

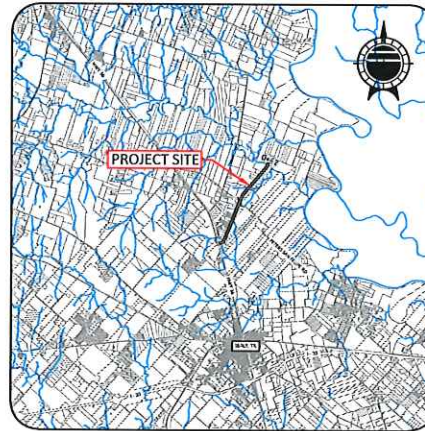
GRUBBS ROAD DRAINAGE IMPROVEMENTS

AUSTIN COUNTY, TX.

TDA CDV23-0303

PROJECT TITLE: GRUBBS ROAD DRAINAGE IMPROVEMENTS
PROJECT STREET ADDRESS: GRUBBS ROAD
AUSTIN COUNTY PRECINCT 1
PROPERTY OWNER: AUSTIN COUNTY, TEXAS
ADDRESS: ONE EAST MAIN STREET
BELLVILLE, TX 77418
PHONE NO.: (979) 885-3829

PROJECT ENGINEER: DOUCET, A KLEINFELDER COMPANY
ADDRESS: 7401 STATE HWY 71 B160
AUSTIN, TX 78735
PHONE NO.: (512) 583-2600 FAX NO. (512) 583-2601



LOCATION MAP
NOT-TO-SCALE

REVISIONS / CORRECTIONS

NO.	DESCRIPTION	REVISE (R) ADD (A) VOID (V) SHEET NO. S	TOTAL # SHES. IN PLAN SET	NET CHANGE BMP. COVER (SQ. FT.)	TOTAL SITE IMP. COVER (SQ. FT.) [%]	CITY OF AUSTIN APPROVAL / DATE	DATE BIMAGED

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ELECTRONIC FILES:

AT THE BIDDER'S/CONTRACTOR'S REQUEST, DOUCET WILL FURNISH ELECTRONIC FILES AS SUPPORT DOCUMENTS FOR THE APPROVED CONSTRUCTION DOCUMENTS. THE ELECTRONIC FILES ARE PROVIDED AS A SERVICE AND ARE SUBORDINATE TO THE APPROVED CONTRACT DOCUMENTS. IN THE EVENT THE APPROVED CONTRACT DOCUMENTS ARE MODIFIED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPILE THE ELECTRONIC DOCUMENTS TO THE MODIFIED CONTRACT DOCUMENTS PRIOR TO RELEASE OF THE ELECTRONIC FILES. AN ELECTRONIC FILE RELEASE AGREEMENT WITH DOUCET AND ASSOCIATES MUST BE SIGNED BY THE CONTRACTOR.

DATE OF SUBMITTAL: APRIL 2, 2025
SUBMITTED BY: *[Signature]* 04/02/2025
DOUCET & ASSOCIATES, INC. DATE

APPROVED BY Commissioners Court of Austin County, Texas, this _____ day of _____, 20____.

County Judge

Commissioner, Precinct 1 Commissioner, Precinct 2

Commissioner, Precinct 3 Commissioner, Precinct 4

RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY CITY ENGINEERS.

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF DAVID A. CLARK, P.E., TEPER 122212, ON 4/2/25 FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO APPROVAL BY ALL GOVERNING JURISDICTIONS



[Signature] 04/02/2025
DOUCET ENGINEERS
TBPES Firm No. F-3937



GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

COVER SHEET

PLOTTED: Apr 02, 2025 - 10:03am
Designed: GS
Drawn: ZD
Reviewed: DC
Issue Date: 3/17/25

SHEET
1
OF 22

Project No.: 25001006.001A

NOTED: Apr 02, 2025 - 10:03am
Desired GS
Drawn: ZD
Reviewed: OC
Issue Date: 3/17/25

SHEET
2
OF 22

Project No.:
25001006.001A

Drawing: c:\pwworking\jw\elct-prod\fundgr\dwg\dwg\2430373\2430373.dwg
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 Last Modified: Mar. 24, 25 - 12:08
 Plot Date/Time: Apr. 02, 25 - 10:04:38

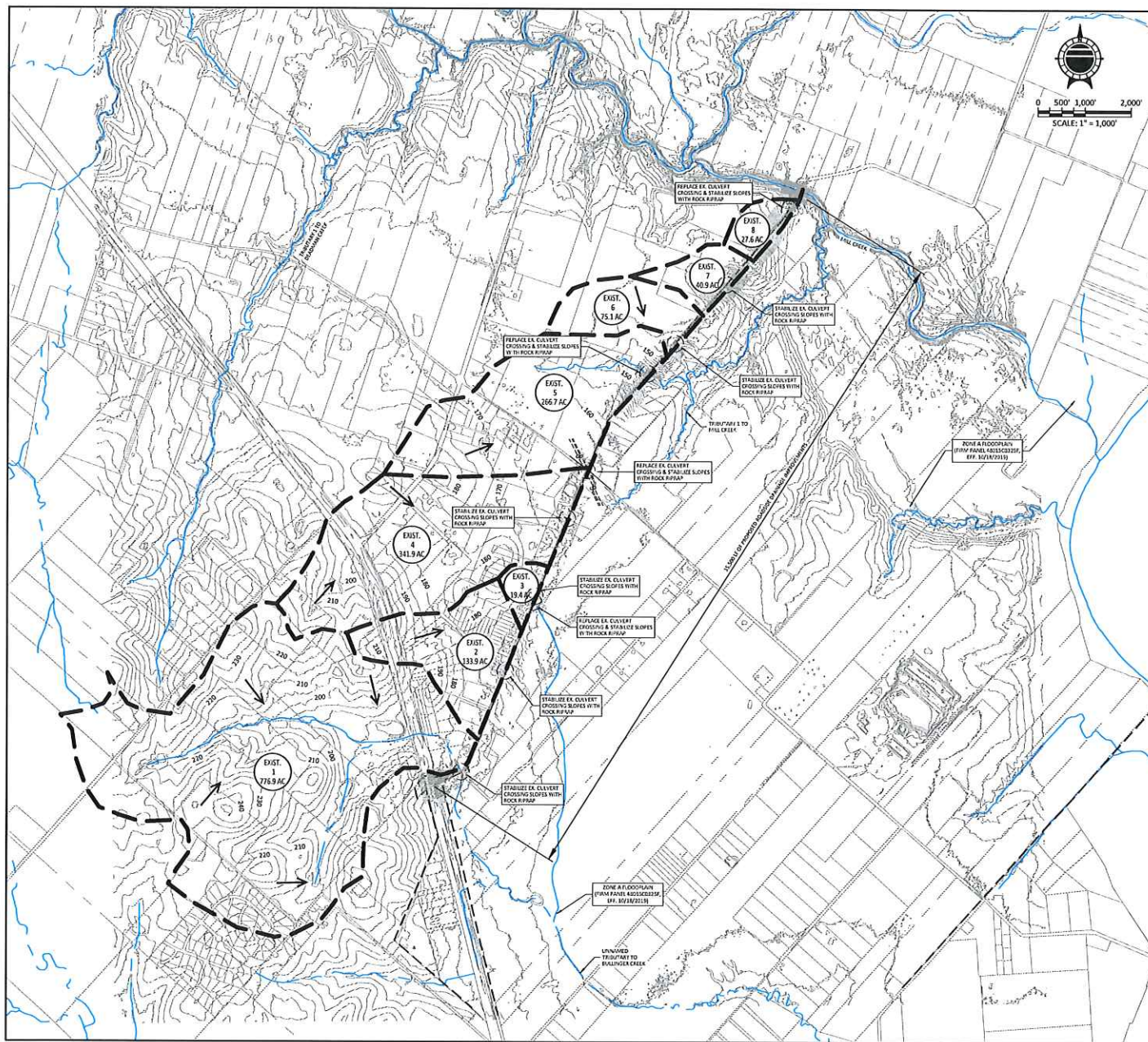


Figure 1 is a diagram of a typical stormwater drainage system. It shows a cross-section of the ground with various layers and components. From top to bottom: a dashed line for the existing R.O.W. property line; a dashed line for the existing easement line; a solid line for the existing pavement; a hatched area for the proposed curb & gutter; a solid line for the existing crown/slope; a dashed line for the drainage boundary line; a circle with 'DA' for the drainage boundary label; a circle with 'NO' for the inlet number; a solid line for the drainage flow direction; a solid line for the time of concentration line; a dashed line for the 493 ft. contours; a dashed line for the 7700 ft. contours; a dashed line for the 100-yr floodplain; a dashed line for the critical water quality zone; a dashed line for the 100-yr floodplain; a dashed line for the 100-yr floodplain.

NOTES:

1. CONTOURS REFLECT THIS TOPO, 2018, NAD 83, TEXAS STATE PLANES, CENTRAL ZONE, US FEET.
VERTICAL DATUM NAVD88.
2. PARCELS FROM AUSTIN COUNTY TAX APPRAISAL DISTRICT GIS.
3. HYDROLOGIC SOIL GROUPS DETERMINED FROM NRCS WEB SOIL SURVEY.



DOUCET
A Kleinfielder Company
Civil Engineering // Entitlements // Geospatial
7401 B, Highway 71 W, Ste. 140
Austin, TX 78731, Tel: (512)-583-2400
www.doucetengineering.com
TUPELLS Engineering Firm No. F-3237
TUPELLS Surveying Firm No. 10194531

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

DRAINAGE AREA
CONDITIONS

PLOTTER: Apr 02, 2025, 10:01:

Designed CS

Drann	ZD
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Raymond DC

Issue Date: 3/17/25

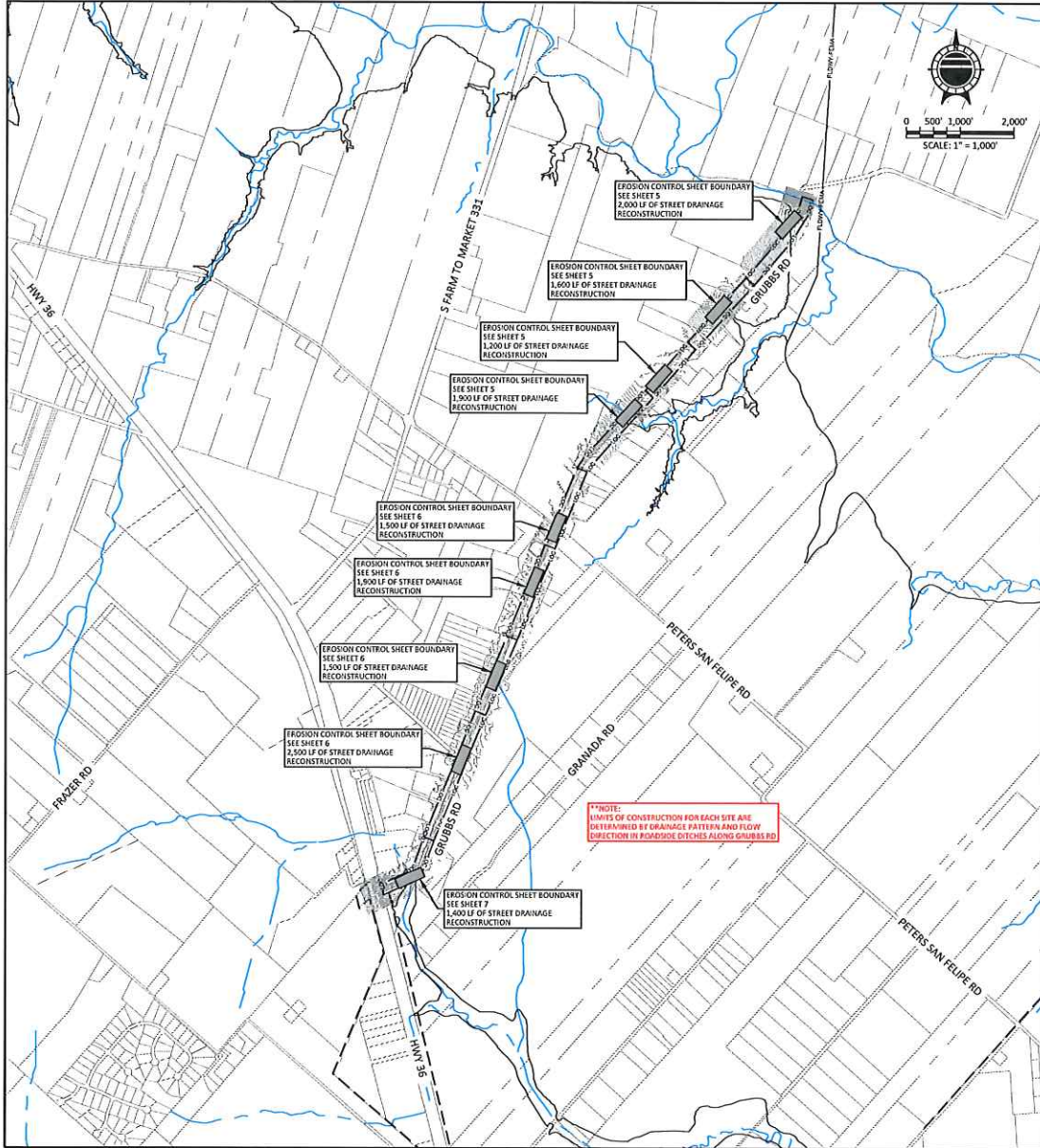
SHEET

3

2

OF 22

Project No. 1



VEGETATION NOTES

TEMPORARY AND PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW:
ALL DISTURBED AREAS TO BE REVEGETATED IN ACCORDANCE WITH THE SEA SETTING FOR EROSION CONTROL, 166-PEH-2010-01, AND SEA WATERWAYS AS FURNISHED BY THE TEXAS DEPARTMENT OF TRANSPORTATION BRIDGES AND SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES AS ADOPTED NOVEMBER 1, 2014.
TEMPORARY EROSION CONTROL: SHALL BE ACCEPTABLE WHEN THE GRASS WAS GROWN AT LEAST 1 1/2 INCHES HIGH WITH A MINIMUM OF 50% TOTAL COVERAGE SO THAT FULL VEGETATION STABILIZATION AND UNIFORM VEGETATION ARE PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 15 SQUARE FEET.

NOTE: THE TOLERANCES IN GENERAL NOTES FOR PERMIT REQUIREMENTS FOR WORKING IN RIGHT OF WAY IN CONSTRUCTION PLANS, SPECIFICATIONS REVIEW AND APPROVAL BY ROAD ADMINISTRATION AND APPLICABLE TO THE EROSION AND SEDIMENTATION IMPROVEMENT PROJECTS. CONTRACTOR SHALL NOTIFY COUNTY ROAD ADMINISTRATION 14 DAYS IN ADVANCE OF ANY ROADWORK WORK OR BEFORE TO BE INSTALLED.
SPECIFICATIONS FOR THE PROPOSED WORK IN THESE PLANS SHALL BE THE TYPICAL STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES, DATED NOVEMBER 1, 2014.

Mitigation Measures and Conditions [40 CFR 1506.3(c)]
Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure and Conditions
Clean Air Act, as amended, particularly section 170(c) & (d); 40 CFR Parts 6, 81, 82	During project construction, there will be some increase in ambient dust particulate from machinery and soil disturbances. These will be only temporary in nature and all efforts will be made through proper construction methods to ensure dust control and properly functioning equipment.
Endangered Species Act of 1973, particularly section 7, 50 CFR Part 402	Contractor shall employ nationwide Standard Conservation Measures set forth by USFWS. Provide Construction workers with a list of federal threatened and endangered species and state listed rare species. If construction workers identify or encounter threatened or endangered species or state listed rare species, construction should cease immediately and Texas Parks & Wildlife should be contacted for guidance. Avoid activities requiring vegetation removal or disturbance during peak bird nesting season (March through August) to prevent the destruction of migratory birds, nests, or eggs. When project activities cannot occur outside the bird nesting season, conduct a survey prior to scheduled activity to determine if active nests are present within the area of impact. If evidence of migratory birds is found, a qualified biologist with USFWS should be notified.
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	The following efforts shall be made to minimize negative impacts on the natural and beneficial floodplain values for restoration and preservation. - The project shall be implemented using best management practices designed to protect improvements from flood damage. - The project shall be implemented using best management practices designed to protect natural landscapes that serve to maintain or restore natural hydrology through infiltration. - The consulting engineer shall take into consideration additional specifications to minimize damage to and/or restore the native plant species. - The project shall not lead to any significant increases in impermeable cover and shall have no negative impacts on the floodplain. - Additionally, prior to construction, the project plans will meet any applicable, additional local floodplain requirements set forth by the community's Floodplain Administrator. - All state and local floodplain protection procedures will be followed.
Historic Preservation National Historic Preservation Act of 1966, particularly section 108 and 110; 36 CFR Part 800	Indirect Discovery Condition: If historic properties are discovered or cultural materials are encountered during construction or disturbance activities, the anticipated effects on historic properties are found, work should cease in the immediate area and THCA's Historic Programs, THCA's Archeology Division, should be contacted to consult on further actions that may be necessary to protect historic properties or cultural remains. Work can continue in areas where no historic properties are present.
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Wetlands and riparian areas will be avoided when possible. When avoidance is not possible, the following efforts shall be made to minimize negative impacts on the natural and beneficial values wetlands provide: The project shall be implemented using best management practices designed to protect natural landscapes that serve to maintain or restore natural hydrology through infiltration. - The consulting engineer will implement sediment and erosion control measures such as silt fences, sediment basins, or sediment ponds to trap sediment runoff from construction activities and prevent it from entering wetlands and areas. - These measures are used in reducing sedimentation in wetlands and protect water quality. - Best management practices shall be used to prevent unintentional pollution of wetlands. - Examples of best management practices used to prevent pollution are inspections for leaks and malfunctions of construction equipment before project work commences and taking precautions to ensure the proper collection and disposal of all on and off-site waste. - The consulting engineer shall implement construction techniques that minimize disturbance to wetlands, such as avoiding heavy equipment operation in wetland areas and minimizing soil compaction. They will at all times limit the duration of construction activities in wetland areas to reduce disturbance and erosion potential. - Potential construction techniques will be used to reduce the availability of construction-related pollutants that might contribute runoff. - The consulting engineer shall avoid clearing vegetation in wetland areas unless absolutely necessary and also re-establish native vegetation in disturbed areas to stabilize the soil. Preserving and restoring native vegetation and around the wetlands areas in stabilizing the soil, prevents erosion, and promotes infiltration of water. - The consulting engineer will acquire all necessary permits, including any from USFWS relating to wetlands, prior to construction.

GENERAL EROSION CONTROL NOTES

- CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP AND THAT CONFORM TO FEDERAL, STATE OR LOCAL REQUIREMENTS. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DIRECTED BY THE PROJECT AGENT AND OWNER OR AS SPECIFIED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- PERMIT FOR ANY CONSTRUCTION OR ACTIVITY SHALL BE MAINTAINED ON SITE AT ALL TIMES.
- CONTRACTOR SHALL MAINTAIN CLEANING TO THE MAXIMUM EXTENT PRACTICAL ON AS REQUIRED BY THE GENERAL PERMIT.
- GENERAL CONTRACTOR SHALL LOCATE AND PROVIDE STORAGE AREA WHICH SHALL BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA. EQUIPMENT PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES OFFICE TRAILERS AND TOILET FACILITIES.
- ALL WASTE MATERIALS SHALL BE STORED IN A SECURED AREA.
- SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR OIL/GREASE SPILLS AND LEAKS.
- DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- RUBBER, TRUCK, GEOTECH, LITTER OR OTHER SOLID MATERIALS SHALL BE DEPOSITED INTO SOLID CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAKING AND THE PHOSPHATES THROUGH THE ACTION OF WINDS OR STORM WATER RUNOFF INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INSTALLED AS SOON AS PRACTICABLE.
- OUTLINED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 7 DAYS SHALL BE TEMPORARILY SEEDER. THESE AREAS SHALL BE SEEDS NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING THERE.
- OUTLINED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED SHALL BE SOONER UNCOVERED HER PLAN. THESE AREAS SHALL BE SEEDS NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING THERE.
- IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIES MUST BE WASHED BEFORE THE VEHICLES ENTER ANY PUBLIC ROAD OR HIGHWAY. PROCEEDINGS MUST BE MADE TO PREVENT THE ROAD FROM BEING DIRTY AND THE SEEDS BEFORE IT IS CARRIED OFF THE SITE.
- ALL MATERIALS SHED, DROPPED, WASHED, OR TRACKED FROM VEHICLES MUST BE REMOVED IMMEDIATELY.
- CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONSTRUCTION WITH THE STABILIZATION.
- ON SITE AND OFF SITE STOCKPILES AND PILES OF EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES, STOCKPILES AND PILES OF EROSION AND SEDIMENTATION SHALL BE LIMITED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- DUE TO THE GRADE CHANGES DURING THE CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES TO PREVENT EROSION AND SEDIMENTATION.
- CONTRACTOR SHALL DESIGNATE CERTAIN AREAS WITHIN THE LIMITS OF DISTURBANCE FOR WASTE DISPOSAL AND EXCESSIVE MATERIAL STORAGE.
- CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH THE EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN. NO UNNECESSARY OR UNNECESSARY SOIL EXPOSURE OR UNNECESSARY SOIL REMOVAL.
- AN INSPECTOR, CERTIFIED BY THE STATE OF TEXAS ON EXPERIENCE IN THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL, IS REQUIRED TO INSPECT THE EROSION AND SEDIMENTATION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN. INSPECTIONS SHOULD BE COMPLETED ONCE EVERY WEEK AND AFTER EVERY MAINTENANCE OF 5.0MP OR MORE DURING THE CONSTRUCTION PHASE. THESE REPORTS SHALL BE MADE AVAILABLE TO THE COUNTY AT ANY TIME AND COPIES OF ALL OF THE INSPECTIONS SHALL BE SUBMITTED TO THE COUNTY PRIOR TO THE ISSUANCE OF A CERTIFICATE OF COMPLETION OR OCCUPANCY.

CONTRACTOR NOTES:
EXISTING UNDERGROUND AND OVERHEAD UTILITIES IN VICINITY. CONTRACTOR TO CONTACT UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL 811 FOR UTILITY LOCATIONS PRIOR TO CONSTRUCTION. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS & DEPTHS PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONDUCT PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF DAVID A. CLARK, P.E. TEXAS 123312, ON 4/27/25 FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO APPROVAL BY ALL GOVERNING JURISDICTIONS.



DOUCET ENGINEERS
TEXAS ENGINEERING FIRM NO. 19184251

DOUCET
A Kiewit Company
Civil Engineering / Environmental / Geotechnical
Austin, TX 78725, Tel: (512) 383-0800
TIPPLES Surveying Firm No. 19184251

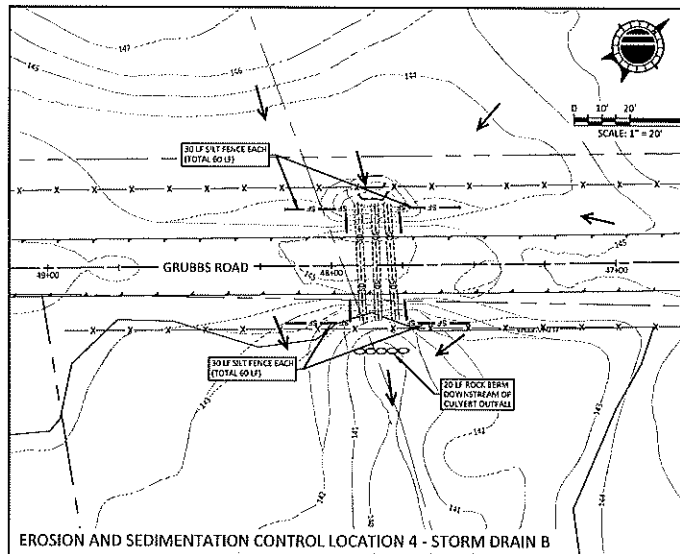
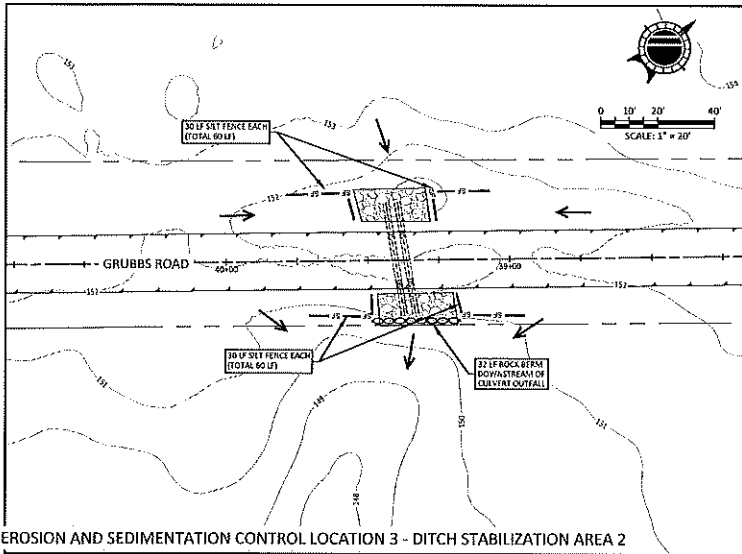
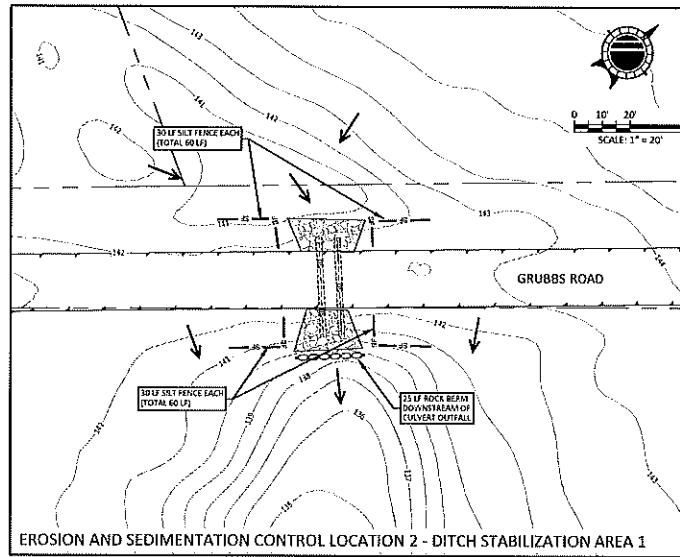
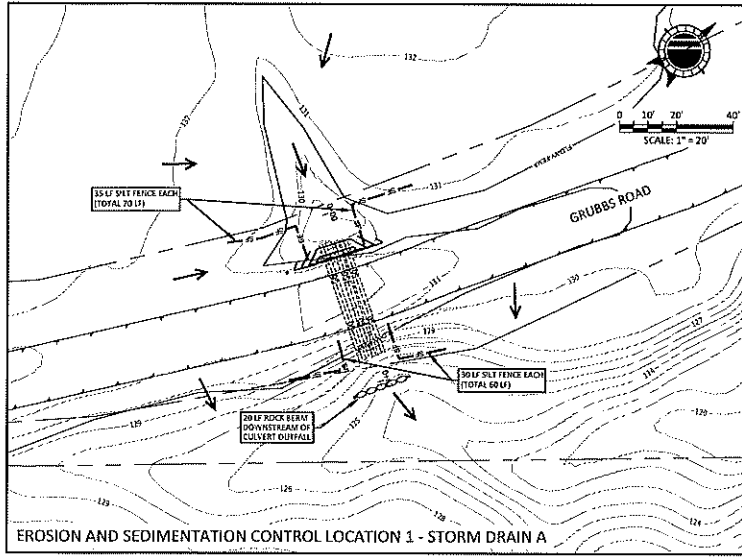
GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

EROSION AND
SEDIMENTATION CONTROL
OVERALL SHEET

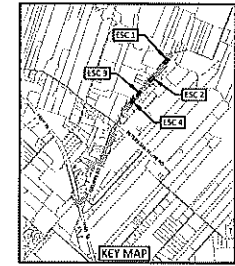
PLOTTED: Apr 02, 2025 - 10:56am
Designed: CS
Drawn: ZD
Reviewed: DCC
Issue Date: 3/17/25

SHEET
4

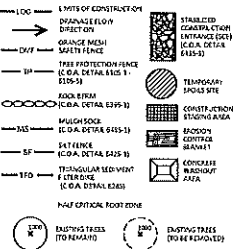
Project No.:
Z5001006.001A



CONTRACTOR NOTES:
 DURING UNDERGROUND & OVERHEAD UTILITIES IN VICINITY, CONTRACTOR TO CONTACT UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL 811 FOR UTILITY LOCATIONS PRIOR TO EXCAVATION. CONTRACTOR TO 100% VERIFY EXISTING UTILITY LOCATIONS & DEPTHS PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONSIDER PROPOSED UTILITIES TO PROTECT AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.



EROSION / SEDIMENTATION AND TREE PROTECTION LEGEND



- EROSION / SEDIMENTATION CONTROL NOTES:**
1. THE ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO STOP AND/OR STOP EROSION / SEDIMENTATION CONTROL ON SITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS.
 2. CONTRACTOR SHALL MAINTAIN SLOPE CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS DRAINAGE, FENCE AND SLOPE PROTECTION. (C.O.A. DETAIL 645-1) SHALL BE MAINTAINED AT ALL TIMES.
 3. ALL EXCAVATED AREAS SHALL BE FENCED WITH SLOPE PROTECTION FENCE TO PREVENT SHOULDER SPALLS. ALL EXCAVATED AREAS SHALL BE FENCED WITH SLOPE PROTECTION FENCE TO PREVENT SHOULDER SPALLS. ALL EXCAVATED AREAS SHALL BE FENCED WITH SLOPE PROTECTION FENCE TO PREVENT SHOULDER SPALLS.
 4. IF EXCAVATED AREAS ARE TO BE STABILIZED BY VEGETATION, THE CONTRACTOR SHALL CLEAN UP SOILS THAT WASH ONTO THE NEARBY ADJACENT DRIVE OR DRAIN (C.O.A. DETAIL 645-1).

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF DAVID A. CLARK, P.E., TOPSOIL 123322, CH 42725 FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO APPROVAL BY ALL GOVERNING JURISDICTIONS.

DAVID A. CLARK
 P.E.
 04/02/2025
 DOUCET ENGINEERS
 TOPSOIL Form No. P-3037

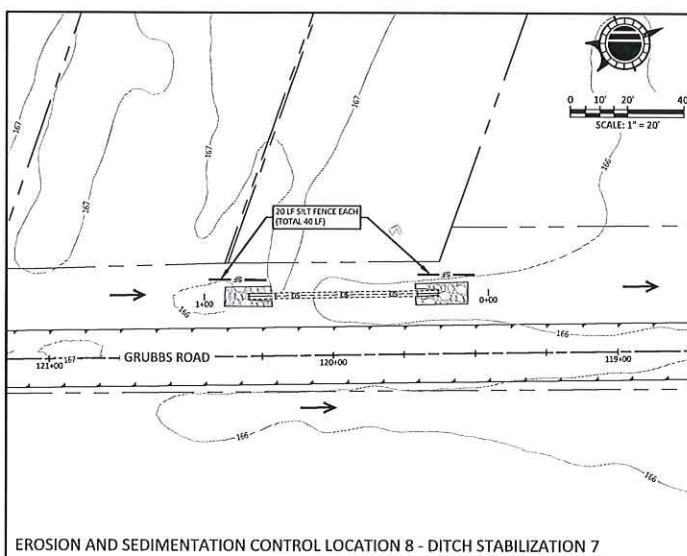
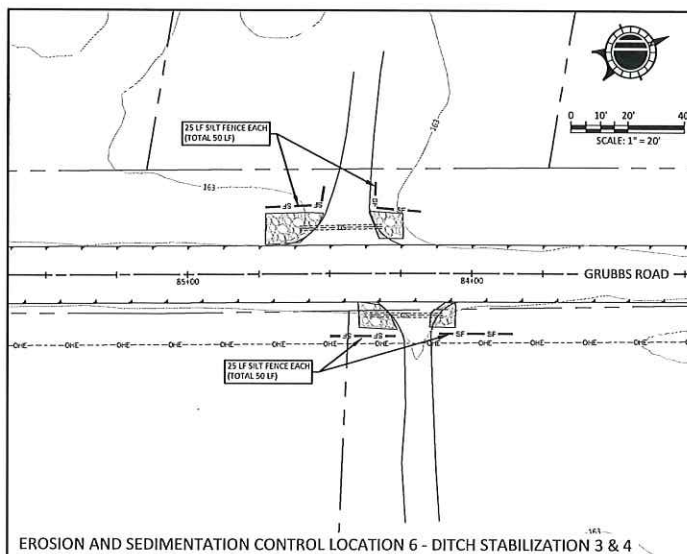
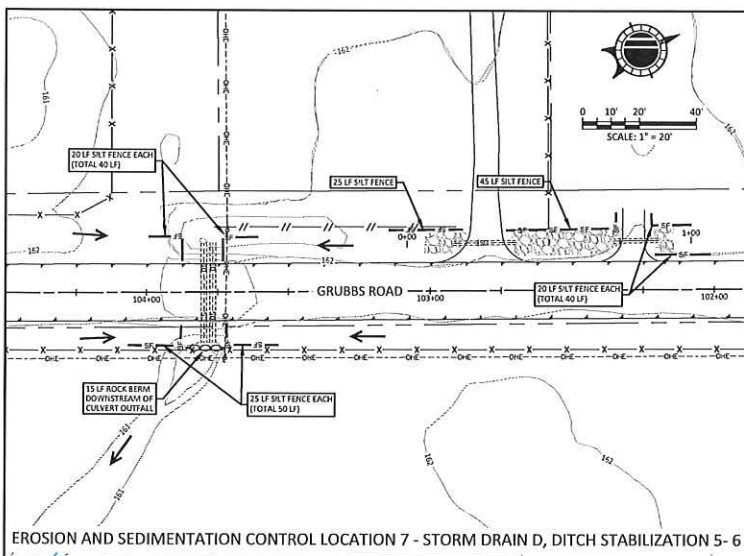
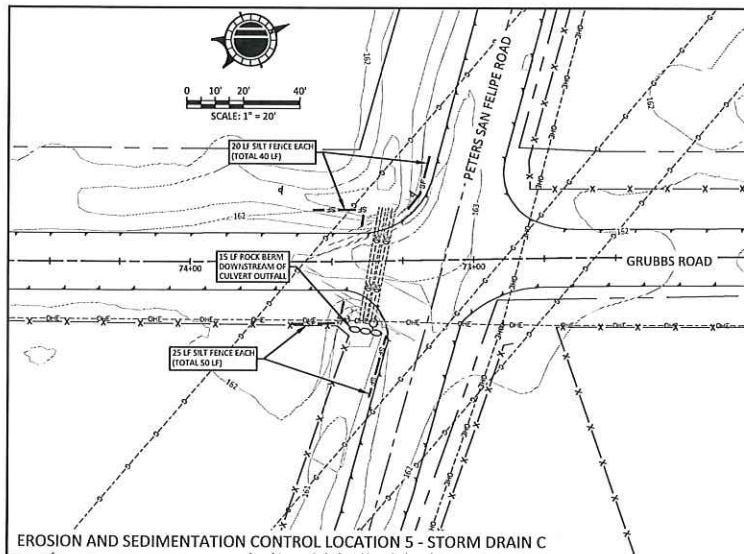
DOUCET
 A Kiewit Company
 Civil Engineering / Environmental / Geotechnical
 Austin, TX 78705, Tel: (512) 389-8800
 TEXAS ENGINEERING FIRM NO. 0044321

GRUBBS ROAD
 DRAINAGE IMPROVEMENTS
 AUSTIN COUNTY, TX.

EROSION AND
 SEDIMENTATION
 CONTROL SHEET 1

PROJECT NO. 25001006.001A
 SHEET 5 OF 22
 DATE: Apr 02, 2025 - 10:06am
 DESIGNED: C.S.
 DRAWN: C.S.
 CHECKED: C.S.
 ISSUE DATE: 07/2025

Drawing: c:\working\Nell-diet-sprind\imgdgs\blowen\blowen.com\02242027\315001006.001.dwg
 User: ZHIDCE
 Last Modified: Mar, 23, 25 - 10:22
 Plot Date/Time: Apr, 03, 25 - 10:04:40



CONTRACTOR NOTES:
EXISTING UNDERGROUND & OVERHEAD UTILITIES
IN VICINITY. CONTRACTOR TO CONTACT UTILITY
COMPANIES PRIOR TO CONSTRUCTION.
CONTRACTOR TO CALL 811 FOR UTILITY LOCATES
PRIOR TO EXCAVATION. CONTRACTOR TO FIELD
VERIFY EXISTING UTILITY LOCATIONS & DEPTH
PRIOR TO BEGINNING CONSTRUCTION.
CONTRACTOR SHALL CONSIDER PROPOSED UTILITY
IMPROVEMENTS AND PROVIDE ADEQUATE
HORIZONTAL AND VERTICAL CLEARANCE DURING
INSTALLATION OF ALL UTILITY INFRASTRUCTURE.



**EROSION / SEDIMENTATION AND
TREE PROTECTION | LEGEND**

- | | | | |
|-----|---|--|---|
| LOC | LINE OF CONSTRUCTION | | STABILIZED
CONSTRUCTION
ENTRANCE (DE)
(J.C.A. DETAIL 6435-1) |
| DFP | DRAINAGE FLOW
DIRECTION | | TEMPORARY
POLE SITE |
| CMF | GRASS MESH
SAFETY FENCE | | CONSTRUCTION
STAGING AREA |
| TFP | TRUE PROJECTION FENCE
(J.C.A. DETAIL 6435-1) | | EROSION
CONTROL
BARRETT |
| MR | MOOR REEF
(J.C.A. DETAIL 6435-1) | | CONCRETE
PROTECTION
PLACEMENT |
| MS | MUD SOIL FILL
(J.C.A. DETAIL 6435-1) | | |
| TFD | TRANSVERSE DRAIN
FILTER (J.C.A. DETAIL 6262) | | |
| | 1:50 CRITICAL ROOT ZONE | | |
| | EXISTING TREES
(TO REMAIN) | | |
| | EXISTING TREES
(TO BE REMOVED) | | |

- EROSION/SEDIMENTATION CONTROL NOTES**
1. THE ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ASSESS AND/OR MONITOR EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT COMPLIANCE WITH THE CITY OF AUSTIN PLACES AND REGULATIONS.
 2. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS BRUSH TRACKS AND MOUNDING AS WELL AS PER ECH 4.3.2.2 ON ALL EXIT/ENTRY TO THE ENVIRONMENTAL INSPECTOR.
 3. SILT FENCE TYPE AND INSTALLATION SHALL COMPLY WITH ECH 4.2.2.2. ALL DISTURBED AREAS SHALL BE REVEGETATED WITH NATIVE GRASSES (SEE CITY OF AUSTIN SPECIFICATIONS). ALL DISTURBED AREAS WITH SLOPES 1:5 OR STEEPER, WHICH ARE NOT ARMORED OR COVERED, SHALL HAVE A SOIL RETENTION BUNDLE (EXCELLENT OR AN APPROVED EQUIV.) INSTALLED TO ASSIST WITH SOIL RETENTION.
 4. DISTURBED AREAS TO BE REVEGETATED FOR MORE THAN 18 MONTHS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TOPSOIL OR REVEGETATION MATTING (ECH 4.1.4.8.3, SECTION 4.1). THE CONTRACTOR SHALL MAINTAIN THE REVEGETATION MATTING ON THE PROJECT A MINIMUM OF ONCE ONLY (ECH 4.1.4.8.4).

THESE PLANS ARE RELEASED
UNDER THE AUTHORITY OF
DAVID A. CLARK, P.E.,
TBPE# 123212, ON 4/2/25
FOR THE PURPOSES OF
REVIEW AND ARE NOT TO BE
USED FOR CONSTRUCTION
PRIOR TO APPROVAL BY ALL
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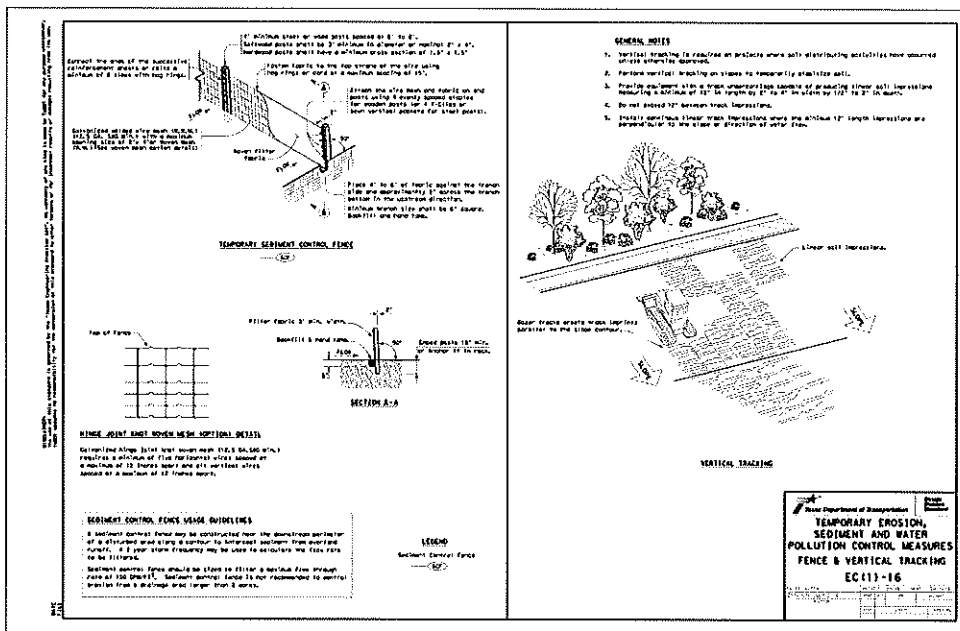
Grillet 04/02/2025
DOUCET ENGINEERS
TRP615 Firm No. F-3937

DOUCET
A Kleinfelder Company
Civil Engineering // Entitlements // Geospatial
7401 S. Highway 71 W. Ste. 140
Austin, TX 78735 Tel: (512) 583-2400
www.doucetengineering.com
TDBELS Engineering Firm No. F-2337
TDBELS Surveying Firm No. 10194551

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

EROSION AND
SEDIMENTATION
CONTROL SHEET 2

PLOTTED: Apr 02, 2025 - 10:06am
 Designed: CS
 Drawn: ZD
 Reviewed: DC
 Issue Date: 3/17/25
 SHEET
 6
 OF 22
 Project No.:
 25001006.001A

[illegible]

David A. Clark 04/02/2003

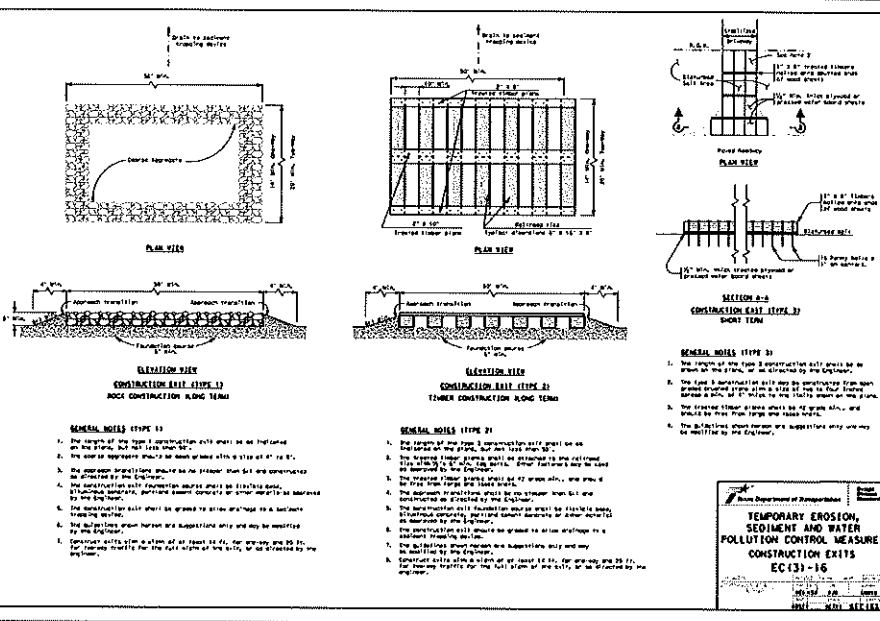
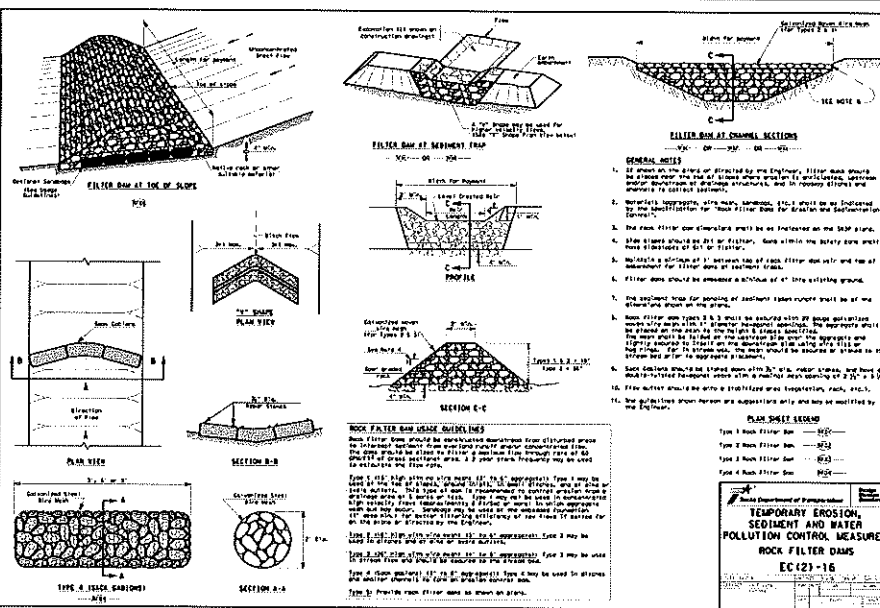
DOUCET ENGINEERS
 TBPEIS Farm No. F-3937

DOUCET
A Kleinfelder Company
Civil Engineering // Earthworks // Geospatial
7401 S. Highway 71 W. Ste. 140
Austin, TX 78753 // (512) 883-2400
www.doucetengineering.com
TYPICAL Engineering Firm No. 73277
TYPICAL Surveying Firm No. 1619431

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

EROSION AND
SEDIMENTATION
CONTROL SHEET 3,
ESC DETAILS

PLOTTED: Apr 02, 2025 - 10:05:11
 Described: CS
 Drawn: ZD
 Reviewed: DC
 Issue Date: 3/17/25
 SHEET
 7
 OF 22
 Project No.:



CONTRACTOR NOTES:

EXISTING UNDERGROUND AND OVERHEAD UTILITIES SHALL BE LOCATED PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL 811 FOR UTILITY LOCATIONS PRIOR TO EXCAVATION. CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS & DEPTHS PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONSIDER PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF DAVID A. CLARK, P.E., TYPED 12/12/12, ON 12/12/12 FOR THE PURPOSES OF REVIEW AND AS NOT TO BE USED FOR CONSTRUCTION PRIOR TO APPROVAL BY ALL GOVERNING AGENCIES.

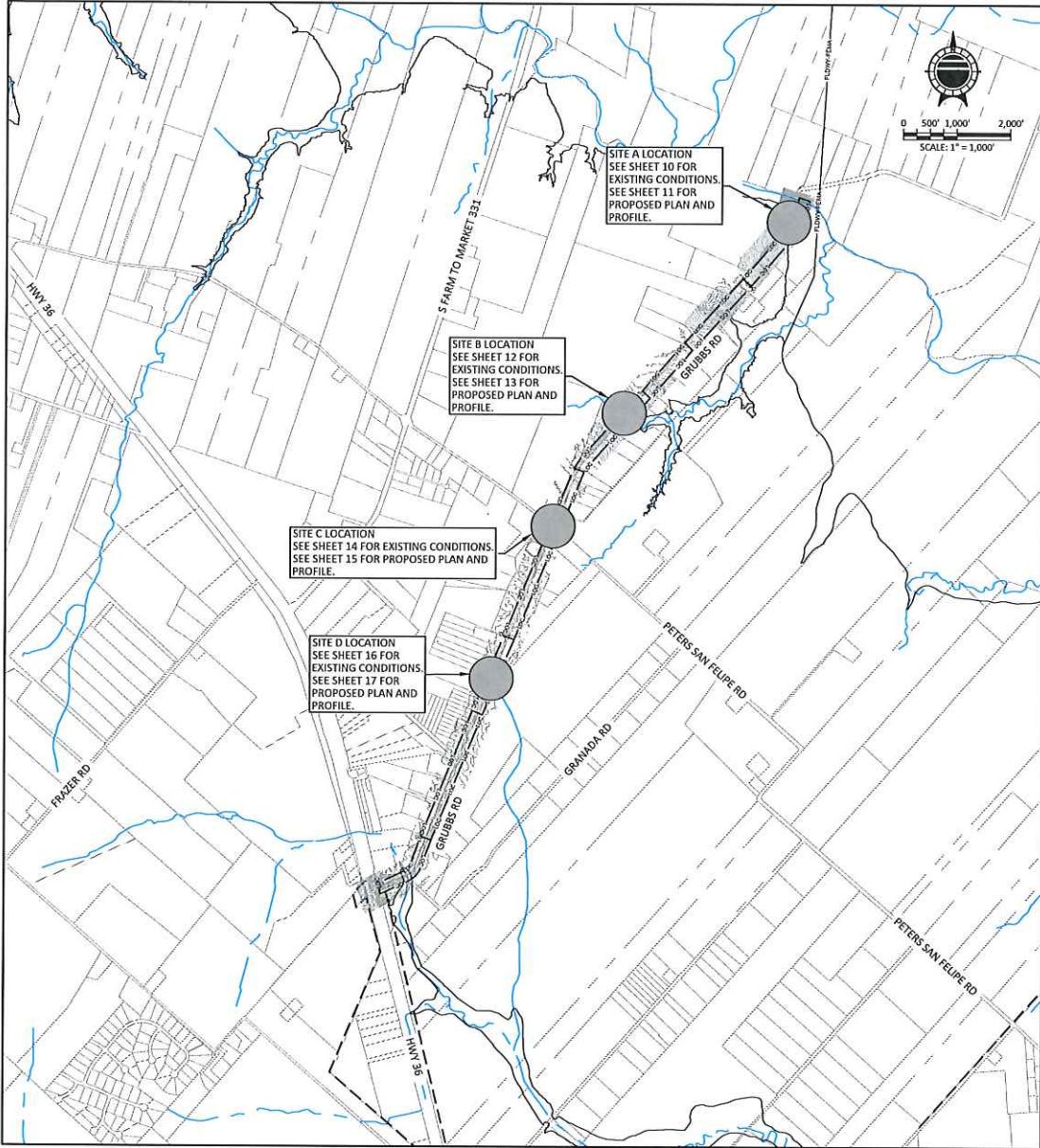
DAVID A. CLARK
REGISTERED PROFESSIONAL ENGINEER
04/10/2012
DOUCET ENGINEERS
10115 FORT LANE, SUITE 100
AUSTIN, TEXAS 78758

DOUCET
A McIntire Company
Civil Engineering & Construction / Geospatial
Austin, TX 78758, Tel: (512) 252-4500
www.doucetengineers.com
TYPED 12/12/12, ON 12/12/12
TYPED 12/12/12, ON 12/12/12

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX

EROSION CONTROL
DETAIL SHEET

PLOTTED: Apr 03, 2015 - 10:05am
Designed: CS
Drawn: ZD
Reviewed: CS
Date Plotted: 04/03/2015
SHEET
8
OF 22
Project No.:
25001006.001A

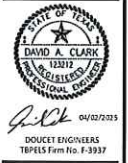


CONTRACTOR NOTES:
EXISTING UNDERGROUND & OVERHEAD UTILITIES IN VICINITY. CONTRACTOR TO CONTACT UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL 811 FOR UTILITY LOCATES PRIOR TO EXCAVATION. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS & DEPTH PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONSIDER PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.

Mitigation Measures and Conditions (40 CFR 1505.2(c))
Summarize below all mitigation measures adopted by the Responsible Party to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure and Conditions
Clean Air Clean Air Act, as amended, particularly section 170(c) & (d); 40 CFR Parts 6, 91, 93	During project construction, there will be some increase in ambient dust particulate from machinery and soil disturbances. These will be only temporary in nature and all efforts will be made through proper construction methods to ensure dust control and properly functioning equipment.
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Contractor shall employ Nationwide Standard Conservation Measures set forth by USFWS. Provide Construction workers with a list of federal threatened and endangered species and state listed rare species. If construction workers identify or encounter threatened or endangered species or state listed rare species, construction should cease immediately and Texas Parks & Wildlife should be contacted for guidance. Acid activities requiring vegetation removal or disturbance during peak bird nesting season (March through August) to prevent the destruction of migratory birds, nests, or eggs. When project activities cannot occur outside the bird nesting season, conduct surveys prior to scheduled activity to determine if active nests are present within the area of impact. If evidence of migratory birds is found, a qualified biologist with USFWS should be notified.
Floodplain Management Executive Order 11980, particularly section 2(a); 24 CFR Part 55	The following efforts shall be made to minimize negative impacts on the natural and beneficial floodplain values for restoration and preservation. • The project shall be implemented using best management practices designed to protect improvements from flood damage. • The project shall be implemented using best management practices designed to protect natural landscapes that serve to maintain or restore natural hydrology through infiltration. • The consulting engineer shall take into consideration additional specifications to minimize damage to and/or restore the native plant species. • The project shall not lead to any significant increases in impermeable cover and shall have no negative impacts on the floodplain. • Additionally, prior to construction, the project plans will meet any applicable, additional local floodplain requirements set forth by the community's Floodplain Administrator. • All state and local floodplain protection procedures will be followed.
Historic Preservation National Historic Preservation Act of 1966, particularly sections 105 and 110; 36 CFR Part 800	Indirect or Discovery Conditions: Historic properties are discovered or cultural materials are encountered during construction or disturbance activities or unanticipated effects on historic properties are found, work should cease in the immediate area and THCA's History Programs, THCA's Archeology Division, should be contacted to consult on further actions that may be necessary to protect historic properties or cultural remains. Work can continue in areas where no historic properties are present.
Wetlands Protection Executive Order 11950, particularly sections 2 and 5	Wetlands and riparian areas will be avoided when possible. When avoidance is not possible, the following efforts shall be made to minimize negative impacts on the natural and beneficial values wetlands provide. • The project shall be implemented using best management practices designed to protect natural landscapes that serve to maintain or restore natural hydrology through infiltration. • The consulting engineer will implement sediment and erosion control measures such as silt fences, sediment basins, or sediment ponds to trap sediment runoff from construction activities and prevent it from entering wetland areas. These measures assist in reducing sedimentation in wetlands and protect water quality. • Best management practices shall be used to prevent unintentional pollution of wetlands. • Examples of best management practices used to prevent pollution are: Inspections for leaks and malfunctions of construction equipment before project work commences and taking precautions to ensure the proper collection and disposal of all on and off site waste. • The consulting engineer shall implement construction techniques that minimize disturbance to wetlands, such as scheduling heavy equipment operation in wetland areas and minimizing soil compaction. They will also limit the duration of construction activities in wetland areas to reduce disturbance and erosion potential. • Preventative construction techniques will be used to reduce the availability of construction related pollutants that might contaminate runoff. • The consulting engineer shall avoid clearing vegetation in wetland areas unless absolutely necessary and also re-establish native vegetation in disturbed areas to stabilize the soil. Preserving and restoring native vegetation in and around the wetlands assists in stabilizing the soil, prevents erosion, and promotes infiltration of water. • The consulting engineer will acquire all necessary permits, including any from USFCA relating to wetlands, prior to construction.

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF DAVID A. CLARK, P.E., TPEL# 123312, ON 02/25/25 FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO APPROVAL BY ALL GOVERNING JURISDICTIONS.

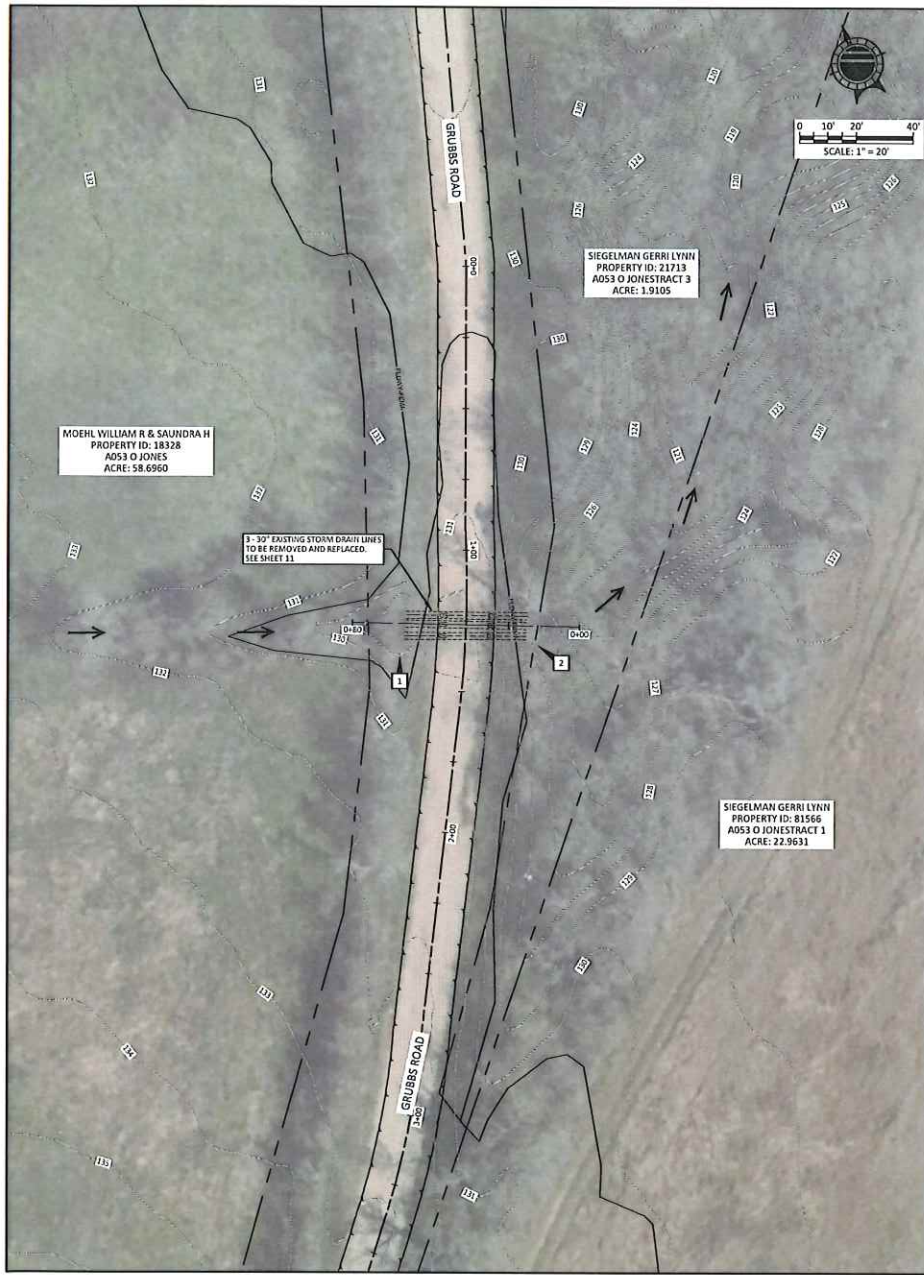


DOUCET
A Kleinfelder Company
Civil Engineering / Environmental / Geospatial
Austin, TX 78721, Tel: (512) 423-4300
Fax: (512) 423-4301
TPEL# 123312
TPEL# Engineering Firm No. 19184551

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

OVERALL STORM
DRAIN SITE PLAN

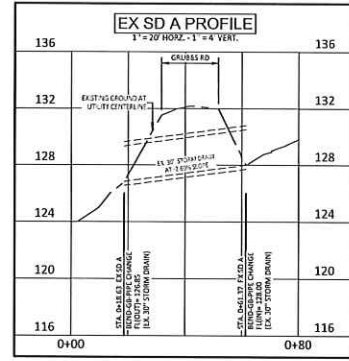
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Designed: CS
Drawn: ZD
Reviewed: DC
Issue Date: 3/17/25
SHEET
9
OF 22
Project No.:
25001005.001A



CONTRACTOR NOTES:
EXISTING UNDERGROUND & OVERHEAD UTILITIES IN VICINITY. CONTRACTOR TO CONTACT UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL 811 FOR UTILITY LOCATES PRIOR TO LOCATION. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS & DEPTH PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONSIDER PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.



- LEGEND**
- EXISTING SITE
 - EXISTING R.O.W. PROPERTY LINE
 - EXISTING EASEMENT LINE
 - EXISTING PAVEMENT
 - EX. CONTIGUOUS
 - EX. WATER LINE
 - EX. WASTE WATER
 - EX. WIDE FENCE
 - EX. WOOD FENCE
 - EX. STORM DRAIN
 - EX. OVERHEAD UTILITIES
 - EX. OVERHEAD ELECTRIC
 - FEMA FLOODPLAIN



Existing SD A: 3 - 30" Corrugated PE Pipes				
Headwater Elevation (ft)	Total Discharge (cfs)	Culvert 1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
128.86	10.00	10.00	0.00	1
130.18	50.00	50.00	0.00	1
132.24	108.00	104.02	3.64	13
132.45	157.00	100.72	56.01	7
132.59	206.00	96.13	109.52	5
132.70	255.00	91.89	162.52	4
132.81	304.00	88.02	215.74	4
132.90	353.00	84.40	268.49	4
132.99	402.00	80.96	320.42	3
133.08	451.00	77.72	372.96	3
133.16	500.00	74.61	425.27	3
132.20	103.20	103.20	0.00	Overtopping

SITE A LIMITS OF CONSTRUCTION INCLUDE APPROXIMATELY 2,000 LINEAR FEET OF GRUBBS RD.

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF DAVID A. CLARK, P.E., TPEL# 123212, ON 4/2/25 FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO APPROVAL BY ALL GOVERNING JURISDICTIONS.

DOUCET
A Kleinfelder Company
Civil Engineering
7401 E. Highway 71 W. Ste. 400
Austin, TX 78725, Tel: (512) 453-6400
TPEL# 123212, F-3327
TPEL# 123212, F-3327
TPEL# 123212, F-3327

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

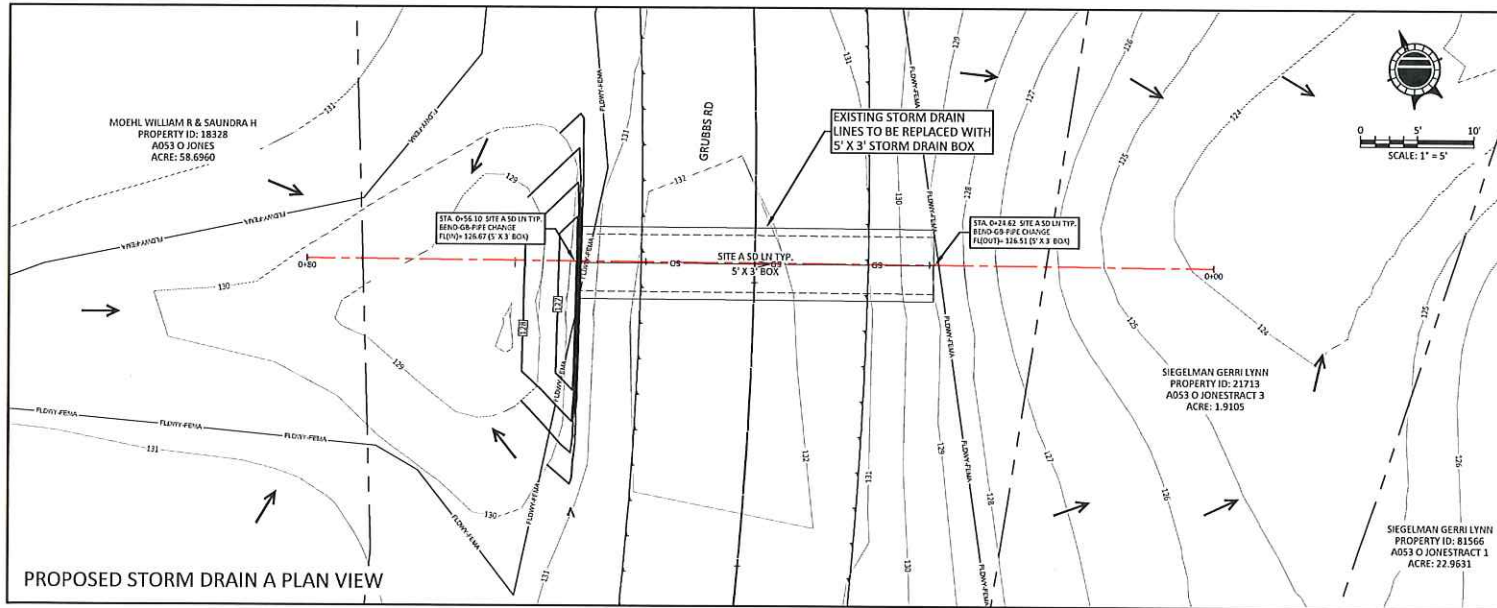
SITE A EXISTING
CONDITIONS SHEET

10
OF 22

Project No.: 25001006.001A

PLOTTED: Apr 02, 2025 - 10:10am
Designed: CS
Drawn: ZD
Reviewed: DC
Issue Date: 3/17/25

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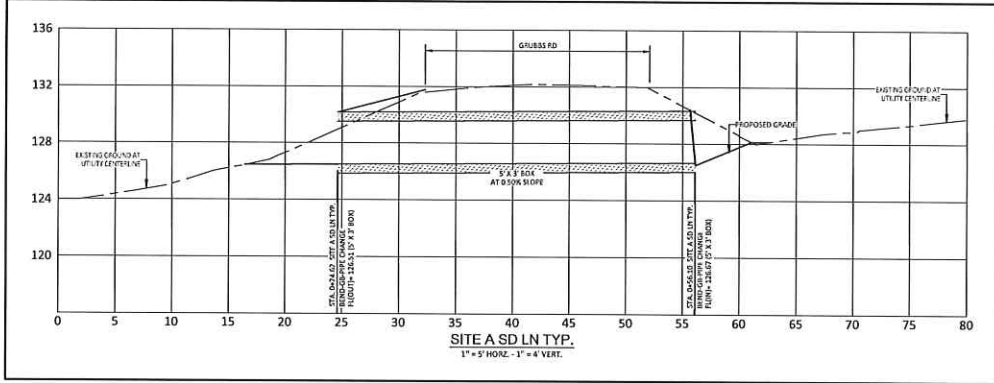


CONTRACTOR NOTES:
EXISTING UNDERGROUND & OVERHEAD UTILITIES IN VICINITY. CONTRACTOR TO CONTACT UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL 811 FOR UTILITY LOCATES PRIOR TO EXCAVATION. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS & DEPTH PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONSIDER PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.



STORM DRAIN LEGEND

- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING PAVEMENT
- EXISTING CREEK/SWALE
- 493 EXISTING CONTOURS
- SD EXISTING STORM DRAIN LINE
- EXISTING STORM DRAIN INLET
- PROPOSED CUB & GUTTER
- PROPOSED CONTOURS
- SD PROPOSED STORM DRAIN LINE
- SD PROPOSED STORM DRAIN INLET
- RD PROPOSED ROAD DOWNSPOUT DRAIN LINE
- PROPOSED CUB INLET
- PROPOSED GRATE INLET
- PROPOSED AREA INLET
- PROPOSED BEEHIVE INLET
- NO PROPOSED INLET NUMBER
- DRAINAGE FLOW DIRECTION



Proposed SD A: 1 - 6'x3' Concrete Box Culvert				
Headwater Elevation	Total Discharge	Culvert 1 Discharge	Roadway Discharge	Iterations
127.76	10	10.0	0.0	1
129.23	50	50.0	0.0	1
131.09	108	108.0	0.0	1
132.33	157	136.4	20.4	11
132.48	206	139.4	66.3	6
132.60	255	139.2	115.6	5
132.72	304	134.3	169.1	4
132.82	353	129.8	223.0	4
132.92	402	125.5	276.4	4
133.01	451	121.4	329.0	3
133.09	500	117.5	382.2	3
132.2	133.7	133.7	0.0	Overtopping

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF DAVID A. CLARK, P.E., TPEL 123313, ON 04/27/25 FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO APPROVAL BY ALL GOVERNING JURISDICTIONS.

DOUCET
A Henselberger Company
Civil Engineering & Surveying
2401 S. Highway 71 W. Ste. 102
Austin, TX 78723, Tel: (512) 252-2400
TPEL'S Engineering Firm No. F-3337
TPEL'S Surveying Firm No. 1514451

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

STORM DRAIN A PLAN
SHEET

PLOTTED: Apr 02, 2025 - 10:11am
Designed: CS
Drawn: ZD
Reviewed: OC
Issue Date: 3/11/25
SHEET
11
OF 22
Project No.: 25001006.001A

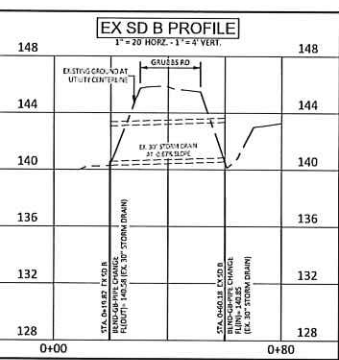
SITE A PROPOSED CULVERT CROSSING
IMPROVEMENTS COMPRISE
APPROXIMATELY 30 LINEAR FEET.



CONTRACTOR NOTES:
EXISTING UNDERGROUND & OVERHEAD UTILITIES IN VICINITY. CONTRACTOR TO CONTACT UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL 811 FOR UTILITY LOCATES PRIOR TO EXCAVATION. CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS & DEPTH PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONSIDER PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.



- LEGEND**
- EXISTING SITE
 - EXISTING R.O.W. PROPERTY LINE
 - EXISTING EASEMENT LINE
 - EXISTING PAVEMENT
 - 495 EX. CONTOURS
 - EX. WATERLINE
 - EX. PLASTER WATER
 - EX. RICE FENCE
 - EX. WOOD FENCE
 - EX. STORM DRAIN
 - EX. OVERHEAD UTILITIES
 - EX. OVERHEAD ELECTRIC
 - EX. FERRA RODDRAIN



Existing SD B: 3 - 30" Corrugated PE Pipes				
Headwater Elevation (ft)	Total Discharge (cfs)	Culvert 1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
141.56	10.00	10.00	0.00	1
143.01	50.00	50.00	0.00	1
145.75	108.00	108.00	0.00	1
146.13	157.00	107.16	49.84	8
146.27	206.00	102.82	102.75	5
146.39	255.00	98.84	156.03	5
146.50	304.00	95.17	208.56	4
146.59	353.00	91.77	261.11	4
146.68	402.00	88.55	312.79	3
146.76	451.00	85.53	365.10	3
146.85	500.00	82.65	417.21	3
145.90	110.56	110.56	0.00	Overtopping

SITE B LIMITS OF CONSTRUCTION INCLUDE APPROXIMATELY 1,900 LINEAR FEET OF GRUBBS RD.

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF DAVID A. CLARK, P.E., TBS# 12312, ON 04/22/25 FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO APPROVAL BY ALL GOVERNING JURISDICTIONS.

DAVID A. CLARK
12312
TBS# 12312
04/22/25

DOUCET ENGINEERS
TBS# Form No. F-3937

DOUCET
A Kleinfelder Company
Civil Engineering / Surveying
2401 S. RYAN ST., SUITE 100
AUSTIN, TX 78745, TEL: (512) 424-4400
FAX: (512) 424-4401
TBS# Form No. F-3937

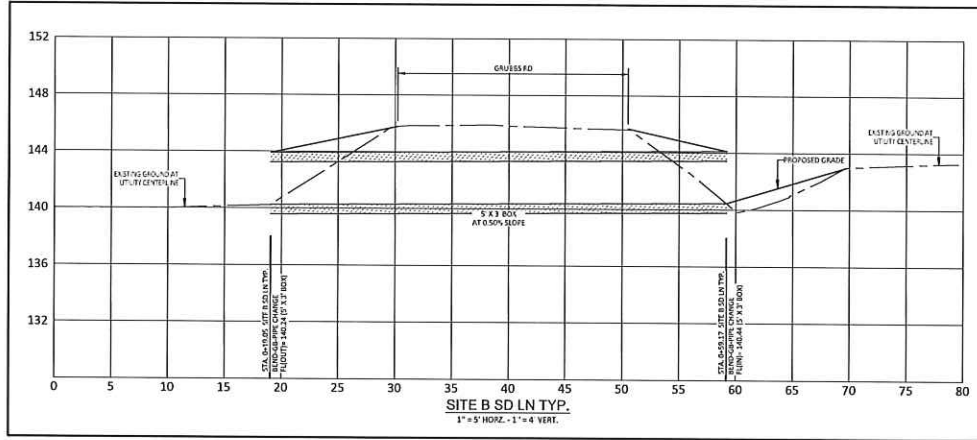
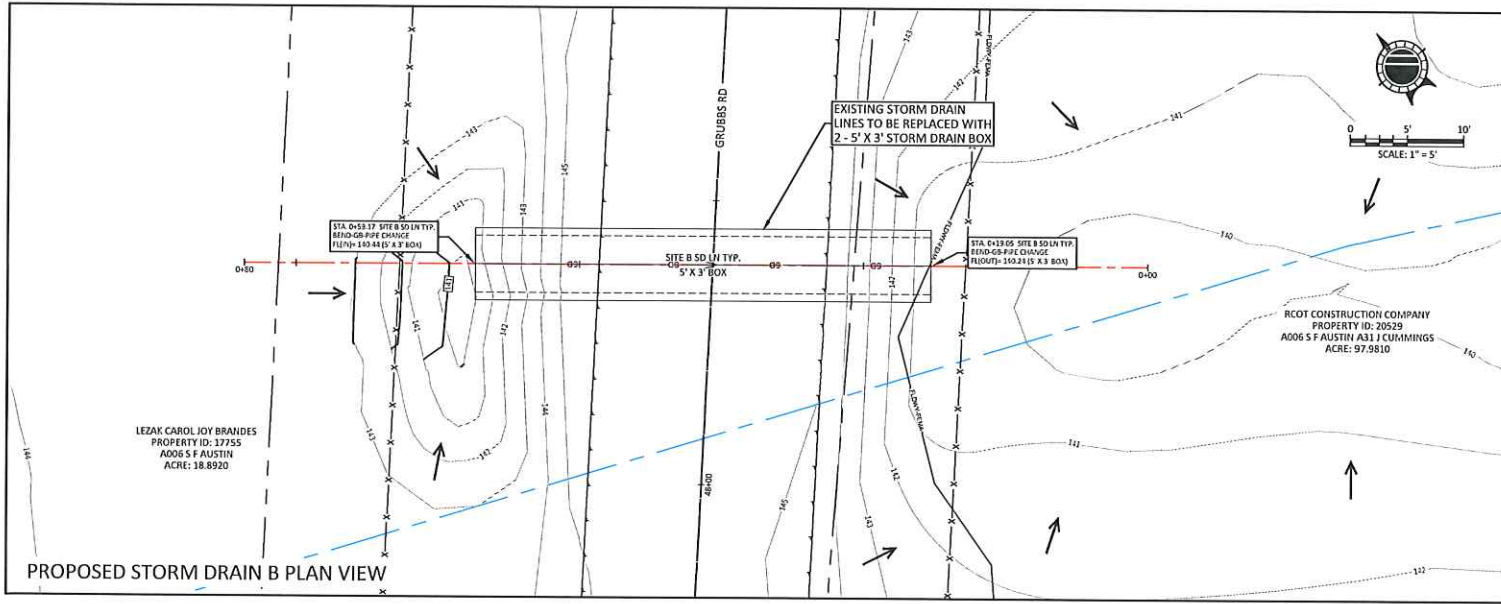
GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

SITE B EXISTING
CONDITIONS SHEET

12
OF 22

Project No.: 25001006.001A

IF THIS SHEET IS NOT 24" X 36", THEN IT IS A REDUCED PRINT.



CONTRACTOR NOTES:
EXISTING UNDERGROUND & OVERHEAD UTILITIES IN VICINITY. CONTRACTOR TO CONTACT UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL 811 FOR UTILITY LOCATIONS PRIOR TO EXCAVATION. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS & DEPTH PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONSIDER PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.



STORM DRAIN LEGEND

- EXISTING R.O.V. / PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING PAVEMENT
- EXISTING CREEK / SWALE
- EXISTING CONDUITS
- EXISTING STORM DRAIN LINE
- EXISTING STORM DRAIN INLET
- PROPOSED CURB & GUTTER
- PROPOSED CONTOURS
- SD - PROPOSED STORM DRAIN LINE
- PROPOSED ROOF DOWNSPOUT
- OSAN LINE
- PROPOSED CURB INLET
- PROPOSED GRATE INLET
- PROPOSED AREA INLET
- PROPOSED BEEHIVE INLET
- PROPOSED INLET FLOWMETER
- DRAINAGE FLOW DIRECTION

Proposed SD B 1- 5'x3' Concrete Box Culvert				
Headwater Elevation	Total Discharge	Culvert 1 Discharge	Roadway Discharge	Iterations
141.49	10	10.0	0.0	1
142.98	50	50.0	0.0	1
144.86	108	108.0	0.0	1
146.03	157	135.0	21.7	10
146.18	206	138.1	67.6	6
146.31	255	136.8	118.0	5
146.42	304	131.9	171.6	4
146.53	353	127.4	225.4	4
146.62	402	123.1	278.8	4
146.71	451	119.0	331.4	3
146.80	500	115.1	384.6	3
145.9	132.2	132.2	0.0	Overlapping

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF DAVID A. CLARK, P.E., TITLE 123112, 014/2025 FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO APPROVAL BY ALL GOVERNING JURISDICTIONS.



DOUCET ENGINEERS
TBPCLS Firm No. F-33937

DOUCET
A Kleinfelder Company
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Fax: (512) 382-2400
TBPCLS Engineering Firm No. F-3327
TBPCLS Surveying Firm No. 01164251

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

STORM DRAIN B PLAN
SHEET

PLOTTED: Apr 03, 2025 - 10:14am

Designed: CS
Drawn: ZD
Reviewed: DO
Issue Date: 3/17/25

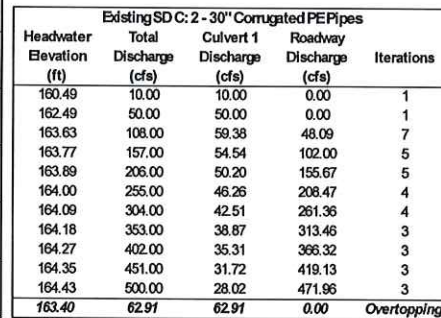
SHEET
13

OF 22

Project No.:
25001006.001A

SITE B PROPOSED CULVERT CROSSING
IMPROVEMENTS COMPRISE
APPROXIMATELY 35 LINEAR FEET.

Drawing: c:\working\Will.dwg
 User: 281001
 Last Modified: Mar. 13, 25 - 18:35
 Plot Date/Time: Apr. 03, 25 - 10:15:11



EXISTING SITE			
---	---	---	EXISTING R.O.W./PROPERTY LINE
---	---	---	EXISTING EASEMENT LINE
---	---	---	EXISTING PAVEMENT
493	EA. CONTIGUOUS	---	SD --- EX. STORM DRAIN
W	EA. WATER LINE	---	Overhead --- EA. OVERHEAD UTILITIES
WW	EA. WASTEWATER	---	Overhead --- EA. OVERHEAD ELECTRIC
X	EA. WIRE FENCE	---	Overhead --- EA. OVERHEAD ELECTRIC
W	EA. WOOD FENCE	---	Overhead --- EA. OVERHEAD ELECTRIC
FWA	FEMA FLOODPLAIN		


 DAVID A. CLARK
 123212
 REGISTERED
 PROFESSIONAL ENGINEER
 04/02/2012
 DOUCET ENGINEERS
 TEPFELS Firm No. E-3057

DOUCET
A Kleinfelder Company
Civil Engineering // Environments // Geospatial

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www.doucetengineers.com
TDBELL Engineering Firm No. F-3237
TDBELL Surveying Firm No. 10194531

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

SITE C EXISTING
CONDITIONS SHEET

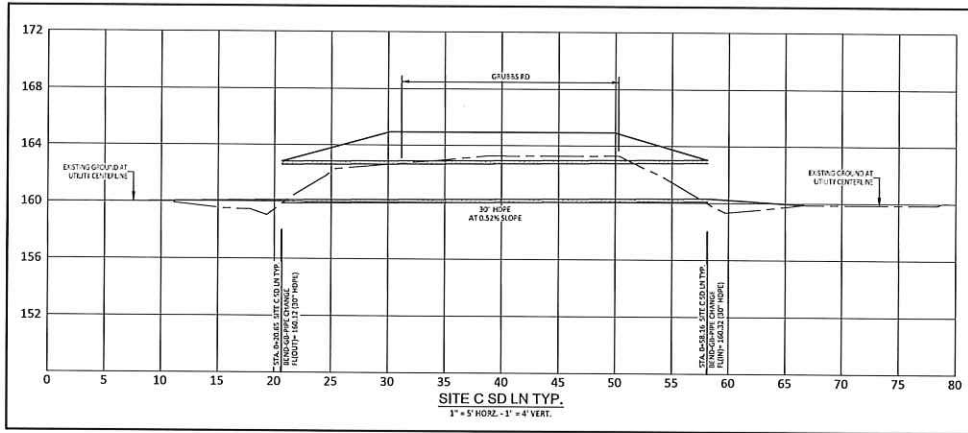
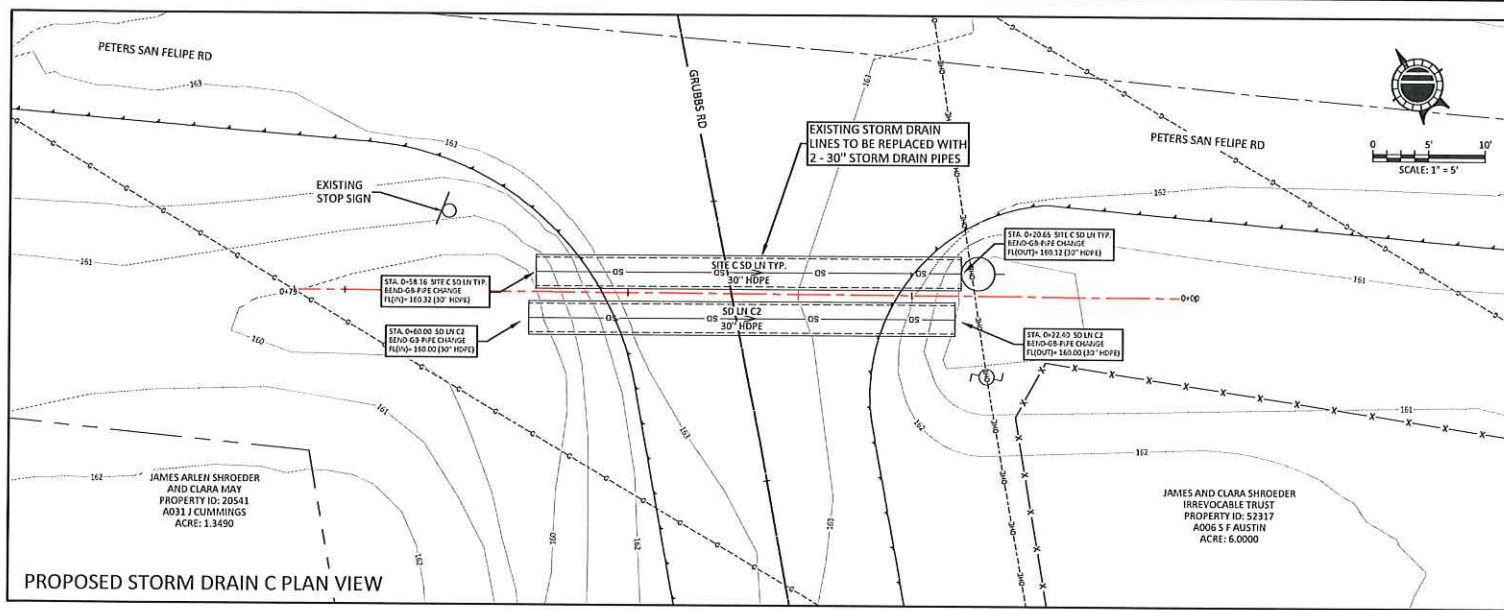
PLOTTED: Apr 02, 2025 - 10:15a
 Designed: CS
 Drawn: ZD
 Reviewed: DC
 Issue Date: 3/17/25

SHEET
14
OF 22

Project No.:
25001006.001A

SITE C LIMITS OF CONSTRUCTION INCLUDE APPROXIMATELY 1,500 LINEAR FEET OF GRUBBS RD.

IF THIS SHEET IS NOT 24" X 36", THEN IT IS A REDUCED PRINT.



CONTRACTOR NOTES:
EXISTING UNDERGROUND & OVERHEAD UTILITIES IN VICINITY. CONTRACTOR TO CONTACT UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL 811 FOR UTILITY LOCATES PRIOR TO EXCAVATION. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS & DEPTH PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONSIDER PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.

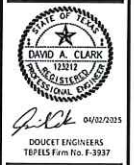


STORM DRAIN LEGEND

- EXISTING R.O.W. / PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING PAVEMENT
- EXISTING CREEK / SWALE
- EXISTING CONTOURS
- EXISTING STORM DRAIN LINE
- EXISTING STORM DRAIN INLET
- PROPOSED CULVERT
- PROPOSED CONTOURS
- PROPOSED STORM DRAIN LINE
- PROPOSED FLOOD DOWNSPOUT
- PROPOSED CULVERT INLET
- PROPOSED GATE INLET
- PROPOSED AREA INLET
- PROPOSED BEEHIVE INLET
- PROPOSED INLET NUMBER
- DRAINAGE FLOW DIRECTION

Proposed SD C: 2 - 30" Thermoplastic (HDPE) Pipe Culverts				
Headwater Elevation	Total Discharge	Culvert 1 Discharge	Roadway Discharge	Iterations
161.46	10	10.0	0.0	1
163.13	50	50.0	0.0	1
163.66	108	49.7	58.0	7
163.81	157	39.0	117.4	5
163.94	206	27.6	178.2	5
164.09	255	15.8	241.6	11
164.32	304	11.5	292.5	6
164.55	353	9.7	346.5	12
164.76	402	8.7	396.0	13
164.97	451	8.1	447.3	13
165.16	500	8.2	488.8	3
163.4	57.0	57.0	0.0	Overtopping

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF DAVID A. CLARK, P.E., TPE&S 13312, ON 4/2/25 FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO APPROVAL BY ALL GOVERNING JURISDICTIONS.



DOUCET
A Kiewit Company
Civil Engineering & Surveying
7401 S. Highway 71 W., Ste. 405
Austin, TX 78725, Tel: (512) 428-2400
TPE&S Engineering Firm No. F-3937
TPE&S Surveying Firm No. 19184551

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

STORM DRAIN C PLAN
SHEET

PLOTTED: Apr 02, 2025 - 10:16am
Designed: CS
Drawn: ZD
Reviewed: DK
Issue Date: 3/17/25
SHEET
15
OF 22
Project No.:
25001006.001A

SITE C PROPOSED CULVERT CROSSING IMPROVEMENTS COMPRISE APPROXIMATELY 35 LINEAR FEET.

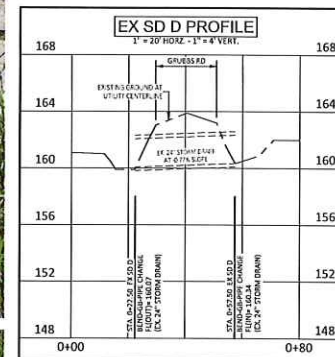
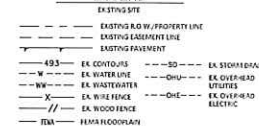


PLOTTED: Apr 02, 2025 - 10:17am
 Designed: CS
 Drawn: ZD
 Reviewed: DC
 Issue Date: 3/17/25
 SHEET
 16
 OF 22
 Project No.:
 25001006.001A

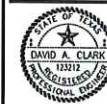
CONTRACTOR NOTES:
EXISTING UNDERGROUND & OVERHEAD UTILITIES
IN VICINITY. CONTRACTOR TO CONTACT UTILITY
COMPANIES PRIOR TO CONSTRUCTION.
CONTRACTOR TO CALL 811 FOR UTILITY LOCATES
PRIOR TO EXCAVATION. CONTRACTOR TO FIELD
VERIFY EXISTING UTILITY LOCATIONS & DEPTH
PRIOR TO BEGINNING CONSTRUCTION.
CONTRACTOR SHALL CONSIDER PROPOSED UTILITY
IMPROVEMENTS AND PROVIDE ADEQUATE
HORIZONTAL AND VERTICAL CLEARANCE DURING
INSTALLATION OF ALL UTILITY INFRASTRUCTURE.



LEGEND



THESE PLANS ARE RELEASED
UNDER THE AUTHORITY OF
DAVID A. CLARK, P.E.,
TBPE# 123212, ON 4/2/25
FOR THE PURPOSES OF
REVIEW AND ARE NOT TO BE
USED FOR CONSTRUCTION
PRIOR TO APPROVAL BY ALL
GOVERNING JURISDICTIONS



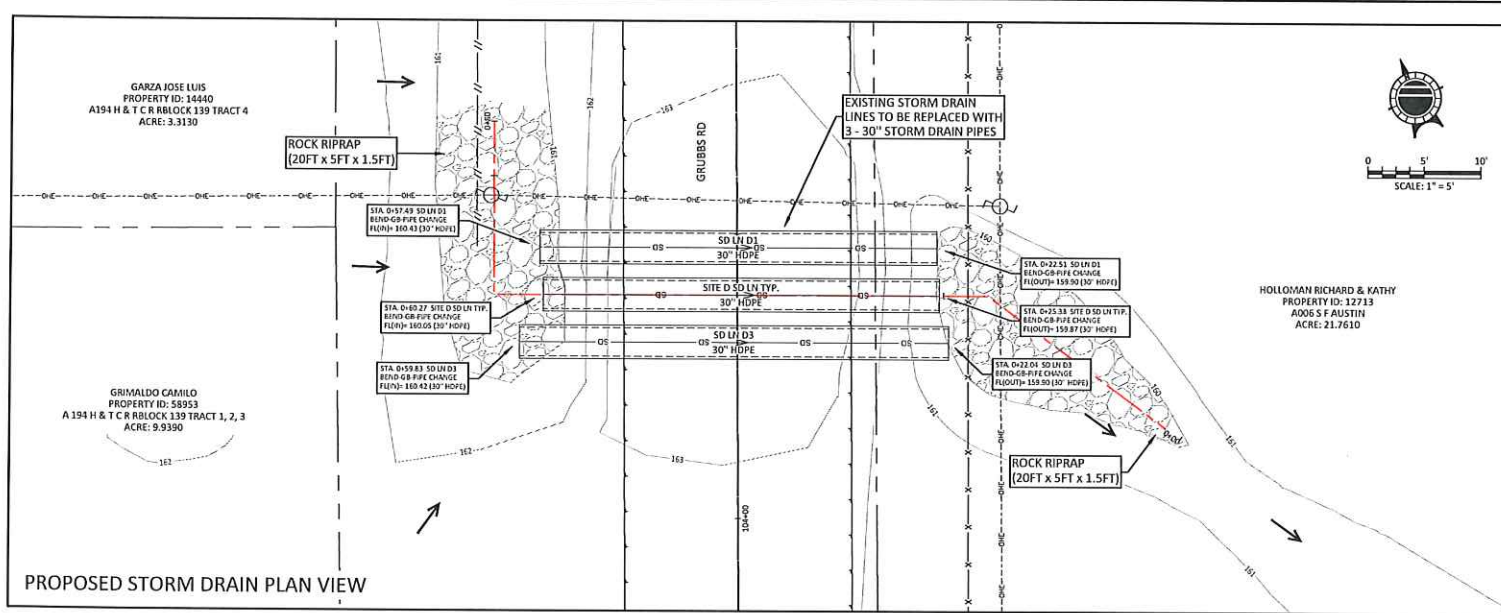
J. Doucet 04/02/2025
DOUCET ENGINEERS
TPELS Firm No. F-3937

DOUCET
A Kleinfelder Company
Civil Engineering // Entitlements // Geospatial
7402 S. Highway 71, Ste. 140
Austin, TX 78735 Tel: (512)-583-2406
www.doucetengineering.com
TDPBLS Engineering Firm No. F-3837
TDPBLS Surveying Firm No. 10194351

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

SITE D EXISTING
CONDITIONS SHEET

IF THIS SHEET IS NOT 24" X 36", THEN IT IS A REDUCED PRINT.

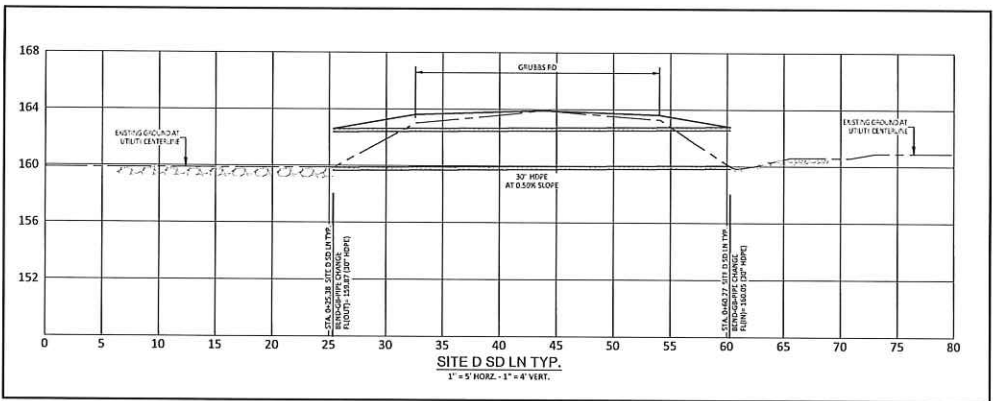


CONTRACTOR NOTES:
EXISTING UNDERGROUND AND OVERHEAD UTILITIES IN VICINITY. CONTRACTOR TO CONTACT UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL 811 FOR UTILITY LOCATES PRIOR TO EXCAVATION. CONTRACTOR TO RE-VERIFY EXISTING UTILITY LOCATIONS & DEPTH PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONSIDER PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.



STORM DRAIN LEGEND

- EXISTING R.O.W./PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING PAVEMENT
- EXISTING CREEK/SWALE
- EXISTING CONTOURS
- EXISTING STORM DRAIN LINE
- EXISTING STORM DRAIN INLET
- PROPOSED CUB & GUTTER
- PROPOSED CONTOURS
- PROPOSED STORM DRAIN LINE
- PROPOSED FLOOD DOWNSPOUT DRAIN LINE
- PROPOSED CUB INLET
- PROPOSED GRATE INLET
- PROPOSED AREA INLET
- PROPOSED BEHIVE INLET
- PROPOSED INLET NUMBER
- DRAINAGE FLOW DIRECTION



Proposed SD D: 3 - 30" Thermoplastic (HDPE) Pipe Culverts

Headwater Elevation	Total Discharge	Culvert 1 Discharge	Roadway Discharge	Iterations
161.10	10	10.0	0.0	1
162.38	50	50.0	0.0	1
163.97	108	100.2	7.7	14
164.18	157	91.3	66.1	6
164.32	206	82.0	123.6	5
164.44	255	73.0	181.4	4
164.55	304	64.1	239.7	4
164.65	353	54.8	298.1	4
164.75	402	45.0	356.3	3
164.85	451	34.8	416.6	4
164.99	500	28.4	473.1	4
163.9	100.5	100.5	0.0	Overtopping

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF DAVID A. CLARK, P.E., TIFER 13313, ON 4/2/25 FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO APPROVAL BY ALL GOVERNING JURISDICTIONS.

DAVID A. CLARK
13313
TIFER 13313
04/02/2025
DOUCET ENGINEERS
TIFER 13313

DOUCET
A HENDERSON COMPANY
Civil Engineering & Surveying
2401 S. Highway 71 W. Ste. 403
Austin, TX 78723, Tel: (512) 482-2400
TIFER 13313
TIFER 13313

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX

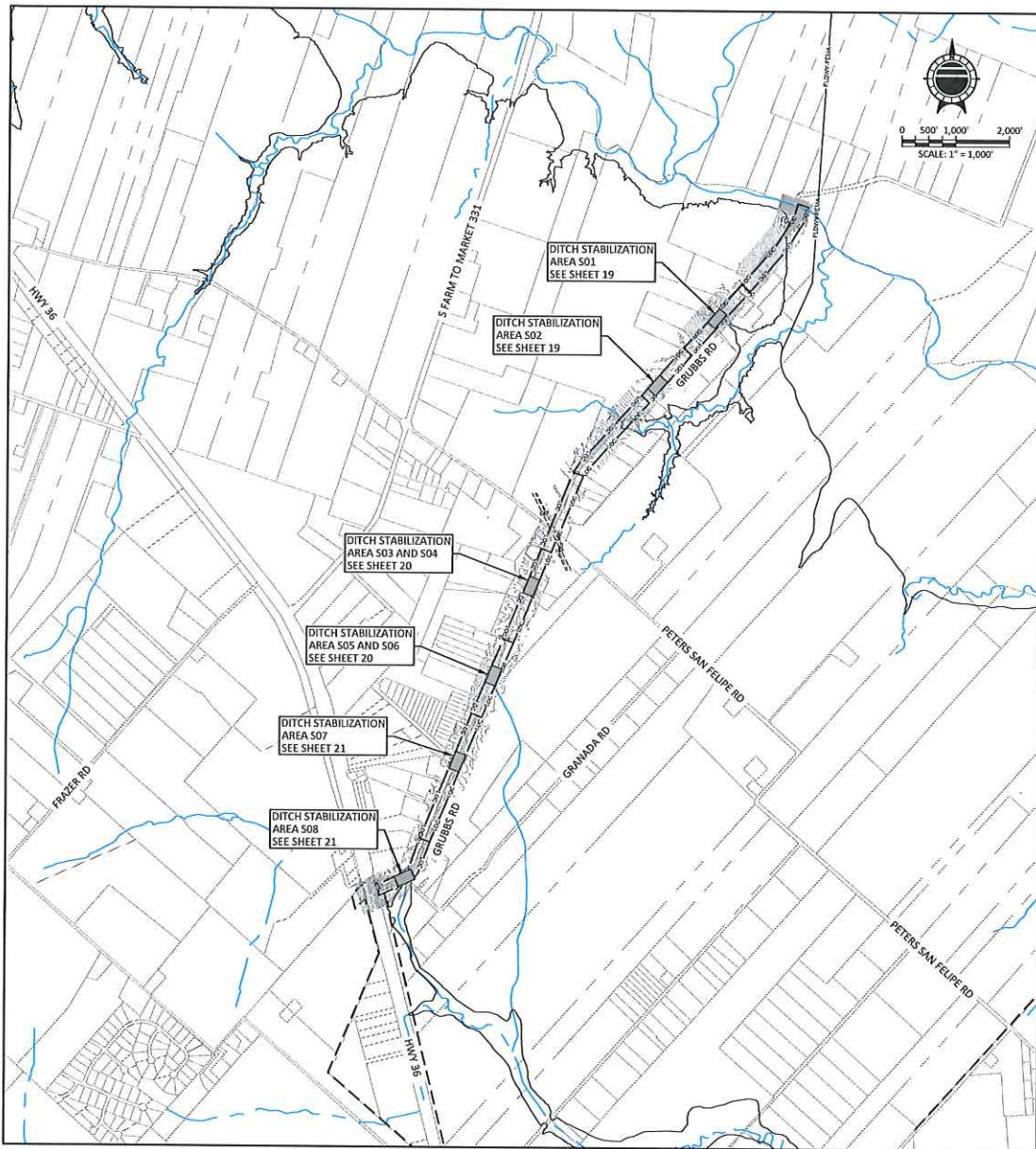
STORM DRAIN D
PLAN SHEET

17
OF 22

Project No.: 25001006.001A

PLOTTED: Apr 02, 2025 - 10:18am
Designed: CS
Drawn: ZD
Reviewed: DC
Issued Date: 3/17/25
SHEET
17
OF 22

SITE D PROPOSED CULVERT CROSSING
IMPROVEMENTS COMPRISE
APPROXIMATELY 30 LINEAR FEET.



CONTRACTOR NOTES:
 EXISTING UNDERGROUND & OVERHEAD UTILITIES IN VICINITY. CONTRACTOR TO CONTACT UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL 811 FOR UTILITY LOCATES PRIOR TO EXCAVATION. CONTRACTOR TO HOLD VERIFY EXISTING UTILITY LOCATIONS & DEPTH PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONSIDER PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.

Mitigation Measures and Conditions [40 CFR 1505.3(c)]

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure and Conditions
Clean Air Clean Air Act, as amended, particularly section 170(c) & (d), 40 CFR Parts 51, 91	During project construction, there will be some increase in ambient dust particles from machinery and soil disturbances. These will be only temporary in nature and all efforts will be made through proper construction methods to ensure dust control and properly functioning equipment. Contractor shall employ National Standard Conservation Measures set forth by USFWS.
Endangered Species Endangered Species Act of 1973, particularly section 7, 50 CFR Part 402	Provide Construction workers with a list of federal threatened and endangered species and state listed rare species. If construction workers identify or encounter threatened or endangered species or state listed rare species, construction should cease immediately and Texas Parks & Wildlife should be contacted for guidance. Avoid activities requiring vegetation removal or disturbance during peak bird nesting season (March through August) to prevent the destruction of migratory birds, nests, or eggs. When project activities cannot occur outside the bird nesting season, conduct surveys prior to scheduled activity to determine if active nests are present within the area of impact. If evidence of migratory birds is found, a qualified biologist with USFWS should be notified.
Floodplain Management Executive Order 11659, particularly section 2(a), 24 CFR Part 55	The following efforts shall be made to minimize negative impacts on the natural and beneficial floodplain values for restoration and preservation. - The project shall be implemented using best management practices designed to protect improvements from flood damage. - The project shall be implemented using best management practices designed to protect natural landscapes that serve to maintain or restore natural hydrology through infiltration. - The consulting engineer shall take into consideration additional specifications to minimize damage to and/or restore the native plant species. - The project shall not lead to any significant increases in impermeable cover and shall have no negative impacts on the floodplain. - Additionally, prior to construction, the project plans will meet any applicable, additional local floodplain requirements set forth by the community's Floodplain Administrator. - All state and local floodplain protection procedures will be followed.
Historic Preservation National Historic Preservation Act of 1966, particularly section 106 and 110, 30 CFR Part 800	Indefinite Discovery Condition: If historic properties are discovered or cultural materials are encountered during construction or disturbance activities or unanticipated effects on historic properties are found, work should cease in the immediate area and THCA's History Program, THCA's Archeology Division, should be contacted to consult on further actions that may be necessary to protect historic properties or cultural remains. Work can continue in areas where no historic properties are present.
Wetlands Protection Executive Order 11659, particularly sections 2 and 5	Wetlands and riparian areas will be avoided when possible. When avoidance is not possible, the following efforts shall be made to minimize negative impacts on the natural and beneficial values wetlands provide: - The project shall be implemented using best management practices designed to protect natural landscapes that serve to maintain or restore natural hydrology through infiltration. - The consulting engineer will implement sediment and erosion control measures such as silt fences, sediment basins, or sediment ponds to trap sediment off from construction activities and prevent it from entering wetland areas. These measures assist in reducing sedimentation in wetlands and protect water quality. - Best management practices shall be used to prevent unintended pollution of wetlands. - Examples of best management practices used to prevent pollution are: inspections for leaks and malfunctions of construction equipment before project work commences and taking precautions to ensure the proper collection and disposal of all on and off-site waste. - The consulting engineer shall implement construction techniques that minimize disturbances to wetlands, such as scheduling heavy equipment operation in wetland areas and minimizing soil compaction. They will also limit the duration of construction activities in wetland areas to reduce disturbance and erosion potential. - Preventative construction techniques will be used to reduce the availability of construction-related pollutants that might contaminate runoff. - The consulting engineer shall avoid clearing vegetation in wetland areas unless absolutely necessary and also re-establish native vegetation in disturbed areas to stabilize the soil, prevent erosion, and promote infiltration of water. - The consulting engineer will acquire all necessary permits, including any from USFWS relating to wetlands, prior to construction.

THESE PLANS ARE RELEASED UNDER THE AUTHORITY OF DAVID A. CLARK, P.E., TEPER 12312, ON 04/22/25 FOR THE PURPOSES OF REVIEW AND ARE NOT TO BE USED FOR CONSTRUCTION PRIOR TO APPROVAL BY ALL GOVERNING JURISDICTIONS.



04/22/2025
 DOUCET ENGINEERS
 TEPER Form No. F-3997

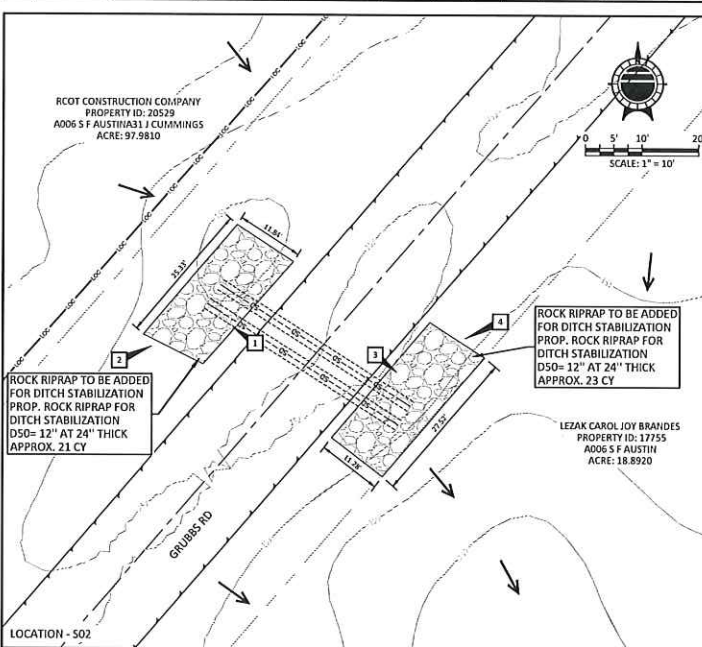
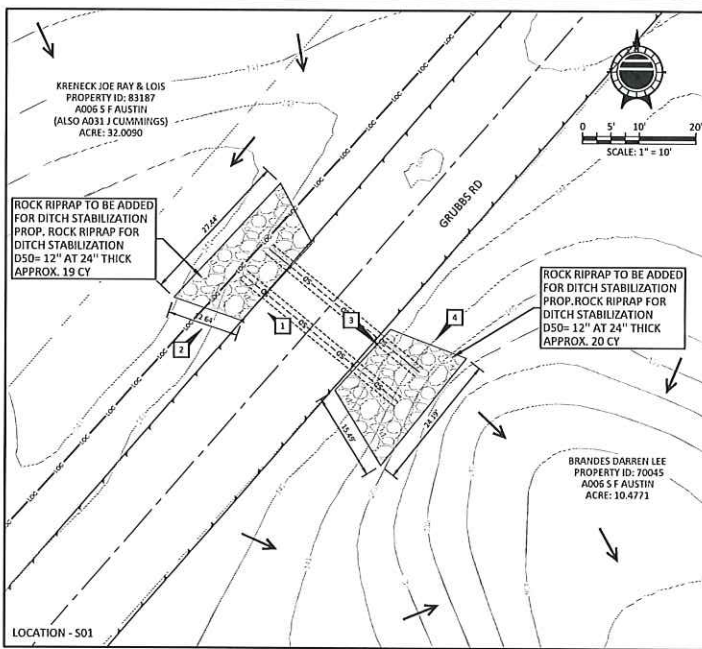
DOUCET
 A Kiewit Company
 Civil Engineering / Environmental / Geospatial
 Austin, TX 78721, Tel: (512) 242-2400
 Email: doucet@kiewit.com
 TEPER Surveying Firm No. 1014251

GRUBBS ROAD
 DRAINAGE IMPROVEMENTS
 AUSTIN COUNTY, TX

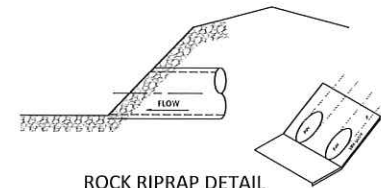
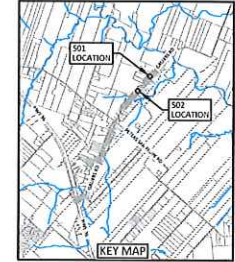
OVERALL DITCH
 STABILIZATION SITE PLAN

PLOTTED: Apr 02, 2025 - 10:20 AM
 Designed: GS
 Drawn: ZD
 Reviewed: OC
 Issue Date: 3/17/25
 SHEET
 18
 OF 22
 Project No.:
 25001006.001A

IF THIS SHEET IS NOT 24" X 36", THEN IT IS A REDUCED PRINT.

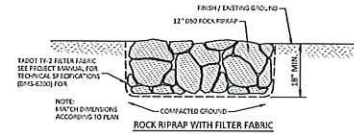


CONTRACTOR NOTES:
EXISTING UNDERGROUND AND OVERHEAD UTILITIES IN VICINITY. CONTRACTOR TO CONTACT UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR TO CALL 811 FOR UTILITY LOCATES PRIOR TO EXCAVATION. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS & DEPTH PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONSIDER PROPOSED UTILITY IMPROVEMENTS AND PROVIDE ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE DURING INSTALLATION OF ALL UTILITY INFRASTRUCTURE.



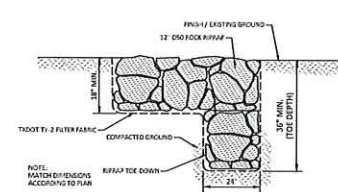
ROCK RIPRAP DETAIL

SCALE: NONE



ROCK RIPRAP SECTION DETAIL

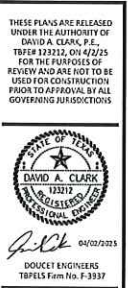
SCALE: NONE



ROCK RIPRAP TOE-DOWN DETAIL

SCALE: NONE

SITE S01 LIMITS OF CONSTRUCTION INCLUDE APPROXIMATELY 1,600 LINEAR FEET OF GRUBBS RD.
SITE S02 LIMITS OF CONSTRUCTION INCLUDE APPROXIMATELY 1,200 LINEAR FEET OF GRUBBS RD.

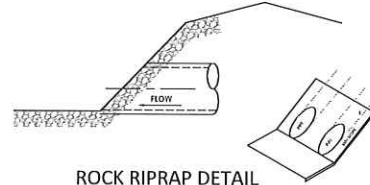
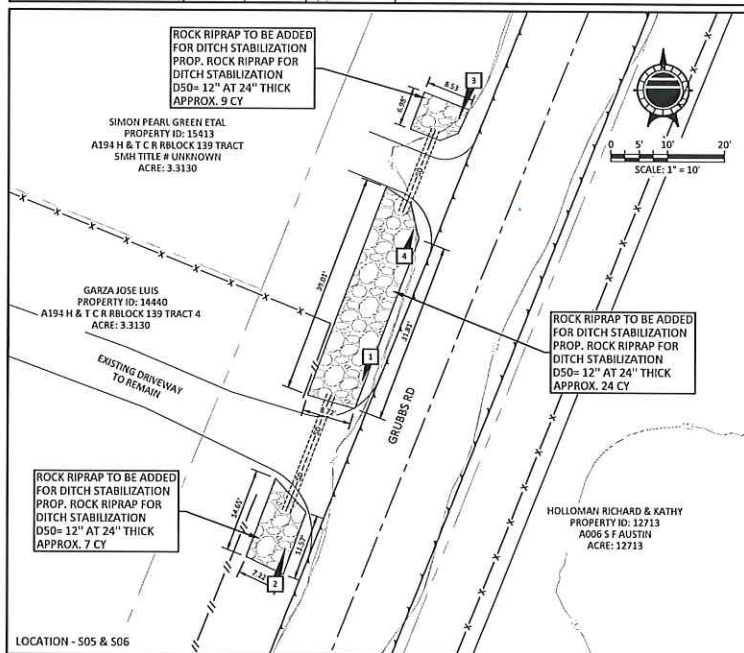
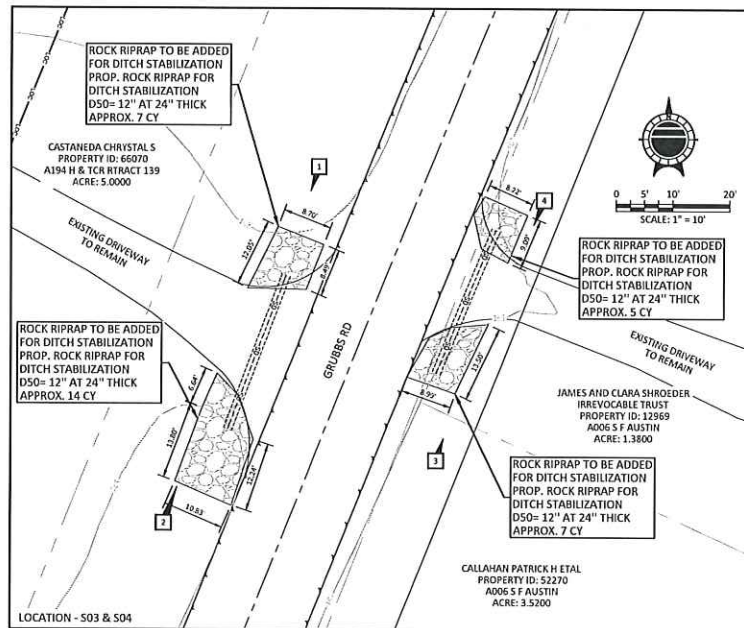


GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

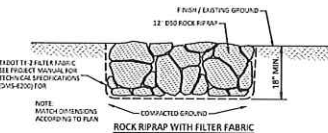
DITCH STABILIZATION
AREAS SHEET 1

PLOTTED: Apr 02, 2025 - 10:31am
Designed: CS
Drawn: ZD
Reviewed: DC
Issue Date: 3/11/25
SHEET
19
OF 22
Project No.: 25001006.001A

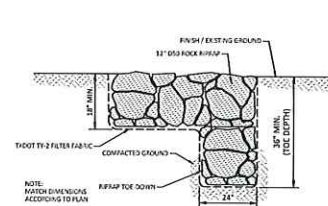
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 User: ZHINCE
 Last Modified: Mar 24, 25 - 10:09
 Print Date/Time: Apr 02, 25 - 10:27:29



SCALE: NONE



SCALE: NONE



SCALE: NONE

SITE 505 & 506 LIMITS OF CONSTRUCTION INCLUDE
APPROXIMATELY 1,500 LINEAR FEET OF GRUBBS RD.



DAVID A. CLARK
123212
REGISTERED
PROFESSIONAL ENGINEER
04/02/2015
DOUCET ENGINEERS
TBPELS Firm No. F-3937

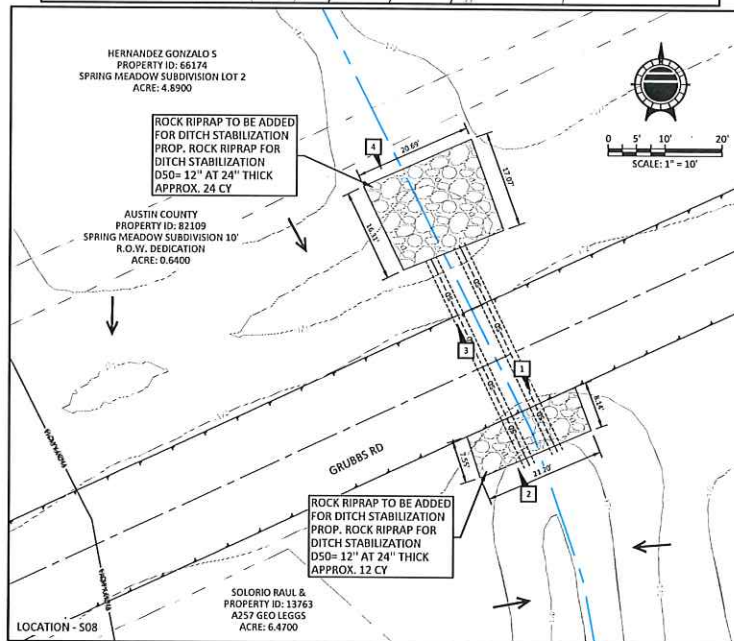
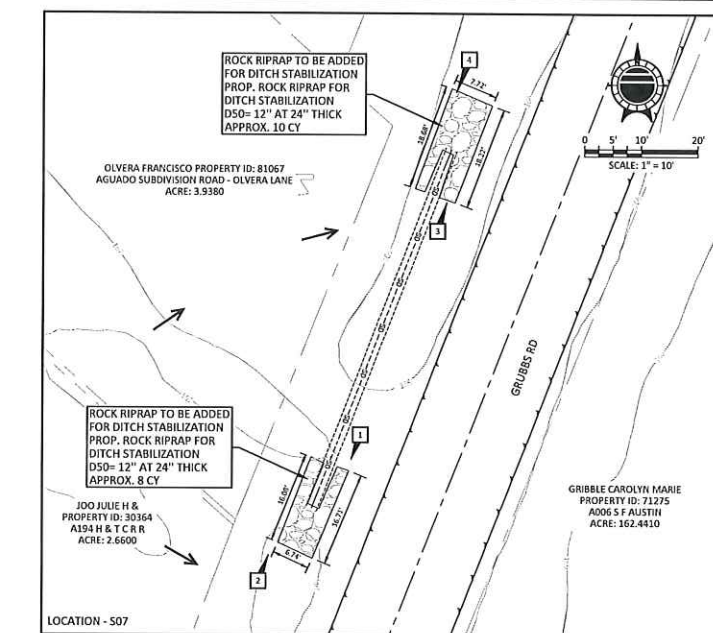
DOUCET
A Kleinfelder Company
Civil Engineering // Environments // Geospatial
7401 S. Highway 71 W. Ste. 140
Austin, TX 78735, Tel: (512)-855-2400
FAX: (512)-855-2401
TAPIRLS Engineering Firm No. F-2027
TAPIRLS Surveying Firm No. 10194251

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

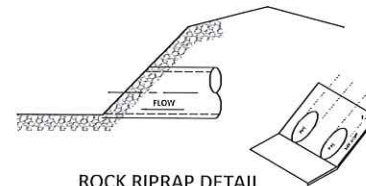
DITCH STABILIZATION
AREAS SHEET 2

PLOTTED: Apr 02, 2025 - 10:22am
 Designed: CS
 Drawn: ZD
 Reviewed: DC
 Issue Date: 3/17/25
 SHEET
 20
 OF 22
 Project No.:
 25001006.001A

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Jan 2010 DCE
Last Modified: Mar 24, 25 - 10:09
ISO Date/Time: Apr 02, 25 - 10:22:55

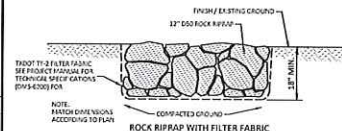


CONTRACTOR NOTES:
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IN VICINITY. CONTRACTOR TO CONTACT UTILITY
COMPANIES PRIOR TO CONSTRUCTION.
CONTRACTOR TO CALL 811 FOR UTILITY LOCATES
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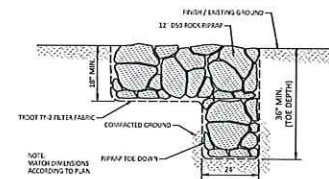
ROCK RIPRAP DETAIL

SCALE: NONE



ROCK RIPRAP SECTION DETAIL

SCALE: NONE



ROCK RIPRAP TOE-DOWN DETAIL

SCALE: NONE

SITE 507 LIMITS OF CONSTRUCTION INCLUDE APPROXIMATELY 2,500 LINEAR FEET OF GRUBBS RD.
SITE 508 LIMITS OF CONSTRUCTION INCLUDE APPROXIMATELY 1,400 LINEAR FEET OF GRUBBS RD.



Grilck 04/02/2023
DOUCET ENGINEERS
TBP&S Firm No. F-3937

DOUCET
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Civil Engineering // Environments // Geospatial

7401 S. Highway 71 W, Ste. 140
Austin, TX 78734 Tel: (512)-383-2400
www.douceteng.com
TUPDLS Engineering Firm No. F-3237
TUPDLS Surveying Firm No. 10194251

GRUBBS ROAD
DRAINAGE IMPROVEMENTS
AUSTIN COUNTY, TX.

DITCH STABILIZATION
AREAS SHEET 3

PLOTTED: Apr 02, 2025 - 10:22a
 Designed: CS
 Drawn: ZD
 Reviewed: DC
 Issue Date: 3/17/25

SHEET
21

Project No.:
25001006.001A

10/10/74

DESIGNER NOTICE
This drawing is to be used for the design of the structure. It is not to be used for the construction of the structure. The designer is responsible for the design of the structure. The contractor is responsible for the construction of the structure. The engineer is responsible for the engineering of the structure. The architect is responsible for the architecture of the structure. The interior designer is responsible for the interior design of the structure. The landscape architect is responsible for the landscape architecture of the structure. The civil engineer is responsible for the civil engineering of the structure. The mechanical engineer is responsible for the mechanical engineering of the structure. The electrical engineer is responsible for the electrical engineering of the structure. The chemical engineer is responsible for the chemical engineering of the structure. The industrial engineer is responsible for the industrial engineering of the structure. The agricultural engineer is responsible for the agricultural engineering of the structure. The marine engineer is responsible for the marine engineering of the structure. The aerospace engineer is responsible for the aerospace engineering of the structure. The nuclear engineer is responsible for the nuclear engineering of the structure. The biomedical engineer is responsible for the biomedical engineering of the structure. The environmental engineer is responsible for the environmental engineering of the structure. The food engineer is responsible for the food engineering of the structure. The textile engineer is responsible for the textile engineering of the structure. The paper engineer is responsible for the paper engineering of the structure. The printing engineer is responsible for the printing engineering of the structure. The transportation engineer is responsible for the transportation engineering of the structure. The communication engineer is responsible for the communication engineering of the structure. The information engineer is responsible for the information engineering of the structure. The management engineer is responsible for the management engineering of the structure. The business engineer is responsible for the business engineering of the structure. The social engineer is responsible for the social engineering of the structure. The health engineer is responsible for the health engineering of the structure. The education engineer is responsible for the education engineering of the structure. The law engineer is responsible for the law engineering of the structure. The arts and humanities engineer is responsible for the arts and humanities engineering of the structure. The engineering of the structure is the responsibility of the engineer.

NOTES
1. The structure is to be constructed of concrete. 2. The structure is to be constructed of steel. 3. The structure is to be constructed of wood. 4. The structure is to be constructed of masonry. 5. The structure is to be constructed of brick. 6. The structure is to be constructed of stone. 7. The structure is to be constructed of glass. 8. The structure is to be constructed of plastic. 9. The structure is to be constructed of metal. 10. The structure is to be constructed of rubber. 11. The structure is to be constructed of leather. 12. The structure is to be constructed of fabric. 13. The structure is to be constructed of paper. 14. The structure is to be constructed of cardboard. 15. The structure is to be constructed of foam. 16. The structure is to be constructed of insulation. 17. The structure is to be constructed of paint. 18. The structure is to be constructed of varnish. 19. The structure is to be constructed of oil. 20. The structure is to be constructed of water. 21. The structure is to be constructed of air. 22. The structure is to be constructed of earth. 23. The structure is to be constructed of fire. 24. The structure is to be constructed of lightning. 25. The structure is to be constructed of thunder. 26. The structure is to be constructed of rain. 27. The structure is to be constructed of snow. 28. The structure is to be constructed of ice. 29. The structure is to be constructed of wind. 30. The structure is to be constructed of sun. 31. The structure is to be constructed of moon. 32. The structure is to be constructed of stars. 33. The structure is to be constructed of planets. 34. The structure is to be constructed of galaxies. 35. The structure is to be constructed of the universe. 36. The structure is to be constructed of everything. 37. The structure is to be constructed of nothing. 38. The structure is to be constructed of everything and nothing. 39. The structure is to be constructed of everything, nothing, and everything. 40. The structure is to be constructed of everything, nothing, and everything, and everything.

GENERAL NOTES
1. The structure is to be constructed of concrete. 2. The structure is to be constructed of steel. 3. The structure is to be constructed of wood. 4. The structure is to be constructed of masonry. 5. The structure is to be constructed of brick. 6. The structure is to be constructed of stone. 7. The structure is to be constructed of glass. 8. The structure is to be constructed of plastic. 9. The structure is to be constructed of metal. 10. The structure is to be constructed of rubber. 11. The structure is to be constructed of leather. 12. The structure is to be constructed of fabric. 13. The structure is to be constructed of paper. 14. The structure is to be constructed of cardboard. 15. The structure is to be constructed of foam. 16. The structure is to be constructed of insulation. 17. The structure is to be constructed of paint. 18. The structure is to be constructed of varnish. 19. The structure is to be constructed of oil. 20. The structure is to be constructed of water. 21. The structure is to be constructed of air. 22. The structure is to be constructed of earth. 23. The structure is to be constructed of fire. 24. The structure is to be constructed of lightning. 25. The structure is to be constructed of thunder. 26. The structure is to be constructed of rain. 27. The structure is to be constructed of snow. 28. The structure is to be constructed of ice. 29. The structure is to be constructed of wind. 30. The structure is to be constructed of sun. 31. The structure is to be constructed of moon. 32. The structure is to be constructed of stars. 33. The structure is to be constructed of planets. 34. The structure is to be constructed of galaxies. 35. The structure is to be constructed of the universe. 36. The structure is to be constructed of everything. 37. The structure is to be constructed of nothing. 38. The structure is to be constructed of everything and nothing. 39. The structure is to be constructed of everything, nothing, and everything. 40. The structure is to be constructed of everything, nothing, and everything, and everything.

CONCRETE WALLS WITH PARALLEL WINGS FOR BOX CURVES
TYPES PW-1 AND PW-2

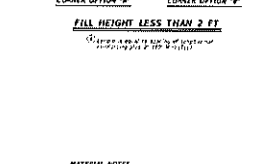
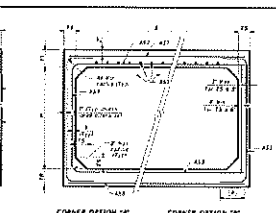
PW

State Department of Transportation

Notes:
1. The structure is to be constructed of concrete. 2. The structure is to be constructed of steel. 3. The structure is to be constructed of wood. 4. The structure is to be constructed of masonry. 5. The structure is to be constructed of brick. 6. The structure is to be constructed of stone. 7. The structure is to be constructed of glass. 8. The structure is to be constructed of plastic. 9. The structure is to be constructed of metal. 10. The structure is to be constructed of rubber. 11. The structure is to be constructed of leather. 12. The structure is to be constructed of fabric. 13. The structure is to be constructed of paper. 14. The structure is to be constructed of cardboard. 15. The structure is to be constructed of foam. 16. The structure is to be constructed of insulation. 17. The structure is to be constructed of paint. 18. The structure is to be constructed of varnish. 19. The structure is to be constructed of oil. 20. The structure is to be constructed of water. 21. The structure is to be constructed of air. 22. The structure is to be constructed of earth. 23. The structure is to be constructed of fire. 24. The structure is to be constructed of lightning. 25. The structure is to be constructed of thunder. 26. The structure is to be constructed of rain. 27. The structure is to be constructed of snow. 28. The structure is to be constructed of ice. 29. The structure is to be constructed of wind. 30. The structure is to be constructed of sun. 31. The structure is to be constructed of moon. 32. The structure is to be constructed of stars. 33. The structure is to be constructed of planets. 34. The structure is to be constructed of galaxies. 35. The structure is to be constructed of the universe. 36. The structure is to be constructed of everything. 37. The structure is to be constructed of nothing. 38. The structure is to be constructed of everything and nothing. 39. The structure is to be constructed of everything, nothing, and everything. 40. The structure is to be constructed of everything, nothing, and everything, and everything.

FILL HEIGHT LESS THAN 2 FT

(Use a max of 10 ft for W or length or 10 ft for L or 10 ft for P, 100' W or 100' L)

[illegible]

PLOTTED: Apr 02, 2025 - 10:23 AM
 Designed CS
 Drawn ZD
 Plotted DC
 Issue Date: 3/17/25
 SHEET
 22
 OF 22
 Project No.: 25001006.001A