	CON:	SECT:	JOB:	HIGHWAY:
REVISIONS	0009	12	220	IH 30
2-94 4-98	DIST:	COUNTY:	SHEET NO.:	
8-95 2-12	DAL	ROCKWALL	42	
1-97 2-18				

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DATE: 05-NOV-2021 15:37
 FILE: Projects\1066800 - Rockwall - Utility Conflict Analysis\411 - Rockwall - Utility Conflict Analysis.dwg



TCP (2-2a)
2-LANE ROADWAY WITHOUT PAVED SHOULDERS
ONE LANE TWO-WAY
CONTROL WITH YIELD SIGNS
 (Less than 2000 ADT - See Note 9)



TCP (2-2b)
2-LANE ROADWAY WITHOUT PAVED SHOULDERS
ONE LANE TWO-WAY
CONTROL WITH FLAGGERS

LEGEND

	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "x" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent			
30	L = WS ² / 60	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L = WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	575'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

* Conventional Roads Only
 ** Taper lengths have been rounded off.
 L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE

MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓	✓	

GENERAL NOTES

- Flags attached to signs where shown, are REQUIRED.
 - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
 - The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4 "ONE LANE ROAD XXX FT" sign, but proper sign spacing shall be maintained.
 - Flaggers should use two-way radios or other methods of communication to control traffic.
 - Length of work space should be based on the ability of flaggers to communicate.
 - A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
 - Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect a wider work space.
- TCP (2-2a)**
- The R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work space should be no longer than one half city block. In rural areas, roadways with less than 2000 ADT, work space should be no longer than 400 feet.
 - The R1-2aP "YIELD TO ONCOMING TRAFFIC" sign shall be placed on a support at a 7 foot minimum mounting height.
- TCP (2-2b)**
- Channelizing devices on the center line may be omitted when a pilot car is leading traffic and approved by the Engineer.
 - If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain stopping sight distance to the flagger and a queue of stopped vehicles. (See table above).
 - Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

Texas Department of Transportation Traffic Operations Division Standard

TRAFFIC CONTROL PLAN
ONE-LANE TWO-WAY
TRAFFIC CONTROL

TCP (2-2) - 18

FILE: tcp2-2-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	0009	12	220	IH 30
8-95 3-03	DIST	COUNTY	SHEET NO.	
1-97 2-12	DAL	ROCKWALL	43	
4-98 2-18				