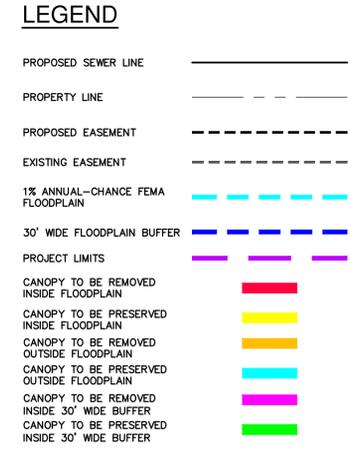


LOCATION MAP  
NOT-TO-SCALE



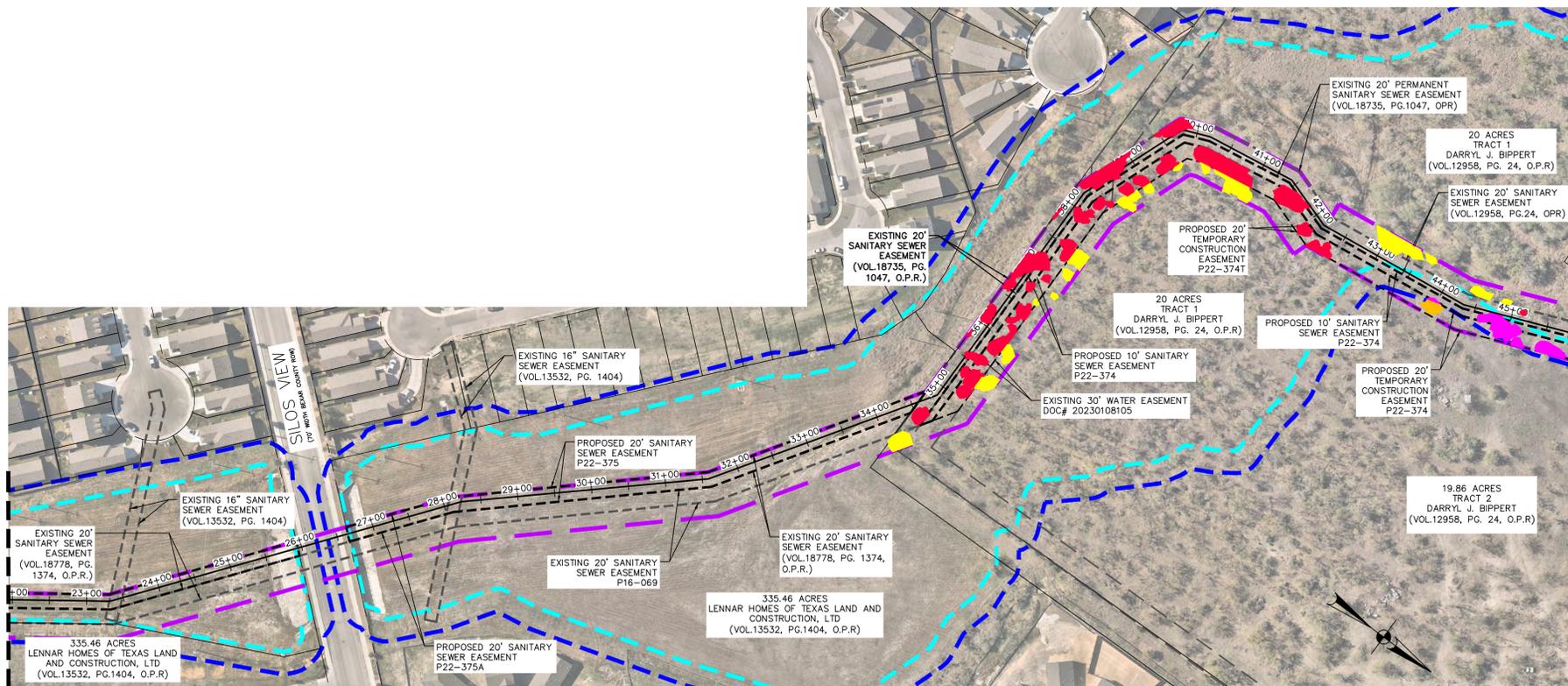
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| DATE |          |
| NO.  | REVISION |
|      |          |
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**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

**STONEHILL OFF-SITE SEWER EXTENSION PHASE II**  
 BEXAR COUNTY, TEXAS  
 TREE PRESERVATION PLAN

|          |                |
|----------|----------------|
| PLAT NO. |                |
| JOB NO.  | 12747-04       |
| DATE     | SEPTEMBER 2024 |
| DESIGNER | AM             |
| CHECKED  | MP_DRAWN_Rd    |
| SHEET    | C6.00          |

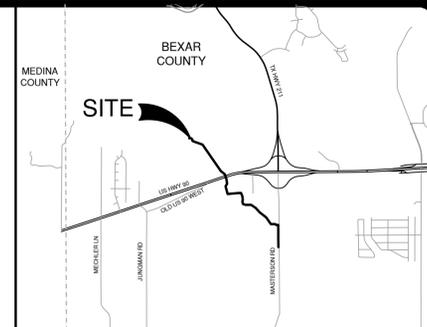


SEWER: SOUTH WATERSHED - DOS RIOS W.R.C.  
 STONEHILL OFF-SITE SEWER EXTENSION PHASE II

|  |                                      |
|--|--------------------------------------|
| Developer's Name: DR HORTON  |                                      |
| Address: 5419 NORTH LOOP 1804 E  |                                      |
| City: SAN ANTONIO  | State: TEXAS ZIP: 78247              |
| Phone# (210) 498-2668  | FAX# N/A                             |
| SAWS Block Map# 066558,066560,068556,068558,070554,070556 Total Acreage 2X |                                      |
| Total Linear Footage of Pipe 9,789 LF ~ 18" PVC SEWER Plat No. N/A         |                                      |
| Number of Lots N/A   | TOTAL EDU'S N/A SAWS JOB NO. 24-4402 |

Date: Oct 08, 2024, 4:37pm User: JD\_Easchbach  
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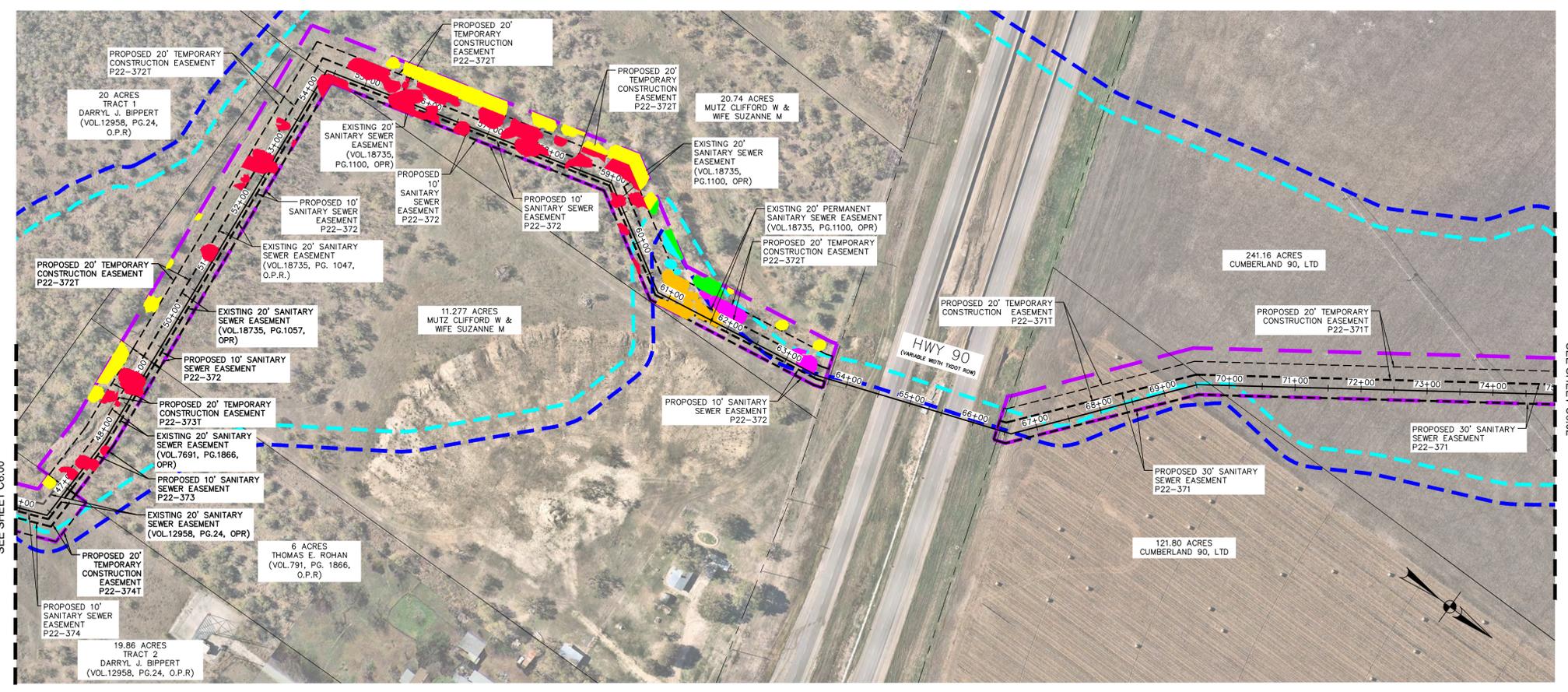
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LOCATION MAP  
NOT-TO-SCALE

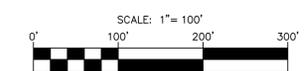
LEGEND

- PROPOSED SEWER LINE \_\_\_\_\_
- PROPERTY LINE \_\_\_\_\_
- PROPOSED EASEMENT \_\_\_\_\_
- EXISTING EASEMENT \_\_\_\_\_
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN \_\_\_\_\_
- 30' WIDE FLOODPLAIN BUFFER \_\_\_\_\_
- PROJECT LIMITS \_\_\_\_\_
- CANOPY TO BE REMOVED INSIDE FLOODPLAIN \_\_\_\_\_
- CANOPY TO BE PRESERVED INSIDE FLOODPLAIN \_\_\_\_\_
- CANOPY TO BE REMOVED OUTSIDE FLOODPLAIN \_\_\_\_\_
- CANOPY TO BE PRESERVED OUTSIDE FLOODPLAIN \_\_\_\_\_
- CANOPY TO BE REMOVED INSIDE 30' WIDE BUFFER \_\_\_\_\_
- CANOPY TO BE PRESERVED INSIDE 30' WIDE BUFFER \_\_\_\_\_



MATCHLINE STA. 46+00  
SEE SHEET C6.00

MATCHLINE STA. 75+00  
SEE SHEET C6.02



SEWER: SOUTH WATERSHED - DOS RIOS W.R.C.  
STONEHILL OFF-SITE SEWER EXTENSION PHASE II

|  |
|--|
| Developer's Name: DR HORTON  |
| Address: 5419 NORTH LOOP 1804 E  |
| City: SAN ANTONIO State: TEXAS ZIP: 78247                                  |
| Phone# (210) 496-2668 FAX# N/A   |
| SAWS Block Map# 066558,066560,068556,068558,070554,070556 Total Acreage 2X |
| Total Linear Footage of Pipe 9,789 LF ~ 18\" PVC SEWER Plat No. N/A        |
| Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 24-4402                    |

|              |  |
|--------------|--|
| DATE         |  |
| NO. REVISION |  |



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SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008890

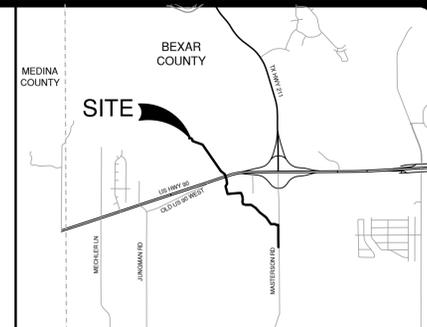
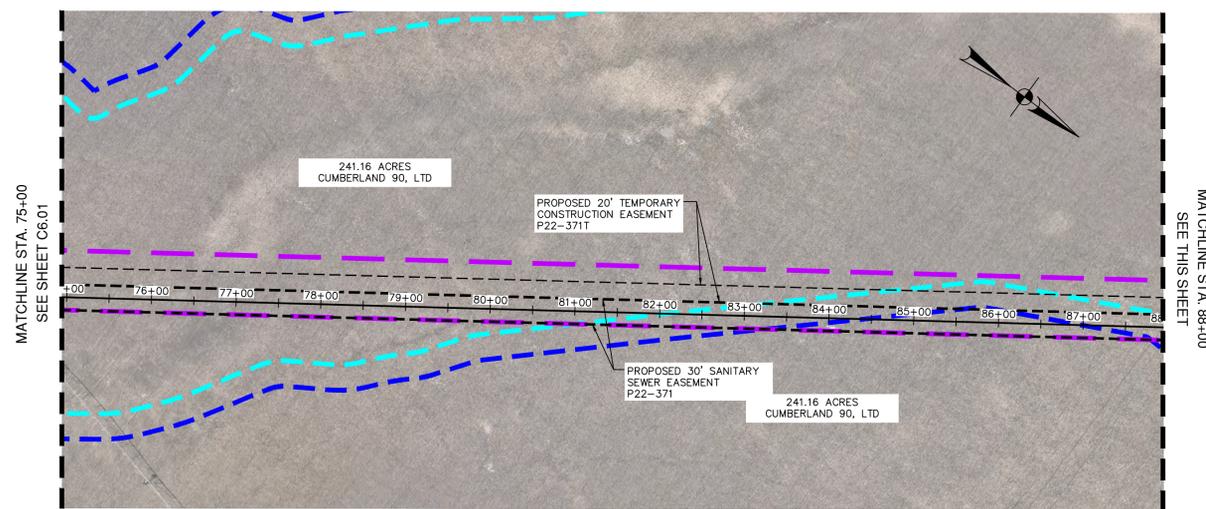
STONEHILL OFF-SITE SEWER EXTENSION PHASE II  
BEXAR COUNTY, TEXAS  
TREE PRESERVATION PLAN

|          |                |
|----------|----------------|
| PLAT NO. |                |
| JOB NO.  | 12747-04       |
| DATE     | SEPTEMBER 2024 |
| DESIGNER | AM             |
| CHECKED  | MP_DRAWN_Rd    |
| SHEET    | C6.01          |

Date: Oct 08, 2024, 4:38pm User: JD - Escribano  
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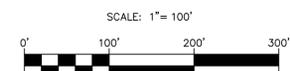
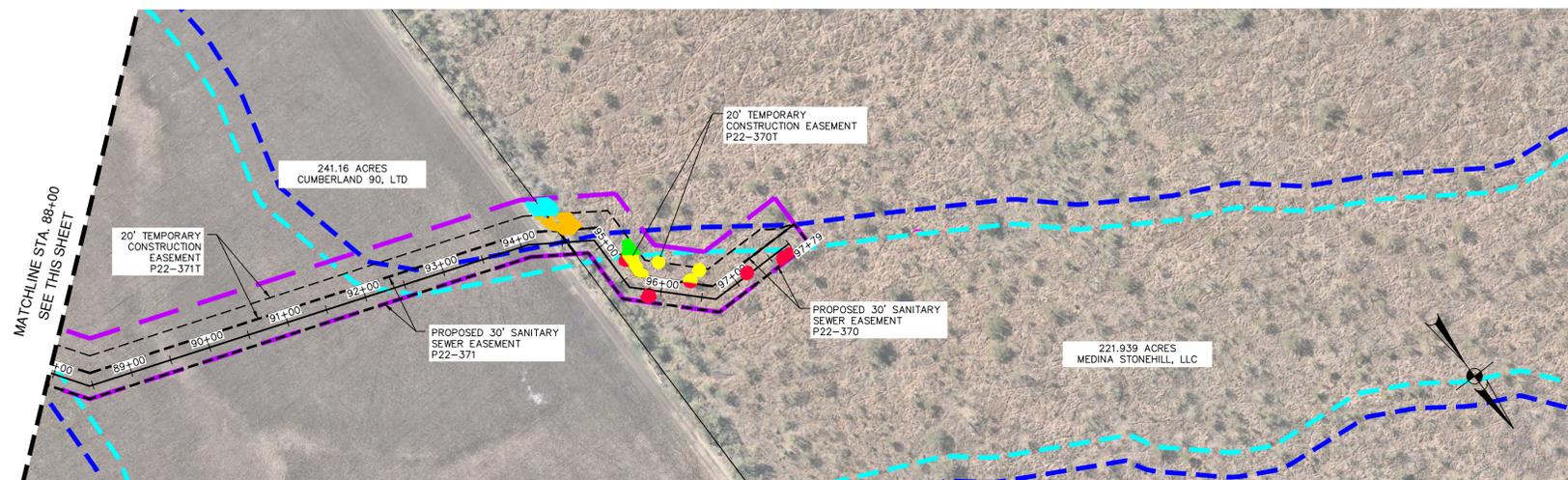
100% SUBMITTAL



LOCATION MAP  
NOT-TO-SCALE

LEGEND

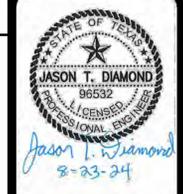
- PROPOSED SEWER LINE ---
- PROPERTY LINE ---
- PROPOSED EASEMENT ---
- EXISTING EASEMENT ---
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN ---
- 30' WIDE FLOODPLAIN BUFFER ---
- PROJECT LIMITS ---
- CANOPY TO BE REMOVED INSIDE FLOODPLAIN ---
- CANOPY TO BE PRESERVED INSIDE FLOODPLAIN ---
- CANOPY TO BE REMOVED OUTSIDE FLOODPLAIN ---
- CANOPY TO BE PRESERVED OUTSIDE FLOODPLAIN ---
- CANOPY TO BE REMOVED INSIDE 30' WIDE BUFFER ---
- CANOPY TO BE PRESERVED INSIDE 30' WIDE BUFFER ---



SEWER: SOUTH WATERSHED - DOS RIOS W.R.C.  
STONEHILL OFF-SITE SEWER EXTENSION PHASE II

Developer's Name: DR HORTON  
 Address: 5419 NORTH LOOP 1804 E  
 City: SAN ANTONIO State: TEXAS ZIP: 78247  
 Phone# (210) 498-2568 FAX# N/A  
 SAWS Block Map# 066558,066560,068556,068558,070554,070556 Total Acreage 2X  
 Total Linear Footage of Pipe 9,789 LF ~ 18" PVC SEWER Plat No. N/A  
 Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 24-4402

| NO. | REVISION | DATE |
|-----|----------|------|
|     |          |      |
|     |          |      |
|     |          |      |



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 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

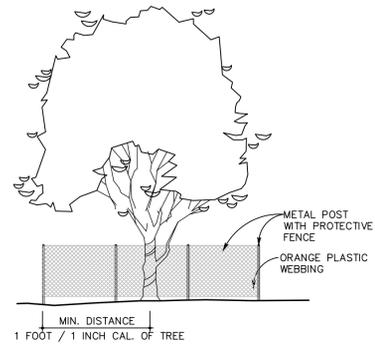
STONEHILL OFF-SITE SEWER EXTENSION PHASE II  
 BEXAR COUNTY, TEXAS  
 TREE PRESERVATION PLAN

PLAT NO. \_\_\_\_\_  
 JOB NO. 12747-04  
 DATE SEPTEMBER 2024  
 DESIGNER AM  
 CHECKED MP\_DRAWN\_Rd  
 SHEET C6.02

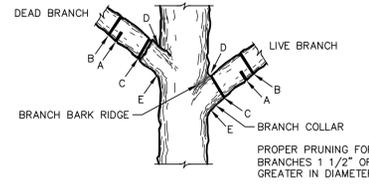
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**TREE PRESERVATION GENERAL NOTES**

- ALL TREES SHALL REMAIN UNLESS NOTED ON THE CITY OF SAN ANTONIO APPROVED PLANS.
- NO UTILITY EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
- THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR FOR GUIDANCE.
- EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
- NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED WITHIN THE ROOT PROTECTION ZONE OF ANY TREE NEAR THE PROJECT. ROOT PROTECTION ZONE IS ONE FOOT RADIUS PER DIAMETER INCH OF THE TRUNK OF THE TREE. A TEN INCH TREE SHALL REQUIRE A TEN FOOT ROOT PROTECTION ZONE. ROOTS OR BRANCHES IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. ALL WOUNDS TO OAK TREES SHALL BE PAINTED WITHIN 20 MINUTES TO PREVENT THE SPREAD OF OAK WILT.
- THE CITY ARBORIST, 207-0278, SHALL APPROVE ANY TREE REMOVED.
- TREES, TREE LIMBS, BUSHES AND SHRUBS LOCATED IN THE PERMANENT EASEMENTS WHICH INTERFERE WITH PROPOSED CONSTRUCTION ACTIVITIES MAY BE NEATLY TRIMMED BY THE CONTRACTOR ONLY AFTER APPROVAL FROM THE CITY INSPECTOR.
- TREES THAT ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE CITY'S SATISFACTION.
- SAPLINGS, SHRUBS OR BUSHES TO BE REMOVED FROM THE PROTECTED ROOT ZONE AREA OF PROTECTED TREES SHALL BE REMOVED BY HAND AS DESIGNATED BY THE INSPECTOR.
- ALL DEBRIS GENERATED BY THE PRUNING OR TRIMMING OF THE TREES AND/OR BUSHES SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY.
- TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE WATERING THE ROOT PROTECTION ZONE AND/OR WASHING FOLIAGE.
- NO WIRES, NAILS OR OTHER MATERIALS MAY BE ATTACHED TO PROTECTED TREES.
- PRIOR TO START OF WORK, CALL 207-1111 TO SCHEDULE A PRE-CONSTRUCTION & FENCING INSPECTION (PER SECTION 35-477 OF THE UDC, SUBSECTION TREE PERMITS (5)(C)).
- FAILURE TO SCHEDULE A FENCING INSPECTION PRIOR TO START OF WORK MAY RESULT IN A STOP WORK ORDER OR A PENALTY OF \$2,000 OR BOTH (PER SECTION 35-523 OF THE UDC, SUBSECTION (K)(2), THE BARRIER SHALL BE IN PLACE BEFORE ANY SITE WORK IS INITIATED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS).
- TREE PLANTING AND MAINTENANCE: ALL PRESERVED AND PLANTED TREES SHALL BE MAINTAINED IN A HEALTHY CONDITION AT ALL TIMES. THIS INCLUDES IRRIGATING, FERTILIZING, PRUNING, AND OTHER MAINTENANCE AS NEEDED. TREES THAT DIE WITHIN TWELVE MONTHS SHALL BE REPLACED WITH A TREE OF COMPARABLE SIZE AND SPECIES. REGARDING REPLACEMENT OF PRESERVED TREES, SIGNIFICANT TREES SHALL BE REPLACED WITH A 1:1 RATIO (OR INCH-FOR-INCH) AND HERITAGE TREES SHALL BE REPLACED AT A 3:1 RATIO (OR THREE-TO-ONE INCH).



**TREE PROTECTION DETAIL  
EXISTING TREES**  
N.T.S.



**TREE PRUNING DETAIL**  
N.T.S.

**TREE PRESERVATION NOTES**

- ALL TREES TO REMAIN ON SITE REQUIRE PROTECTIVE FENCING, PRUNING, WATERING, AND FERTILIZATION AS DIRECTED BY A QUALIFIED ARBORIST.
- PROTECTIVE FENCING CONSISTS OF 4'-0" HIGH FENCE.
- FENCE TO EXTEND FROM TRUNK ONE FOOT FOR EVERY CALIPER INCH OF TREE (MINIMUM). THE OPTIMUM DISTANCE IS TO INSTALL FENCE DIRECTLY BENEATH DRIPLINE OF TREE TO REMAIN AS SHOWN.
- DURING CONSTRUCTION, NO EXCESS SOIL, FILL MATERIAL, EQUIPMENT, LIQUIDS, OR CONSTRUCTION DEBRIS SHALL BE PLACED WITHIN THE PROTECTIVE FENCING, NOR SHALL ANY SOIL BE REMOVED FROM WITHIN THE FENCING.
- ALL TREE PROTECTION MUST BE IN PLACE BEFORE CONSTRUCTION BEGINS.
- INSTALL 4" MINIMUM DEPTH OF SHREDDED MULCH BENEATH THE DRIPLINE OF THE TREE.

NOTE: DO NOT CUT FROM D TO E

- FIRST CUT** - TO PREVENT THE BARK FROM BEING PEELED WHEN THE BRANCH FALLS.
- SECOND CUT** - TO REDUCE THE WEIGHT OF BRANCH.
- FINAL CUT** - ALLOW FOR HEALING COLLAR BUT NO STUBS
- BRANCH RIDGES** - INDENT PROPERLY BRANCH RIDGES WHICH ARE SITE FOR DECAY.

FOR OAKS ONLY: PAINT ALL WOUNDS OR CUTS WITH PRUNING PAINT WITHIN 20 MIN. TO PREVENT THE SPREAD OF OAK WILT.

**CANOPY PRESERVATION SUMMARY**

| OUTSIDE FLOODPLAIN                 |           |
|------------------------------------|-----------|
| EXISTING CANOPY                    | 4941 SF   |
| REQUIRED TO REMAIN (25%)           | 1235 SF   |
| EXISTING TREE CANOPY TO BE REMOVED | 3826 SF   |
| EXISTING TREE CANOPY TO REMAIN     | 1115 SF   |
| PERCENTAGE AREA PRESERVED          | 23%       |
| CANOPY REQUIRED TO BE MITIGATED    | 120.25 SF |

**TREE CANOPY MITIGATION CALCULATIONS**

OUTSIDE FLOODPLAIN

- EXISTING CANOPY AREA PRESERVED: 1,115 SF
- EXISTING CANOPY AREA REQUIRED TO BE PRESERVED: 25% x 4,941 SF = 1,235 SF

\*\* TREE CANOPY AREA BEING PRESERVED DOES NOT EXCEED THE REQUIRED CANOPY AREA; THEREFORE, MITIGATION IS REQUIRED.

INSIDE FLOODPLAIN

- EXISTING CANOPY AREA PRESERVED: 14,679 SF
- EXISTING CANOPY AREA REQUIRED TO BE PRESERVED: 80% x 41,449 SF = 33,159 SF

\*\* TREE CANOPY AREA BEING PRESERVED DOES NOT EXCEED THE REQUIRED CANOPY AREA; THEREFORE, MITIGATION IS REQUIRED.

INSIDE 30' WIDE BUFFER

- EXISTING CANOPY AREA PRESERVED: 1,482 SF
- EXISTING CANOPY AREA REQUIRED TO BE PRESERVED: 80% x 5,251 SF = 4,200.8 SF

\*\* TREE CANOPY AREA BEING PRESERVED DOES NOT EXCEED THE REQUIRED CANOPY AREA; THEREFORE, MITIGATION IS NOT REQUIRED.

**TOTAL MITIGATION**

INSIDE FLOODPLAIN CANOPY MITIGATION INCHES = 367.4 INCHES  
 OUTSIDE FLOODPLAIN CANOPY MITIGATION INCHES = 16.7 INCHES  
 INSIDE 30' WIDE BUFFER CANOPY MITIGATION INCHES = 66.8 INCHES

MITIGATION FEE @ \$200.00/INCH

INSIDE FLOODPLAIN CANOPY FEE = 367.4 INCHES x \$200 = \$73,480  
 OUTSIDE FLOODPLAIN CANOPY FEE = 16.7 INCHES x \$200 = \$3,340  
 INSIDE 30' WIDE BUFFER CANOPY FEE = 66.8 INCHES x \$200 = \$13,360

TOTAL MITIGATION FEE = \$90,180

**MITIGATION REQUIREMENTS**

OUTSIDE FLOODPLAIN

NUMBER OF TREES REQUIRED TO BE PLANTED = 120 SF ÷ (875 SF/TREE) = 1 TREE  
 INCHES OF CANOPY REQUIRED TO BE MITIGATED = 1 TREES x 16.7 INCHES = 16.7 INCHES

INSIDE FLOODPLAIN

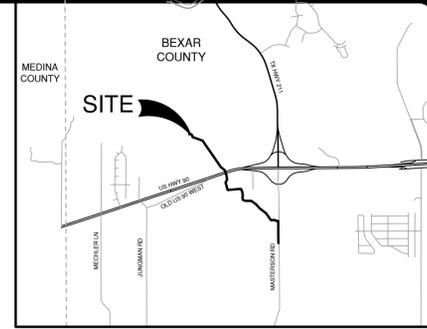
NUMBER OF TREES REQUIRED TO BE PLANTED = 18480 SF ÷ (875 SF/TREE) = 22 TREES  
 INCHES OF CANOPY REQUIRED TO BE MITIGATED = 22 TREES x 16.7 INCHES = 367.4 INCHES

INSIDE 30' WIDE BUFFER

NUMBER OF TREES REQUIRED TO BE PLANTED = 2718.8 SF ÷ (875 SF/TREE) = 4 TREES  
 INCHES OF CANOPY REQUIRED TO BE MITIGATED = 4 TREES x 16.7 INCHES = 66.8 INCHES

| INSIDE FLOODPLAIN                  |            |
|------------------------------------|------------|
| EXISTING CANOPY                    | 41449 SF   |
| REQUIRED TO REMAIN (80%)           | 33159.2 SF |
| EXISTING TREE CANOPY TO BE REMOVED | 26770 SF   |
| EXISTING TREE CANOPY TO REMAIN     | 14679 SF   |
| PERCENTAGE AREA PRESERVED          | 35%        |
| CANOPY REQUIRED TO BE MITIGATED    | 18480.2 SF |

| INSIDE 30' FLOODPLAIN BUFFER       |           |
|------------------------------------|-----------|
| EXISTING CANOPY                    | 5251 SF   |
| REQUIRED TO REMAIN (80%)           | 4200.8 SF |
| EXISTING TREE CANOPY TO BE REMOVED | 3769 SF   |
| EXISTING TREE CANOPY TO REMAIN     | 1482 SF   |
| PERCENTAGE AREA PRESERVED          | 28%       |
| CANOPY REQUIRED TO BE MITIGATED    | 2718.8 SF |



**LOCATION MAP**  
NOT-TO-SCALE

| NO. | REVISION | DATE |
|-----|----------|------|
|     |          |      |



**PAPE-DAWSON ENGINEERS**  
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 TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

**STONEHILL OFF-SITE SEWER EXTENSION PHASE II**  
 BEXAR COUNTY, TEXAS  
 TREE PRESERVATION PLAN AND DETAILS

**SEWER: SOUTH WATERSHED - DOS RIOS W.R.C.**  
 STONEHILL OFF-SITE SEWER EXTENSION PHASE II

|  |
|--|
| Developer's Name: DR HORTON  |
| Address: 5419 NORTH LOOP 1804 E  |
| City: SAN ANTONIO State: TEXAS ZIP: 78247                                  |
| Phone# (210) 498-2568 FAX# N/A   |
| SAWS Block Map# 066558,066560,068556,068558,070554,070556 Total Acreage 2X |
| Total Linear Footage of Pipe 9,789 LF ~ 18" PVC SEWER Plat No. N/A         |
| Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 24-4402                    |

|          |                |
|----------|----------------|
| PLAT NO. |                |
| JOB NO.  | 12747-04       |
| DATE     | SEPTEMBER 2024 |
| DESIGNER | AM             |
| CHECKED  | MP_DRAWN_Rd    |
| SHEET    | C6.03          |