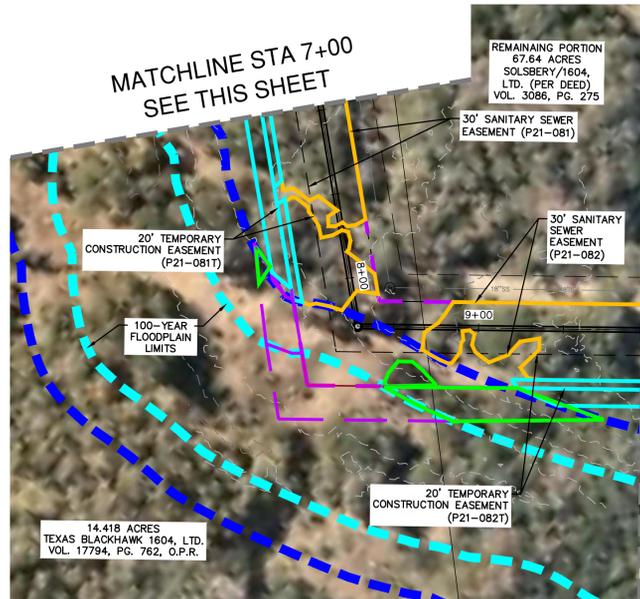


MATCHLINE STA 7+00
SEE THIS SHEET



MATCHLINE STA 10+00
SEE THIS SHEET

LEGEND

- PROPOSED SEWER LINE
- PROPERTY LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- EXISTING OVERHEAD ELECTRIC
- EXISTING 1' CONTOURS
- EXISTING 5' CONTOURS
- 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 OUTSIDE 30' WIDE BUFFER

CAUTION UNDERGROUND UTILITIES

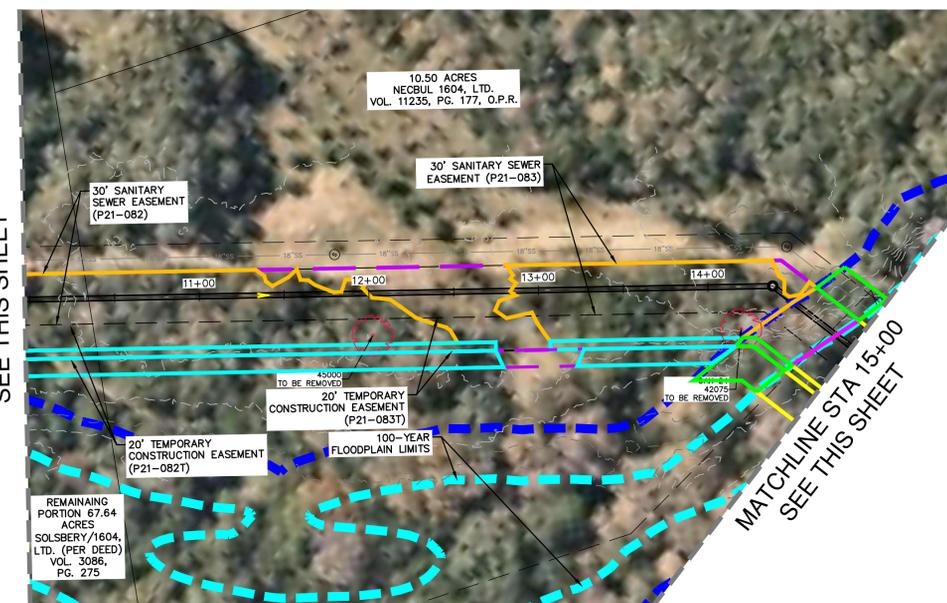
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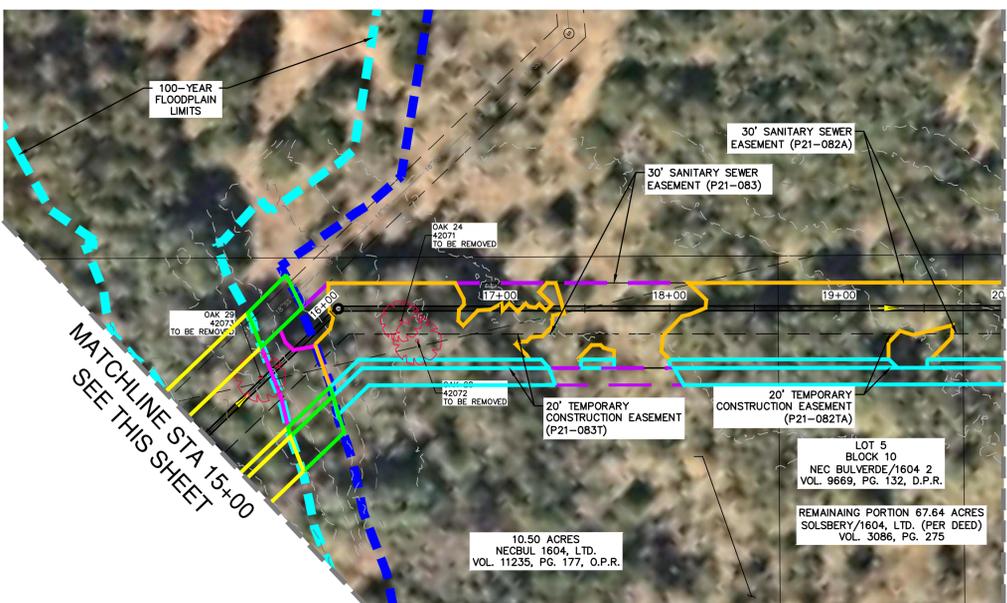
TRENCH EXCAVATION SAFETY PROTECTION

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MATCHLINE STA 10+00
SEE THIS SHEET

MATCHLINE STA 15+00
SEE THIS SHEET



MATCHLINE STA 15+00
SEE THIS SHEET

MATCHLINE STA 20+00
SEE SHEET C7.01A

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
 TYPE FIRM REGISTRATION #070 | TBPUS FIRM REGISTRATION #10088900

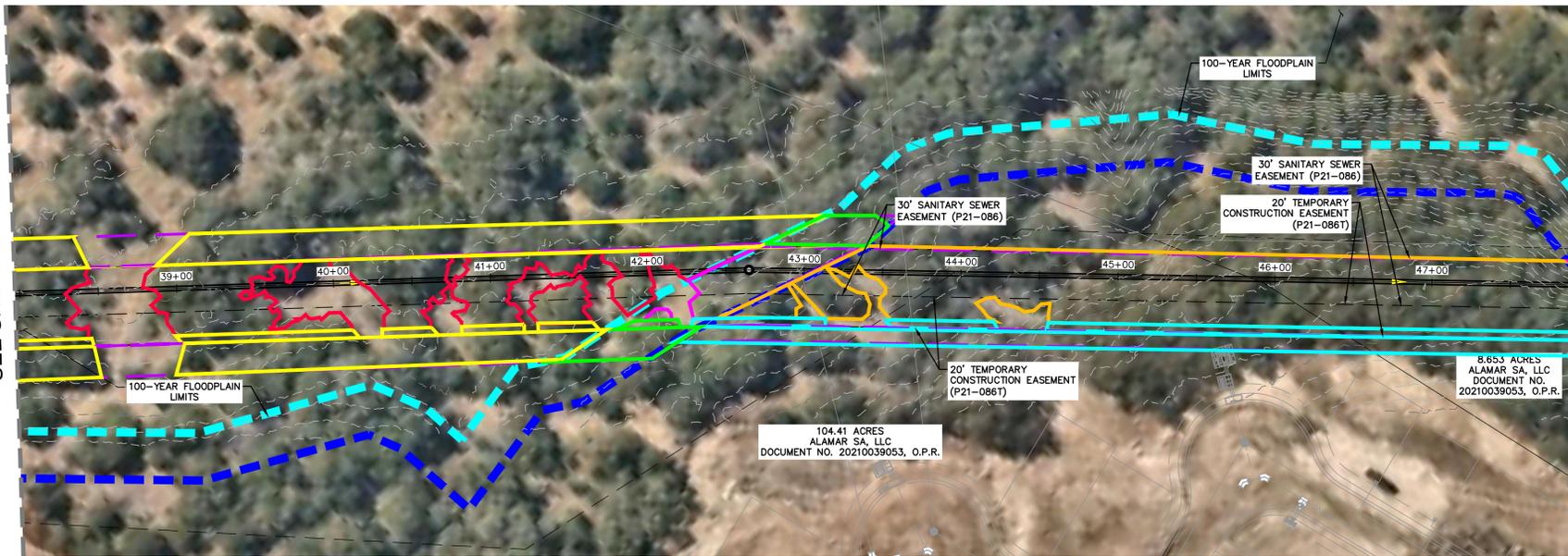
SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE PRESERVATION PLAN
 STA 1+00 TO STA 20+00

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.00A

Notes: Aug 30, 2022, 6:07pm User ID: cally
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MATCHLINE STA 38+00
SEE SHEET C7.01A



MATCHLINE STA 48+00
SEE THIS SHEET



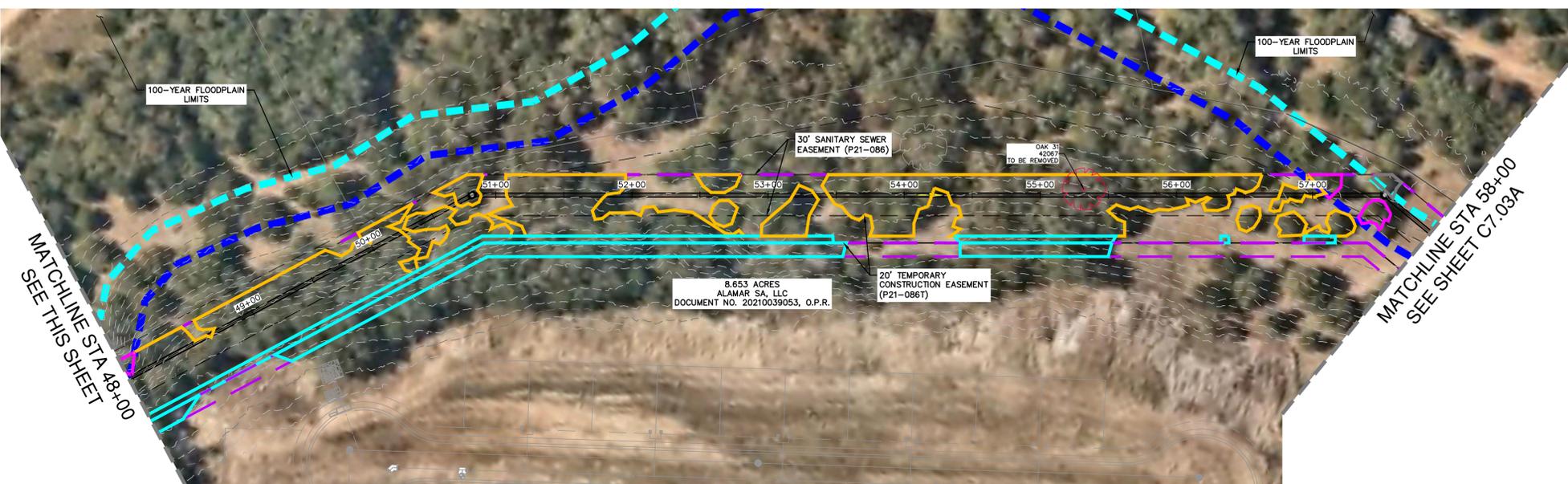
LEGEND

- PROPOSED SEWER LINE —
- PROPERTY LINE —
- PROPOSED EASEMENT ---
- EXISTING EASEMENT ---
- EXISTING OVERHEAD ELECTRIC — OHE
- EXISTING 1' CONTOURS - - - - - 946
- EXISTING 5' CONTOURS - - - - - 950
- 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 OUTSIDE 30' WIDE BUFFER ---

NO.	REVISION	DATE



PAPE-DAWSON ENGINEERS
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 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TBPUS FIRM REGISTRATION #1008890



MATCHLINE STA 48+00
SEE THIS SHEET

MATCHLINE STA 58+00
SEE SHEET C7.03A

CAUTION UNDERGROUND UTILITIES

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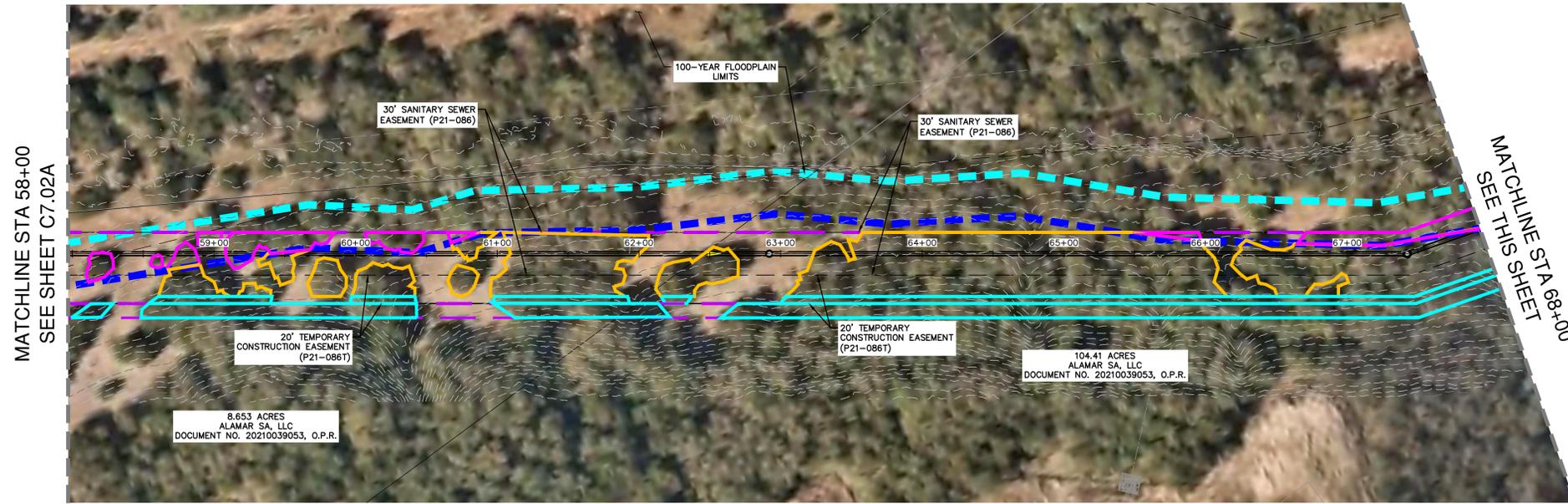
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SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE PRESERVATION PLAN
 STA 38+00 TO STA 58+00

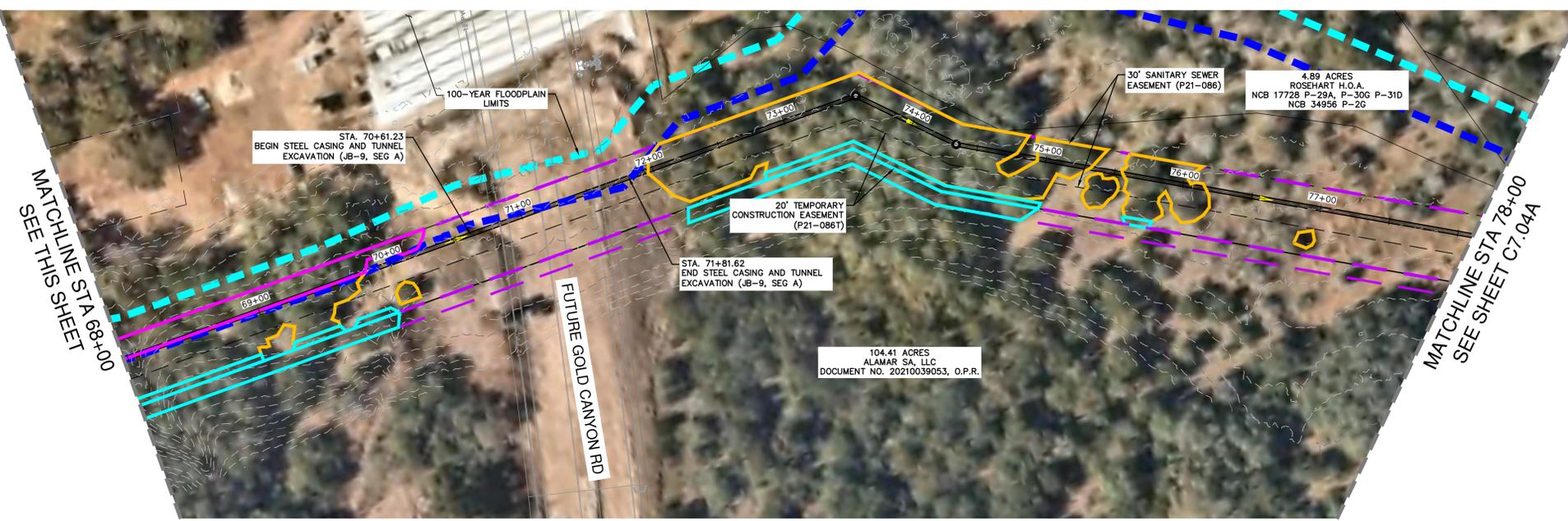
SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.02A

Notes: Aug 30, 2022, 6:09pm User ID: ccdilly
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LEGEND

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- EXISTING EASEMENT ---
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- CANOPY TO BE PRESERVED OUTSIDE FLOODPLAIN ---
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NO.	REVISION	DATE



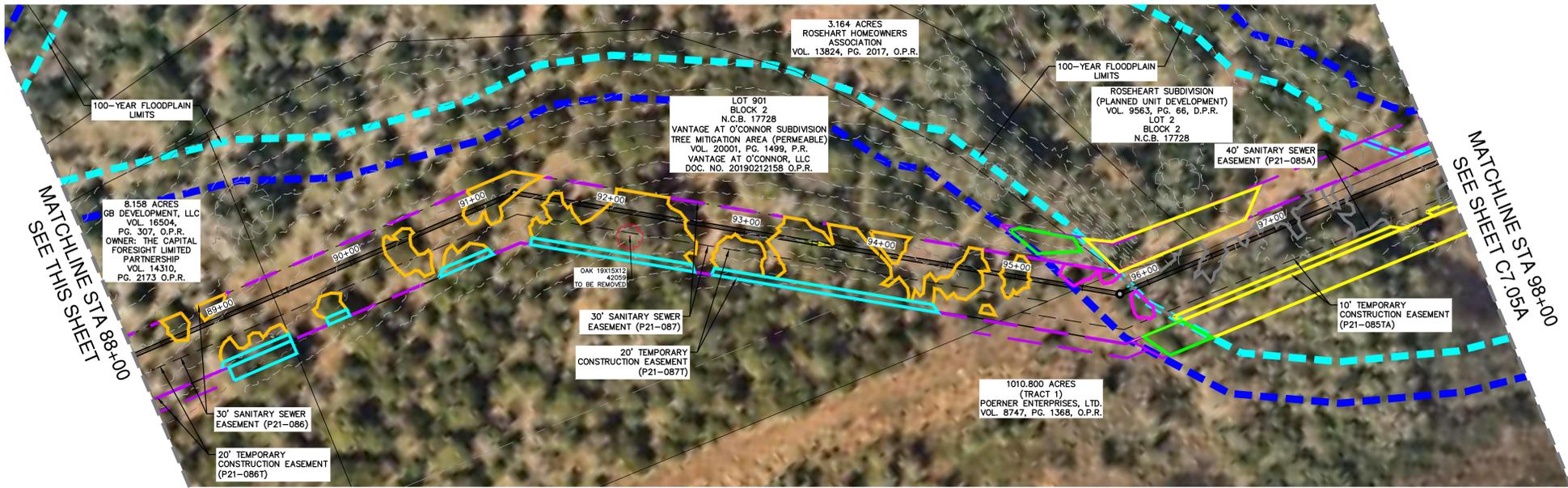
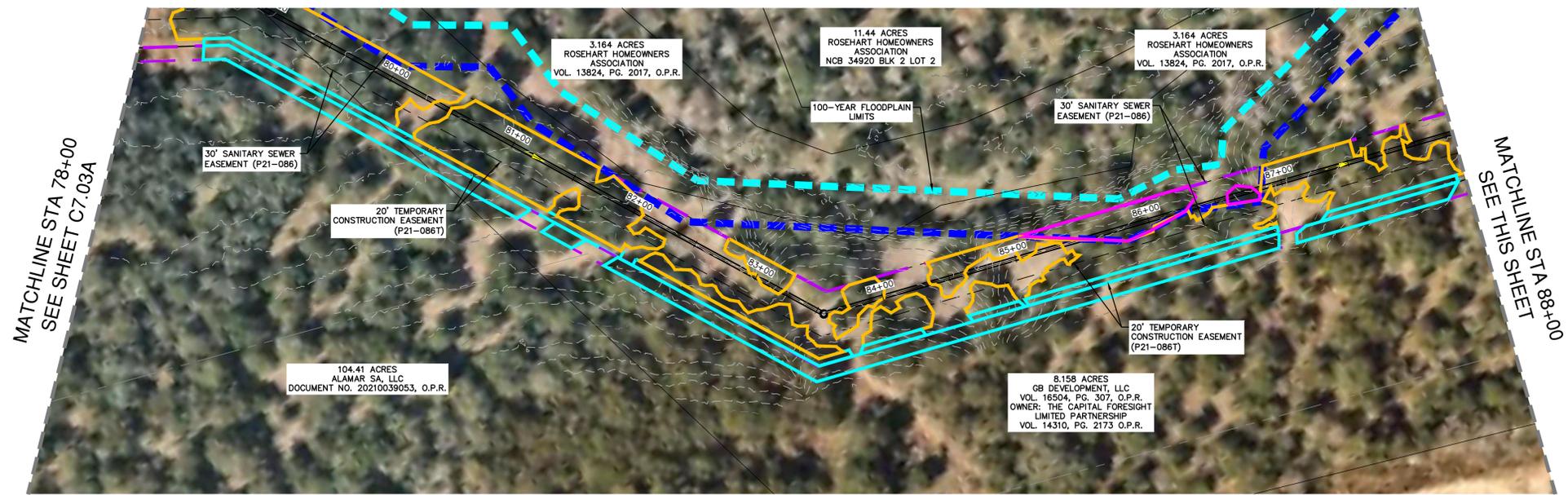
PAPE-DAWSON ENGINEERS
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TYPE FIRM REGISTRATION #0028890

SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE PRESERVATION PLAN
 STA 58+00 TO STA 78+00

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.03A

Notes: Aug 30, 2022, 6:09pm User ID: cally
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LEGEND

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NO.	REVISION	DATE



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 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TBPUS FIRM REGISTRATION #1008890

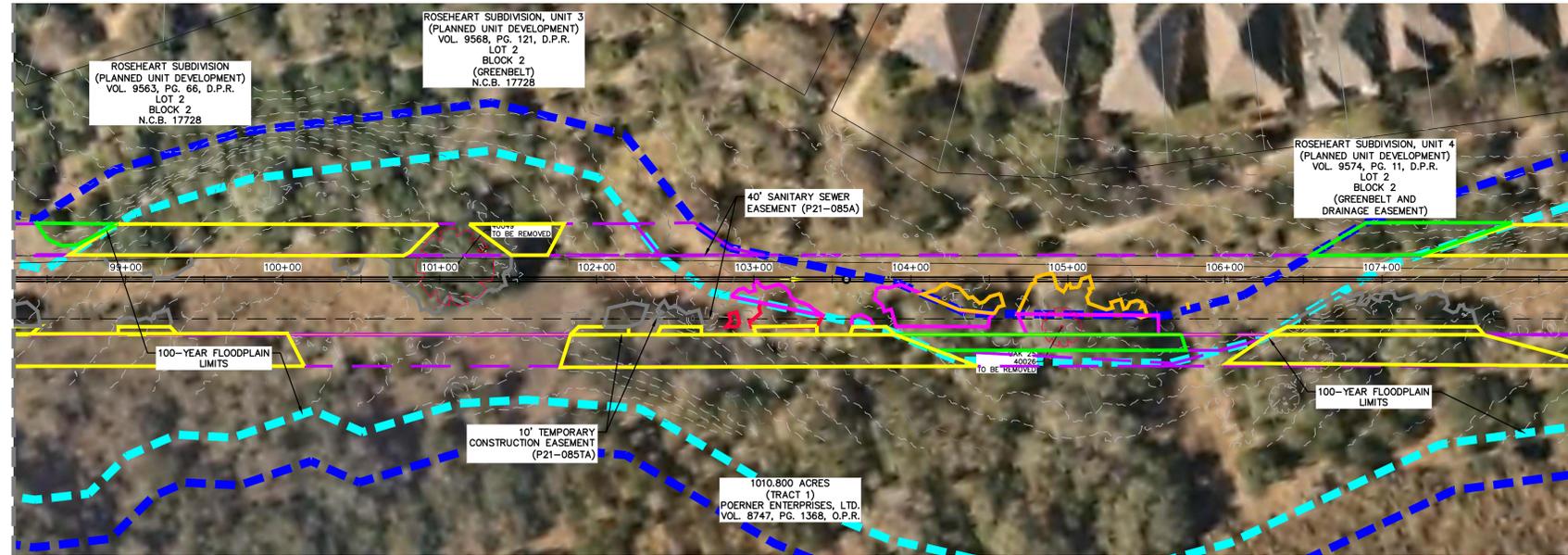
SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE PRESERVATION PLAN
 STA 78+00 TO STA 98+00

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.04A

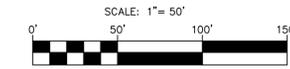
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MATCHLINE STA 98+00
SEE SHEET C7.04A



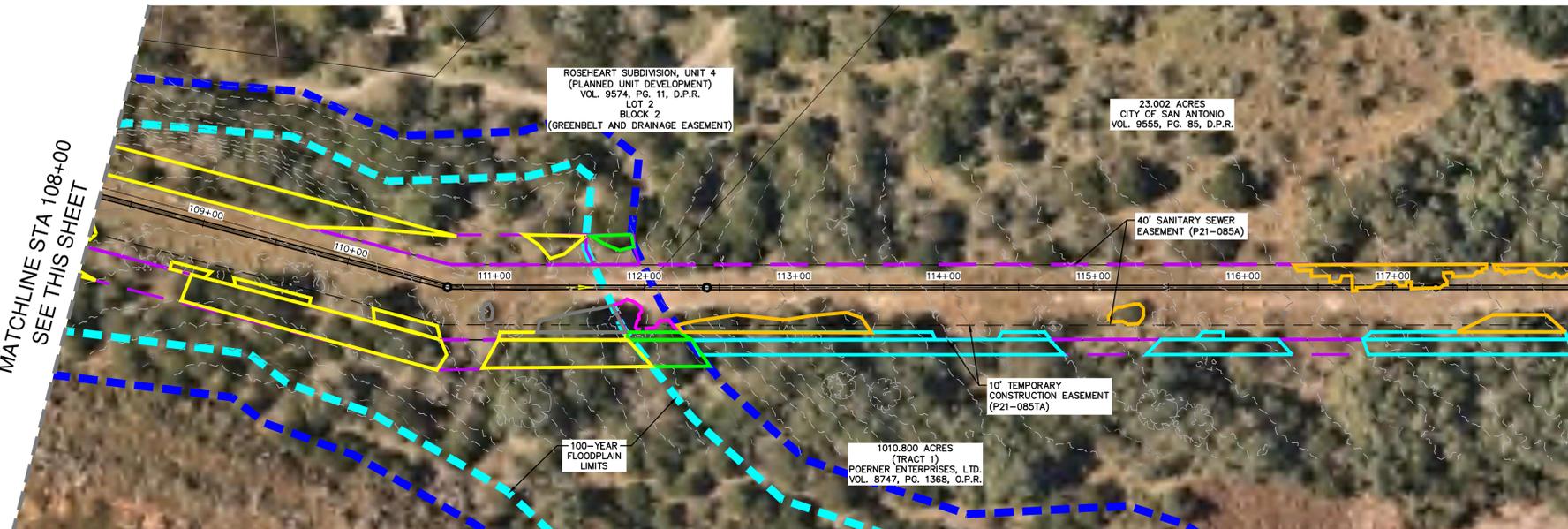
MATCHLINE STA 108+00
SEE THIS SHEET



LEGEND

PROPOSED SEWER LINE	—
PROPERTY LINE	—
PROPOSED EASEMENT	- - - - -
EXISTING EASEMENT	- - - - -
EXISTING OVERHEAD ELECTRIC	— OHE —
EXISTING 1' CONTOURS	- - - - - 946
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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 OUTSIDE 30' WIDE BUFFER	—

MATCHLINE STA 108+00
SEE THIS SHEET



MATCHLINE STA 118+00
SEE SHEET C7.06A

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NO.	REVISION	DATE

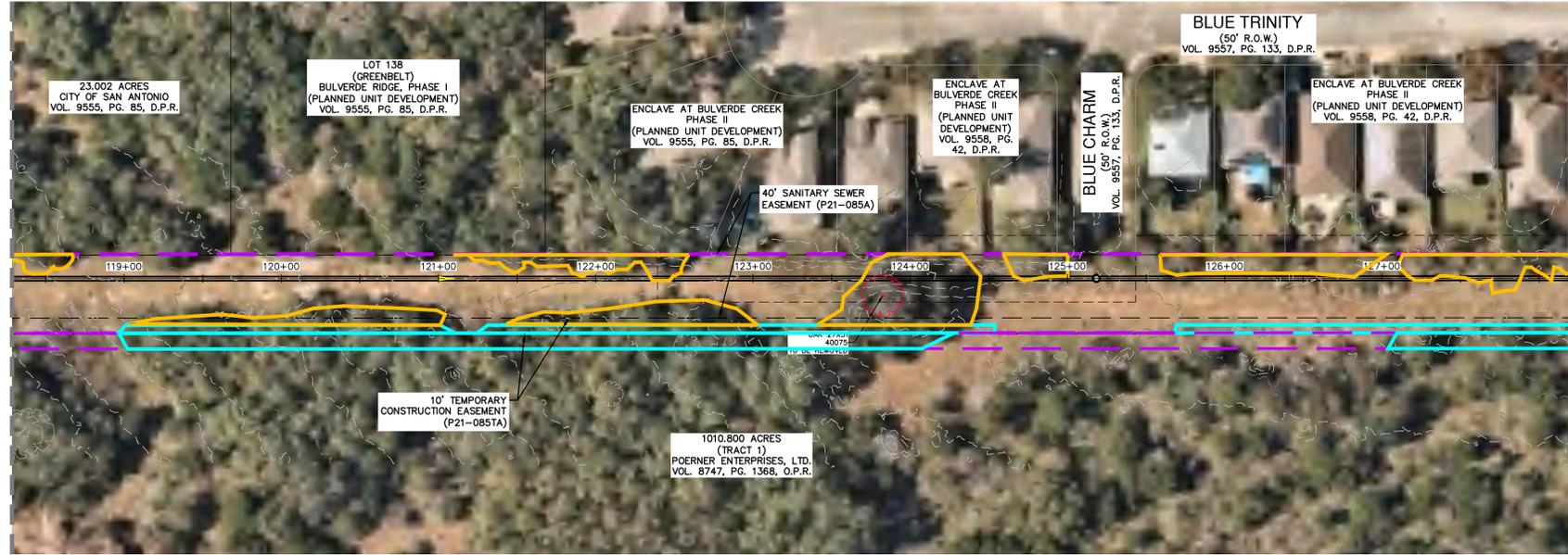


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 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #071 | TBPUS FIRM REGISTRATION #10028890

SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE PRESERVATION PLAN
 STA 98+00 TO STA 118+00

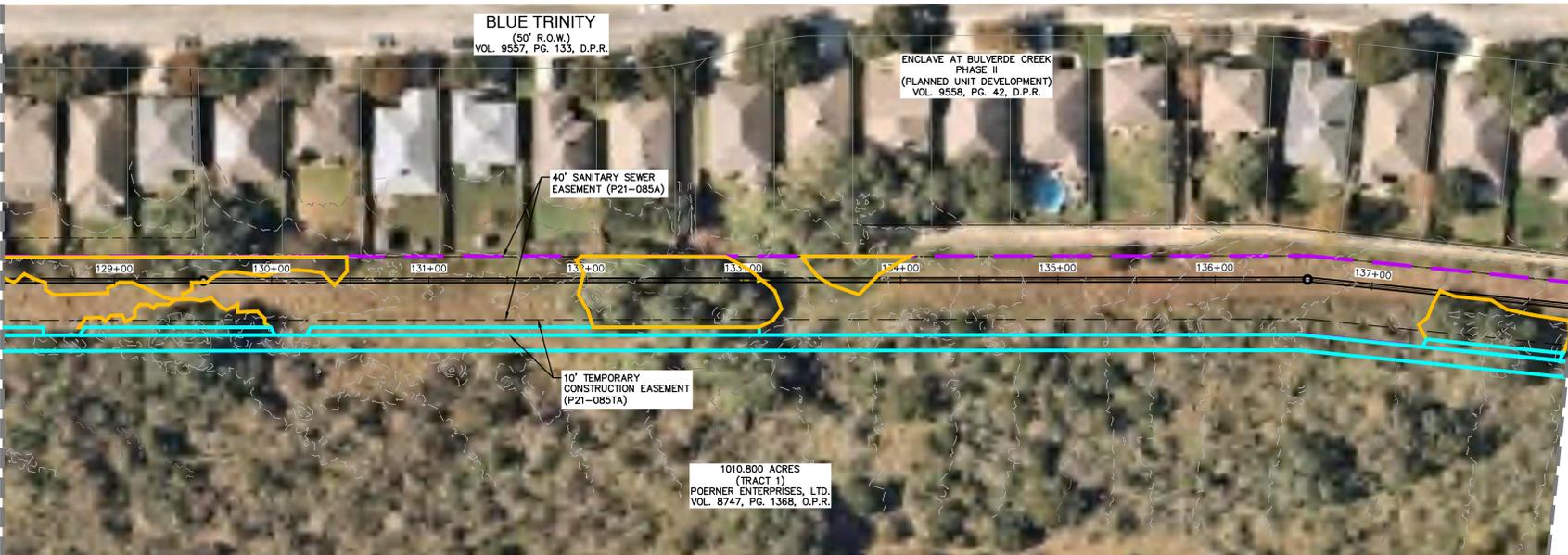
SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.05A

MATCHLINE STA 118+00
SEE SHEET C7.05A

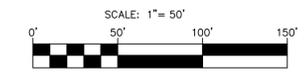


MATCHLINE STA 128+00
SEE THIS SHEET

MATCHLINE STA 128+00
SEE THIS SHEET



MATCHLINE STA 138+00
SEE SHEET C7.07A



LEGEND

- PROPOSED SEWER LINE ---
- PROPERTY LINE ---
- PROPOSED EASEMENT ---
- EXISTING EASEMENT ---
- EXISTING OVERHEAD ELECTRIC --- OHE
- EXISTING 1' CONTOURS --- 946
- EXISTING 5' CONTOURS --- 950
- 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 OUTSIDE 30' WIDE BUFFER ---

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NO.	REVISION	DATE

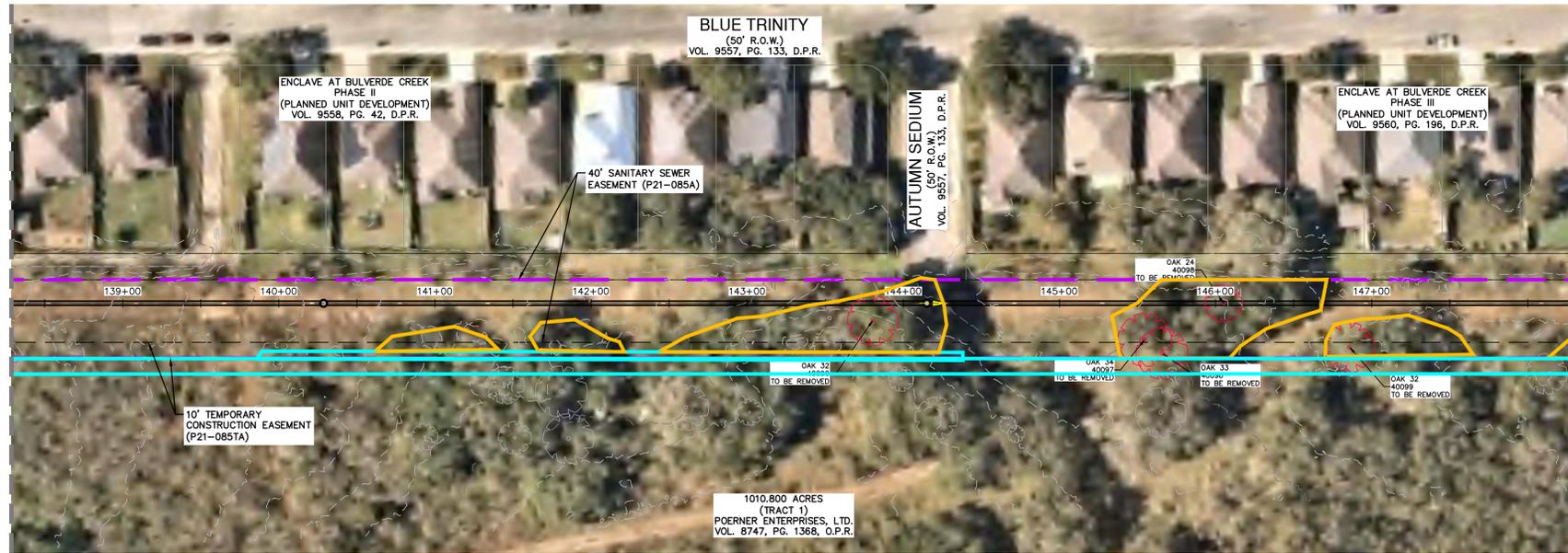


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SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE PRESERVATION PLAN
 STA 118+00 TO STA 138+00

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.06A

MATCHLINE STA 138+00
SEE SHEET C7.06A



MATCHLINE STA 148+00
SEE THIS SHEET



LEGEND

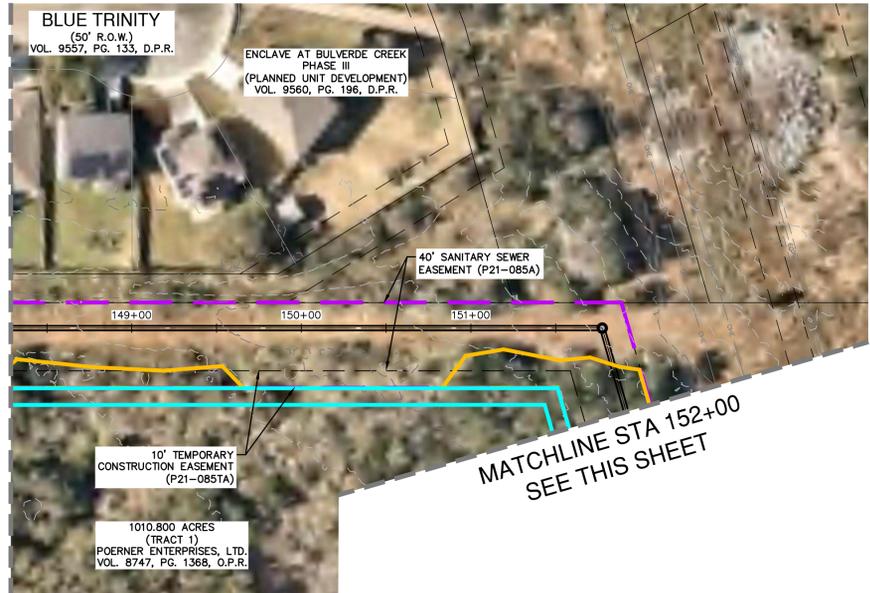
- PROPOSED SEWER LINE ---
- PROPERTY LINE ---
- PROPOSED EASEMENT ---
- EXISTING EASEMENT ---
- EXISTING OVERHEAD ELECTRIC --- OHE
- EXISTING 1' CONTOURS --- -946
- EXISTING 5' CONTOURS --- -950
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN ---
- 30' WIDE FLOODPLAIN BUFFER ---
- PROJECT LIMITS ---
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- CANOPY TO BE REMOVED OUTSIDE FLOODPLAIN ---
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- CANOPY TO BE REMOVED INSIDE 30' WIDE BUFFER ---
- CANOPY TO BE PRESERVED OUTSIDE 30' WIDE BUFFER ---

NO.	REVISION	DATE



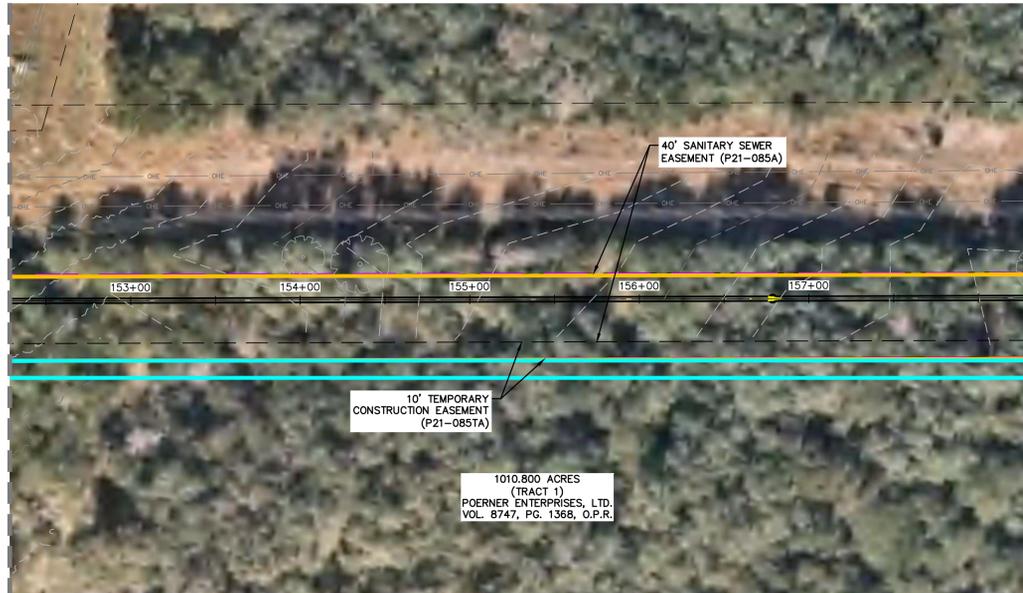
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 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TBPUS FIRM REGISTRATION #1008890

MATCHLINE STA 148+00
SEE THIS SHEET



MATCHLINE STA 152+00
SEE THIS SHEET

MATCHLINE STA 152+00
SEE THIS SHEET



MATCHLINE STA 158+00
SEE SHEET C7.08A

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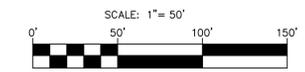
SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE PRESERVATION PLAN
 STA 138+00 TO STA 158+00

SAWS JOB NO. 21-4404
 JOB NO. 11500-51
 DATE AUGUST 2022
 DESIGNER CD
 CHECKED MP DRAWN BS
 SHEET C7.07A

MATCHLINE STA 158+00
SEE SHEET 7.07A



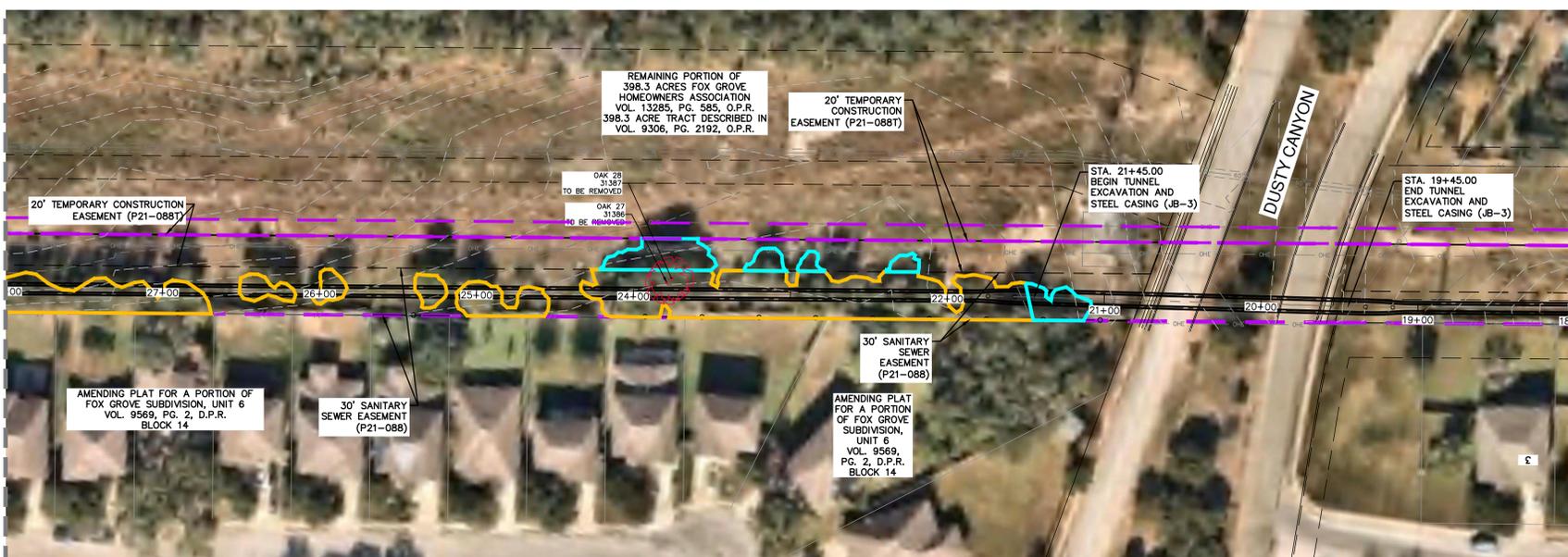
MATCHLINE FM STA 28+00
SEE THIS SHEET



LEGEND

- PROPOSED SEWER LINE
- PROPERTY LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- EXISTING OVERHEAD ELECTRIC
- EXISTING 1' CONTOURS
- EXISTING 5' CONTOURS
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- CANOPY TO BE PRESERVED OUTSIDE 30' WIDE BUFFER

MATCHLINE FM STA 28+00
SEE THIS SHEET



MATCHLINE FM STA 18+00
SEE SHEET C7.09A

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NO.	REVISION	DATE



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 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TBPUS FIRM REGISTRATION #10088800

SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE PRESERVATION PLAN
 STA 158+00 TO FM STA 18+00

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.08A

Notes: Aug 30, 2022, 6:25am User ID: c.dilly
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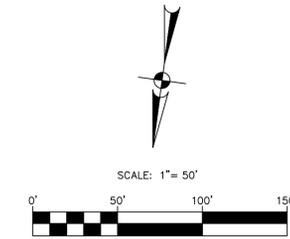
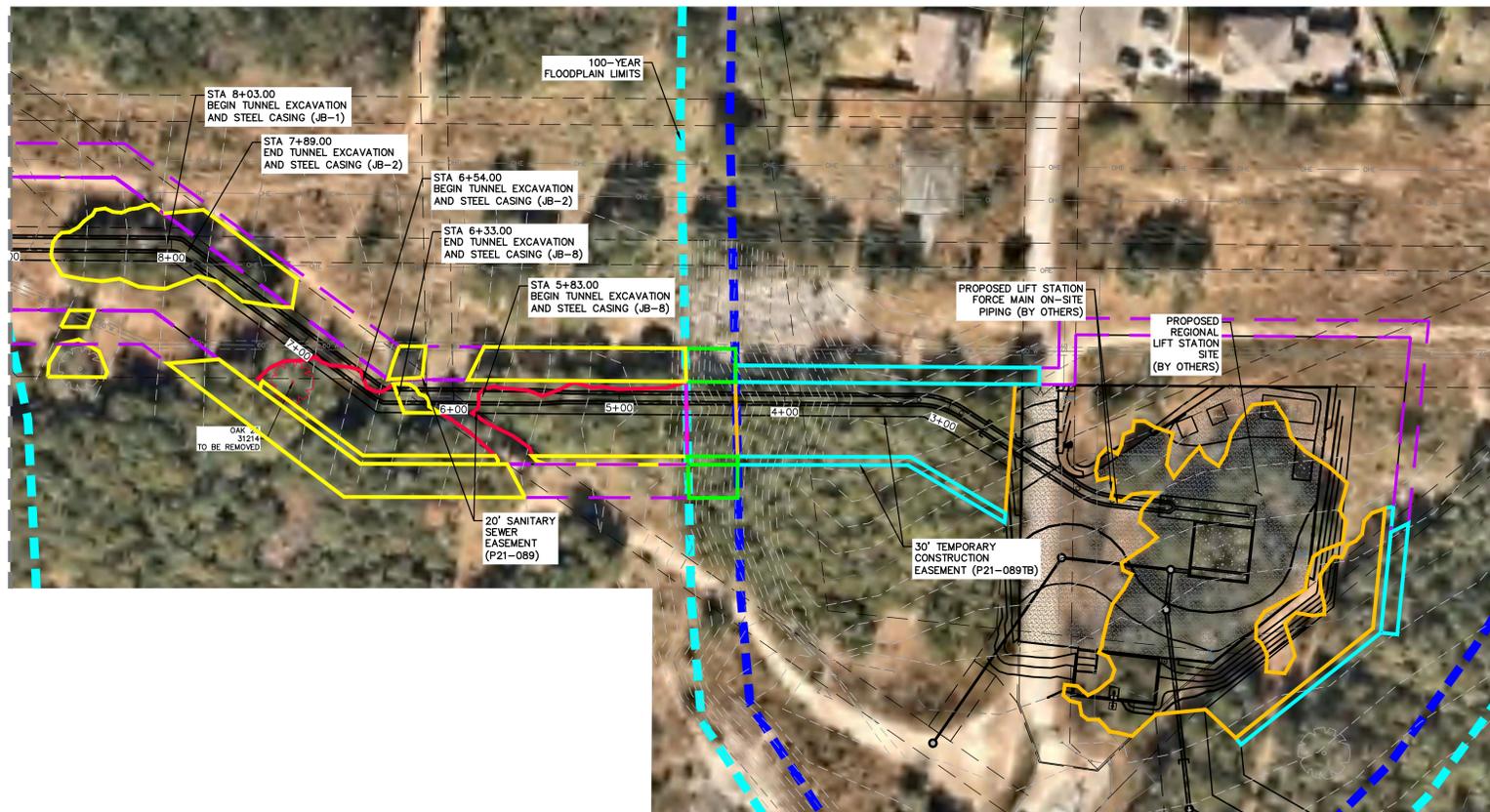
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MATCHLINE FM STA 18+00
SEE SHEET C7.08A



MATCHLINE FM STA 9+00
SEE THIS SHEET

MATCHLINE FM STA 9+00
SEE THIS SHEET



LEGEND

- PROPOSED SEWER LINE ---
- PROPERTY LINE ---
- PROPOSED EASEMENT ---
- EXISTING EASEMENT ---
- EXISTING OVERHEAD ELECTRIC --- OHE
- EXISTING 1' CONTOURS --- -946
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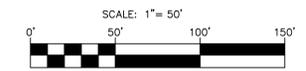
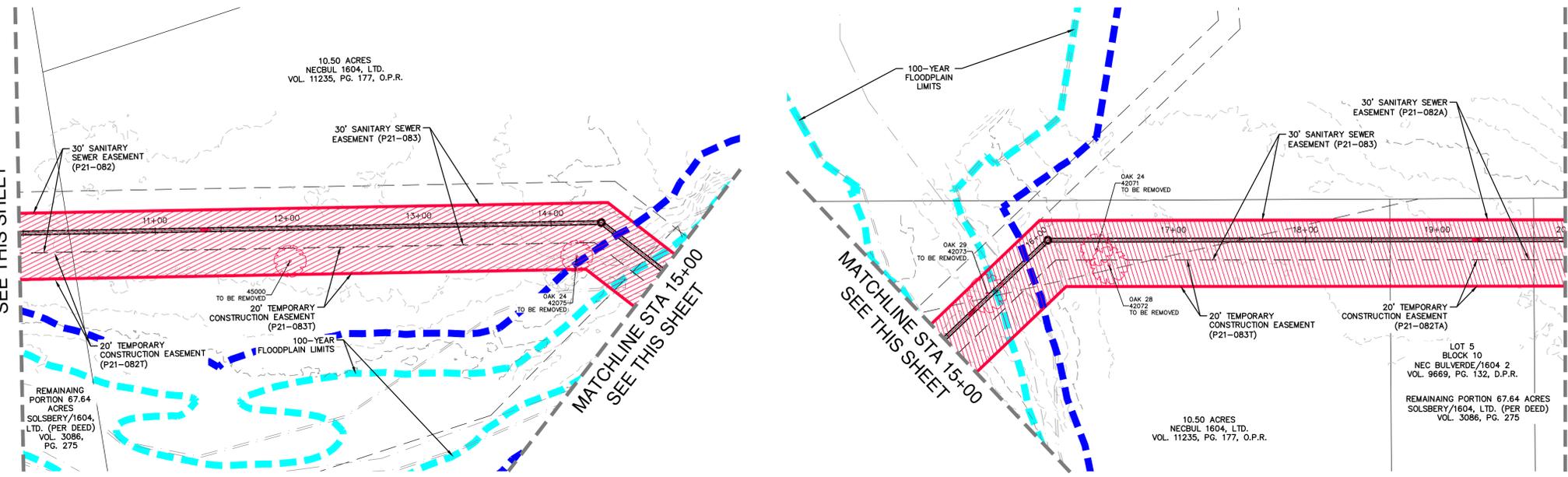
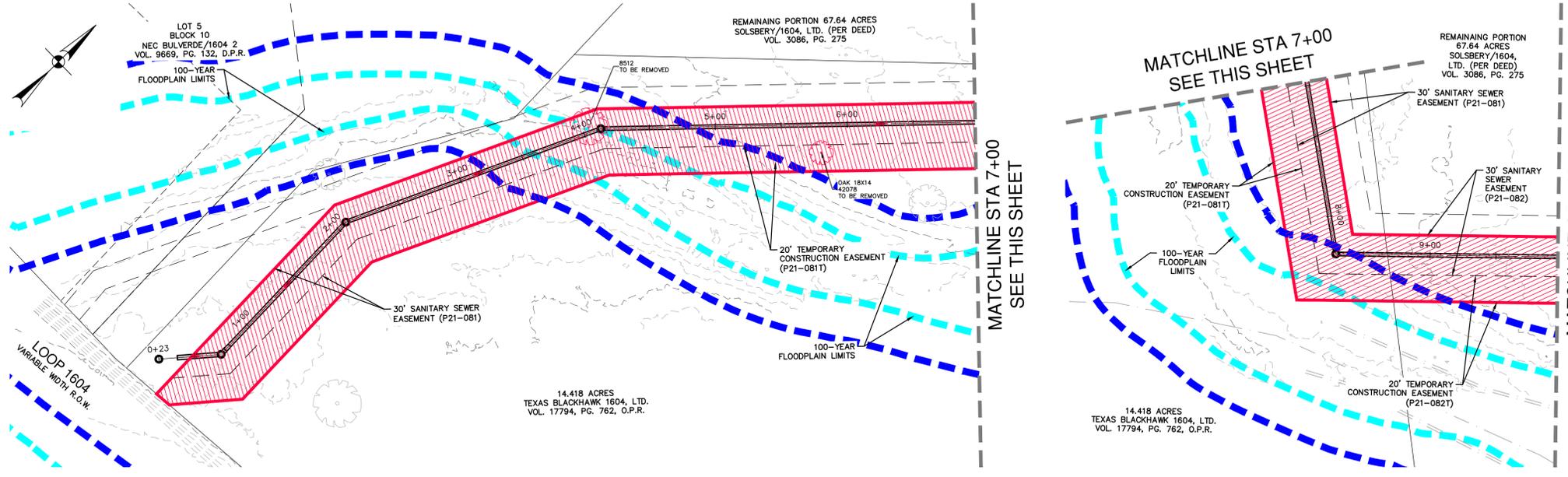
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 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TBPUS FIRM REGISTRATION #10028800

SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE PRESERVATION PLAN
 FM STA 18+00 TO END

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.09A

Notes: Aug 30, 2022, 6:13pm, User: JD_cally, File: P:\11500\51_TreePresPlan_Segment A.TBDD-1150051-SegA.dwg

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LEGEND

AREA TO BE SEEDED WITH NATIVE SEED MIXTURE	
PROPOSED SEWER LINE	
PROPOSED EASEMENT	
EXISTING EASEMENT	
1% ANNUAL-CHANCE FEMA FLOODPLAIN	
30' WIDE FLOODPLAIN BUFFER	
PROPERTY LINE	

QUANTITY TABLE

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1A-TP10A	REVEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDROMULCH)	SY	10,904

REVEGETATION NOTE

THE CONTRACTOR SHALL REFER TO SC-13 REVEGETATION REQUIREMENTS: COSA TREE PERMIT FOR TOPSOIL REQUIREMENTS. THE PRICE FOR REVEGETATION SHALL REFLECT BOTH DRILL SEEDING AND HYDROMULCHING WITH A NATIVE SEED MIXTURE. THE NATIVE SEED MIXTURE FOR THE POERNER ENTERPRISES LTD (VULCAN MATERIALS COMPANY) PROPERTY SHALL CONSIST OF THE FOLLOWING MIXTURE: (1) SIDEOATS GRAMA (40%), (2) LITTLE BLUESTEM (30%), (3) GREEN SPRANGLETOP (20%), AND (4) SHORT-SPIKE WINDMILL GRASS (10%). THE REMAINING AREAS OUTSIDE OF THE POERNER ENTERPRISES, LTD (VULCAN MATERIALS COMPANY) PROPERTY SHALL BE PLANTED WITH DROUGHT RESISTANT, LOW GROWTH, NATIVE SPECIES GRASSES WHICH WILL ALLOW UNOBSTRUCTED PASSAGE OF FLOODWATERS. RECOMMENDED GRASSES AND GROUNDCOVER CAN BE FOUND IN APPENDIX E OF "SAN ANTONIO RECOMMENDED PLANT LIST - ALL SUITED TO XERISCAPE PLANTING METHODS", FOUND IN THE CURRENT CITY OF SAN ANTONIO UNIFIED DEVELOPMENT CODE. JOHNSON GRASS, GIANT RAGWEED, AND OTHER INVASIVE SPECIES SHALL NOT BE ALLOWED.

CAUTION UNDERGROUND UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. THE CONTRACTOR MUST CONTACT 1-800-DIG-TESS AND CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION AND/OR START OF CONSTRUCTION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

COMPACTION NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT A LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR. PER EACH 12-INCH LOOSE LIFT PER 400 FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THE REQUIREMENT BEING MET AND VERIFIED BY PROVING ALL NECESSARY DOCUMENTED TEST RESULTS.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

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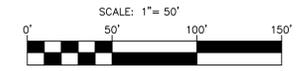
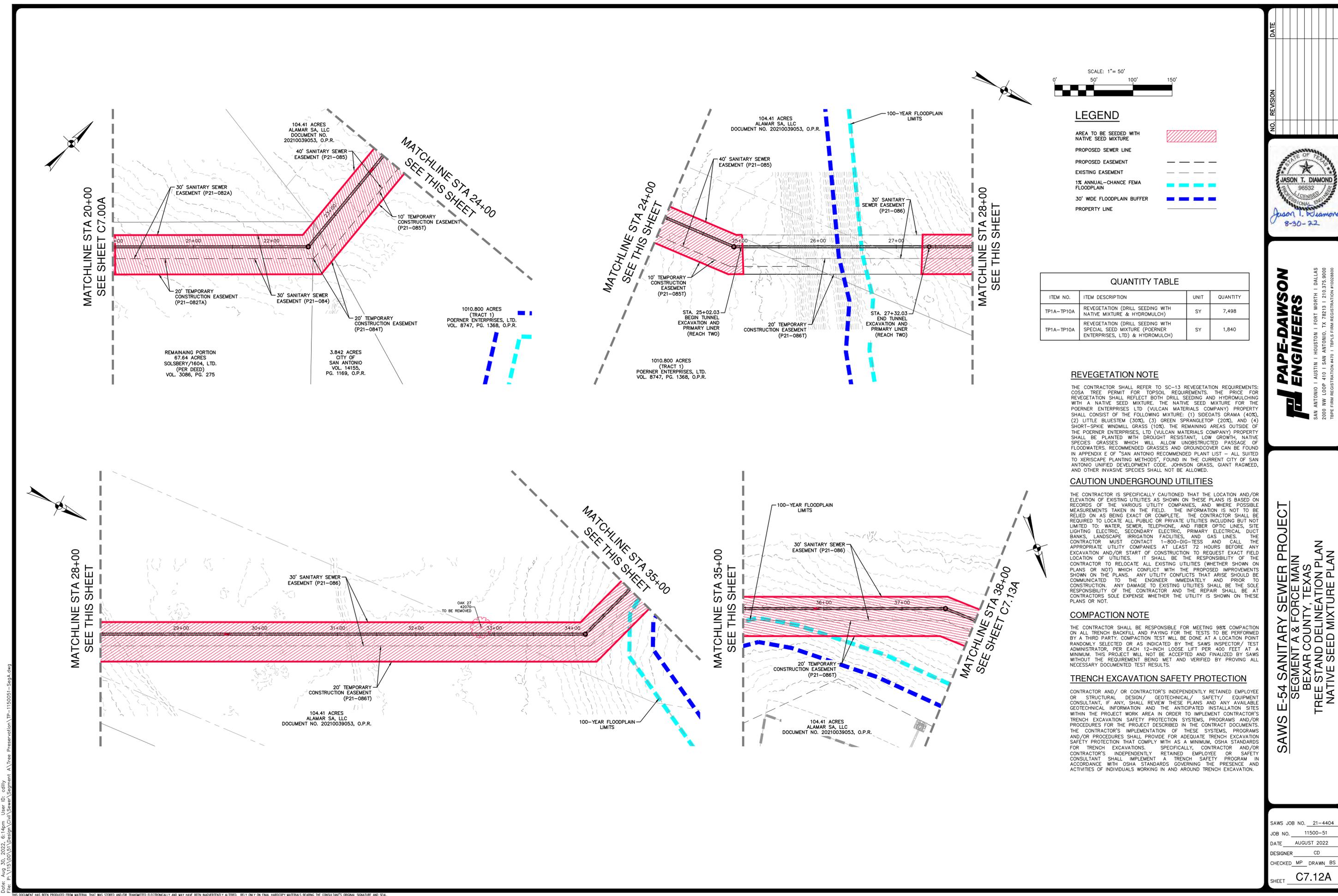
PAPE-PAWSON ENGINEERS
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TPBUS FIRM REGISTRATION #10088900

SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.11A

Notes: Aug 30, 2022, 6:13pm, User ID: cally, File: P:\11500\51\Design\City\Segment A\Tree Preservation\TP-1150051-SegA.dwg

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LEGEND

- AREA TO BE SEEDED WITH NATIVE SEED MIXTURE
- PROPOSED SEWER LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN
- 30' WIDE FLOODPLAIN BUFFER
- PROPERTY LINE

QUANTITY TABLE

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1A-TP10A	REVEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDROMULCH)	SY	7,498
TP1A-TP10A	REVEGETATION (DRILL SEEDING WITH SPECIAL SEED MIXTURE (POERNER ENTERPRISES, LTD) & HYDROMULCH)	SY	1,840

REVEGETATION NOTE

THE CONTRACTOR SHALL REFER TO SC-13 REVEGETATION REQUIREMENTS: COSA TREE PERMIT FOR TOPSOIL REQUIREMENTS. THE PRICE FOR REVEGETATION SHALL REFLECT BOTH DRILL SEEDING AND HYDROMULCHING WITH A NATIVE SEED MIXTURE. THE NATIVE SEED MIXTURE FOR THE POERNER ENTERPRISES LTD (VULCAN MATERIALS COMPANY) PROPERTY SHALL CONSIST OF THE FOLLOWING MIXTURE: (1) SIDEOATS GRAMA (40%), (2) LITTLE BLUESTEM (30%), (3) GREEN SPRANGLETOP (20%), AND (4) SHORT-SPIKE WINDMILL GRASS (10%). THE REMAINING AREAS OUTSIDE OF THE POERNER ENTERPRISES, LTD (VULCAN MATERIALS COMPANY) PROPERTY SHALL BE PLANTED WITH DROUGHT RESISTANT, LOW GROWTH, NATIVE SPECIES GRASSES WHICH WILL ALLOW UNOBSTRUCTED PASSAGE OF FLOODWATERS. RECOMMENDED GRASSES AND GROUNDCOVER CAN BE FOUND IN APPENDIX E OF "SAN ANTONIO RECOMMENDED PLANT LIST - ALL SUITED TO XERISCAPE PLANTING METHODS", FOUND IN THE CURRENT CITY OF SAN ANTONIO UNIFIED DEVELOPMENT CODE. JOHNSON GRASS, GIANT RAGWEED, AND OTHER INVASIVE SPECIES SHALL NOT BE ALLOWED.

CAUTION UNDERGROUND UTILITIES

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COMPACTION NOTE

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TRENCH EXCAVATION SAFETY PROTECTION

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NO.	REVISION	DATE



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 TYPE FIRM REGISTRATION #070 | TBPUS FIRM REGISTRATION #1008890

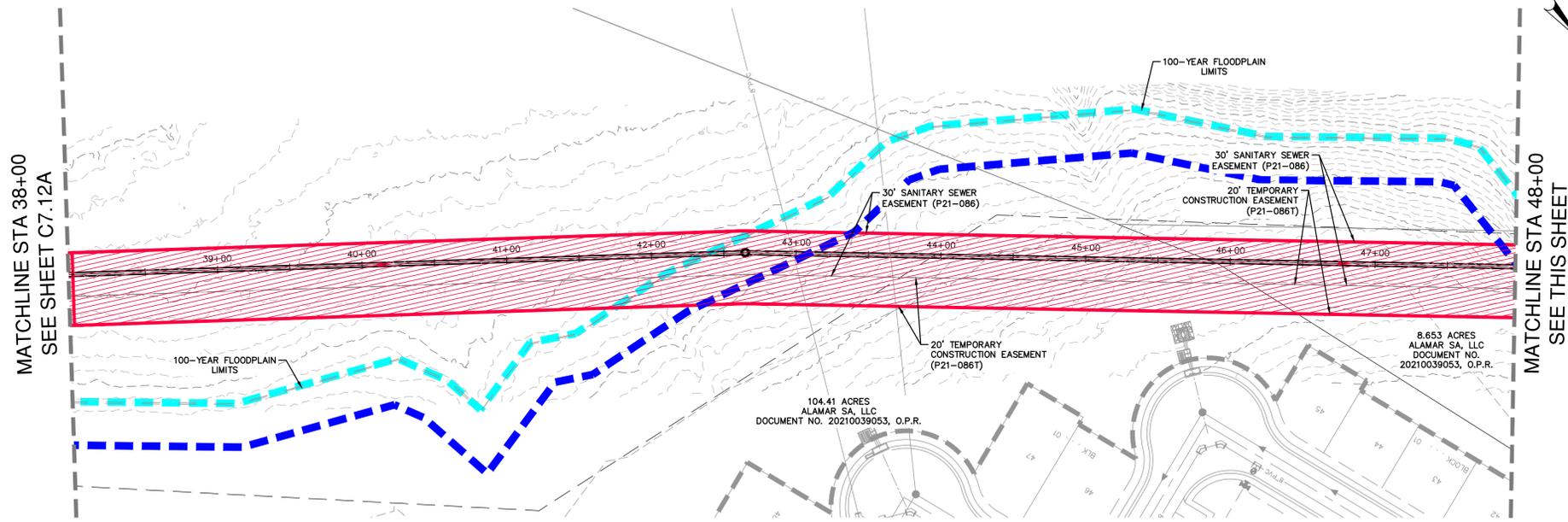
SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.12A

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LEGEND

- AREA TO BE SEEDED WITH NATIVE SEED MIXTURE
- PROPOSED SEWER LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN
- 30' WIDE FLOODPLAIN BUFFER
- PROPERTY LINE

QUANTITY TABLE

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1A-TP10A	REVEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDROMULCH)	SY	11,040

REVEGETATION NOTE

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CAUTION UNDERGROUND UTILITIES

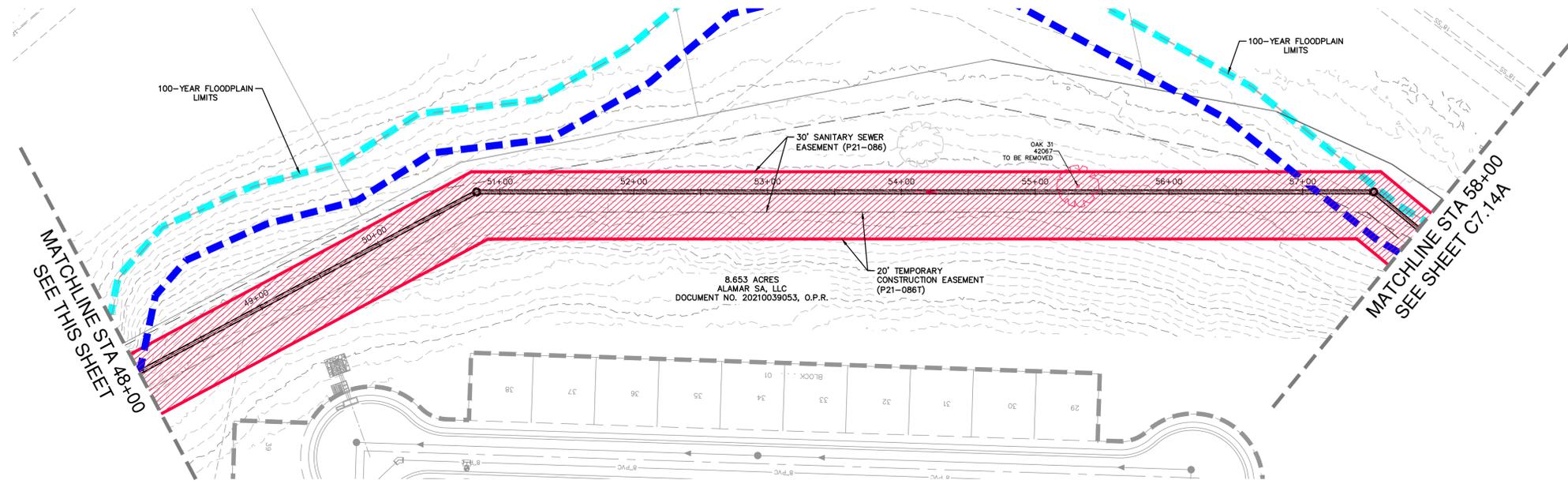
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DATE: _____

NO. REVISION: _____

PAPE-DAWSON ENGINEERS

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 2000 HWY LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #470 | TPPLUS FIRM REGISTRATION #1008890

SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

SAWS JOB NO. 21-4404

JOB NO. 11500-51

DATE AUGUST 2022

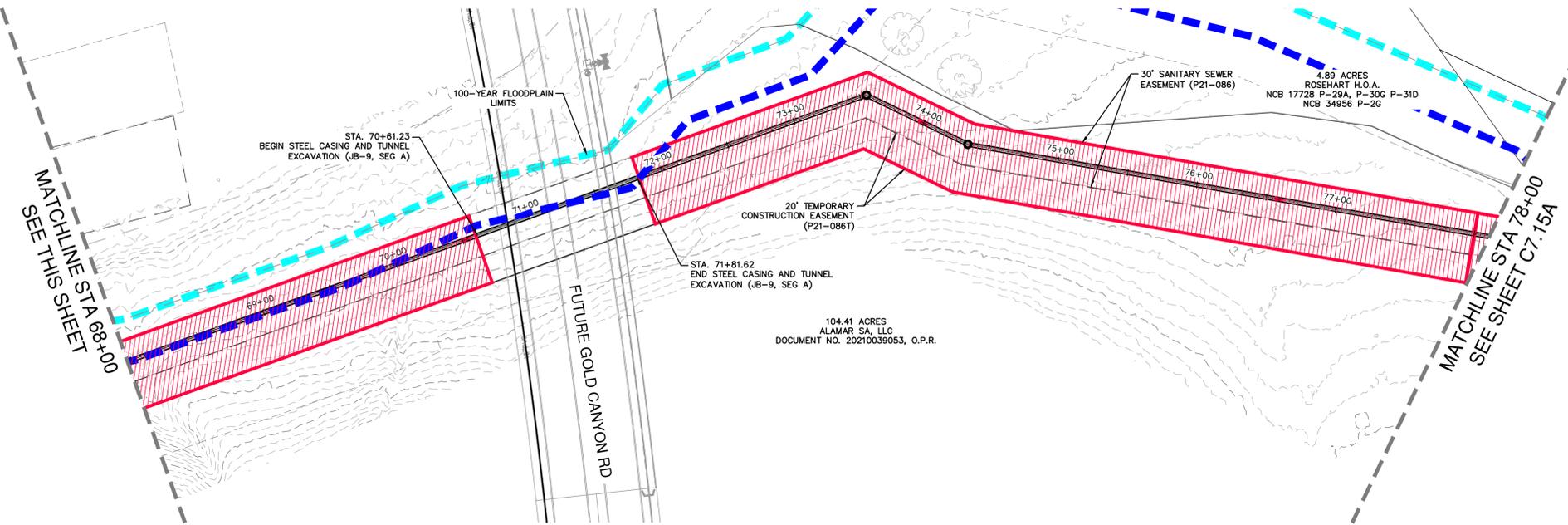
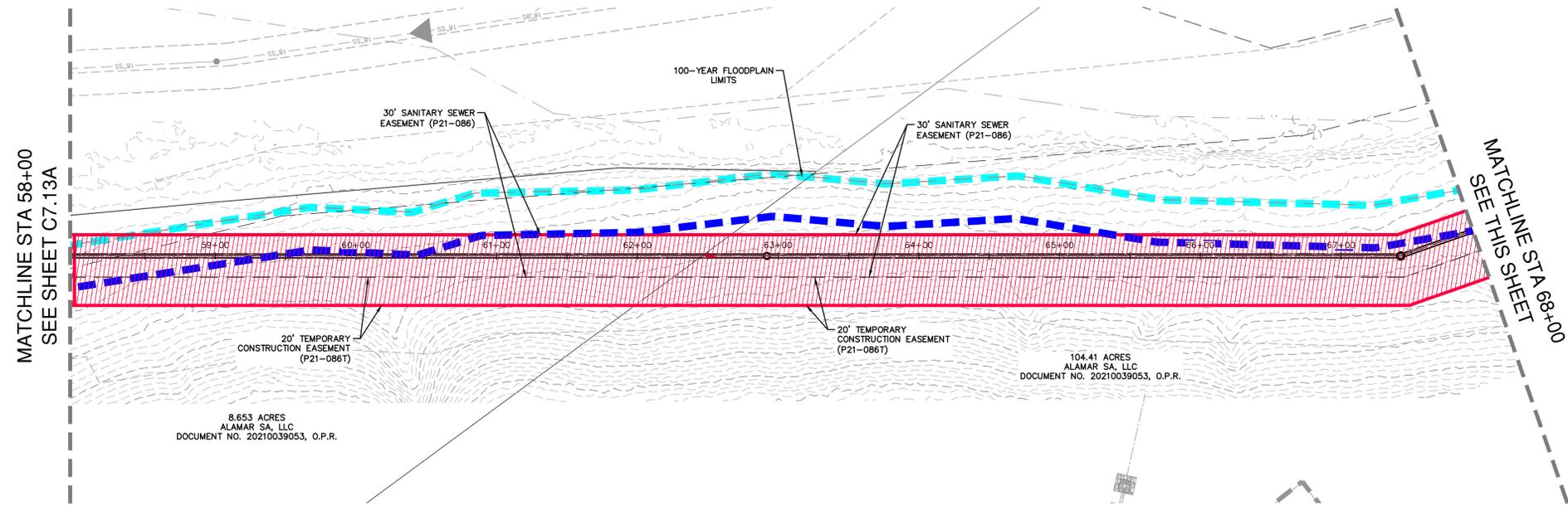
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LEGEND

- AREA TO BE SEEDED WITH NATIVE SEED MIXTURE
- PROPOSED SEWER LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN
- 30' WIDE FLOODPLAIN BUFFER
- PROPERTY LINE

QUANTITY TABLE			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1A-TP10A	REVEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDROMULCH)	SY	10,414

REVEGETATION NOTE

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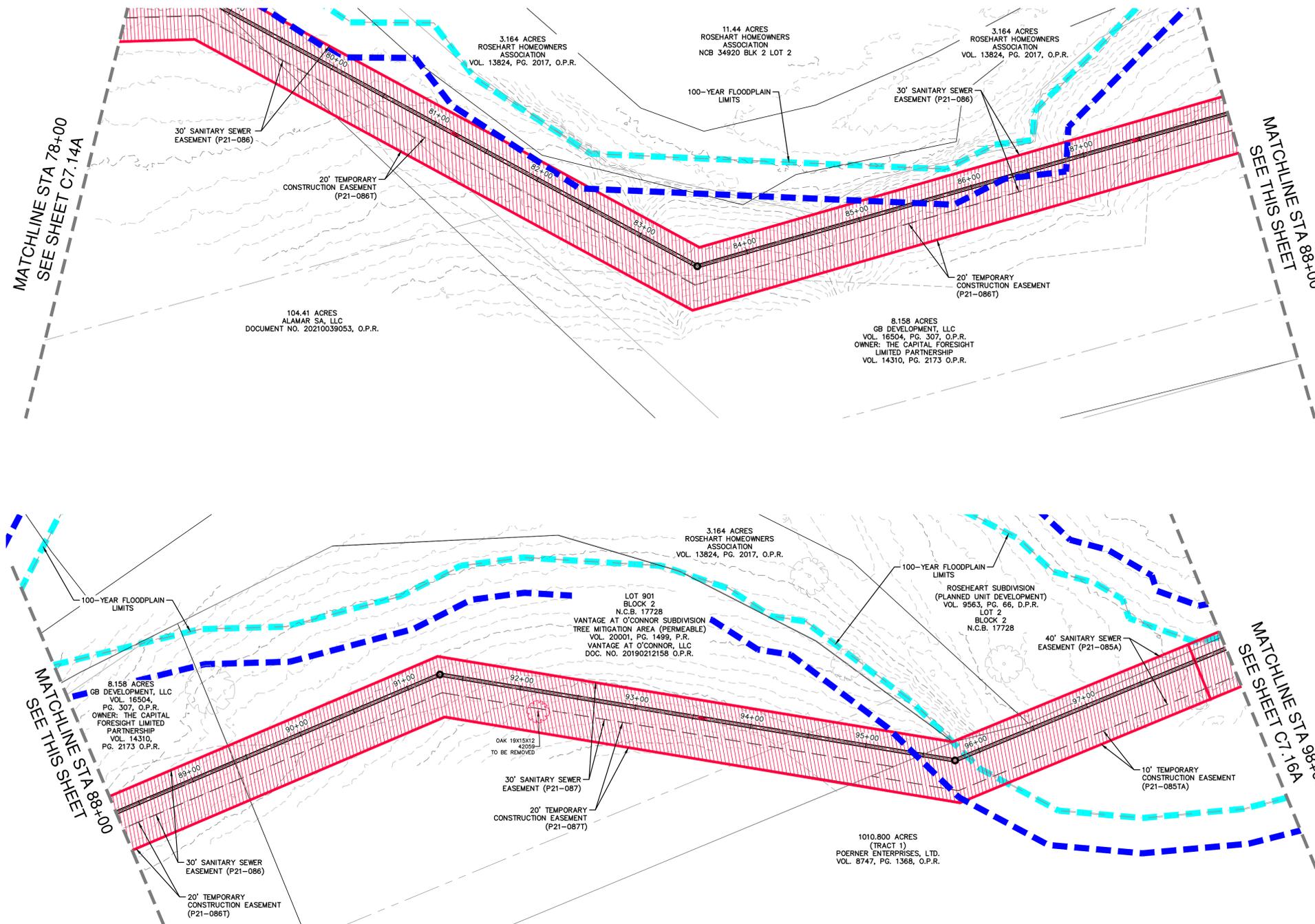
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 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
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SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.14A

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LEGEND

- AREA TO BE SEEDED WITH NATIVE SEED MIXTURE
- PROPOSED SEWER LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN
- 30' WIDE FLOODPLAIN BUFFER
- PROPERTY LINE

QUANTITY TABLE			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1A-TP10A	REVEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDROMULCH)	SY	9,790
TP1A-TP10A	REVEGETATION (DRILL SEEDING WITH SPECIAL SEED MIXTURE (POERNER ENTERPRISES, LTD) & HYDROMULCH)	SY	1,355

REVEGETATION NOTE

THE CONTRACTOR SHALL REFER TO SC-13 REVEGETATION REQUIREMENTS: COSA TREE PERMIT FOR TOPSOIL REQUIREMENTS. THE PRICE FOR REVEGETATION SHALL REFLECT BOTH DRILL SEEDING AND HYDROMULCHING WITH A NATIVE SEED MIXTURE. THE NATIVE SEED MIXTURE FOR THE POERNER ENTERPRISES LTD (VULCAN MATERIALS COMPANY) PROPERTY SHALL CONSIST OF THE FOLLOWING MIXTURE: (1) SIDEOATS GRAMA (40%), (2) LITTLE BLUESTEM (30%), (3) GREEN SPRANGLETOP (20%), AND (4) SHORT-SPIKE WINDMILL GRASS (10%). THE REMAINING AREAS OUTSIDE OF THE POERNER ENTERPRISES, LTD (VULCAN MATERIALS COMPANY) PROPERTY SHALL BE PLANTED WITH DROUGHT RESISTANT, LOW GROWTH, NATIVE SPECIES GRASSES WHICH WILL ALLOW UNOBSTRUCTED PASSAGE OF FLOODWATERS. RECOMMENDED GRASSES AND GROUNDCOVER CAN BE FOUND IN APPENDIX E OF "SAN ANTONIO RECOMMENDED PLANT LIST - ALL SUITED TO XERISCAPE PLANTING METHODS", FOUND IN THE CURRENT CITY OF SAN ANTONIO UNIFIED DEVELOPMENT CODE. JOHNSON GRASS, GIANT RAGWEED, AND OTHER INVASIVE SPECIES SHALL NOT BE ALLOWED.

CAUTION UNDERGROUND UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. THE CONTRACTOR MUST CONTACT 1-800-DIG-TESS AND CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION AND/OR START OF CONSTRUCTION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

COMPACTION NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT A LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/ TEST ADMINISTRATOR. PER EACH 12-INCH LOOSE LIFT PER 400 FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THE REQUIREMENT BEING MET AND VERIFIED BY PROVING ALL NECESSARY DOCUMENTED TEST RESULTS.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

NO.	REVISION	DATE



PAPE-PAWSON ENGINEERS

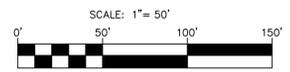
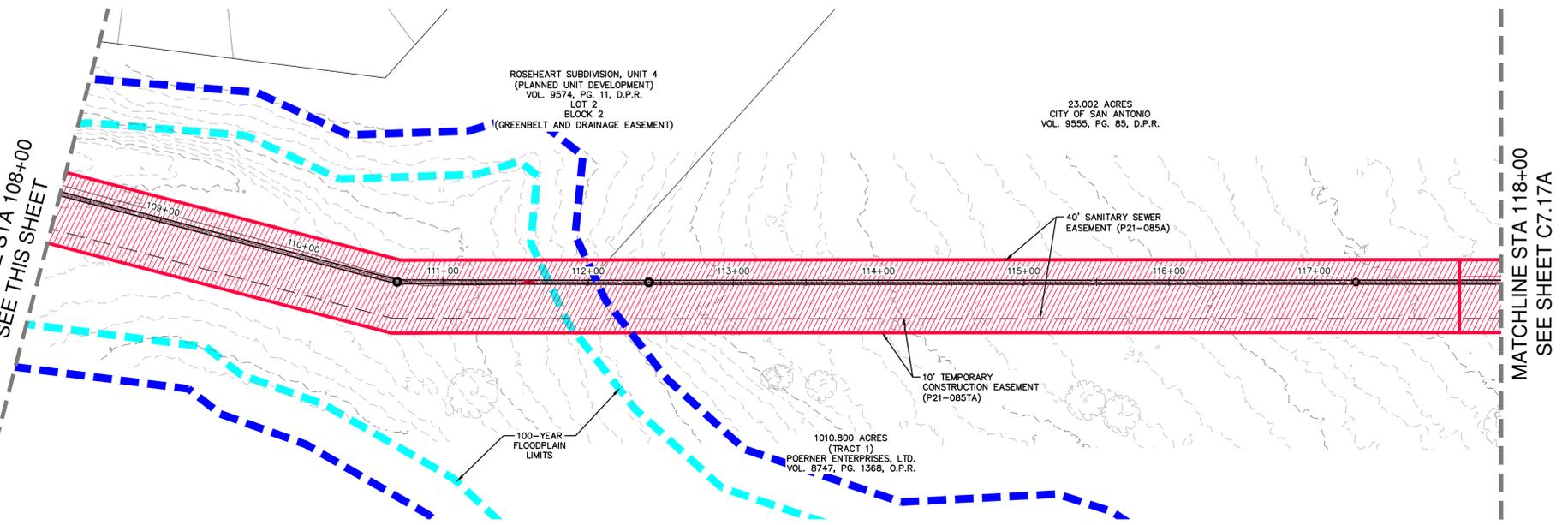
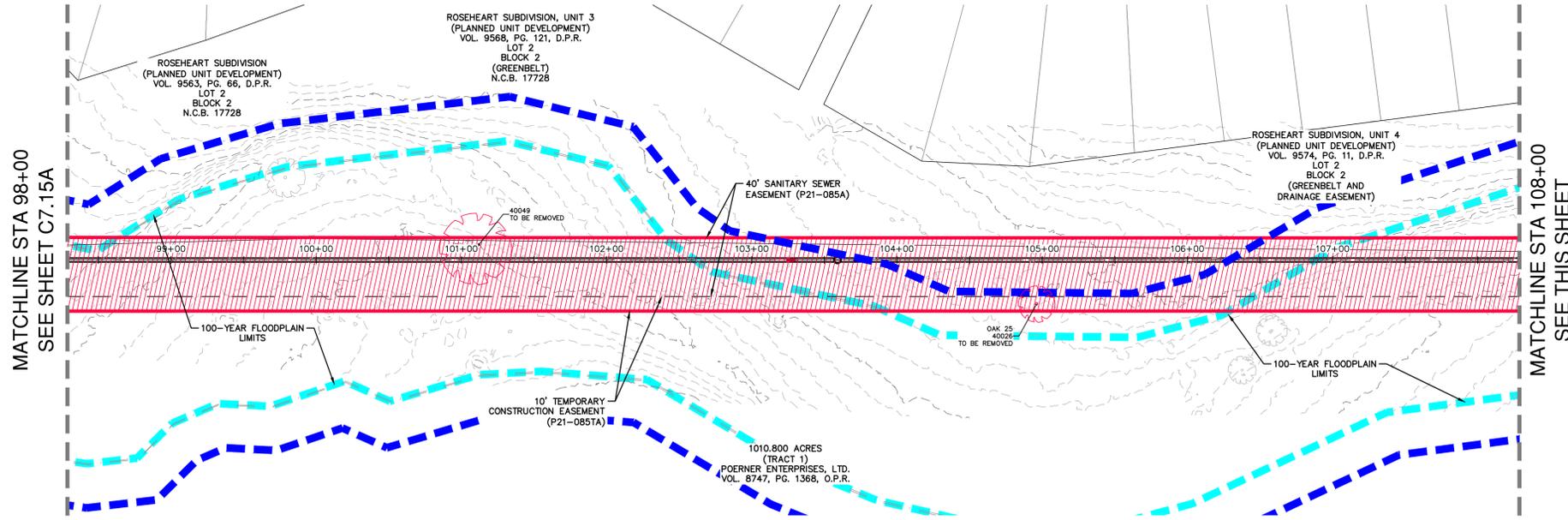
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TPBUS FIRM REGISTRATION #1008890

SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.15A

Notes: Aug 30, 2022, 6:16pm, User ID: cally, File Path: \\US001\1\Design\City\SanAntonio\Segment A\Tree Preservation\TP-1150051-SegA.dwg

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LEGEND

- AREA TO BE SEEDED WITH NATIVE SEED MIXTURE
- PROPOSED SEWER LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN
- 30' WIDE FLOODPLAIN BUFFER
- PROPERTY LINE

QUANTITY TABLE			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1A-TP10A	VEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDROMULCH)	SY	2,029
TP1A-TP10A	VEGETATION (DRILL SEEDING WITH SPECIAL MIXTURE (POERNER ENTERPRISES, LTD) & HYDROMULCH)	SY	9,128

REVEGETATION NOTE

THE CONTRACTOR SHALL REFER TO SC-13 REVEGETATION REQUIREMENTS: COSA TREE PERMIT FOR TOPSOIL REQUIREMENTS. THE PRICE FOR REVEGETATION SHALL REFLECT BOTH DRILL SEEDING AND HYDROMULCHING WITH A NATIVE SEED MIXTURE. THE NATIVE SEED MIXTURE FOR THE POERNER ENTERPRISES, LTD (VULCAN MATERIALS COMPANY) PROPERTY SHALL CONSIST OF THE FOLLOWING MIXTURE: (1) SIDEOATS GRAMA (40%), (2) LITTLE BLUESTEM (30%), (3) GREEN SPRANGLETOP (20%), AND (4) SHORT-SPIKE WINDMILL GRASS (10%). THE REMAINING AREAS OUTSIDE OF THE POERNER ENTERPRISES, LTD (VULCAN MATERIALS COMPANY) PROPERTY SHALL BE PLANTED WITH DROUGHT RESISTANT, LOW GROWTH, NATIVE SPECIES GRASSES WHICH WILL ALLOW UNOBSTRUCTED PASSAGE OF FLOODWATERS. RECOMMENDED GRASSES AND GROUND COVER CAN BE FOUND IN APPENDIX E OF "SAN ANTONIO RECOMMENDED PLANT LIST - ALL SUITED TO XERISCAPE PLANTING METHODS", FOUND IN THE CURRENT CITY OF SAN ANTONIO UNIFIED DEVELOPMENT CODE. JOHNSON GRASS, GIANT RAGWEED, AND OTHER INVASIVE SPECIES SHALL NOT BE ALLOWED.

CAUTION UNDERGROUND UTILITIES

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COMPACTION NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT A LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR. PER EACH 12-INCH LOOSE LIFT PER 400 FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THE REQUIREMENT BEING MET AND VERIFIED BY PROVING ALL NECESSARY DOCUMENTED TEST RESULTS.

TRENCH EXCAVATION SAFETY PROTECTION

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NO.	REVISION	DATE



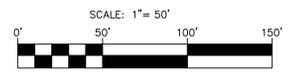
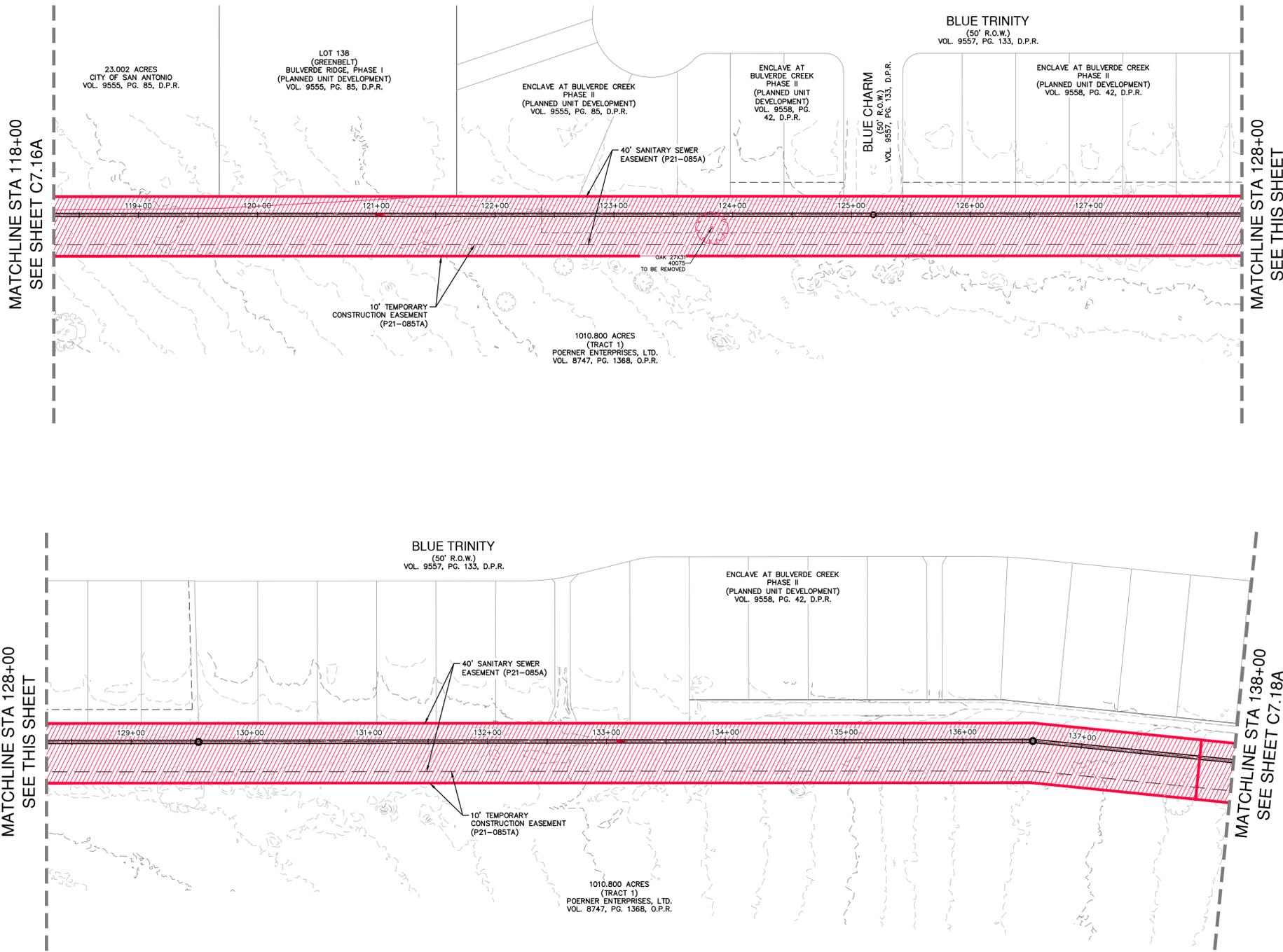
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 TYPE FIRM REGISTRATION #070 | TPBUS FIRM REGISTRATION #0008800

SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.16A

Plot: Aug 30, 2022, 6:16pm, User: ID: cally, File: P:\15\200\151\Design\City\SanAntonio\Segment A\Tree Preservation\TP_1150051_SegA.dwg

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LEGEND

- AREA TO BE SEEDED WITH NATIVE SEED MIXTURE
- PROPOSED SEWER LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN
- 30' WIDE FLOODPLAIN BUFFER
- PROPERTY LINE

QUANTITY TABLE			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1A-TP10A	REVEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDROMULCH)	SY	277
TP1A-TP10A	REVEGETATION (DRILL SEEDING WITH SPECIAL SEED MIXTURE (POERNER ENTERPRISES, LTD) & HYDROMULCH)	SY	10,828

REVEGETATION NOTE

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COMPACTION NOTE

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TRENCH EXCAVATION SAFETY PROTECTION

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NO.	REVISION	DATE



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 TYPE FIRM REGISTRATION #070 | TPBUS FIRM REGISTRATION #0028890

SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.17A

Notes: Aug 30, 2022, 6:17pm, User ID: cally, File Path: \\US001\51\Design\City\Segment A\Tree Preservation\TP-1150051_SegA.dwg

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LEGEND

- AREA TO BE SEEDED WITH NATIVE SEED MIXTURE
- PROPOSED SEWER LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN
- 30' WIDE FLOODPLAIN BUFFER
- PROPERTY LINE

QUANTITY TABLE			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1A-TP10A	REVEGETATION (DRILL SEEDING WITH SPECIAL SEED MIXTURE (POERNER ENTERPRISES, LTD) & HYDROMULCH)	SY	11,012

REVEGETATION NOTE

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CAUTION UNDERGROUND UTILITIES

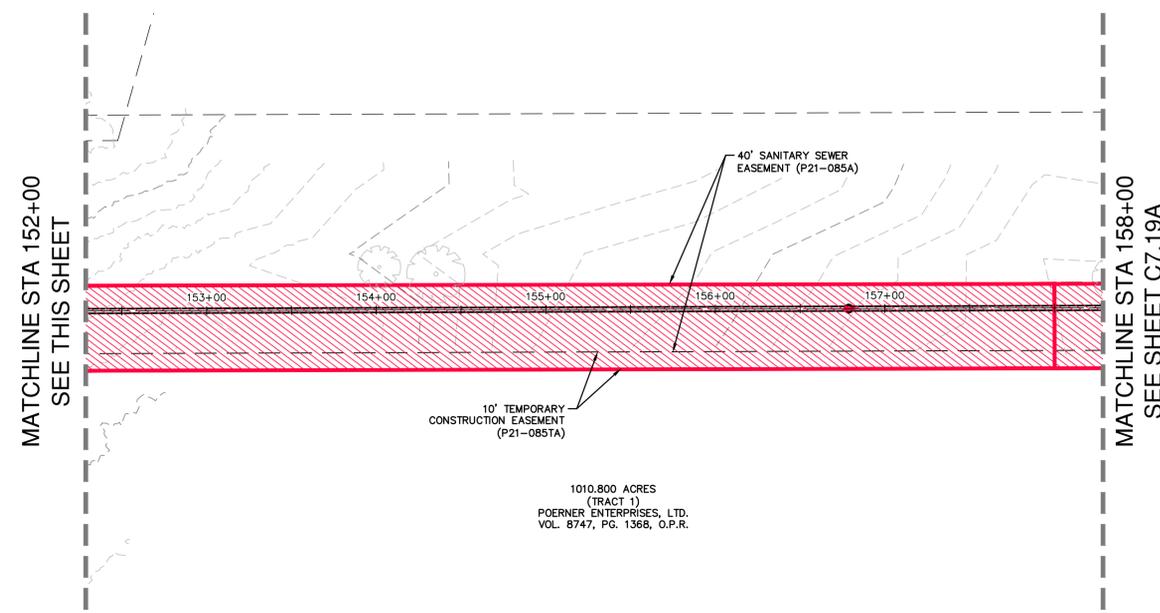
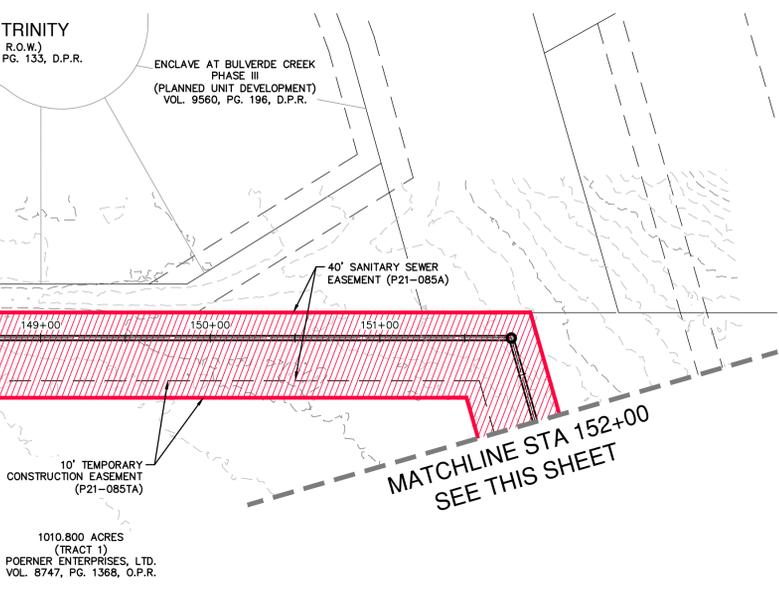
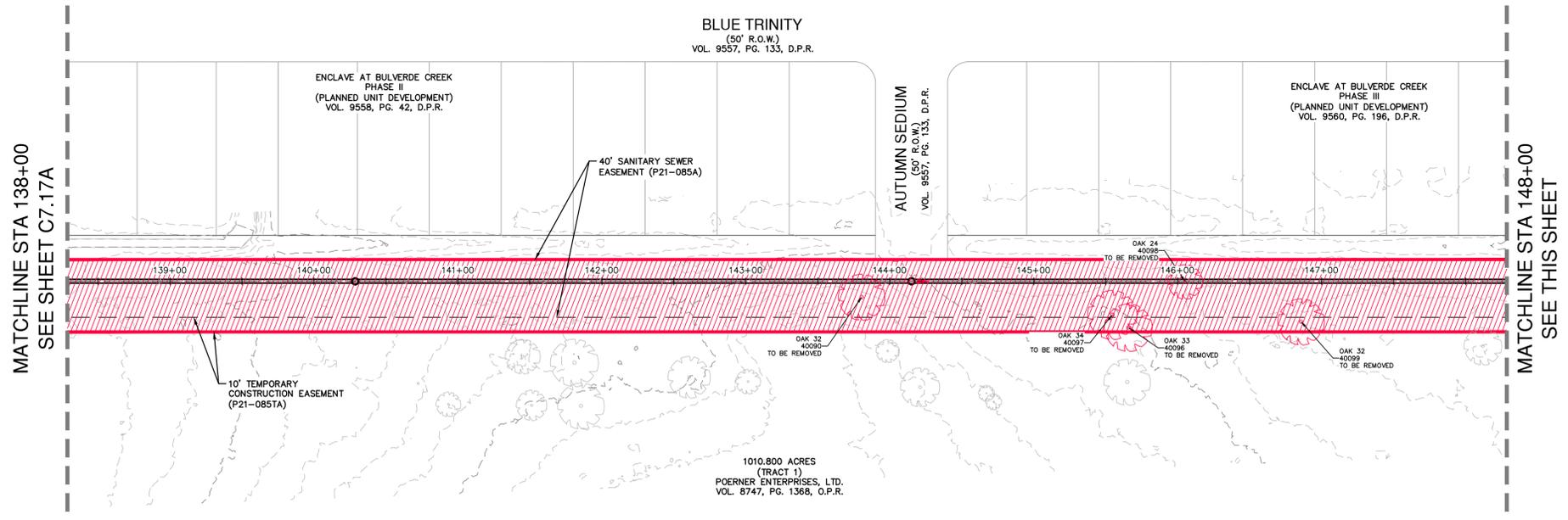
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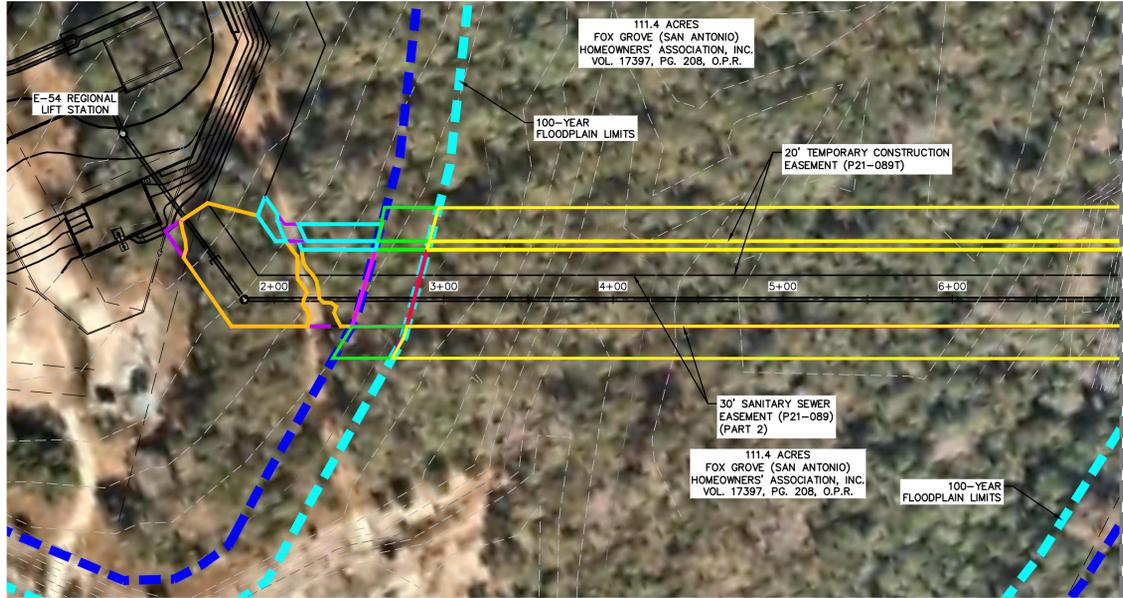
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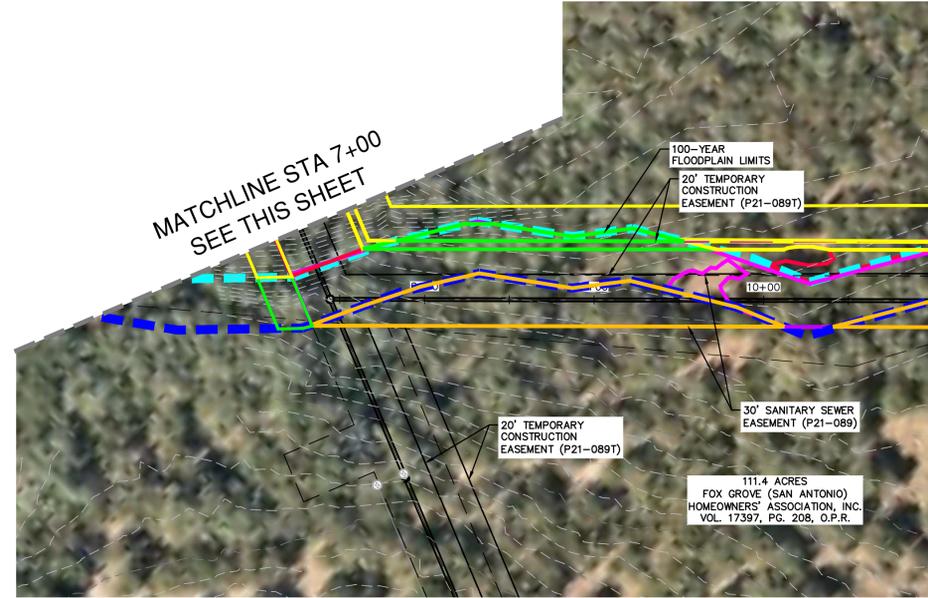
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 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TPBUS FIRM REGISTRATION #0088890

SAWS E-54 SANITARY SEWER PROJECT
 SEGMENT A & FORCE MAIN
 BEXAR COUNTY, TEXAS
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

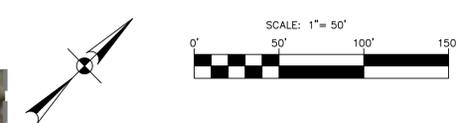
SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	CD
CHECKED	MP DRAWN BS
SHEET	C7.18A



MATCHLINE STA 7+00
SEE THIS SHEET



MATCHLINE STA 11+00
SEE THIS SHEET



LEGEND

PROPOSED SEWER LINE	—
PROPERTY LINE	---
PROPOSED EASEMENT	---
EXISTING EASEMENT	---
EXISTING OVERHEAD ELECTRIC	— OHE
EXISTING 1' CONTOURS	--- 946
EXISTING 5' CONTOURS	--- 950
1% ANNUAL-CHANCE FEMA FLOODPLAIN	---
30' 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' BUFFER	---
CANOPY TO BE PRESERVED INSIDE 30' BUFFER	---

CAUTION OVERHEAD UTILITIES

CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER "HIGH VOLTAGE TRANSMISSION LINES". A WORKING HEIGHT OF 30' FROM GROUND ELEVATION WILL BE OBSERVED WHEN WORKING UNDER THE HIGH VOLTAGE LINE. COORDINATE ALL WORK WITH THE LOCAL UTILITY PROVIDER.

CAUTION UNDERGROUND UTILITIES

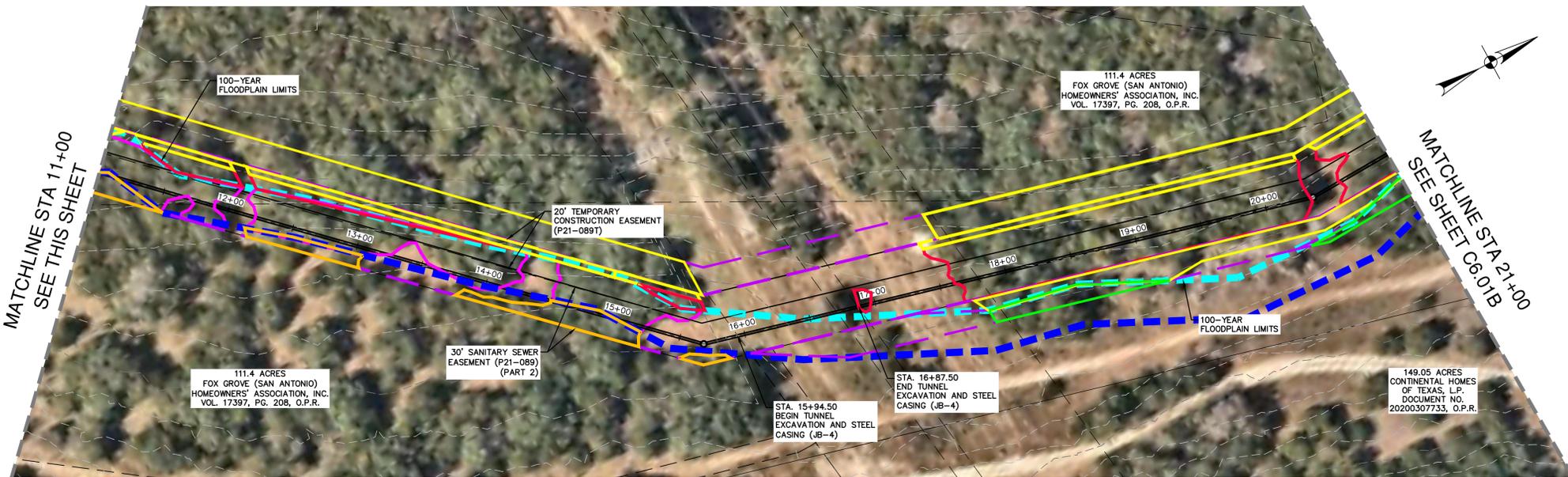
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MATCHLINE STA 11+00
SEE THIS SHEET

MATCHLINE STA 21+00
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DATE	
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REVISION	

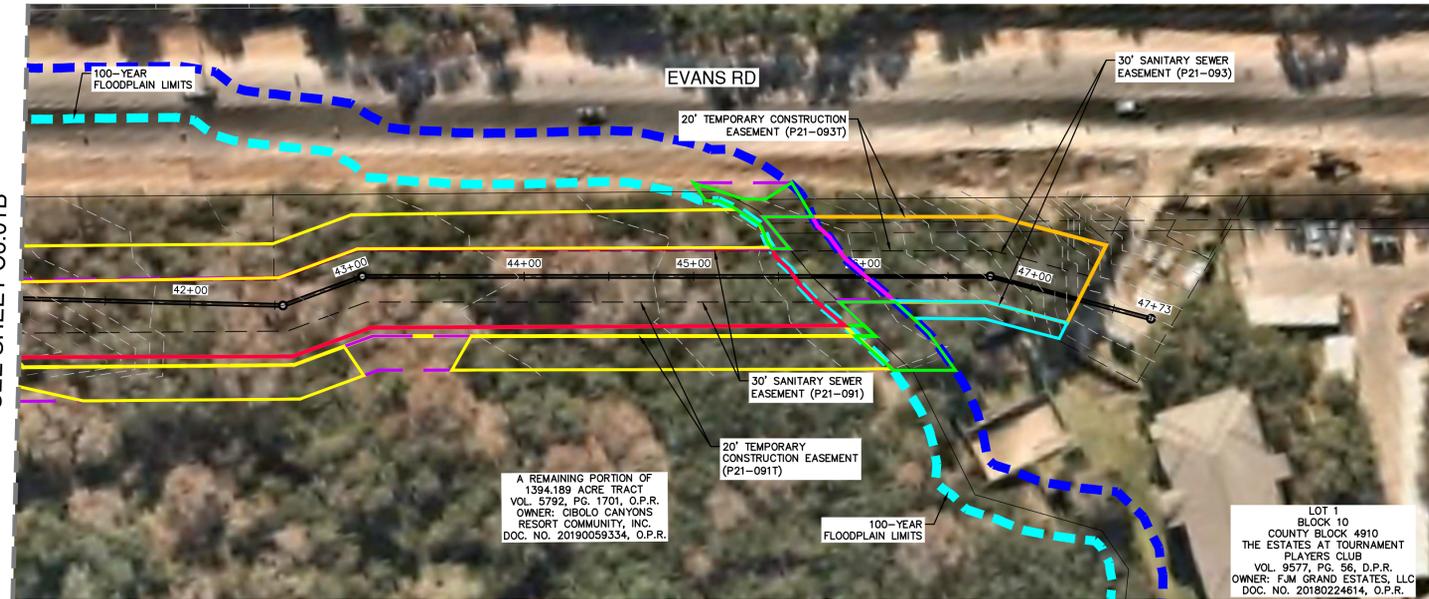


PAPE-PAWSON ENGINEERS
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TBPUS FIRM REGISTRATION #1008890

SAWS E-54 SANITARY SEWER PROJECT
 BEXAR COUNTY, TEXAS
 SEGMENT B
 TREE PRESERVATION PLAN
 STA 1+00 TO STA 21+00

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	MP
CHECKED	JD DRAWN BS
SHEET	C6.00B

MATCHLINE STA 41+00
SEE SHEET C6.01B



A REMAINING PORTION OF
1394.189 ACRE TRACT
VOL. 5792, PG. 1701, O.P.R.
OWNER: CIBOLO CANYONS
RESORT COMMUNITY, INC.
DOC. NO. 20190059334, O.P.R.

LOT 1
BLOCK 10
COUNTY BLOCK 4910
THE ESTATES AT TOURNAMENT
PLAYERS CLUB
VOL. 9577, PG. 56, D.P.R.
OWNER: F.M. GRAND ESTATES, LLC
DOC. NO. 20180224614, O.P.R.

CANOPY PRESERVATION SUMMARY

OUTSIDE FLOODPLAIN:	
EXISTING CANOPY =	27,803 SF
REQUIRED TO REMAIN (25%) =	6,951 SF
EXISTING TREE CANOPY TO BE REMOVED =	23,574 SF
EXISTING TREE CANOPY TO REMAIN =	4,229 SF
PERCENTAGE AREA PRESERVED =	15%
CANOPY REQUIRED TO BE MITIGATED =	0 SF*
*OVERALL PROJECT ACHIEVES MINIMUM 25% PRESERVATION OF UPLAND TREE CANOPY AREA	

INSIDE FLOODPLAIN:	
EXISTING CANOPY =	203,168 SF
REQUIRED TO REMAIN (80%) =	162,535 SF
EXISTING TREE CANOPY TO BE REMOVED =	100,513 SF
EXISTING TREE CANOPY TO REMAIN =	102,655 SF
PERCENTAGE AREA PRESERVED =	51%
CANOPY REQUIRED TO BE MITIGATED =	59,879 SF

INSIDE 30' FLOODPLAIN BUFFER:	
EXISTING CANOPY =	47,411 SF
REQUIRED TO REMAIN (80%) =	37,298 SF
EXISTING TREE CANOPY TO BE REMOVED =	31,569 SF
EXISTING TREE CANOPY TO REMAIN =	15,842 SF
PERCENTAGE AREA PRESERVED =	33%
CANOPY REQUIRED TO BE MITIGATED =	22,087 SF

TREE CANOPY MITIGATION CALCULATIONS

OUTSIDE FLOODPLAIN

- A. EXISTING CANOPY AREA PRESERVED: 4,229 SF
- B. EXISTING CANOPY AREA REQUIRED TO BE PRESERVED: 25% x 27,803 SF = 6,951 SF
- ** OVERALL TREE CANOPY AREA BEING PRESERVED FOR TOTAL PROJECT EXCEEDS THE REQUIRED CANOPY AREA PRESERVATION THRESHOLD OF 25%; THEREFORE, MITIGATION IS NOT REQUIRED.

INSIDE FLOODPLAIN

- A. EXISTING CANOPY AREA PRESERVED: 102,655 SF
- B. EXISTING CANOPY AREA REQUIRED TO BE PRESERVED: 80% x 203,168 SF = 162,535 SF
- ** TREE CANOPY AREA BEING PRESERVED DOES NOT EXCEED THE REQUIRED CANOPY AREA; THEREFORE, MITIGATION IS REQUIRED.

INSIDE 30' FLOODPLAIN BUFFER

- A. EXISTING CANOPY AREA PRESERVED: 15,842 SF
- B. EXISTING CANOPY AREA REQUIRED TO BE PRESERVED: 80% x 47,411 SF = 37,928 SF
- ** TREE CANOPY AREA BEING MITIGATED DOES NOT EXCEED THE REQUIRED CANOPY AREA; THEREFORE, MITIGATION IS REQUIRED.

MITIGATION REQUIREMENTS

INSIDE FLOODPLAIN

NUMBER OF TREES REQUIRED TO BE PLANTED = 59,879 SF ÷ (875 SF/TREE) = 69 TREES
INCHES OF CANOPY REQUIRED TO BE MITIGATED = 69 TREES x 16.7 INCHES = 1,152 INCHES

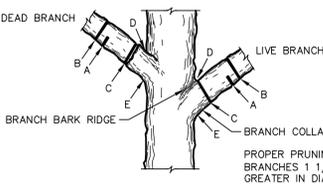
INSIDE 30' FLOODPLAIN BUFFER

NUMBER OF TREES REQUIRED TO BE PLANTED = 22,087 SF ÷ (875 SF/TREE) = 25 TREES
INCHES OF CANOPY REQUIRED TO BE MITIGATED = 25 TREES x 16.7 INCHES = 418 INCHES

TOTAL MITIGATION

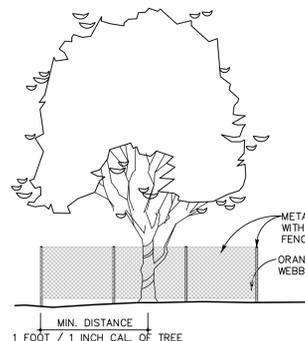
FLOODPLAIN CANOPY MITIGATION INCHES = 1,152 INCHES
BUFFER CANOPY MITIGATION INCHES = 418 INCHES

MITIGATION FEE @ \$200.00/INCH
FLOODPLAIN CANOPY FEE = 1,152 INCHES x \$200 = \$230,400
BUFFER CANOPY FEE = 418 INCHES x \$200 = \$83,600
TOTAL MITIGATION FEE = \$314,000



PROPER PRUNING FOR BRANCHES 1 1/2" OR GREATER IN DIAMETER.

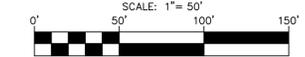
TREE PRUNING DETAIL
N.T.S.



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.

TREE PROTECTION DETAIL
EXISTING TREES
N.T.S.



LEGEND

- PROPOSED SEWER LINE
- PROPERTY LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- EXISTING OVERHEAD ELECTRIC
- EXISTING 1' CONTOURS
- EXISTING 5' CONTOURS
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN
- 30' 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' BUFFER
- CANOPY TO BE PRESERVED INSIDE 30' BUFFER

CAUTION OVERHEAD UTILITIES

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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 (S)(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).

NO.	REVISION	DATE



PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TYPE FIRM REGISTRATION #470 | TPBUS FIRM REGISTRATION #1008890

SAWS E-54 SANITARY SEWER PROJECT
BEXAR COUNTY, TEXAS
SEGMENT B
TREE PRESERVATION PLAN
STA 41+00 TO STA 47+72.91

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	MP
CHECKED	JD DRAWN BS
SHEET	C6.02B

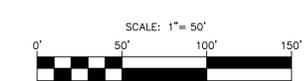
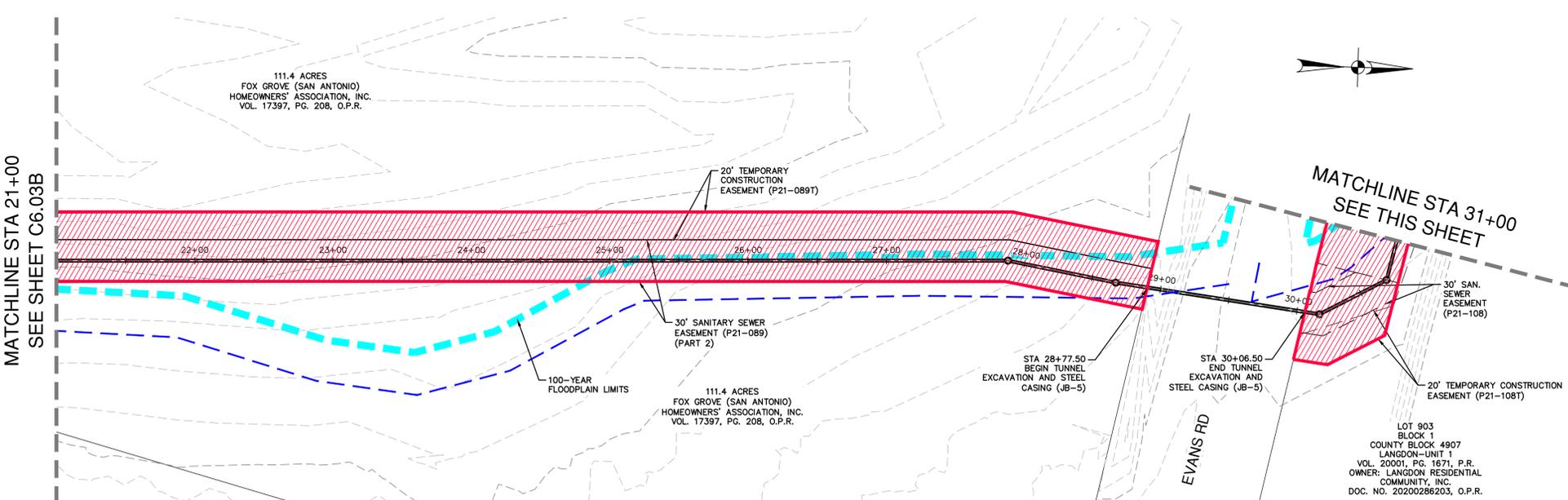
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 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
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SAWS E-54 SANITARY SEWER PROJECT
 BEXAR COUNTY, TEXAS
 SEGMENT B
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	MP
CHECKED	JD DRAWN BS
SHEET	C6.04B



LEGEND

- AREA TO BE SEEDED WITH NATIVE SEED MIXTURE (Red hatched area)
- PROPOSED SAN. SEWER (Solid black line)
- PROPOSED EASEMENT (Dashed black line)
- EXISTING SAWS EASEMENT (Dashed blue line)
- 100-YEAR FLOODPLAIN (Dashed cyan line)
- 30' FLOODPLAIN BUFFER (Dashed blue line)
- PROPERTY LINE (Dashed black line)

QUANTITY TABLE

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1B-TP3B	REVEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDROMULCH)	SY	6,238

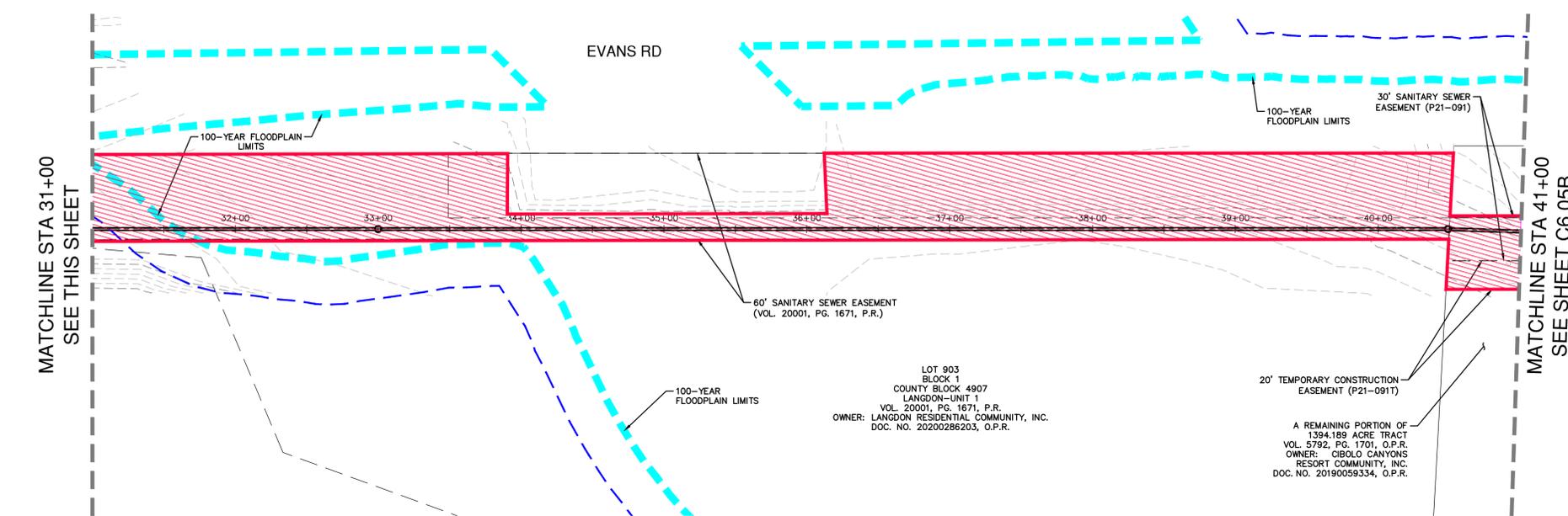
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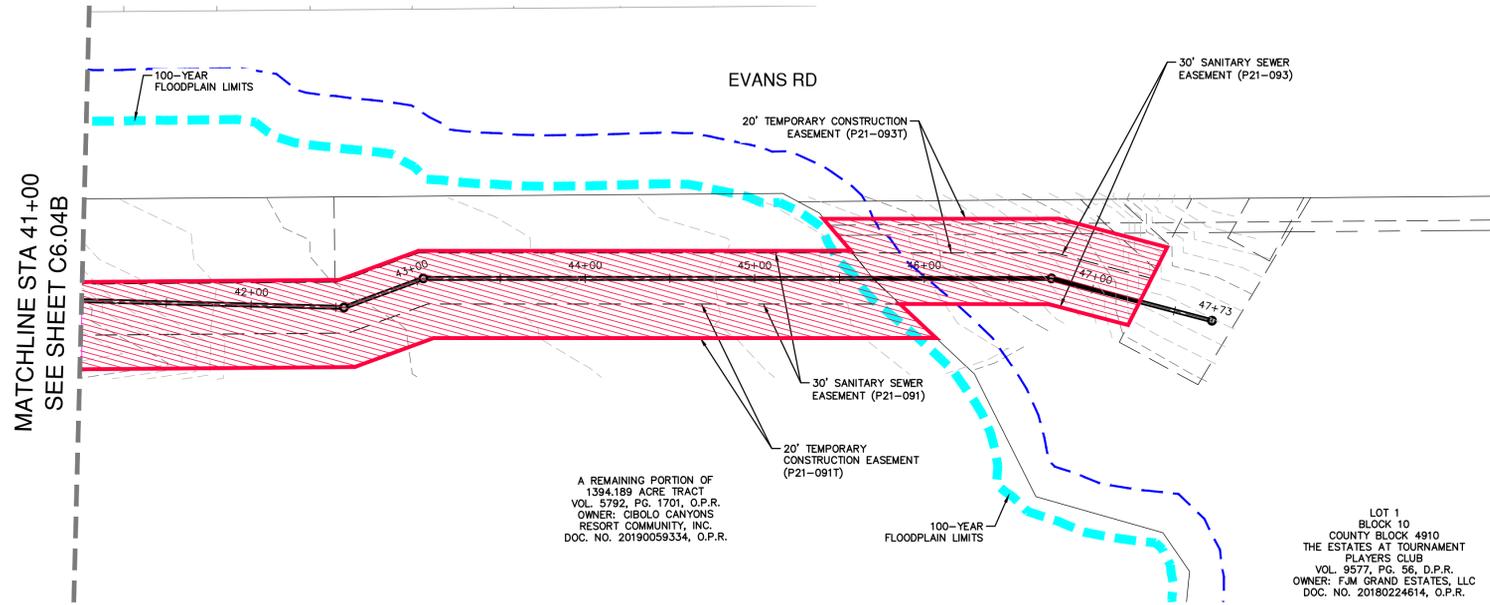
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REVEGETATION NOTE
 THE CONTRACTOR SHALL REFER TO SC-13 REVEGETATION REQUIREMENTS, COSA TREE PERMIT FOR TOPSOIL REQUIREMENTS. THE PRICE FOR REVEGETATION SHALL REFLECT BOTH DRILL SEEDING AND HYDROMULCHING WITH A NATIVE SEED MIXTURE. THE AREAS OUTSIDE OF THE POERNER ENTERPRISES, LTD (VOLCAN MATERIALS COMPANY) PROPERTY SHALL BE PLANTED WITH DROUGHT RESISTANT, LOW GROWTH, NATIVE SPECIES GRASSES WHICH WILL ALLOW UNOBSTRUCTED PASSAGE OF FLOODWATERS, RECOMMENDED GRASSES AND GROUND COVER CAN BE FOUND IN APPENDIX E OF "SAN ANTONIO RECOMMENDED PLANT LIST - ALL SUITED TO XERISCAPE PLANTING METHODS", FOUND IN THE CURRENT CITY OF SAN ANTONIO UNIFIED DEVELOPMENT CODE, JOHNSON GRASS, GIANT RAGWEED, AND OTHER INVASIVE SPECIES SHALL NOT BE ALLOWED.



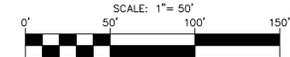
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MATCHLINE STA 41+00
SEE SHEET C6.04B

A REMAINING PORTION OF
1394.189 ACRE TRACT
VOL. 5792, PG. 1701, O.P.R.
OWNER: CIBOLO CANYONS
RESORT COMMUNITY, INC.
DOC. NO. 20190059334, O.P.R.

LOT 1
BLOCK 10
COUNTY BLOCK 4910
THE ESTATES AT TOURNAMENT
PLAYERS CLUB
VOL. 9577, PG. 56, D.P.R.
OWNER: FJM GRAND ESTATES, LLC
DOC. NO. 20180224614, O.P.R.



LEGEND

- AREA TO BE SEEDED WITH NATIVE SEED MIXTURE
- PROPOSED SAN. SEWER
- PROPOSED EASEMENT
- EXISTING SAWS EASEMENT
- 100-YEAR FLOODPLAIN
- 30' FLOODPLAIN BUFFER
- PROPERTY LINE

QUANTITY TABLE

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1B-TP3B	REVEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDROMULCH)	SY	3,687

CAUTION OVERHEAD UTILITIES

CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER "HIGH VOLTAGE TRANSMISSION LINES". A WORKING HEIGHT OF 30' FROM GROUND ELEVATION WILL BE OBSERVED WHEN WORKING UNDER THE HIGH VOLTAGE LINE. COORDINATE ALL WORK WITH THE LOCAL UTILITY PROVIDER.

CAUTION UNDERGROUND UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. THE CONTRACTOR MUST CONTACT 1-800-DIG-TESS AND CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION AND/OR START OF CONSTRUCTION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

COMPACTION NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT A LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/ TEST ADMINISTRATOR. PER EACH 12-INCH LOOSE LIFT PER 400 FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THE REQUIREMENT BEING MET AND VERIFIED BY PROVING ALL NECESSARY DOCUMENTED TEST RESULTS.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

REVEGETATION NOTE

THE CONTRACTOR SHALL REFER TO SC-13 REVEGETATION REQUIREMENTS, COSEA TREE PERMIT FOR TOPSOIL REQUIREMENTS. THE PRICE FOR REVEGETATION SHALL REFLECT BOTH DRILL SEEDING AND HYDROMULCHING WITH A NATIVE SEED MIXTURE. THE AREAS OUTSIDE OF THE POERNER ENTERPRISES, LTD (VOLCAN MATERIALS COMPANY) PROPERTY SHALL BE PLANTED WITH DROUGHT RESISTANT, LOW GROWTH, NATIVE SPECIES GRASSES WHICH WILL ALLOW UNOBSTRUCTED PASSAGE OF FLOODWATERS, RECOMMENDED GRASSES AND GROUND COVER CAN BE FOUND IN APPENDIX E OF "SAN ANTONIO RECOMMENDED PLANT LIST - ALL SUITED TO XERISCAPE PLANTING METHODS", FOUND IN THE CURRENT CITY OF SAN ANTONIO UNIFIED DEVELOPMENT CODE, JOHNSON GRASS, GIANT RAGWEED, AND OTHER INVASIVE SPECIES SHALL NOT BE ALLOWED.

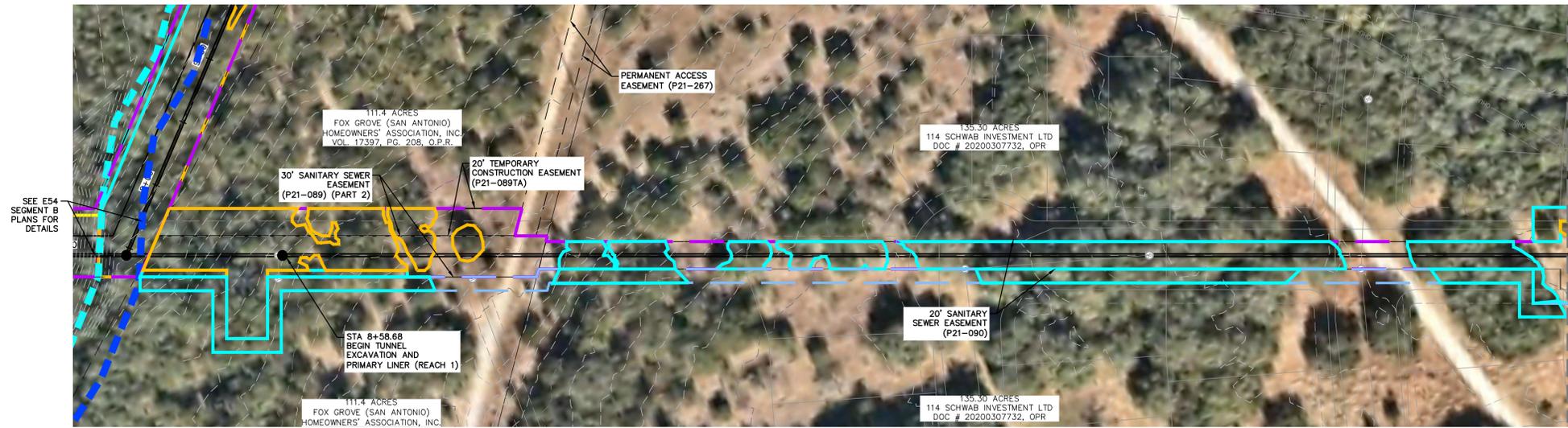
NO.	REVISION	DATE



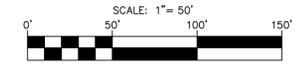
PAPE-DAWSON ENGINEERS
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #270 | TPBUS FIRM REGISTRATION #1028890

SAWS E-54 SANITARY SEWER PROJECT
 BEXAR COUNTY, TEXAS
 SEGMENT B
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	MP
CHECKED	JD DRAWN BS
SHEET	C6.05B



MATCHLINE STA 18+00
SEE THIS SHEET



LEGEND

- PROPOSED SEWER LINE
- PROPERTY LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- EXISTING OVERHEAD ELECTRIC
- EXISTING 1' CONTOURS
- EXISTING 5' CONTOURS
- 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

NO.	REVISION	DATE



PAPE-DAWSON ENGINEERS
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TBPUS FIRM REGISTRATION #10028800

SAWS E-54 SANITARY SEWER PROJECT
 BEXAR COUNTY, TEXAS
 SEGMENT C
 TREE PRESERVATION PLAN

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	MP
CHECKED	JD DRAWN EP
SHEET	C6.00C



SEE THIS SHEET
MATCHLINE STA 18+00

MATCHLINE STA 29+00
SEE THIS SHEET

CAUTION OVERHEAD UTILITIES

CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER "HIGH VOLTAGE TRANSMISSION LINES". A WORKING HEIGHT OF 30' FROM GROUND ELEVATION WILL BE OBSERVED WHEN WORKING UNDER THE HIGH VOLTAGE LINE. COORDINATE ALL WORK WITH THE LOCAL UTILITY PROVIDER.

CAUTION UNDERGROUND UTILITIES

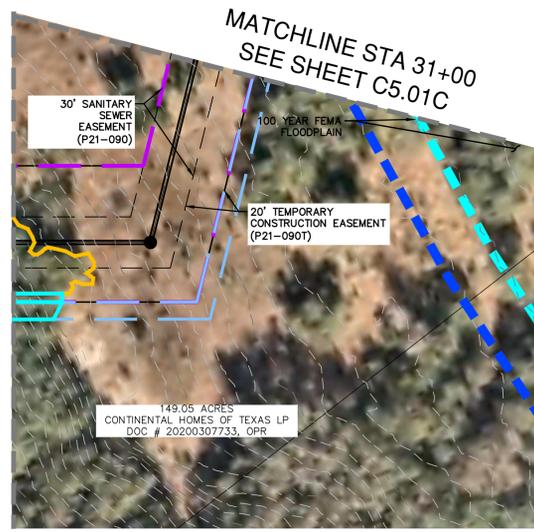
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COMPACTION NOTE

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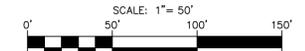
TRENCH EXCAVATION SAFETY PROTECTION

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SEE THIS SHEET
MATCHLINE STA 29+00

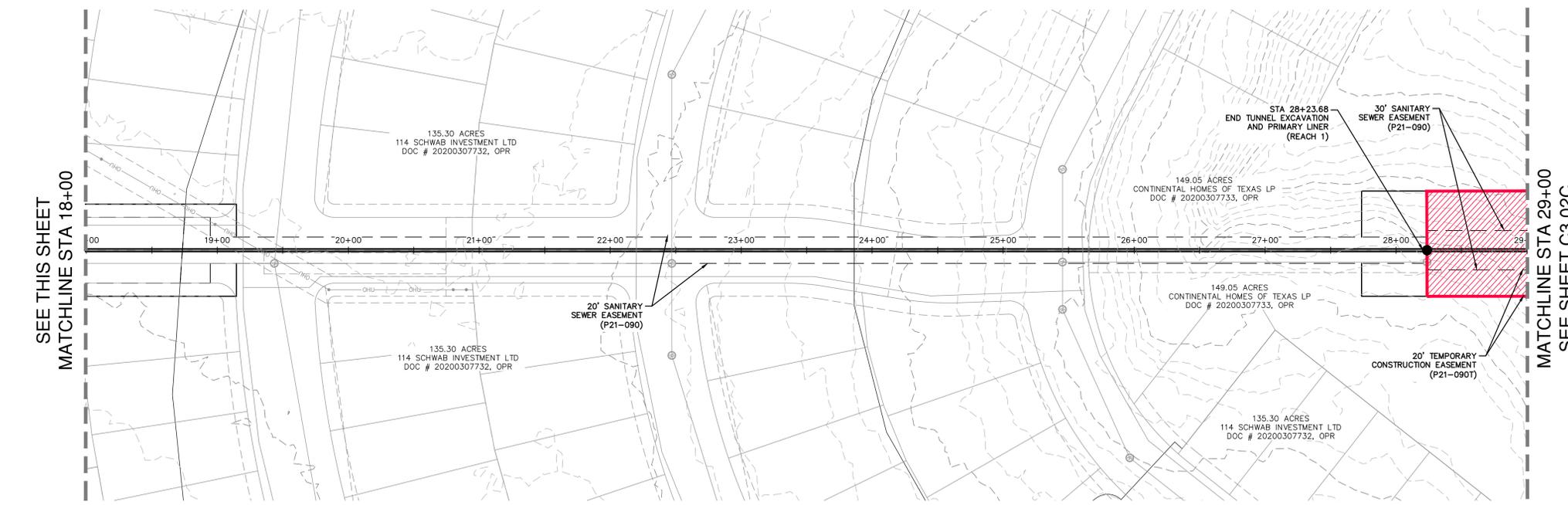
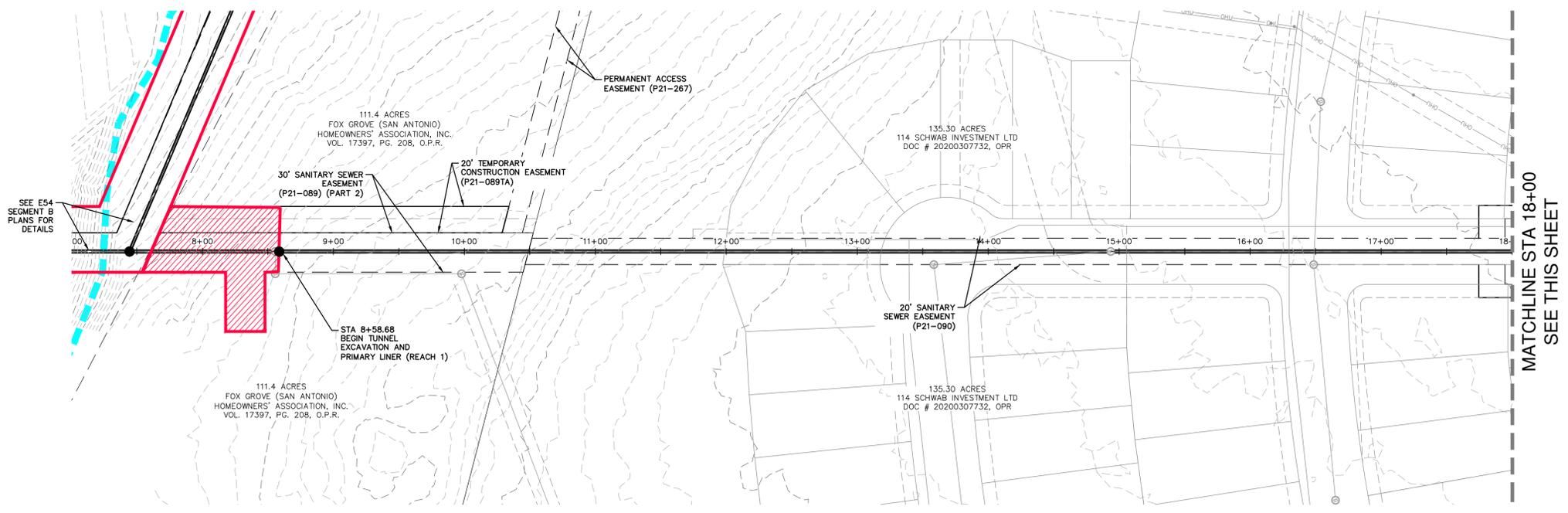
MATCHLINE STA 31+00
SEE SHEET C5.01C



LEGEND

- AREA TO BE SEEDED WITH NATIVE SEED MIXTURE
- PROPOSED SEWER LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN
- 30' WIDE FLOODPLAIN BUFFER
- PROPERTY LINE

QUANTITY TABLE			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1C-TP3C	REVEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDROMULCH)	SY	1,359



CAUTION OVERHEAD UTILITIES

CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER "HIGH VOLTAGE TRANSMISSION LINES". A WORKING HEIGHT OF 30' FROM GROUND ELEVATION WILL BE OBSERVED WHEN WORKING UNDER THE HIGH VOLTAGE LINE. COORDINATE ALL WORK WITH THE LOCAL UTILITY PROVIDER.

CAUTION UNDERGROUND UTILITIES

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COMPACTION NOTE

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TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

REVEGETATION NOTE

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NO.	REVISION	DATE



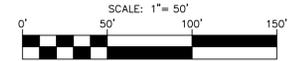
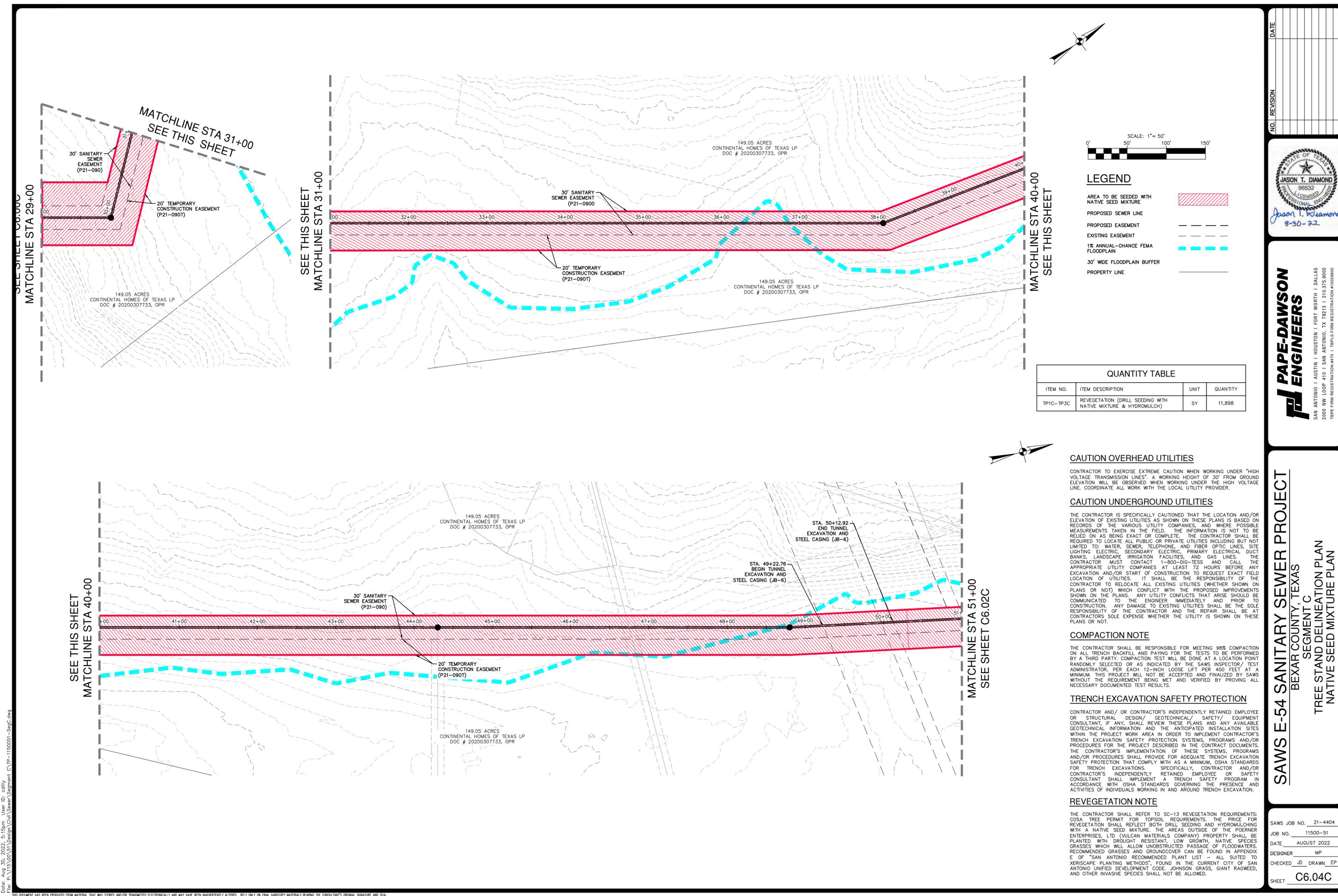
PAPE-PAWSON ENGINEERS
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TPBUS FIRM REGISTRATION #10028890

SAWS E-54 SANITARY SEWER PROJECT
 BEXAR COUNTY, TEXAS
 SEGMENT C
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

SAWS JOB NO. 21-4404
 JOB NO. 11500-51
 DATE AUGUST 2022
 DESIGNER MP
 CHECKED JD DRAWN EP
 SHEET C6.03C

Notes: Aug. 30, 2022, 5:15pm User ID: ccollin
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LEGEND

- AREA TO BE SEEDED WITH NATIVE SEED MIXTURE
- PROPOSED SEWER LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN
- 30' WIDE FLOODPLAIN BUFFER
- PROPERTY LINE

QUANTITY TABLE			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1C-TP3C	REVEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDROMULCH)	SY	11,898



CAUTION OVERHEAD UTILITIES

CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER "HIGH VOLTAGE TRANSMISSION LINES". A WORKING HEIGHT OF 30' FROM GROUND ELEVATION WILL BE OBSERVED WHEN WORKING UNDER THE HIGH VOLTAGE LINE. COORDINATE ALL WORK WITH THE LOCAL UTILITY PROVIDER.

CAUTION UNDERGROUND UTILITIES

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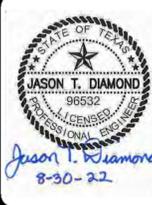
TRENCH EXCAVATION SAFETY PROTECTION

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NO.	REVISION	DATE



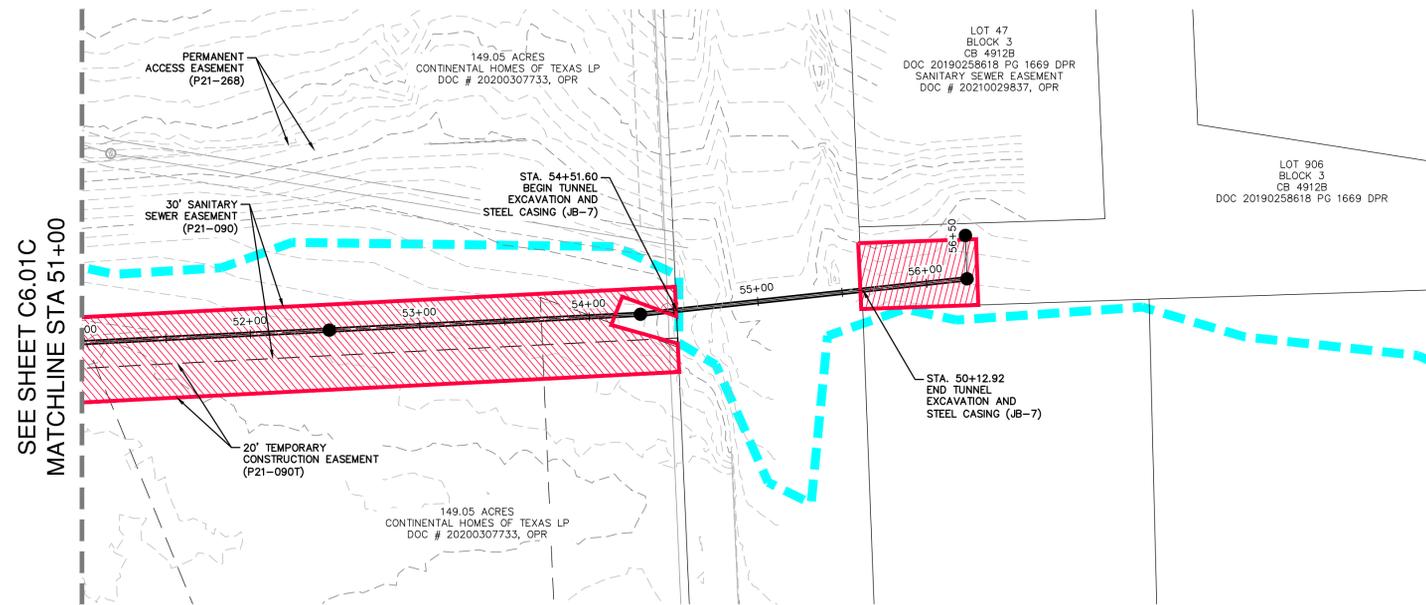
PAPE-DAWSON ENGINEERS
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TPEL FIRM REGISTRATION #070 | TPELIS FIRM REGISTRATION #10028800

SAWS E-54 SANITARY SEWER PROJECT
 BEXAR COUNTY, TEXAS
 SEGMENT C
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

SAWS JOB NO.	21-4404
JOB NO.	11500-51
DATE	AUGUST 2022
DESIGNER	MP
CHECKED	JD DRAWN EP
SHEET	C6.04C

Notes: Aug 30, 2022, 5:15pm User ID: c.dilly
 File: P:\152\2021\15210\Design\Ch3\Sanitary\Segment C\TP-1150051-SawC.dwg

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL.



SEE SHEET C6.01C
MATCHLINE STA 51+00



LEGEND

- AREA TO BE SEEDED WITH NATIVE SEED MIXTURE
- PROPOSED SEWER LINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- 1% ANNUAL-CHANCE FEMA FLOODPLAIN
- 30' WIDE FLOODPLAIN BUFFER
- PROPERTY LINE

QUANTITY TABLE			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
TP1C-TP3C	REVEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDRONULCH)	SY	2,568

CAUTION OVERHEAD UTILITIES

CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER "HIGH VOLTAGE TRANSMISSION LINES". A WORKING HEIGHT OF 30' FROM GROUND ELEVATION WILL BE OBSERVED WHEN WORKING UNDER THE HIGH VOLTAGE LINE. COORDINATE ALL WORK WITH THE LOCAL UTILITY PROVIDER.

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THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING, ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. THE CONTRACTOR MUST CONTACT 1-800-DIG-TESS AND CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION AND/OR START OF CONSTRUCTION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

COMPACTION NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT A LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/ TEST ADMINISTRATOR PER EACH 12-INCH LOOSE LIFT PER 400 FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THE REQUIREMENT BEING MET AND VERIFIED BY PROVING ALL NECESSARY DOCUMENTED TEST RESULTS.

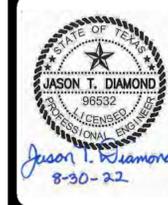
TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/ EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

REVEGETATION NOTE

THE CONTRACTOR SHALL REFER TO SC-13 REVEGETATION REQUIREMENTS: COSA TREE PERMIT FOR TOPSOIL REQUIREMENTS. THE PRICE FOR REVEGETATION SHALL REFLECT BOTH DRILL SEEDING AND HYDRONULCHING WITH A NATIVE SEED MIXTURE. THE AREAS OUTSIDE OF THE CORNER ENTERPRISES, LTD (VULCAN MATERIALS COMPANY) PROPERTY SHALL BE PLANTED WITH DROUGHT RESISTANT, LOW GROWTH, NATIVE SPECIES GRASSES WHICH WILL ALLOW UNOBSTRUCTED PASSAGE OF FLOODWATERS. RECOMMENDED GRASSES AND GROUND COVER CAN BE FOUND IN APPENDIX E OF "SAN ANTONIO RECOMMENDED PLANT LIST - ALL SUITED TO XERISCAPE PLANTING METHODS", FOUND IN THE CURRENT CITY OF SAN ANTONIO UNIFIED DEVELOPMENT CODE. JOHNSON GRASS, GIANT RAGWEED, AND OTHER INVASIVE SPECIES SHALL NOT BE ALLOWED.

NO.	REVISION	DATE



PAPE-DAWSON ENGINEERS
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TYPE FIRM REGISTRATION #070 | TPBUS FIRM REGISTRATION #10028800

SAWS E-54 SANITARY SEWER PROJECT
 BEXAR COUNTY, TEXAS
 SEGMENT C
 TREE STAND DELINEATION PLAN
 NATIVE SEED MIXTURE PLAN

SAWS JOB NO. 21-4404
 JOB NO. 11500-51
 DATE AUGUST 2022
 DESIGNER MP
 CHECKED JD DRAWN EP
 SHEET C6.05C

Notes: Aug 30, 2022, 5:15pm User ID: c.dilly
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