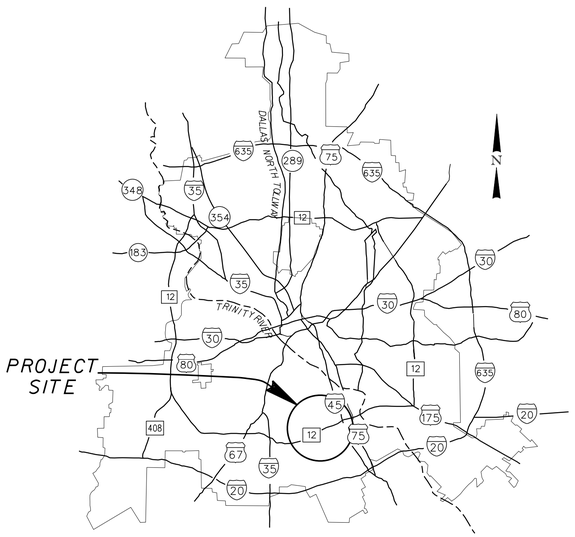
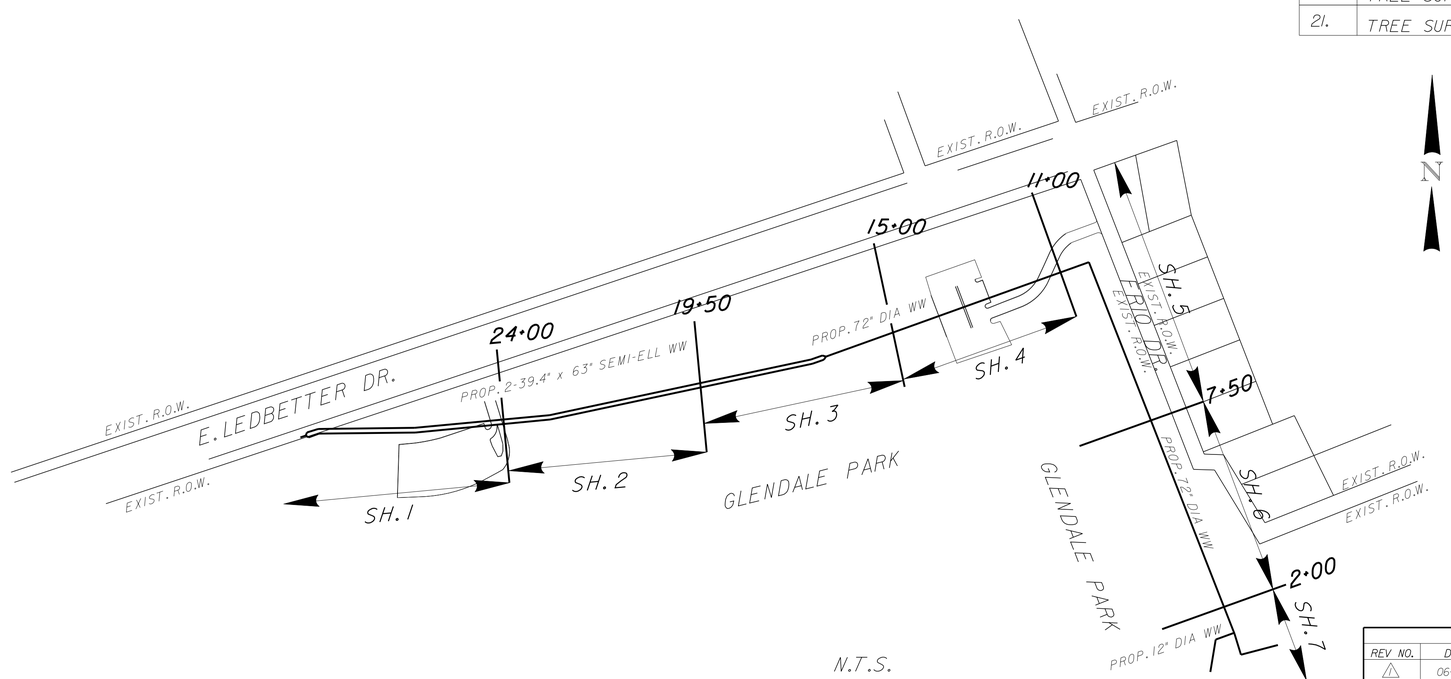
# FIVE MILE CREEK WW PIPE REPLACEMENT
# GLENDALE PARK- E. LEDBETTER DR. TO FRIO DR.




## Dallas Water Utilities
## City Of Dallas, Texas

### Contract No. : 21- 124
### MAY 2021

| No. | SHEET TITLE | DESIGN SHEET |
|---|---|---|
| 1. | COVER SHEET | 411Q-1191-097 |
| 2. | GENERAL NOTES | 411Q-1191-098 |
| 3. | STA.28+80.48 TO STA.24+00 | 411Q-1191-099 |
| 4. | STA.24+00 TO STA.19+50 | 411Q-1191-100 |
| 5. | STA.19+50 TO STA.15+00 | 411Q-1191-101 |
| 6. | STA.15+00 TO STA.11+00 | 411Q-1191-102 |
| 7. | STA.11+00 TO STA.6+50 | 411Q-1191-103 |
| 8. | STA.6+50 TO STA.2+00 | 411Q-1191-104 |
| 9. | STA.2+00 TO STA.0+00 | 411Q-1191-105 |
| 10. | HOBAS FITTING DETAILS SHT #1 | 411Q-1191-106 |
| 11. | HOBAS FITTING DETAILS SHT #2 | 411Q-1191-107 |
| 12. | HOBAS FITTING DETAILS SHT #3 | 411Q-1191-108 |
| 13. | HOBAS FITTING DETAILS SHT #4 | 411Q-1191-109 |
| 14. | HOBAS FITTING DETAILS SHT #5 | 411Q-1191-110 |
| 15. | TEE-BASE MANHOLE DETAIL | 411Q-1191-111 |
| 16. | TREE EXHIBIT STA.28+80.48 TO STA.19+50 | 411Q-1191-112 |
| 17. | TREE EXHIBIT STA.19+50 TO STA.11+00 | 411Q-1191-113 |
| 18. | TREE EXHIBIT STA.11+00 TO STA.2+00 | 411Q-1191-114 |
| 19. | TREE EXHIBIT STA.2+00 TO STA.0+00 | 411Q-1191-115 |
| 20. | TREE SURVEY TABLE SHT #1 | 411Q-1191-116 |
| 21. | TREE SURVEY TABLE SHT #2 | 411Q-1191-117 |

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| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

STATE OF TEXAS
MICHAEL R. HAGEN
111955
LICENSED
PROFESSIONAL ENGINEER
06/09/2021

411Q - 1191 - 097

# GENERAL LEGENDS

## GENERAL

- Benchmark
- Control Point
- Iron Pin Found
- Iron Pin Set
- Exist.ROW
- Prop.ROW
- ROW Centerline
- Alley ROW
- Exist.Easement
- Prop.Easement
- Corporation Line Marker
- Exist.Structure/Building
- Prop.Structure/Building
- Bank/Slope Line
- Flow Line/Stream Line
- Bore Hole

## TOPOGRAPHIC FEATURES

- Tree
- Brush, Shrub, Wood
- Swamp
- Mail Box
- Bollards
- Irrigation Control Valve
- Chain Link/Other Fence
- Wood Fence
- Wrought Iron Fence
- Brick Wall
- Concrete Wall
- Retaining Wall
- Parking Meter
- Traffic Sign
- Traffic Signal Pole
- Street Lamp
- Railroad,Each Track

## PAVEMENT

- Exist.Gravel
- Exist.Asphalt
- Exist.Brick
- Exist.Concrete
- Prop.Pavement

## STORM DRAINS

- Exist.Storm Drain
- Exist.Storm Manhole
- Exist.Storm Inlet
- Prop.Storm Drain
- Prop.Storm Manhole
- Prop.Storm Inlet

## UTILITIES

- Exist.Gas Line
- Exist.Gas Manhole
- Exist.Underground Electric Line
- Exist.Overhead Electric Line
- Exist.Electric Pad Mounted Transformer
- Exist.Electric Power Pole
- Exist.Electric Pole Anchor
- Exist.Electric Utility Manhole
- Exist.Electric Vault
- Exist.Telephone Line
- Exist.Telephone Utility Manhole
- Exist.Telephone Pedestal
- Exist.Fiber Optic Line
- Exist.Fiber Optic Manhole
- Exist.Cable TV Line
- Exist.Cable TV Manhole

## WATER MAINS & APPURTENANCES

- Exist.6" Water Main
- Exist.8" to 27" Water Main
- Exist.30" or Larger Water Main
- Prop.6" Water Main
- Prop.8" to 27" Water Main
- Prop.30" or Larger Water Main
- Future Water Main
- Exist.Water Meter
- Exist.Water Manhole
- Exist.Water Vault
- Exist.Fire Hydrant
- Prop.Water Manhole
- Prop.Water Vault
- Prop.Fire Hydrant
- Exist.11.25° Fitting
- Exist.22.5° Fitting
- Exist.45° Fitting
- Exist.90° Fitting
- Exist.Reducer
- Exist.Tee
- Exist.Tapping Sleeve
- Exist.Cross
- Exist.Plug
- Exist.Blind Flange
- Cut & Plug
- Prop.11.25° Fitting
- Prop.22.5° Fitting
- Prop.45° Fitting
- Prop.90° Fitting
- Prop.Reducer
- Prop.Tee
- Prop.Tapping Sleeve
- Prop.Plug
- Prop.Blind Flange
- Exist.Gate Valve
- Exist.High/Low Valve
- Exist.Check Valve
- Exist.Flush Point
- Exist.Air Valve
- Exist.Cathodic Test Station
- Prop.Gate Valve
- Prop.High/Low Valve
- Prop.Check Valve
- Prop.Flush Point
- Prop.Air Valve
- Prop.Cathodic Test Station

## WASTEWATER MAINS & APPURTENANCES

- Exist.6" to 27" Wastewater Main
- Exist.30" or Larger Wastewater Main
- Prop.6" to 27" or Larger Wastewater Main
- Prop.30" or Larger Wastewater Main
- Exist.Wastewater Manhole
- Exist.Wastewater Access Device
- Exist.Wastewater Cleanout
- Prop.Wastewater Manhole
- Prop.Wastewater Access Device
- Prop.Wastewater Cleanout
- Remove & Replace Exist.Manhole

# GENERAL NOTES

## PROJECT CONTACTS

DWU PROJECT MANAGER:
DWU DISTRIBUTION DIVISION:
DWU WASTEWATER COLLECTION DIVISION:
CITY OF DALLAS PW&T - STREET CUTS:
CITY OF DALLAS PW&T - STORMWATER:
CITY OF DALLAS PW&T - TRAFFIC CONTROL:

## GENERAL

1. All work shall be done in accordance with the North Central Texas Council Of Governments (NCTCOG) Standard Specifications for Public Works Construction (Version XX) and City of Dallas Addendum (Month,Year) to these specifications.
2. Reference to standard drawings shall mean those shown in the DWU Standard Drawings for Water & Wastewater Construction XX Edition (Month, Year).
3. All items of work required to complete the work as shown or implied by the plans and as specified in the contract documents which are not listed as a pay item in the proposal shall be considered subsidiary.
4. The location,elevations and dimensions of existing utilities shown on the plans as obtained from The City of Dallas and utility company records,are considered approximate. The Engineer does not certify that all utilities are shown. The Contractor shall verify exact locations,sizes and depths of existing utilities before begining construction (including ordering pre-cast manholes and concrete pipe if applicable. NO SEPARATE PAY ITEM
5. The Contractor shall contact Texas Excavation Safety System (800-DIG-TESS; 800-344-8377) and relevant utility companies 48 hours prior to locating existing utilities and/or construction activities.
6. The Contractor shall preserve and protect all existing utilities at all times during construction. Any damage to utilities resulting from the Contractor's operation shall be restored at his expense.
7. The Contractor shall support telephone conduits,storm drains,water and wastewater mains when going under said utilities. NO SEPARATE PAY ITEM.
8. Power poles may have to be braced at the Contractor's expense.
9. No machinery,construction access or storage shall be allowed on park property beyond the limits of the temporary workspace as defined by the City of Dallas Inspector.

## TRAFFIC CONTROL

1. The Contractor shall develop a traffic control plan in accordance with the City Of Dallas Traffic Barricade Manual, Latest Edition and the TXDOT Texas Manual On Uniform Traffic Control Devices (TMUTCD),Latest Version as necessary. NO SEPARATE PAY ITEM.
2. The diversion of pedestrians and vehicles during the progress of the work shall be in a manner satisfactory to the City of Dallas Inspector.
3. The Contractor shall coordinate all traffic variances with Traffic Safety Coordinators at 670-5896 or 683-5189, City Of Dallas Public Works & Transportation.
4. Two - way traffic shall be maintained at all times and flagmen should be used to maintain two-way traffic as necessay.
5. All barricades,warning signs and traffic control devices shall conform to the City Of Dallas standards. NO SEPARATE PAY ITEM.
6. When closing side streets,two working days notification is required for Fire,Police,Streets and Sanitation Departments. Please contact Gary Maxwell at 670-5896 or mobile 683-5189 to notify traffic restrictions.
7. Contractor shall maintain access to private driveways at all times during construction. NO SEPARATE PAY ITEM.
8. Vehicular ingress and egress (entrance and exit) to a business property shall be maintained at all time. If not,specific signs along with business name and direction arrow(s) shall be used for any temporary
9. access locations. Additional signs may be necessary if there is a detour.NO SEPARATE PAY ITEM.

## PAVEMENT REPLACEMENT

1. Sawcut, remove and replace pavements,sidewalks,curbs and gutters shall conform to City Of Dallas Public Works & Transportation, Pavement Cuts & Repair Standards Manual, Latest Edition.
2. All disturbed pavement markings Including,but not limited to,striping,traffic buttons and crosswalks shall be restored to the same or improved condition as per City Of Dallas Specifications For Public Works Construction, Standard Construction Details and all addenda thereto. NO SEPARATE PAY ITEM.

## TREES AND LANDSCAPING

1. Contractor shall not damage or remove any trees or landscaping unless otherwise authorized by the City of Dallas Inspector. Any trees or landscaping that are damaged or removed during the construction shall be replaced by the contractor at his expense.

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## ADVANCE METERING INFRASTRUCTURE

1. Caution! Advanced Metering Infrastructure (AMI) Meters in the area.Contractor shall not remove,damage, or otherwise disturb AMI meter endpoint components unless otherwise directed by the DWU Meter Reading Operation (MRO) Technician.
2. Contractor shall contact MRO five (5) working days in advance at 214-670-5537 and Email: DWUMRO@dallascityhall.com. If Any AMI Components shall be disconnected,reconnected,removed,or installed.
3. Contractor shall install AMI meter lids for water meters 2" and smaller in all Existing AMI and Proposed AMI Areas. Contractor shall also return the existing AMI lids from existing AMI Area to DWU MRO for meters 2" or smaller. NO SEPARATE PAY ITEM.
4. For meters 3" or larger,the contractor shall either connect to the existing meter vault or construct a new meter vault as specified on the plans.
5. Contractor shall be liable for the replacement cost of any lost or damaged AMI Components.
6. All Meters In the Proposed and Existing AMI area shall be AMI-Ready Meter As Furnished By DWU. A non AMI-Ready meter shall be replaced with an AMI-Ready meter by DWU.

## WATER MAIN AND APPURTENANCES

1. All 6",8" and 12" water mains shall be PVC C900 (DR-14) water pipe,with Class "C-" embedment,except as noted.
2. All water mains with no profiles shall have a minimum cover of four (4) feet below street grade in an improved street and five (5) feet of cover in an unimproved street or alley.
3. Compact fittings are not authorized for this project. All ductile iron pipe,fittings and fire hydrant bases shall be poly-wrapped.
4. All bends,tees fire hydrants and plugs are to be restrained type fittings and to be blocked with Class "B" Concrete as per DWU Standard Drawings #229-234.In addition to restrained joints.
5. If required by the City of Dallas Inspector,the Contractor shall install temporary water lines on both sides of the street until the new water main has been completed,tested,approved,and accepted by DWU. NO SEPARATE PAY ITEM.
6. If no temporary mains are required by the City of Dallas Inspector,then the existing water mains are to be in service with the fire hydrants until the new water main has been tested,approved and accepted by DWU. NO SEPARATE PAY ITEM.
7. The Contractor will ensure that fire hydrants are accessible to fire trucks at all times. NO SEPARATE PAY ITEM.
8. The Contractor shall sequence his construction such that no more than one fire hydrant is out of service at any given time.
9. All fire hydrants shall be installed as per DWU Standard Drawing #224. Existing fire hydrants on killed water lines are to be removed and delivered to DWU Distribution Division at 4120 Scottsdale Street Dallas,Texas if required by the City of Dallas Project Inspector,otherwise they become the property of the Contractor.
10. Backfill made on break repairs to existing water mains may have been made with crushed rock. This could present a cave-in danger to a new ditch;therefore,precautions should be taken by the Contractor. NO SEPARATE PAY ITEM.
11. Abandon all water valves on existing mains being killed as per DWU Standard Drawing #219. NO SEPARATE PAY ITEM.
12. The Contractor shall coordinate all water main tie-ins with the City of Dallas Inspector.
13. The Contractor shall verify the location and number of all existing active water services and construct new services up to the meter prior to killing existing main.
14. Water services greater than 30 feet shall be a minimum of one (1) inch in diameter.

## WASTEWATER MAIN AND APPURTENANCES

1. The Contractor shall maintain existing wastewater flow at all times. NO SEPARATE PAY ITEM.
2. Abandon all manholes on abandoned wastewater mains.
3. The Contractor shall verify the location of all wasterwater laterals and construct new laterals from the wastewater main to the property line with cleanouts and reconnect to the existing laterals. Dye testing maybe required at no additional cost to the owner.
4. The backfill around manholes located in existing or new pavement shall be flowable backfill as per NCTCOG Specification Item 6.2.JOG). NO SEPARATE PAY ITEM.

STATE OF TEXAS
MICHAEL R. HAGEN
111955
LICENSED PROFESSIONAL ENGINEER
06/09/2021


FREESE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING
FIRM F-2144

FREESE AND NICHOLS
2711 North Haskell Avenue, Suite 3300
Dallas, TX 75204
Phone - (214) 217-2200
Web - www freese com


CONTRACT NO.21-124 | PID:6358

5 MILE CRK WW REPLACEMENT
GLENDALE PARK
E.LEDBETTER DR.TO FRIO DR.
DALLAS WATER UTILITIES
CITY OF DALLAS,TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
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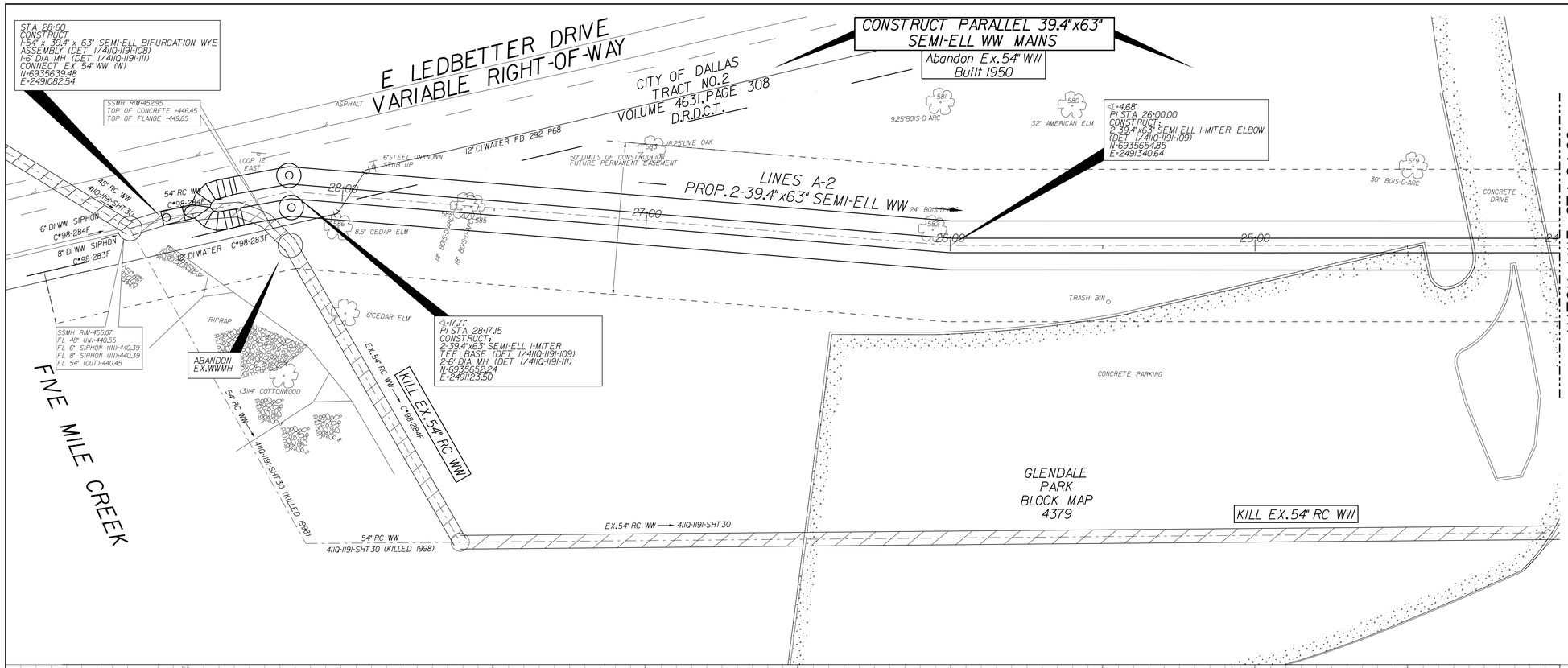
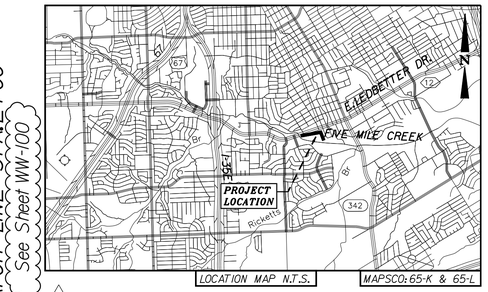
| MH | MA | MAY 2021 | 411Q | 1191 | 098 |




LOCATION MAP N.T.S.

MAPSCO: 65-K & 65-L

## UNDERGROUND UTILITIES

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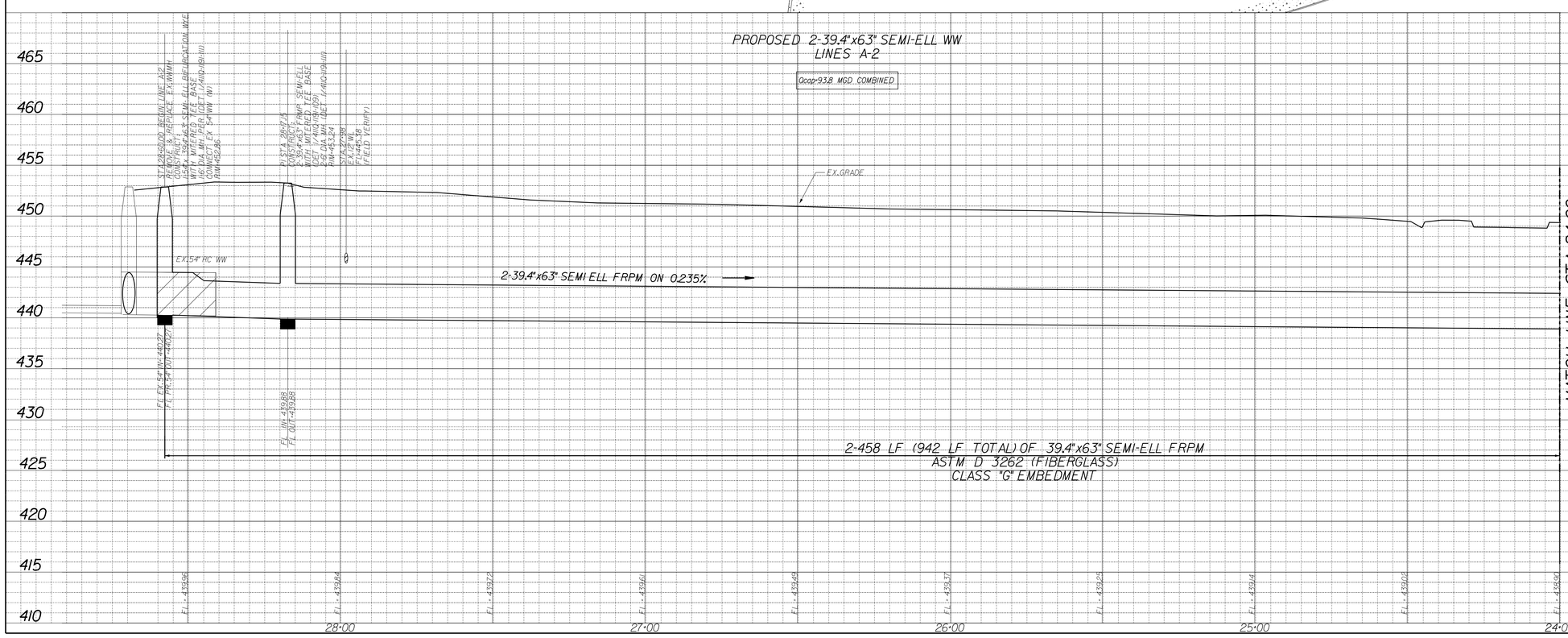


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## BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
STD.WDBM ON CONCRETE CURB ON NORTHEAST CORNER OF INTERSECTION OF E.FRIO DR.& E.LEDBETTER DR.
ELEV = 463.653

BENCHMARK 65-F-1
A SQUARE IS ON CONCRETE CURB RADIUS.SOUTHWEST CORNER OF INTERSECTION OF STROBEL AVE.& ADELAIDE DR.
ELEV = 463.653

| Point | Northing | Easting | Elev. | Description |
|---|---|---|---|---|
| 50 | 6935103.233 | 2493249.769 | 444.853 | 5/8" CIRS |
| 51 | 6935544.714 | 2493005.989 | 446.563 | 5/8" CIRS |
| 52 | 6936073.123 | 2492818.542 | 454.163 | 5/8" CIRS |
| 53 | 6935794.418 | 2492404.703 | 446.678 | 5/8" CIRS |
| 54 | 6935680.697 | 2491962.760 | 448.233 | 5/8" CIRS |
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Horizontal Scale: 1" = 20'
0' 20' 40'

Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES

WATER
55-25W, 56-25W

WASTEWATER
BH G-17, 55-25S, 56-25S

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CONTRACT NO. 21-124 | PID: 6358

# PROP 2-39.4"x63" SEMI-ELL WW

## STA.28+80.49 TO STA.24+00

## FROM E.LEDBETTER DR.TO E.FRIO DR.

## DALLAS WATER UTILITIES

## CITY OF DALLAS, TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
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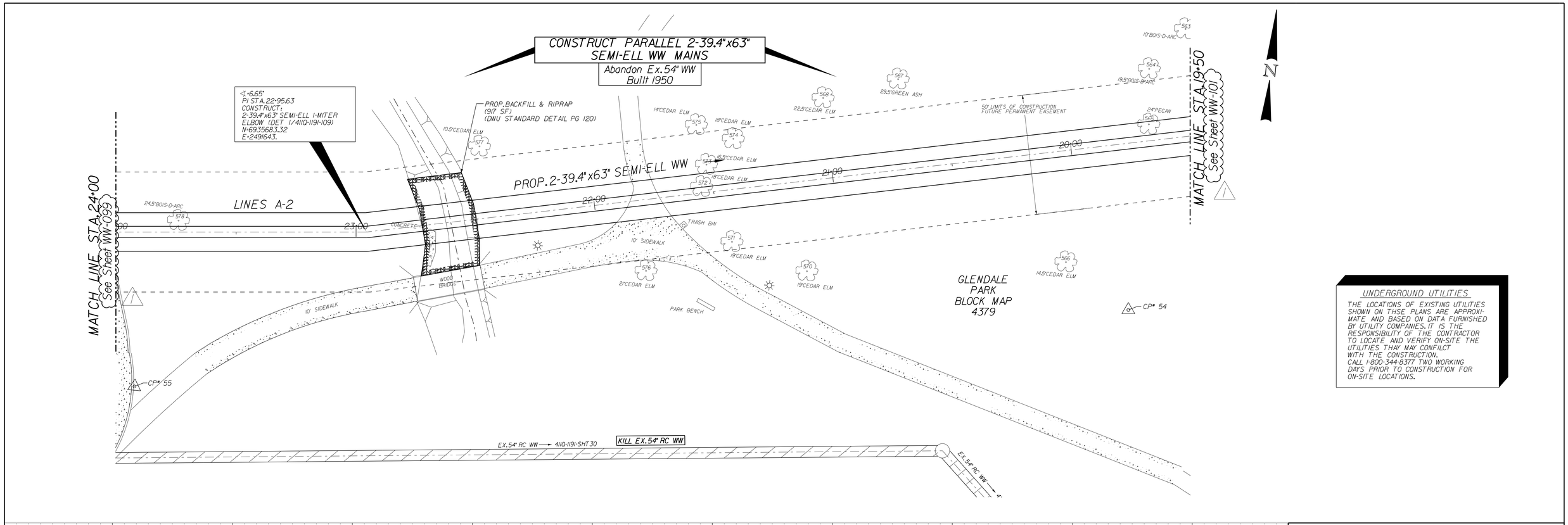


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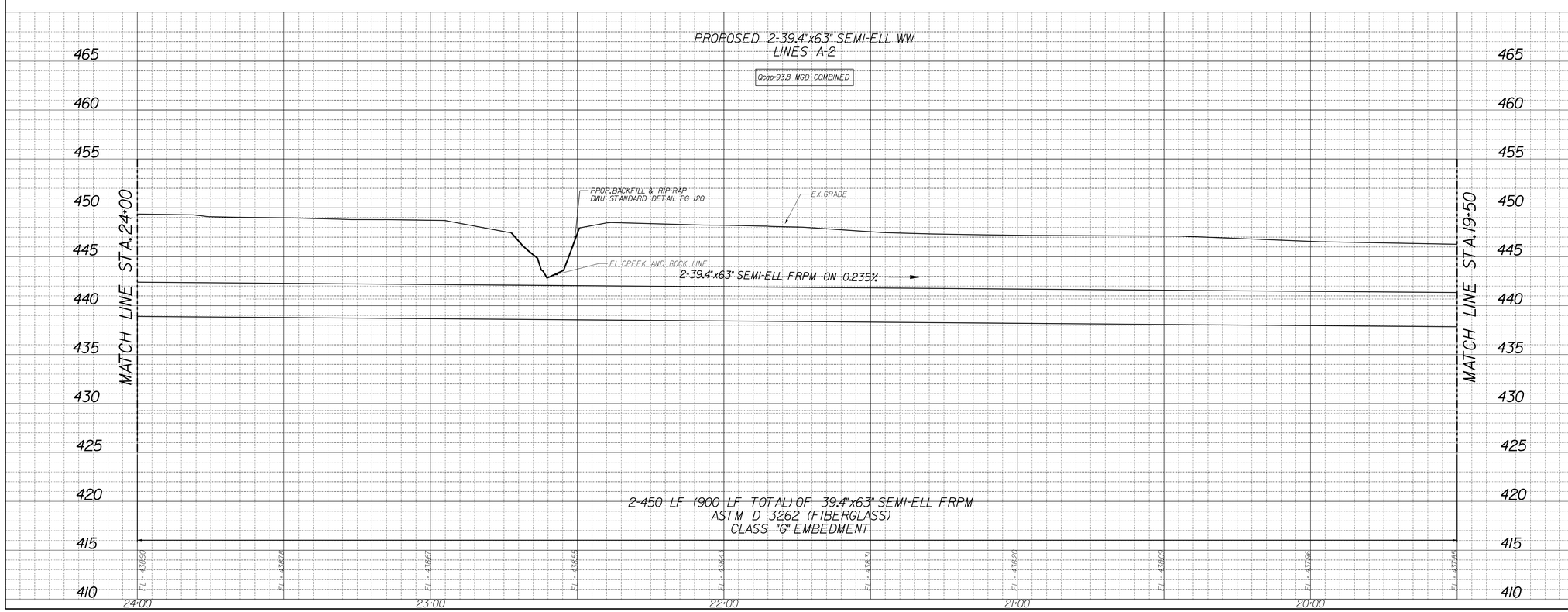


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# PROP 2-39.4"x63" SEMI-ELL WW
## STA.24+00 TO STA.19+50
## FROM E.LEDBETTER DR.TO E.FRIO DR.
## DALLAS WATER UTILITIES
## CITY OF DALLAS,TEXAS

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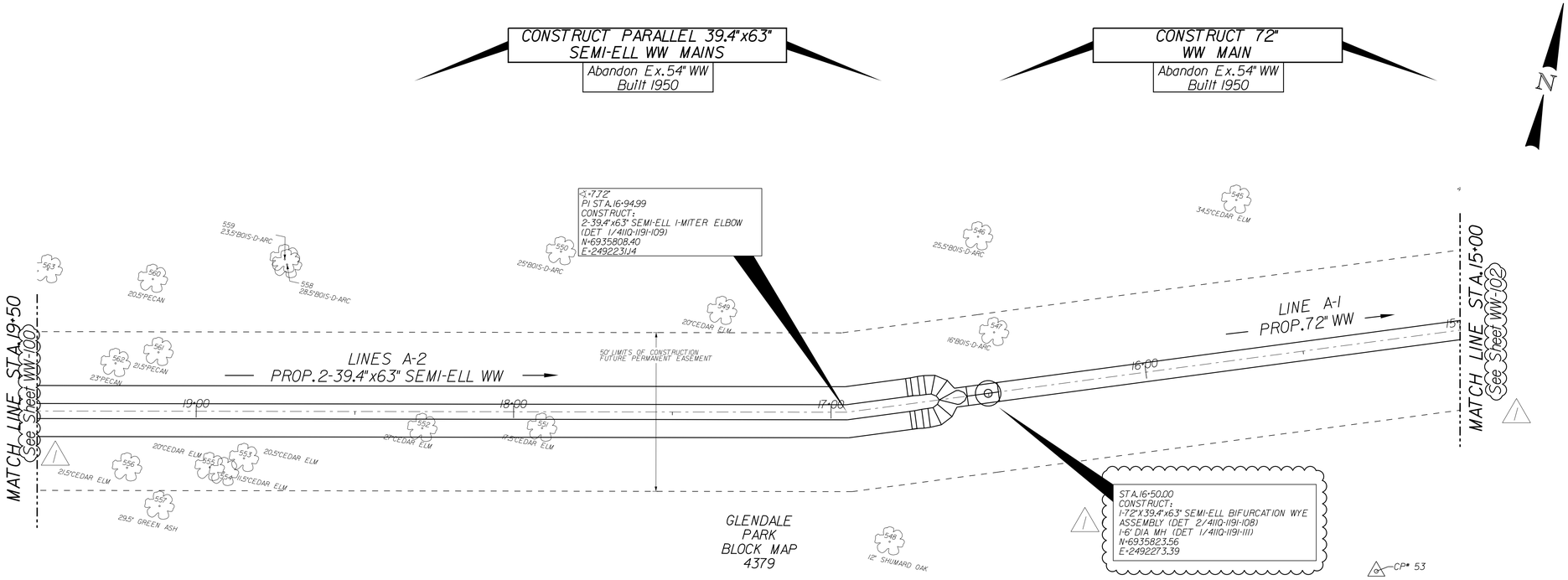


NOTES:
1. 72-IN. WIDE BY 6-IN. THICK UNREINFORCED CLASS B CONCRETE SLAB TO BE INSTALLED 1 FOOT ABOVE PIPE CROWN TO PREVENT PIPE FLOTATION.

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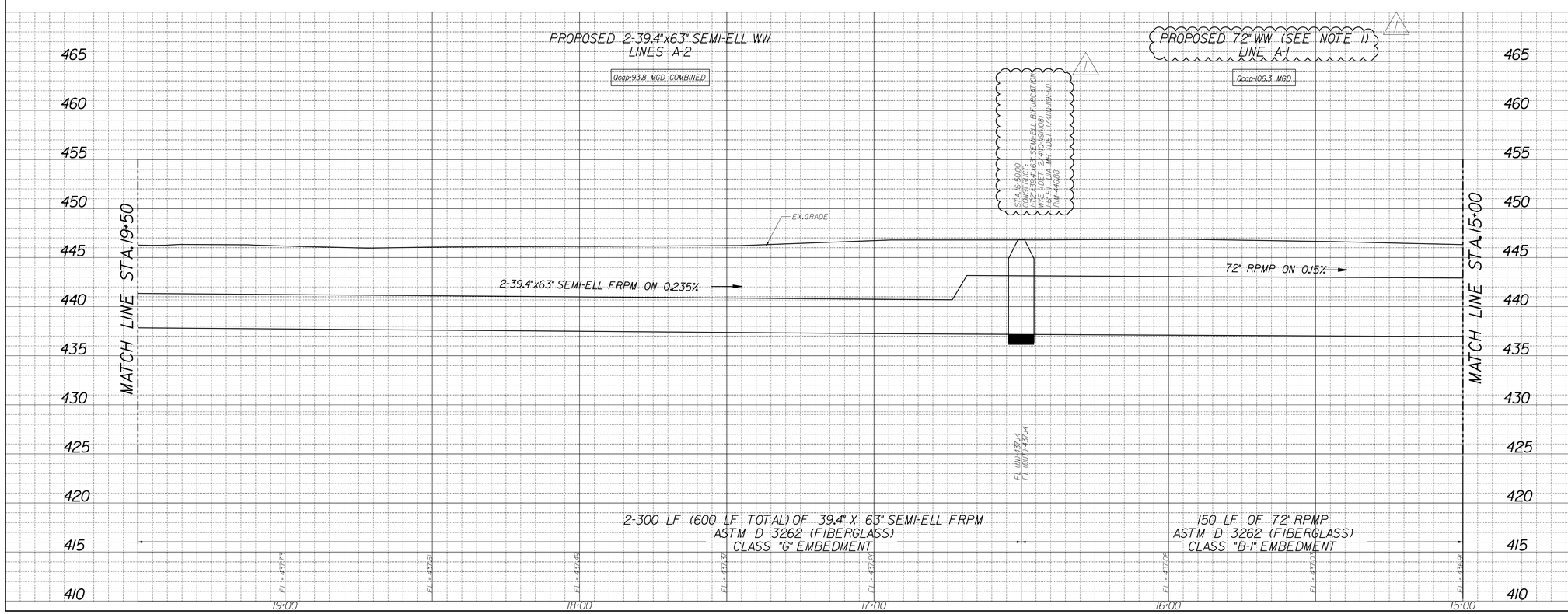


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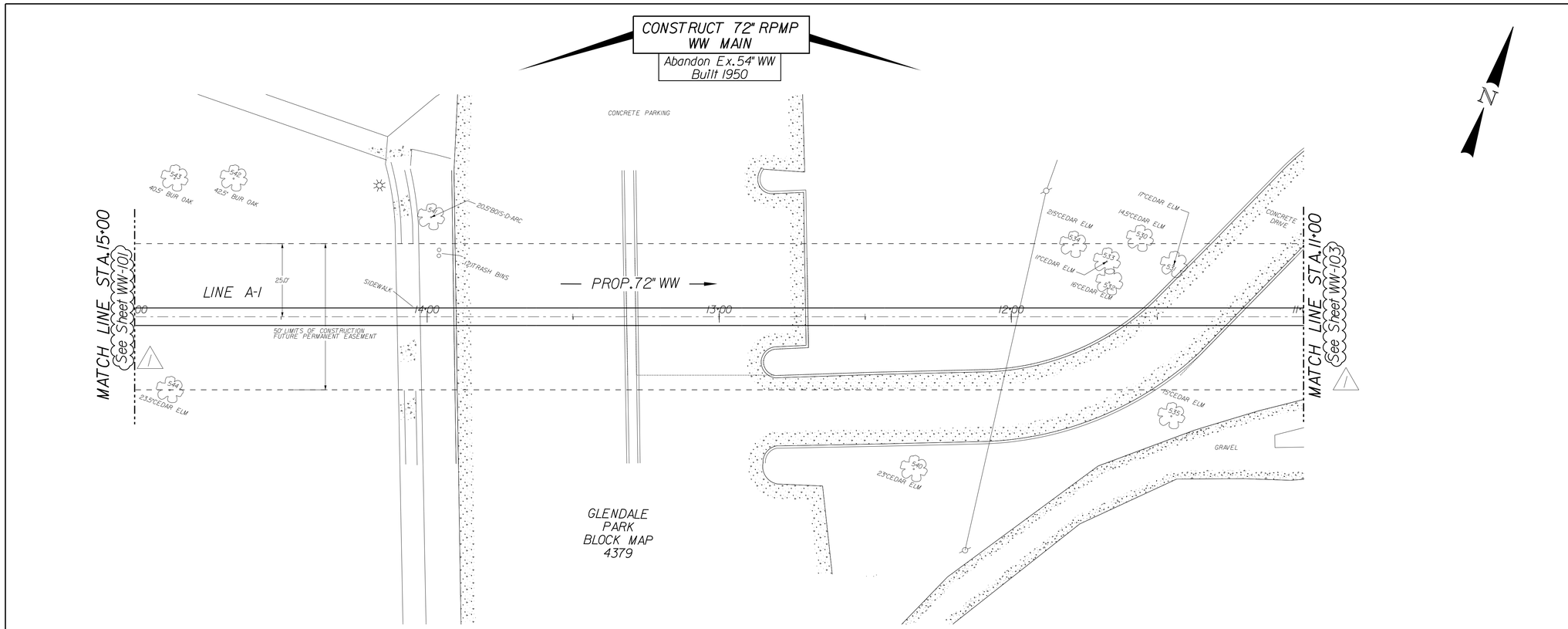
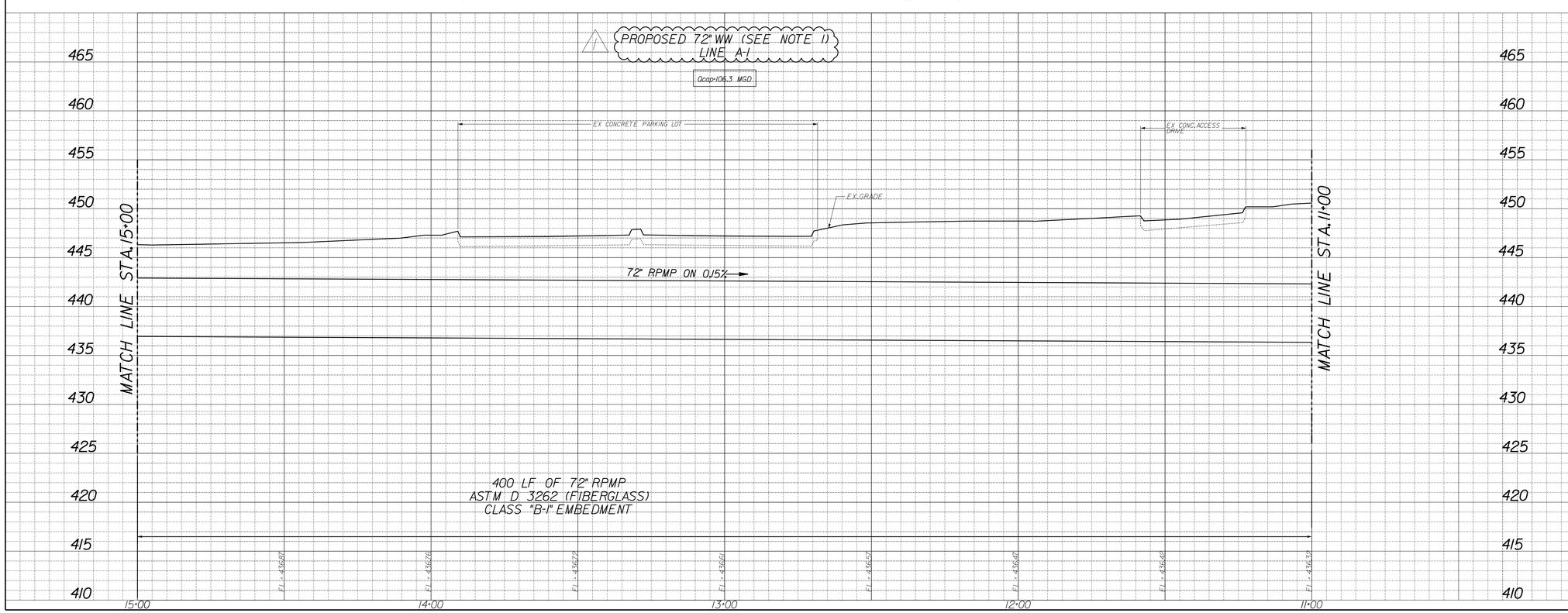
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 101 |




NOTES:
1. 72-IN. WIDE BY 6-IN. THICK UNREINFORCED CLASS B CONCRETE SLAB TO BE INSTALLED 1 FOOT ABOVE PIPE CROWN TO PREVENT PIPE FLOTATION.

UNDERGROUND UTILITIES

THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THSE PLANS ARE APPROXIMATE AND BASED ON DATA FURNISHED BY UTILITY COMPANIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND VERIFY ON-SITE THE UTILITIES THAY MAY CONFILCT WITH THE CONSTRUCTION. CALL 1-800-344-8377 TWO WORKING DAYS PRIOR TO CONSTRUCTION FOR ON-SITE LOCATIONS.




REVISIONS

| REV NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
STD.WDBM ON CONCRETE CURB ON NORTHEAST CORNER OF INTERSECTION OF E.FRIO DR.& E.LEDBETTER DR.
ELEV = 463.653

BENCHMARK 65-F-1
A SQUARE IS ON CONCRETE CURB RADIUS,SOUTHWEST CORNER OF INTERSECTION OF STROBEL AVE.& ADELAIDE DR.
ELEV = 463.653

| Point | Northing | Easting | Elev. | Description |
|---|---|---|---|---|
| 50 | 6935103.233 | 2493249.769 | 444.853 | 5/8" CIRS |
| 51 | 6935544.714 | 2493005.989 | 446.563 | 5/8" CIRS |
| 52 | 6936073.123 | 2492818.542 | 454.163 | 5/8" CIRS |
| 53 | 6935794.418 | 2492404.703 | 446.678 | 5/8" CIRS |
| 54 | 6935680.697 | 2491962.760 | 448.233 | 5/8" CIRS |
| 55 | 6935610.81 | 2491553.368 | 449.263 | 5/8" CIRS |

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES

WATER
55-25W, 56-25W

WASTEWATER
BH G-17, 55-25S, 56-25S

STATE OF TEXAS
MICHAEL R. HAGEN
111955
LICENSED
PROFESSIONAL ENGINEER
06/09/2021

FREESE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING FIRM F-2144

FREESE AND NICHOLS
2711 North Haskell Avenue, Suite 3300
Dallas, TX 75204
Phone - (214) 217-2200
Web - www.freese.com

CONTRACT NO. 21-124 | PID: 6358

# PROPOSED 72" WASTEWATER

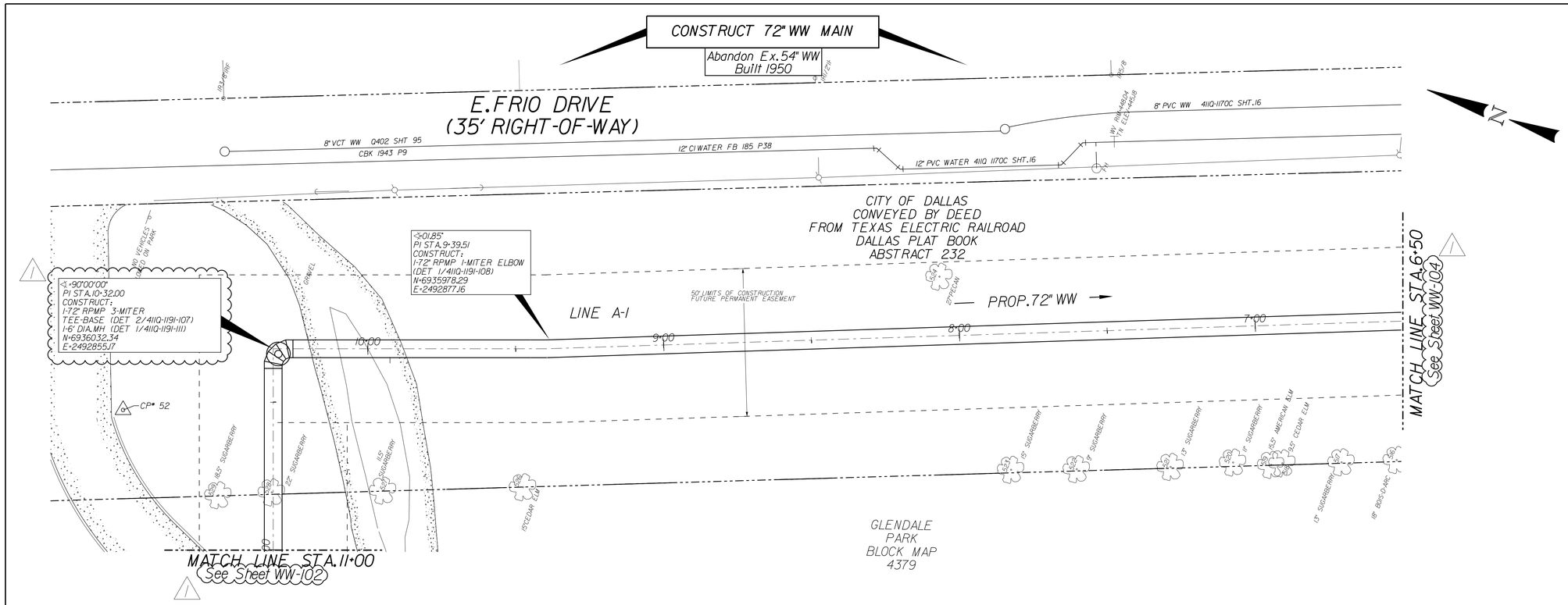
STA.15+00 TO STA.11+00

FROM E.LEDBETTER DR.TO E.FRIO DR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 102 |




NOTES:
1. 72-IN. WIDE BY 6-IN. THICK UNREINFORCED CLASS B CONCRETE SLAB TO BE INSTALLED 1 FOOT ABOVE PIPE CROWN TO PREVENT PIPE FLOTATION.

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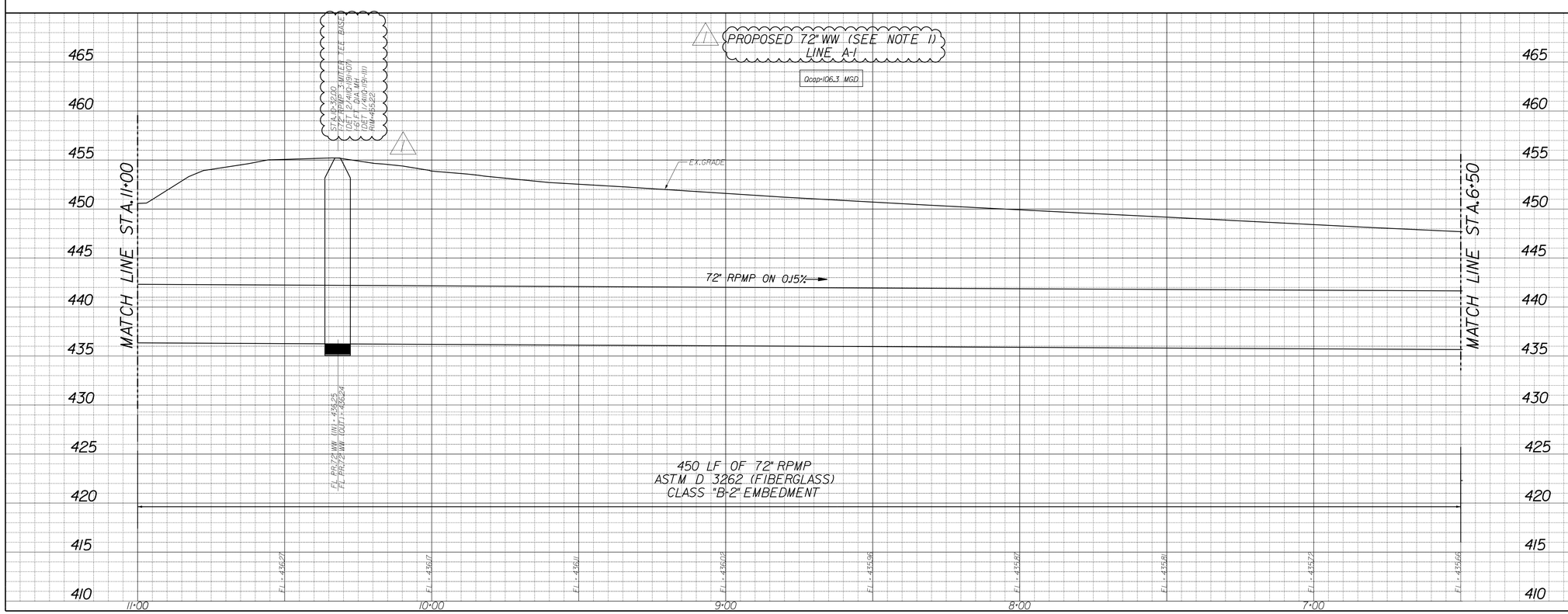


REVISIONS

| REV NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
STD.WDBM ON CONCRETE CURB ON NORTHEAST CORNER OF INTERSECTION OF E.FRIO DR.& E.LEDBETTER DR.
ELEV = 463.653

BENCHMARK 65-F-1
A SQUARE IS ON CONCRETE CURB RADIUS.SOUTHWEST CORNER OF INTERSECTION OF STROBEL AVE.& ADELAIDE DR.
ELEV = 463.653

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| 55 | 6935610.181 | 2491553.368 | 449.263 | 5/8" CIRS |

Horizontal Scale: 1" = 20'
0' 20' 40'
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0' 6' 12'

REFERENCES
WATER
55-25W, 56-25W
WASTEWATER
BH 6-17, 55-25S, 56-25S

STATE OF TEXAS
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06/09/2021
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TEXAS REGISTERED ENGINEERING
FIRM F-2144

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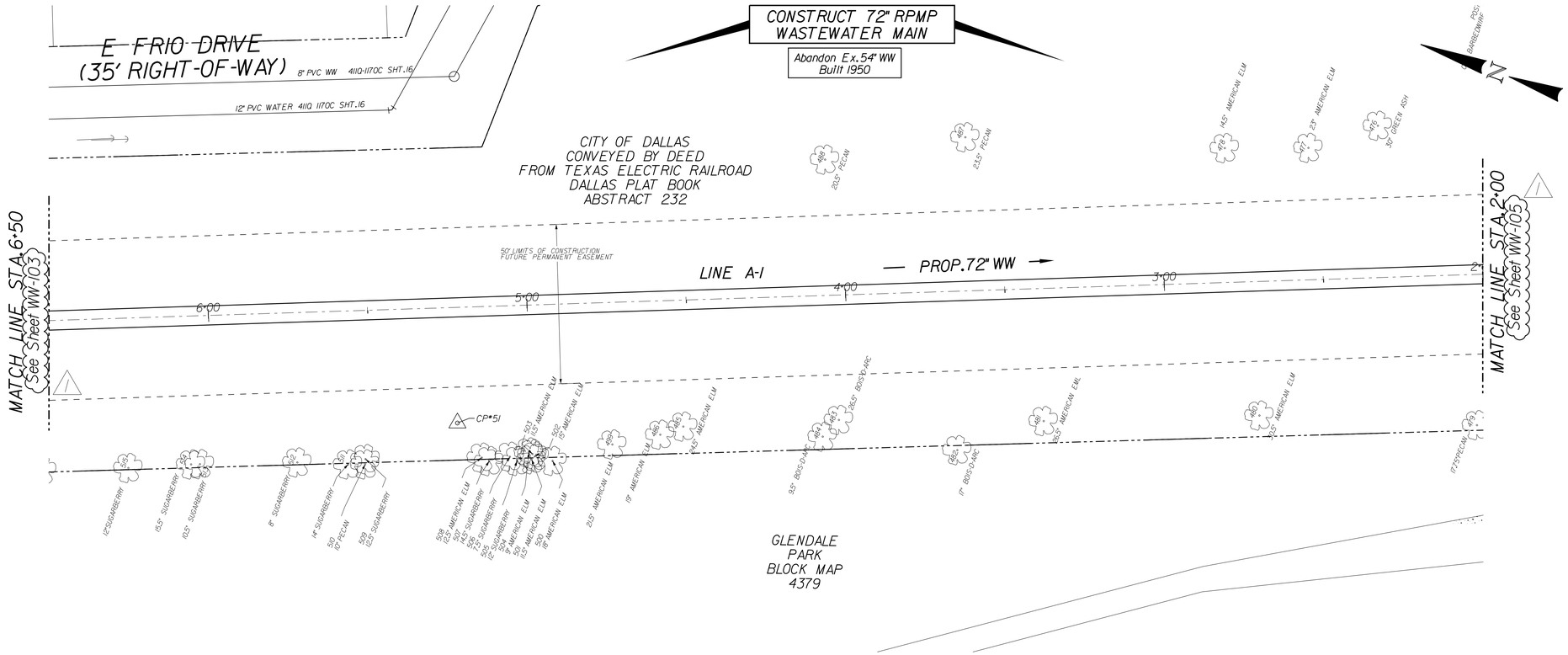
Dallas, TX 75204
Phone - (214) 217-2200
Web - www.freese.com

CONTRACT NO. 21-124 | PID: 6358

# PROPOSED 72" WASTEWATER
## STA.11+00 TO STA.6+50
## FROM E.LEDBETTER DR.TO E.FRIO DR.
## DALLAS WATER UTILITIES
## CITY OF DALLAS, TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 103 |




NOTES:
1. 72-IN. WIDE BY 6-IN. THICK UNREINFORCED CLASS B CONCRETE SLAB TO BE INSTALLED 1 FOOT ABOVE PIPE CROWN TO PREVENT PIPE FLOTATION.

UNDERGROUND UTILITIES

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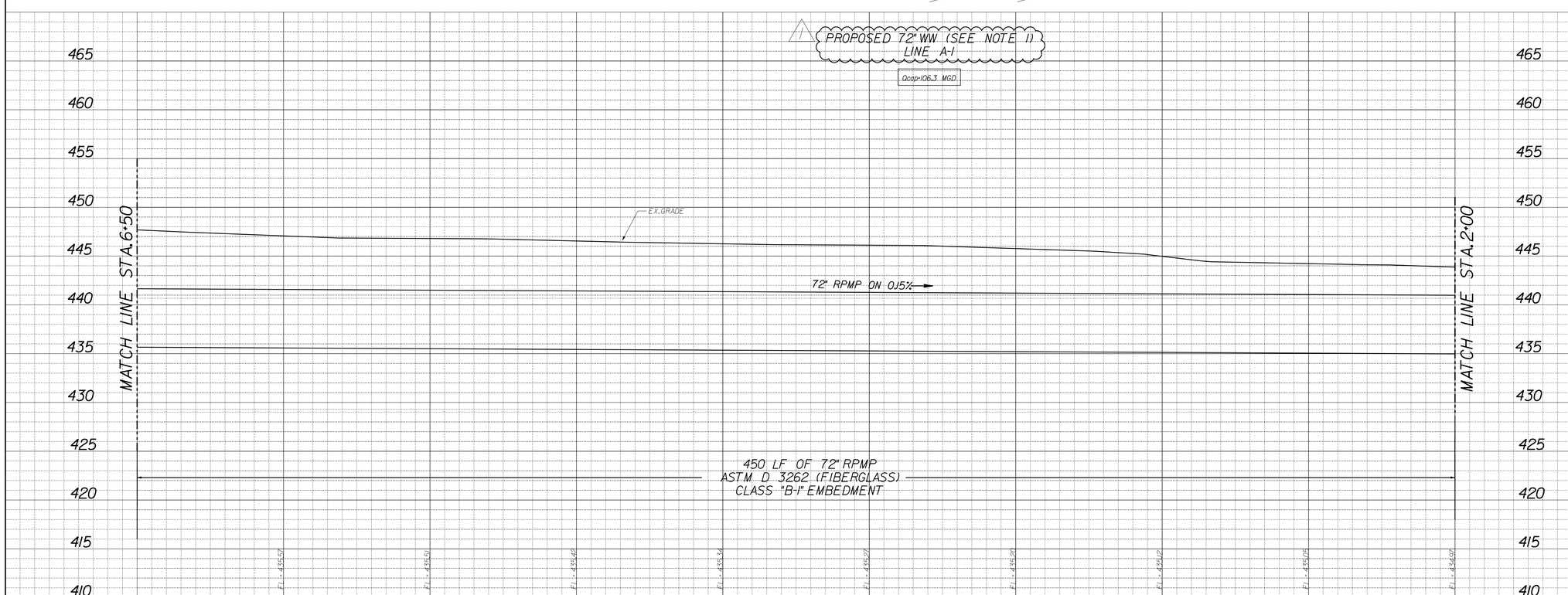


REVISIONS

| REV NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
STD.WDBM ON CONCRETE CURB ON NORTHEAST CORNER OF INTERSECTION OF E.FRIO DR.& E.LEDBETTER DR.
ELEV = 463.653

BENCHMARK 65-F-1
A SQUARE IS ON CONCRETE CURB RADIUS.SOUTHWEST CORNER OF INTERSECTION OF STROBEL AVE.& ADELAIDE DR.
ELEV = 463.653

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|---|---|---|---|---|
| 50 | 6935103.233 | 2493249.769 | 444.853 | 5/8" CIRS |
| 51 | 6935544.714 | 2493005.989 | 446.563 | 5/8" CIRS |
| 52 | 6936073.123 | 2492818.542 | 454.163 | 5/8" CIRS |
| 53 | 6935794.418 | 2492404.703 | 446.678 | 5/8" CIRS |
| 54 | 6935680.697 | 2491962.760 | 448.233 | 5/8" CIRS |
| 55 | 6935610.181 | 2491553.368 | 449.263 | 5/8" CIRS |

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES

WATER
55-25W, 56-25W

WASTEWATER
BH G-17, 55-25S, 56-25S

STATE OF TEXAS
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06/09/2021

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Web - www.freese.com

CONTRACT NO. 21-124 | PID: 6358

# PROPOSED 72" WASTEWATER

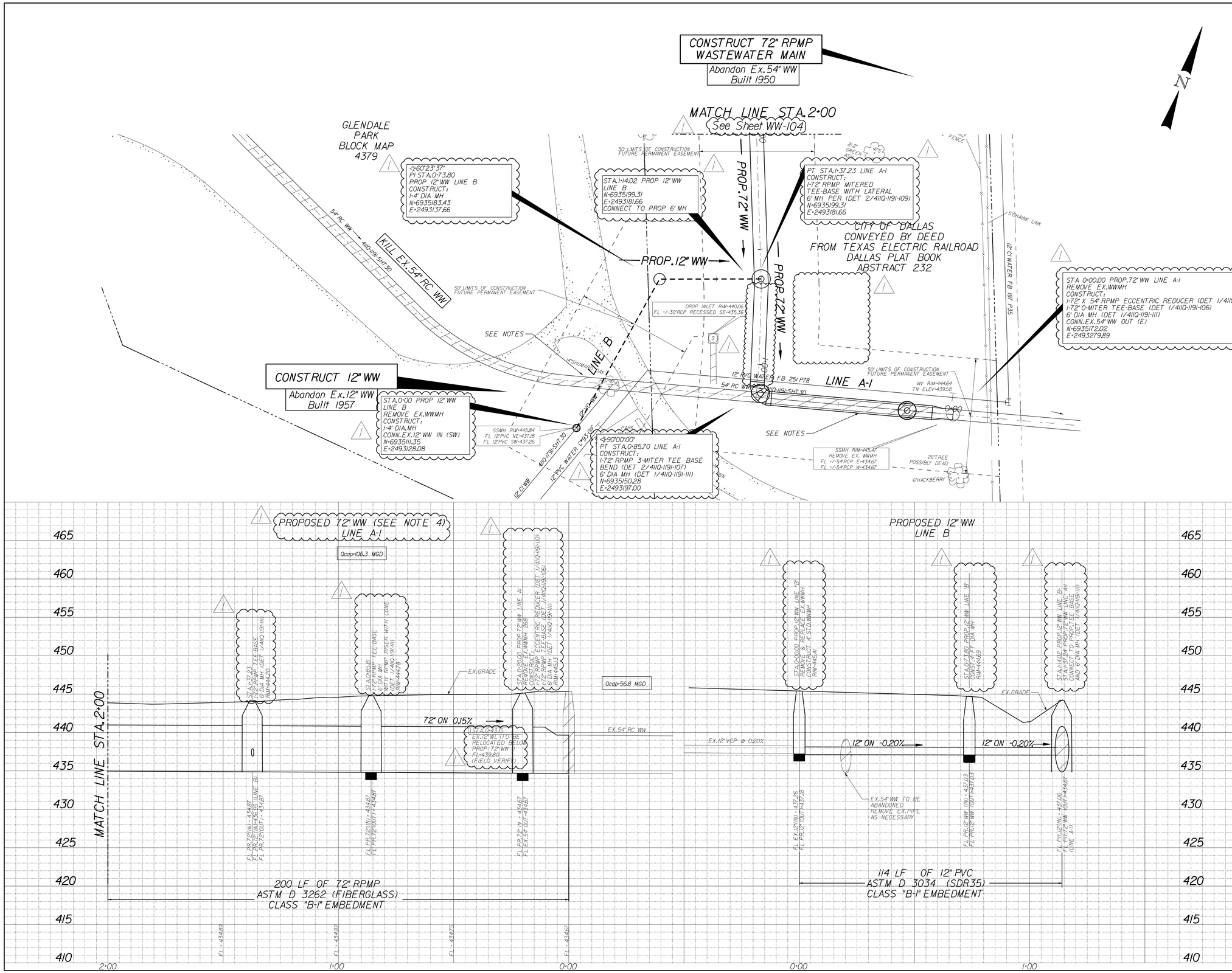
## STA.6+50 TO STA.2+00

## FROM E.LEDBETTER DR. TO E.FRIO DR.

## DALLAS WATER UTILITIES

## CITY OF DALLAS, TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 104 |




NOTES:
1. LINE B CONSTRUCTION SHALL NOT BE COMPLETED UNTIL LINE A-1 AND LINES A-2 ARE CONSTRUCTED, ACCEPTED, AND IN SERVICE (EX.54" WW ABANDONED).
2. CONTRACTOR TO REMOVE EXTENT OF ABANDONED PORTION OF EXISTING 54" WW AS REQUIRED TO CONSTRUCT PROPOSED 12" WW MAINS.
3. NO SEPARATE PAY ITEM FOR REQUIRED REMOVAL OF EXISTING 54" WW TO FACILITATE CONSTRUCTION OF PROPOSED 72" AND 12" WW MAINS.
4. 72-IN. WIDE BY 6-IN. THICK UNREINFORCED CLASS B CONCRETE SLAB TO BE INSTALLED 1 FOOT ABOVE PIPE CROWN TO PREVENT PIPE FLOTATION.

## UNDERGROUND UTILITIES

THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THSE PLANS ARE APPROXIMATE AND BASED ON DATA FURNISHED BY UTILITY COMPANIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND VERIFY ON-SITE THE UTILITIES THAY MAY CONFILCT WITH THE CONSTRUCTION. CALL 1-800-344-8377 TWO WORKING DAYS PRIOR TO CONSTRUCTION FOR ON-SITE LOCATIONS.




## REVISIONS

| REV NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

## BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
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ELEV = 463.653

BENCHMARK 65-F-1
A SQUARE IS ON CONCRETE CURB RADIUS, SOUTHWEST CORNER OF INTERSECTION OF STROBEL AVE.& ADELAIDE DR.
ELEV = 463.653

| Point | Northing | Easting | Elev. | Description |
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WASTEWATER
BH G-17, 55-25S, 56-25S

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Dallas, TX 75204
Phone - (214) 217-2200
Web - www.freese.com

CONTRACT NO. 21-124 | PID: 6358

# PROPOSED 72" WW & 12" WW

## STA.2+00 TO STA.0+00

## FROM E.LEDBETTER DR. TO E.FRIO DR.

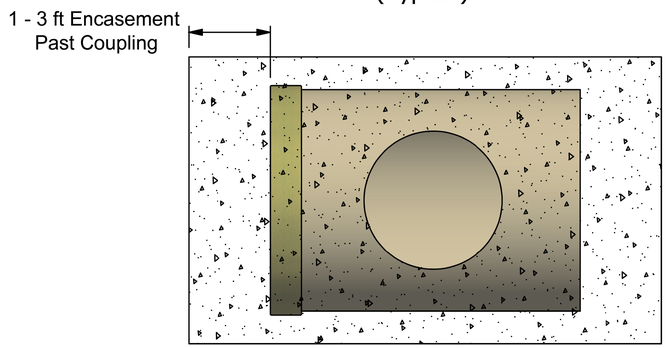
## DALLAS WATER UTILITIES

## CITY OF DALLAS, TEXAS

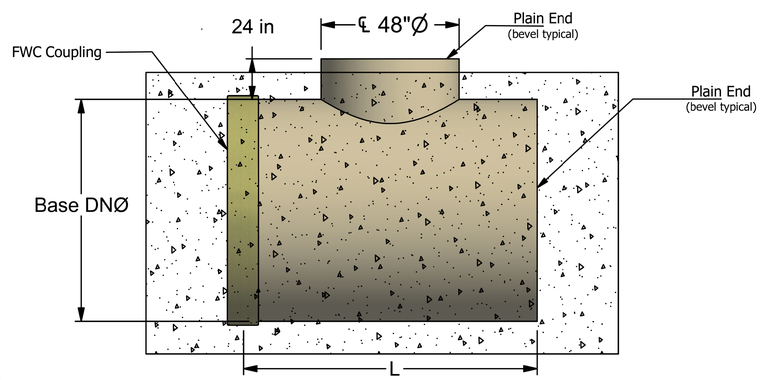
| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 105 |

# 0-Miter Tee-Base

(Typical)




Plan View




Elevation View

## Notes:

1. Concrete Encasement (designed by others) is to resist all T-Base deformations.
2. Contractor to coordinate top Elevation of Concrete Encasement with FRP Manhole Manufacturer.
3. See HOBAS Tee Base Manhole System Technical Advise Sheets for additional information.

Project: Sample Detail for Tee-Bases
Dallas Water Utilities (DWU)
Dallas, TX

PART NO.:

CONTRACTOR:

Description:

HOBAS

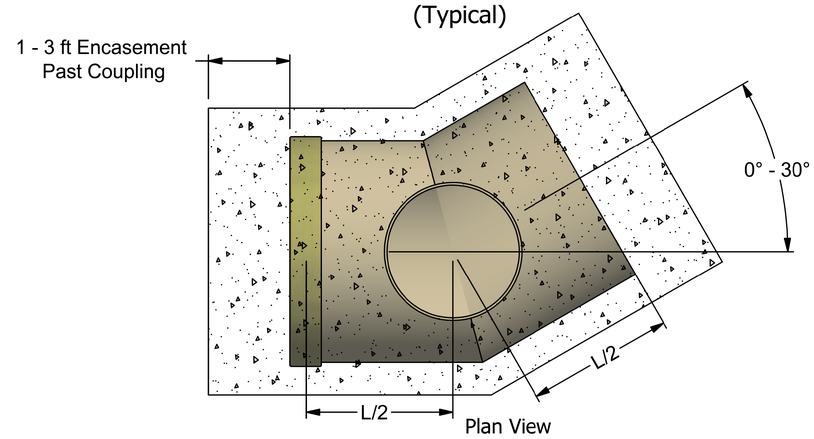
| DRWN. BY | REV |
|---|---|
| GAC | |

03-09-2016

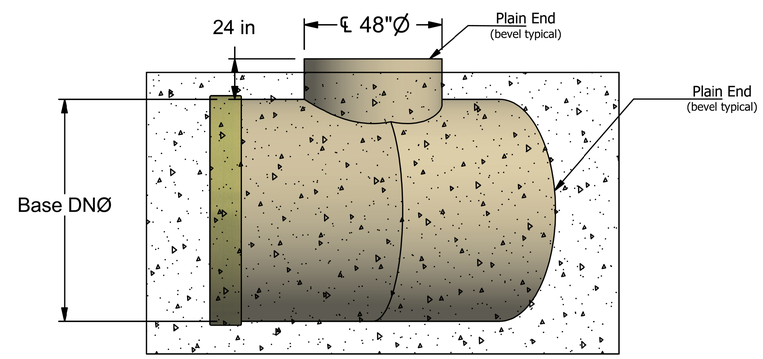
HOBAS
FRP 0-MITER TEE BASE
NOT TO SCALE

# 1-Miter Tee-Base

(Typical)




Plan View




Elevation View

## Notes:

1. Concrete Encasement (designed by others) is to resist all T-Base deformations.
2. Contractor to coordinate top Elevation of Concrete Encasement with FRP Manhole Manufacturer.
3. See HOBAS Tee Base Manhole System Technical Advise Sheets for additional information.

Project: Sample Detail for Tee-Bases
Dallas Water Utilities (DWU)
Dallas, TX

PART NO.:

CONTRACTOR:

Description:

HOBAS

| DRWN. BY | REV |
|---|---|
| GAC | |

03-09-2016

HOBAS
FRP 1-MITER TEE BASE
NOT TO SCALE

REVISIONS

| REV NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
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| 54 | 6935680.697 | 2491962.760 | 448.233 | 5/8" CIRS |
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REFERENCES

WATER
55-25W, 56-25W

WASTEWATER
BH G-17, 55-25S, 56-25S

STATE OF TEXAS
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Web - www.freese.com

CONTRACT NO. 21-124 | PID: 6358

DETAILS

HOBAS FITTING DETAILS SHT #1

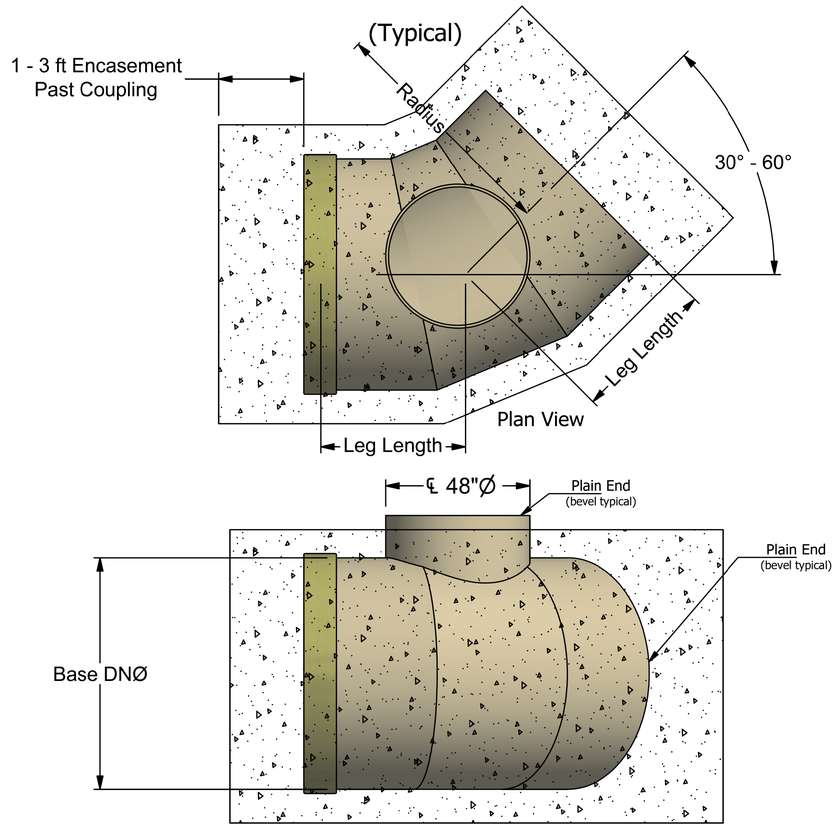
FROM E.LEDBETTER DR.TO E.FRIO DR.

DALLAS WATER UTILITIES

CITY OF DALLAS, TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 106 |

## 2-Miter Tee-Base



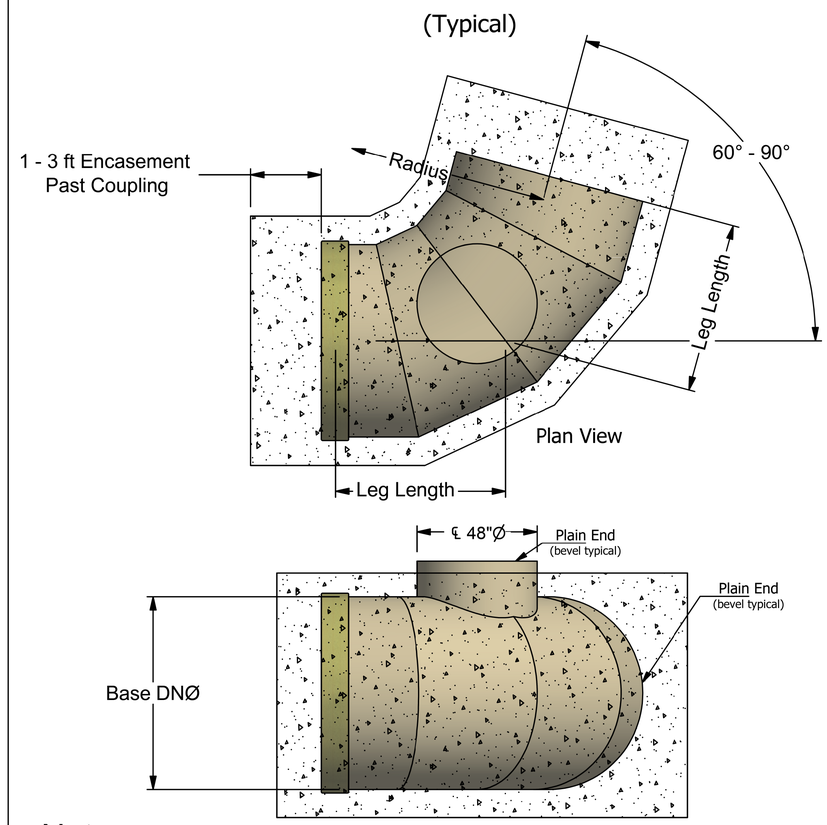

## Notes:

1. Concrete Encasement (designed by others) is to resist all T-Base deformations.
2. Contractor to coordinate top Elevation of Concrete Encasement with FRP Manhole Manufacturer.
3. See HOBAS Tee Base Manhole System Technical Advise Sheets for additional information.

| | | |
|---|---|---|
| Project: Sample Detail for Tee-Bases<br>Dallas Water Utilities (DWU)<br>Dallas, TX | PART NO.:<br>CONTRACTOR: | HOBAS<br>DRWN. BY: GAC<br>REV:<br>03-09-2016 |
| Description: | | |

HOBAS
FRP 2-MITER TEE BASE
3
NOT TO SCALE

## 3-Miter Tee-Base




## Notes:

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3. See HOBAS Tee Base Manhole System Technical Advise Sheets for additional information.

| | | |
|---|---|---|
| Project: Sample Detail for Tee-Bases<br>Dallas Water Utilities (DWU)<br>Dallas, TX | PART NO.:<br>CONTRACTOR: | HOBAS<br>DRWN. BY: GAC<br>REV:<br>03-09-2016 |
| Description: | | |

HOBAS
FRP 3-MITER TEE BASE
4
NOT TO SCALE

REVISIONS

| REV NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
STD.WDBM ON CONCRETE CURB ON NORTHEAST CORNER OF INTERSECTION OF E.FRIO DR.& E.LEDBETTER DR.
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| 55 | 6935610.181 | 2491553.368 | 449.263 | 5/8" CIRS |

REFERENCES
WATER
55-25W, 56-25W
WASTEWATER
BH G-17, 55-25S, 56-25S

STATE OF TEXAS
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PROFESSIONAL ENGINEER
06/09/2021

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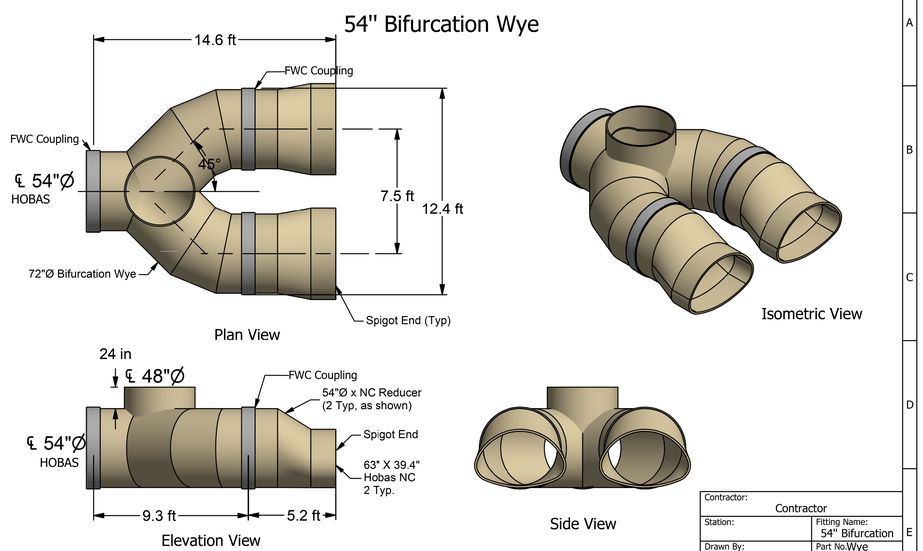
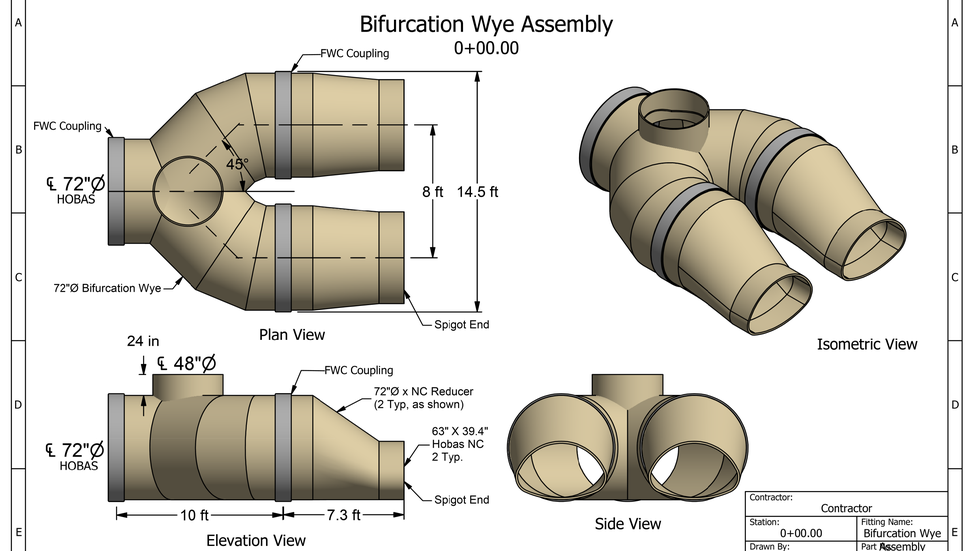
CONTRACT NO. 21-124 | PID: 6358

DETAILS
HOBAS FITTING DETAILS SHT #2
FROM E.LEDBETTER DR.TO E.FRIO DR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 107 |




HOBAS
54"x39.4"x63" SEMI-ELL BIFURCATION WYE ASSEMBLY
NOT TO SCALE




HOBAS
72"x39.4"x63" SEMI-ELL BIFURCATION WYE ASSEMBLY
NOT TO SCALE

REVISIONS

| REV NO. | DATE | DESCRIPTION | BY |
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| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
STD.WDBM ON CONCRETE CURB ON NORTHEAST CORNER OF INTERSECTION OF E.FRIO DR.& E.LEDBETTER DR.
ELEV = 463.653

BENCHMARK 65-F-1
A SQUARE IS ON CONCRETE CURB RADIUS,SOUTHWEST CORNER OF INTERSECTION OF STROBEL AVE.& ADELAIDE DR.
ELEV = 463.653

| Point | Northing | Easting | Elev. | Description |
|---|---|---|---|---|
| 50 | 6935103.233 | 2493249.769 | 444.853 | 5/8" CIRS |
| 51 | 6935544.714 | 2493005.989 | 446.563 | 5/8" CIRS |
| 52 | 6936073.123 | 2492818.542 | 454.163 | 5/8" CIRS |
| 53 | 6935794.418 | 2492404.703 | 446.678 | 5/8" CIRS |
| 54 | 6935680.697 | 2491962.760 | 448.233 | 5/8" CIRS |
| 55 | 6935610.181 | 2491553.368 | 449.263 | 5/8" CIRS |

REFERENCES

WATER
55-25W, 56-25W

WASTEWATER
BH G-17, 55-25S, 56-25S

STATE OF TEXAS
MICHAEL R. HAGEN
111955
LICENSED
PROFESSIONAL ENGINEER
06/09/2021
FREESE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING
FIRM F-2144

FREESE AND NICHOLS
2711 North Haskell Avenue, Suite 3300
Dallas, TX 75204
Phone - (214) 217-2200
Web - www.freese.com

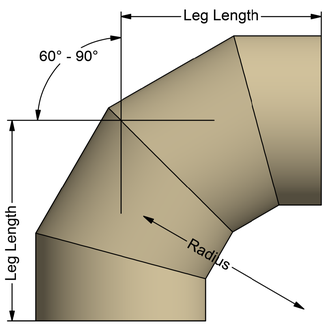
CONTRACT NO. 21-124 | PID: 6358

# DETAILS

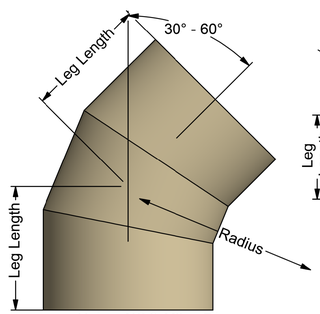
HOBAS FITTING DETAILS SHT #3
FROM E.LEDBETTER DR.TO E.FRIO DR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 108 |

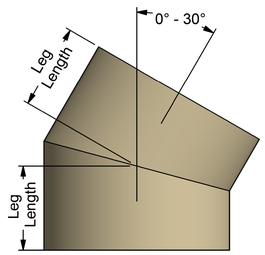
## Elbow Drawings



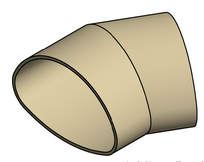

Hobas NC 3-Miter Elbow
Plan View



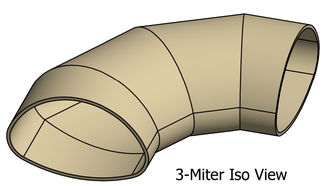

Hobas NC 2-Miter Elbow
Plan View



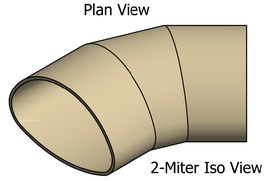

Hobas NC 1-Miter Elbow
Plan View



1-Miter Iso View



3-Miter Iso View



2-Miter Iso View

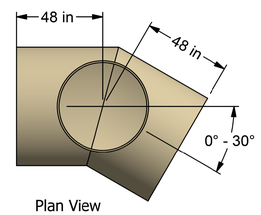
| Elbow Dimensions | | | |
|---|---|---|---|
| Number of Miters | Angle | Radius | Leg Length |
| 1-Miter | 0°-30° | N/A | 30" |
| 2-Miter | 30°-60° | 72" | 42"-51" |
| 3-Miter | 60°-90° | 72" | 54"-84" |

Contractor: Contractor
Station:
Fitting Name: Elbow Drawings
Drawn By: G. Castelblanco
Part No.
Pipe Description: Line 1 / Line 2 / Line 3
Project Name: Glendale Park
Project Location: Dallas, TX
Agency: DWU

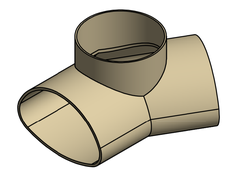
**HOBAS Pipe USA**
1413 E. Richey Road
Houston, Texas 77073
281-821-2200
www.hobaspipe.com
HOBAS®

HOBAS
SEMI-ELL 1-MITER, 2-MITER, & 3-MITER ELBOWS
1
NOT TO SCALE

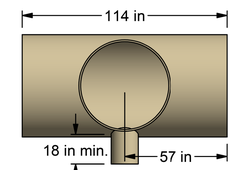
## Tee-Base Drawings



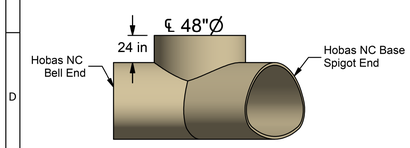

Plan View



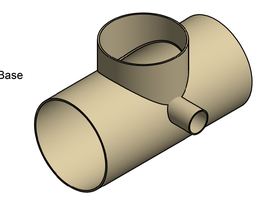
Iso View



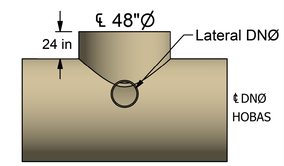

Plan View




Hobas NC Tee-Base



Iso View




Hobas Tee-Base w/ Lateral

Notes:
1. Concrete Encasement (designed by others) is to resist all T-Base deformations.
2. Contractor to coordinate top Elevation of Concrete Encasement with Manhole Manufacturer.
3. See HOBAS Branch Fitting's Concrete Encasement Technical Advice Sheets for additional information.
4. All linear dimensions are ± 0.50".

Contractor: Contractor
Station:
Fitting Name: Tee-Base Drawings
Drawn By: G. Castelblanco
Part No.
Pipe Description: Line 1 / Line 2 / Line 3
Project Name: Glendale Park
Project Location: Dallas, TX
Agency: DWU

**HOBAS Pipe USA**
1413 E. Richey Road
Houston, Texas 77073
281-821-2200
www.hobaspipe.com
HOBAS®

HOBAS
SEMI-ELL TEE BASE AND TEE BASE WITH LATERAL
2
NOT TO SCALE

REVISIONS

| REV NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
STD.MCDBM ON CONCRETE CURB ON NORTHEAST CORNER OF INTERSECTION OF E.FRIO DR.& E.LEDBETTER DR.
ELEV = 463.653

BENCHMARK 65-F-1
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ELEV = 463.653

| Point | Northing | Easting | Elev. | Description |
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| 55 | 6935610.181 | 2491553.368 | 449.263 | 5/8" CIRS |

REFERENCES
WATER
55-25W, 56-25W
WASTEWATER
BH G-17, 55-25S, 56-25S

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TEXAS REGISTERED ENGINEERING
FIRM F-2144

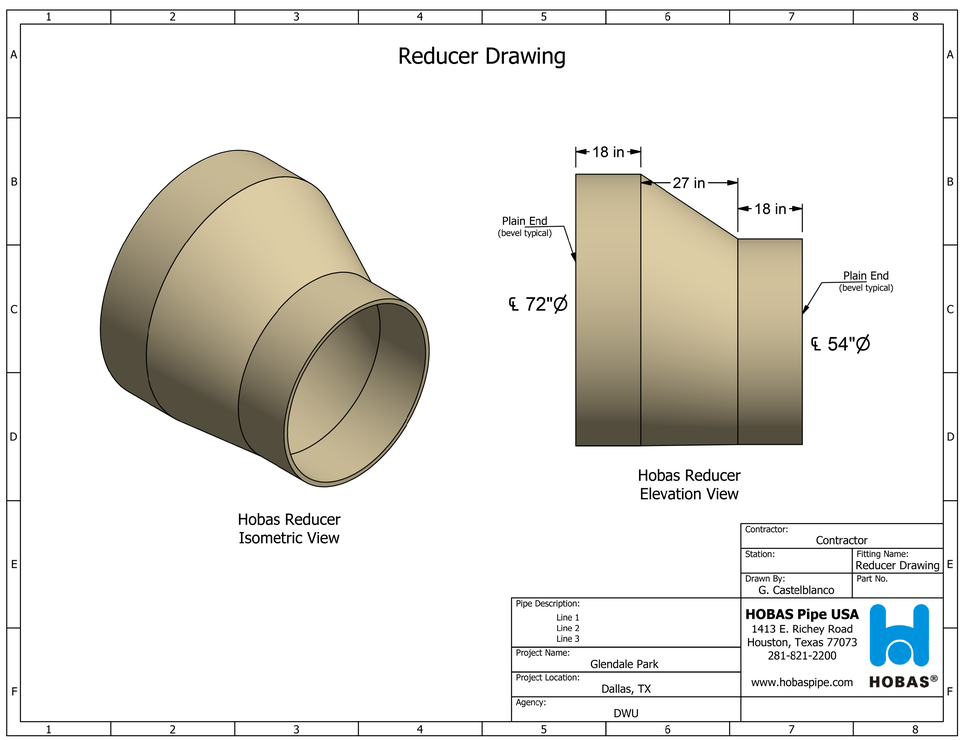
FREESE AND NICHOLS
2711 North Haskell Avenue, Suite 3300
Dallas, TX 75204
Phone - (214) 217-2200
Web - www.freese.com

CONTRACT NO. 21-124 | PID: 6358

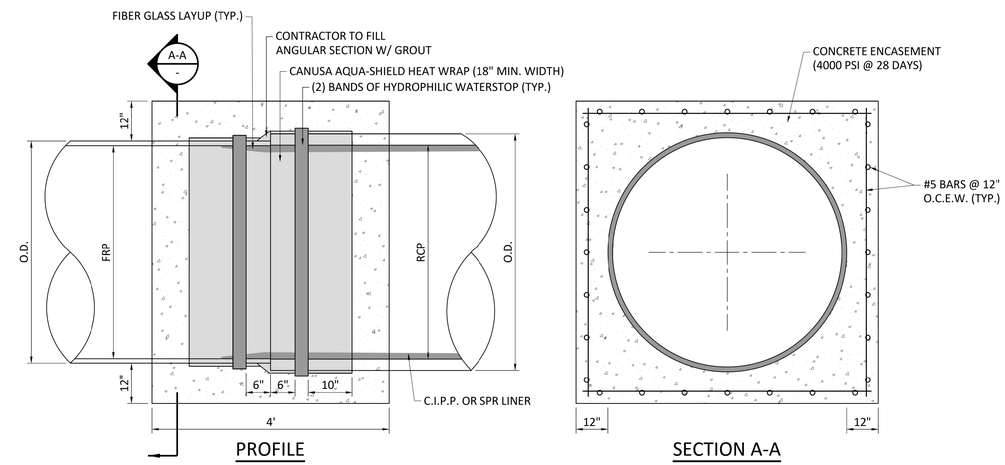
# DETAILS

HOBAS FITTING DETAILS SHT #4
FROM E.LEDBETTER DR.TO E.FRIO DR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 109 |




HOBAS
72"x54" ECCENTRIC REDUCER
1
NOT TO SCALE




2 CLOSURE COUPLING DETAIL
NOT TO SCALE

| REVISIONS | | | |
|---|---|---|---|
| REV NO. | DATE | DESCRIPTION | BY |
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
STD.WDBM ON CONCRETE CURB ON NORTHEAST CORNER OF INTERSECTION OF E.FRIO DR.& E.LEDBETTER DR.
ELEV = 463.653

BENCHMARK 65-F-1
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ELEV = 463.653

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REFERENCES
WATER
55-25W, 56-25W
WASTEWATER
BH G-17, 55-25S, 56-25S

STATE OF TEXAS
MICHAEL R. HAGEN
111955
LICENSED
PROFESSIONAL ENGINEER
06/09/2021

FREESE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING
FIRM F-2144

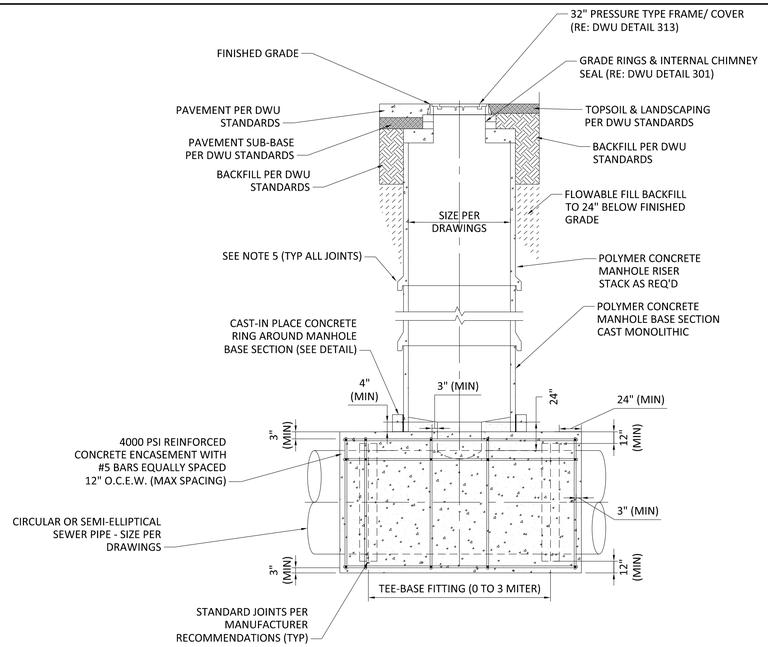
FREESE AND NICHOLS
2711 North Haskell Avenue, Suite 3300
Dallas, TX 75204
Phone - (214) 217-2200
Web - www.freese.com

CONTRACT NO. 21-124 | PID: 6358

# DETAILS

HOBAS FITTING DETAILS SHT #5
FROM E.LEDBETTER DR.TO E.FRIO DR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

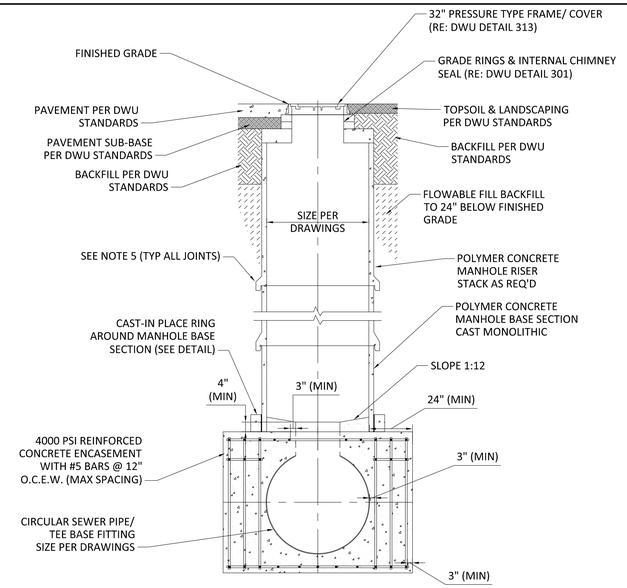
| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 110 |




A

## TEE-BASE FITTING SIDE VIEW
## CIRCULAR & SEMI-ELLIPTICAL PIPE

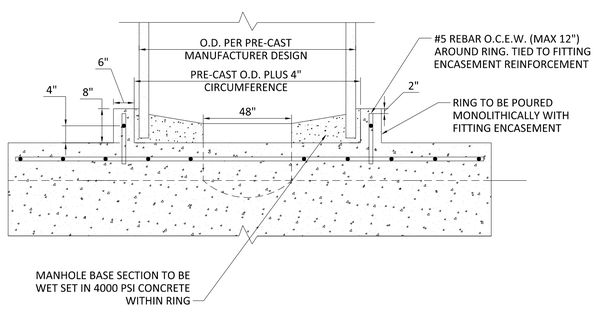
NOT TO SCALE




B

## TEE-BASE FITTING AXIAL VIEW
## CIRCULAR PIPE

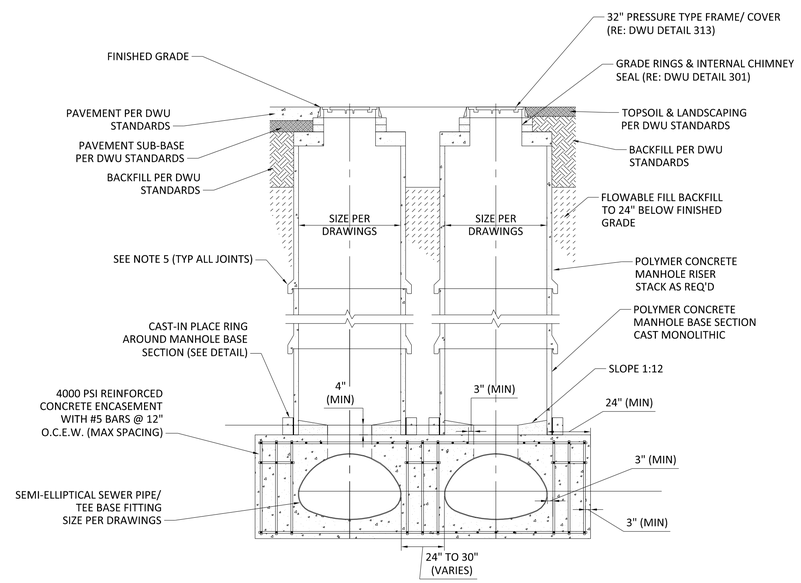
NOT TO SCALE




D

## MANHOLE CAST MONOLITHIC RING DETAIL

NOT TO SCALE




C

## TEE-BASE FITTING AXIAL VIEW
## PARALLEL SEMI-ELLIPTICAL PIPES

NOT TO SCALE

NOTES:

1. CONSTRUCTION TO BE DONE IN ACCORDANCE WITH DWU REQUIREMENTS.
2. CONTRACTOR TO REFERENCE DWU WASTEWATER MANHOLE CONSTRUCTION GENERAL NOTES AND DETAILS FOR ADDITIONAL INFORMATION.
3. TEE-BASE FITTING INSTALLATION TO BE DONE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS/REQUIREMENTS.
4. PRECAST MANHOLE DESIGN TO MEET AASHTO HL93 TRUCK LOAD CRITERIA.
5. POLYMER CONCRETE MANHOLE TO BE DUROROCK OR APPROVED EQUAL.
6. PRE-CAST JOINTS SHALL CONFORM TO ASTM C478.
7. EXPOSED CAST-IN-PLACE CONCRETE WITHIN MANHOLE TO BE EPOXY COATED; RAVEN LININGS, OR EQUAL

1

## TEE BASE FITTING/
## POLYMER CONCRETE MANHOLE (FLAT TOP)

NOT TO SCALE

| REVISIONS | | | |
|---|---|---|---|
| REV NO. | DATE | DESCRIPTION | BY |
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
STD.WDBM ON CONCRETE CURB ON NORTHEAST CORNER OF INTERSECTION OF E.FRIO DR.& E.LEDBETTER DR.
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REFERENCES

WATER
55-25W, 56-25W

WASTEWATER
BH G-17, 55-25S, 56-25S

STATE OF TEXAS
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06/09/2021

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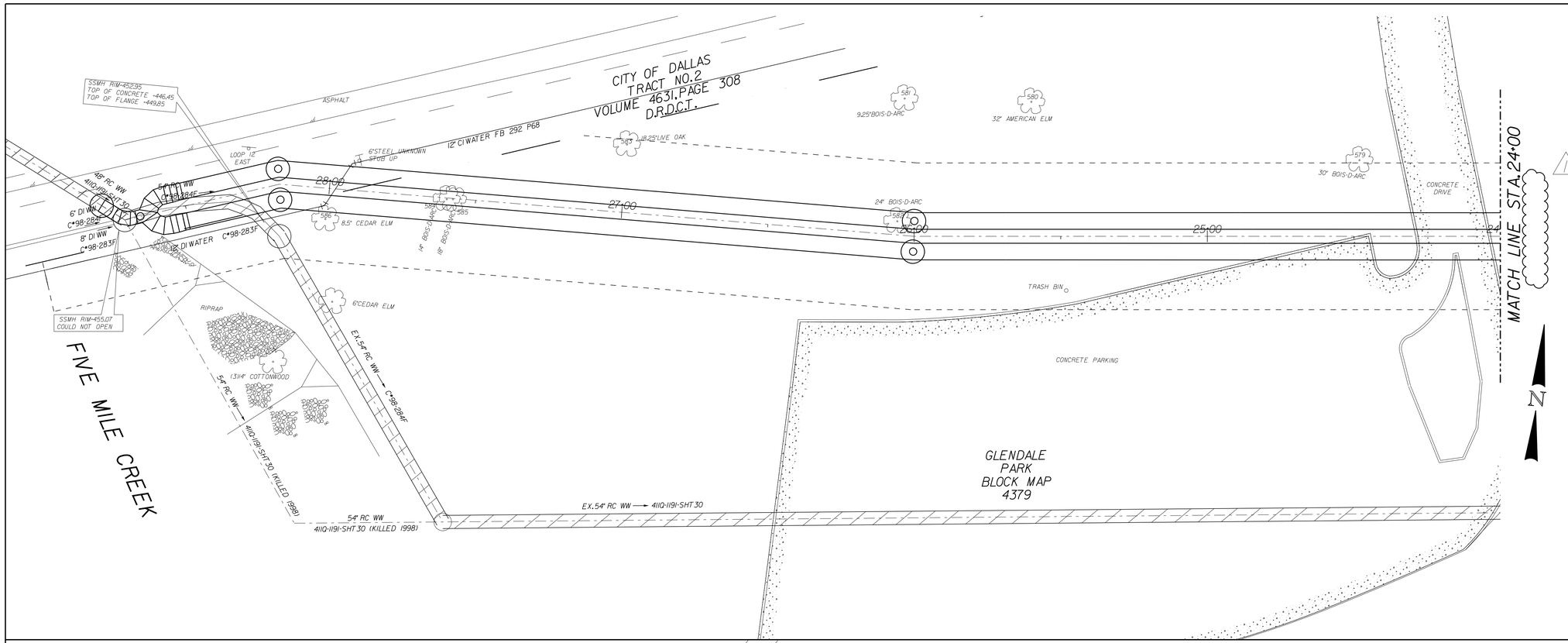
Dallas, TX 75204
Phone - (214) 217-2200
Web - www.freese.com

CONTRACT NO.21-124 | PID:6358

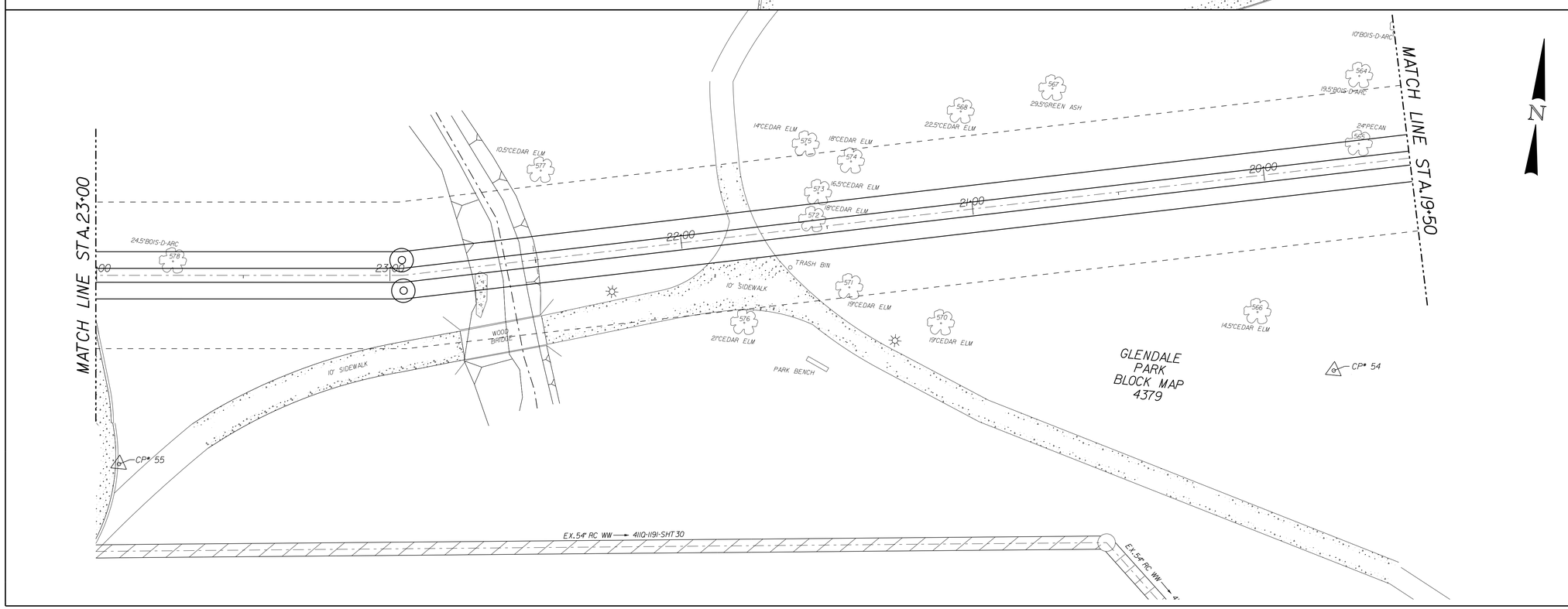
# DETAILS

TEE BASE MANHOLE DETAIL
FROM E.LEDBETTER DR.TO E.FRIO DR.
DALLAS WATER UTILITIES
CITY OF DALLAS,TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 111 |




| TREES TO BE REMOVED |
|---|
| 586 |
| 585 |
| 584 |
| 582 |
| 578 |
| 574 |
| 573 |
| 572 |
| 565 |




| REVISIONS | | | |
|---|---|---|---|
| REV NO. | DATE | DESCRIPTION | BY |
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

## BENCHMARKS & CONTROL POINTS

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Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
55-25W, 56-25W
WASTEWATER
BH G-17, 55-25S, 56-25S

STATE OF TEXAS
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06/09/2021

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FIRM F-2144

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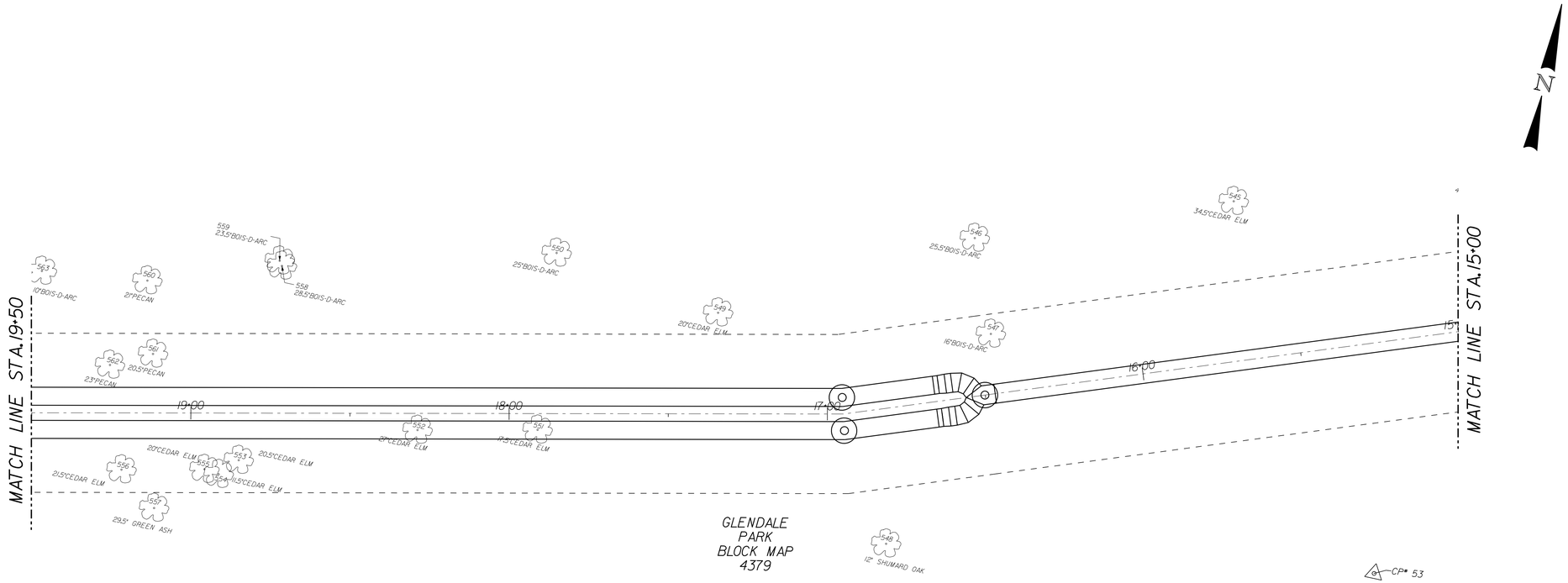
Dallas, TX 75204
Phone - (214) 217-2200
Web - www.freese.com

CONTRACT NO.21-124 | PID:6358

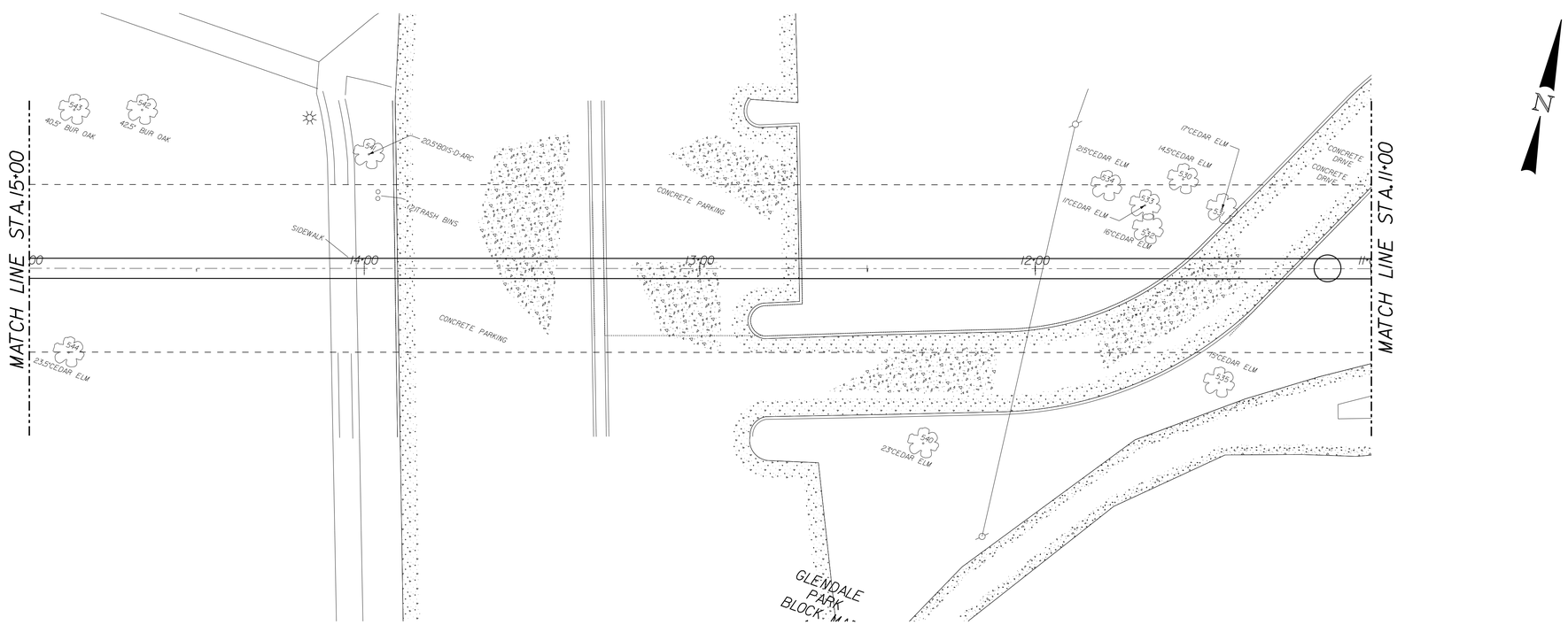
# TREE EXHIBIT

STA.28+80.49 TO STA.19+50
FROM E.LEDBETTER DR.TO E.FRIO DR.
DALLAS WATER UTILITIES
CITY OF DALLAS.TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 4110 | 1191 | 112 |




| TREES TO BE REMOVED |
|---|
| 562 |
| 561 |
| 556 |
| 555 |
| 554 |
| 553 |
| 552 |
| 551 |
| 547 |
| 533 |
| 532 |
| 531 |




## REVISIONS

| REV NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

## BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
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| 54 | 6935680.697 | 2491962.760 | 448.233 | 5/8" CIRS |
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Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
55-25W, 56-25W
WASTEWATER
BH G-17, 55-25S, 56-25S

STATE OF TEXAS
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PROFESSIONAL ENGINEER
06/09/2021
FREESE AND NICHOLS, INC.
TEXAS REGISTERED ENGINEERING
FIRM F-2144

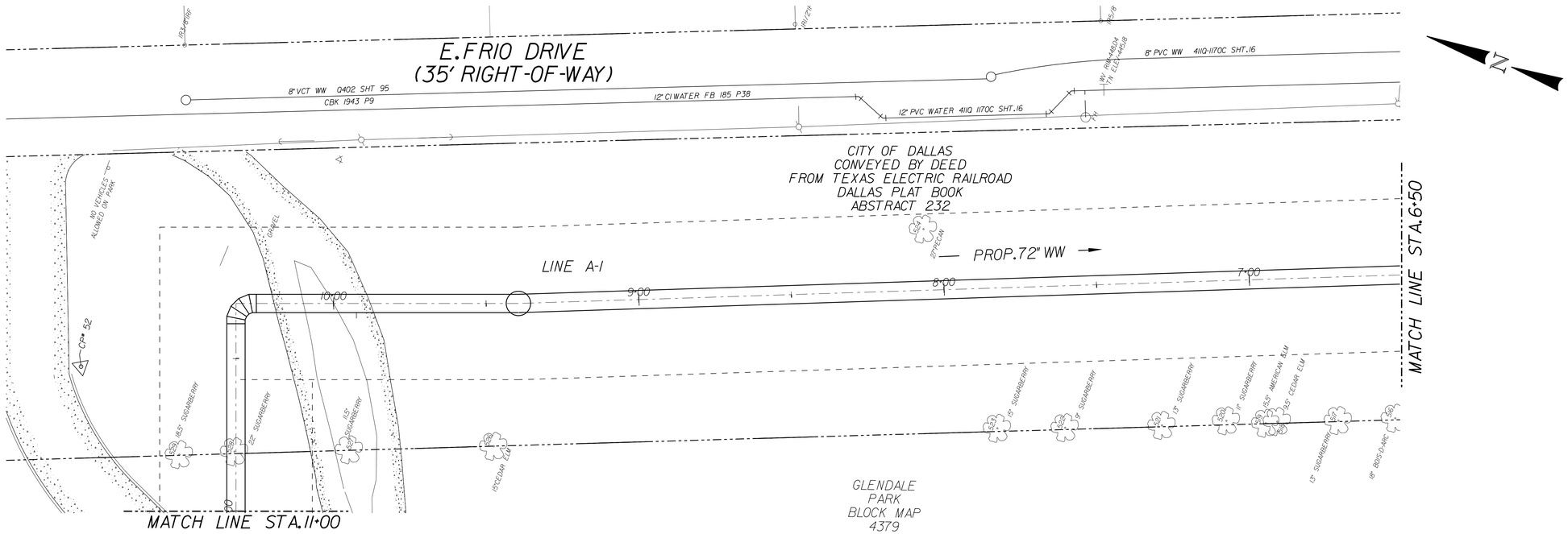
FREESE AND NICHOLS
2711 North Haskell Avenue, Suite 3300
Dallas, TX 75204
Phone - (214) 217-2200
Web - www.freese.com

CONTRACT NO.21-124 | PID:6358

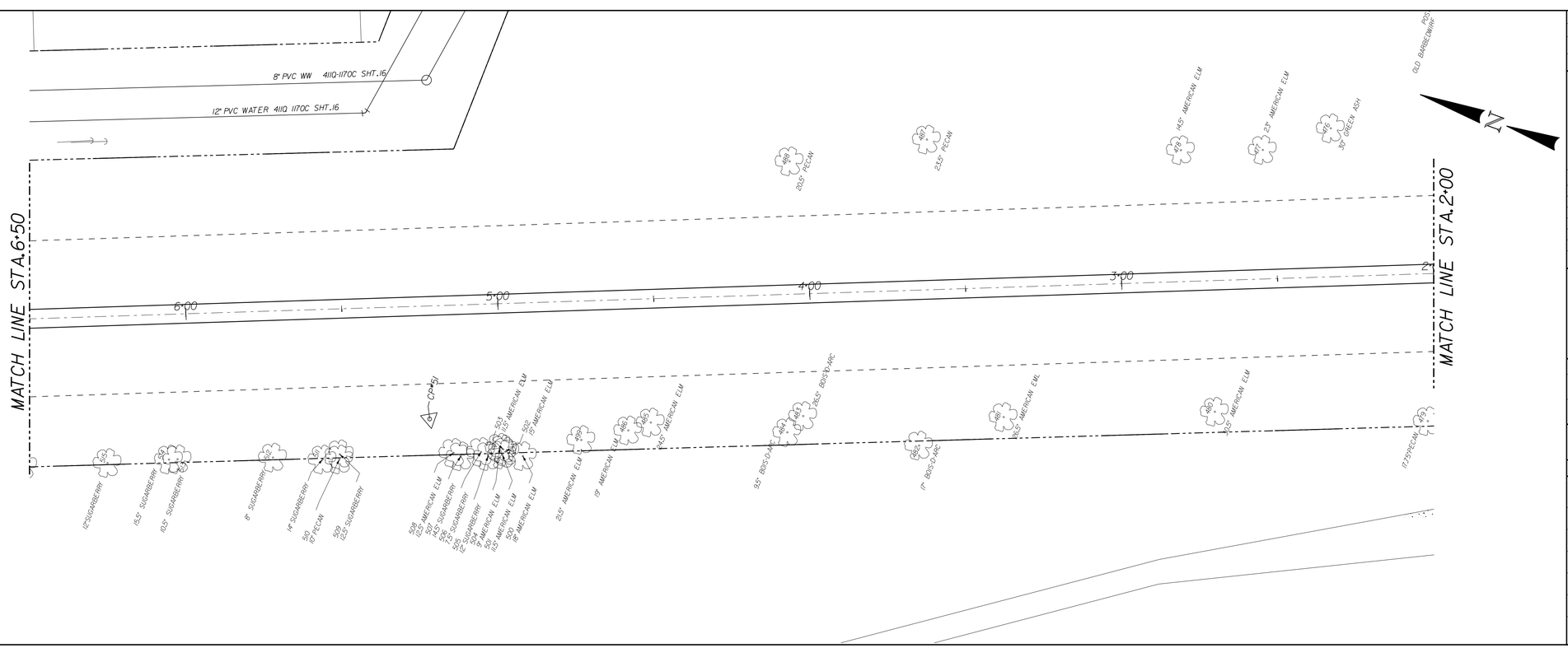
# TREE EXHIBIT

STA.19+50 TO STA.11+00
FROM E.LEDBETTER DR.TO E.FRIO DR.
DALLAS WATER UTILITIES
CITY OF DALLAS,TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 113 |




| TREES TO BE REMOVED |
|---|
| 529 |
| 528 |
| 524 |




## REVISIONS

| REV NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

## BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
STD.WDBM ON CONCRETE CURB ON NORTHEAST CORNER OF INTERSECTION OF E.FRIO DR.& E.LEDBETTER DR.
ELEV = 463.653

BENCHMARK 65-F-1
A SQUARE IS ON CONCRETE CURB RADIUS.SOUTHWEST CORNER OF INTERSECTION OF STROBEL AVE.& ADELAIDE DR.
ELEV = 463.653

| Point | Northing | Easting | Elev. | Description |
|---|---|---|---|---|
| 50 | 6935103.233 | 2493249.769 | 444.853 | 5/8" CIRS |
| 51 | 6935544.714 | 2493005.989 | 446.563 | 5/8" CIRS |
| 52 | 6936073.123 | 2492818.542 | 454.163 | 5/8" CIRS |
| 53 | 6935794.418 | 2492404.703 | 446.678 | 5/8" CIRS |
| 54 | 6935680.697 | 2491962.760 | 448.233 | 5/8" CIRS |
| 55 | 6935610.181 | 2491553.368 | 449.263 | 5/8" CIRS |

Horizontal Scale: 1" = 20'
0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

REFERENCES
WATER
55-25W, 56-25W
WASTEWATER
BH G-17, 55-25S, 56-25S

STATE OF TEXAS
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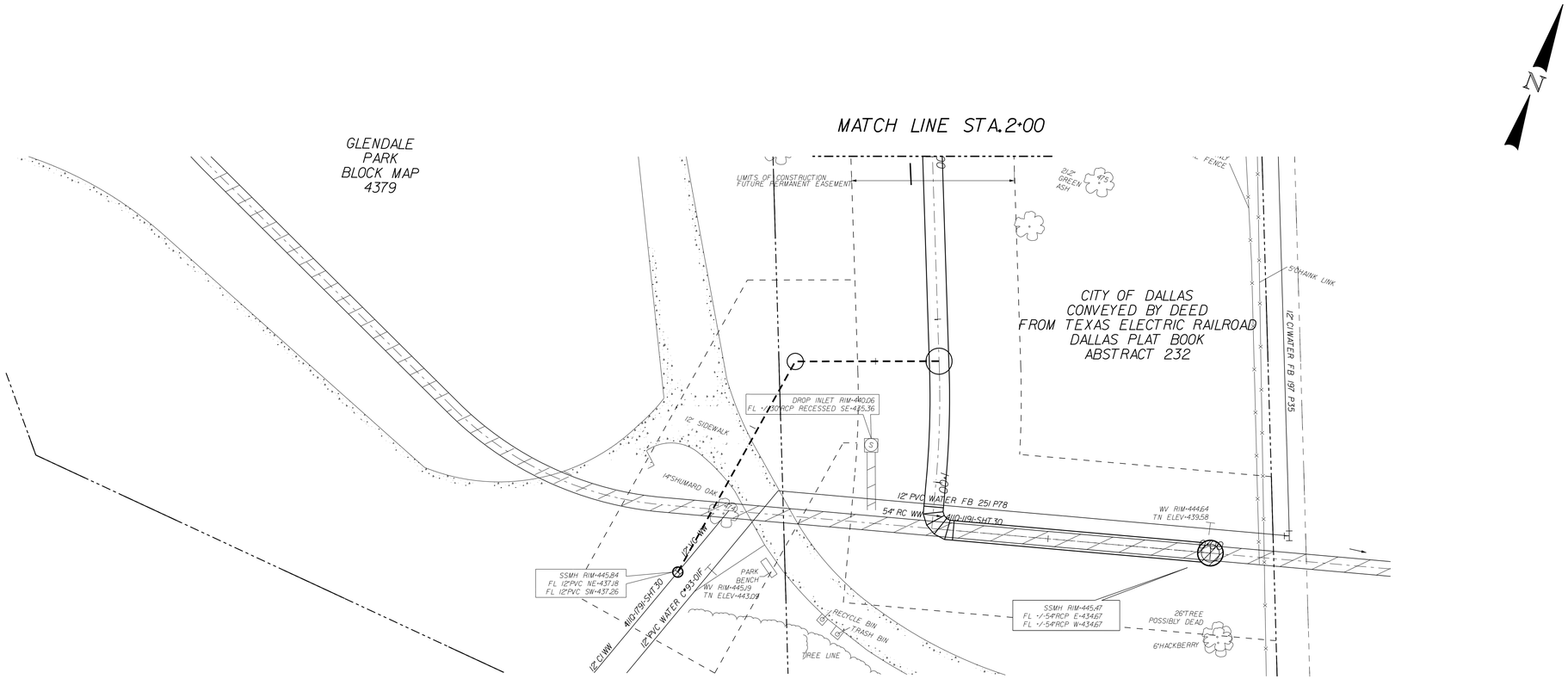
CONTRACT NO. 21-124 | PID: 6358

# TREE EXHIBIT

STA.11+00 TO STA.2+00
FROM E.LEDBETTER DR.TO E.FRIO DR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 114 |




| TREE TO BE REMOVED |
|---|
| 474 |

| REVISIONS | | | |
|---|---|---|---|
| REV NO. | DATE | DESCRIPTION | BY |
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

## BENCHMARKS & CONTROL POINTS

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BENCHMARK 65-F-1
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0' 20' 40'
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55-25W, 56-25W
WASTEWATER
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# TREE EXHIBIT

STA.2+00 TO STA.0+00
FROM E.LEDBETTER DR.TO E.FRIO DR.
DALLAS WATER UTILITIES
CITY OF DALLAS.TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 115 |

| Tag Number | Common Name | Scientific Name | DBH-1 | DBH-2 | DBH-3 | Total DBH* | Status** | Notes | Sheet Reference |
|---|---|---|---|---|---|---|---|---|---|
| 474 | Shumard Oak | *Quercus shumardii* | 14.0 | | | 14.00 | Protected | TO BE REMOVED | |
| 475 | Green Ash | *Fraxinus pennsylvanica* | 29.0 | 27.0 | 25.5 | 27.17 | Protected | | |
| 476 | Green Ash | *Fraxinus pennsylvanica* | 30.0 | | | 30.00 | Protected | outside buffer | |
| 477 | American Elm | *Ulmus americana* | 23.0 | | | 23.00 | Protected | | |
| 478 | American Elm | *Ulmus americana* | 14.5 | | | 14.50 | Protected | | |
| 479 | Pecan | *Carya illinoinensis* | 19.5 | 16.0 | | 17.75 | Protected | | |
| 480 | American Elm | *Ulmus americana* | 30.5 | | | 30.50 | Protected | | |
| 481 | American Elm | *Ulmus americana* | 26.5 | | | 26.50 | Protected | Less than 10% live crown | |
| 482 | Bois d'Arc | *Maclura pomifera* | 17.0 | | | 17.00 | *Not Protected* | | |
| 483 | Bois d'Arc | *Maclura pomifera* | 26.5 | | | 26.50 | *Not Protected* | outside buffer | |
| 484 | Bois d'Arc | *Maclura pomifera* | 9.5 | | | 9.50 | *Not Protected* | outside buffer | |
| 485 | American Elm | *Ulmus americana* | 24.5 | | | 24.50 | Protected | | |
| 486 | American Elm | *Ulmus americana* | 19.0 | | | 19.00 | Protected | | |
| 487 | Pecan | *Carya illinoinensis* | 23.5 | | | 23.50 | Protected | outside buffer | |
| 488 | Pecan | *Carya illinoinensis* | 20.5 | | | 20.50 | Protected | | |
| 489 | Cottonwood | *Populus deltoides* | 42.0 | 25.0 | | 33.50 | Protected | heart rot, outside buffer | |
| 490 | Cottonwood | *Populus deltoides* | 43.0 | | | 43.00 | Protected | outside buffer | |
| 491 | Cottonwood | *Populus deltoides* | 31.5 | | | 31.50 | Protected | outside buffer | |
| 492 | Cottonwood | *Populus deltoides* | 30.5 | | | 30.50 | Protected | outside buffer | |
| 493 | Pecan | *Carya illinoinensis* | 34.0 | | | 34.00 | Protected | heart rot, outside buffer | |
| 494 | Pecan | *Carya illinoinensis* | 22.0 | | | 22.00 | Protected | | |
| 495 | Pecan | *Carya illinoinensis* | 14.5 | | | 14.50 | Protected | outside buffer | |
| 496 | Pecan | *Carya illinoinensis* | 24.5 | | | 24.50 | Protected | outside buffer | |
| 497 | Pecan | *Carya illinoinensis* | 26.5 | 15.5 | | 21.00 | Protected | outside buffer | |
| 498 | Pecan | *Carya illinoinensis* | 21.5 | | | 21.50 | Protected | outside buffer | |
| 499 | American Elm | *Ulmus americana* | 21.5 | | | 21.50 | Protected | | |
| 500 | American Elm | *Ulmus americana* | 18.0 | | | 18.00 | Protected | | |
| 501 | American Elm | *Ulmus americana* | 11.5 | | | 11.50 | Protected | | |
| 502 | American Elm | *Ulmus americana* | 15.0 | | | 15.00 | Protected | | |
| 503 | American Elm | *Ulmus americana* | 11.5 | | | 11.50 | Protected | | |
| 504 | American Elm | *Ulmus americana* | 9.0 | | | 9.00 | Protected | | |
| 505 | Sugarberry | *Celtis laevigata* | 12.0 | | | 12.00 | *Not Protected* | | |
| 506 | Sugarberry | *Celtis laevigata* | 7.5 | | | 7.50 | *Not Protected* | | |
| 507 | Sugarberry | *Celtis laevigata* | 14.5 | | | 14.50 | *Not Protected* | | |
| 508 | American Elm | *Ulmus americana* | 12.5 | | | 12.50 | Protected | | |
| 509 | Sugarberry | *Celtis laevigata* | 12.5 | | | 12.50 | *Not Protected* | Moderate decline | |
| 510 | Pecan | *Carya illinoinensis* | 10.0 | | | 10.00 | Protected | Significant decline | |
| 511 | Sugarberry | *Celtis laevigata* | 14.0 | | | 14.00 | Not Protected | Moderate decline | |
| 512 | Sugarberry | *Celtis laevigata* | 8.0 | | | 8.00 | Not Protected | Moderate decline | |
| 513 | Sugarberry | *Celtis laevigata* | 10.5 | | | 10.50 | Not Protected | Moderate decline | |
| 514 | Sugarberry | *Celtis laevigata* | 15.5 | | | 15.50 | Not Protected | | |
| 515 | Sugarberry | *Celtis laevigata* | 12.0 | | | 12.00 | Not Protected | | |
| 516 | Bois d'Arc | *Maclura pomifera* | 18.0 | | | 18.00 | Not Protected | Moderate decline | |
| 517 | Sugarberry | *Celtis laevigata* | 13.0 | | | 13.00 | Not Protected | | |
| 518 | Cedar Elm | *Ulmus crassifolia* | 9.5 | | | 9.50 | Protected | | |
| 519 | American Elm | *Ulmus americana* | 15.5 | | | 15.50 | Protected | | |
| 520 | Sugarberry | *Celtis laevigata* | 11.0 | | | 11.00 | *Not Protected* | | |
| 521 | Sugarberry | *Celtis laevigata* | 13.0 | | | 13.00 | *Not Protected* | outside buffer | |
| 522 | Sugarberry | *Celtis laevigata* | 9.0 | | | 9.00 | *Not Protected* | | |
| 523 | Sugarberry | *Celtis laevigata* | 15.0 | | | 15.00 | *Not Protected* | Storm damage | |
| 524 | Pecan | *Carya illinoinensis* | 27.0 | | | 27.00 | Protected | TO BE REMOVED | |
| 525 | Pecan | *Carya illinoinensis* | 28.5 | | | 28.50 | Protected | Moderate decline, outside buffer | |
| 526 | Cedar Elm | *Ulmus crassifolia* | 15.0 | | | 15.00 | Protected | | |
| 527 | Sugarberry | *Celtis laevigata* | 11.5 | 11.5 | | 11.50 | *Not Protected* | | |
| 528 | Sugarberry | *Celtis laevigata* | 22.0 | | | 22.00 | *Not Protected* | TO BE REMOVED | |
| 529 | Sugarberry | *Celtis laevigata* | 18.5 | | | 18.50 | *Not Protected* | TO BE REMOVED | |
| 530 | Cedar Elm | *Ulmus crassifolia* | 14.5 | | | 14.50 | *Not Protected* | | |
| 531 | Cedar Elm | *Ulmus crassifolia* | 17.0 | | | 17.00 | Protected | TO BE REMOVED | |

NOTES:
* CALCULATED AS SUM OF ALL STEMS >6-INCHES DIAMETER-AT-BREAST-HEIGHT (DBH) DIVIDED BY THE NUMBER OF SUMMED STEMS, IF ANY.

** AS PER CITY OF DALLAS URBAN FORESTOR AND ARTICLE X-LANDSCAPED AND TREE PRESERVATION REGULATIONS.

REVISIONS

| REV NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 1 | 06-08-21 | ADDENDUM #1 | MEA |
| 2 | | | |

BENCHMARKS & CONTROL POINTS

BENCHMARK 65-L-15
STD.WDBM ON CONCRETE CURB ON NORTHEAST CORNER OF INTERSECTION OF E.FRIO DR.& E.LEDBETTER DR.
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BENCHMARK 65-F-1
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| 51 | 6935544.714 | 2493005.989 | 446.563 | 5/8" CIRS |
| 52 | 6936073.123 | 2492818.542 | 454.163 | 5/8" CIRS |
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| 54 | 6935680.697 | 2491962.760 | 448.233 | 5/8" CIRS |
| 55 | 6935610.181 | 2491553.368 | 449.263 | 5/8" CIRS |

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0' 20' 40'
Vertical Scale: 1" = 6'
0' 6' 12'

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55-25W, 56-25W
WASTEWATER
BH G-17, 55-25S, 56-25S

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# TREE EXHIBIT

TREE SURVEY TABLE SHT #1
FROM E.LEDBETTER DR.TO E.FRIO DR.
DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 116 |

| Tag Number | Common Name | Scientific Name | DBH-1 | DBH-2 | DBH-3 | Total DBH* | Status** | Notes | Sheet Reference |
|---|---|---|---|---|---|---|---|---|---|
| 532 | Cedar Elm | *Ulmus crassifolia* | 16.0 | | | 16.00 | Protected | TO BE REMOVED | |
| 533 | Cedar Elm | *Ulmus crassifolia* | 11.0 | | | 11.00 | Protected | TO BE REMOVED | |
| 534 | Cedar Elm | *Ulmus crassifolia* | 21.5 | | | 21.50 | Protected | | |
| 535 | Cedar Elm | *Ulmus crassifolia* | 15.0 | | | 15.00 | Protected | | |
| 536 | Cedar Elm | *Ulmus crassifolia* | 21.0 | | | 21.00 | Protected | | |
| 537 | Cedar Elm | *Ulmus crassifolia* | 11.0 | | | 11.00 | Protected | | |
| 538 | Cedar Elm | *Ulmus crassifolia* | 10.5 | | | 10.50 | Protected | | |
| 539 | Cedar Elm | *Ulmus crassifolia* | 28.5 | | | 28.50 | Protected | | |
| 540 | Cedar Elm | *Ulmus crassifolia* | 23.0 | | | 23.00 | Protected | | |
| 541 | Bois d'Arc | *Maclura pomifera* | 20.5 | | | 20.50 | *Not Protected* | | |
| 542 | Bur Oak | *Quercus marcoparpa* | 42.5 | | | 42.50 | Protected | | |
| 543 | Bur Oak | *Quercus marcoparpa* | 40.5 | | | 40.50 | Protected | | |
| 544 | Cedar Elm | *Ulmus crassifolia* | 23.5 | | | 23.50 | Protected | | |
| 545 | Cedar Elm | *Ulmus crassifolia* | 34.5 | | | 34.50 | Protected | | |
| 546 | Bois d'Arc | *Maclura pomifera* | 25.5 | | | 25.50 | *Not Protected* | | |
| 547 | Bois d'Arc | *Maclura pomifera* | 16.0 | | | 16.00 | *Not Protected* | TO BE REMOVED | |
| 548 | Shumard Oak | *Quercus shumardii* | 12.0 | | | 12.00 | Protected | | |
| 549 | Cedar Elm | *Ulmus crassifolia* | 20.0 | | | 20.00 | Protected | | |
| 550 | Bois d'Arc | *Maclura pomifera* | 25.0 | | | 25.00 | *Not Protected* | heart rot; Moderate decline | |
| 551 | Cedar Elm | *Ulmus crassifolia* | 17.5 | | | 17.50 | Protected | TO BE REMOVED | |
| 552 | Cedar Elm | *Ulmus crassifolia* | 27.0 | | | 27.00 | Protected | TO BE REMOVED | |
| 553 | Cedar Elm | *Ulmus crassifolia* | 20.5 | | | 20.50 | Protected | TO BE REMOVED | |
| 554 | Cedar Elm | *Ulmus crassifolia* | 11.5 | | | 11.50 | Protected | TO BE REMOVED | |
| 555 | Cedar Elm | *Ulmus crassifolia* | 20.0 | | | 20.00 | Protected | TO BE REMOVED | |
| 556 | Cedar Elm | *Ulmus crassifolia* | 21.5 | | | 21.50 | Protected | TO BE REMOVED | |
| 557 | Cedar Elm | *Ulmus crassifolia* | 16.0 | | | 16.00 | Protected | | |
| 558 | Bois d'Arc | *Maclura pomifera* | 28.5 | | | 28.50 | *Not Protected* | | |
| 559 | Bois d'Arc | *Maclura pomifera* | 23.5 | | | 23.50 | *Not Protected* | | |
| 560 | Pecan | *Carya illinoinensis* | 21.0 | | | 21.00 | Protected | | |
| 561 | Pecan | *Carya illinoinensis* | 20.5 | | | 20.50 | Protected | TO BE REMOVED | |
| 562 | Pecan | *Carya illinoinensis* | 23.0 | | | 23.00 | Protected | TO BE REMOVED | |
| 563 | Bois d'Arc | *Maclura pomifera* | 10.0 | | | 10.00 | *Not Protected* | | |
| 564 | Bois d'Arc | *Maclura pomifera* | 19.5 | | | 19.50 | *Not Protected* | | |
| 565 | Pecan | *Carya illinoinensis* | 24.0 | | | 24.00 | Protected | TO BE REMOVED | |
| 566 | Cedar Elm | *Ulmus crassifolia* | 14.5 | | | 14.50 | Protected | | |
| 567 | Green Ash | *Fraxinus pennsylvanica* | 29.5 | | | 29.50 | Protected | Moderate decline | |
| 568 | Cedar Elm | *Ulmus crassifolia* | 22.5 | | | 22.50 | Protected | | |
| 569 | Bur Oak | *Quercus marcoparpa* | 39.0 | | | 39.00 | Protected | | |
| 570 | Cedar Elm | *Ulmus crassifolia* | 19.0 | | | 19.00 | Protected | | |
| 571 | Cedar Elm | *Ulmus crassifolia* | 19.0 | | | 19.00 | Protected | | |
| 572 | Cedar Elm | *Ulmus crassifolia* | 18.0 | | | 18.00 | Protected | TO BE REMOVED | |
| 573 | Cedar Elm | *Ulmus crassifolia* | 16.5 | | | 16.50 | Protected | TO BE REMOVED | |
| 574 | Cedar Elm | *Ulmus crassifolia* | 18.0 | | | 18.00 | Protected | TO BE REMOVED | |
| 575 | Cedar Elm | *Ulmus crassifolia* | 14.0 | | | 14.00 | Protected | | |
| 576 | Cedar Elm | *Ulmus crassifolia* | 21.0 | | | 21.00 | Protected | | |
| 577 | Cedar Elm | *Ulmus crassifolia* | 10.5 | | | 10.50 | Protected | | |
| 578 | Bois d'Arc | *Maclura pomifera* | 24.5 | | | 24.50 | *Not Protected* | TO BE REMOVED | |
| 579 | Bois d'Arc | *Maclura pomifera* | 30.0 | | | 30.00 | *Not Protected* | | |
| 580 | American Elm | *Ulmus americana* | 32.0 | | | 32.00 | Protected | | |
| 581 | Bois d'Arc | *Maclura pomifera* | 10.0 | 8.5 | | 9.25 | *Not Protected* | | |
| 582 | Bois d'Arc | *Maclura pomifera* | 24.0 | | | 24.00 | *Not Protected* | TO BE REMOVED | |
| 583 | Live Oak | *Quercus virginiana* | 19.0 | 17.5 | | 18.25 | Protected | | |
| 584 | Bois d'Arc | *Maclura pomifera* | 14.0 | | | 14.00 | *Not Protected* | TO BE REMOVED | |
| 585 | Bois d'Arc | *Maclura pomifera* | 18.0 | | | 18.00 | *Not Protected* | TO BE REMOVED | |
| 586 | Cedar Elm | *Ulmus crassifolia* | 8.5 | | | 8.50 | Protected | TO BE REMOVED | |
| 587 | Cedar Elm | *Ulmus crassifolia* | 6.5 | | | 6.50 | Protected | | |
| 588 | Cottonwood | *Populus deltoides* | 16.0 | 14.5 | 16.0 | 15.50 | Protected | | |

NOTES:
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55-25W, 56-25W
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BH G-17, 55-25S, 56-25S

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# TREE EXHIBIT

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DALLAS WATER UTILITIES
CITY OF DALLAS, TEXAS

| DESIGN | DRAWN | DATE | FILE | NUMBER | SHEET |
|---|---|---|---|---|---|
| MH | MA | MAY 2021 | 411Q | 1191 | 117 |