

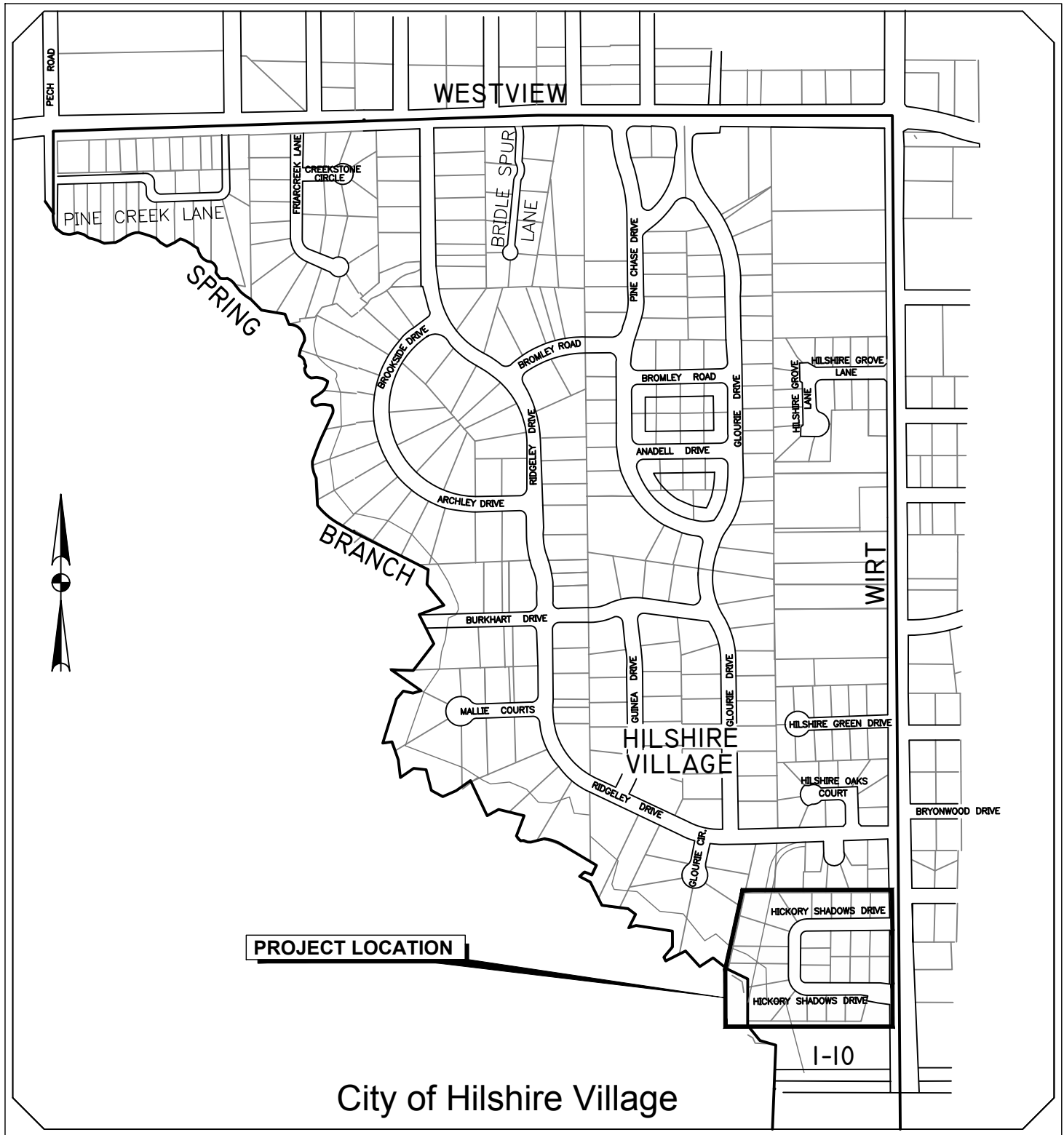
City of Hilshire Village, Texas

Hickory Shadows Drive

Paving, Drainage & Water Line Improvements

April, 2025

70% Submittal



VICINITY MAP
NOT TO SCALE
HARRIS COUNTY KEY MAP 491B



MAYOR
Robert (Bob) Buesinger

COUNCIL

Mike Gordy
Andy Carey
Kristi Cooper

Justin Crawford
Mark Huber

CITY SECRETARY
Cassie Stephens



HDR PROJECT NO. 10418041

| SHEET | SHEET TITLE | |
|--|--|-----------------------|
| No. | | |
| <u>GENERAL</u> | | |
| 01 | COVER SHEET | |
| 02 | GENERAL CONSTRUCTION NOTES | |
| 03 | LEGEND & ABBREVIATIONS | |
| 04 | SURVEY CONTROL MAP | |
| 05 | OVERALL LAYOUT | |
| 06 | DRAINAGE AREA MAP AND CALCULATIONS | |
| <u>TRAFFIC CONTROL PLAN</u> | | |
| 07 | TRAFFIC CONTROL PLAN - GENERAL NOTES | |
| 08 | ONE LANE TWO-WAY TRAFFIC CONTROL DETAIL | |
| 09 | HICKORY SHADOWS DRIVE TRAFFIC CONTROL PLAN - PHASE I & 2 | |
| 10 | HICKORY SHADOWS DRIVE TRAFFIC CONTROL PLAN - PHASE 3 | |
| 11 | TYPICAL TRAFFIC CONTROL DETAILS | |
| <u>PLAN & PROFILE</u> | | |
| 12 | HICKORY SHADOWS DRIVE (PAVING & DRAINAGE) | STA 1+00 TO STA 2+75 |
| 13 | HICKORY SHADOWS DRIVE (PAVING & DRAINAGE) | STA 2+75 TO STA 7+75 |
| 14 | HICKORY SHADOWS DRIVE (PAVING & DRAINAGE) | STA 7+75 TO STA 10+50 |
| 15 | HICKORY SHADOWS DRIVE (WATER LINE) | STA 1+00 TO STA 2+75 |
| 16 | HICKORY SHADOWS DRIVE (WATER LINE) | STA 2+75 TO STA 7+75 |
| 17 | HICKORY SHADOWS DRIVE (WATER LINE) | STA 7+75 TO STA 10+50 |
| 18 | HICKORY SHADOWS DRIVE (WATER LINE EASEMENT) | STA 1+00 TO STA 5+13 |
| <u>STORM WATER POLLUTION PREVENTION PLAN</u> | | |
| 19 | STORM WATER POLLUTION PREVENTION PLAN | |
| 20 | STORM WATER POLLUTION PREVENTION DETAILS I | |
| <u>CONSTRUCTION DETAILS</u> | | |
| 21 | PAVING DETAILS I | |
| 22 | PAVING DETAILS II | |
| 23 | WATER DETAILS I | |
| 24 | WATER DETAILS II | |
| 25 | STORM SEWER DETAILS I | |
| 26 | STORM SEWER DETAILS II | |



SUBMITTED BY: _____ DATE: _____
NGOC KIM LE, PE
HDR ENGINEERING, INC

APPROVED BY: _____ DATE: _____
ROBERT (BOB) BUESINGER
MAYOR, CITY OF HILSHIRE VILLAGE

1. CONTRACTOR SHALL NOTIFY THE CITY OF HILSHIRE VILLAGE AT (713) 973-1779 AND THE ENGINEER AT (713) 622-9264 48 HOURS PRIOR TO START OF CONSTRUCTION.
2. CONTRACTOR SHALL CONTACT ALL PERTINENT UTILITY COMPANIES 48 HOURS (MINIMUM) PRIOR TO EXCAVATION IN AREA. THE HOUSTON AREA UTILITY COORDINATING COMMITTEE MAY BE CONTACTED FOR CERTAIN UTILITIES AT (713) 223-4567 OR TOLL FREE 1-800-669-8344 48 HOURS BEFORE BEGINNING WORK.
3. CONTRACTOR SHALL COORDINATE ANY UTILITY CONSTRUCTION THAT MAY DISRUPT SERVICE WITH THE CITY OF HILSHIRE VILLAGE (CASSIE STEPHENS, CITY SECRETARY, 713-973-1779.) AND THE CITY'S OPERATOR (ST SERVICES @ 281-578-4200). NOTIFY CITY 24 HOURS IN ADVANCE.
4. PROPERTY OWNERS SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR, BETWEEN 48 HOURS AND 7 DAYS IN ADVANCE OF DISTURBANCE OF DRIVEWAYS. PROPERTY OWNER SHALL BE PROVIDED THE MINIMUM FOLLOWING INFORMATION: WORK TO BE PERFORMED, STARTING AND ENDING DATES, THE NAME AND NUMBER OF CONTRACTOR'S REPRESENTATIVE, AND NAME OF HILSHIRE VILLAGE OFFICIAL TO BE CONTACTED FOR QUESTIONS. WRITTEN NOTICES SHALL BE APPROVED BY HILSHIRE VILLAGE PRIOR TO DISTRIBUTION.
5. TEXAS LAW ARTICLE 1436C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN SIX FEET OF ENERGIZED OVERHEAD POWER LINES, AND FEDERAL REGULATIONS, TITLE 29, PART 1910.180(I) AND PART 1926.550(A)(15) REQUIRE A MINIMUM CLEARANCE OF TEN FEET FROM THESE FACILITIES. THE ABOVE LAWS CARRY BOTH CRIMINAL AND CIVIL LIABILITIES, WITH CONTRACTORS AND OWNERS BEING LEGALLY RESPONSIBLE FOR THE SAFETY OF WORKERS UNDER THESE LAWS. IF YOU OR YOUR COMPANY MUST WORK NEAR OVERHEAD POWER LINES, CALL (713) 228-7400 FOR THE LINES TO BE DE-ENERGIZED AND/OR MOVED AT YOUR EXPENSE.
6. IN THE EVENT A GAS LINE IS EXPOSED DUE TO EXCAVATION AND IS IN NEED OF RELOCATION, THE APPROPRIATE GAS COMPANY SHALL BE CONTACTED BY THE CONTRACTOR TO HAVE STATUS OF THE LINE VERIFIED. CONTRACTOR IS RESPONSIBLE FOR HAVING THE GAS COMPANY RELOCATE THE GAS LINES WITHIN THE RIGHT OF WAY. SEE NOTE FOR CENTERPOINT ENERGY THIS PAGE.
7. THE PREPARATION OF THESE PLANS REFLECT INFORMATION PROVIDED BY OTHERS ON THE APPROXIMATE LOCATION AND EXISTENCE OF EXISTING UTILITIES AND ADJACENT PHYSICAL FEATURES; HOWEVER, THEY DO NOT IMPLY OR AFFIRM THAT ALL UTILITIES OR PHYSICAL FEATURES ARE SHOWN. GENERALLY, UTILITY SERVICE CONNECTIONS ARE NOT INDICATED ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION OF THE OWNER IMMEDIATELY UPON ENCOUNTERING UNFORESEEN CONFLICTS.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE DEPTH, LOCATION AND EXISTENCE OF ALL EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION, PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
9. RIGHTS OF WAY INDICATED ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXACT LIMITS OF RIGHT OF WAY PRIOR TO CONSTRUCTION.
10. THE CONTRACTOR SHALL MAINTAIN ACCESS TO RESIDENTIAL AND COMMERCIAL PROPERTIES ADJACENT TO WORK AREAS AT ALL TIMES.
11. NO EXCAVATIONS SHALL BE LEFT OPEN OVERNIGHT. ALL EXCAVATIONS WHICH CANNOT BE BACKFILLED OVERNIGHT SHALL BE COVERED. USE STEEL PLATES WHEN IN PAVED AREAS; IN OTHER AREAS USE 3/4" PLYWOOD, WOOD PLANKING OR OTHER MATERIAL APPROVED BY THE CITY. THE EXCAVATION AREA MUST BE WELL PROTECTED WITH TRAFFIC BARRICADES EQUIPPED WITH FLASHING YELLOW LIGHTS, DURING ACTIVE CONSTRUCTION PERIODS. THE EXCAVATION AREAS MUST BE COMPLETELY CORDONED OFF WITH PLASTIC TAPE OR CONSTRUCTION FENCE WHEN CONSTRUCTION IS NOT ACTIVELY PROGRESSING.
12. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER SUCH THAT TRUCKS AND OTHER VEHICLES DO NOT CREATE A DIRT NUISANCE OR SAFETY HAZARD IN ANY STREETS, PUBLIC OR PRIVATE. CLEAN UP OF STREETS SHALL BE DONE DAILY.
13. IT IS IMPERATIVE THAT THE CONSTRUCTION IN THE PROJECT AREA INCONVENIENCE THE RESIDENTS OF THE AREA AS LITTLE AS POSSIBLE. CLEAN-UP SHALL BE COMPLETED AND MAINTAINED WITHIN ONE BLOCK BEHIND ALL CONSTRUCTION OF UTILITIES AND PAVING. CLEAN-UP INCLUDES COMPACTION OF BACKFILL, CLOSURE OF BORE PITS, AND SURFACE RESTORATION. NEW CONSTRUCTION OPERATIONS TO BE SUSPENDED TEMPORARILY IF COMPLETE CLEAN-UP IS FURTHER THAN ONE BLOCK BEHIND CONSTRUCTION.
14. ANY AREA OF GRASS WHICH IS DISTURBED OR DUG UP DURING THE CONSTRUCTION SHALL BE REPLACED WITH ST. AUGUSTINE SOD OR GRASS WHICH MATCHES THE GRASS REMOVED, AT NO ADDITIONAL COST TO THE CITY. WHEN CONSTRUCTION OCCURS IN CITY RIGHTS-OF-WAY AND EASEMENTS ON RESIDENTIAL YARD AREAS, CARE SHALL BE TAKEN TO MINIMIZE CONSTRUCTION DAMAGE TO YARD AREAS.
15. CONTRACTOR SHALL ADEQUATELY PROTECT EXISTING STRUCTURES, SPRINKLER SYSTEMS, LANDSCAPING, UTILITIES, POWER POLES, TREES, SHRUBS AND OTHER PERMANENT OBJECTS. TREES SHALL NOT BE REMOVED OR DISTURBED UNLESS OTHERWISE NOTED IN THE TREE PROTECTION PLANS. WHERE TREE ROOTS MUST BE CUT, FOLLOW THE REPAIR METHODS DESCRIBED IN THE SPECIFICATIONS AND TREE PROTECTION PLANS. ALL COST FOR REPAIRS OR REPLACEMENT OF DAMAGE DUE TO CONTRACTOR'S PERFORMANCE WILL BE PAID BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.
16. CONTRACTOR SHALL NOT USE RESIDENTS WATER.
17. PROGRESS MEETINGS WILL BE HELD BETWEEN THE CONTRACTOR, THE CITY, AND THE ENGINEER ON A MONTHLY BASIS DURING CONSTRUCTION, AND MORE FREQUENTLY IF NEEDED.

LEGEND :

| SYMBOL | EXISTING PLAN VIEW | DESCRIPTION |
|--------|-----------------------|---|
| | 0" IR | IRON PIPE OR IRON ROD MONUMENTS |
| | 5+00 | CENTERLINE OF RIGHT-OF-WAY |
| | | SURVEY BASELINE |
| | | EXISTING RIGHT-OF-WAY LINE |
| | | PROPERTY LINE |
| | 25' | DIMENSION LINE |
| | | CURB LINE |
| | | EDGE OF ASPHALT PAVEMENT |
| | | SIDEWALK |
| | | SHRUBS |
| | | TREE |
| | BRICK BLDG. | BUILDING |
| | | SLAB |
| | | POST, WOOD OR METAL |
| | 95 | INDEX CONTOUR |
| | | WATER LINE (20" & SMALLER) |
| | | WATER LINE (24" & LARGER) |
| | WV OR BFWV | WATER VALVE (GATE OR BUTTERFLY) |
| | TS & V | TAPPING SLEEVE AND VALVE |
| | FH | FIRE HYDRANT |
| | | WATER METER |
| | | GAS LINE |
| | GM | GAS METER |
| | | SANITARY SEWER LINE (24" & SMALLER) |
| | | SANITARY SEWER LINE (30" & LARGER) |
| | CO MH | SANITARY SEWER LINE, MANHOLE & CLEANOUT |
| | | STORM SEWER LINE (24" & SMALLER) |
| | | STORM SEWER LINE (30" & LARGER) |
| | MH | STORM SEWER LINE AND MANHOLE |
| | | STORM SEWER JUNCTION BOX |
| | "B" INLET "B-B" INLET | CURB INLET |
| | | GRATE INLET |
| | | CONCRETE DRAIN |
| | | CULVERT |
| | SWBT 6 MTD MH | SOUTHWESTERN BELL MANHOLE & OVERHEAD & BURIED CABLE |
| | TI | TELEPHONE BOX |
| | | STREET LIGHT (CANTILEVERED ON WOODEN POLE) |
| | | STREET LIGHT (CANTILEVERED ON ORNAMENTAL POLE) |

| SYMBOL | EXISTING PLAN VIEW | DESCRIPTION |
|--------|--------------------|---|
| | HL & P CO MH 9 MTD | HOUSTON LIGHTING & POWER CO CONDUIT & MANHOLE |
| | | POWER POLE W/OVERHEAD LINES |
| | | POWER POLE W/DOWN GUY |
| | | TRAFFIC LIGHT POLE |
| | | MARKER |
| | | BUSINESS SIGN |
| | | SIGN POST |
| | | FENCE LINE (CHAIN LINK OR OTHER) |
| | | FENCE LINE (BARBED WIRE) |

| SYMBOL | EXISTING PROFILE VIEW | DESCRIPTION |
|--------|--------------------------|---|
| | | NORTH OR EAST RIGHT-OF-WAY |
| | | SOUTH OR WEST RIGHT-OF-WAY |
| | | NORTH OR EAST DITCH OR CURB |
| | | SOUTH OR WEST DITCH OR CURB |
| | | CENTER LINE OF PAVEMENT |
| | RELIANT ENERGY MTD | RELIANT ENERGY CONDUIT |
| | 8" HP CENTERPOINT ENERGY | GAS LINE |
| | SWBT 6 MCD | SOUTHWESTERN BELL COMMUNICATION CONDUIT |
| | EXIST 20" WATER LINE | WATER LINE (20" & SMALLER) |
| | EXIST 24" WATER LINE | WATER LINE (24" & LARGER) |
| | EXIST 24" SAN SWR | SANITARY SEWER LINE (24" & SMALLER) |
| | EXIST 30" SAN SWR | SANITARY SEWER LINE (30" & LARGER) |
| | EXIST 24" STM SWR | STORM SEWER LINE (24" & SMALLER) |
| | EXIST 30" STM SWR | STORM SEWER LINE (30" & LARGER) |
| | | RELIANT ENERGY MANHOLE |
| | | SOUTHWESTERN BELL TELEPHONE MANHOLE |
| | | SANITARY SEWER MANHOLE & CLEANOUT |
| | | STORM SEWER MANHOLE |

| SYMBOL | PROPOSED PLAN VIEW | DESCRIPTION |
|--------|--------------------|---|
| | B-1 | BORING LOCATION |
| | PI# | POINT OF INTERSECTION (PI) |
| | PC OR PT | POINT OF CURVE (PC) OR POINT OF TANGENCY (PT) |
| | | WATER LINE (20" & SMALLER) |
| | | WATER LINE (24" & LARGER) |
| | | TAPPING SLEEVE & VALVE |
| | | FIRE HYDRANT |
| | | SANITARY SEWER LINE (24" & SMALLER) |
| | | SANITARY SEWER LINE (30" & LARGER) |
| | | SANITARY SEWER MANHOLE |
| | | STORM SEWER LINE (24" & SMALLER) |
| | | STORM SEWER LINE (30" & LARGER) |
| | | STORM SEWER MANHOLE |
| | "B-B" INLET | CURB INLET |
| | | FACE OF CURB |
| | | PROPOSED SIGN |
| | 5' CONC SIDEWALK | CONCRETE WALK |

| SYMBOL | PROPOSED PROFILE VIEW | DESCRIPTION |
|--------|---------------------------|--|
| | | WATER LINE (20" & SMALLER) |
| | | WATER LINE (24" & LARGER) |
| | | SANITARY SEWER LINE (24" & SMALLER) |
| | | SANITARY SEWER LINE (30" & LARGER) |
| | | STORM SEWER LINE (24" & SMALLER) |
| | | STORM SEWER LINE (30" & LARGER) |
| | | PVC SLEEVE |
| | | SANITARY SEWER MANHOLE |
| | | STORM SEWER MANHOLE |
| | | STORM SEWER INLET |
| | TOC @ +0.30% TOC @ -0.30% | TOP OF CURB OR CENTERLINE OF OPEN DITCH PAVING |

ABBREVIATIONS :

| | | | |
|------------|---|-----------|---|
| & | AND | RJ | RESTRAINED JOINT |
| @ | AT | RT | RIGHT |
| AB | ALL BELL | RW | RETAINING WALL |
| AC | ASBESTOS CEMENT | | |
| AVE | AVENUE | S | SOUTH |
| B | BASELINE | SAN | SANITARY |
| B-B | BACK TO BACK | SPL | SPECIAL |
| BC | BEHIND CURB | SPRINK | SPRINKLER |
| BSSN | BUSINESS SIGN | ST | STREET |
| | | STA | STATION ALONG BASELINE OR CENTERLINE |
| CI | CAST IRON | STD | STANDARD |
| CL | CENTERLINE | STL | STEEL |
| CLR | CLEAR | STM | STORM |
| CMP | CORRUGATED METAL PIPE | SWR | SEWER |
| COH | CITY OF HOUSTON | SWBT | SOUTHWESTERN BELL COMMUNICATION COMPANY |
| CONC | CONCRETE | | |
| CONSTR | CONSTRUCTION | T | TANGENT |
| CPE | CENTER POINT ENERGY | TBM | TEMPORARY BENCH MARK |
| CSG | CASING | TOC OR TC | TOP OF CURB |
| CTMS | COMPUTERIZED TRANSPORTATION MANAGEMENT SYSTEM | TEMP | TEMPORARY |
| | | TP | TOP OF PAVEMENT |
| | | TS & V | TAPPING SLEEVE AND VALVE |
| | | TY | TYPE |
| | | TYP | TYPICAL |
| DI | DUCTILE IRON | UE | UTILITY EASEMENT |
| DIA | DIAMETER | UG | UNDERGROUND |
| DR | DRIVE | | |
| DWG | DRAWING | VC | VERTICAL CURVE |
| E | EAST | | |
| EL OR ELEV | ELEVATION | W | WEST |
| EOP | EDGE OF PAVEMENT | W/ | WITH |
| ESP | EXTRA STRENGTH PIPE | WL | WATER LINE |
| E/R | END OF CURB RETURN | WLE | WATER LINE EASEMENT |
| ESMT | EASEMENT | WM | WATER METER |
| EXIST | EXISTING | WP | WOOD POLE |
| | | WV | WATER VALVE |
| FC | FACE OF CURB | | |
| F-F | FACE-TO-FACE | | |
| FH | FIRE HYDRANT | | |
| ? | FLOWLINE | | |
| FT | FEET | | |
| GV & B | GATE VALVE AND BOX | | |
| HL & P | HOUSTON LIGHTING AND POWER | | |
| HMAC | HOT MIXED ASPHALTIC CONCRETE | | |
| HPS | HIGH-PRESSURE SODIUM | | |
| HWY | HIGHWAY | | |
| ID | INSIDE DIAMETER | | |
| IE | INVERT ELEVATION | | |
| IP | IRON PIPE | | |
| IR | IRON ROD | | |
| JT | JOINT | | |
| JUNC | JUNCTION | | |
| LF | LINEAR FEET | | |
| LN | LANE | | |
| LPST | LEAKING PETROLEUM STORAGE TANK | | |
| LT | LEFT | | |
| MAX | MAXIMUM | | |
| METRO | METROPOLITAN TRANSIT AUTHORITY | | |
| MH | MANHOLE | | |
| MIN | MINIMUM | | |
| MON | MONUMENT | | |
| MRC | MONOLITHIC REINFORCED CONCRETE | | |
| N | NORTH | | |
| NFV | NOT FIELD VERIFIED | | |
| NO | NUMBER | | |
| NTS | NOT TO SCALE | | |
| OCEL | ON CURVE ELEVATION | | |
| OFS | OFFSET | | |
| OLE | OVERHEAD ELECTRICAL | | |
| OH | OVERHEAD | | |
| PC | POINT OF CURVATURE | | |
| PCC | POINT OF COMPOUND CURVATURE | | |
| PCCP | PRESTRESSED CONCRETE CYLINDER PIPE | | |
| PERM | PERMANENT | | |
| PI | POINT OF INTERSECTION | | |
| PPCA | POTENTIALLY PETROLEUM CONTAMINATED AREA | | |
| PROP | PROPOSED | | |
| PT | POINT | | |
| PVC | POINT OF TANGENCY | | |
| PVI | POINT OF VERTICAL INTERSECTION | | |
| PVMT | PAVEMENT | | |
| PVT | POINT OF VERTICAL TANGENCY | | |
| R | RECORD DRAWING | | |
| RCB | RADIUS OF CIRCULAR CURVE | | |
| RCP | REINFORCED CONCRETE BOX | | |
| REINF | REINFORCED CONCRETE PIPE | | |
| REMOV | REMOVABLE | | |
| ROW | RIGHT OF WAY | | |
| RD | ROAD | | |
| RRPM | REFLECTIVE REMOVABLE PAVEMENT MARKERS | | |

| | | | | |
|-----|-------------|------|------|------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| MK. | DESCRIPTION | DATE | DWN. | CHK. |

FOR REVIEW ONLY

APRIL 2025

NGOC KIM LE

TX. LIC. 102192

NOT FOR BIDDING OR CONSTRUCTION

HDR

HDR Engineering Inc. Texas Reg. No. 754
4828 Loop Central Drive, Suite 700 · Houston, Texas 77081
(713) 622-9264 · Fax (713) 622-9265 · www.hdrinc.com

City of Hilshire Village, Texas

Hickory Shadows Drive
Paving, Drainage & Utility Improvements

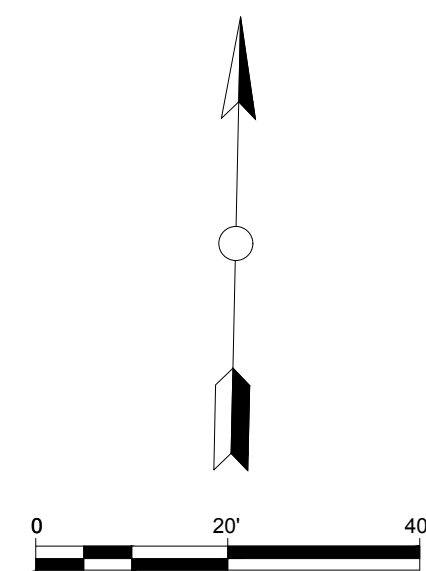
LEGEND & ABBREVIATIONS

| | | |
|---------------------|--|-----------------------------|
| Job No.: 10418041 | Scale: HORZ : VERT : ONE INCH = IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | SHEET 03 OF 26 |
| Date: April, 2025 | | |
| Dwn By: G.S. Fuller | | |
| Chkd By: N. Le | | |

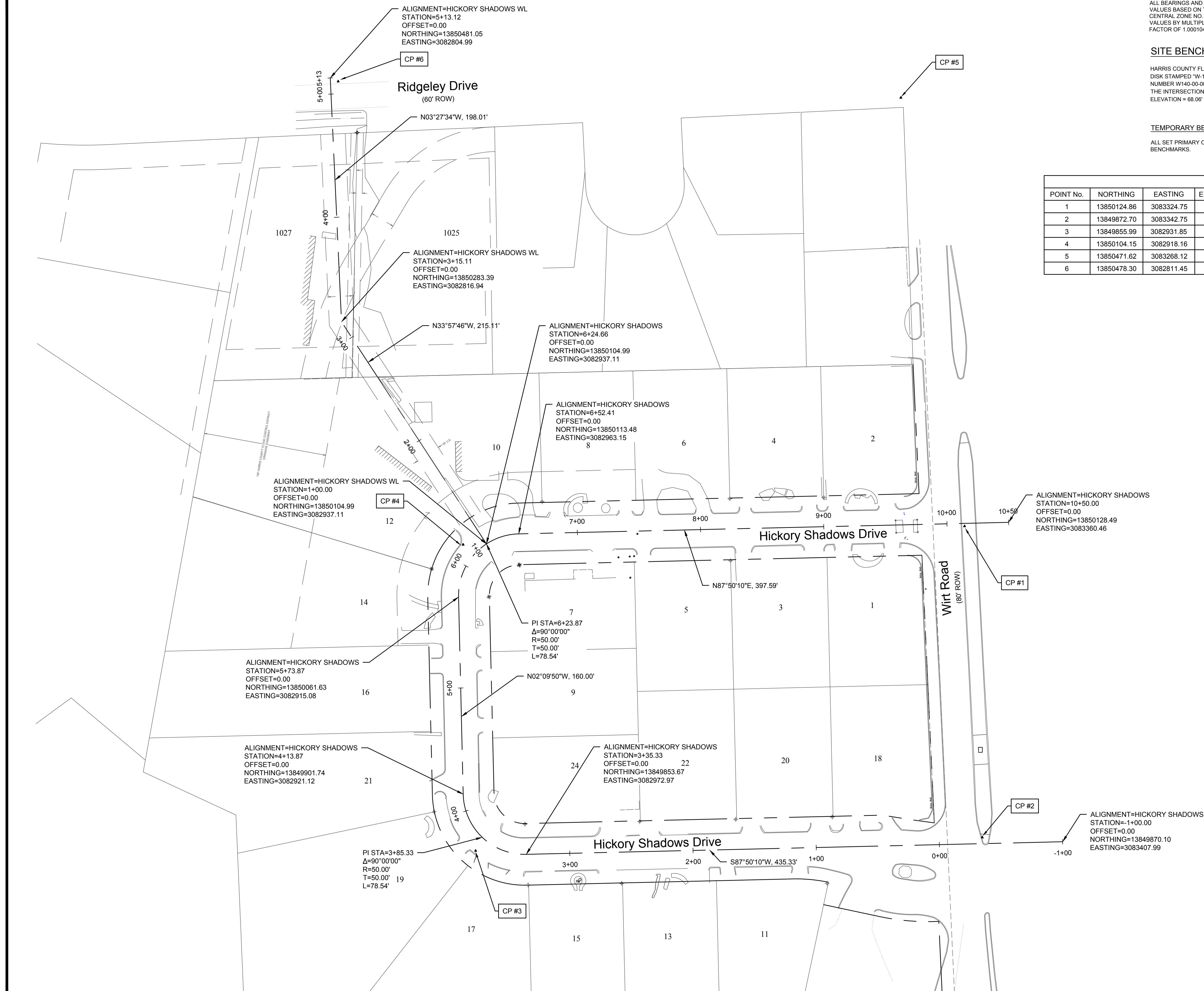
ALL BEARINGS AND COORDINATES REFERENCED HEREON ARE GRID
VALUES BASED ON THE TEXAS COORDINATE SYSTEM OF 1983, SOUTH
CENTRAL ZONE NO. 4204 AND MAY BE CONVERTED TO SURFACE
VALUES BY MULTIPLYING BY THE FOLLOWING COMBINED SCALE
FACTOR OF 1.00010462

HARRIS COUNTY FLOODPLAIN REFERENCE MARKER 210215 IS A BRASS DISK STAMPED "W-140" IN THE SPRING BRANCH WATERSHED, STREAM NUMBER W140-00-00. BENCHMARK IS LOCATED 340' SOUTHWEST OF THE INTERSECTION OF WESTVIEW DR. AND PECH RD. ELEVATION = 68.06' NAVD 1988, 2001 ADJ.

ALL SET PRIMARY CONTROL POINTS(1-6) MAY BE USED AS TEMPORARY BENCHMARKS.



| CONTROL TABLE | | | | | | | |
|---------------|-------------|------------|-----------|-------------|----------|------------|--------------------|
| POINT No. | NORTHING | EASTING | ELEVATION | DESCRIPTION | STATION | OFFSET | ALIGNMENT |
| 1 | 13850124.86 | 3083324.75 | 65.69 | CP IRSC 58 | 10+14.19 | 2.28' RT | HICKORY SHADOWS |
| 2 | 13849872.70 | 3083342.75 | 65.46 | CP CHP | -0+34.91 | 5.06' RT | HICKORY SHADOWS |
| 3 | 13849855.99 | 3082931.85 | 61.75 | CP CHP | +3+71.66 | 11.71' LT | HICKORY SHADOWS |
| 4 | 13850104.15 | 3082918.16 | 62.33 | CP CHP | 6+11.44 | 12.03' LT | HICKORY SHADOWS |
| 5 | 13850471.62 | 3083268.12 | 65.35 | CP IRSC 58 | 9+70.71 | 346.37' LT | HICKORY SHADOWS |
| 6 | 13850478.30 | 3082811.45 | 64.55 | CP IRSC 58 | 5+09.99 | 6.30' RT | HICKORY SHADOWS WL |



HDR

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4828 Loop Central Drive, Suite 700 • Houston, Texas 77081
(713) 622-9264 • Fax (713) 622-9265 • www.hdrinc.com

City of Hilshire Village, Texas

Hickory Shadows Drive Paving, Drainage & Utility Improvements

Survey Control Map

Job No.: 10418041

Date: April, 2025

Dwn By: G.S. Fuller

Chkd By: N. Le

Scale:
HORIZ : 1" = 40'

HORZ : 1" = 40'
VERT :

ONE INCH
IF ABOVE MARK DOES NOT

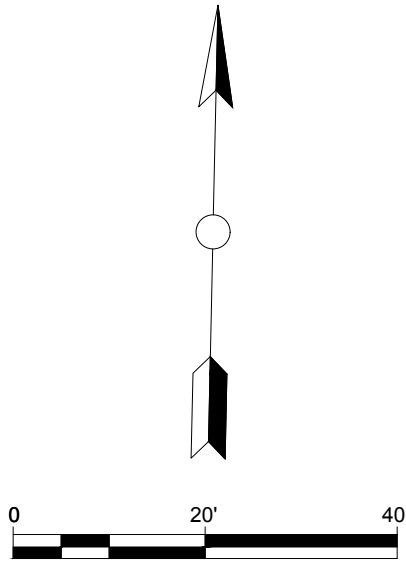
IF ABOVE MARK DOES NOT
MEASURE ONE INCH, THEN
THIS DWG. NOT TO SCALE

SHEET

04

04

OF 26



LEGEND

OVERALL DRAINAGE BOUNDARY



FLOW DIRECTION

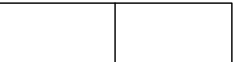


DRAINAGE AREA DESIGNATION



CULVERT LABEL

DESIGNATION



CULVERT CAPACITY

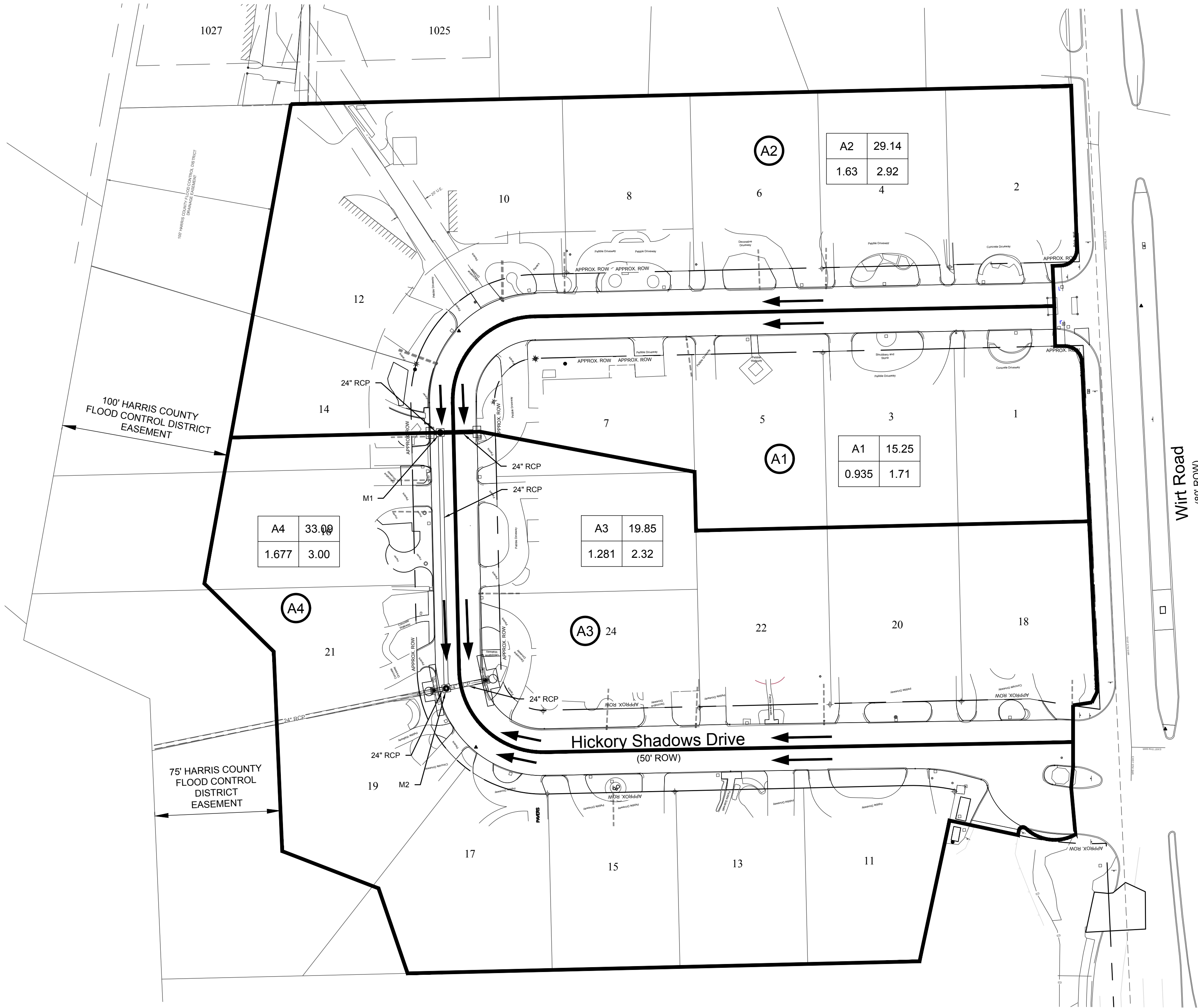
AREA (ACRES)



FLOW (2-YR)

NOTES:

1. DESIGN CRITERIA USED FOR STORM ANALYSIS IS THE LATEST HARRIS TX-DOT INTENSITY-DURATION FOR A 2-YEAR STORM EVENT WITH AN AVERAGE C VALUE OF 0.50.



Storm Sewer Hydrology & Hydraulic Calculations - 2 Year Storm Design
Hickory Shadows Drive Paving, Drainage, & Water Line Improvements
City of Hilshire Village

Job Section
Date: Wednesday, March 12, 2025
By: TC/NKL

Criteria:
HGA Starting Elevation for Drainage Basin = 59.25 (Top of Outfall Pipe)
Design Velocity = 5 (ft/s)
Agency Curve Used = Harris-TxDOT
Year Storm Calculated = 2
Minimum pipe size proposed = 24 inches in diameter.
Pavement Thickness (Inches) = 6 in.
Subgrade Thickness (Inches) = 3 in.

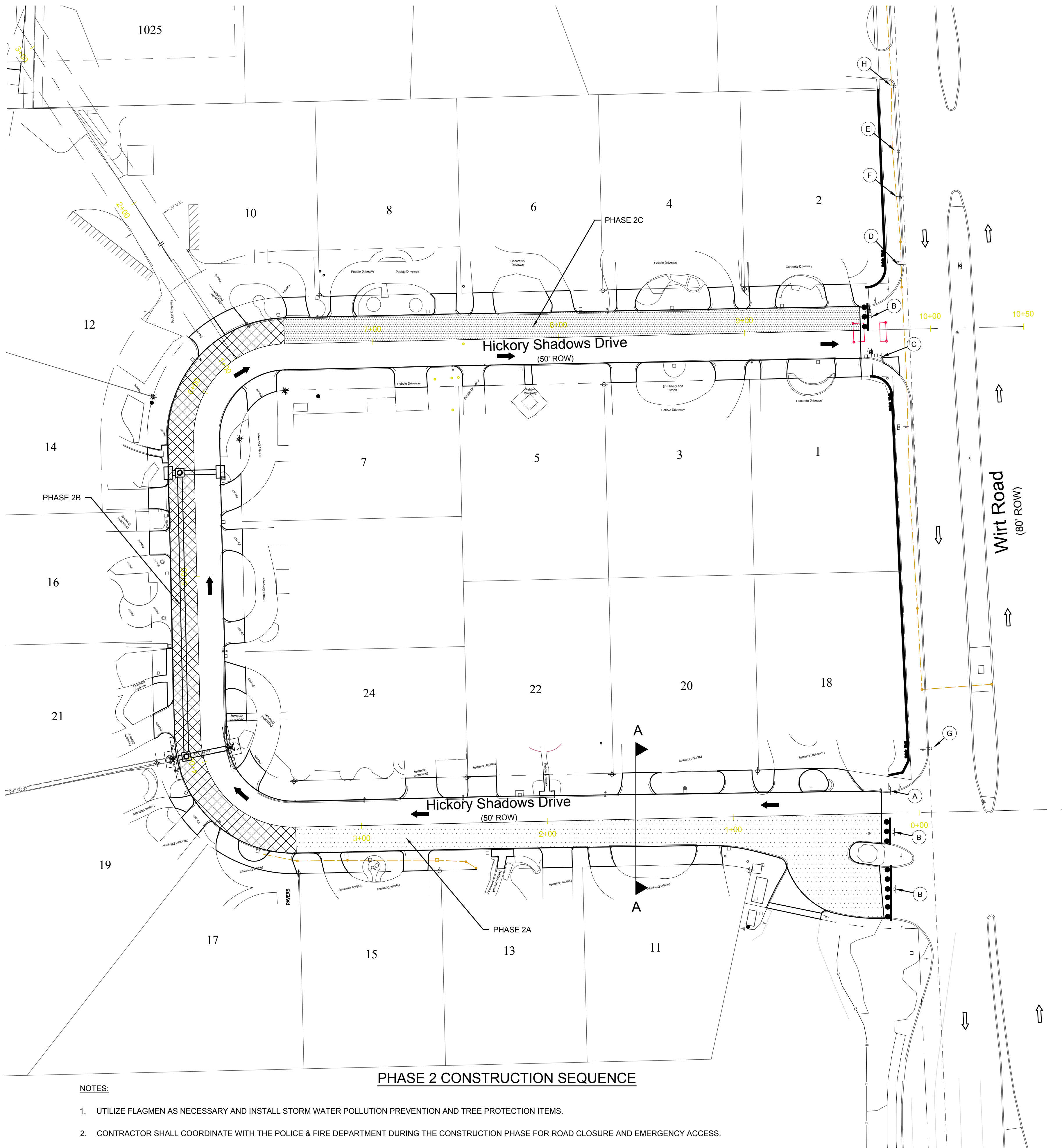
| Upstream Manhole / Inlet (From) | Downstream Manhole / Inlet (To) | Drainage Sub Area (Acres) | Total Area (Acres) | Runoff Coefficient "C" | Sum of CFA | Time of Concentration "TC" | Intensity based on 2 Year Storm | Bypass / Other Flow Added (cfs) | Sum of Flow (cfs) | Proposed Arch, Circular, or Box | Proposed Pipe | Prop. Top Wall Thickness (in) | Prop. Slope % | Prop. Design Capacity (cfs) | Pipe Length (Feet) | Pipe Fall (ft) | Manhole Drop / Pipe Drop (ft) | Flow line Elevation Upstream (ft) | Flow line Elevation Downstream (ft) | Actual Velocity (fps) | Travel Time (min) | Hydraulic Gradient % based on 2 Year Storm | Change in Head (ft) based on 2 Year Storm | 2 Year Storm Upstream Hydraulic Elev. | 2 Year Storm Downstream Hydraulic Elev. |
|---|---------------------------------------|---------------------------------|-----------------------|------------------------------|---------------|----------------------------------|--|------------------------------------|-------------------|--|------------------|--|------------------|--------------------------------------|--------------------------|-------------------|--|---|--|-----------------------------|-------------------------|---|--|--|--|
| Storm sewer along Hickory Shadows Drive | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inlet Laterals | | | | | | | | | | | | | | | | | | | | | | | | | |
| A1 | M1 | 0.995 | 0.995 | 0.50 | 0.498 | 24.88 | 3.06 | 0.00 | 1.71 | C | 24" | 3.00 | 0.40% | 15.25 | 22 | 0.10 | 0.00 | 57.76 | 57.66 | 0.54 | 0.67 | 0.006% | 0.001 | 59.28 | 59.27 |
| A2 | M1 | 1.630 | 1.630 | 0.50 | 0.815 | 25.90 | 3.58 | 0.00 | 2.92 | C | 24" | 3.00 | 1.66% | 29.14 | 6 | 0.10 | 0.00 | 57.76 | 57.66 | 0.93 | 0.11 | 0.017% | 0.001 | 59.28 | 59.27 |
| A3 | M2 | 1.281 | 1.281 | 0.50 | 0.641 | 25.45 | 3.62 | 0.00 | 2.32 | C | 24" | 3.00 | 0.77% | 19.85 | 24 | 0.18 | 0.00 | 57.53 | 57.35 | 0.74 | 0.54 | 0.011% | 0.003 | 59.22 | 59.21 |
| A4 | OUTFALL | 1.677 | 1.677 | 0.50 | 0.839 | 25.95 | 3.58 | 0.00 | 3.00 | C | 24" | 3.00 | 2.14% | 33.09 | 0 | 0.00 | 0.00 | 57.20 | 57.20 | 0.96 | 0.00 | 0.018% | 0.000 | 59.21 | 59.21 |
| Trunk Line | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 | M2 | 2.565 | 2.565 | 0.50 | 1.283 | 26.80 | 3.32 | 0.00 | 4.51 | C | 24" | 3.00 | 0.20% | 10.11 | 153 | 0.31 | 0.00 | 57.66 | 57.35 | 1.44 | 1.78 | 0.040% | 0.061 | 59.27 | 59.21 |
| M2 | OUTFALL | 1.281 | 5.923 | 0.50 | 2.702 | 28.51 | 2.62 | 0.00 | 9.99 | C | 24" | 3.00 | 2.14% | 33.09 | 7 | 0.15 | 0.00 | 57.35 | 57.20 | 3.18 | 0.04 | 0.195% | 0.014 | 59.21 | 59.20 |

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|--|-------------|--|------|-----------------------------|
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| MK. | DESCRIPTION | DATE | DWN. | CHK. |
| <div>FOR REVIEW ONLY APRIL 2025 NGOC KIM LE TX. LIC. 102192 NOT FOR BIDDING OR CONSTRUCTION</div> | | | | |
| <div>HDR HDR Engineering Inc. Texas Reg. No. 754 4828 Loop Central Drive, Suite 700 · Houston, Texas 77081 (713) 622-9264 · Fax (713) 622-9265 · www.hdrinc.com</div> | | | | |
| City of Hilshire Village, Texas | | | | |
| Hickory Shadows Drive Paving, Drainage & Utility Improvements | | | | |
| Drainage Area Map | | | | |
| Job No.: 10418041 | | Scale: HORZ : 1" = 40' | | SHEET 06 OF 26 |
| Date: April, 2025 | | VERT : 1" = 4' | | |
| Dwn By: G.S. Fuller | | ONE INCH | | |
| Chkd By: N. Le | | IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | | |

GENERAL TRAFFIC CONTROL NOTES:

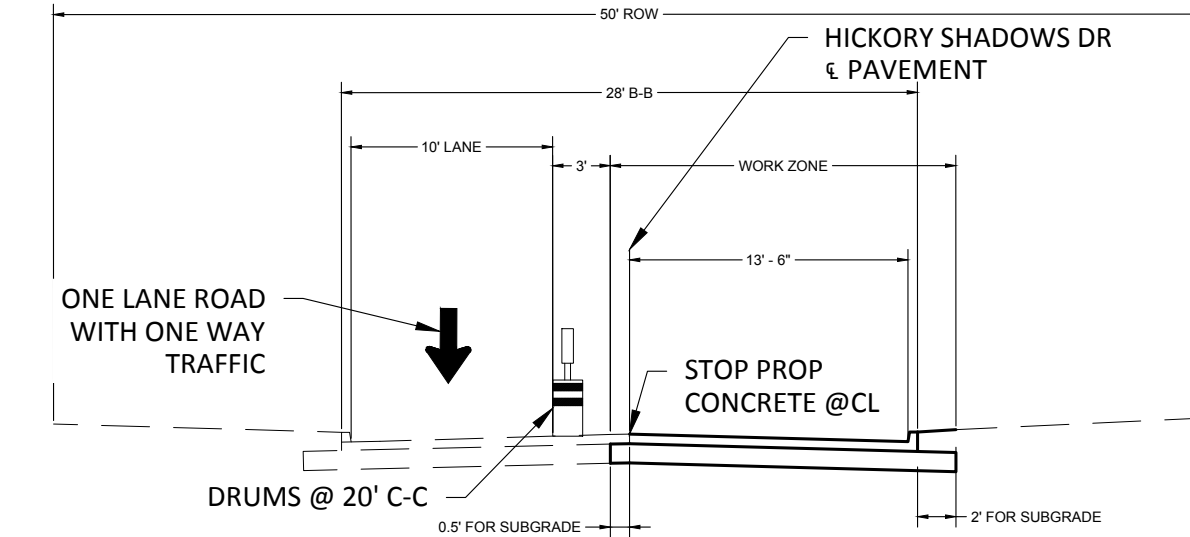
1. IF THE CONTRACTOR CHOOSES TO USE A DIFFERENT METHOD OF "TRAFFIC CONTROL PLAN" DURING CONSTRUCTION THAN WHAT IS OUTLINED IN CONTRACT DRAWINGS HE/SHE SHALL BE RESPONSIBLE TO PREPARE AND SUBMIT AN ALTERNATIVE SET OF PLANS TO PLAN REVIEW FOR APPROVAL THREE WEEKS PRIOR TO BEGINNING CONSTRUCTION. THESE PLANS SHALL BE DRAWN TO SCALE AND SEALED BY A P.E. IN THE STATE OF TEXAS.
2. THE CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TXMUTCD - LATEST EDITION WITH REVISIONS) DURING CONSTRUCTION. FOR A 30 MPH ROADWAY, SIGNS SHALL BE PLACED MIN. 120' APART PER MINIMUM SIGN SPACING DISTANCE 'X' FROM "TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL" DETAIL.
3. CONTRACTOR SHALL NOTIFY CITY 72 HOURS PRIOR TO INSTALLING TRAFFIC CONTROL DEVICES.
4. THE TCP PLAN SHALL BE COORDINATED WITH ALL LOCAL AGENCIES AND SERVICES THAT MAY BE IMPACTED BY THE CONSTRUCTION, INCLUDING BUT NOT LIMITED TO EMERGENCY RESPONSE AGENCIES SUCH AS CITY POLICE DEPARTMENT, FIRE DEPARTMENT, TRASH PICKUP, USPS, SCHOOLS, AND TXDOT.
5. NO WORK WILL BE ALLOWED ON SATURDAYS OR HOLIDAYS, WITHOUT PRIOR AUTHORIZATION BY CITY STAFF.
6. THE CONTRACTOR SHALL NOT STORE ANY CONSTRUCTION MATERIALS IN SUCH A MANNER AS TO OBSTRUCT VEHICLE DRIVER SIGHT DISTANCES.
7. ALL SIGNS, WARNING DEVICES, AND BARRICADES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING ACTS OF VANDALISM OR ACCIDENT. THE CONTRACTOR SHALL INSURE THAT ALL BARRICADES, SIGNS, CHANNELIZING DEVICES, WARNING LIGHTS, TRAFFIC HANDLING DEVICES, AND TEMPORARY AND EXISTING PAVEMENT MARKINGS ARE MAINTAINED IN A CLEAN FUNCTIONAL CONDITION AT ALL TIMES.
8. THE CONTRACTOR SHALL REMOVE ALL EXISTING SIGNS WHICH ARE IN CONFLICT WITH THE CONSTRUCTION SIGNS.
9. NOTHING IN THESE NOTES OR PLANS SHALL RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT; INCLUDING SAFETY OF ALL MODES OF TRANSPORTATION, PERSONS, AND PROPERTY, AND THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS. PROJECT SITE AND PROPOSED IMPROVEMENTS TO BE MAINTAINED AND CONTRACTOR TO CLEAN UP AT THE END OF EACH DAY AS APPROVED BY THE ENGINEER AND CITY.
10. THE CITY HAS THE RIGHT TO DEMAND THE INSTALLATION OF ADDITIONAL TRAFFIC CONTROL DEVICES OR MODIFICATIONS OF THESE PLANS AND NOTES, AS DEEMED NECESSARY TO PROMOTE THE SAFE AND ORDERLY FLOW OF TRAFFIC, INCLUDING PEDESTRIANS AND BICYCLES, THROUGH THE CONSTRUCTION WORK ZONE. THE CONTRACTOR SHALL COMPLY WITH THESE ADDITIONAL REQUESTS OR MODIFICATIONS WITH DUE DILIGENCE.
11. WHEN ENTERING OR LEAVING ROADWAYS CARRYING PUBLIC TRAFFIC, THE CONTRACTOR'S EQUIPMENT WHETHER EMPTY OR LOADED SHALL IN ALL CASES YIELD TO PUBLIC TRAFFIC WITH ASSISTANCE OF CONTRACTOR PROVIDED CERTIFIED FLAGGER/OFF-DUTY OFFICER.
12. ACCESS TO DRIVEWAYS ADJACENT TO THE CONSTRUCTION WORK ZONE SHALL BE MAINTAINED AT ALL TIMES. ADDITIONAL CONES AND DELINEATORS MAY BE REQUIRED TO DELINEATE THE DRIVEWAY ACCESS ROUTE THROUGH THE CONSTRUCTION ZONE. A MINIMUM OF A 10' TRAVEL LANE SHALL BE MAINTAINED AT ALL TIMES.
13. CONTRACTOR SHALL PROVIDE A TEMPORARY DRIVEWAY FOR RESIDENTS UNTIL THE DRIVEWAY HAS BEEN REPLACED. THIS SHALL BE INCIDENTAL TO THE TRAFFIC CONTROL PAY ITEM.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE RESIDENTS A MINIMUM OF 7 DAYS PRIOR TO WORKING IN FRONT OF THEIR PROPERTY.
15. SPILLAGE RESULTING FROM HAULING OPERATIONS ALONG OR ACROSS ANY PUBLIC TRAVELED WAY SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
16. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE THROUGHOUT THE PROJECT AT ALL TIMES.
17. THE CONTRACTOR SHALL COORDINATE HIS SCHEDULE OF WORK WITH UTILITY OWNERS, BOTH PUBLIC AND PRIVATE. UTILITY OWNERS MAY HAVE THERE OWN FORCES OR CONTRACTORS RELOCATING FACILITIES REQUIRED BY THE NEW CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THESE OTHER FORCES OR CONTRACTORS.
18. FLASHING WARNING LIGHTS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE ADVANCE WARNING SIGNS.
19. ALL WORK SHALL BE PURSUED IN ACCORDANCE WITH CITY ORDINANCE NO. 40-28. NO WORK SHALL BE DONE ON HICKORY SHADOWS DRIVE IN THE ROADWAY BETWEEN HOURS OF 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM, MONDAY-FRIDAY. ALL OTHER ROADWAYS SHALL HAVE WORKING HOURS OF 7:00 AM TO 6:00 PM.
20. CONTRACTOR SHALL COVER OPEN EXCAVATIONS DURING NON-WORKING HOURS. ANCHORED STEEL PLATES SHALL BE USED TO COVER EXCAVATION WITHIN THE PAVEMENT, EXCAVATIONS OUTSIDE OF PAVEMENT SHALL BE COVERED AND ENCLOSED IN CONSTRUCTION FENCING AND OPEN THE LANES FOR TRAFFIC.

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| MK. | DESCRIPTION | DATE | DWN. | CHK. |
| <div><div>FOR REVIEW ONLY</div><div>APRIL 2025</div><div>NGOC KIM LE</div><div>TX. LIC. 102192</div><div>NOT FOR BIDDING, OR CONSTRUCTION</div></div> | | | | |
| <div><div><div>HDR</div><div>HDR Engineering Inc. Texas Reg. No. 754 4828 Loop Central Drive, Suite 700 · Houston, Texas 77081 (713) 622-9264 · Fax (713) 622-9265 · www.hdrinc.com</div></div></div> | | | | |
| City of Hilshire Village, Texas | | | | |
| Hickory Shadows Drive Paving, Drainage & Utility Improvements | | | | |
| TRAFFIC CONTROL PLAN GENERAL NOTES | | | | |
| Job No.: 10418041 | Date: April, 2025 | Dwn By: G.S. Fuller | Scale: HORIZ : VERT : ONE INCH IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | SHEET 07 OF 26 |

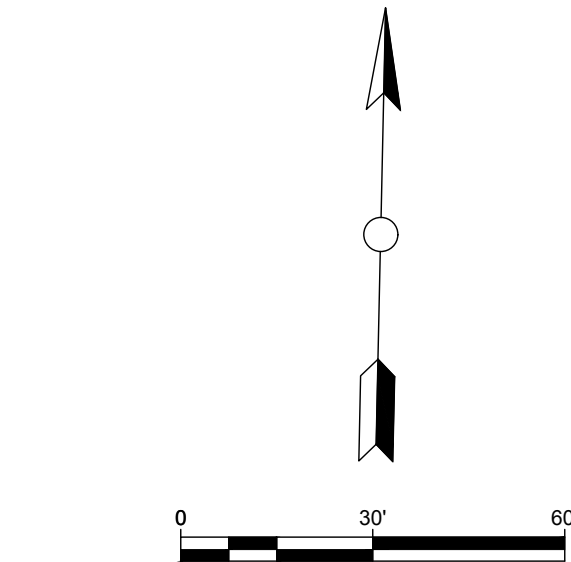


- PHASE 1 NOTES:**
1. PLACE EROSION CONTROL ITEMS WHERE APPLICABLE (TYPICAL OF ALL TRAFFIC CONTROL PLAN NARRATIVE SEQUENCE ITEMS.)
 2. INSTALL UTILITIES ON A ROLLING OPERATION PER "TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL". WATER LINE TO BE INSTALLED FIRST. CONTRACTOR SHALL COORDINATE WITH CITY PRIOR TO INSTALLING UTILITIES. WHERE INSTALLATION OF UTILITIES ARE UNDER PAVEMENT, CONTRACTOR SHALL BACKFILL AND PLACE TEMPORARY PAVEMENT OR STEEL PLATES TO MAINTAIN ACCESS TO BOTH LANES OF TRAFFIC AT THE END OF EACH WORK DAY (NO SEPARATE PAYMENT).
 3. INSTALLATION OF STORM SEWER ON THE WESTSIDE OF HICKORY SHADOWS DRIVE ON A ROLLING OPERATION PER SHEET 10 AND PLACE TEMPORARY ASPHALT PER TRAFFIC CONTROL ONE-LANE TWO-WAY TRAFFIC CONTROL, WITH FLAGGERS.

- PHASE 2 NOTES:**
1. PLACE TRAFFIC CONTROL SIGNS IN PHASE 2 IN ACCORDANCE WITH THE TYPICAL SECTION AND CONSTRUCTION SEQUENCE LAYOUT.
 2. CONTRACTOR SHALL CONSTRUCT PAVEMENT IN SECTIONS (PHASE 2A, 2B AND 2C). CONSTRUCT WALKWAYS AND DRIVEWAYS ON APPLICABLE SIDE OF HICKORY SHADOWS DRIVE.
 3. CONTRACTOR SHALL SEQUENCE CONSTRUCTION IN SUCH A MANNER THAT DRIVEWAYS ACCESS IS MAINTAINED AS MUCH AS POSSIBLE.
 4. CONTRACTOR SHALL PROVIDE 72 HOUR NOTICE TO RESIDENTS PRIOR TO DRIVEWAY REMOVAL OR UTILITY SERVICE DISRUPTION.



GENERAL TYPICAL SECTION FOR PAVING HALF OF THE ROAD
SECTION A-A



- LEGEND**
- PHASE 2A CONSTRUCTION
 - PHASE 2B CONSTRUCTION
 - PHASE 2C CONSTRUCTION
 - BARRELS OR DRUMS
 - GROUND MOUNTED SIGN
 - TYPE III BARRICADE
 - PROP DIRECTION OF TRAFFIC
 - EXIST DIRECTION OF TRAFFIC

- TRAFFIC CONTROL SIGNS:
- A: ONE LANE ROAD (CW20-4)
 - B: ROAD CLOSED (R11-2 (48"x30"))
 - C: DO NOT ENTER (R5-1 (30"x30"))
 - D: NO RIGHT TURN (R3-1 (24"x24"))
 - E: DETOUR AHEAD (M4-9N (30"x12"))
 - F: DETOUR (M4-9N (30"x12"))
 - G: DETOUR (M4-9R (30"x24"))
 - H: ROAD WORK AHEAD (CW20-1 (36"x36"))

- NOTES:**
1. UTILIZE FLAGMEN AS NECESSARY AND INSTALL STORM WATER POLLUTION PREVENTION AND TREE PROTECTION ITEMS.
 2. CONTRACTOR SHALL COORDINATE WITH THE POLICE & FIRE DEPARTMENT DURING THE CONSTRUCTION PHASE FOR ROAD CLOSURE AND EMERGENCY ACCESS.

PHASE 2 CONSTRUCTION SEQUENCE

| MK. | DESCRIPTION | DATE | DWN. | CHK. |
|-----|-------------|------|------|------|
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FOR REVIEW ONLY

APRIL 2025

NGOC KIM LE

TX LIC. 102192

NOT FOR BIDDING OR CONSTRUCTION

HDR

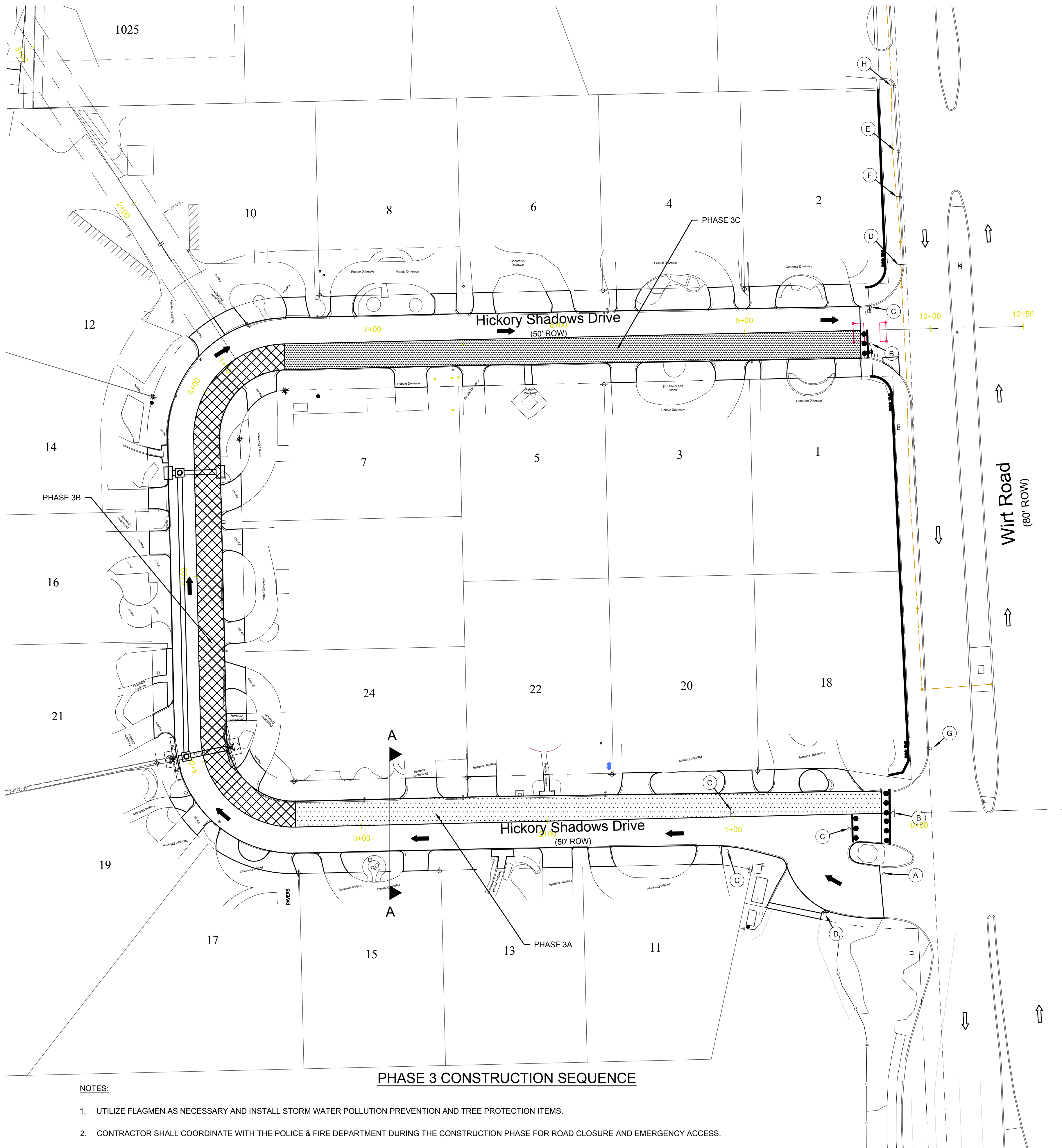
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(713) 622-9264 · Fax (713) 622-9265 · www.hdrinc.com

City of Hilshire Village, Texas

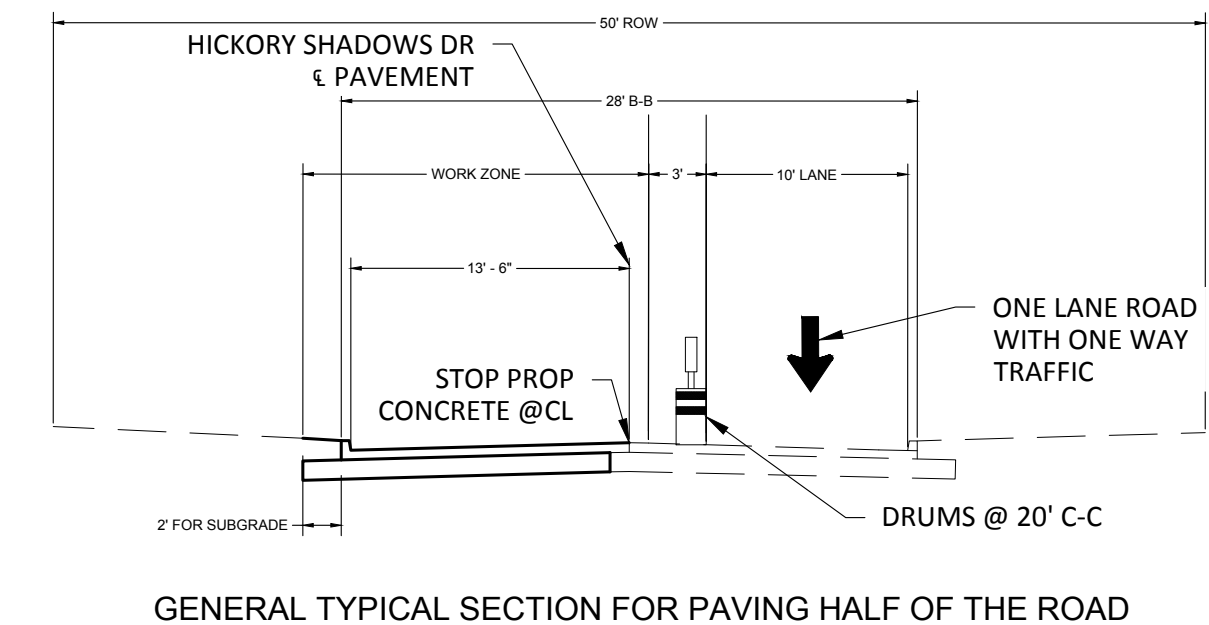
Hickory Shadows Drive
Paving, Drainage & Utility Improvements

Traffic Control Map
Phase 1 & 2

| | | |
|---------------------------|--|-----------------------------|
| Job No.: 10418041 | Scale: HORIZ : 1" = 30' | SHEET 08 OF 26 |
| Date: April, 2025 | VERT : ONE INCH | |
| Dwn By: C.A. Speas | IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | |
| Chkd By: G. Moylan | | |



- PHASE 3 NOTES:**
1. PLACE EROSION CONTROL ITEMS WHERE APPLICABLE (TYPICAL OF ALL TRAFFIC CONTROL PLAN NARRATIVE SEQUENCE ITEMS.)
 2. PLACE TRAFFIC CONTROL SIGNS AND DEVICES FOR PHASE 3 IN ACCORDANCE WITH TYPICAL SECTIONS AND CONSTRUCTION SEQUENCE LAYOUT.
 3. CONTRACTOR SHALL CONSTRUCT PAVEMENT IN APPLICABLE SECTIONS (PHASE 3A, 3B AND 3C). CONSTRUCT WALKWAYS AND DRIVEWAYS ON APPLICABLE SIDE OF HICKORY SHADOWS DRIVE.
 4. CONTRACTOR SHALL SEQUENCE CONSTRUCTION IN SUCH A MANNER THAT DRIVEWAYS ACCESS IS MAINTAINED AS MUCH AS POSSIBLE.
 5. CONTRACTOR SHALL PROVIDE 72 HOUR NOTICE TO RESIDENTS PRIOR TO DRIVEWAY REMOVAL OR UTILITY SERVICE DISRUPTION.



LEGEND

- PHASE 3A CONSTRUCTION
- PHASE 3B CONSTRUCTION
- PHASE 3C CONSTRUCTION
- BARRELS OR DRUMS
- GROUND MOUNTED SIGN
- TYPE III BARRICADE
- PROP DIRECTION OF TRAFFIC
- EXIST DIRECTION OF TRAFFIC

| | |
|---|--|
| (A) ONE LANE ROAD CW20-4 | (B) ROAD CLOSED R11-2 (48" x 30") |
| (C) DO NOT ENTER R5-1 (30" x 30") | (D) NO RIGHT TURN R3-1 (24" x 24") |
| (E) DETOUR AHEAD CW20-2 (36" x 36") | (F) DETOUR M4-9N (30" x 12") |
| (G) DETOUR M4-9R (30" x 24") | (H) ROAD WORK AHEAD CW20-1 (36" x 36") |

- NOTES:**
1. UTILIZE FLAGMEN AS NECESSARY AND INSTALL STORM WATER POLLUTION PREVENTION AND TREE PROTECTION ITEMS.
 2. CONTRACTOR SHALL COORDINATE WITH THE POLICE & FIRE DEPARTMENT DURING THE CONSTRUCTION PHASE FOR ROAD CLOSURE AND EMERGENCY ACCESS.

| MK. | DESCRIPTION | DATE | DWN. | CHK. |
|-----|-------------|------|------|------|
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APRIL 2025

NGOC KIM LE

TX. LIC. 102192

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HDR

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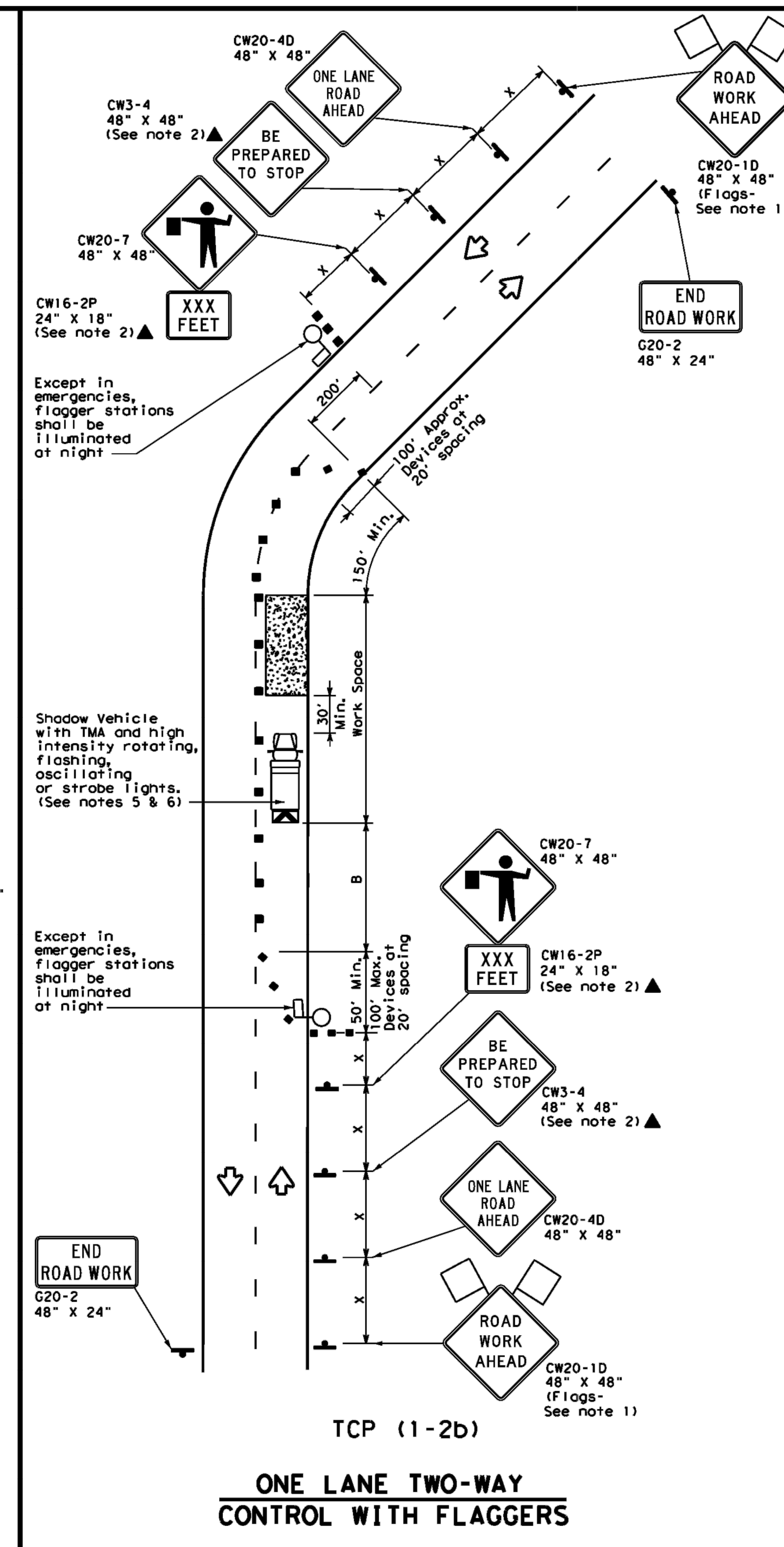
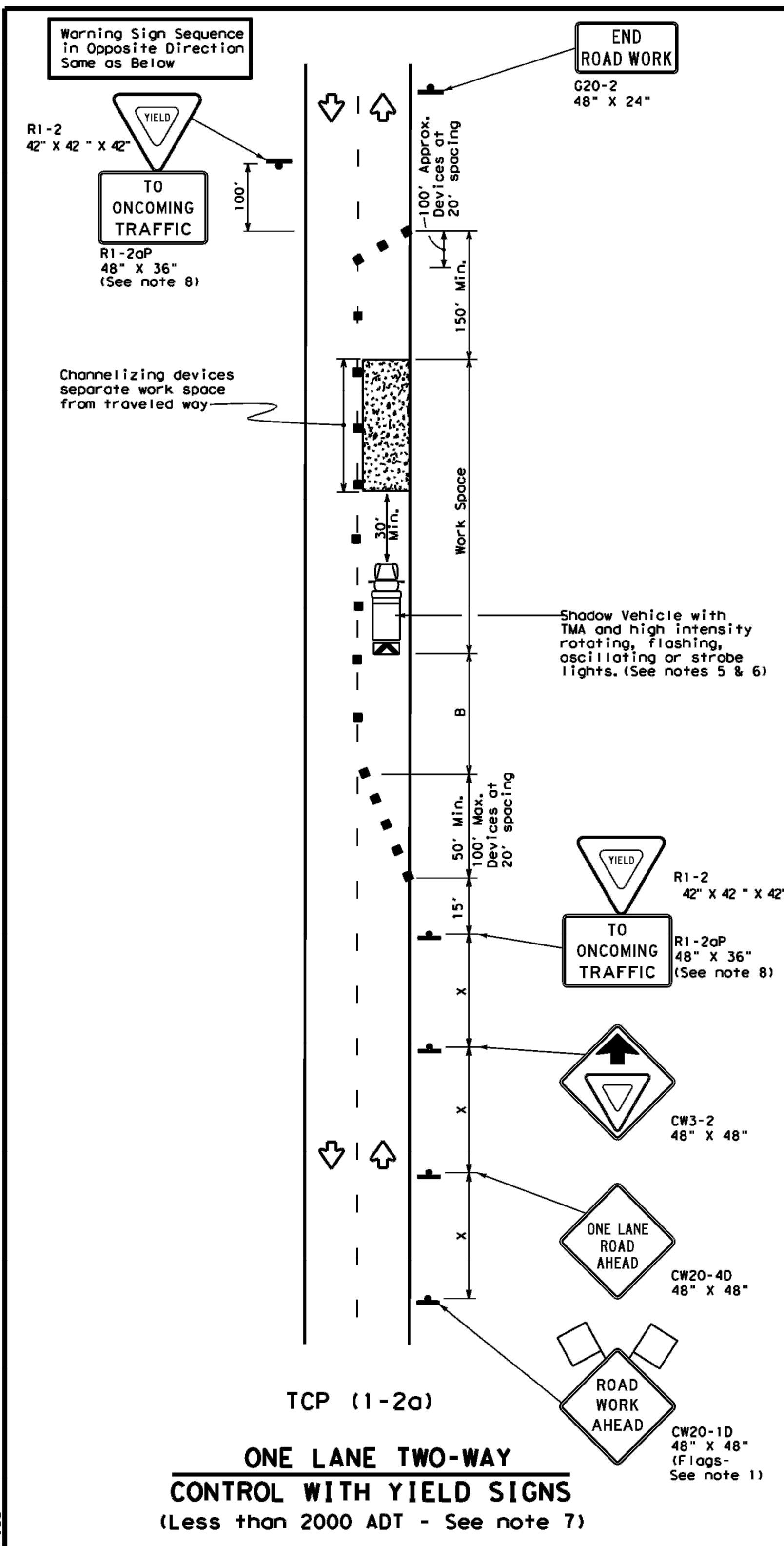
City of Hilshire Village, Texas











Hickory Shadows Drive
Paving, Drainage & Utility Improvements

Traffic Control Map Phase 3

| | | |
|---------------------------|--|-----------------------------|
| Job No.: 10418041 | Scale: HORZ : 1" = 30' | SHEET 09 OF 26 |
| Date: April, 2025 | VERT : 1" = 30' | |
| Dwn By: C.A. Speas | ONE INCH | |
| Chkd By: G. Moylan | IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | |

DATE: _____
FILE: _____



| 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 | Desirable Taper Lengths * % | | | Suggested Maximum Spacing of Channelizing Devices | | Minimum Sign Spacing "x" | 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 | | 450' | 495' | 540' | 45' | 90' | 320' | 195' | 360' |
| 50 | | 500' | 550' | 600' | 50' | 100' | 400' | 240' | 425' |
| 55 | L = WS | 550' | 605' | 660' | 55' | 110' | 500' | 295' | 495' |
| 60 | | 600' | 660' | 720' | 60' | 120' | 600' | 350' | 570' |
| 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


1. Flags attached to signs where shown are REQUIRED.
2. 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.
3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
4. Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger or RI-2 "YIELD" sign is less than 1500 feet.
5. 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.
6. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

TCP (1-2a)

7. R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
8. R1-2 "YIELD" sign with R1-2aP "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.

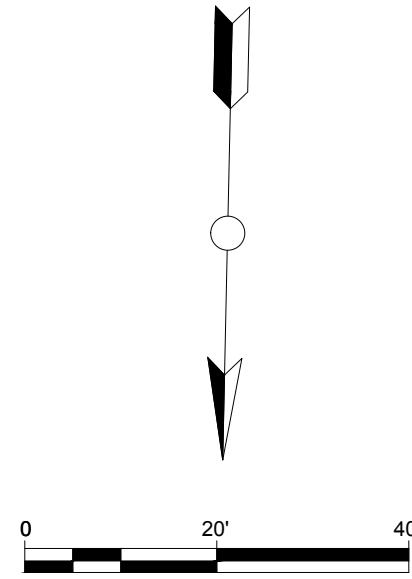
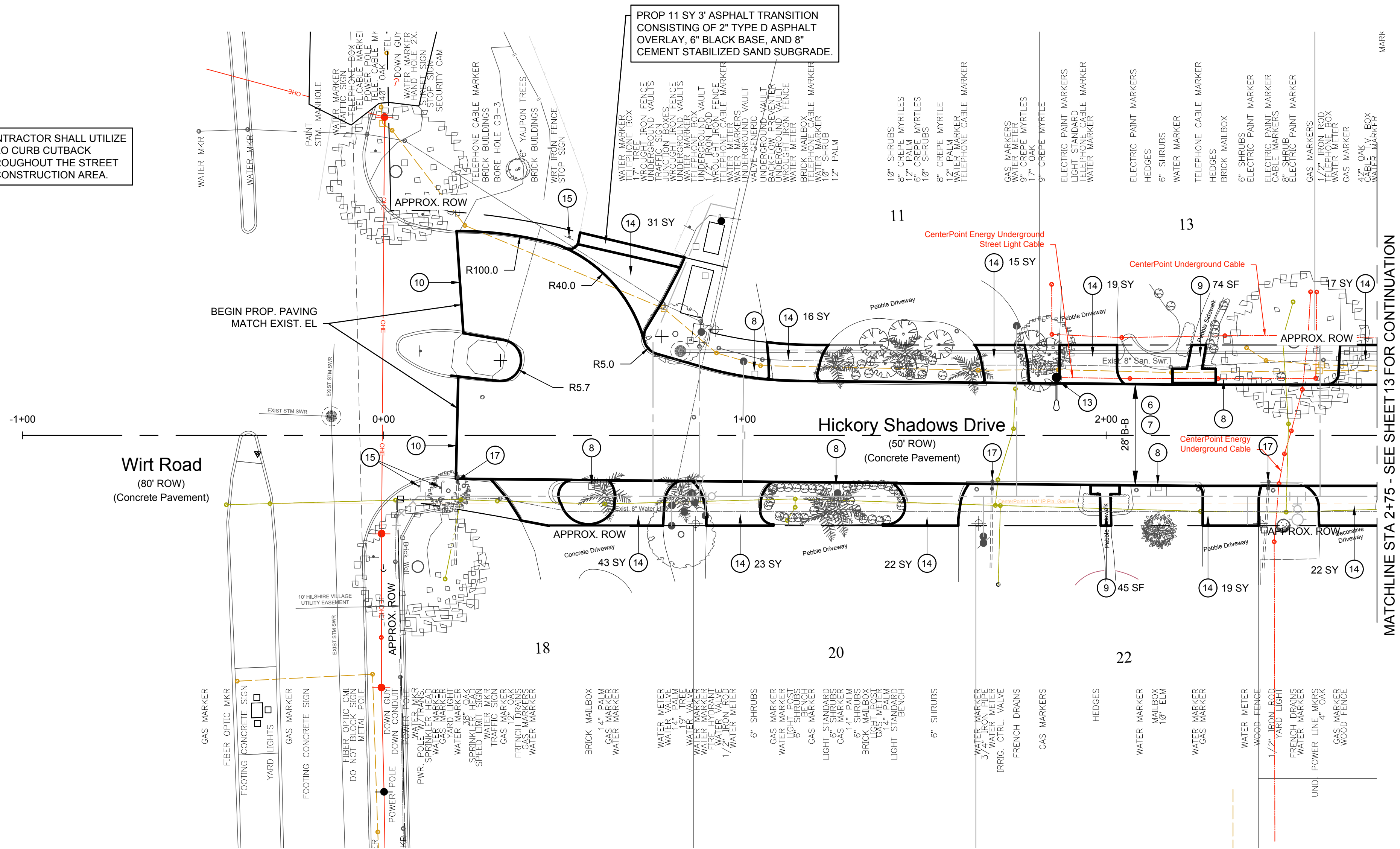
TCP (1-2b)

9. Flaggers should use two-way radios or other methods of communication to control traffic.
10. Length of work space should be based on the ability of flaggers to communicate.
11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
12. Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the engineer.
13. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

| | | | | |
|---|---|------|--------|----------|
|  <p>Texas Department of Transportation</p> | <p><i>Traffic Operations Division Standard</i></p> | | | |
| <h1 style="margin: 0;">TRAFFIC CONTROL PLAN</h1> <h2 style="margin: 0;">ONE-LANE TWO-WAY</h2> <h2 style="margin: 0;">TRAFFIC CONTROL</h2> | | | | |
| <h1 style="margin: 0;">TCP (1-2) - 18</h1> | | | | |
| FILE# tcp1-2-18.dgn | DNI# | CK1# | DWI# | CKI# |
| © TxDOT December 1985 | CONT | SECT | JOB | HIGHWAY |
| 4-90 4-98 2-94 2-12 1-97 2-18 | DIST | | COUNTY | SHEET NO |
| 152 | | | | |

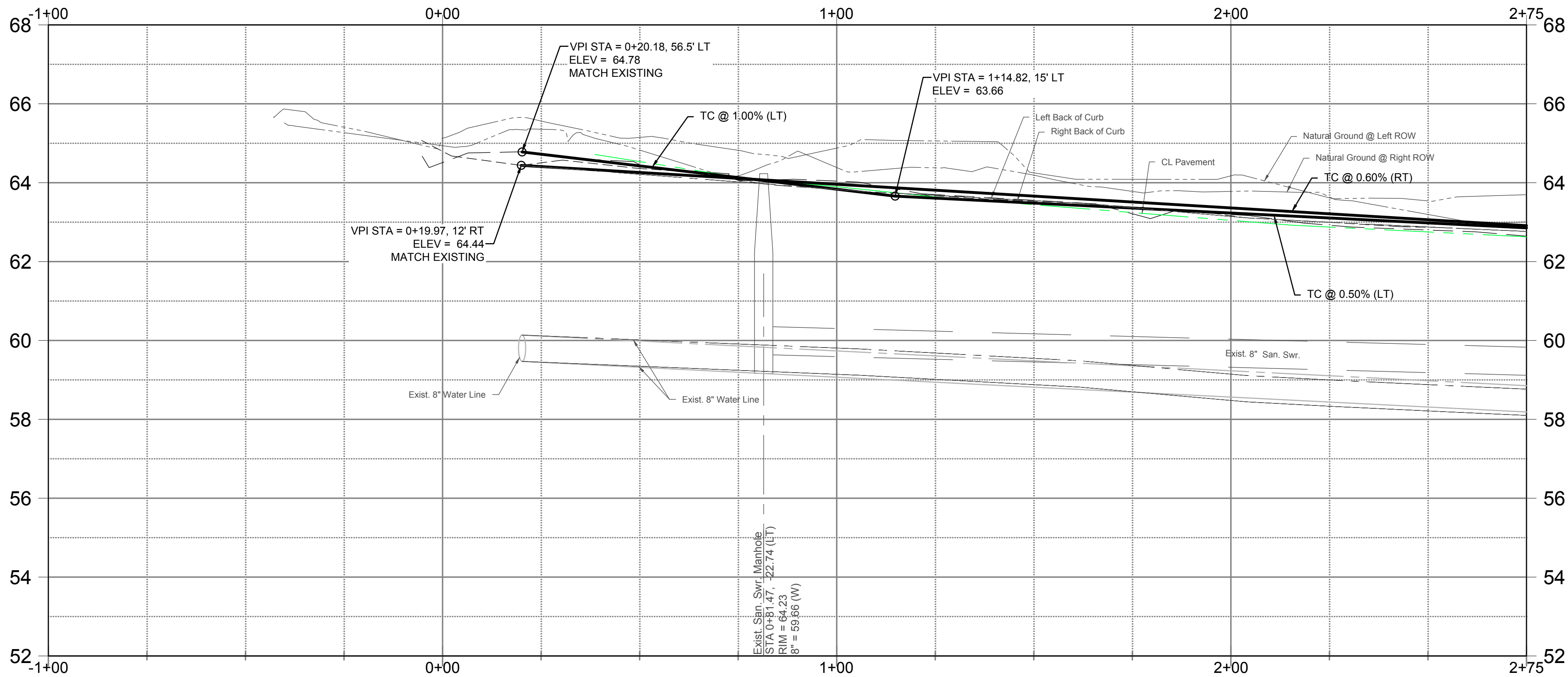
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| MK. | DESCRIPTION | | DATE | DWN. | CHK. |
| | | | | | |
| <div style="font-size: 48pt; font-weight: bold; margin-bottom: 10px;">HDR</div> <p>HDR Engineering Inc. Texas Reg. No. 754 4828 Loop Central Drive, Suite 700 - Houston, Texas 77081 (713) 622-9264 Fax (713) 622-9265 www.hdrinc.com</p> | | | | | |
| <h2>City of Hilshire Village, Texas</h2> <p>Hickory Shadows Drive Paving, Drainage & Utility Improvements</p> | | | | | |
| <h1>ONE-LANE TWO-WAY TRAFFIC CONTROL DETAIL</h1> | | | | | |
| Job No.: I04I80401 | | Scale: HORIZ : VERT : <div style="border: 1px solid black; padding: 2px; display: inline-block;">[ONE INCH]</div> <small>IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE</small> | | SHEET | |
| Date: April, 2025 | | | | 10 | |
| Dwn By: G.S. Fuller | | | | | |
| Chkd By: N. Le | | | | OF 26 | |

CONTRACTOR SHALL UTILIZE ZERO CURB CUTBACK THROUGHOUT THE STREET RECONSTRUCTION AREA.



IMPROVEMENTS LEGEND:
UTILITIES, PAVING & DRAINAGE:

- Proposed 1 1/2" Short Side Water Service Replacement with New Meter Box.
- Proposed 1 1/2" Long Side Water Service Replacement with New Meter Box.
- Remove and Salvage Existing Fire Hydrants.
- Abandon Existing Water Valve as Per Specifications.
- Abandon Existing Water Line Per Specifications.
- Proposed Concrete pavement. (See Typical Single Roadway Section on Sheet 21)
- Remove and Dispose of Existing Concrete Pavement and Base Course with Curb.
- Remove and Reset Mailboxes.
- Proposed Walkway Replacement. (See Sidewalk Details on Sheet 22)
- Proposed Pavement Header. (See Type I Paving Header Detail on Sheet 21)
- Remove Existing Storm Sewer Inlet.
- Remove Existing Storm Sewer.
- Contractor Shall Coordinate Support, Adjustment or Relocation of Power/Light Poles and/or Guy Anchors w/Owner of Poles, as Required.
- Remove and Replace Driveway with Concrete. (See Driveway Details on Sheet 22)
- Remove and Relocate Sign.
- Cut and Plug Sprinkler Head at R.O.W - No Replacement.
- Remove and Replace existing Yard Drain using 4" PVC Pipe to penetrate through Proposed Curb. (No Separate Payment)



| MK. | DESCRIPTION | DATE | DWN. | CHK. |
|-----|-------------|------|------|------|
| | | | | |
| | | | | |
| | | | | |

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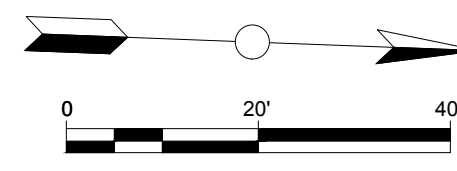
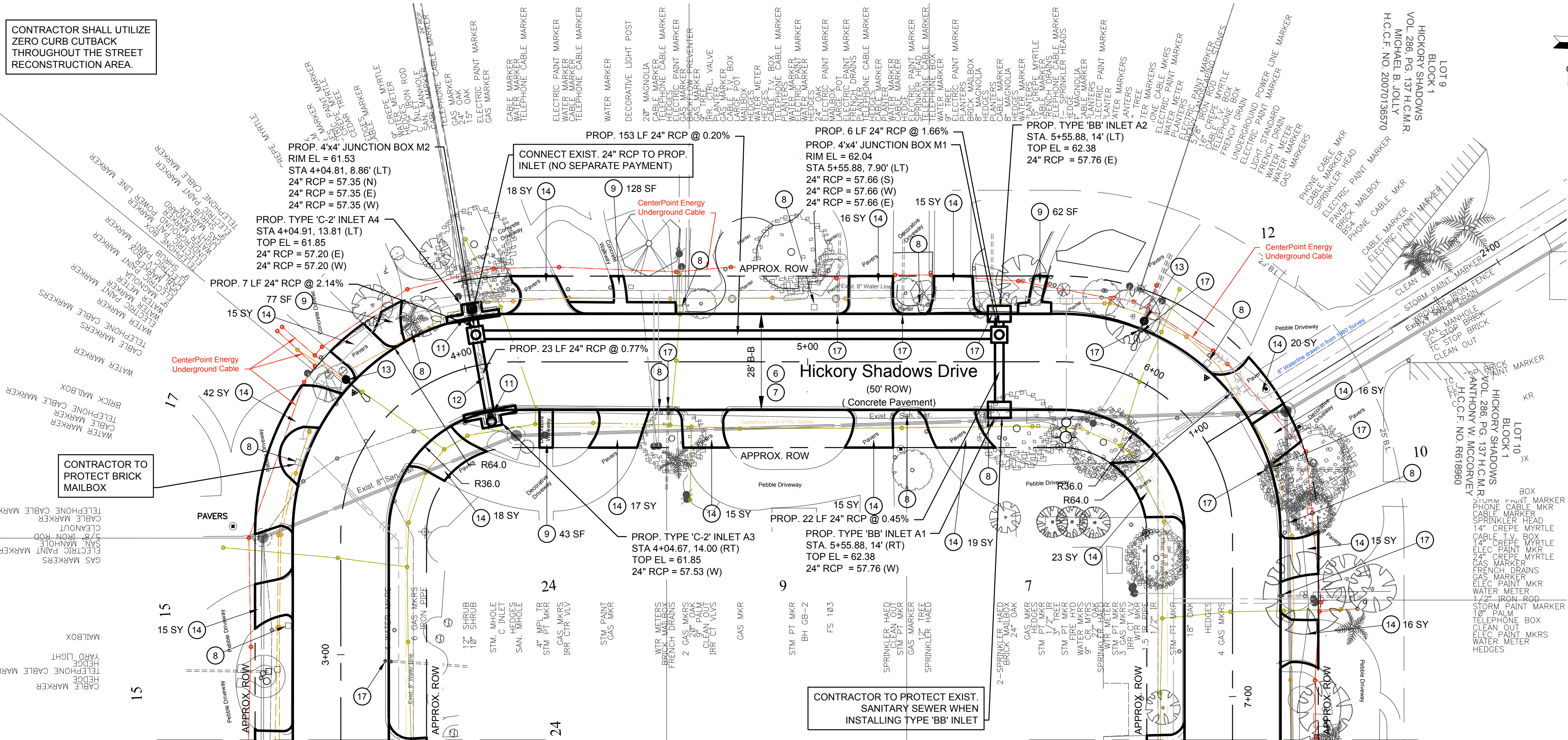
City of Hilshire Village, Texas

Hickory Shadows Drive
Paving, Drainage & Utility Improvements

HICKORY SHADOWS
STA. -1+00.00 TO STA. 2+75.00

| | | |
|---------------------|--|-----------------------------|
| Job No.: 10418041 | Scale: HORIZ : 1" = 20' VERT : 1" = 2' | SHEET 12 OF 26 |
| Date: April, 2025 | ONE INCH | |
| Dwn By: G.S. Fuller | IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | |
| Chkd By: N. Le | | |

CONTRACTOR SHALL UTILIZE ZERO CURB CUTBACK THROUGHOUT THE STREET RECONSTRUCTION AREA.



IMPROVEMENTS LEGEND:
UTILITIES, PAVING & DRAINAGE:

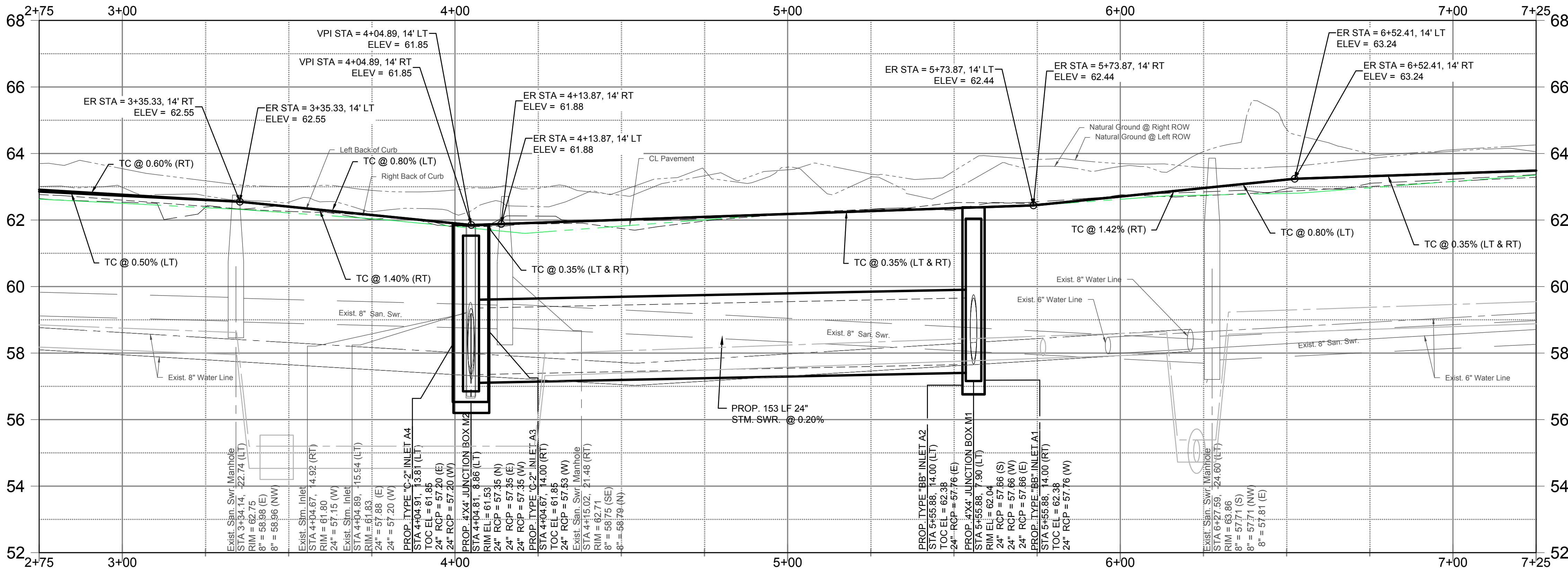
- 1 Proposed 1 1/2" Short Side Water Service Replacement with New Meter Box.
- 2 Proposed 1 1/2" Long Side Water Service Replacement with New Meter Box.
- 3 Remove and Salvage Existing Fire Hydrants.
- 4 Abandon Existing Water Valve as Per Specifications.
- 5 Abandon Existing Water Line Per Specifications.
- 6 Proposed Concrete pavement. (See Typical Single Roadway Section on Sheet 21)
- 7 Remove and Dispose of Existing Concrete Pavement and Base Course with Curb.
- 8 Remove and Reset Mailboxes.
- 9 Proposed Walkway Replacement. (See Sidewalk Details on Sheet 22)
- 10 Proposed Pavement Header. (See Type I Paving Header Detail on Sheet 21)
- 11 Remove Existing Storm Sewer Inlet.
- 12 Remove Existing Storm Sewer.
- 13 Contractor Shall Coordinate Support, Adjustment or Relocation of Power/Light Poles and/or Guy Anchors w/Owner of Poles, as Required.
- 14 Remove and Replace Driveway with Concrete. (See Driveway Details on Sheet 22)
- 15 Remove and Relocate Sign.
- 16 Cut and Plug Sprinkler Head at R.O.W - No Replacement.
- 17 Remove and Replace existing Yard Drain using 4" PVC Pipe to penetrate through Proposed Curb. (No Separate Payment)

MATCHLINE STA. 2+75 - SEE SHEET 12 FOR CONTINUATION

Hickory Shadows Drive
(50' ROW)

MATCHLINE STA. 7+25 - SEE SHEET 14 FOR CONTINUATION

Hickory Shadows Drive
(50' ROW)



| MK. | DESCRIPTION | DATE | DWN. | CHK. |
|-----|-------------|------|------|------|
| | | | | |
| | | | | |
| | | | | |

FOR REVIEW ONLY

APRIL 2025

NGOC KIM LE

Tx. Lic. 102192

NOT FOR BIDDING OR CONSTRUCTION

HDR

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4828 Loop Central Drive, Suite 700 · Houston, Texas 77081
(713) 622-9264 · Fax (713) 622-9265 · www.hdrinc.com

City of Hilshire Village, Texas

**Hickory Shadows Drive
Paving, Drainage & Utility Improvements**

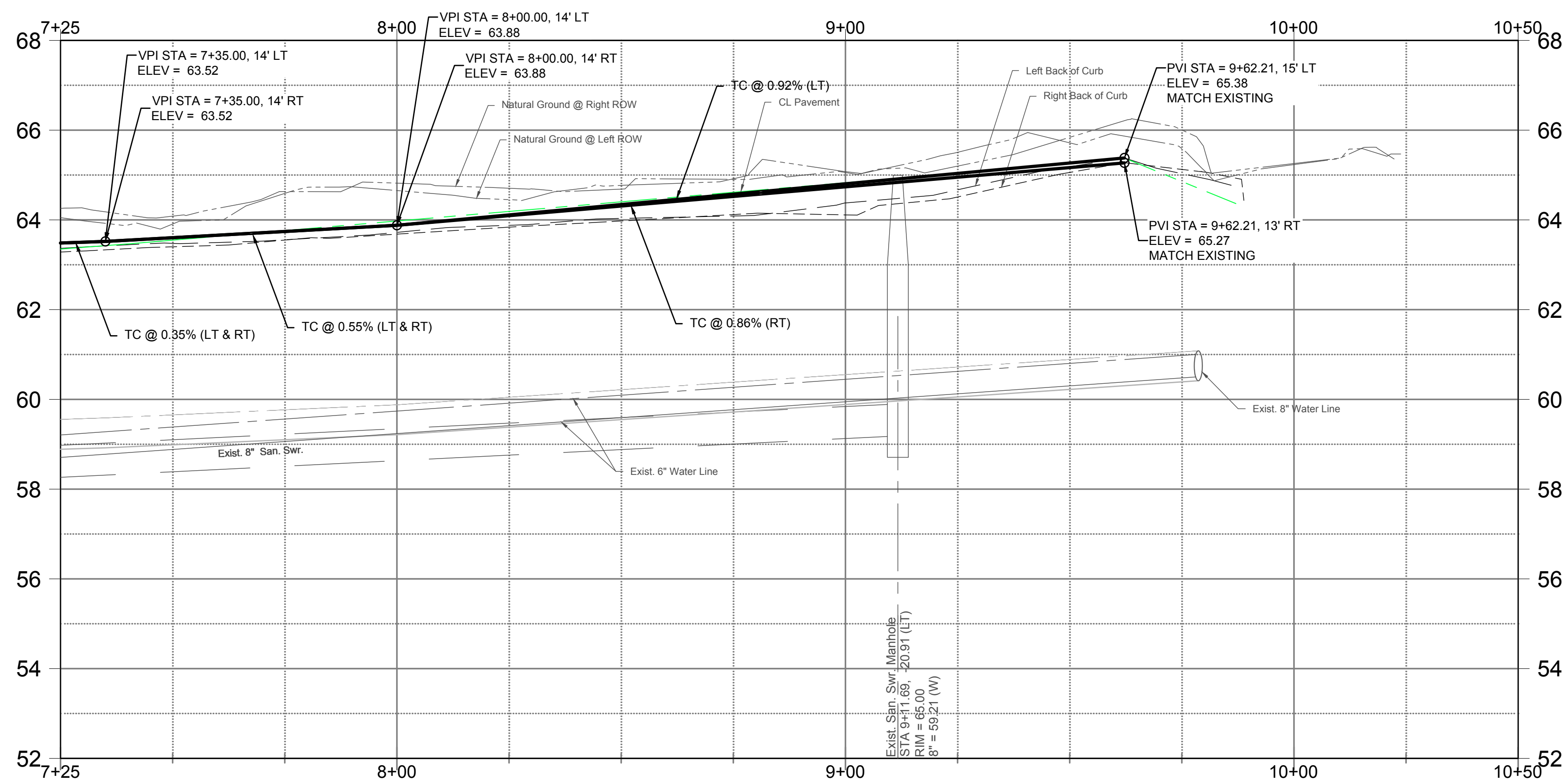
**HICKORY SHADOWS
STA. 2+75.00 TO STA. 7+25.00**

| | | |
|---------------------|--|-------------------------------|
| Job No.: 10418041 | Scale: HORZ : 1" = 20' VERT : 1" = 2' | SHEET 13 OF 26 |
| Date: April, 2025 | ONE INCH | |
| Dwn By: G.S. Fuller | IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | |
| Chkd By: N. Le | | |

[illegible]

- CONTRACTOR TO REMOVE AND REINSTALL GATE CONTROL BUTTON INCLUDING ANY APPURTENANCES TO RESUME SERVICE.

PROP. 7 SY CONCRETE POINT REPAIR
INCLUDING CURB, CONCRETE
PAVEMENT TO MATCH EXIST.,
AND CEMENT STABILIZED SUBGRADE
PER DETAIL SHEET 22.



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| MK. | DESCRIPTION | DATE | DWN. | CHK. |
|-----|-------------|------|------|------|
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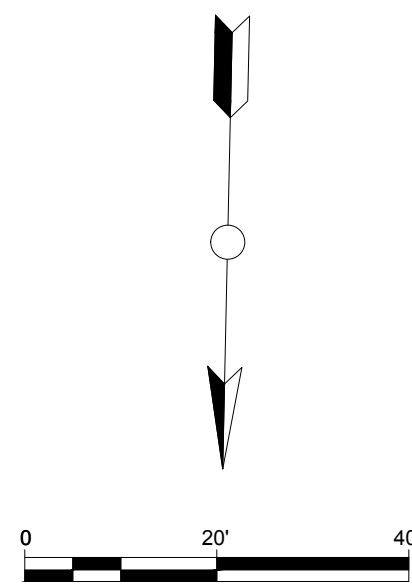
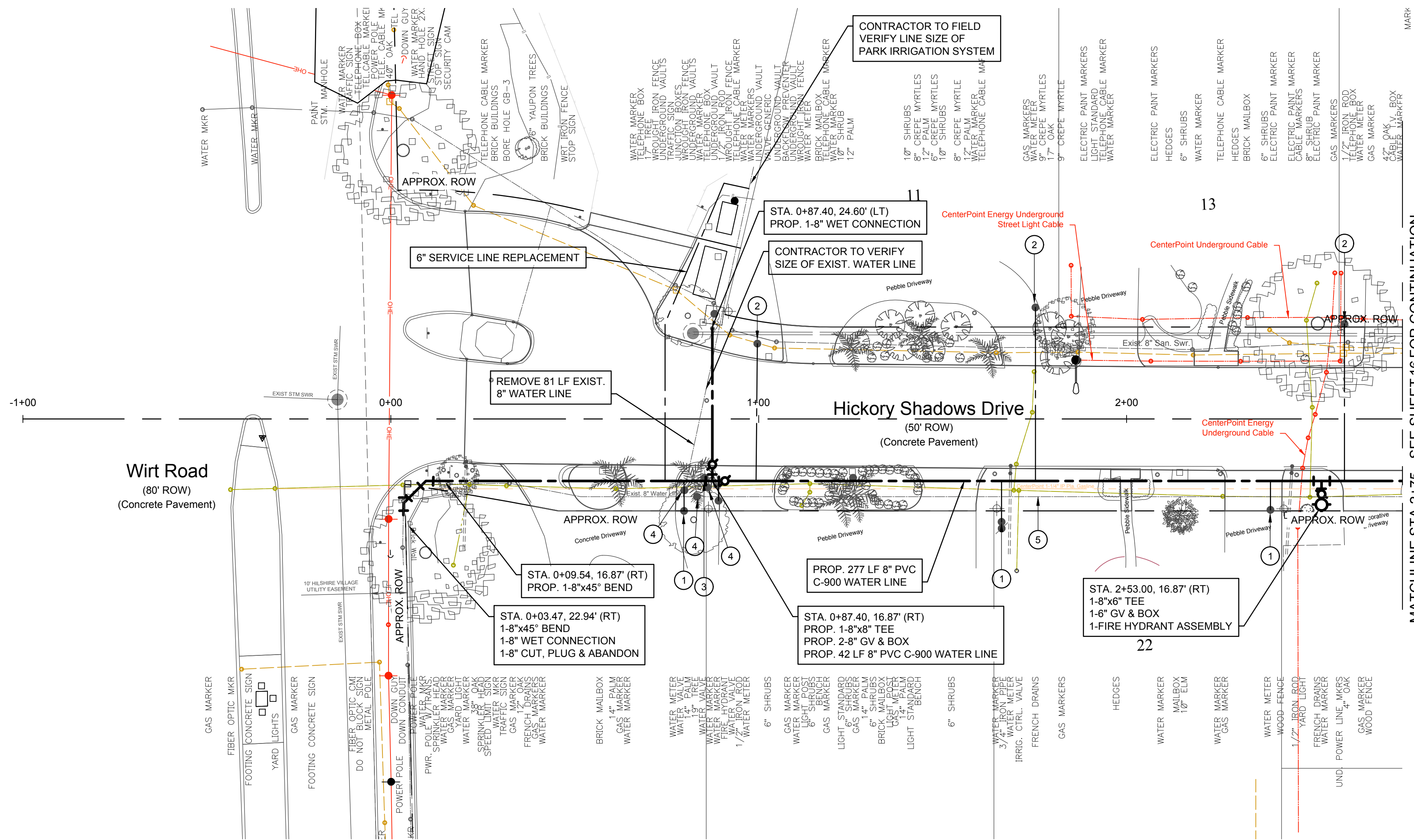
City of Hillshire Village, Texas

Hickory Shadows Drive Paving, Drainage & Utility Improvements

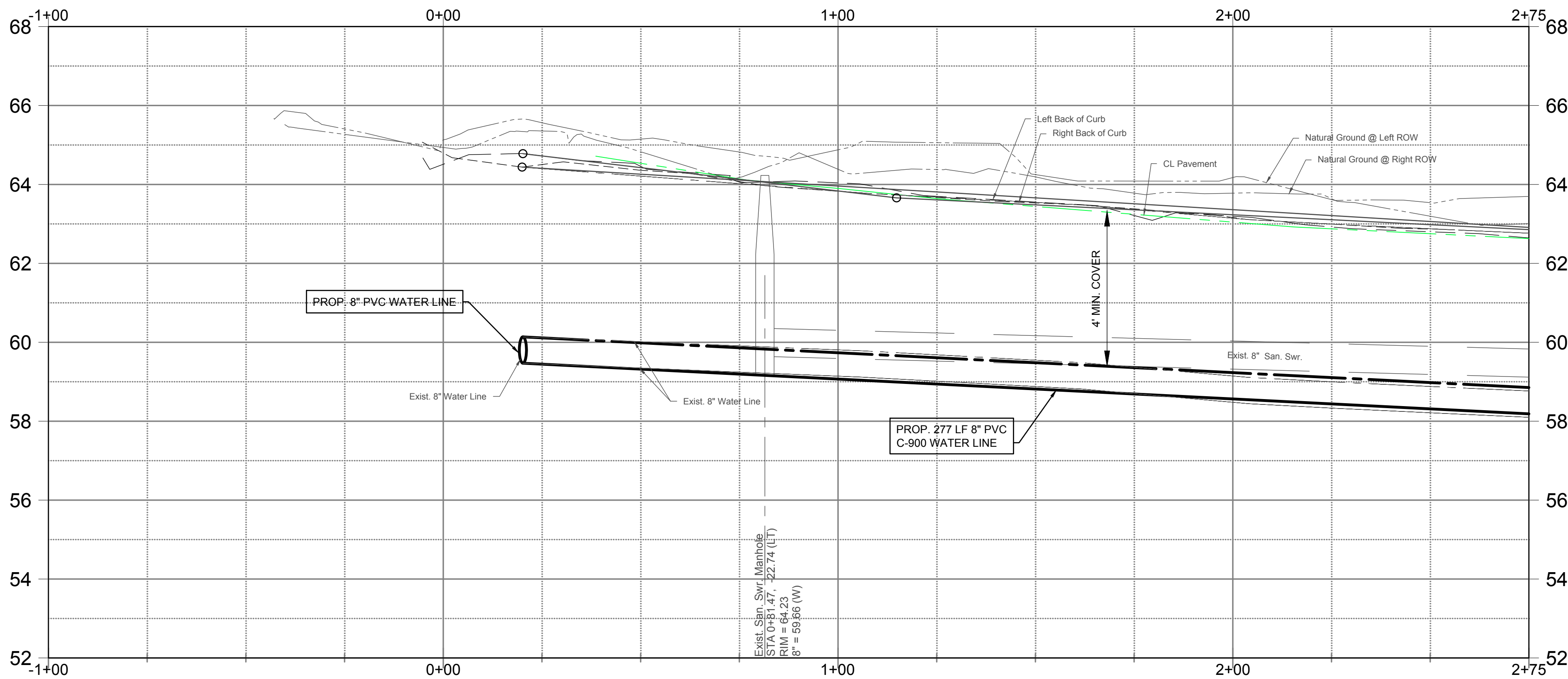
HICKORY SHADOWS

STA. 7+25.00 TO STA. 10+50.00

| | | |
|---------------------|--|--|
| Job No.: I04I804I | Scale: HORZ : 1" = 20' VERT : 1" = 2' | <div>SHEET</div> <div style="font-size: 2em; font-weight: bold; margin-top: -10px;">14</div> |
| Date: April, 2025 | <div>ONE INCH</div> <div style="font-size: 0.8em; margin-top: 5px;">IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE</div> | OF 26 |
| Dwn By: G.S. Fuller | | |
| Chkd By: N. Le | | |



- IMPROVEMENTS LEGEND:**
UTILITIES, PAVING & DRAINAGE:
- 1 Proposed 1 1/2" Short Side Water Service Replacement with New Meter Box.
 - 2 Proposed 1 1/2" Long Side Water Service Replacement with New Meter Box.
 - 3 Remove and Salvage Existing Fire Hydrants.
 - 4 Abandon Existing Water Valve as Per Specifications.
 - 5 Abandon Existing Water Line Per Specifications.
 - 6 Proposed Concrete pavement. (See Typical Single Roadway Section on Sheet 21)
 - 7 Remove and Dispose of Existing Concrete Pavement and Base Course with Curb.
 - 8 Remove and Reset Mailboxes.
 - 9 Proposed Walkway Replacement. (See Sidewalk Details on Sheet 22)
 - 10 Proposed Pavement Header. (See Type I Paving Header Detail on Sheet 21)
 - 11 Remove Existing Storm Sewer Inlet.
 - 12 Remove Existing Storm Sewer.
 - 13 Contractor Shall Coordinate Support, Adjustment or Relocation of Power/Light Poles and/or Guy Anchors w/Owner of Poles, as Required.
 - 14 Remove and Replace Driveway with Concrete. (See Driveway Details on Sheet 22)
 - 15 Remove and Relocate Sign.
 - 16 Cut and Plug Sprinkler Head at R.O.W - No Replacement.
 - 17 Remove and Replace existing Yard Drain using 4" PVC Pipe to penetrate through Proposed Curb. (No Separate Payment)



| MK. | DESCRIPTION | DATE | DWN. | CHK. |
|-----|-------------|------|------|------|
| | | | | |
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FOR REVIEW ONLY

APRIL 2025

NGOC KIM LE

TX. LIC. 102192

NOT FOR BIDDING, OR CONSTRUCTION

HDR

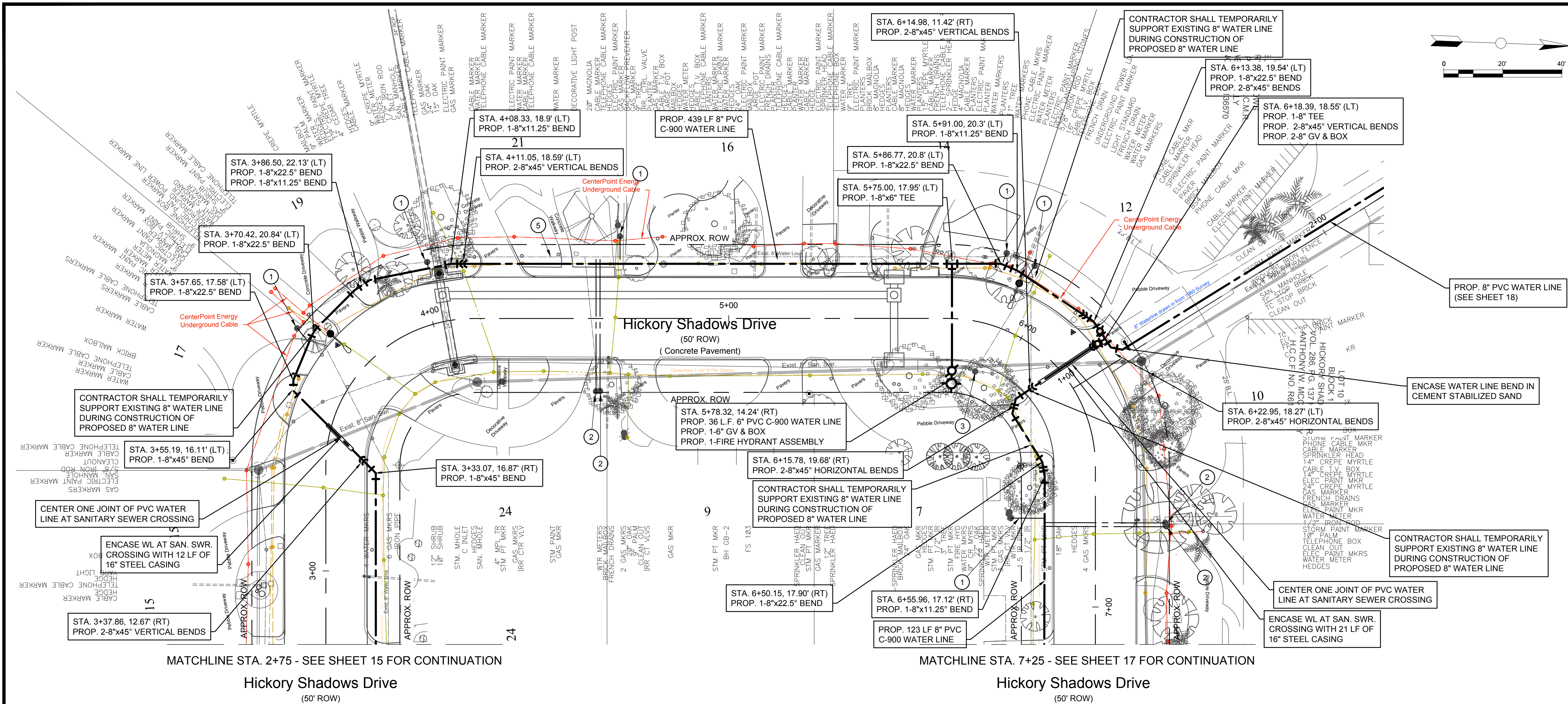
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(713) 622-9264 · Fax (713) 622-9265 · www.hdrinc.com

City of Hilshire Village, Texas

Hickory Shadows Drive
Paving, Drainage & Utility Improvements

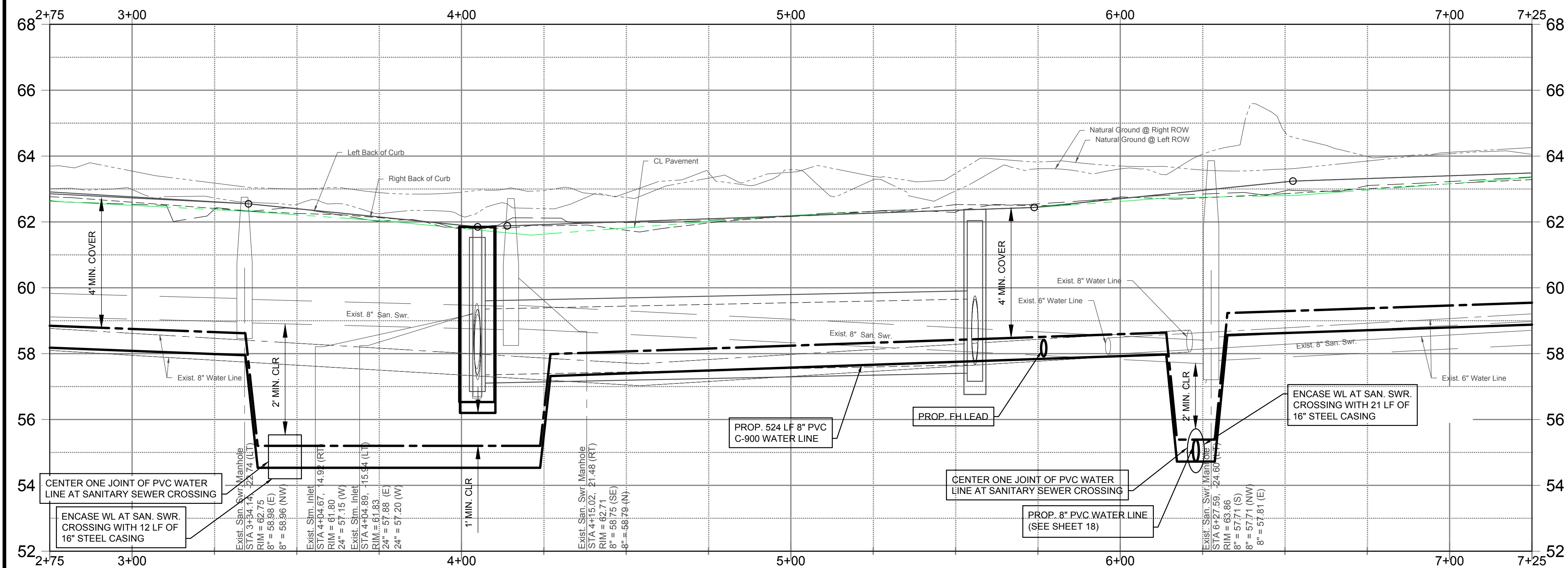
HICKORY SHADOWS (WL)
STA. -1+00.00 TO STA. 2+75.00

| | | |
|---------------------|--|------------------------------------|
| Job No.: 10418041 | Scale: HORIZ : 1" = 20' VERT : 1" = 2' | SHEET 15 OF 26 |
| Date: April, 2025 | ONE INCH | |
| Dwn By: G.S. Fuller | IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | |
| Chkd By: N. Le | | |



IMPROVEMENTS LEGEND:
UTILITIES, PAVING & DRAINAGE:

- Proposed 1 1/2" Short Side Water Service Replacement with New Meter Box.
- Proposed 1 1/2" Long Side Water Service Replacement with New Meter Box.
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- Abandon Existing Water Valve as Per Specifications.
- Abandon Existing Water Line Per Specifications.
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- Remove and Dispose of Existing Concrete Pavement and Base Course with Curb.
- Remove and Reset Mailboxes.
- Proposed Walkway Replacement. (See Sidewalk Details on Sheet 22)
- Proposed Pavement Header. (See Type I Paving Header Detail on Sheet 21)
- Remove Existing Storm Sewer Inlet.
- Remove Existing Storm Sewer.
- Contractor Shall Coordinate Support, Adjustment or Relocation of Power/Light Poles and/or Guy Anchors w/Owner of Poles, as Required.
- Remove and Replace Driveway with Concrete. (See Driveway Details on Sheet 22)
- Remove and Relocate Sign.
- Cut and Plug Sprinkler Head at R.O.W - No Replacement.
- Remove and Replace existing Yard Drain using 4" PVC Pipe to penetrate through Proposed Curb. (No Separate Payment)



| MK. | DESCRIPTION | DATE | DWN. | CHK. |
|-----|-------------|------|------|------|
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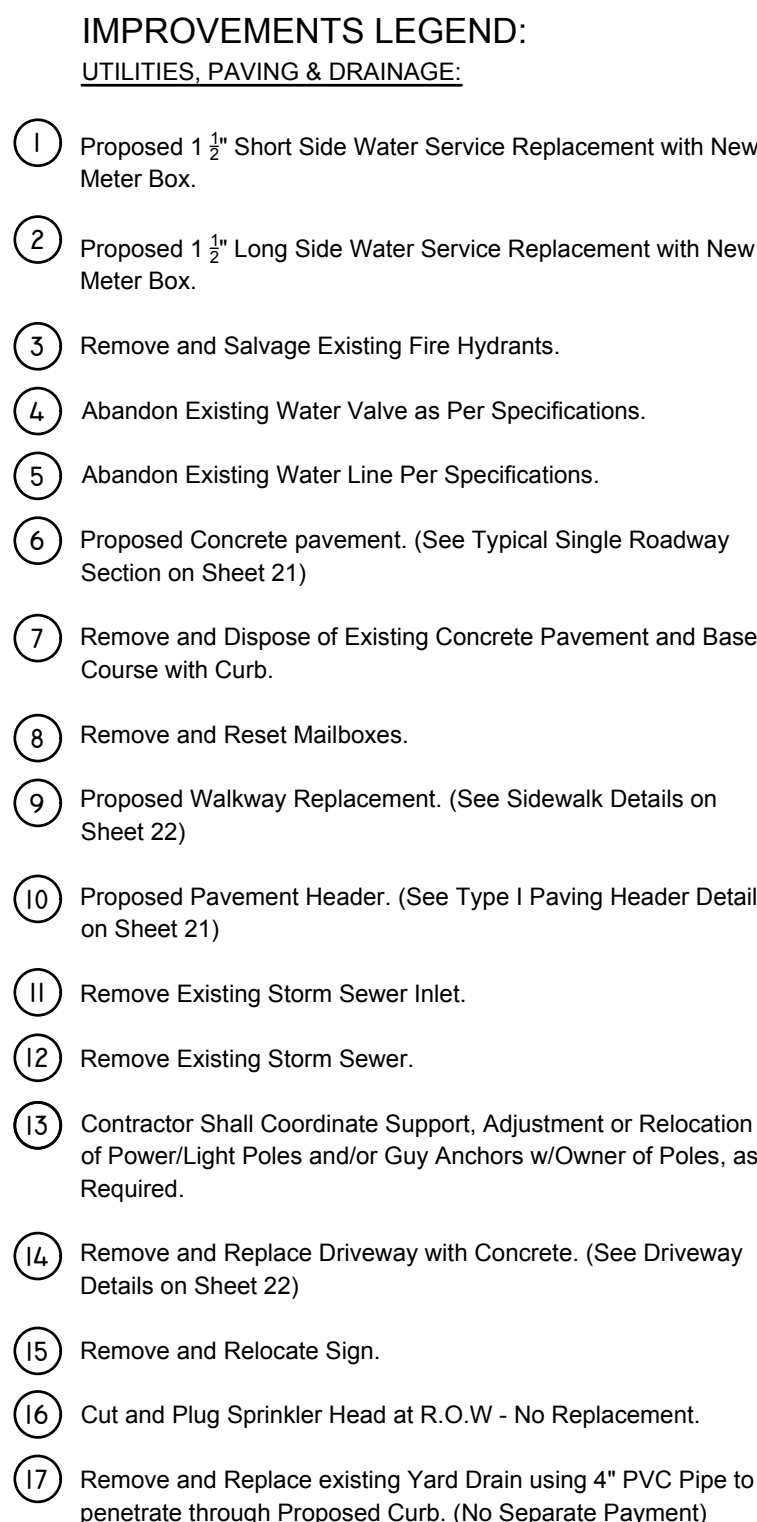
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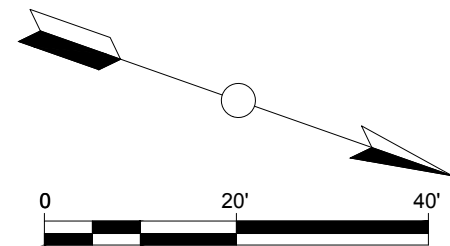
City of Hilshire Village, Texas

Hickory Shadows Drive
Paving, Drainage & Utility Improvements

HICKORY SHADOWS (WL)
STA. 2+75.00 TO STA. 7+25.00

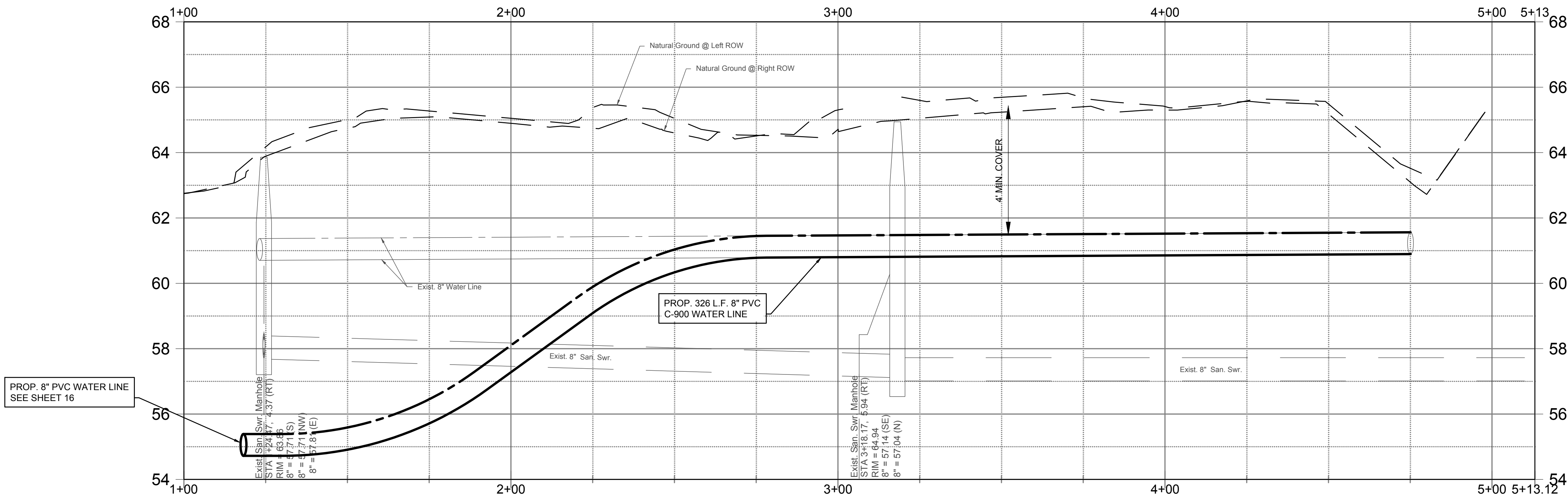
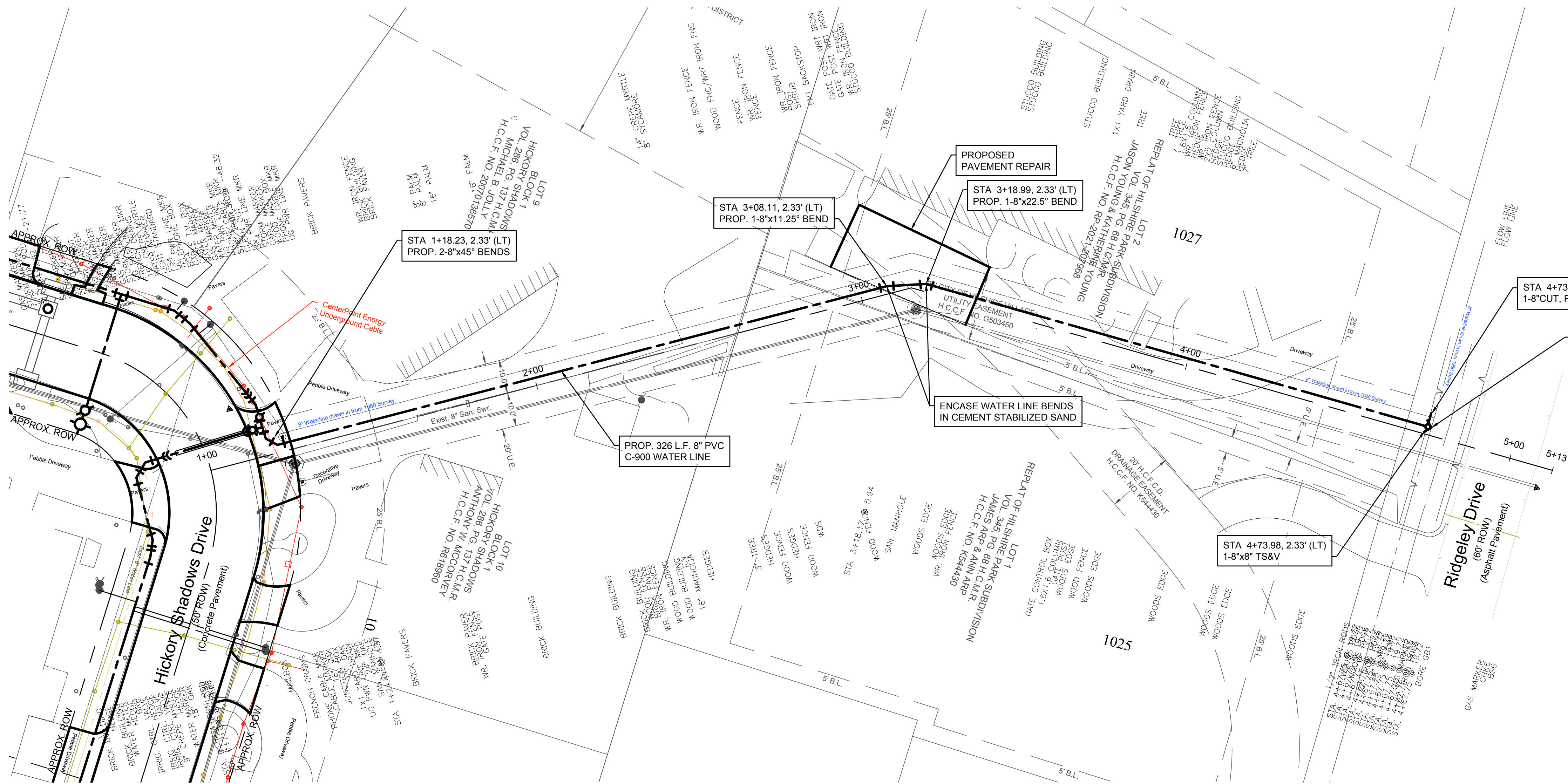
| | | |
|---------------------|--|-------|
| Job No.: 10418041 | Scale: HORZ : 1" = 20' VERT : 1" = 2' | SHEET |
| Date: April, 2025 | ONE INCH | 16 |
| Dwn By: G.S. Fuller | IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | OF 26 |
| Chkd By: N. Le | | |





IMPROVEMENTS LEGEND:
UTILITIES, PAVING & DRAINAGE:

- 1 Proposed 1 1/2" Short Side Water Service Replacement with New Meter Box.
- 2 Proposed 1 1/2" Long Side Water Service Replacement with New Meter Box.
- 3 Remove and Salvage Existing Fire Hydrants.
- 4 Abandon Existing Water Valve as Per Specifications.
- 5 Abandon Existing Water Line Per Specifications.
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- 13 Contractor Shall Coordinate Support, Adjustment or Relocation of Power/Light Poles and/or Guy Anchors w/Owner of Poles, as Required.
- 14 Remove and Replace Driveway with Concrete. (See Driveway Details on Sheet 22)
- 15 Remove and Relocate Sign.
- 16 Cut and Plug Sprinkler Head at R.O.W - No Replacement.
- 17 Remove and Replace existing Yard Drain using 4" PVC Pipe to penetrate through Proposed Curb. (No Separate Payment)



| MK. | DESCRIPTION | DATE | DWN. | CHK. |
|-----|-------------|------|------|------|
| | | | | |
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FOR REVIEW ONLY

APRIL 2025

NGOC KIM LE

TX. LIC. 102192

NOT FOR BIDDING OR CONSTRUCTION

HDR

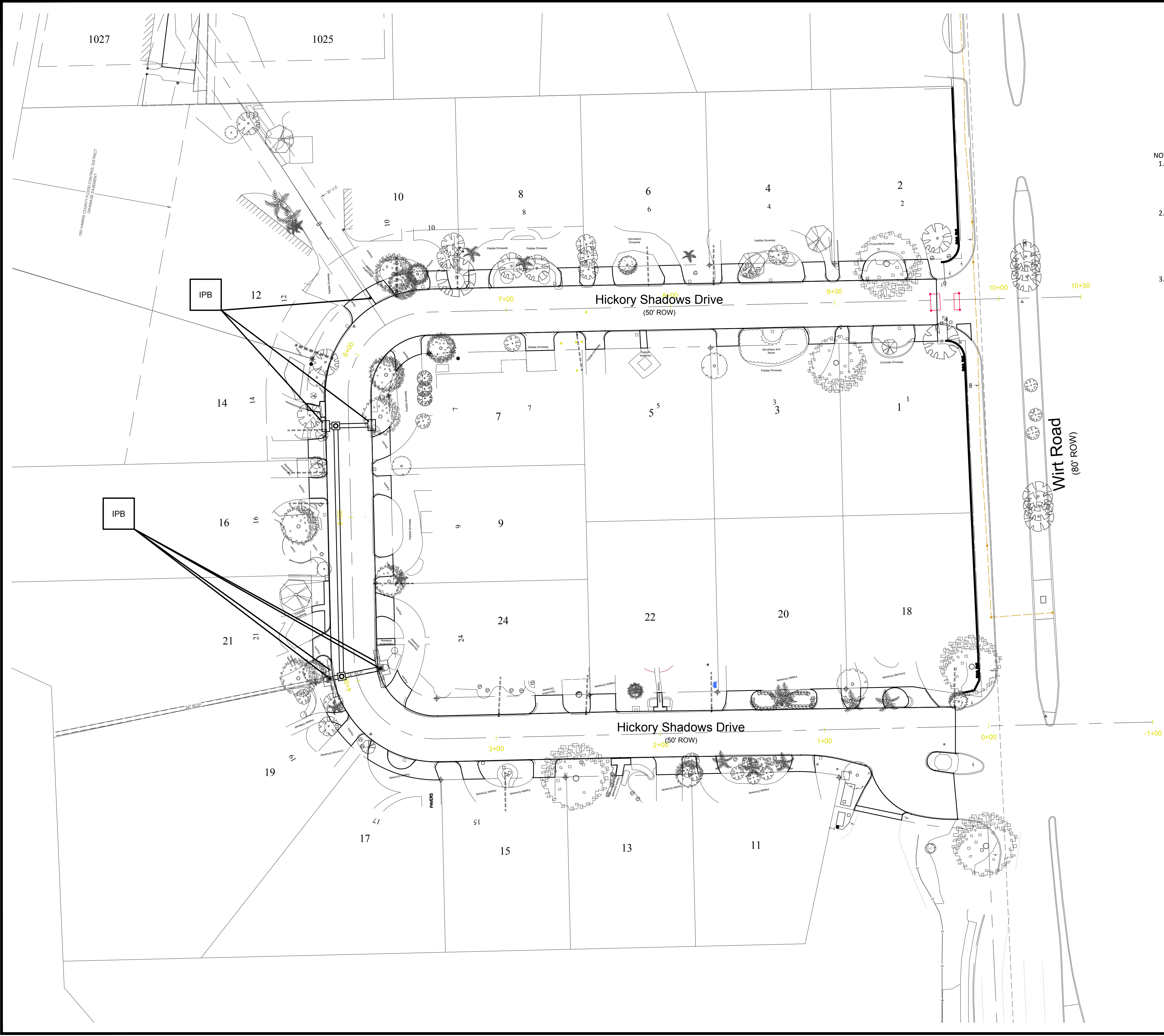
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City of Hilshire Village, Texas

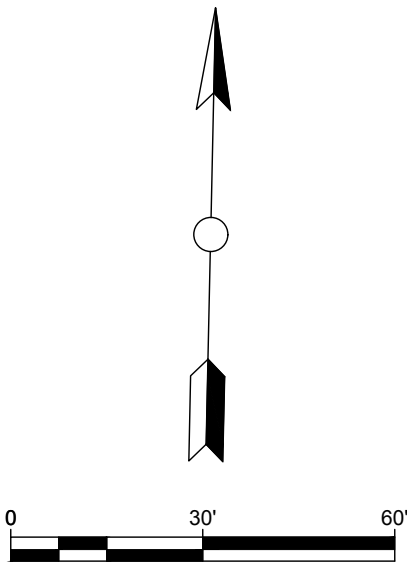
**Hickory Shadows Drive
Paving, Drainage & Utility Improvements**

**HICKORY SHADOWS -
(WATER LINE EASEMENT)**

| | | |
|---------------------|--|--------------------|
| Job No.: 10418041 | Scale: HORIZ : 1" = 20' VERT : 1" = 2' | 18 OF 26 |
| Date: April, 2025 | ONE INCH | |
| Dwn By: G.S. Fuller | IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | |
| Chkd By: N. Le | | |



- NOTES:
1. ALL STORM WATER POLLUTION PREVENTION FEATURES APPLIED FOR EXISTING CONDITIONS SHALL REMAIN IN EFFECT THROUGHOUT CONSTRUCTION PROGRESS AS REQUIRED.
 2. ALL SWPPP FEATURE LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN THE FIELD AND ADJUST AS REQUIRED TO ASSURE COMPLIANCE WITH SWPPP SPECIFICATIONS INCLUDING PROTECTION OF PRIVATE PROPERTIES.
 3. INLET PROTECTION BARRIERS SHALL BE INSTALLED FOR EXISTING AND PROPOSED SITUATIONS AS REQUIRED.



SW3P LEGEND

- 60" EXISTING STORM SEWER
- 60" PROPOSED STORM SEWER
- EXISTING MANHOLE
- EXISTING "C" INLET
- PROPOSED "C" INLET
- PROPOSED "BB" INLET
- PROPOSED JUNCTION BOX
- IPB INLET PROTECTION BARRIER FOR EXIST. AND PROP. INLETS
- ROW IN PROJECT AREA

| MK. | DESCRIPTION | DATE | DWN. | CHK. |
|-----|-------------|------|------|------|
| | | | | |
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FOR REVIEW ONLY

APRIL 2025

NGOC KIM LE

TX. LIC. 102192

NOT FOR BIDDING OR CONSTRUCTION

HDR

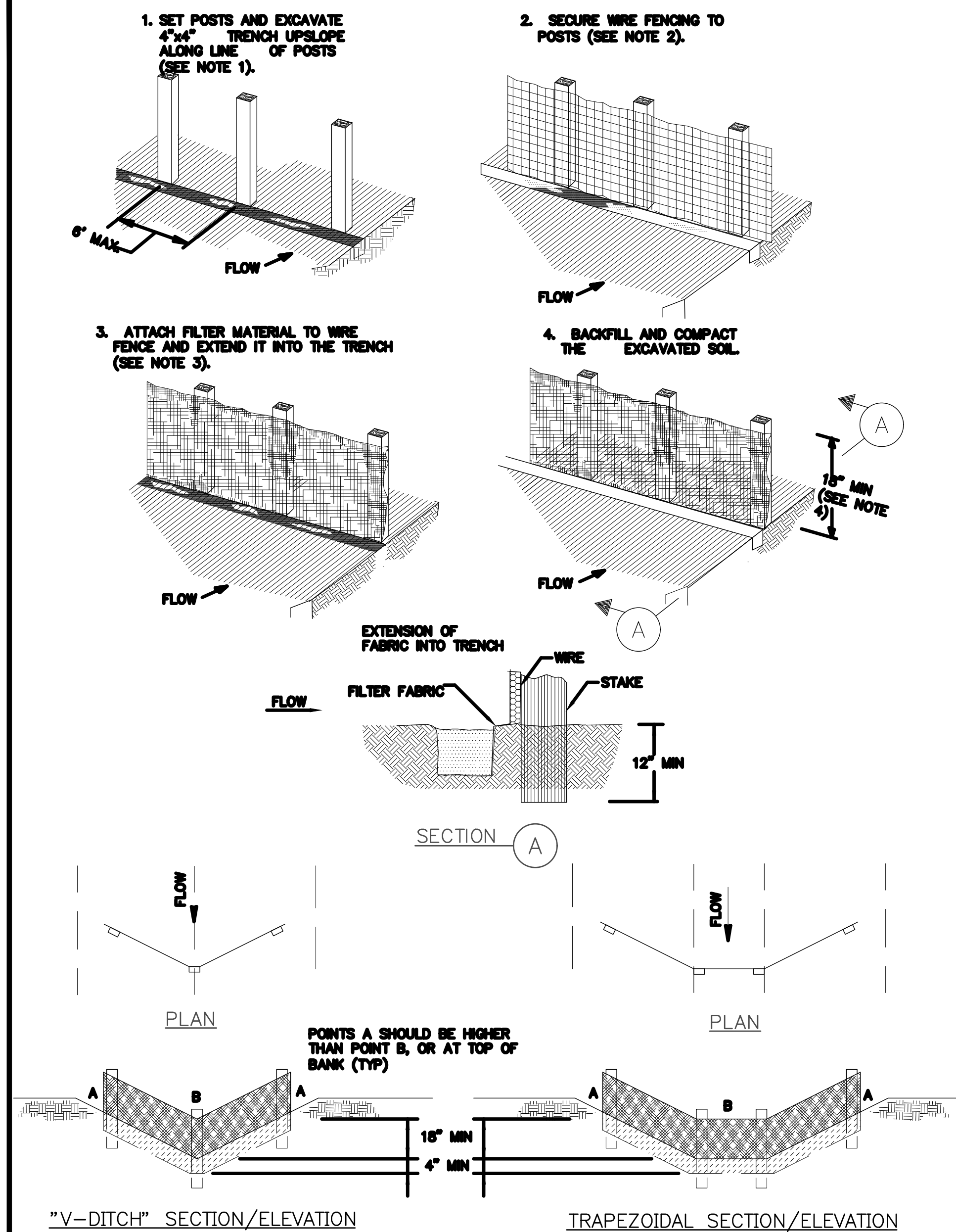
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City of Hilshire Village, Texas

Hickory Shadows Drive
Paving, Drainage & Utility Improvements

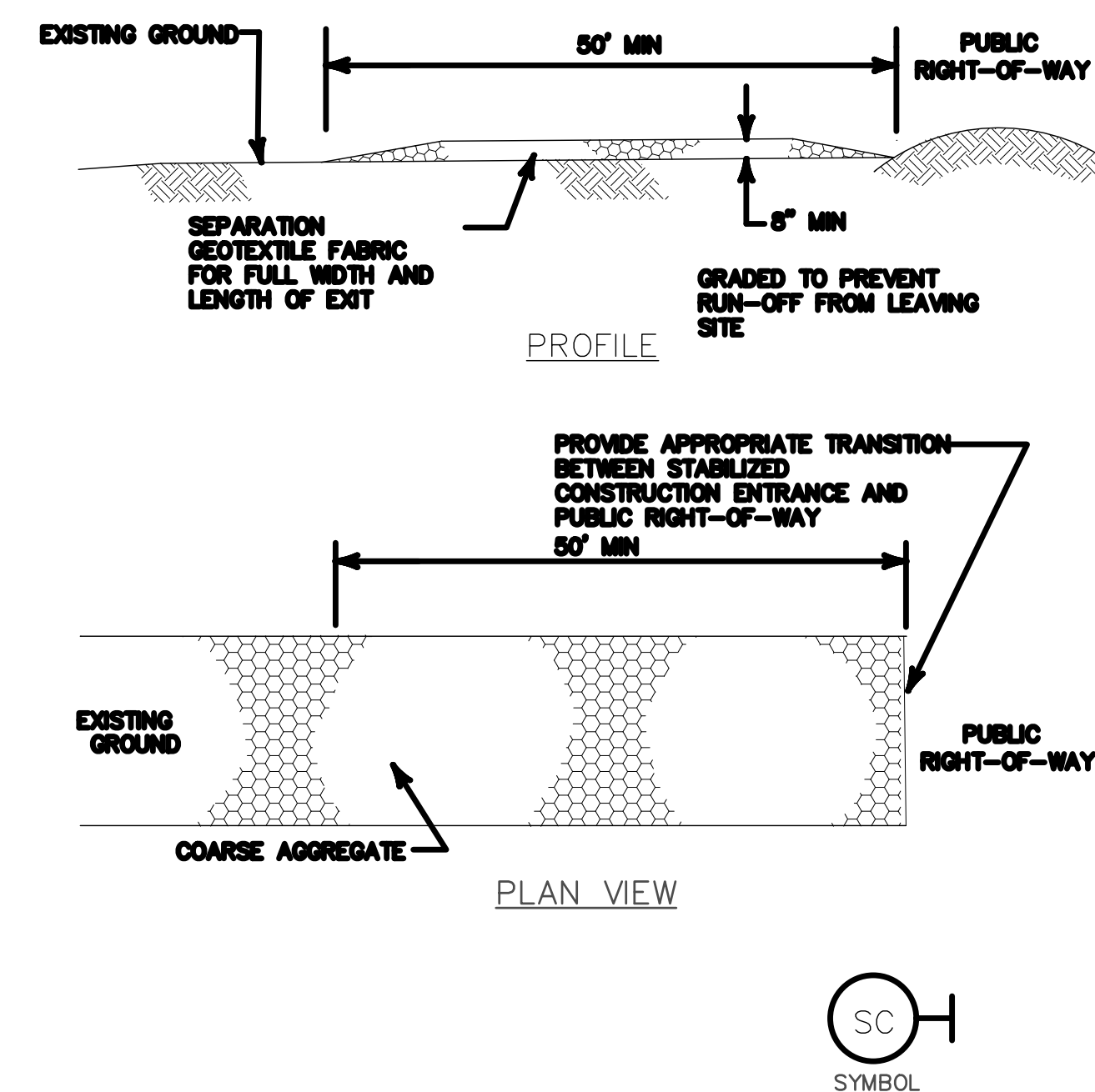
SWPPP Plan

| | | |
|---------------------|--|-----------------------------|
| Job No.: 10418041 | Scale: HORIZ : 1" = 30' | SHEET 19 OF 26 |
| Date: April, 2025 | VERT : ONE INCH | |
| Dwn By: G.S. Fuller | IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | |
| Chkd By: N. Le | | |



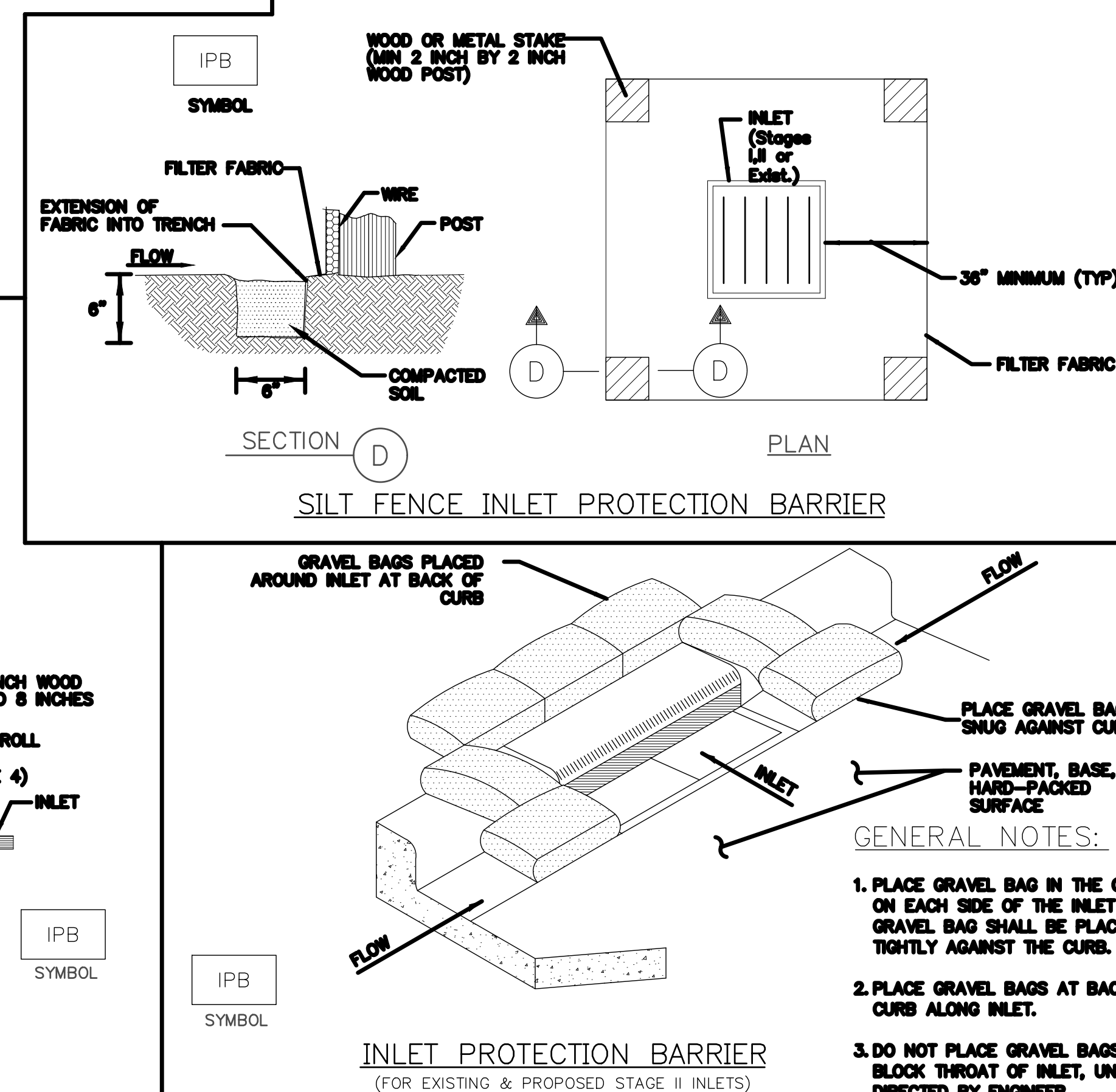
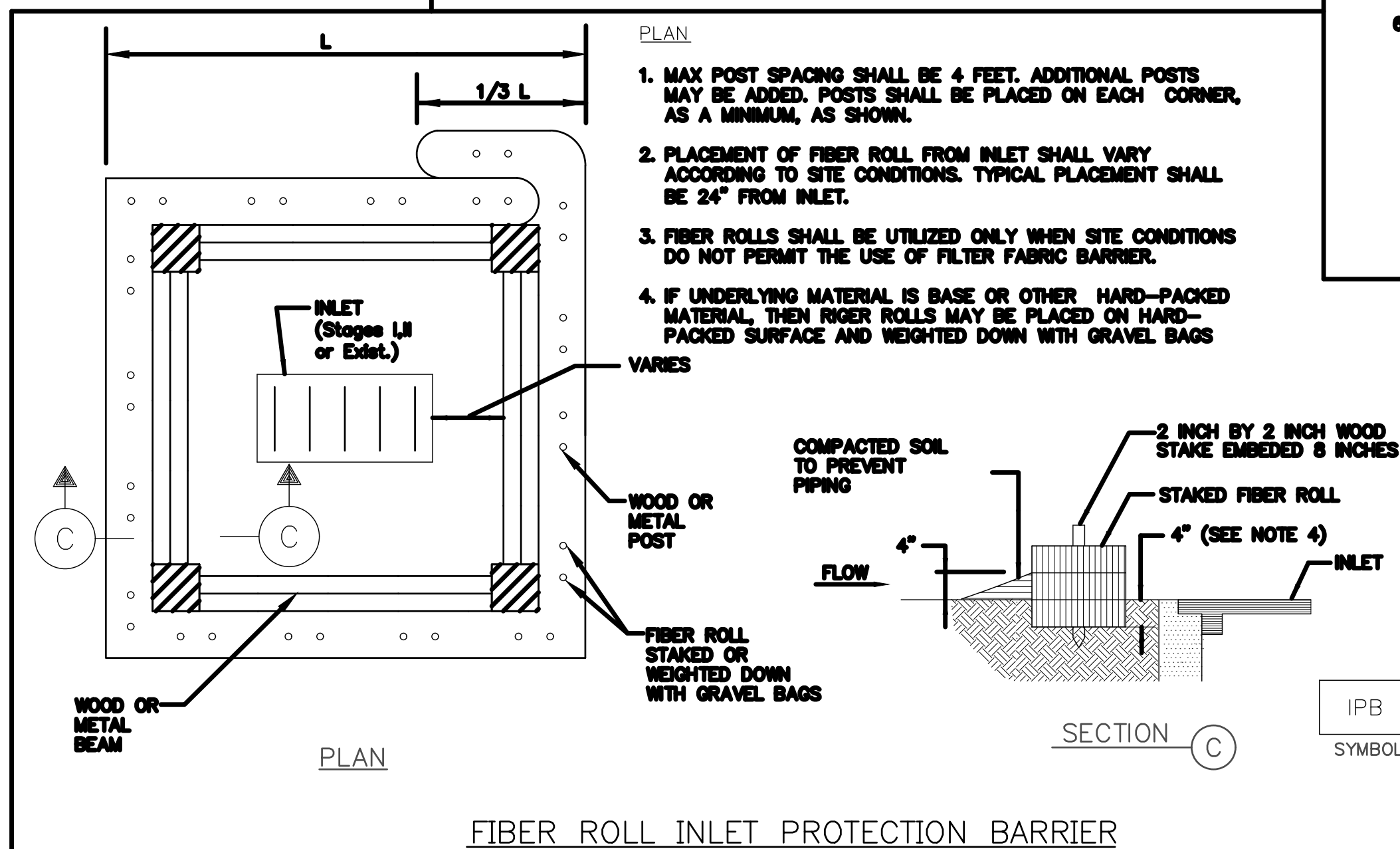
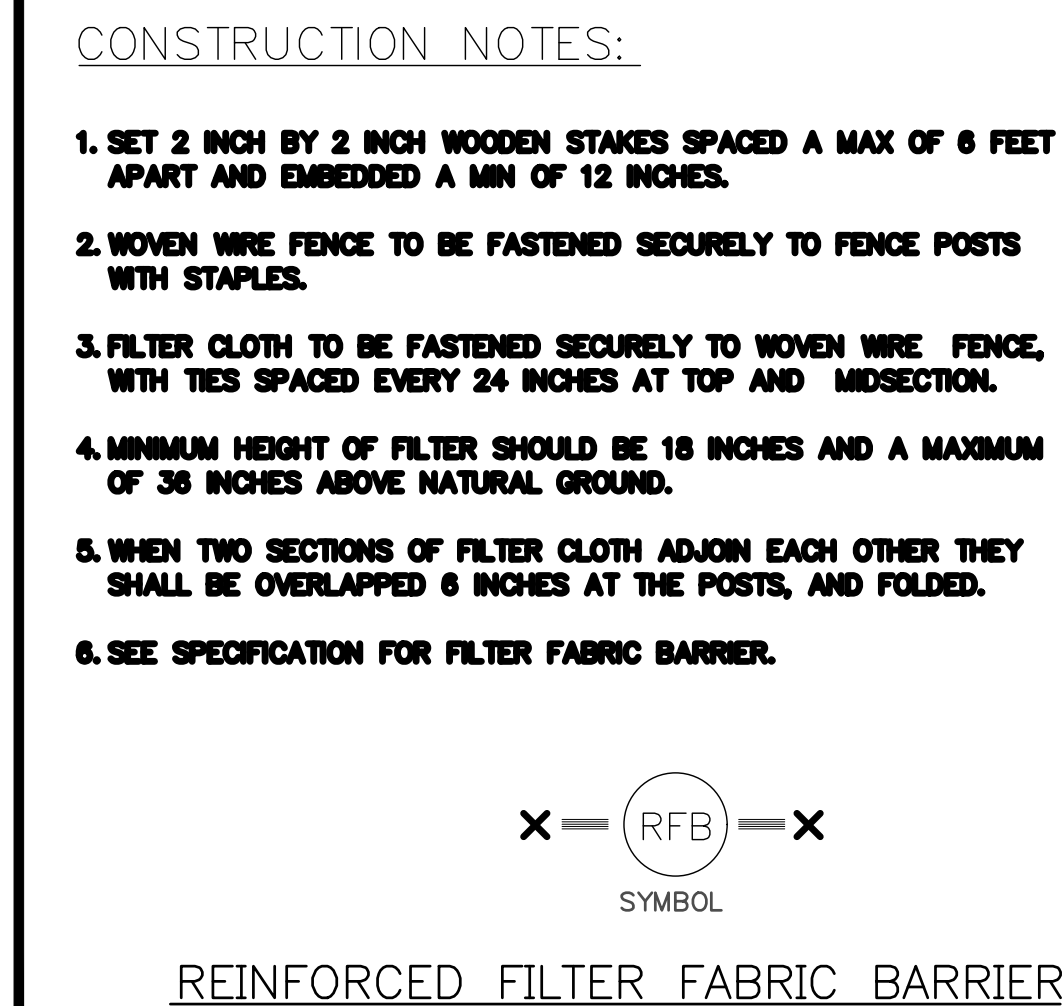
- CONSTRUCTION NOTES:

1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
2. THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
5. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE A TRUCK WASHING AREA, AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE TRUCK WASHING AREA.
6. SEE SPECIFICATION FOR STABILIZED CONSTRUCTION EXIT.
7. STABILIZED CONSTRUCTION EXIT SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.



- CONSTRUCTION NOTE:

1. MAX. POST SPACING SHALL BE 4 FEET. ADDITIONAL POSTS MAY BE ADDED. POSTS SHALL BE PLACED ON EACH CORNER, AS A MINIMUM, AS SHOWN.
2. PLACEMENT OF FILTER FABRIC BARRIER FROM INLET SHALL VARY ACCORDING TO SITE CONDITIONS. TYPICAL PLACEMENT SHALL BE 36" MINIMUM FROM INLET EDGE.



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| MK | DESCRIPTION | DATE | DWN | CHK |



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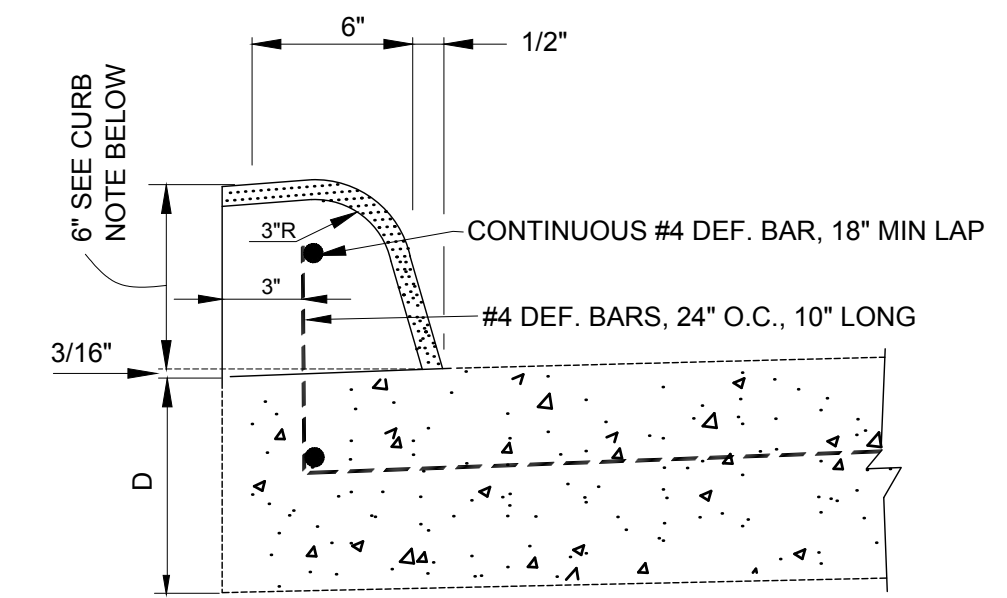
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|--|
| City of Hilshire Village, Texas |
| Hickory Shadows Drive Paving, Drainage & Utility Improvements |

SWPPP DETAILS I

| |
|---------------------|
| Job No.: 1041804 |
| Date: April, 2025 |
| Dwn By: G.S. Fuller |
| Chkd By: N. Le |

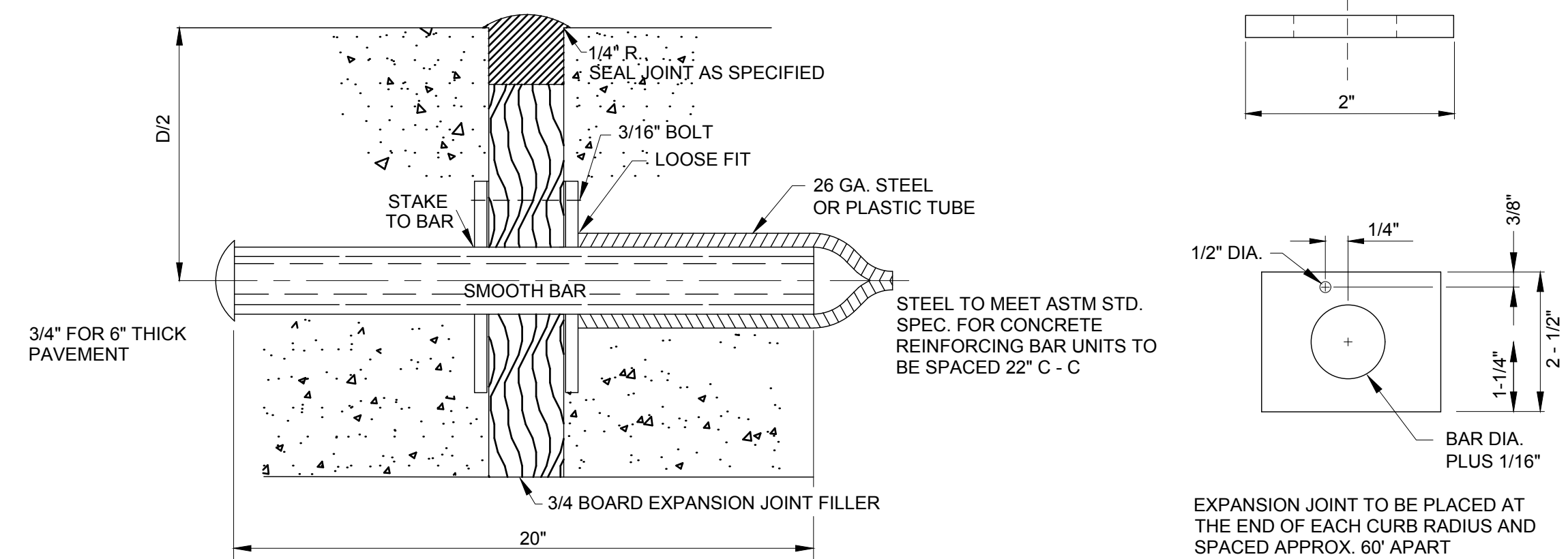
Scale:
HORIZ :
VERT :
ONE INCH
IF ABOVE MARK DOES NOT
MEASURE ONE INCH, THEN
THIS DWG. NOT TO SCALE

SHEET
20
OF 26



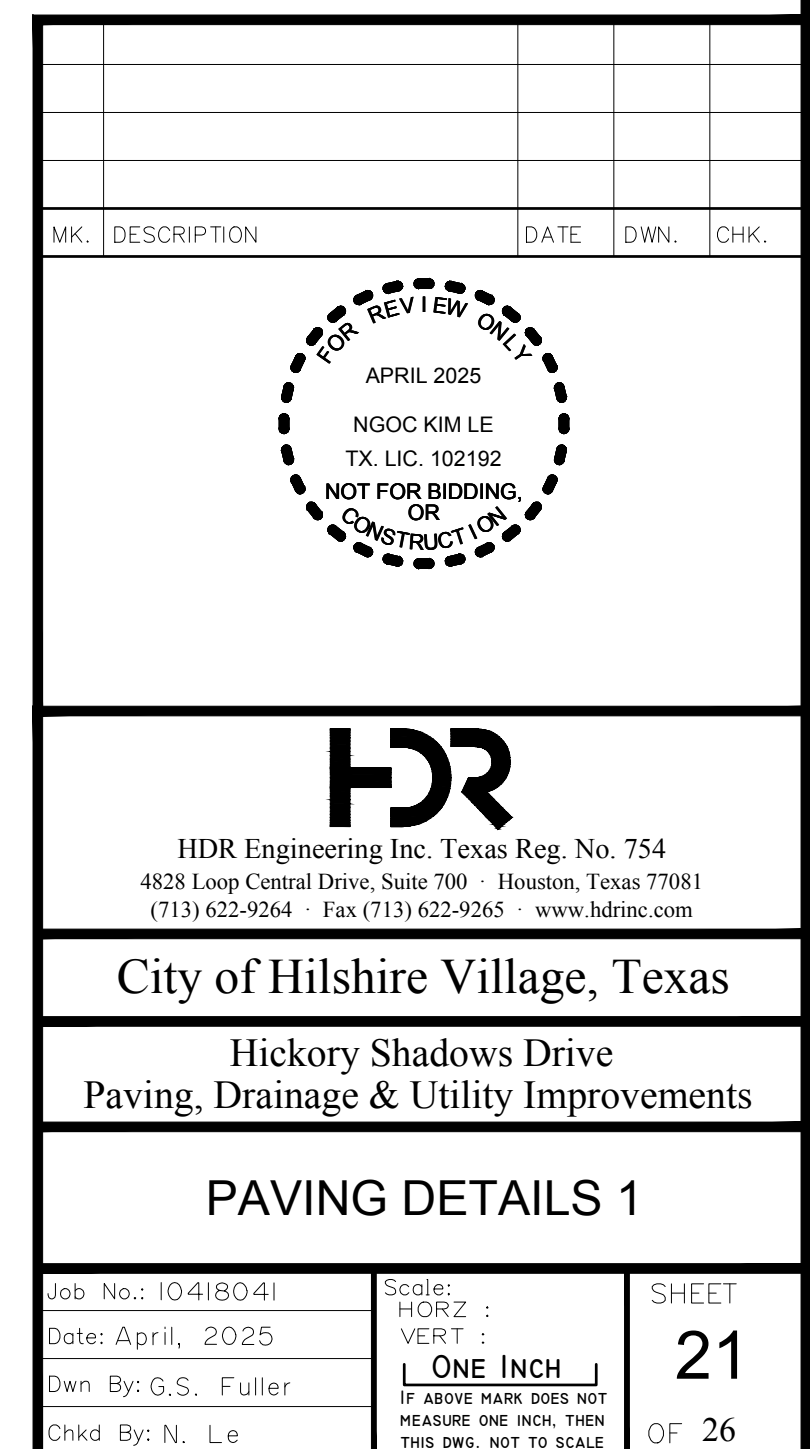
CONCRETE CURB

TYPICAL SINGLE ROADWAY SECTION



DOWEL TYPE EXPANSION JOINT

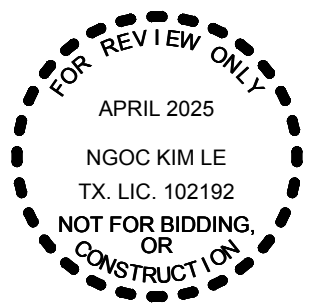
TYPE I PAVING HEADER DETAIL





1. DRIVEWAYS SHALL BE CONSTRUCTED TO MATCH EXISTING DRIVEWAY WIDTH MEASURED AT THE RIGHT-OF-WAY. WHEN DRIVEWAY EXCEEDS 20'-0" IN WIDTH, OR WHEN EXISTING DRIVEWAY JOINT OR PROPOSED PAVING JOINT FALLS WITHIN LIMIT OF DRIVEWAY, A 3/4" REDWOOD BOARD EXPANSION JOINT W/STEEL RUNNING THROUGH IT, OR APPROVED EQUAL SHALL BE INSTALLED THE FULL LENGTH OF THE DRIVEWAY.
2. RESIDENTIAL DRIVEWAYS SHALL BE CONSTRUCTED OF CONCRETE 6" THICK.
3. SELECT BACKFILL SHALL BE USED AS A BASE LEVELER AND/OR AS BACKFILL REQUIRED WHEN OVER EXCAVATION OCCURS DUE TO POOR SOILS OR ANY OTHER CONDITION RESULTING IN OVER EXCAVATION OF DRIVEWAYS. SELECT BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
4. WHERE TYING INTO EXISTING CONCRETE DRIVEWAY AND CONDITION OF EXISTING DRIVEWAY ALLOWS, PROVIDE 3/4" REDWOOD BOARD W/24" LONG #4 DEFORMED BARS @ 18" O.C. THROUGH IT DRILLED INTO EXISTING DRIVEWAY. WHERE EXISTING CONCRETE IS IN POOR CONDITION OR WHERE DRIVEWAY IS ASPHALT, SHELLCRETE, SHELL, GRAVEL, DIRT, OR GRASS, PROVIDE STANDARD PAVING HEADER AT NO ADDITIONAL COST.
5. THE PROPOSED LIMITS OF REPLACEMENT OF DRIVEWAYS SHOWN ON THE PLAND AND PROFILES ARE APPROXIMATE. CONTRACTOR TO VERIFY THAT BASED ON THESE LIMITS, THE SLOPE IS NOT GREATER THAN 14%. CONTRACTOR SHALL COORDINATE WITH THE CITY'S REPRESENTATIVE AND PROPERTY OWNER TO REMOVE AND REPLACE DRIVEWAY BEYOND ROW AS REQUIRED TO ACHIEVE DRIVEWAY GRADE EQUAL TO OR LESS THAN 14%. REMOVAL/REPLACEMENT OF DRIVEWAYS TO RIGHT-OF-WAY VS NEAREST JOINT BEYOND ROW SHALL BE A FIELD DECISION. CITY REQUIRES CLEAN JOINT AT ROW IN ANY CASE. IF DECISION IS MADE TO EXTEND DRIVEWAY REPLACEMENT TO AN EXISTING EXPANSION JOINT BEYOND THE ROW, PROVISION OF A CONTRACTION JOINT AT THE ROW IS REQUIRED.

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| MK. | DESCRIPTION | DATE | DWN. | CHK. |

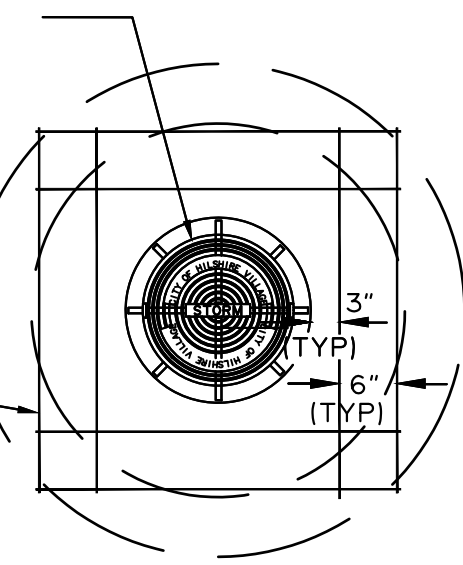


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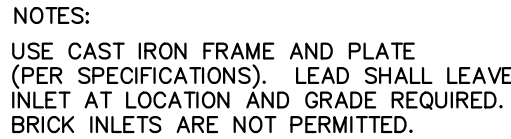
City of Hilshire Village, Texas
Hickory Shadows Drive
Paving, Drainage & Utility Improvements

PAVING DETAILS II

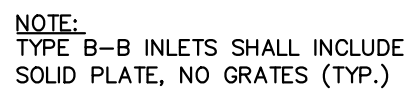
| | | |
|----------------------|--|-------|
| Job No.: I0418041 | Scale: HORZ : | SHEET |
| Date: April, 2025 | VERT : | 22 |
| Dwn By: G.S., Fuller | <u>ONE INCH</u> | |
| Chkd By: N. Le | IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | OF 26 |



= 26



| BAR LIST | | | | |
|----------|------|--------|------|--------|
| No. | Size | Length | Shp. | Loc. |
| 4 | #4 | 5'-10" | St. | Horiz. |
| 7 | #4 | 0'-10" | St. | Vert. |
| 7 | #3 | 1'-6" | Bt. | |



TYPE B-B INLET

HALF FRONT ELEVATION

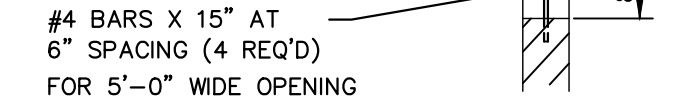
TRANS SECTION

PRECAST CURB BEAM



SECTION B-B

1. All concrete shall be Class A. All exposed corners shall be chamfered 3/4". Pipes shall enter inlets as shown elsewhere on plans. Slope top of inlets as directed to match graded section.
2. All materials used in casting manhole covers and ladder rung shall conform to A.S.T.M. Specifications.
3. A permissible construction joint may be placed in the inlet wall with the approval of the Engineer.
4. Manhole ring and cover shall be 23 1/2" unless otherwise specified in the plans. Connection of pipes to precast units shall be mortared as directed by the Engineer. * But not less than six inches over highest pipe.
5. Control points for horizontal layout of inlets, all types, is the lateral center of the inlet, without regard for extensions, at the back of curb.
6. 5' Extension is not included unless called for in plans.



BACK OPENING DETAIL

This portion of
ET WALL OMITTED
WHEN BUILT WITH
EXTENSION.

#4 BARS @ 6" ±
BOTHWAYS

STAGE II
CONSTRUCTION

VARIABLE DEPTH

3'-0"

SECTION A-A

TYPE "C" INLET DETAILS

PLAN

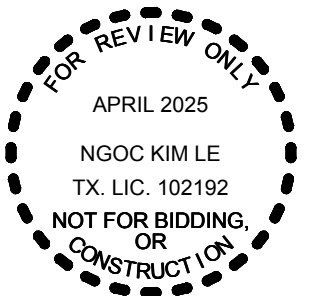


AT CURE



NOT TO SCALE

| MK. | DESCRIPTION | DATE | DWN. | CHK. |
|-----|-------------|------|------|------|



HDR Engineering Inc. Texas Reg. No. 754
4828 Loop Central Drive, Suite 700 · Houston, Texas 77081
(713) 622-9264 · Fax (713) 622-9265 · www.hdrinc.com

City of Hilshire Village, Texas

Hickory Shadows Drive Paving, Drainage & Utility Improvements

STORM SEWER DETAILS II

Job No.: 10418041

Date: April, 2025

Dwn By: G.S. Fuller

Chkd By: N. Le

Scale:
100%

HURZ :
VERT :

ONE INCH

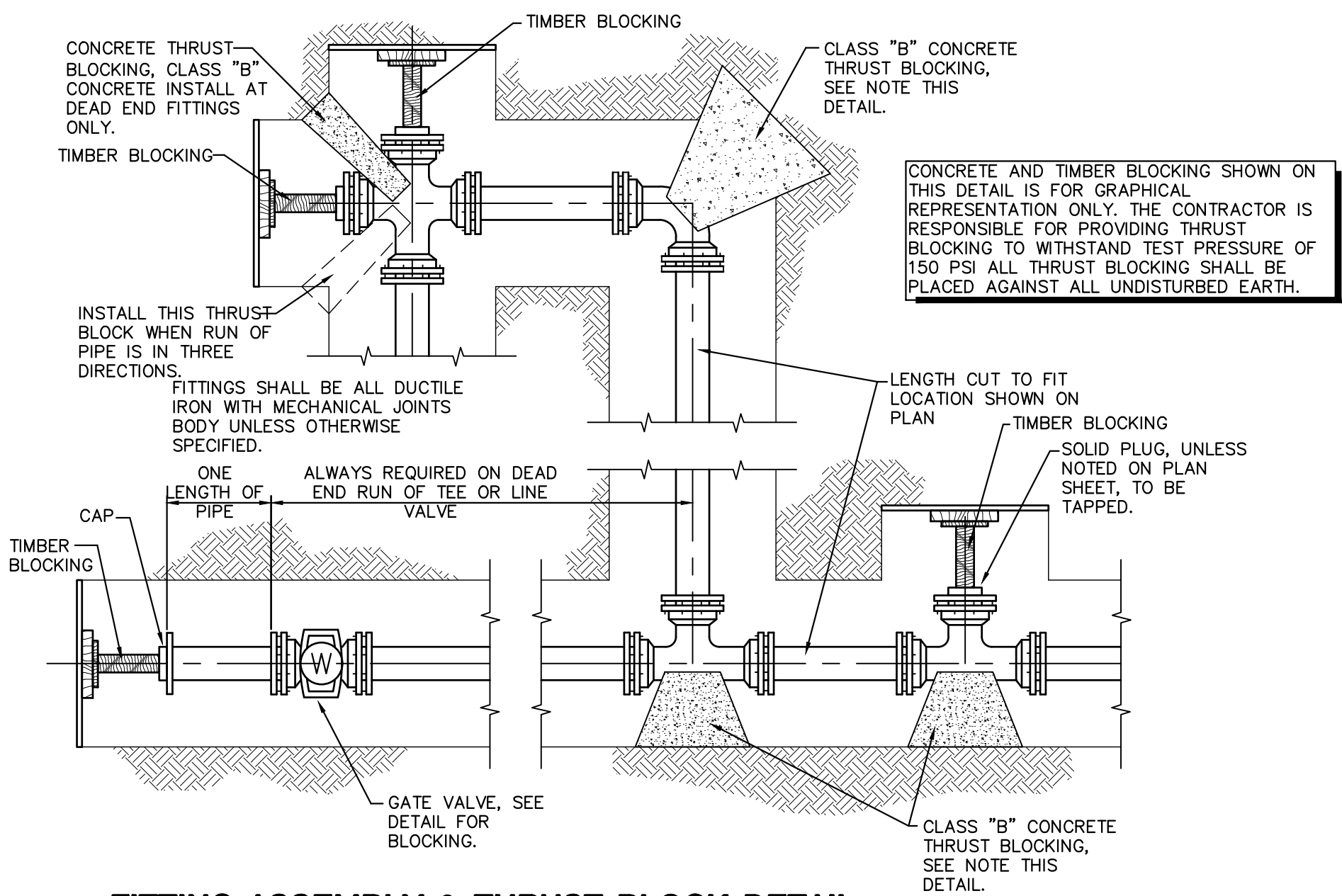
IF ABOVE HARK DOES NOT
MEASURE ONE INCH, THEN
THIS DWG. NOT TO SCALE

SHEET

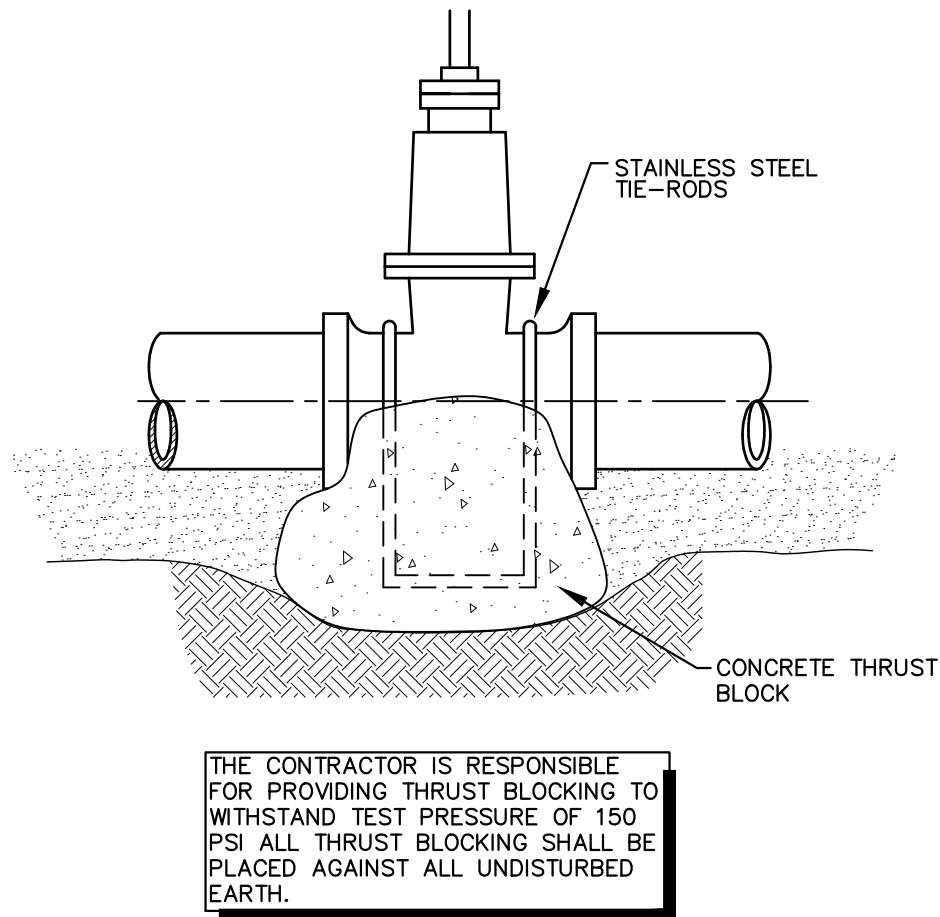
24

24

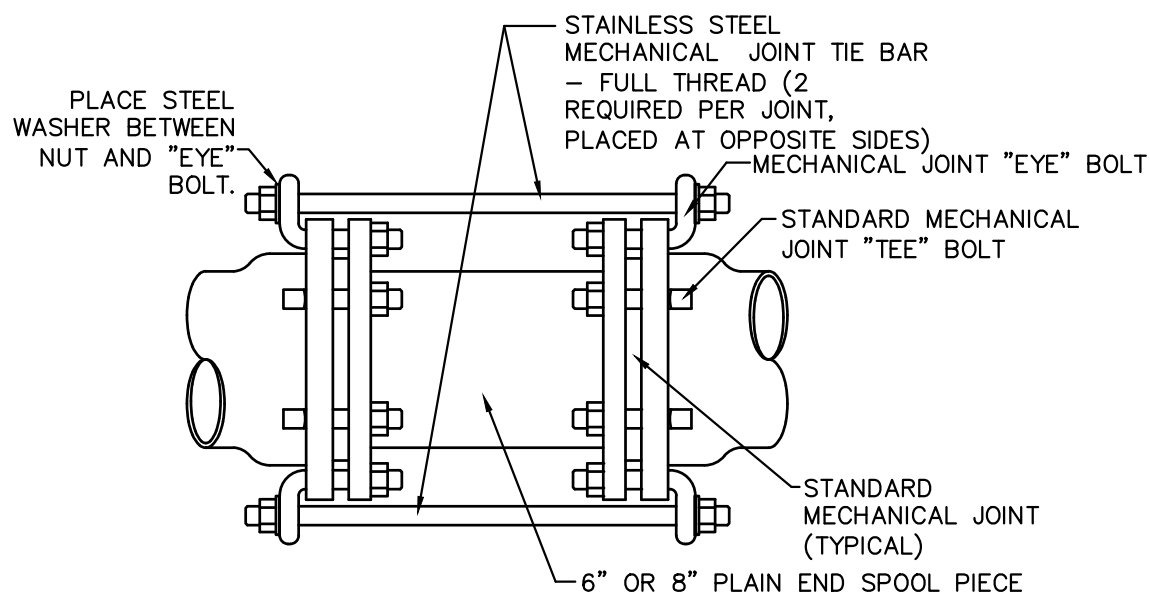
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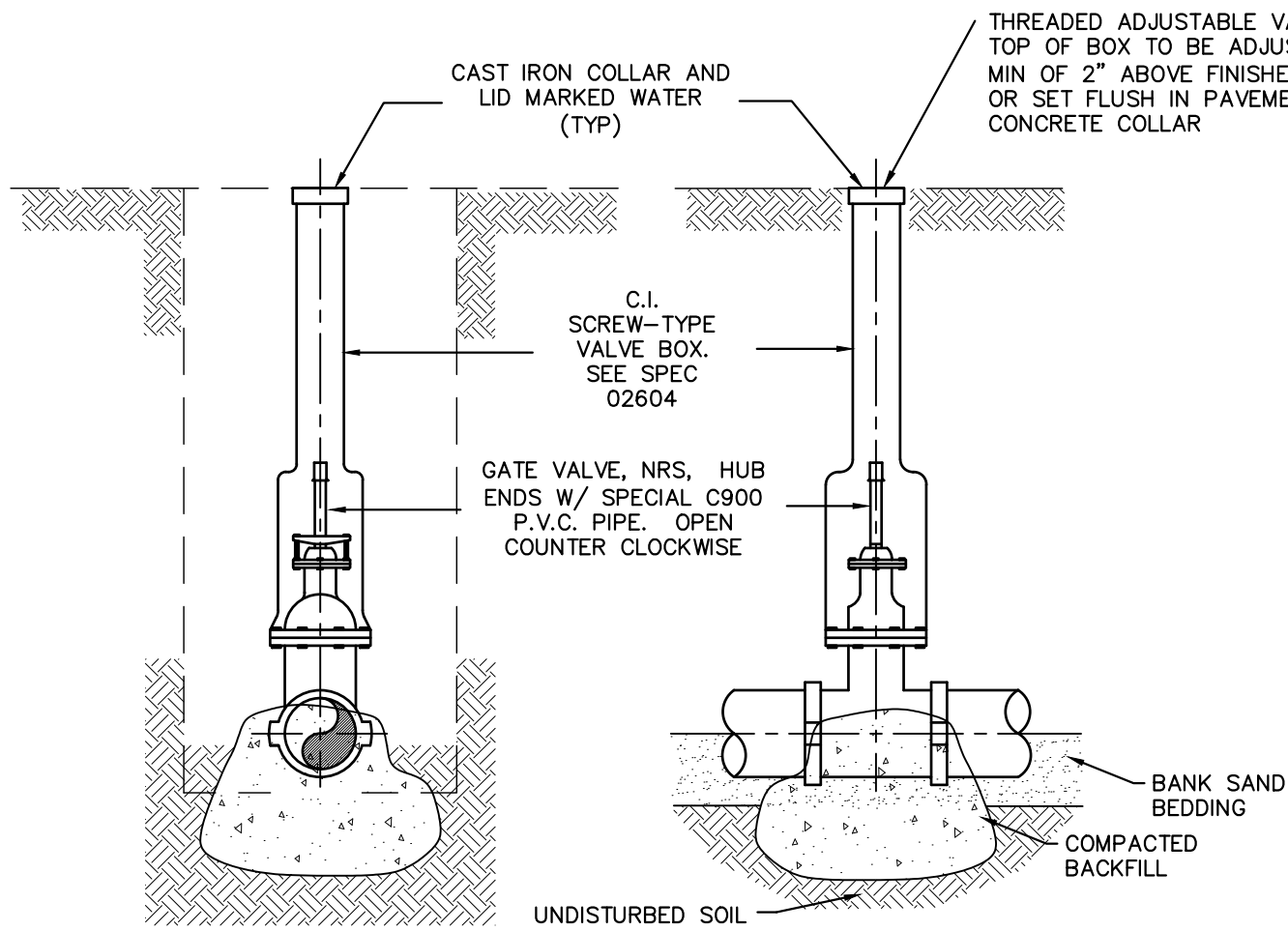
FITTING ASSEMBLY & THRUST BLOCK DETAIL
NOT TO SCALE



THRUST BLOCKING OF IN LINE VALVE DETAIL
NOT TO SCALE

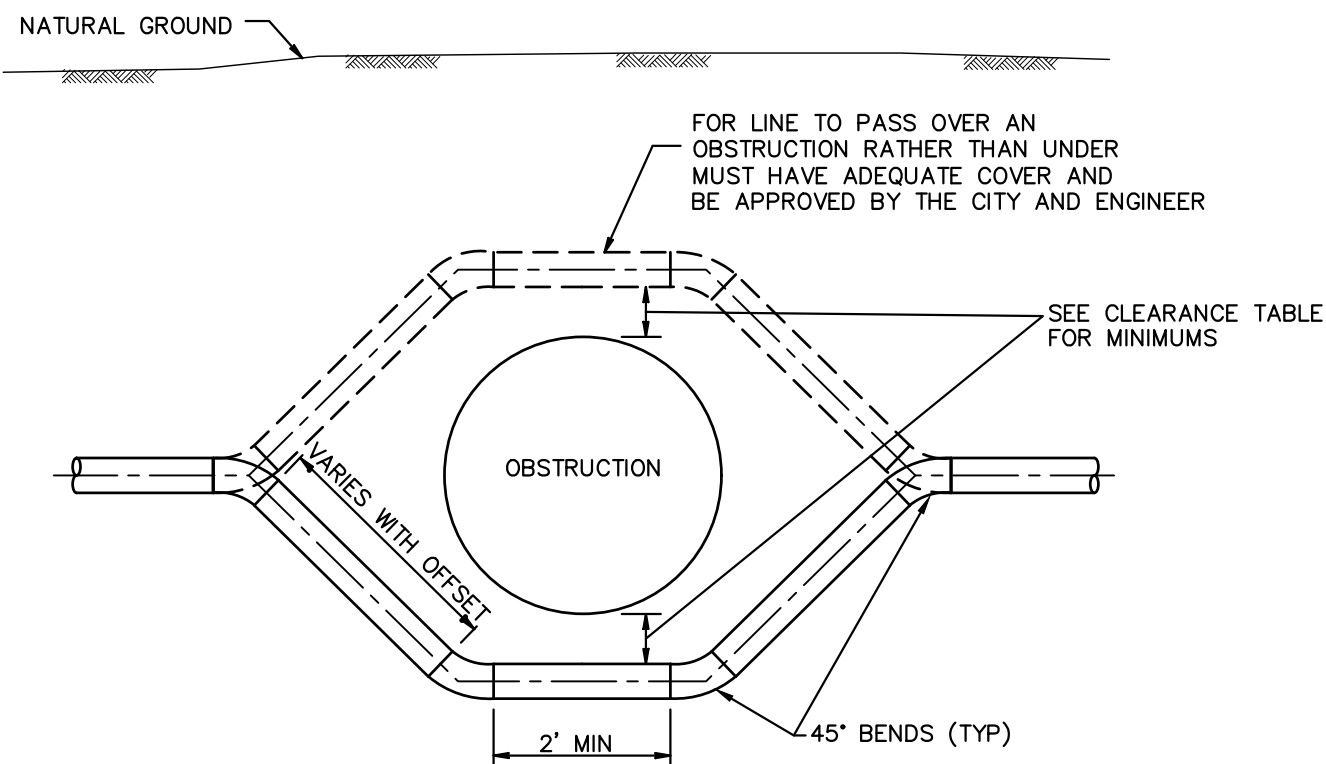


MECHANICAL RESTRAINT DETAIL
NOT TO SCALE



FRONT ELEVATION
GATE VALVE INSTALLATION DETAIL
NOT TO SCALE

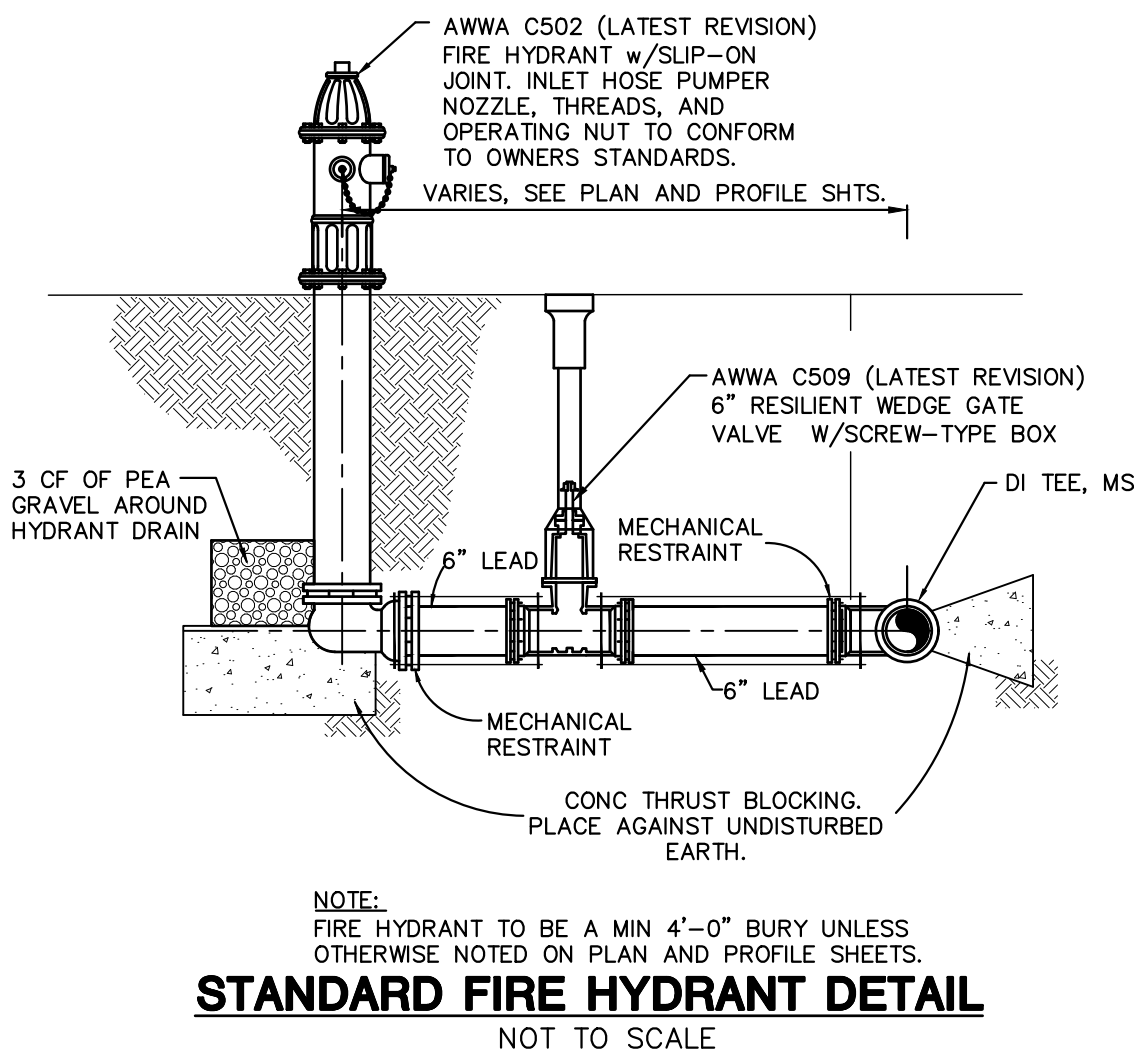
SIDE ELEVATION



| PROPOSED WATERLINE VERTICAL CLEARANCE TABLE | | |
|---|--|--|
| OBSTRUCTION | MINIMUM CLEARANCE | MATERIAL |
| SANITARY SEWER | SEE TCEQ REGULATIONS (SPEC SECTIONS 02664) | SEE TCEQ REGULATIONS (SPEC SECTIONS 02664) |
| PRIVATE UTILITY | 12" | C-900 DR 18 PVC * |
| PRIVATE PIPELINE | 24" | C-900 DR 18 PVC * |
| WATERLINE | 6" | C-900 DR 18 PVC * |
| STORM SEWER | 6" | C-900 DR 18 PVC * |

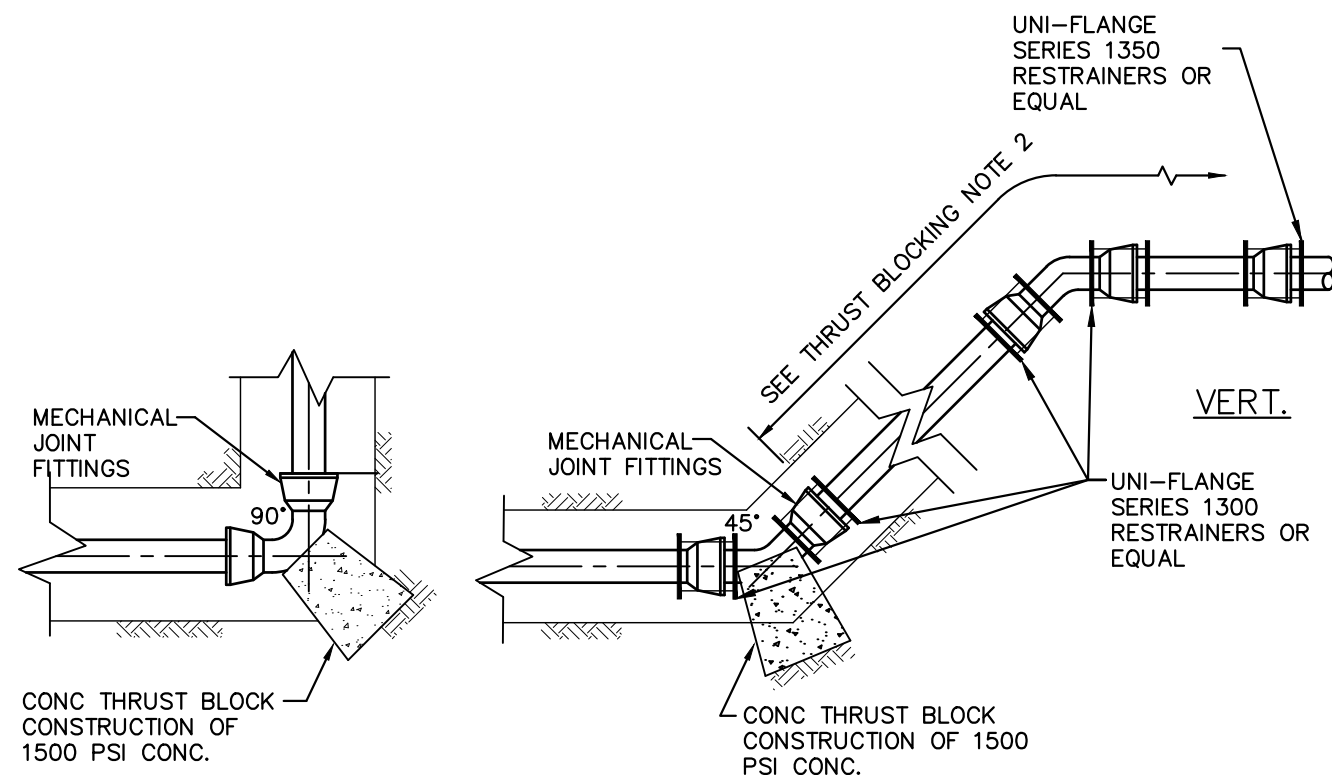
* IF DEPTH OF WATERLINE IS GREATER THAN 8' OR COVER IS LESS THAN 3' MATERIAL SHALL BE C-900 DR 14 PVC.

CLEARANCE DETAIL
NOT TO SCALE



FIRE HYDRANT NOTES

- ALL FIRE HYDRANTS SHALL CONFORM TO THE CITY'S FIRE DEPARTMENT REQUIREMENTS.
- ALL FIRE HYDRANTS SHALL BE LOCATED 3' BACK OF CURB FOR CURB AND GUTTER STREETS AND 3' INSIDE RIGHT-OF-WAY (2' ABSOLUTE MIN) FOR ROADSIDE DITCH STREETS.
- FIRE HYDRANTS SHOWN AT INTERSECTIONS SHALL BE LOCATED AT THE CURB RETURN FOR CURB AND GUTTER STREETS AND AT THE PROPERTY CORNER FOR ROADSIDE DITCH STREETS UNLESS OTHERWISE SHOWN ON PLANS AND APPROVED BY OWNER.
- ALL FIRE HYDRANTS SHALL HAVE A MINIMUM OF 5'-0" LEAD PIPE. LEAD PIPES SHALL NOT EXCEED 100' IN LENGTH AND SHALL HAVE NO VERTICAL OR HORIZONTAL BENDS.
- EACH FIRE HYDRANT LEAD SHALL HAVE A VALVE, PER SPECIFICATIONS, BEING EITHER A GATE VALVE WITH A TEE CONNECTION TO THE MAIN OR A TAPPING SLEEVE AND VALVE CONNECTION TO THE MAIN.
- VALVES SHALL NOT BE LOCATED AT THE FLOWLINE OF ANY DITCH.
- NEW FIRE HYDRANTS REPLACING THOSE TO BE SALVAGED SHALL BE PLACED 2'± EITHER SIDE OF THE EXISTING.
- FIRE HYDRANTS SHALL BE PLACED AS SHOWN ON PLANS
- FIRE HYDRANTS LOCATED IN AREAS OTHER THAN INTERSECTIONS SHALL BE LOCATED AT SIDE OF LOT LINES, UNLESS SHOWN OTHERWISE ON PLANS AND APPROVED BY OWNER.
- NEW FIRE HYDRANTS SHALL BE LOCATED IN ALL AREAS WHERE EXISTING FIRE HYDRANTS ARE TO BE SALVAGED.
- IN THE EVENT THAT A PROPOSED FIRE HYDRANT CANNOT BE LOCATED IN AREA DESCRIBED AS TYPICAL, ULTIMATE LOCATION OF FIRE HYDRANTS SHALL BE AS DETERMINED BY OWNER.
- ALL FIRE HYDRANTS SHALL BE INSTALLED WITH 5" STORZ ADAPTERS WITH CAP.
- STORZ ADAPTERS SHALL BE AS MANUFACTURED BY HARRINGTON HPHA50-40NH/CAP STORZ PERMANENT HYDRANT ADAPTER WITH CAP (HYDRANT CONVERTER) OR FYRELANE ADPT-5.0ST-BC 5" STORZ BLIND CAP (ALUMINUM).
- NO PART OF THE STORZ ADAPTERS SHOULD BE PAINTED. ALL PARTS ARE DESIGNED TO PROVIDE FUNCTION WITHOUT PAINT. THIS INCLUDES SOME WITH THE CONNECTING CABLE THAT HAS BUILT-IN REFLECTORS FOR BETTER RECOGNITION AT NIGHT.



HORIZ/ VERT

HORIZ/ VERT

THRUST BLOCKING NOTES:

- SIZE OF THRUST BLOCK TO BE ADEQUATE FOR TWO TIMES, TEST PRESSURE; THAT IS 250 PSI NO SEPARATE PAY FOR THRUST BLOCKING.
- RESTRAINED JOINT PIPING SHALL BE USED IN ALL AREAS WHERE HORIZONTAL NEW PIPE HAS LESS THAN 4' COVER. ALL VERTICAL BENDS SHALL HAVE RESTRAINED JOINTS.

JOINT RESTRAINT DETAILS
NOT TO SCALE

| | | | | |
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| MK. | DESCRIPTION | DATE | DWN. | CHK. |
| <div>FOR REVIEW ONLY APRIL 2025 NGOC KIM LE TX LIC. 102192 NOT FOR BIDDING OR CONSTRUCTION</div> | | | | |
| <div>HDR HDR Engineering Inc. Texas Reg. No. 754 4828 Loop Central Drive, Suite 700 · Houston, Texas 77081 (713) 622-9264 · Fax (713) 622-9265 · www.hdrinc.com</div> | | | | |
| City of Hilshire Village, Texas | | | | |
| Hickory Shadows Drive Paving, Drainage & Utility Improvements | | | | |
| WATER LINE DETAILS I | | | | |
| Job No.: 10418041 | Scale: HORIZ : VERT : ONE INCH | SHEET 25 | | |
| Date: April, 2025 | IF ABOVE MARK DOES NOT MEASURE ONE INCH, THEN THIS DWG. NOT TO SCALE | | | |
| Dwn By: G.S. Fuller | OF 26 | | | |
| Chld By: N. Le | | | | |

