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September 28, 2022
AVO 37449.004

Ms. Ramie Hammonds
Development Services Director/Building Official
City of Sanger
201 Bolivar Street
P.O. Box 1729
Sanger, Texas 76266

Re: **Lonesome Dove Addition – Final Plat**
First Review

Dear Ms. Hammonds,

Halff Associates, Inc. was requested by the City of Sanger to provide a first review of the Civil Plans for the Lonesome Dove Addition located near the intersection of Metz Road and Hoehn Road. The proposed improvements are located within the City of Sanger ETJ. The plans were prepared by Westfall Engineering and are dated September 13, 2022.

It is our understanding that Planning and Zoning approved the preliminary plat with the following variances approved:

1. The minimum of 1.5 acre for Estate lots not apply
2. Maximum cul-de-sac length to not apply
3. Maximum block length to not apply

We have completed the civil review of the plans and have the below comments. Please note a detailed Hydrology and Hydraulic review is forth coming.

Final Plat Sheet 1 of 2:

1. Not a true statement. State the exception you received from Planning and Zoning for undersized lots.
2. Entire 16' drainage easement needs to be in lot. Cannot split with neighboring parcel.

C3.00 – Paving Plan and Profile:

1. City requires an 8-inch minimum of lime stabilized.
2. Provide radius for cul-de-sac returns.
3. Provide radius for curb returns at the intersection of Lonesome Dove Trail and Metz Road.
4. Increase K value to meet 30 mph design speed.
5. HGL for both culverts is above ditch high point. This will cause carry over which is not accounted for in your calculations
6. Verify. Center of pipe is higher than upstream invert.

C4.00 – Grading Plan:

1. The proposed ditch between Lot 5 and Lot 6 will not have capacity as currently shown.
2. All ditches must meet minimum of 0.5% longitudinal slope.
3. Do not want ROW/Property line within the flooded area (HGL). Pull ROW back beyond HGL elevation and beyond rock rubble.
4. Per city ordinance all channels shall be trapezoidal with a max velocity of 6 ft/s and allows 1' of freeboard.
5. All Sections. Provide edge of pavement call out with elevation, property line with elevation, provide ditch section has 1' of freeboard.
6. Section B-B does not take into account HGL at structure.
7. Verify direction of Section Section B-B. Downstream HGL should not be higher than upstream.
8. Lot to Lot drainage is not permitted.
9. Provide section downstream in existing ditch 100' downstream of Culvert A.

C4.01 – Grading Plan:

1. The proposed ditch between Lots 9, 10, and 11 will not have capacity as currently shown. Drainage will bypass these channels and follow the existing contours and cross lot lines.
2. Proposed contours between Lots 18 and Lot 19 as well as Lot 21 and 22 show a lowpoint behind the houses.
3. Provide minimum 0.5 % longitudinal slope for all ditches. Provide more control for your contractor.

C5.00 – Downstream Assessment:

1. Detailed H&H comments are forthcoming.

C6.00 – Storm Culvert A and B and C Plan and Profile:

1. Hoehn intersection will need to be reconstructed. Show your proposed improvements (Plan and Profile).
2. Provide proposed grading and show existing contours. I am concerned with downstream ditch capacity.
3. Headwall is too close to edge of pavement and is within clear zone.
4. Provide box culvert details and Traffic control Plan.
5. Pull ROW back out of Headwater depth and out from stone riprap.
6. Provide 1' of freeboard.
7. HW is higher than the highpoint of road ditch. Will have split flow to Culvert C. This has not been accounted for.
8. Verify grading. Ditch between lots should be draining to culvert.
9. Remove high point in ditch. Do not pond water.

10. HW is higher than the highpoint of road ditch. Will have split flow to adjacent Culvert. This has not been accounted for.

C6.00 – Storm Culvert D and E Plan and Profile:

1. HW is higher than the highpoint of road ditch. Will have split flow to adjacent Culvert. This has not been accounted for.
2. HW is higher than the highpoint of road ditch. Will have split flow to adjacent Culvert. This has not been accounted for.

C6.02 – Storm Culvert Calculations:

1. Verify calculations. Appears to be bypass in ditches which are not accounted for in these calcs.

C7.00 – Utility Plan:

1. Provide fire hydrant at intersection.
2. City requires letter from Bolivar WSC stating they can supply the subdivision with water and they approve your design.
3. Max distance between fire hydrants is 500 feet. Evaluate spacing between all fire hydrants.

C8.00 – Signage Plan:

1. Provide stop bar.
2. Remove weigh limit sign unless County has a requirement.

C9.00 – Erosion Control Plan:

1. Show entire limits of work and provide erosion control measures.

The Engineer/Owner shall revise the plans to address the above-stated comments. If you have any questions or need additional information, please do not hesitate to call me at (817) 764-7480.

Sincerely,

HALFF ASSOCIATES, INC.
TBPELS Firm No. 312



Steven D. Templer, P.E.

Attachments: markups

CIVIL CONSTRUCTION PLANS

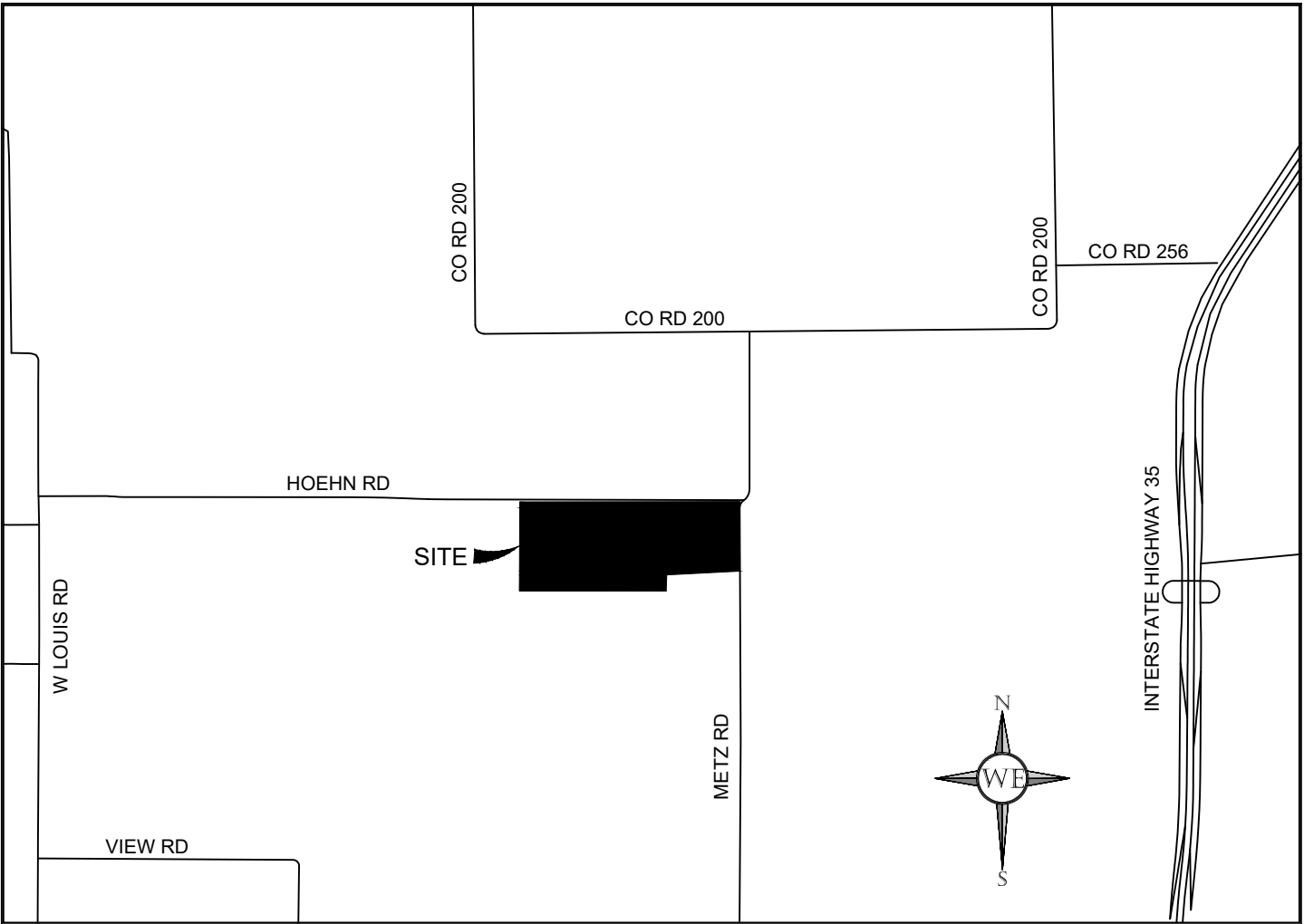
FOR

LONESOME DOVE

METZ ROAD AND HOEHN ROAD
SANGER ETJ, DENTON COUNTY, TEXAS

SUBMITTAL LOG

DATE	DESCRIPTION
SEPTEMBER 2022	CITY REVIEW SUBMITTAL



N.T.S.

SHEET INDEX

SHEET NO.	SHEET TITLE
C1.00	COVER SHEET
C1.01	GENERAL NOTES
C1.02	FINAL PLAT
C2.00	DEMOLITION PLAN
C3.00	PAVING PLAN AND PROFILE
C3.01	PAVING PLAN AND PROFILE
C4.00	GRADING PLAN
C4.01	GRADING PLAN
C5.02	DRAINAGE AREA MAP
C5.00	PRE-PROJECT DOWNSTREAM ASSESSMENT
C5.01	POST-PROJECT DOWNSTREAM ASSESSMENT
C5.03	DRAINAGE AREA MAP
C6.00	STORM CULVERT A AND B AND C PLAN AND PROFILE
C6.02	STORM CULVERT D AND E PLAN AND PROFILE
C6.02	STORM CULVERT CALCULATIONS
C7.00	UTILITY PLAN
C8.00	SIGNAGE PLAN
C9.00	EROSION CONTROL PLAN
C9.01	EROSION CONTROL DETAILS
C10.00	CONSTRUCTION DETAILS
C11.01	CONSTRUCTION DETAILS
C10.02	CONSTRUCTION DETAILS

OWNER / DEVELOPER

TRACOM ENTERPRISES INC
4925 GREENVILLE AVE STE 200,
DALLAS, TX, 75206
CONTACT: KEITH SMITH

SURVEYOR

BURKS LAND SURVEYING
223 CR 1260
DECATUR, TX 76255
CONTACT: QUINT BURKS, RPLS

ENGINEER

WESTFALL
ENGINEERING

1719 ANGEL PKWY, SUITE 400-206
ALLEN, TX 75002
TBPE FIRM REG. #19101
(817) 657-4759
CONTACT: HEATH VOYLES, P.E.

THIS DOCUMENT IS RELEASED FOR
REVIEW PURPOSES ONLY UNDER
THE AUTHORITY OF HEATH VOYLES,
P.E. 107823 ON
09/13/2022. IT IS NOT TO BE USED
FOR CONSTRUCTION.

SEPTEMBER 2022

OVERALL:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE PLANS, CITY (OR TOWN) STANDARD DETAILS AND SPECIFICATIONS. THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE CITY SPECIFICATIONS SHALL GOVERN WHERE OTHER SPECIFICATIONS DO NOT EXIST. IN CASE OF CONFLICTING SPECIFICATIONS OR DETAILS, THE MORE RESTRICTIVE SPECIFICATION AND DETAIL SHALL BE FOLLOWED.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF CHICAGO. FOR INSTANCES WHERE THEY DO NOT CONFLICT WITH THESE WESTPALL FARMLEIGH, PLLC GENERAL NOTES, THEN THE MORE RESTRICTIVE SHALL APPLY. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE PLANS.
3. THE CONTRACTOR SHALL COMPLY WITH ALL CITY ORDINANCES, ORDINANCES, ORDINANCES AND ORDINANCES.
4. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE EXISTING CONDITIONS.
5. THE CONTRACTOR SHALL REVIEW AND VERIFY THE EXISTING TOPOGRAPHIC SURVEY SHOWN ON THE PLANS PREPARED BY THE PROJECT SURVEYOR, AND ARE BASED ON THE BENCHMARKS SHOWN. THE CONTRACTOR SHALL REFERENCE THE SAME BENCHMARKS.
6. THE CONTRACTOR SHALL REVIEW AND VERIFY THE EXISTING TOPOGRAPHIC SURVEY SHOWN ON THE PLANS REPRESENTS EXISTING FIELD CONDITIONS PRIOR TO CONSTRUCTION, AND SHALL REPORT ANY DISCREPANCIES FOUND TO THE OWNER AND ENGINEER IMMEDIATELY.

1. IF THE CONTRACTOR DOES NOT ACCEPT THE EXISTING TOPOGRAPHIC SURVEY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THE CONTRACTOR SHALL OBTAIN THEIR OWN SURVEY. A TOPOGRAPHIC SURVEY BY A REGISTERED PROFESSIONAL LAND SURVEYOR SHALL BE PROVIDED TO THE OWNER AND ENGINEER FOR REVIEW.
2. CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING AND STAKING.
3. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL CONTROL, INCLUDING BENCHMARKS PRIOR TO COMMENCING CONSTRUCTION. HORIZONTAL OR STATIONING BENCHMARKS SHALL BE HELD AS THE HORIZONTAL CONTROL.
4. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS, ELEVATIONS, AND FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER BEFORE ANY WORK BEGINS. FIELD VERIFICATIONS OF THE CONTRACTOR SHALL BE APPROVED BY THE ARCHITECT, ENGINEER, AND/OR ADEQUATELY QUALIFIED CITY AND OWNER. NO CONSIDERATION WILL BE GIVEN TO CHANGE ORDERS FOR WHICH THE CITY, ENGINEER, AND OWNER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
5. CONTRACTOR SHALL THOROUGHLY CHECK COORDINATION OF CIVIL, LANDSCAPE, MEP, ARCHITECTURAL, AND OTHER PLANS PRIOR TO COMMENCING CONSTRUCTION. OWNER/ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO COMMENCING WITH CONSTRUCTION.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES LOCATED IN THE PROJECT AREA. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY INFORMATION FROM THESE UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION.
7. CONTRACTOR SHALL CALL TEXAS BY AN ADEQUATE AMOUNT OF TIME PRIOR TO COMMENCING CONSTRUCTION OR ANY EXCAVATION.
8. CONTRACTOR SHALL EXERCISE EXTREME CAUTION AS THE SITE CONTAINS VARIOUS KNOWN AND UNKNOWN PUBLIC AND PRIVATE UTILITIES.
9. THE LOCATIONS, ELEVATIONS, DEPTHS, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE UTILITY COMPANIES MAPS AND PLANS, AND ARE CONSIDERED APPROXIMATE AND INCOMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ADDITIONAL INFORMATION FROM THE UTILITY COMPANIES. THE CONTRACTOR SHALL NOTIFY SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE ENGINEER SHALL BE NOTIFIED WHEN A PROPOSED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY.
10. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ANY ADJUSTMENTS AND RELOCATIONS OF EXISTING UTILITIES THAT MAY BE REQUIRED TO PROVIDE THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MANHOLES TO MATCH PROPOSED GRADE, RELOCATING EXISTING POLES AND GUY WIRES THAT ARE LOCATED IN PROPOSED DRIVeways, ADJUSTING THE HORIZONTAL OR VERTICAL ALIGNMENT OF EXISTING UNDERGROUND UTILITIES TO ACCOMMODATE PROPOSED GRADE OR CROSSING WITH PROPOSED UTILITY, AND ANY OTHERS THAT MAY BE ENCOUNTERED THAT ARE UNKNOWN AT THIS TIME AND NOT SHOWN ON THESE PLANS.

17. CONTRACTOR SHALL ARRANGE FOR OR PROVIDE, AT ITS EXPENSE, ALL GAS, TELECOMMUNICATIONS, CABLE, OVERHEAD AND UNDERGROUND UTILITIES TO BE MAINTAINED AND PROTECTED. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY REPAIRS TO EXISTING UTILITIES.
18. CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF FRANCHISE UTILITIES THAT ARE NECESSARY FOR ON-SITE AND OFF-SITE CONSTRUCTION, AND SERVICE TO THE PROPOSED DEVELOPMENT.
19. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGES DUE TO THE CONTRACTORS' FAILURE TO EXACTLY LOCATE AND PROTECT ALL UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES. IF IT IS NECESSARY TO SHORE, BRACE, SWAY OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED BY THE CONTRACTOR AND THEIR REPRESENTATIVE SHALL BE PRESENT AT ALL TIMES DURING SUCH WORK.
20. BRACING OF UTILITY POLES MAY BE REQUIRED BY THE UTILITY COMPANIES WHEN TRENCHING OR EXCAVATING IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR, WITH NO SEPARATE PAY ITEM FOR THIS WORK.
21. CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND POWER LINES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, FEDERAL AND UTILITY OWNER REGULATIONS PERTAINING TO ELECTRICAL SAFETY. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SAFETY PERMITS, APPROVALS, AND BONDS PRIOR TO CONSTRUCTION.
22. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES A COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT AND ADDENDA, PROJECT AND CITY SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWPPP AND INSPECTION REPORTS.
23. THE CONTRACTOR SHALL SUBMIT ALL REQUESTS FOR INFORMATION TO THE ENGINEER. REQUESTS FOR INFORMATION MUST BE SUBMITTED BY THE CONTRACTOR SUFFICIENTLY IN ADVANCE OF CONSTRUCTION OF THAT ITEM, SO THAT NO LESS THAN 10 BUSINESS DAYS FOR REVIEW AND RESPONSE IS AVAILABLE.
24. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES, JURISDICTIONAL AGENCIES, AND UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO USE OF THE FACILITY AND THE FINAL CONNECTION OF SERVICES.
25. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
26. CONTRACTORS BID PRICE SHALL INCLUDE ALL INSPECTION FEES.
27. ALL DIMENSIONS SHOWN ON THESE PLANS ARE IN FEET AND INCHES. DIMENSIONS IN PARENTS, FEET, INCHES, ETC., ARE FOR PRESENTATION PURPOSES ONLY AND ARE NOT TO SCALE. CONTRACTOR SHALL COORDINATE FINAL SIZES AND LOCATIONS WITH APPROPRIATE CITY INSPECTOR.
28. THE SCOPE OF WORK FOR THE CIVIL IMPROVEMENTS SHOWN ON THESE PLANS TERMINATES 5-FEET FROM THE BUILDING. REFERENCE TO AREAS (E.G. ARCHITECTURAL, STRUCTURAL, MEP) FOR AREAS WITHIN 5-FEET OF THE BUILDING AND WITHIN THE BUILDING FOOTPRINT.

31. OWNER SHALL PROVIDE ARCHITECTURAL AND STRUCTURAL PLANS FOR ALL FINAL BUILDING DIMENSIONS. WESTALL ENGINEERING, PLLC BY THE PROJECT ARCHITECT SHALL VERIFY ALL DIMENSIONS OF THE BUILDING. THE PROJECT ARCHITECT SHALL BE RESPONSIBLE FOR THE FINAL ENGINEERING, PLLC BY THE PROJECT ARCHITECT AT THE TIME THESE PLANS WERE PREPARED. IT MAY NOT BE THE FINAL CORRECT VERSION BECAUSE THE BUILDING DESIGN WAS ONGOING. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFIRMING THE FINAL CORRECT VERSION OF THE BUILDING DIMENSIONS. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF THE BUILDING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL ARCHITECTURAL FOOTPRINT, AND ARE THEREFORE A PRELIMINARY LOCATION OF THE BUILDING. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY WHAT PART OF THE BUILDING THE ARCHITECTS FOOTPRINT REPRESENTS. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF THE BUILDING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL ARCHITECTURAL FOOTPRINT, CIVIL DIMENSION CONTROL PLAN, SURVEY BOUNDARY AND/OR PLAT. ANY DIFFERENCES FOUND SHALL BE REPORTED TO WESTALL ENGINEERING, PLLC IMMEDIATELY.
32. THE CONTRACTOR SHALL COMPLY WITH THE PROJECTS FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING SUBSEQUENT ADDENDA.
33. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIALS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL MATERIALS TESTING AND CERTIFICATION SHALL BE PERFORMED BY A QUALIFIED TESTING AGENCY IN ACCORDANCE WITH THE SPECIFICATIONS AND GEOTECHNICAL REPORT. TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING MATERIALS. OWNER SHALL APPROVE THE AGENCY NOMINATED BY THE CONTRACTOR FOR MATERIALS TESTING.
34. TEST RESULTS OF MATERIALS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING AGENCY.

- 37 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE MATERIALS, THAT THE
38 WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
- 39 THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY OF CHICAGO. THE CONTRACTOR SHALL ADHERE TO
40 GEOTECHNICAL REPORTER'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE PROPOSED
41 BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO
42 FLATWORK ADJACENT TO THE BUILDING. NONE IS CURRENTLY EXISTING.
- 43 THE CONTRACTORS SHALL NOT CONFINE ANYTHING TO THE WORK AREA. NO ENCROACHMENTS OUTSIDE OF THE WORK AREA WILL BE
44 ALLOWED. ANY DAMAGE RESULTING THEREFROM SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO REPAIR.
- 45 THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, UTILITIES, MANHOLES, POLES, GUY WIRES, VALUE COVERS, VAULTS,
46 LANDSCAPE, TREES, AND COMMUNICATION BOXES/PEDESTALS, AND OTHER FACILITIES TO REMAIN AND SHALL REPAIR ANY DAMAGES AT
47 NO COST TO THE OWNER.
- 48 THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PRIVATE PROPERTY OR PUBLIC
49 IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCES, WALLS, SIGNS, PAVEMENT, CURBS, UTILITIES, SIDEWALKS, GRASS, TREES,
50 LANDSCAPE, AND OTHER FACILITIES TO REMAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST TO THE OWNER.
- 51 ALL AREAS IN EXISTING RIGHT-OF-WAY DISTURBED BY SITE CONSTRUCTION SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER
52 INCLUDING AS NECESSARY GRADING, LANDSCAPING, CULVERTS, AND PAVEMENT.

41. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING POWER POLES, SIGNS, WATER VALVES, FIRE HYDRANTS, METERS, ETC., THAT ARE
42. CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING
43. DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES.
44. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL
45. ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH
46. SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REGULATIONS, INCLUDING OSHA FOR ALL TRENCHES. NO
47. OPEN TRENCH SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.
48. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCH FREEDOM.
49. SITE SAFETY IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
50. THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS
51. EMPLOYEES OR SUBCONTRACTORS OR TO THE SAFETY OF THE WORK. THE ENGINEER'S SEAL AND SIGNATURE DOES NOT EXTEND
52. TO ANY SUCH SAFETY SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF ALL REQUIRED SAFETY
53. PROCEDURES AND PROGRAMS.
54. SIGNATURE TO THE CONSTRUCTION OR SAFETY ARE NOT INCLUDED IN THESE PLANS

48. CONTRACTOR OFFICE AND STAGING AREA SHALL BE AGREED ON BY THE OWNER AND CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING REQUIREMENTS FOR THE CONSTRUCTION OFFICE, TRAILER, STORAGE, AND STAGING OPERATIONS AND LOCATIONS.
49. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "TEXTS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
51. TOP RIM ELEVATIONS OF ALL EXISTING AND PROPOSED MANHOLES SHALL BE COORDINATED WITH TOP OF PAVEMENT OR FINISHED GRADE AND SHALL BE ADJUSTED TO BE FLUSH WITH THE ACTUAL FINISHED GRADE AT THE TIME OF PAVING.
52. CONTRACTOR SHALL ADJUST ALL EXISTING AND PROPOSED VEHES, FIRE HYDRANTS, AND OTHER UTILITY APPURTENANCES TO MATCH ACTUAL FINISHED GRADES AT THE TIME OF PAVING.
53. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SEQUENCING AND PHASING, AND SHALL CONTACT THE APPROPRIATE CITY DEPARTMENT OF PUBLIC WORKS, BUILDING INSPECTOR, AND FIRE MARSHAL TO LEARN OF ANY REQUIREMENTS.
54. CONTRACTOR IS RESPONSIBLE FOR PREPARATION, SUBMITTAL, AND APPROVAL BY THE CITY OF A TRAFFIC CONTROL PLAN PRIOR TO THE START OF CONSTRUCTION, AND THEN THE IMPLEMENTATION OF THE PLAN.
55. CONTRACTOR SHALL KEEP A NEAT AND ACCURATE RECORD OF CONSTRUCTION, INCLUDING ANY DEVIATIONS OR VARIANCES FROM THE PLANS.
56. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS AND VARIATIONS FROM THESE PLANS MADE DURING CONSTRUCTION.

1. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL AND WATER QUALITY REQUIREMENTS, LAWS, AND ORDINANCES THAT APPLY TO THE CONSTRUCTION SITE LAND DISTURBANCE.
2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE "TOEG GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM TRX 150000".
3. EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBANCE.
4. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT.
5. CONTRACTOR IS SOLELY RESPONSIBLE FOR INSTALLATION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL EROSION CONTROL DEVICES, BEST MANAGEMENT PRACTICES (BMPs), AND FOR UPDATING THE EROSION CONTROL PLAN DURING CONSTRUCTION AS FIELD CONDITIONS CHANGE.
6. CONTRACTOR SHALL DOCUMENT THE DATES OF INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL FOR EACH BMP EMPLOYED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE.
7. IF STORM SEWER INLETS ARE INSTALLED ON-SITE, TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED AT EACH INLET PER APPROVED DETAILS.
8. THE EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE AREA IT PROTECTS HAS BEEN PERMANENTLY STABILIZED.
9. REMOVAL OF EROSION CONTROL DEVICES WILL BE REQUIRED DUE TO PROJECT PHASING.
10. CONTRACTOR SHALL OBSERVE THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES AND MAKE FIELD ADJUSTMENTS AND MODIFICATIONS AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE. IF THE EROSION CONTROL DEVICES DO NOT

EFFECTIVELY CONTROL EROSION AND PREVENT SEDIMENTATION FROM WASHING OFF THE SITE, THEN THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

11. CONTROL OF SPOIL, AND STORAGE AREAS (IF APPLICABLE) ARE CONSIDERED AS PART OF THE PROJECT SITE AND MUST ALSO COMPLY WITH THE EROSION CONTROL REQUIREMENTS FOR THIS PROJECT. THIS INCLUDES THE INSTALLATION OF BMP'S TO CONTROL EROSION AND SEDIMENTATION AND THE ESTABLISHMENT OF PERMANENT GROUND COVER ON DISTURBED AREAS PRIOR TO FINAL APPROVAL OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE SWPPP AND EROSION CONTROL PLAN TO TAKE INTO ACCOUNT THE PROJECT'S SPECIFIC REQUIREMENTS.

12. ALL STAGING, STOCKPILES, SPOIL, AND STORAGE SHALL BE LOCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER QUALITY. PROTECTIVE MEASURES SHALL BE PROVIDED IF NEEDED TO ACCOMPLISH THIS REQUIREMENT, SUCH AS COVERING OR ENCLOSING THE AREA WITH AN APPROPRIATE BARRIER.

13. CONSTRUCTION OF EROSION CONTROL DEVICES, BMP'S, DISTURBED AREAS, AND VEHICLE ENTRY AND EXIT AREAS SHALL BE COMPLETED WITHIN 48 HOURS OF THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CONDUCT INSPECTIONS WEEKLY AND WITHIN 24 HOURS OF ALL RAINFALL EVENTS OF 0.5 INCHES OR GREATER, AND KEEP A RECORD OF THIS INSPECTION IN THE SWPPP BOOKLET IF APPLICABLE, TO VERIFY THAT THE DEVICES AND EROSION CONTROL PLAN ARE FUNCTIONING PROPERLY.

14. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS IN ACCORDANCE WITH THE EROSION CONTROL PLAN. CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION TRAFFIC USES THE STABILIZED ENTRANCE AT ALL TIMES FOR ALL INGRESS/EGRESS.

15. SITE ENTRY AND EXITS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING AND FLOWING OF SEDIMENT AND SOIL OFF-SITE ROADWAYS. ALL SEDIMENT AND DIRT FROM THE SITE THAT IS DEPOSITED ON AN OFF-SITE ROADWAY SHALL BE REMOVED BY THE CONTRACTOR.

18. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL SILT AND DEBRIS FROM THE AFFECTED OFF-SITE ROADWAYS THAT ARE A RESULT OF THE CONSTRUCTION, AS REQUESTED BY OWNER AND CITY. AT A MINIMUM, THIS SHOULD OCCUR ONCE PER DAY FOR THE OFF-SITE ROADWAYS.
19. WHEN WASHING OF VEHICLES IS REQUIRED TO REMOVE SEDIMENT PRIOR TO EXITING THE SITE, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP BMP.
20. CONTRACTOR SHALL INSTALL A TEMPORARY SEDIMENT BASIN FOR ANY ON-SITE DRAINAGE AREAS THAT ARE GREATER THAN 10 ACRES. PER CITY AND CITY STANDARDS. IF NO ENGINEERING DESIGN HAS BEEN PROVIDED FOR A SEDIMENTATION BASIN ON THESE PLANS, THEN THE CONTRACTOR SHALL PROVIDE AN APPROPRIATE DESIGN TO BE PROVIDED.
21. ALL FINES IMPOSED FOR SEDIMENT OR DIRT DISCHARGED FROM THE SITE SHALL BE PAID BY THE RESPONSIBLE CONTRACTOR.
22. WHEN SEDIMENT OR DIRT HAS CLOGGED THE CONSTRUCTION ENTRANCE VOID SPACES BETWEEN STONES OR DIRT IS BEING TRACKED ONTO A ROADWAY, THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASH-DOWN OPERATION SHALL BE ALLOWED TO DRAIN TO THE SEDIMENT TRAP. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAINAGE BMP TO BE PROVIDED FOR TEMPORARY GRADING OR NEW STONE MAY BE REQUIRED TO MAINTAIN THE EFFECTIVENESS OF THE CONSTRUCTION ENTRANCE.
23. TEMPORARY SEEDING OR OTHER APPROVED STABILIZATION SHALL BE INITIATED WITHIN 14 DAYS OF THE LAST DISTURBANCE OF ANY AREA, UNLESS ADDITIONAL CONSTRUCTION IN THE AREA IS EXPECTED WITHIN 21 DAYS OF THE LAST DISTURBANCE.
24. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING CONSTRUCTION, ALWAYS CLEANING UP DIRT, LOOSE MATERIALS, AND TRUCKS AND TRAILERS.
25. UPON COMPLETION OF FINE GRADING, ALL SURFACES OF DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED. STABILIZATION IS ACHIEVED WHEN THE AREA IS EITHER COVERED BY PERMANENT IMPERVIOUS STRUCTURES, SUCH AS BUILDINGS, SIDEWALK, PAVEMENT, OR A UNIFORM PERENNIAL VEGETATIVE COVER.
26. AT THE END OF THE PROJECT, ALL EXISTING DRAINAGE PIPE, CHANNELS, DRAINAGEWAYS AND BORROW DITCHES AFFECTED BY THE CONSTRUCTION SHALL BE DREGGED, AND THE SEDIMENT GENERATED BY THE PROJECT SHALL BE REMOVED AND DISPOSED IN ACCORDANCE WITH APPLICABLE REGULATIONS.

1. CONTRACTOR SHALL COMPLY WITH ALL TCEQ AND EPA STORM WATER POLLUTION PREVENTION REQUIREMENTS.
2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS WATER QUALITY ACT.
3. CONTRACTOR SHALL DISCHARGE ELUANT DISCHARGE UNDER THE TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS WATER QUALITY ACT.
4. THE CONTRACTOR SHALL ENSURE THAT ALL PRIMARY OPERATORS SUBMIT A NOI TO TCEQ AT LEAST SEVEN DAYS PRIOR TO COMMENCING CONSTRUCTION (IF APPLICABLE), OR IF UTILIZING ELECTRONIC SUBMITTAL, PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE SIGNED NOI TO THE OPERATOR OF ANY MS4 (TYPICALLY THE CITY) RECEIVING DISCHARGE FROM THE SITE.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE, INCLUDING POSTING SITE NOTICE, INSPECTIONS, DOCUMENTATION, AND SUBMISSION OF ANY INFORMATION REQUIRED BY THE TCEQ AND EPA.
6. ALL CONTRACTORS AND SUBCONTRACTORS PROVIDING SERVICES RELATED TO THE SWPPP SHALL SIGN THE REQUIRED CONTRACTOR CERTIFICATION STATEMENT ACKNOWLEDGING THEIR RESPONSIBILITIES AS SPECIFIED IN THE SWPPP.
7. A COPY OF THE SWPPP, INCLUDING NOI, SITE NOTICE, CONTRACTOR CERTIFICATIONS, AND ANY REVISIONS, SHALL BE SUBMITTED TO THE CITY BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
8. A NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO TCEQ BY ANY PRIMARY OPERATOR WITHIN 30 DAYS AFTER SOIL DISTURBANCE ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND A UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY STRUCTURES. A TRANSFER OF OPERATORIAL CONTROL HAS OCCURRED, OR THE OPERATOR HAS BEEN DETERMINED TO BE A DIFFERENT ENTITY. A COPY OF THE NOT SHALL BE PROVIDED TO THE OPERATOR OF ANY MS4 RECEIVING DISCHARGE FROM THE SITE.

WESTFALL ENGINEERING, PLLC IS NOT RESPONSIBLE FOR THE MEANS AND METHODS EMPLOYED BY THE CONTRACTOR TO IMPLEMENT THIS DEMOLITION PLAN. THIS PRELIMINARY DEMOLITION PLAN SIMPLY INDICATES THE KNOWN OBJECTS ON THE SUBJECT TRACT THAT THE CONTRACTOR HAS DISCOVERED OR BELIEVES TO BE PRESENT.

2. WESTFALL ENGINEERING, PLLC DOES NOT WARRANT OR REPRESENT THAT THE PLAN, WHICH WAS PREPARED BASED ON SURVEY AND UTILITY INFORMATION PROVIDED BY OTHERS, SHOWS ALL IMPROVEMENTS AND UTILITIES, THAT THE IMPROVEMENTS AND UTILITIES SHOWN ARE ACCURATE, OR THAT THE CONTRACTOR IS RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. IT IS THE CONTRACTOR'S OWN SITE RECONNAISSANCE TO SCOPE ITS WORK AND TO CONFIRM WITH THE OWNERS OF IMPROVEMENTS AND UTILITIES THE LOCATION AND PROCESS FOR THE REMOVAL OF THEIR FACILITIES.

3. THIS DEMO PLAN IS INTENDED TO GIVE A GENERAL GUIDE TO THE CONTRACTOR. NOTHING MORE. THE GOAL OF THE DEMOLITION IS TO HAVE THE SITE IN A STATE WHERE THE PROPOSED DEVELOPMENT, REMOVAL, OR PRESERVATION OF IMPROVEMENTS, UTILITIES, ETC. TO ACCOMPLISH THIS GOAL ARE THE RESPONSIBILITY OF THE CONTRACTOR.

4. CONTRACTOR IS STRONGLY CAUTIONED TO REVIEW THE FOLLOWING REPORTS DESCRIBING SITE CONDITIONS PRIOR TO BIDDING AND IMPLEMENTING THE DEMOLITION PLAN.

- A. ENVIRONMENTAL SITE ASSESSMENT PROVIDED BY THE OWNER.
- B. ASBESTOS BUILDING INSPECTION REPORT(S) PROVIDED BY THE OWNER.
- C. GEOTECHNICAL REPORT PROVIDED BY THE OWNER.
- D. OTHER REPORTS THAT ARE APPLICABLE AND AVAILABLE.

5. CONTRACTOR SHALL CONTACT THE OWNER TO DETERMINE WHETHER ADDITIONAL REPORTS OR AMENDMENTS TO THE ABOVE CITED REPORTS HAVE BEEN PREPARED AND TO OBTAIN/REVIEW/AND COMPLY WITH THE RECOMMENDATION OF SUCH STUDIES PRIOR TO STARTING ANY WORK ON THE SITE.

6. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS REGARDING THE DEMOLITION OF OBJECTS ON THE TRACT. THE DISPOSAL OF THE DEMOLISHED MATERIALS OFF-SITE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE SITE, DETERMINE THE APPLICABLE REGULATIONS, RECEIVE THE REQUIRED PERMITS AND AUTHORIZATIONS, AND COMPLY.

7. WESTFALL ENGINEERING, PLLC DOES NOT REPRESENT THAT THE REPORTS AND SURVEYS REFERENCED ABOVE ARE ACCURATE, COMPLETE, OR COMPREHENSIVE SHOWING ALL ITEMS THAT MAY BE TO BE DEMOLISHED AND REMOVED.

8. THE CONTRACTOR SHALL INDICATE ALL EXISTING UTILITIES, STRUCTURES, SUCH AS ADDITIONAL LAYERS OF PAVEMENT, FOUNDATIONS OR WALLS, THAT ARE ALSO TO BE REMOVED.

1. THE CONTRACTOR AND GRADING SUBCONTRACTOR SHALL VERIFY THE SUITABILITY OF EXISTING AND PROPOSED SITE CONDITIONS, DIMENSIONS AND DIMENSIONS BEFORE START OF CONSTRUCTION. THE CIVIL ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
2. CONTRACTOR SHALL OBTAIN ANY REQUIRED GRADING PERMITS FROM THE CITY.
3. UNLESS OTHERWISE NOTED, PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN IN PAVED AREA REFLECT TOP OF PAVEMENT GRADE. IN LOCATIONS ALONG A CURB LINE, ADD 6-INCHES (OR THE HEIGHT OF THE CURB) TO THE PAVING GRADE FOR TOP OF CURB ELEVATION.
4. PROPOSED SPOT ELEVATIONS AND CONTOURS OUTSIDE THE PAVEMENT ARE TO TOP OF FINISHED GRADE.
5. PROPOSED CONTOURS ARE APPROXIMATE. PROPOSED SPOT ELEVATIONS AND DESIGNATED GRADING ARE TO BE USED IN CASE OF DISCREPANCY.
6. ALL FINISHED GRADES SHALL TRANSITION UNIFORMLY BETWEEN THE FINISHED ELEVATIONS SHOWN.
7. CONTOURS AND SPOT ELEVATIONS SHALL SHOW AN ALLOWANCE OF TOP OF FINISHED GRADE. WHILE PERFORMING THE GRADING WORK, THE CONTRACTOR SHALL MAINTAIN AN APPROPRIATE ELEVATION AND ALLOWANCE FOR THE THICKNESS OF PAVEMENT, SIDEWALK, TOPSOIL, MULCH, STONE, LANDSCAPING, RIP-RAP AND ALL OTHER SURFACE MATERIALS THAT WILL

- CONTRIBUTE TO THE TOP OF FINISHED GRADE.
9. ALL QUANTITIES OF MATERIALS AND QUANTITIES OR SITE BALANCE ARE MADE BY THESE PLANS. THE CONTRACTOR SHALL PROVIDE THEIR OWN EARTHWORK CALCULATION TO DETERMINE THEIR CONTRACT QUANTITIES AND COST. ANY SIGNIFICANT VARIANCE FROM A BALANCED SITE SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CIVIL ENGINEER.
10. ALL EROSION AND EARTHWORK SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING SUBSEQUENT ADDENDA.
11. ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED, UNUSABLE EXCAVATED MATERIAL, AND ALL EXCESS EXCAVATED MATERIAL. EXCESS MATERIAL SHALL BE REMOVED FROM THE SITE AND APPROPRIATELY DISPOSED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE.
12. EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF EROSION CONTROL. EROSION CONTROL PLAN, DETAILS, GENERAL NOTES, AND SWPPP FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
13. BEFORE ANY EARTHWORK IS PERFORMED, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF THE PROJECT'S PROPERTY LINE AND THE LIMITS OF THE EROSION CONTROL PLAN. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.
14. CONTRACTOR TO DISPOSE OF ALL EXCESS EXCAVATION MATERIALS IN A MANNER THAT ADHERES TO LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS. THE CONTRACTOR SHALL KEEP A RECORD OF WHERE EXCESS EXCAVATION WAS DISPOSED, ALONG WITH THE RECEIVING LANDOWNER'S APPROVAL TO DO SO.

14. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF TOPSOIL AT THE COMPLETION OF FINE GRADING. CONTRACTOR SHALL MAINTAIN ADEQUATE EROSION CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PERIOD.
15. CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING DITCHES OR CURBS/FREE FLOE OF OBSTRUCTIONS AT ALL TIMES.
16. CONTRACTOR SHALL MAINTAIN ADEQUATE EROSION CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PERIOD, INCLUDING SWALE, CHANNEL, DITCH, CREEK, OR FLOODPLAIN FOR ANY REASON OR ANY LENGTH OF TIME, UNLESS THESE PLANS SPECIFICALLY INDICATE THIS IS REQUIRED.
17. CONTRACTOR SHALL MAINTAIN ADEQUATE EROSION CONTROL MEASURES IN SOME LOCATIONS TO PREVENT EROSION AND SLOPE WASH-OFF.
18. REFER TO DIMENSION CONTROL PLAN, AND PLAN FOR HORIZONTAL DIMENSIONS.
19. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND CONDITION FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE CONTRACTOR SHALL FILL TO THE PROPOSED FINISH ELEVATION OF THE GEOTECHNICAL ENGINEER'S PLACEMENT.
20. CONTRACTOR IS RESPONSIBLE FOR SOILS TESTING AND CORRECTING DEFICIENCIES, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL SOILS TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR AND SHALL COMPLY WITH CITY STANDARDS, SPECIFICATIONS AND THE GEOTECHNICAL REPORT. SOILS TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY AND SHALL BE IN ACCORDANCE WITH THE CITY STANDARDS, SPECIFICATIONS AND THE GEOTECHNICAL REPORT.
21. ALL COPIES OF SOILS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING

- AGENCY.
22. SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE SOILS, THAT THE WORK
CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
23. THE SCOPE OF WORK FOR CIVIL IMPROVEMENT SHOWN ON THESE PLANS TERMINATES 5-FEET FROM THE BUILDING. CONTRACTOR
SHALL REFER TO THE GEOTECHNICAL REPORT AND STRUCTURAL PLANS AND SPECIFICATIONS FILL, CONDITIONING, AND PREPARATION
IN THE BUILDING PAD.
24. DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO
GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE PROPOSED
BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO
FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING.
25. CONTRACTOR SHALL ENSURE THAT SUFFICIENT GRADING MATERIAL ON THE BUILDING PAD IS ACHIEVED FOR ENTIRE PERIMETER
OF THE PROPOSED BUILDING(S) DURING GRADING OPERATIONS AND IN THE FINAL CONDITION. IF THE CONTRACTOR OBSERVES THAT
THIS WILL NOT BE ACHIEVED, THE CONTRACTOR SHALL CONTACT THE ENGINEER TO REVIEW THE LOCATION.
26. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST
DURING GRADING WORK, OR THE CITY ENGINEER SHALL TAKE THE NECESSARY ACTION TO CONTROL DUST.
27. CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS
NEEDED FOR GRADING OPERATIONS AND TO ACCOMMODATE PROPOSED GRADING, INCLUDING THE UNKNOWN UTILITIES NOT SHOWN ON
THESE PLANS. CONTRACTOR SHALL REFER TO THE GENERAL NOTES "OVERALL" SECTION THESE PLANS FOR ADDITIONAL
INFORMATION.
28. EXISTING TREE LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. CONTRACTOR SHALL REPORT ANY DISCREPANCIES FOUND
IN THE FIELD THAT AFFECT THE GRADING PLAN TO THE CIVIL ENGINEER.
29. CONTRACTOR SHALL FIELD VERIFY ALL PROTECTED TREE LOCATIONS, INDIVIDUAL PROTECTED TREE CRITICAL ROOT ZONES, AND
PROPOSED SITE GRADING, AND NOTIFY THE CIVIL ENGINEER AND LANDSCAPE ARCHITECT OF ANY CONFLICTS WITH THE TREE
PRESERVATION PLAN. CONTRACTOR SHALL STOP WORK IMMEDIATELY TO CONSULT WITH THE ENGINEER REGARDING THE WORK.
30. TREE PROTECTION MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY STANDARD TREE PROTECTION DETAILS AND THE
APPROVED TREE PRESERVATION PLANS BY THE LANDSCAPE ARCHITECT.

1. CONTRACTOR SHALL REFER TO THE LANDSCAPING AND TREE PRESERVATIONS PLANS FOR ALL INFORMATION AND DETAILS REGARDING EXISTING TREES TO BE REMOVED AND PRESERVED.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMIT HAS BEEN ISSUED BY THE CITY, OR CITY HAS OTHERWISE CONFIRMED IN WRITING THAT ONE IS NOT NEEDED FOR THE TREE(S).
3. NO TREE SHALL BE REMOVED OR DAMAGED WITHOUT PRIOR AUTHORIZATION OF THE OWNER OR OWNER'S REPRESENTATIVE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND GRADING IMPACT TO THEM-LEAD TO A MINOR DAMAGE.
5. AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AREAS FOR EVIDENCE OF PONDING AND INADEQUATE SLOPE FOR DRAINAGE. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE STREET OR EXISTING DRAIN RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY AREAS OF POOR DRAINAGE ARE DISCOVERED.
6. CONTRACTOR FIELD ADJUSTMENT OF PROPOSED SLOPE GRADES IS ALLOWED, IF THE APPROVAL OF THE CIVIL ENGINEER IS OBTAINED.

1. RETAINING WALLS SHOWN ARE FOR SITE GRADING PURPOSES ONLY, AND INCLUDE ONLY LOCATION AND SURFACE SLOPE ELEVATIONS AT THE TOP AND BOTTOM OF THE WALL.
2. RETAINING WALL TYPE OR SYSTEM SHALL BE SELECTED BY THE OWNER.
3. RETAINING WALL DESIGN SHALL BE PROVIDED BY THE ENGINEER AND SHALL BE IN THE WALL ZONE OR LOCATION SHOWN ON THESE PLANS. STRUCTURAL DESIGN AND PERMITTING OF RETAINING WALLS, RAILINGS, AND OTHER WALL SAFETY DEVICES SHALL BE PERFORMED BY A LICENSED ENGINEER AND ARE NOT PART OF THIS PLAN SET.
4. RETAINING WALL DESIGN SHALL MEET THE INTENT OF THE GRADING PLAN AND SHALL ACCOUNT FOR ANY INFLUENCE ON ADJACENT BUILDING FOUNDATIONS, UTILITIES, PROPERTY LINES AND OTHER CONSTRUCTABILITY NOTES.
5. RETAINING WALL ENGINEER SHALL CONSULT THESE PLANS AND THE GEOTECHNICAL REPORT FOR POTENTIAL CONFLICTS.

1. ALL PAVING MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS, THE CITY STANDARD DETAILS AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE CITY SPECIFICATIONS OR ANY OTHER CITY SPECIFICATIONS DO NOT EXIST IN CASE OF CONFLICTING SPECIFICATIONS OR DETAILS, THE MORE RESTRICTIVE SPECIFICATION/DETAIL SHALL BE FOLLOWED.
2. ALL PRIVATE ON-SITE PAVING AND PAVING SUBGRADE SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST REVISION) FOR REMEDIATION REQUIREMENTS.
3. ALL FIRELANE PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARDS AND DETAILS. IF THESE ARE DIFFERENT THAN THOSE IN THE GEOTECHNICAL REPORT, THEN THE MORE RESTRICTIVE SHALL BE FOLLOWED.
4. ALL PUBLIC PAVING AND PAVING SUBGRADE SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS. THE CITY SPECIFICATIONS OR ANY OTHER CITY SPECIFICATIONS DO NOT EXIST UNLESS SPECIFIED OTHERWISE BY OWNER.
5. ALL PAVING AND PAVING SUBGRADE TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR. TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING PAVING AND SUBGRADE. OWNER SHALL PROVIDE THE AGENCY NOMINATED BY THE CONTRACTOR FOR PAVING AND PAVING SUBGRADE TESTING.
6. THE CONTRACTOR SHALL SHIELD OFF ALL TRAFFIC FROM THE PAVING AND PAVING SUBGRADE, THAT THE WORK CONSTRUCTION MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.

DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO THE NEAREST CITY SPECIFICATIONS REGARDING THE PROTECTION OF ADJACENT BUILDINGS. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING.

- [illegible]

1. ALL STORM SEWER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
2. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF STORM SEWER.
3. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING STORM SEWER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY STORM SEWER, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED.
4. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER.

6. ALL ELEVATIONS OF PROPOSED INLETS SHALL BE VERIFIED WITH THE GRADING PLAN AND FIELD CONDITIONS PRIOR TO THEIR INSTALLATION.
7. ALL PUBLIC STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS STANDARD DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
8. ALL PRIVATE STORM SEWER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
9. ALL PVC TO RCP CONNECTIONS AND ALL STORM PIPE CONNECTIONS ENTERING STRUCTURES OR OTHER STORM PIPES SHALL HAVE A MINIMUM 12" VERTICAL CLEARANCE.
10. ALL PUBLIC STORM SEWER LINES SHALL BE MINIMUM CLASS III RCP. PRIVATE STORM SEWER LINES 18-INCHES AND GREATER SHALL BE CLASS III RCP OR OTHER APPROVED MATERIAL.
11. WHERE COVER EXCEEDS 20-FOET OR IS LESS THAN 2-FOET, CLASS IV RCP SHALL BE USED.
12. IF CONTRACTOR PROPOSES TO USE HDPE, PVC IN LIEU OF RCP FOR PRIVATE STORM SEWER, CONTRACTOR SHALL SUBMIT TECHNICAL DATA TO THE OWNER, ENGINEER AND CITY ENGINEER/INSPECTOR FOR APPROVAL PRIOR TO ORDERING THE MATERIAL. ANY PROPOSED HDPE AND PVC SHALL BE WATER TIGHT.
13. THE CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL STORM SEWER LINES.
14. EMBEDED FOR ALL STORM SEWER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS.
15. ALL WYE CONNECTIONS AND PIPE BENDS ARE TO BE PRE-FABRICATED AND INSTALLED PER MANUFACTURERS SPECIFICATIONS.
16. USE 4 FOOT JOINTS WITH REVEALED ENDS IF RADIUS OF STORM SEWER IS LESS THAN 100 FEET.
17. ALL TRENCHES SHALL BE PROTECTED BY A TRENCH SHIELDING SYSTEM, MANUFACTURED BY A TRENCH SHIELDING COMPANY, ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REGULATIONS, INCLUDING OSHA FOR ALL TRENCHES. NO TRENCH SHIELDING SHALL BE OVERLOOKED OR REMOVED WITHOUT WRITTEN APPROVAL OF THE CITY.
18. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.

1. ANY PONDS THAT ARE INTENDED TO HOLD WATER INDEFINITELY SHALL BE CONSTRUCTED WATERTIGHT.
2. FOR ANY PONDS INTENDED TO HOLD WATER INDEFINITELY, THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR POND LINER SPECIFICATIONS.
3. A GEOTECHNICAL ENGINEER SHALL REVIEW AND APPROVE ALL POND LINER MATERIAL, PLACEMENT PROCEDURES, AND PROVIDE TESTING TO ENSURE THE POND LINER MATERIAL PLACED IS WATER TIGHT.
4. STORM SEWER PIPES AND HEADWALLS THAT CONNECT TO A POND INTENDED HOLD WATER SHALL BE INSTALLED WITH WATER TIGHT JOINTS TO MAINTAIN THE POND WATER SURFACE ELEVATION.
5. ANY GRAVEL OR OTHER PERVIOUS EMBEDMENT AROUND PIPES OR OUTFALL STRUCTURES NEAR THE POND SHALL BE ELIMINATED FOR AT LEAST 20 FEET FROM THE POND SO NO ROUTE FOR WATER TO LEAK THROUGH THE EMBEDMENT MATERIAL IS PROVIDED. BACKFILL IN THESE AREAS SHALL BE OF IMPERVIOUS WATER TIGHT MATERIAL.
6. FOR ANY POND INTENDED TO HOLD WATER INDEFINITELY, THE WATER LEVEL FOLLOWING COMPLETION AND FILLING OF THE POND SHALL BE MONITORED BY THE CONTRACTOR FOR AT LEAST 60 DAYS TO OBSERVE WATER INFLOW, OUTFLOW, AND CALCULATE EVAPORATION TO VERIFY THAT THE POND IS WATER TIGHT.
7. FOR ANY POND INTENDED TO HOLD WATER INDEFINITELY, THE POND WATER LEVEL SHALL ALSO BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION, THAT IT REMAINS FULL TO ITS DESIGN WATER LEVEL, AND IS NOT LOWERED TO WHICH MAY DRY OUT THE POND LINER AND RISK ITS WATER TIGHT PROPERTIES.

1. ALL WATER AND WASTEWATER MATERIALS AND CONSTRUCTION SHALL COMPLY WITH CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
2. CONTRACTOR SHALL FIELD VERIFY THE SIZE, CONDITION, HORIZONTAL, AND VERTICAL LOCATIONS OF ALL EXISTING WATER AND WASTEWATER FACILITIES THAT ARE TO BE CONNECTED TO, PRIOR TO START OF CONSTRUCTION OF ANY WATER OR WASTEWATER CONSTRUCTION, AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED.
3. CONTRACTOR SHALL VERIFY AND CONFIRM ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITY SERVICES ENTERING THE BUILDING.
4. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATION OF ALL UTILITY CROSSINGS PRIOR TO THE INSTALLATION OF ANY PIPE.
5. CONTRACTOR SHALL VERIFY AND CONFIRM ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE WATER AND WASTEWATER IMPROVEMENTS.
6. ALL PUBLIC WATER AND WASTEWATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO CITY PUBLIC WORKS STANDARD DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
7. PRIVATE WATER AND WASTEWATER CONSTRUCTION, PIPE, STRUCTURES, AND FITTINGS SHALL ADHERE TO THE APPLICABLE PLUMBING CODE. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY INSPECTIONS.
8. FIRE SPRINKLER LINES SHALL BE DESIGNED AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR, AND COMPLY TO THE CITY OF CHICAGO FIRE DEPARTMENT REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE FIRE SPRINKLER DESIGN. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES.
9. EMBEDEDMENT FOR ALL WATER AND WASTEWATER LINES, PUBLIC OR PRIVATE, SHALL BE PER CITY STANDARD DETAILS.
10. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING TOLERANCES TO THE CITY STANDARD DETAILS, AND TO CITY STANDARDS, TO KEEP WATER PIPE AND FITTINGS CLEAN AND CAPPED AT TIMES WHEN INSTALLATION IS NOT IN PROGRESS.
11. CONTRACTOR SHALL PROVIDE CONSTRUCTION SURVEYING FOR ALL WATER AND WASTEWATER LINES.
12. WATER AND WASTEWATER CONSTRUCTION SHALL BE LIMITED TO 6 FEET ABOVE THE BUILDING UNLESS NOTED OTHERWISE.
13. CONTRACTOR SHALL COMPLY WITH CITY REQUIREMENTS FOR WATER AND WASTEWATER DISRUPTIONS AND THE AMOUNT OF PRIOR NOTICE THAT IS REQUIRED, AND SHALL COORDINATE DIRECTLY WITH THE APPROPRIATE CITY DEPARTMENT.
14. CONTRACTOR SHALL SEQUENCE WATER AND WASTEWATER CONSTRUCTION TO AVOID INTERRUPTION OF SERVICE TO SURROUNDING AREAS.
15. CONTRACTOR SHALL MAINTAIN WATER SERVICE AND WASTEWATER SERVICE TO ALL CUSTOMERS THROUGHOUT CONSTRUCTION (IF NECESSARY, BY USE OF TEMPORARY METHODS APPROVED BY THE CITY AND OWNER). THIS WORK SHALL BE CONSIDERED AN ESSENTIAL PART OF THE PROJECT AND SHALL NOT BE CONSIDERED A SEPARATE PAY ITEM.
16. THE CONTRACTOR IS RESPONSIBLE TO PROTECT ALL WATER AND WASTEWATER LINES CROSSING THE PROJECT. THE CONTRACTOR SHALL REPAIR ALL DAMAGED LINES IMMEDIATELY. ALL REPAIRS OF EXISTING WATER MAINS, WATER SERVICES, SEWER MAINS, AND WASTEWATER SERVICES SHALL BE DONE IN ACCORDANCE WITH CITY STANDARD DETAILS AND SPECIFICATIONS.
17. VALVE ADJUSTMENTS SHALL BE CONSTRUCTED SUCH THAT THE COVERS ARE AT FINISHED SURFACE GRADE OF THE PROPOSED PAVEMENT.
18. THE ENDS OF ALL EXISTING WATER MAINS THAT ARE CUT, BUT NOT REMOVED, SHALL BE PLUGGED AND ABANDONED IN PLACE. THIS WORK SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
19. ALL FIRE HYDRANTS, VALVES, TEES, BENDS, WYES, REDUCERS, FITTINGS, AND ENDS SHALL BE MECHANICALLY RESTRAINED AND/OR

THRUST BLOCKED TO CITY STANDARDS.

20. CONTRACTOR SHALL INSTALL A FULL SEGMENT OF WATER OR WASTEWATER PIPE CENTERED AT ALL UTILITY CROSSINGS SO THAT THE UTILITY CROSSING IS GREATER THAN THE DUCTILE IRON PIPE.

21. ALL CROSSINGS AND LOCATIONS WHERE WASTEWATER IS LESS THAN 9- FEET FROM WATER, WASTEWATER CONSTRUCTION AND MATERIALS SHALL COMPLY WITH TCEQ CHAPTER 217.53

22. ALL CROSSINGS AND LOCATIONS WHERE WATER IS LESS THAN 9- FEET FROM WASTEWATER, WATER CONSTRUCTION AND MATERIALS SHALL COMPLY WITH TCEQ CHAPTER 217.53

23. ALL WATER AND WASTEWATER SHALL BE TESTED IN ACCORDANCE WITH THE CITY, AWWA, AND TCEQ STANDARDS AND SPECIFICATIONS. AT A MINIMUM, THIS SHALL CONSIST OF THE FOLLOWING:

A. ALL TRENCHES SHALL BE INSPECTED AND TESTED PRIOR TO BEING CLOSED BEFORE BEING PLACED INTO SERVICE. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR THEIR REQUIRED PROCEDURES AND SHALL ALSO COMPLY WITH TCEQ REGULATIONS.

B. WASTEWATER LINES AND MANHOLES SHALL BE PRESSURE TESTED. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR THEIR REQUIRED PROCEDURES AND SHALL ALSO COMPLY WITH TCEQ REGULATIONS. THE COMPLETION OF THESE TESTS, A TELEVISION INSPECTION SHALL BE PERFORMED AND PROVIDED TO THE CITY AND OWNER ON A DVD.

24. CONTRACTOR SHALL INSTALL DETECTABLE WIRING OR MARKING TAP A MINIMUM OF 12" ABOVE WATER AND WASTEWATER LINES. MARKER DECALS SHALL BE LABELED "CAUTION- WATER LINE," OR "CAUTION - SEWER LINE." DETECTABLE WIRING AND MARKING TAP SHALL BE INSTALLED WITH THE TRENCHES.

25. DUCTILE IRON PIPE SHALL BE PROTECTED FROM CORROSION BY A LOW-DENSITY POLYETHYLENE LINER WRAP THAT IS AT LEAST A SINGLE LAYER OF 8-MIL. ALL DUCTILE IRON JOINTS SHALL BE BONDED.

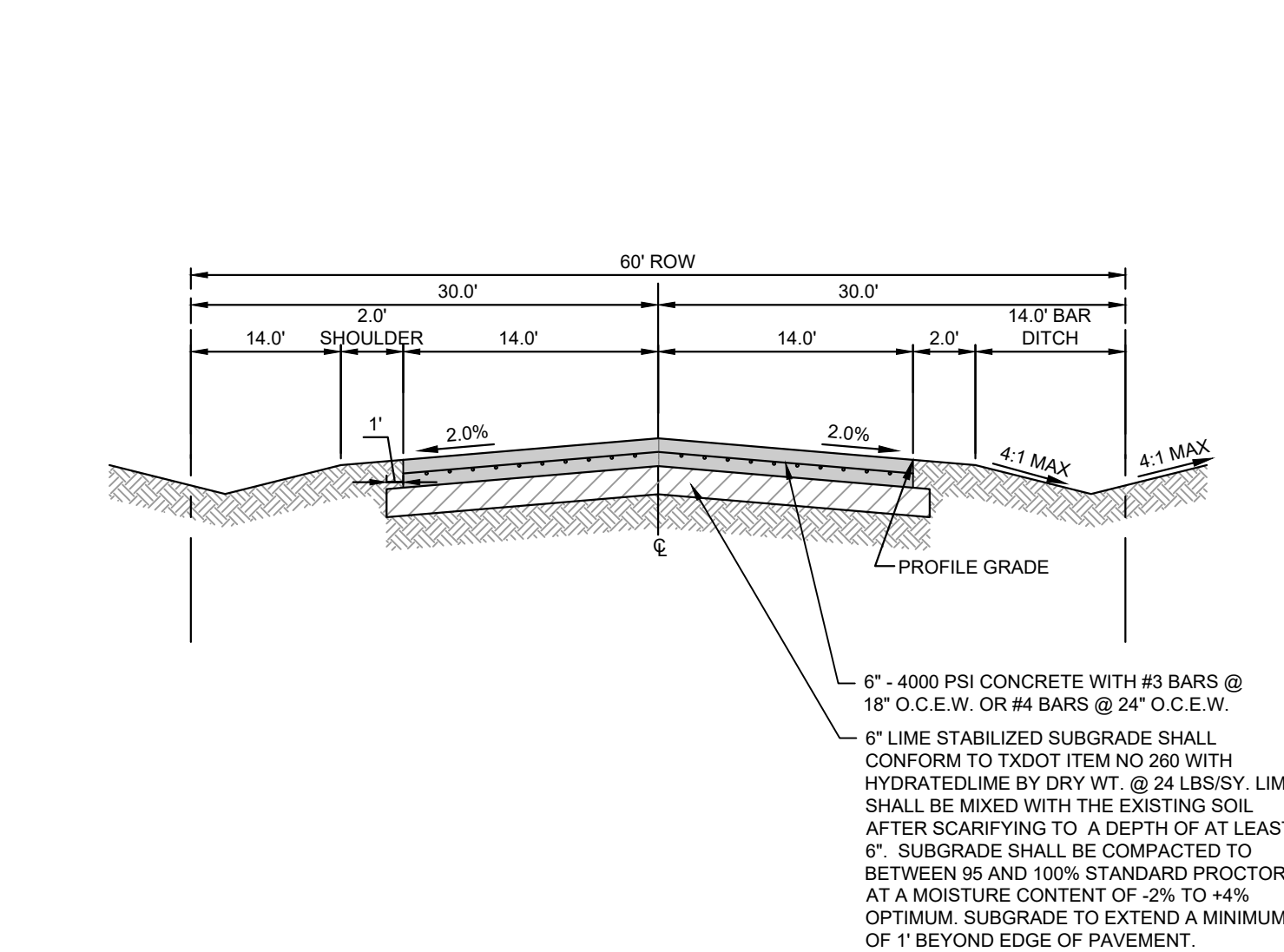
26. ALL TRENCHES SHALL BE COVERED TO AT LEAST NO LESS THAN THE MINIMUM COVER REQUIRED BY THE CITY.

27. CONTRACTOR SHALL PROVIDE CLEAN-OUTS FOR PRIVATE SANITARY SEWER LINES AT ALL CHANGES IN DIRECTION AND 100-FOOT INTERVALS, OR AS REQUIRED BY THE APPLICABLE PLUMBING CODE. CLEAN-OUTS REQUIRED IN PAVEMENT OR SIDEWALKS SHALL BE INSTALLED TO THE SURFACE.

28. CONTRACTOR SHALL PROVIDE BACKWATER VALVES FOR PLUMBING FIXTURES AS REQUIRED BY THE APPLICABLE PLUMBING CODE (E.G. FLOOR ELEVATION OF FIXTURE UNIT IS BELOW THE ELEVATION OF THE MANHOLE COVER OF THE NEXT UPSTREAM MANHOLE IN THE PUBLIC SEWER). CONTRACTOR SHALL REVIEW BOTH MEP AND CIVIL PLANS TO CONFIRM WHERE THESE ARE REQUIRED.

29. ALL TRENCHES SHALL BE COVERED OVERLAPPING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REGULATIONS, INCLUDING OSHA FOR ALL TRENCHES. NO TRENCHES SHALL BE COVERED OVER UNTIL THE TRENCH SAFETY PLAN HAS BEEN WRITTEN APPROVAL OF THE CITY.

30. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.



N.T.S.

REFER TO GEOTECHNICAL REPORT NO. 21315, PREPARED
BY CRI LABS,
DATED: OCTOBER 13, 2021.



THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND SHALL NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER OF ANY CONFLICTS DISCOVERED. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN SCOPE OF CONSTRUCTION. IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT HIS OWN EXPENSE. CALL 811 AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION IN VICINITY.

WOLSKI, EDWARD F
A0199A B.B.B. & C. RR CO., TR 5
INST. #2017-106111
D R D C T

54'

WATER:
BOLIVAR WATER SUPPLY COMPANY
4151 FM 455 WEST
SANGER, TX 76266
(940)458-3931
WEBSITE: <https://www.bolivarwatersc.com>

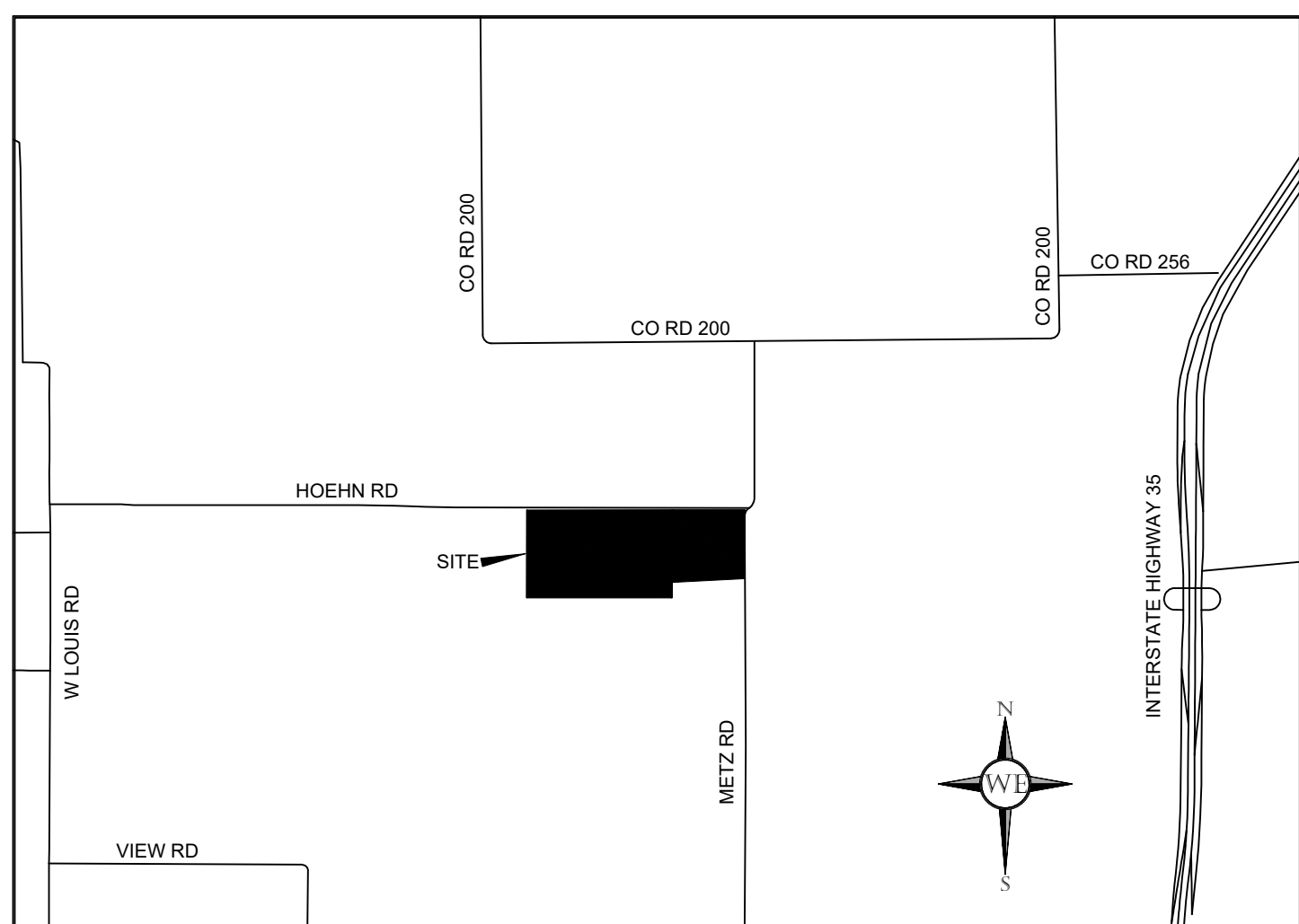
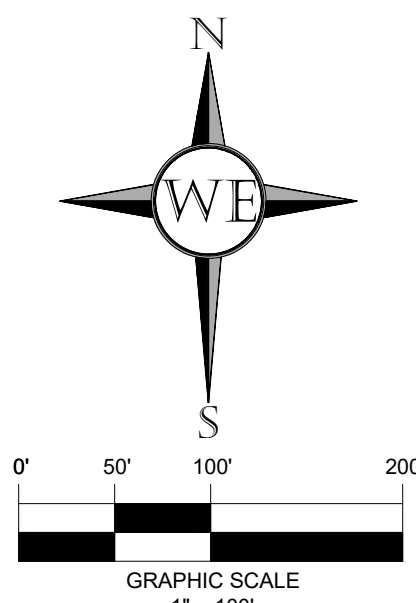
1. ALL LOTS COMPLY WITH THE MINIMUM SIZE REQUIREMENTS OF THE ZONING DISTRICT.
2. THIS PROPERTY MAY BE SUBJECT TO CHARGES RELATED TO IMPACT FEES AND THE APPLICANT SHOULD CONTACT THE CITY REGARDING ANY APPLICABLE FEES DUE.
3. ALL COMMON AREAS, DRAINAGE EASEMENTS, AND DETENTION FACILITIES WILL BE OWNED AND MAINTAINED BY THE HOA/POA. ANY COMMON AREA WITHIN THE CITY'S RIGHT-OF-WAY WILL REQUIRE A FACILITIES AGREEMENT, TO BE REVIEWED AND APPROVED BY THE CITY.
4. NOTICE – SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF CITY ORDINANCE AND STATE LAW AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.
5. THIS PLAT DOES NOT ALTER OR REMOVE EXISTING DEED RESTRICTIONS, IF ANY, ON THIS PROPERTY.
6. MINIMUM FINISHED FLOOR ELEVATIONS (FFE) ARE AT LEAST 2 FEET ABOVE THE 100-YEAR FLOODPLAIN.
7. THE SUBJECT PROPERTY DOES NOT LIE WITHIN A 100-YEAR FLOODPLAIN ACCORDING TO COMMUNITY PANEL NO. 48121C0065G DATED MARCH 18, 2011 OF THE NATIONAL FLOOD INSURANCE RATE MAPS FOR DENTON COUNTY, TEXAS.
8. THE PURPOSE OF THIS PLAT IS TO CREATE A RESIDENTIAL SUBDIVISION.
9. BEARINGS ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, TEXAS NORTH CENTRAL ZONE (4202), NORTH AMERICAN DATUM OF 1983 (NAD 83).

Entire 16' drainage easement needs to be in lot. Cannot split with neighboring parcel.

- Not a true statement.
- State the exception you received from Planning and Zoning for undersized lots

CURVE NO.	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C1	960.00'	40.94'	002°26'36"	N89°02'45"E	40.94'
C2	1040.00'	41.23'	002°16'18"	N88°57'35"E	41.23'
C3	530.00'	129.56'	014°00'23"	S82°53'52"W	129.24'
C4	66.00'	57.31'	049°45'10"	N66°07'45"W	55.53'
C5	66.00'	87.75'	076°10'33"	S50°54'24"W	81.43'
C6	470.00'	115.81'	014°07'04"	S82°50'31"W	115.52'
C7	66.00'	13.49'	011°42'28"	N32°59'19"W	13.46'
C8	66.00'	66.85'	058°02'01"	N67°51'34"W	64.03'
C9	66.00'	64.41'	055°54'41"	S55°10'05"W	61.88'
C10	66.00'	64.66'	056°07'51"	S00°51'10"E	62.10'
C11	66.00'	64.75'	056°12'51"	S57°01'32"E	62.19'
C12	66.00'	64.76'	056°13'24"	N66°45'21"E	62.20'
C13	66.00'	13.49'	011°42'28"	N32°47'25"E	13.46'
C14	530.00'	130.59'	014°07'04"	N82°50'31"E	130.26'
C15	66.00'	46.13'	040°03'01"	S61°16'40"E	45.20'
C16	66.00'	98.92'	085°52'42"	N55°45'28"E	89.92'
C17	470.00'	101.04'	012°19'02"	N81°56'30"E	100.85'

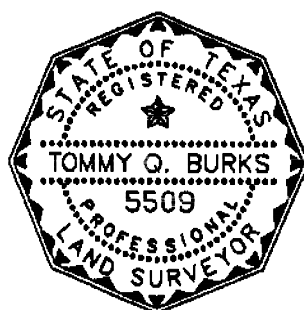
	PROPERTY LINE
	EASEMENT
R.O.W.	RIGHT OF WAY
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
D.U.E.	DRAINAGE AND UTILITY EASEMENT
V.E.	VISIBILITY EASEMENT
E-E	EDGE TO EDGE



VICINITY MAP

N.T.S.

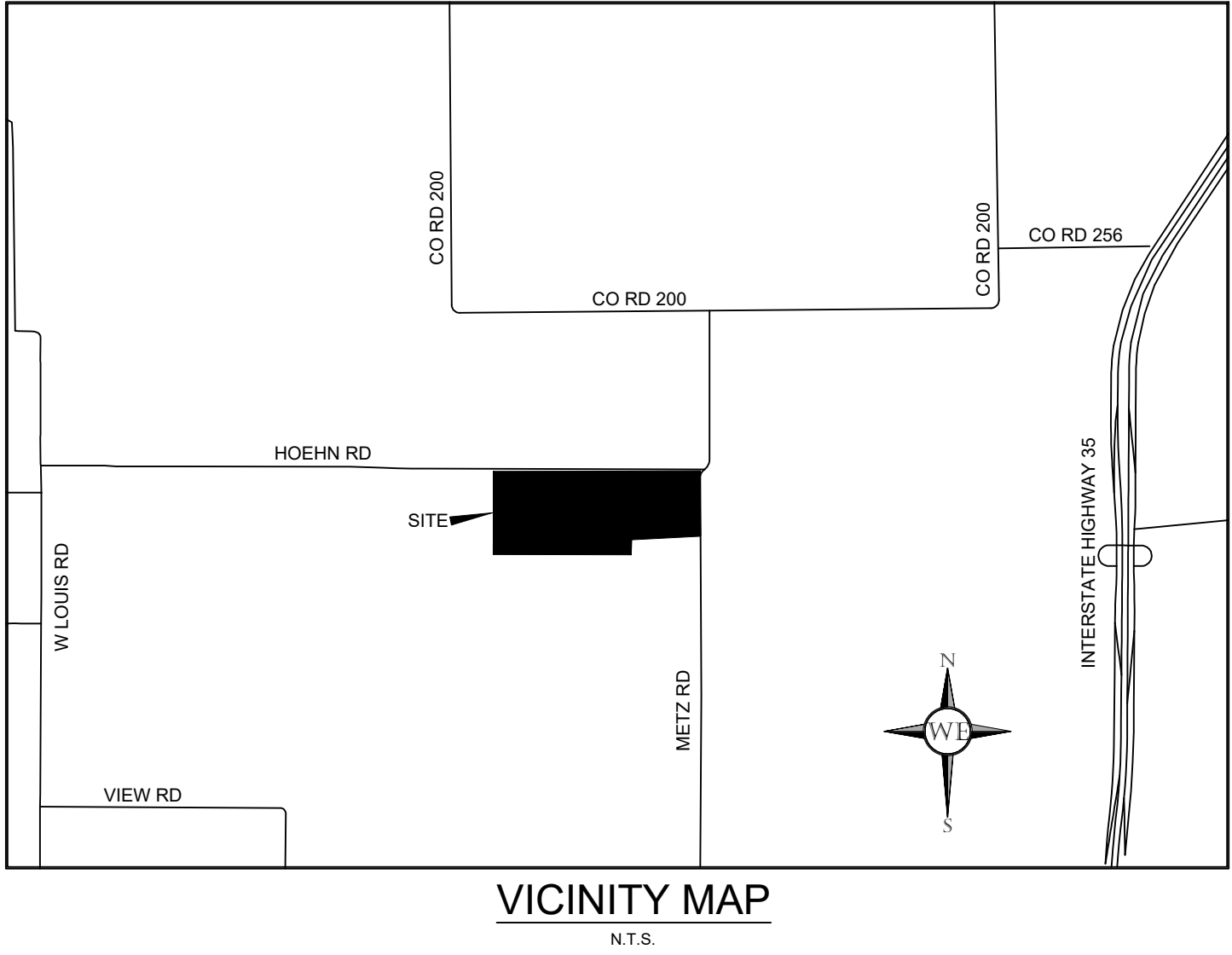
Tommy Q. Burks
Registered Professional Land Surveyor No. 5509
Burks Land Surveying
223 CR 1260
Decatur, Tx 76234
FIRM NO. 10069700



ENGINEER / APPLICANT:
WESTFALL ENGINEERING
CIVIL ENGINEERING CONSULTANTS
TBPE FIRM REG. #19101
CONTACT: HEATH VOYLES, P.E.
EMAIL: HEATH@WESTFALLENGINEERING.COM

FINAL PLAT
LONESOME DOVE ADDITION
LOTS 1 - 30, BLOCK A
5.15 AC R.O.W. DEDICATION
55.50 ACRES (2,417,492.19 SQ.FT.) OUT OF THE
WILLIAM MASON SURVEY, ABSTRACT NO. 801
SANGER ETJ, DENTON COUNTY, TEXAS
PREPARED: AUGUST 19, 2022





STATE OF TEXAS
COUNTY OF DENTON

We, Tracom Enterprises, Inc, the undersigned, are the owners of the land shown on this plat within the area described by metes and bounds as follows:
BEING all that certain lot, tract, or parcel of land situated in the William Mason Survey Abstract Number 801 in Denton County, Texas, being all that certain tract of land conveyed by deed from Josephine B. Hoehn to Wilbur Clarence Hoehn recorded in Volume 748, Page 804, Deed Records, Denton County, Texas and being more particularly described as follows:
BEGINNING at a P. K. nail set for corner in Metz Road, a public roadway, said point being the northeast corner of that certain tract of land conveyed by deed from Fanton R. Hoehn and wife, Anna Mae Hoehn to Charles E. Stobaugh recorded in Volume 2827, Page 965, Real Property Records, Denton County, Texas;
THENCE South 87°03'28" West, 844.96 feet with the north line of said Stobaugh tract to a fence corner for corner;
THENCE South 02°12'57" West, 183.22 feet with the north line of said Stobaugh tract to an iron rod set for corner;
THENCE South 89°55'26" West, 1,687.76 feet with the north line of said Stobaugh tract to an iron rod set for corner in the east line of Lot 6, Block A of Saddle Ridge Estates, an addition to Denton County, Texas according to the plat thereof recorded in Cabinet M, Page 241, Plat Records, Denton County, Texas;
THENCE North 00°16'06" East, 1,018.38 feet with said east line of said Lot 6, Block A of said Saddle Ridge Estates to an iron rod set for corner in Hoehn Road, a public roadway;
THENCE North 89°54'03" East, 2,530.63 feet with said Hoehn Road to an iron rod set for corner in said Metz Road;
THENCE South 00°14'07" East, 798.54 feet with said Metz Road to the PLACE OF BEGINNING and containing 55.50 acres of land.

NOW, THEREFORE, KNOW ALL PERSONS BY THESE PRESENTS:
THAT Tracom Enterprises, Inc, acting herein by and through its duly authorized officer does hereby adopt this plat designating the herein above described property as Lots 1-30, Block A, Lonesome Dove Addition, an addition to the City of Sanger, Texas, and does hereby dedicate to the public use forever by fee simple title, free and clear of all liens and encumbrances, all streets, thoroughfares, alleys, fire lanes, drive aisles, parks, and watercourses, and to the public use forever easements for sidewalks, storm drainage facilities, utilities, and any other property necessary to serve the plat and to implement the requirements of the subdivision regulations and other City codes and do hereby bind ourselves, our heirs, successors and assigns to warrant and to forever defend the title on the land so dedicated. Further, the undersigned covenants and agrees that he/she shall maintain all easements and facilities in a state of good repair and functional condition at all times in accordance with City codes and regulations. No buildings, fences, trees, shrubs, of other improvements or growths shall be constructed or placed upon, over, or across the easements as shown, except that landscape improvements may be installed, if approved by the City of Sanger. The City of Sanger and public entities shall have the right to access and maintain all respective easements without the necessity at any time procuring permission from anyone.

WITNESS MY HAND this ____ day of _____, 2022.
Keith Smith (Tracom representative)

STATE OF TEXAS
COUNTY OF DENTON

BEFORE ME, the undersigned authority, on this day personally appeared, Keith Smith, known to me to be the person whose name is subscribed to the above and foregoing instrument, and acknowledged to me that he executed the same for the purposes and considerations therein expressed and in the capacity therein stated.

Given under my hand and seal of office this ____ day of _____, 2022
Notary Public in and for the State of Texas
Commission expires: _____

STANDARD DENTON COUNTY CONSTRUCTION NOTES:

1. ALL LOTS WILL BE SERVICED BY BOLIVAR WATER.
2. ALL LOTS WILL HAVE SEPTIC SYSTEMS FOR SANITARY SEWER.
3. THE MAINTENANCE OF PAVING, GRADING AND DRAINAGE IMPROVEMENTS AND/OR EASMENTS SHOWN ON THIS PLAT ARE THE RESPONSIBILITY OF THE INDIVIDUAL PROPERTY OWNER AND DOES NOT CONSTITUTE ACCEPTANCE OF SAME FOR MAINTENANCE PURPOSES BY DENTON COUNTY.
4. ALL SURFACE DRAINAGE EASEMENTS SHALL BE KEPT CLEAR OF FENCES, BUILDINGS, FOUNDATION, PLANTINGS AND OTHER OBSTRUCTIONS TO THE OPERATION AND MAINTENANCE OF THE DRAINAGE FACILITY.
5. BLOCKING THE FLOW OF WATER OR CONSTRUCTING IMPROVEMENTS IN SURFACE DRAINAGE EASEMENTS, AND FILLING OR OBSTRUCTING THE FLOODWAY IS PROHIBITED.
6. CONSTRUCTION NOT COMPLETE WITHIN TWO YEARS OF THE COMMISSIONERS COURT APPROVAL SHALL BE SUBJECT TO CURRENT COUNTY SUBDIVISION RULES AND REGULATIONS.
7. A DRIVEWAY CULVERT PERMIT MUST BE OBTAINED FROM THE DENTON COUNTY AND BRIDGE DEPARTMENT BY THE OWNER OF EACH LOT PRIOR TO THE CONSTRUCTION, INSTALLATION, OR PLACEMENT OF ANY DRIVEWAY ACCESS IMPROVEMENTS WITHIN THE DEDICATED RIGHT-OR-WAY.
8. NO CONSTRUCTION, WITHOUT WRITTEN APPROVAL FROM DENTON COUNTY SHALL BE ALLOWED WITHIN AN IDENTIFIED "FIRM" FLOODPLAIN AREA, AND THEN ONLY AFTER A DETAILED FLOODPLAIN DEVELOPMENT PERMIT INCLUDING ENGINEERING PLANS AND STUDIES SHOW THAT NO RISE IN THE BASE FLOOD ELEVATION (BFE) WILL RESULT, THAT NO FLOODING WILL RESULT, THAT NO OBSTRUCTION TO THE NATURAL FLOW OF WATER WILL RESULT; AND SUBJECT TO ALL OWNERS OF THE PROPERTY AFFECTED BY SUCH CONSTRUCTION BECOMING A PARTY TO THE REQUEST. WHERE CONSTRUCTION IS PERMITTED, ALL FINISHED FLOOR ELEVATIONS SHALL BE A MINIMUM OF TWO FOOT ABOVE THE 100-YEAR FLOOD ELEVATION.
9. DENTON COUNTY SHALL NOT BE RESPONSIBLE FOR MAINTENANCE OF PRIVATE STREETS, DRIVES, EMERGENCY ACCESS EASEMENTS, RECREATION AREAS AND OPEN SPACES; AND THE OWNERS SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF PRIVATE STREETS, DRIVES, EMERGENCY ACCESS EASEMENTS, RECREATION AREAS AND OPEN SPACES, AND SAID OWNERS AGREE TO INDEMNIFY AND HOLD HARMLESS DENTON COUNTY FROM ALL CLAIMS, DAMAGES AND LOSSES ARISING OUT OF OR RESULTING FROM PERFORMANCE OF THE OBLIGATIONS OF SAID OWNERS SET FORTH IN THIS PARAGRAPH.

ELECTRIC:
COSERV
7701 S STEMMONS
CORINTH, TX 76065
(940)321-7844
WEBSITE: <https://www.coserv.com>

TELEPHONE:
CENTURYLINK
450 MAIN ST
LAKE DALLAS, TX 75065
(940)227-4202
WEBSITE: <https://www.centurylink.com>

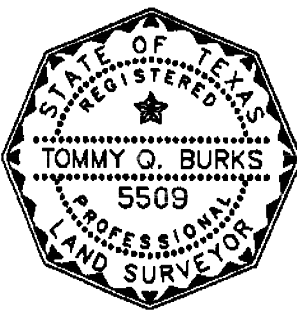
WATER:
BOLIVAR WATER SUPPLY COMPANY
4151 FM 455 WEST
SANGER, TX 76266
(940)458-3931
WEBSITE: <https://www.bolivarwatersc.com/>

- GENERAL NOTES:
1. ALL LOTS COMPLY WITH THE MINIMUM SIZE REQUIREMENTS OF THE ZONING DISTRICT.
 2. THIS PROPERTY MAY BE SUBJECT TO CHARGES RELATED TO IMPACT FEES AND THE APPLICANT SHOULD CONTACT THE CITY REGARDING ANY APPLICABLE FEES DUE.
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SURVEYORS CERTIFICATE

STATE OF TEXAS
COUNTY OF DENTON
I hereby certify that this plat is true and correct and was prepared from an actual Survey of the property made on the ground under my supervision.

Tommy Q. Burks
Registered Professional Land Surveyor No. 5509
Burks Land Surveying
223 CR 1260
Decatur, Tx 76234
FIRM NO. 10069700




OWNER / DEVELOPER:
TRACOM ENTERPRISES INC
4025 GREENVILLE AVE STE 200,
DALLAS, TX, 75206
CONTACT: KEITH SMITH

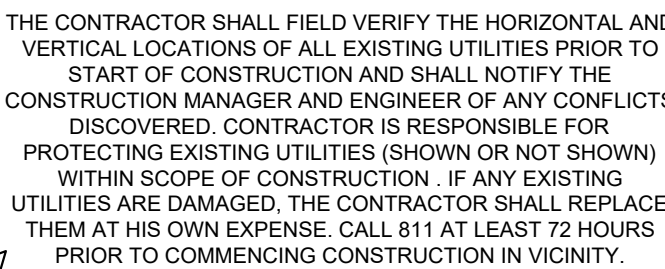
SURVEYOR:
BURKS LAND SURVEYING
223 CR 1260
DECATUR, TX 76234
CONTACT: QUINT BURKS, RPLS

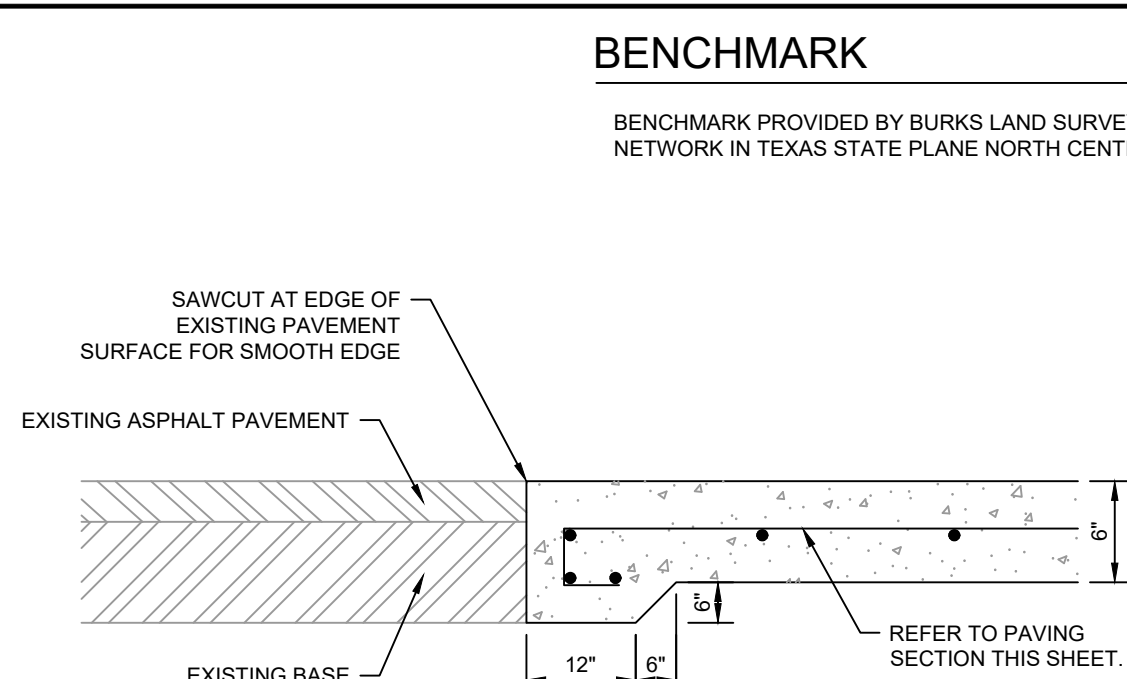
ENGINEER / APPLICANT:
WESTFALL ENGINEERING
CIVIL ENGINEERING CONSULTANTS
TPE FIRM REG. #19101
CONTACT: HEATH VOYLES, P.E.
EMAIL: HEATH@WESTFALLENGINEERING.COM

Approved:	
Chairman, Planning & Zoning Commission City of Sanger, Texas	Date
Mayor City of Sanger, Texas	Date
Attested by	
City Secretary, City of Sanger, Texas	Date

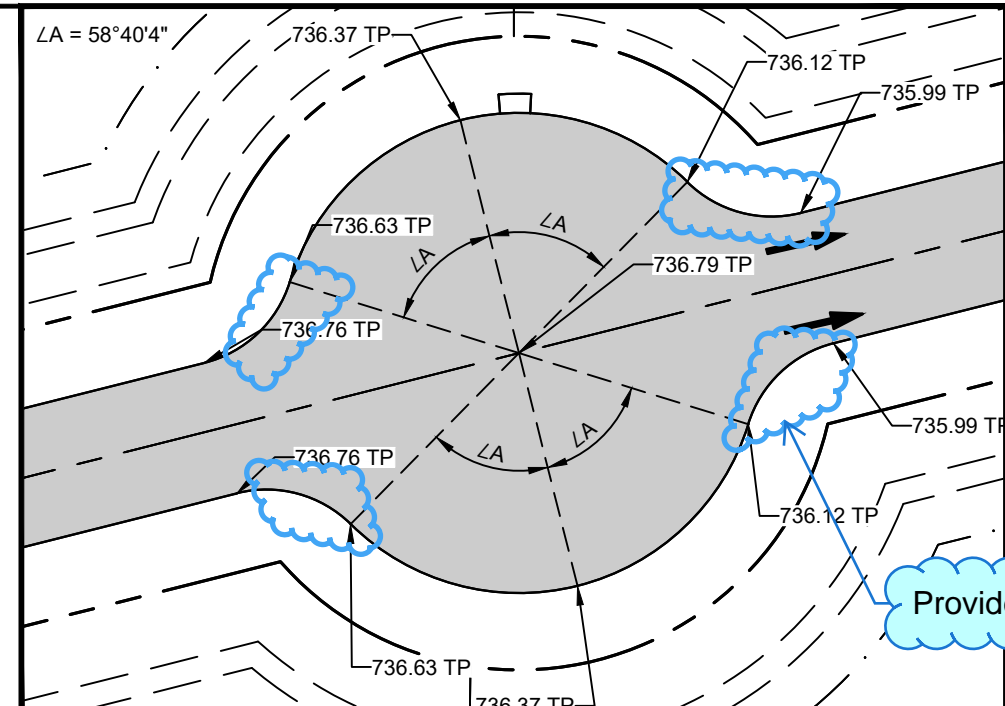
FINAL PLAT
LONESOME DOVE ADDITION
LOTS 1 - 30, BLOCK A
5.15 AC R.O.W. DEDICATION
55.50 ACRES (2,417,492.19 SQ.FT.) OUT OF THE
WILLIAM MASON SURVEY, ABSTRACT NO. 801
SANGER ETJ, DENTON COUNTY, TEXAS
PREPARED: AUGUST 19, 2022







BENCHMARK PROVIDED BY BURKS LAND SURVEYING UTILIZING THE GPS NETWORK IN TEXAS STATE PLANE NORTH CENTRAL (4202).

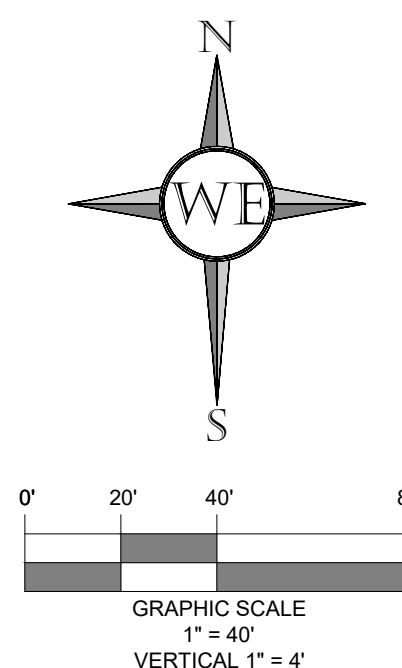


1. ALL SPECIFICATIONS REGARDING PAVEMENT SECTION AND SUBGRADE PREPARATION ARE BASED ON CITY OF SANGER MINIMUM REQUIREMENTS.

1. ALL SPECIFICATIONS REGARDING PAVEMENT SECTION AND SUBGRADE PREPARATION ARE BASED ON CITY OF SANGER MINIMUM REQUIREMENTS.
2. CONCRETE SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 3,600 PSI AT 28 DAYS EXCEPT THAT IN AREAS HAND FINISHED IS REQUIRED TO BE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.

CONCRETE PAVEMENT = REFER TO PAVING SECTION
THIS SHEET

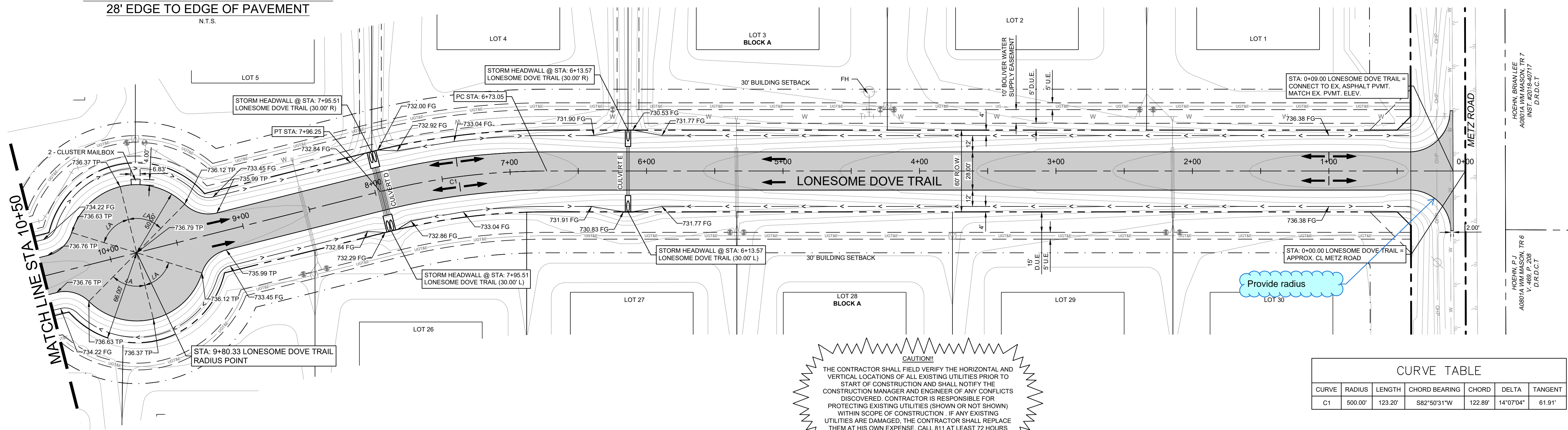
FH	FIRE HYDRANT
FG	FINISHED GRADE
D.U.E.	DRAINAGE AND UTILITY EASEMENT
U.E.	UTILITY EASEMENT



N.T.S.

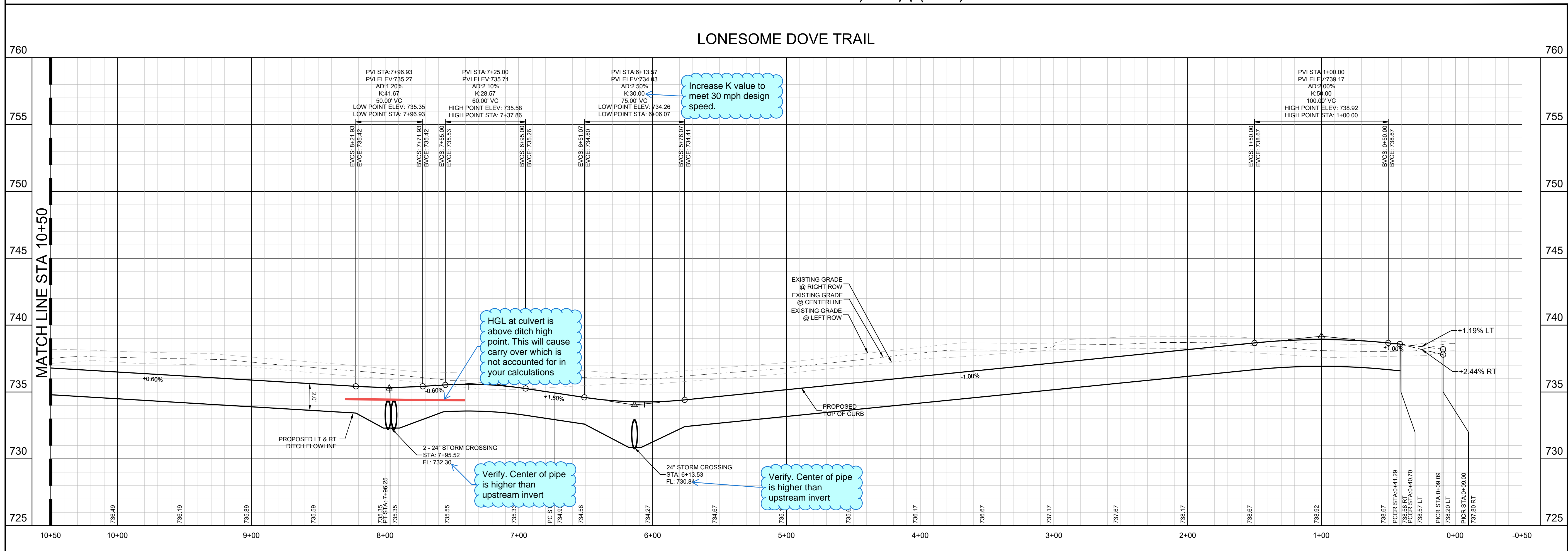


N.T.S.



CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	500.00'	123.20'	S82°50'31"W	122.89'	14°07'04"	61.91'

THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND SHALL NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER OF ANY CONFLICTS DISCOVERED. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN SCOPE OF CONSTRUCTION. IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT HIS OWN EXPENSE. CALL 811 AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION IN VICINITY.



Know what's below.
Call before you dig.

WE WESTFALL
ENGINEERING

1719 ANGEL PARKWAY
STE 400-206, ALLEN, TX 75002
PHONE NO. (214) 846-9397
TPEE FIRM REG. #19101

THIS DOCUMENT IS
RELEASED FOR
REVIEW PURPOSES
ONLY UNDER THE
AUTHORITY OF HEAT
VOYLES, P.E. 10782
ON 09/13/2022. IT IS
NOT TO BE USED FOR
CONSTRUCTION

LONESOME DOVE
LOTS 1-30, BLOCK A
METZ ROAD AND HOEHN ROAD
DENTON COUNTY, SANGER ETJ, TX

PAVING PLAN AND PROFILE

[illegible]

DATE
08/01/2022

PROJECT NO
16802

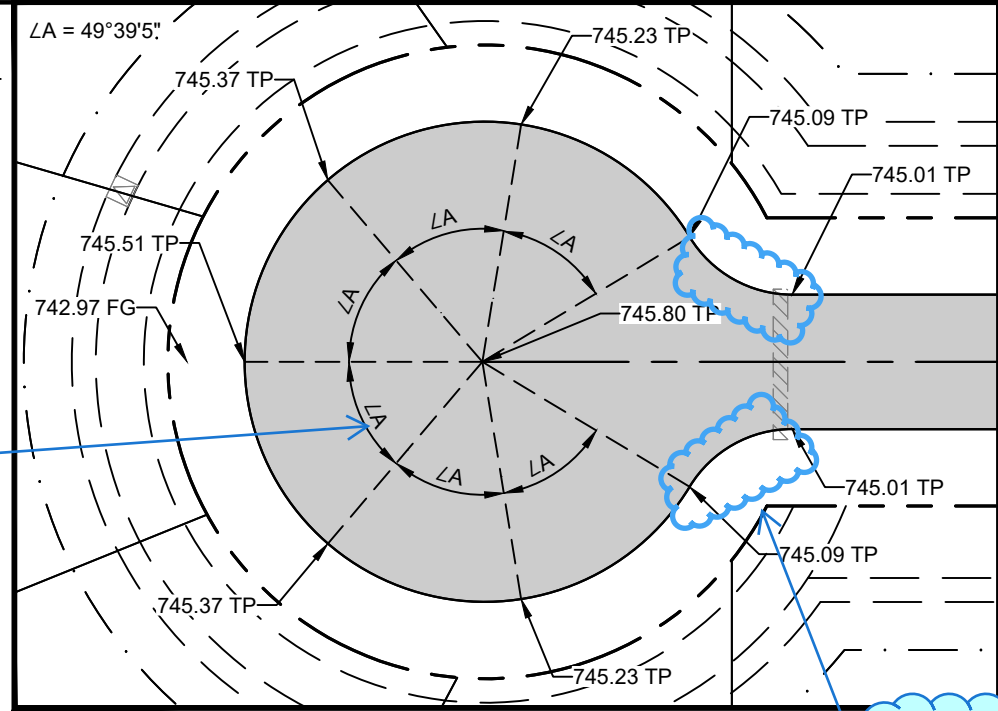
SHEET NO.
C3.00

CURVE TABLE					
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	TANGENT
C2	500.00'	123.20'	S82°50'31"W	122.89'	14°07'04"

CAUTION!
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BENCHMARK

BENCHMARK PROVIDED BY BURKS LAND SURVEYING UTILIZING THE GPS NETWORK IN TEXAS STATE PLANE NORTH CENTRAL (4202).

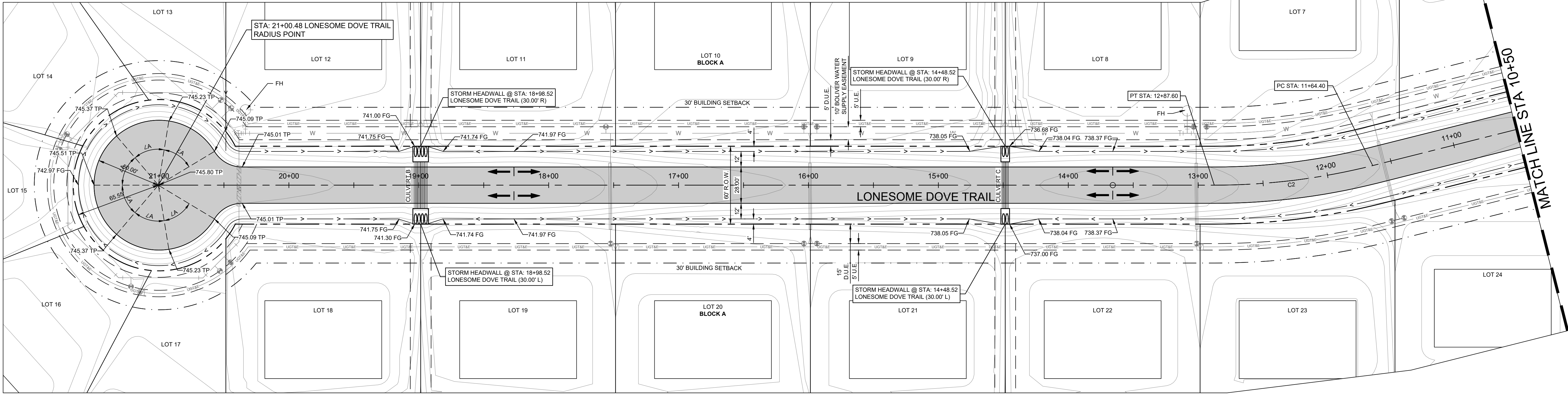
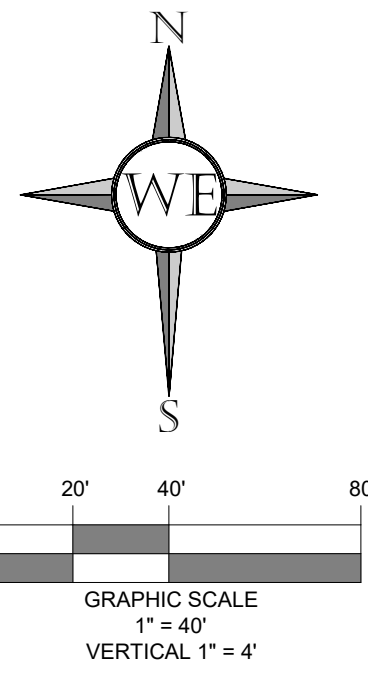


PAVING NOTES

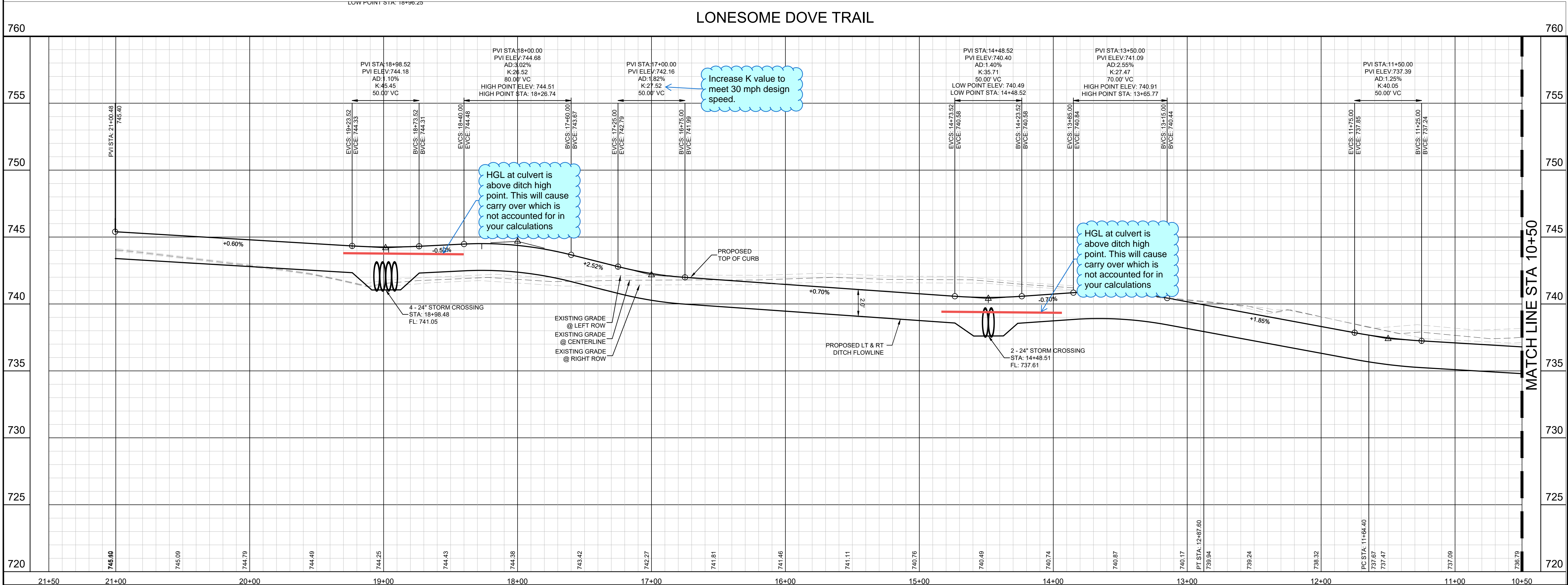
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PAVING LEGEND

- CONCRETE PAVEMENT = REFER TO PAVING SECTION THIS SHEET
- FH FIRE HYDRANT
- FG FINISHED GRADE
- D.U.E. DRAINAGE AND UTILITY EASEMENT
- U.E. UTILITY EASEMENT



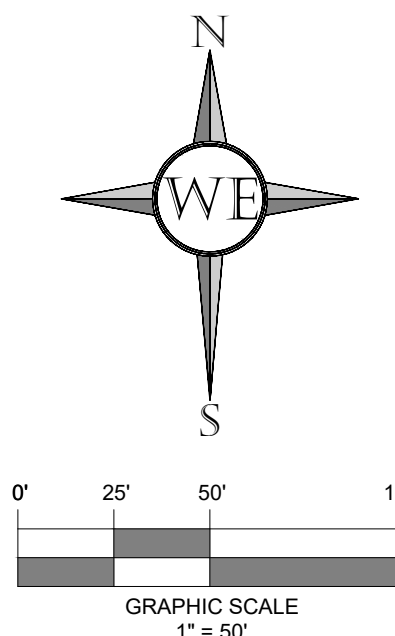
LONESOME DOVE TRAIL



REVISIONS		DATE	
No.			
DATE		08/01/2022	
PROJECT NO.		16802	
SHEET NO.		C3.01	

LOT 7, BLOCK A
METZ ESTATES
ADDITION
INST. #2019-89640
P.R.D.C.T

MATCH LINE SEE
THIS SHEET



WE WESTFALL
ENGINEERING

1719 ANGEL PARKWAY
STE 400-206, ALLEN, TX 75002
PHONE NO. (214) 846-9397
TBPE FIRM REG. #19101

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LOTS 1-30, BLOCK A
METZ ROAD AND HOEHN ROAD
DENTON COUNTY, SANGER ETJ, T

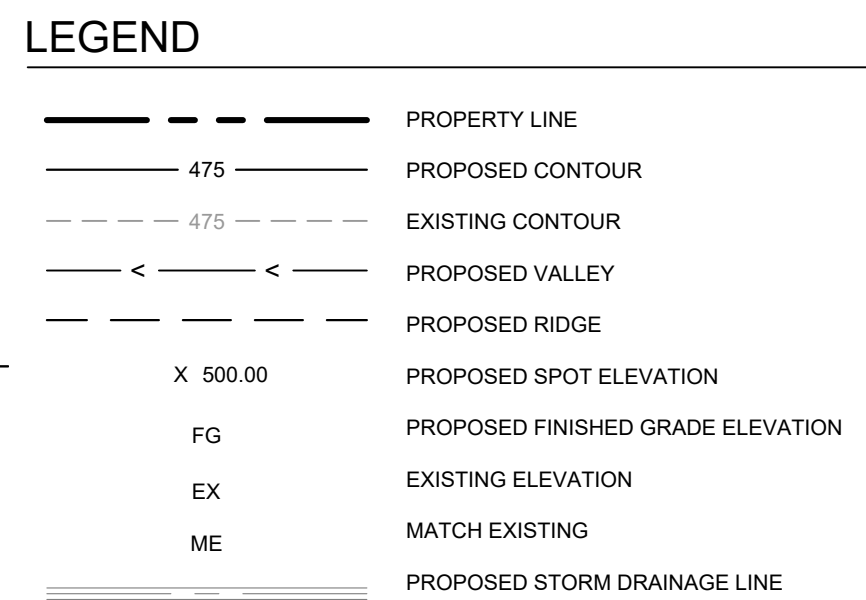
GRADING FLAIN

DATE _____
 0000000000

PROJECT NO.

SHEET NO.

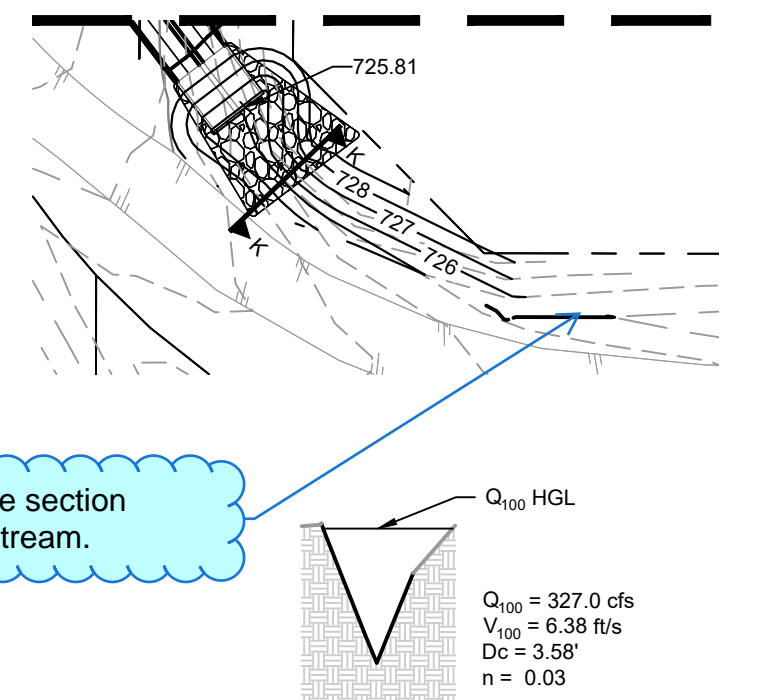
C4 00



GRADING NOTES

1. ALL FILL MATERIAL SHALL BE COMPACTED PER GEOTECH RECOMMENDATION. REFER TO PAVING SECTION DETAILS FOR SUBGRAD PREPARATION REQUIREMENTS UNDER ALL PAVED AREAS. (REFER TO GEOTECH REPORT)
2. SPOT ELEVATIONS IDENTIFIED AS "MATCH EXISTING" SHALL BE FIELD VERIFIED. CONTRACTOR SHALL NOTIFY CIVIL ENGINEERING CONSULTANT (CEC) OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH GRADING ACTIVITIES.

MATCH LINE SEE
THIS SHEET



BENCHMARK

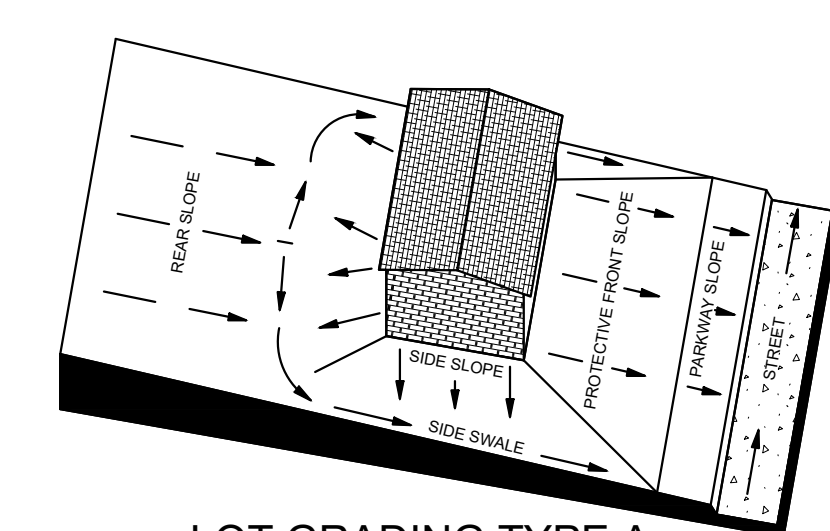
BENCHMARK PROVIDED BY BURKS LAND SURVEYING UTILIZING THE GPS NETWORK IN TEXAS STATE PLANE NORTH CENTRAL (4202).



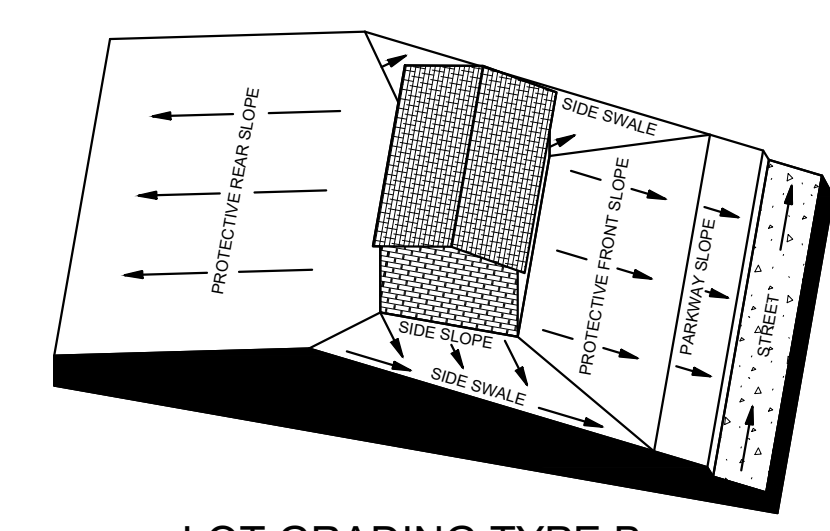
Know what's **below**.
Call before you dig.

CAUTION!

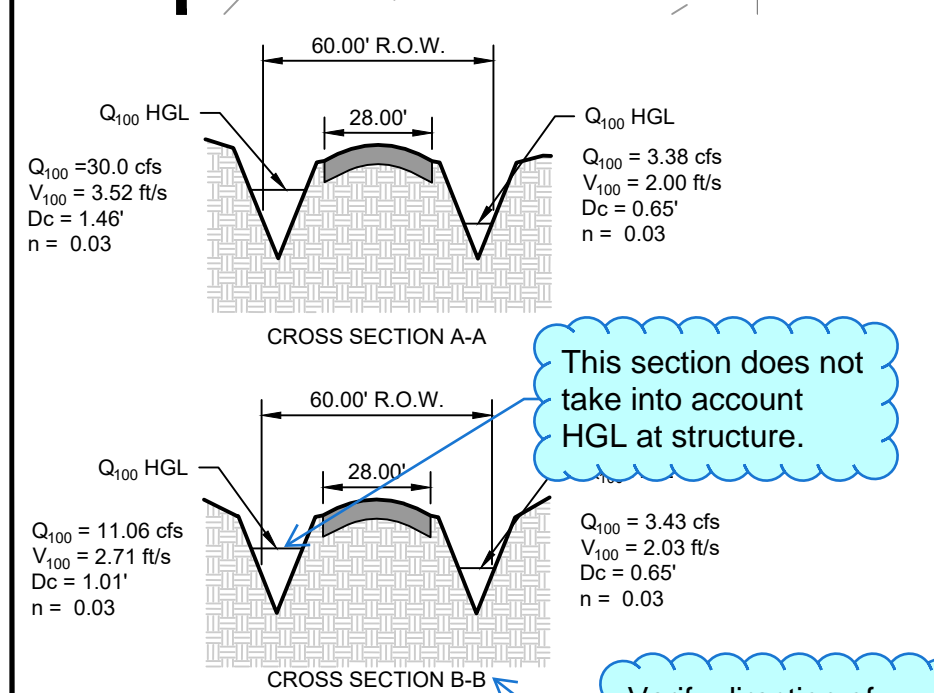
THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND SHALL NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER OF ANY CONFLICTS DISCOVERED. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (KNOWN OR NOT SHOWN) WITHIN SCOPE OF CONSTRUCTION. IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT HIS OWN EXPENSE. CALL 811 AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION IN VICINITY.



LOT GRADING TYPE A
ALL DRAINAGE TO STREET

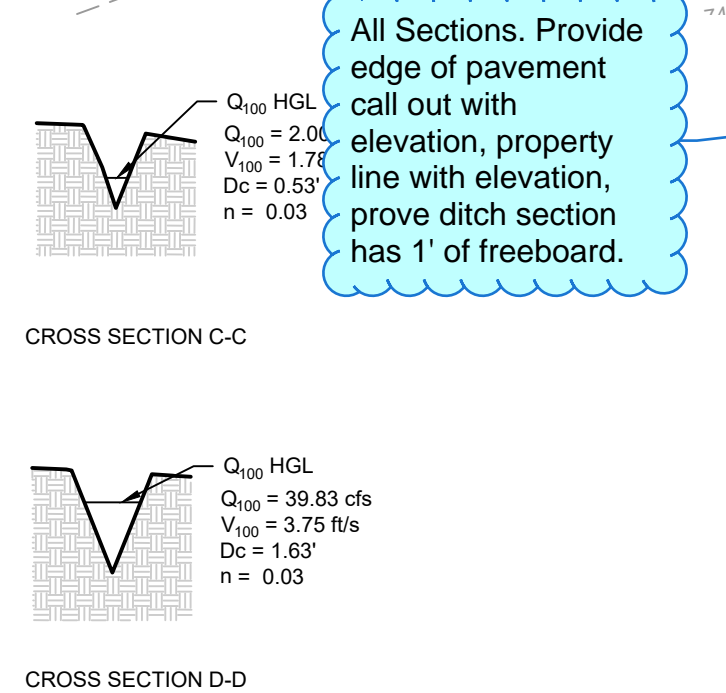


LOT GRADING TYPE B
DRAINAGE BOTH TO STREET & REAR LOT LINE



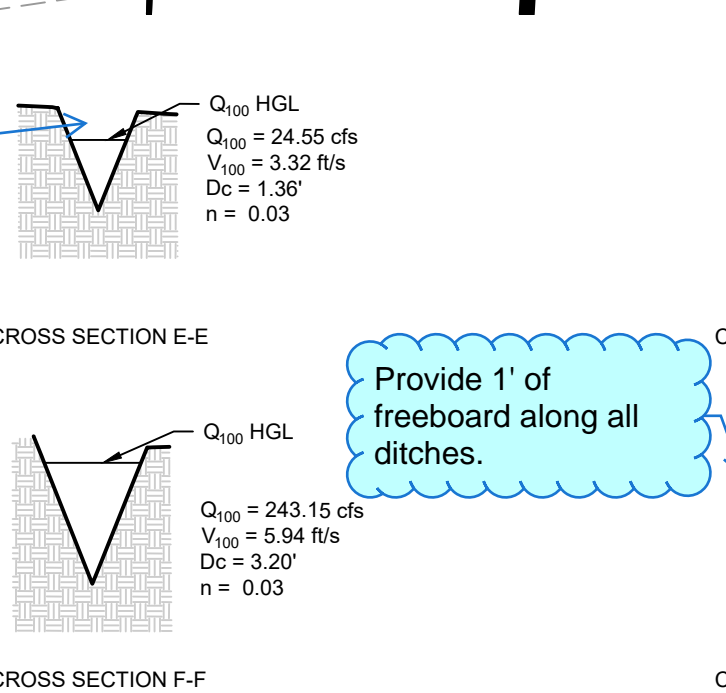
CROSS SECTION A-A

CROSS SECTION B-B



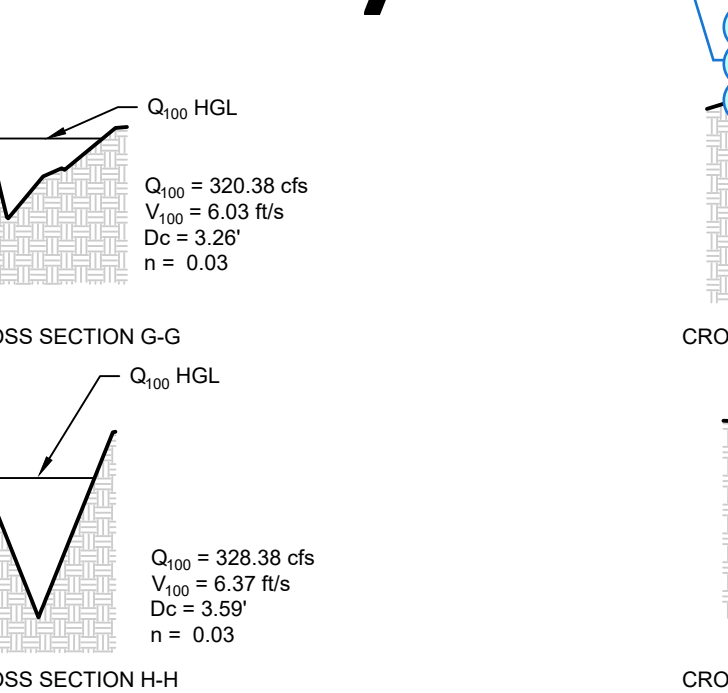
CROSS SECTION C-C

CROSS SECTION D-D



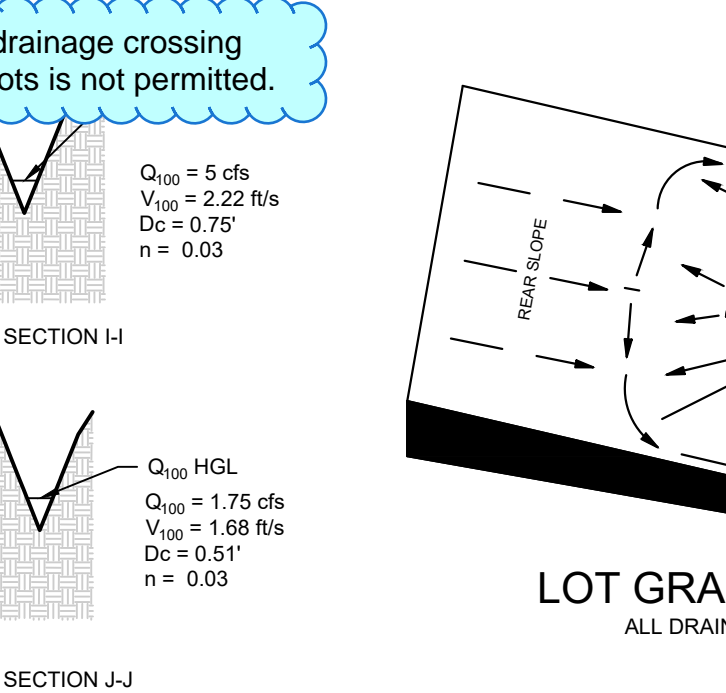
CROSS SECTION E-E

CROSS SECTION F-F



CROSS SECTION G-G

CROSS SECTION H-H



SECTION 1-1

SECTION J-J

drainage crossing lots is not permitted.

Provide 1' of freeboard along all ditches.

This section does not take into account HGL at structure.

Verify direction of Section. Downstream HGL should not be higher than upstream

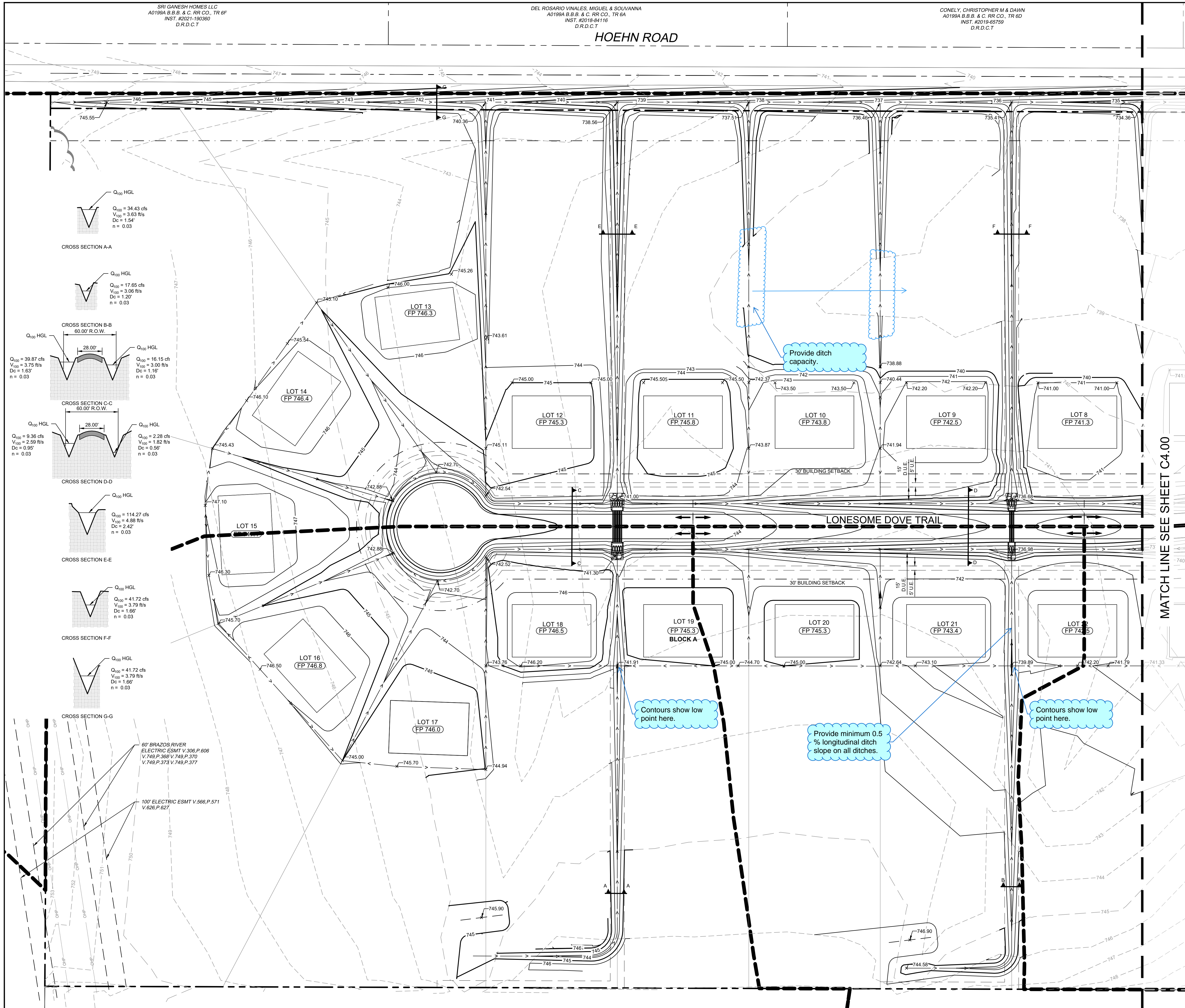
WE WESTFALL
ENGINEERING

1719 ANGEL PARKWAY
STE 400-206, ALLEN, TX 75002
PHONE NO. (214) 846-9397
TXBPE FIRM REG. #91901


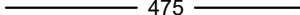








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LONESOME DOVE
LOTS 1-30, BLOCK A
METZ ROAD AND HOEHN ROAD
DENTON COUNTY, SANGER ETJ, TEXAS

GRADING PLAN

[illegible]

LEGEND

	PROPERTY LINE
	PROPOSED CONTOUR
	EXISTING CONTOUR
	PROPOSED VALLEY
	PROPOSED RIDGE
	PROPOSED SPOT ELEVATION
	PROPOSED FINISHED GRADE ELEVATION
	EXISTING ELEVATION
	MATCH EXISTING
	PROPOSED STORM DRAINAGE LINE

GRADING NOTES

1. ALL FILL MATERIAL SHALL BE COMPACTED PER GEOTECH RECOMMENDATION. REFER TO PAVING SECTION DETAILS FOR SUBGRADE PREPARATION REQUIREMENTS UNDER ALL PAVED AREAS. (REFER TO GEOTECH REPORT)
2. SPOT ELEVATIONS IDENTIFIED AS "MATCH EXISTING" SHALL BE FIELD VERIFIED. CONTRACTOR SHALL NOTIFY CIVIL ENGINEERING CONSULTANT (CEC) OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH GRADING ACTIVITIES.

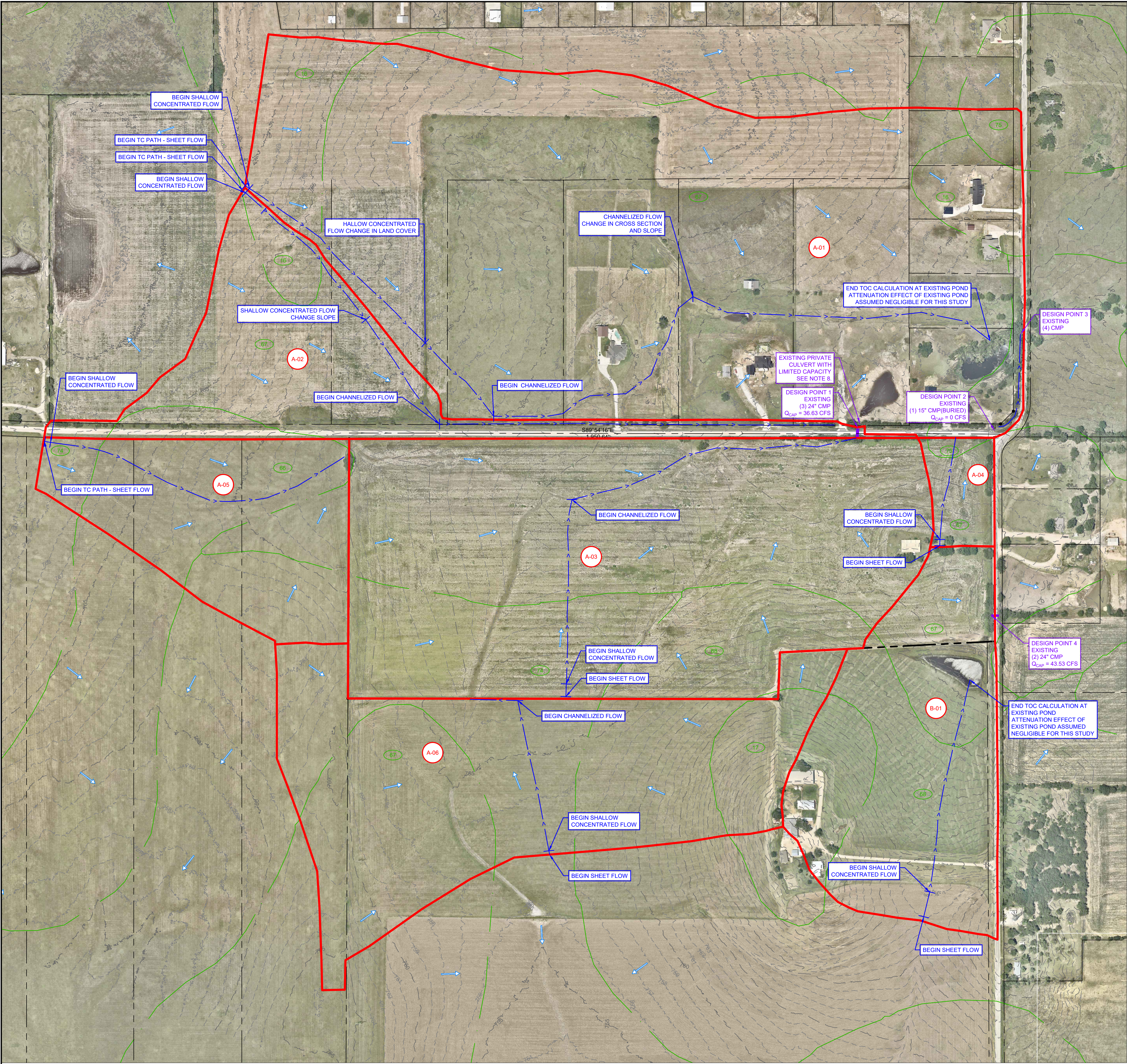
BENCHMARK

BENCHMARK PROVIDED BY BURKS LAND SURVEYING UTILIZING THE GPS NETWORK IN TEXAS STATE PLANE NORTH CENTRAL (4202).

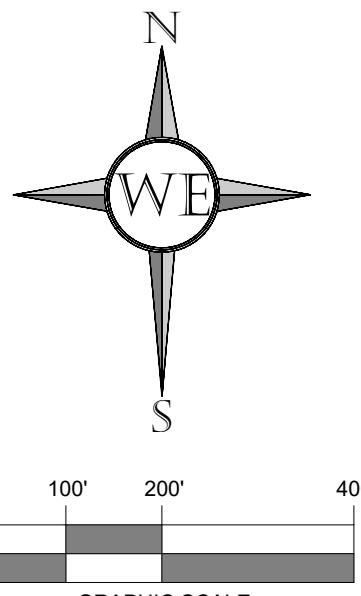


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THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND SHALL NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER OF ANY CONFLICTS DISCOVERED. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN SCOPE OF CONSTRUCTION. IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT HIS OWN EXPENSE. CALL 811 AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION IN VICINITY.



Detailed H&H comments are forthcoming.



A-01 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.41	20	0.66%	3.97	8.5	
Shallow Concentrated					
	L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)	
Hay Meadow	1073	1.47%	0.3	58.6	
	244	1.61%	0.9	4.6	
Channel Flow					
	L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)	
	691	2.9	4.0		
	1210	2.4	8.4		
TOC				84	
Lag Time				50	
A-02 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.41	27	0.73%	3.97	10.3	
Shallow Concentrated					
	L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)	
Hay Meadow	676	1.62%	0.3	35.2	
Hay Meadow	502	1.39%	0.3	28.2	
Channel Flow					
	L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)	
	1639	4.1	6.7		
	TOC			80	
Lag Time			48		
A-03 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.24	50	1.63%	3.97	8.0	
Shallow Concentrated					
	L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)	
Short-grass pasture	737	0.96%	0.7	18.0	
Channel Flow					
	L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)	
	486	1.5	5.36		
	517	3.5	2.43		
TOC				34	
Lag Time				20	
A-04 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.24	24	0.32%	3.97	8.5	
Shallow Concentrated					
	L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)	
Short-grass pasture	406	1.65%	0.9	7.6	
TOC				16	
Lag Time				10	
A-05 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.41	25	1.19%	3.97	8.0	
Shallow Concentrated					
	L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)	
Hay Meadow	676	1.27%	0.3	39.7	
Hay Meadow	563	0.71%	0.2	44.3	
TOC				92	
Lag Time				55	
A-06 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.41	15	0.28%	3.97	9.5	
Shallow Concentrated					
	L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)	
Hay Meadow	602	0.50%	0.2	56.4	
Channel Flow					
	L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)	
	186	1.6	2.00		
	TOC			68	
Lag Time			41		
B-01 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.24	50	1.38%	3.97	8.5	
Shallow Concentrated					
	L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)	
Short-grass pasture	898	2.59%	1.1	13.4	
TOC				22	
Lag Time				13	

LEGEND

- A-01 BASIN NAME
- DRAINAGE AREA
- FLOW ARROW
- - - - - EXISTING CONTOUR
- - - - - PROPERTY LINE
- / / / / / EXISTING STORM LINE
- SOIL TYPE BOUNDARY

SOIL MAP UNIT SYMBOL

- 16 BOLAR CLAY LOAM, 1 TO 3 PERCENT SLOPES (HSG C)
- 17 BOLAR CLAY LOAM, 3 TO 5 PERCENT SLOPES (HSG C)
- 66 PONDER LOAM, 1 TO 3 PERCENT SLOPES (HSG C)
- 67 SLIDELL CLAY, 1 TO 3 PERCENT SLOPES (HSG D)
- 68 SANGER CLAY, 3 TO 5 PERCENT SLOPES (HSG D)
- 74 SANGER CLAY, 1 TO 3 PERCENT SLOPES (HSG D)
- 75 SOMERVELL GRAVELLY LOAM, 1 TO 5 PERCENT SLOPE (HSG C)

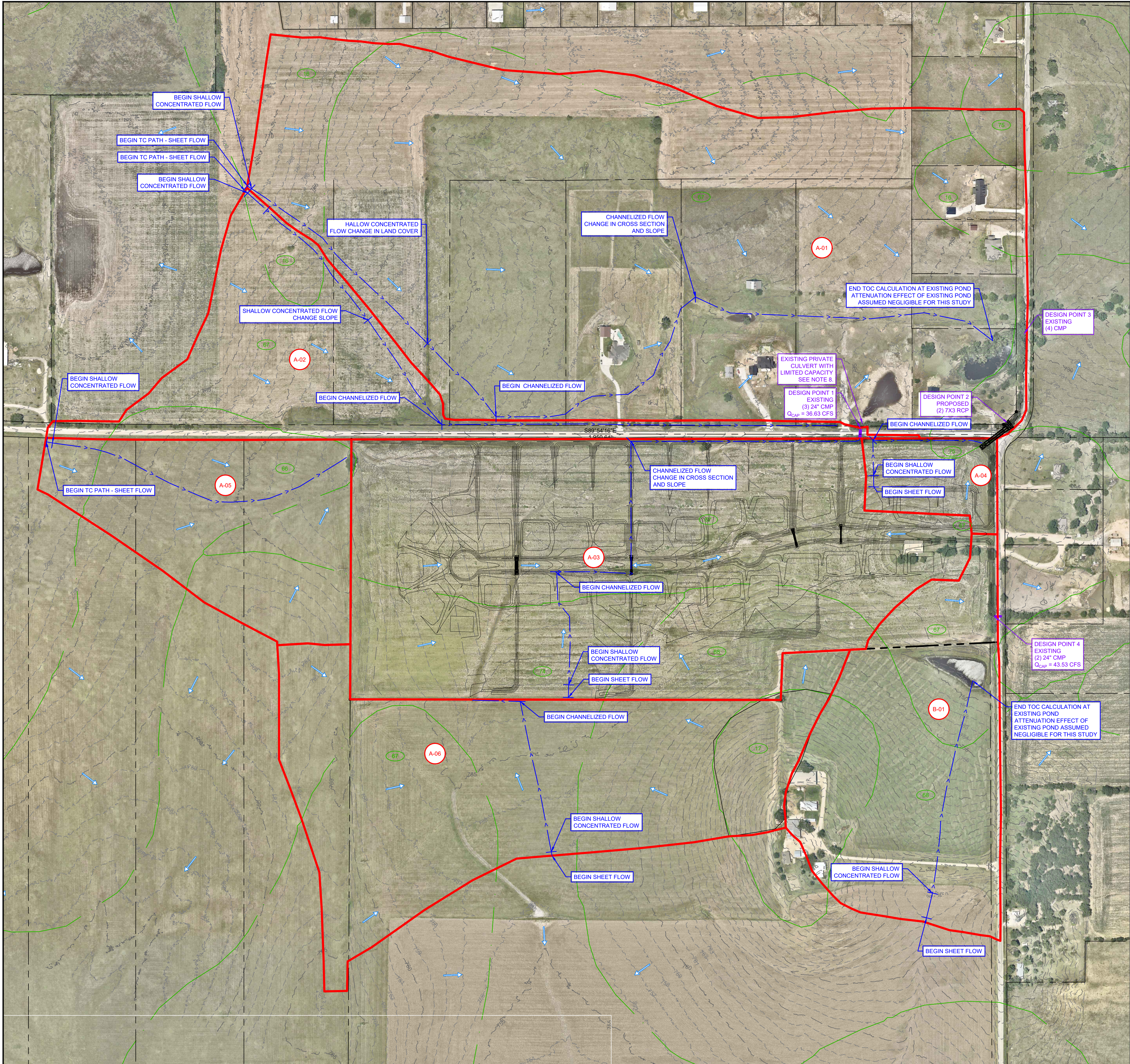
DRAINAGE AREA MAP NOTES:

- TOPOGRAPHY BASED ON SURVEY AND LIDAR.
- SOIL TYPES BASED ON DELINEATION AND CHARACTERISTICS FROM THE NRCS
- SCS TYPE II STORM USED IN DRAINAGE CALCULATIONS.
- PRECIPITATION VALUES SHOWN BELOW ARE BASED ON ATLAS 14
- TIME OF CONCENTRATION BASED ON TR 55 AND NATIONAL ENGINEERING HANDBOOK CRITERIA
- ATTENUATION EFFECTS DUE TO EXISTING PONDS HAVE BEEN ASSUMED TO HAVE NO IMPACT ON BASIN HYDROLOGY.
- MAXIMUM SHEET FLOW LENGTH ASSUMED TO BE 100 FT OR 100X SORT(S) IN PER KUBLER AND ARON (1982) AS OUTLINED IN THE NATIONAL ENGINEERING HANDBOOK CHAPTER 630.
- TOPOGRAPHIC SURVEY FOR DRAINAGE IMPROVEMENTS ON PRIVATE PROPERTY WAS NOT PERFORMED. PRIVATE DRAINAGE IMPROVEMENTS APPEAR TO HAVE LIMITED CAPACITY AND WOULD LIKELY DIVERT RUNOFF FROM LARGE STORM EVENTS DON THE HOEHN RIGHT-OF-WAY. THE HYDROLOGIC MODEL AND RESULTS BELOW ASSUME THAT THE DRAINAGE STRUCTURE PASSES THE DESIGN FLOWS WITHOUT BEING DIVERTED.

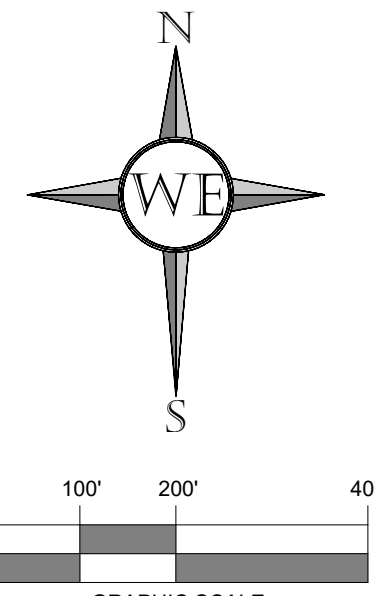
PRECIPITATION VALUES									
Return (Y R)	2	5	10	25	50	100			
Depth(in)	4	5	6.9	7.2	8.2	9.3			

DESIGN POINT SUMMARY						
Design Point	Q ₂ (cfs)	Q ₅ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₅₀ (cfs)	Q ₁₀₀ (cfs)
1	52	59	66	76	84	93
2	66	114	157	220	270	323
3	155	231	299	399	478	563
4	46	67	85	112	134	157

Pre Project Sub Basin Summary												
Basin	Area (Ac)	Hydologic Soil Group	CN	Land Use Description	Area (Ac)	Weighted CN	Q ₂ (cfs)	Q ₅ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₅₀ (cfs)	Q ₁₀₀ (cfs)
A-01	10.49	C	71	Meadow	84.18	78	70	103	134	178	213	251
	22.77	D	78	Meadow								
	2.26	C	77	2 Acre Residential								
	7.74	D	82	2 Acre Residential								
	40.92	D	80	Grassland - Good								
A-02	2.62	C	71	Meadow	18.68	77	15	23	30	40	48	56
	16.06	D	78	Meadow								
A-03	48.68	D	80	Grassland - Good	49.68	80	86	124	158	208	247	288
	1.00	D	86	Farmstead								
A-04	0.31	C	74	Grassland - Good	2.52	79	6	9	11	15	17	20
	2.21	D	80	Grassland - Good								
A-05	8.94	C	71	Meadow	16.04	74	10	16	21	29	35	41
	7.10	D	78	Meadow								
A-06	3.73	C	71	Meadow	33.64	77	31	46	60	80	97	114
	29.91	D	78	Meadow								
B-01	3.86	C	74	Grassland - Good	21.49	79	46	67	85	112	134	157
	17.63	D	80	Grassland - Good								



H&H comments are forthcoming.



A-01 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.41	20	0.66%	3.97	8.5	
Shallow Concentrated					
L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)		
1073	1.47%	0.3	58.6		
244	1.61%	0.9	4.6		
Channel Flow					
L (ft)	V _p (ft/s)	Time (min)			
691	2.9	4.0			
1210	2.4	8.4			
TOC				84	
Lag Time				50	
A-02 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.41	27	0.73%	3.97	10.3	
Shallow Concentrated					
L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)		
676	1.62%	0.3	35.2		
502	1.39%	0.3	29.2		
Channel Flow					
L (ft)	V _p (ft/s)	Time (min)			
1639	4.1	6.7			
TOC				80	
Lag Time				46	
A-03 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.24	50	1.63%	3.97	8.0	
Shallow Concentrated					
L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)		
937	5.3	2.95			
Channel Flow					
L (ft)	V _p (ft/s)	Time (min)			
937	5.3	2.95			
TOC				27	
Lag Time				16	
A-04 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.24	44	1.23%	3.97	8.1	
Shallow Concentrated					
L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)		
137	0.84%	0.6	3.6		
Channel Flow					
L (ft)	V _p (ft/s)	Time (min)			
429	3.1	2.3			
TOC				14	
Lag Time				8	
A-05 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.41	25	1.19%	3.97	8.0	
Shallow Concentrated					
L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)		
676	1.27%	0.3	39.7		
563	0.71%	0.2	44.3		
Channel Flow					
L (ft)	V _p (ft/s)	Time (min)			
196	1.6	2.00			
TOC				68	
Lag Time				41	
A-06 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.41	15	0.28%	3.97	9.5	
Shallow Concentrated					
L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)		
602	0.50%	0.2	56.4		
Channel Flow					
L (ft)	V _p (ft/s)	Time (min)			
196	1.6	2.00			
TOC				68	
Lag Time				41	
B-01 TOC Calcs					
Sheet Flow					
n	L (ft)	S ₀ (%)	P ₂ (in)	Time (min)	
0.24	50	1.38%	3.97	8.5	
Shallow Concentrated					
L (ft)	S ₀ (%)	V _p (ft/s)	Time (min)		
898	2.59%	1.1	13.4		
Channel Flow					
L (ft)	V _p (ft/s)	Time (min)			
137	1.64	2.52			
TOC				22	
Lag Time				13	

LEGEND

- A-01 BASIN NAME
- DRAINAGE AREA
- FLOW ARROW
- EXISTING CONTOUR
- PROPERTY LINE
- EXISTING STORM LINE
- SOIL TYPE BOUNDARY

SOIL MAP UNIT SYMBOL

- 16 BOLAR CLAY LOAM, 1 TO 3 PERCENT SLOPES (HSG C)
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- 67 SLIDELL CLAY, 1 TO 3 PERCENT SLOPES (HSG D)
- 68 SANGER CLAY, 3 TO 5 PERCENT SLOPES (HSG D)
- 74 SANGER CLAY, 1 TO 3 PERCENT SLOPES (HSG D)
- 75 SOMERVELL GRAVELLY LOAM, 1 TO 5 PERCENT SLOPE (HSG C)

DRAINAGE AREA MAP NOTES:

- TOPOGRAPHY BASED ON SURVEY AND LIDAR.
- SOIL TYPES BASED ON DELINEATION AND CHARACTERISTICS FROM THE NRCS
- SCS TYPE II STORM USED IN DRAINAGE CALCULATIONS.
- PRECIPITATION VALUES SHOWN BELOW ARE BASED ON ATLAS 14
- TIME OF CONCENTRATION BASED ON TR 55 AND NATIONAL ENGINEERING HANDBOOK CRITERIA
- ATTENUATION EFFECTS DUE TO EXISTING PONDS HAVE BEEN ASSUMED TO HAVE NO IMPACT ON BASIN HYDROLOGY.
- MAXIMUM SHEET FLOW LENGTH ASSUMED TO BE 100 FT OR 100X SORTS/IN PER KIBLER AND ARON (1982) AS OUTLINED IN THE NATIONAL ENGINEERING HANDBOOK CHAPTER 630.
- THE DESIGN POINT SUMMARY BELOW DEPICTS THE POST PROJECT FLOW RATES AS WELL AS A DELTA COLUMN WHICH SHOWS THE DIFFERENCE IN FLOWS BETWEEN PRE AND POST PROJECT RESULTS. DESIGN POINT 2 SHOWS TO HAVE AN INCREASE IN FLOWS, HOWEVER DUE TO THE LIMITED CAPACITY OF THE EXISTING PRIVATE CULVERT THIS FLOW INCREASE IS NOT ACCURATE. THE PRE PROJECT CONDITION LIKELY HAS A LARGER FLOW RATE AT THIS POINT THAN MODELED. THE POST PROJECT CONDITION PROPOSES IMPROVING THE STORM CROSSING AT DESIGN POINT 2 TO PASS THE 100-YR DESIGN STORM WHILE KEEPING LARGE STORM EVENTS IN THE PUBLIC RIGHT-OF-WAY. DESIGN POINT 3 SHOWS THAT THE POST PROJECT FLOW RATE WOULD BE REDUCED FOR THE DRAINAGE BASIN AS IT CROSSES UNDER METZ ROAD.

PRECIPITATION VALUES

Return (Yr) 2 5 10 25 50 100

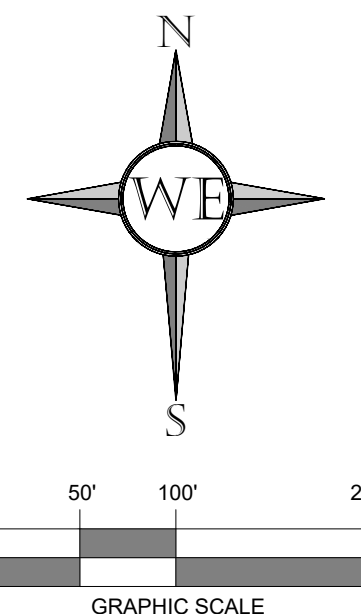
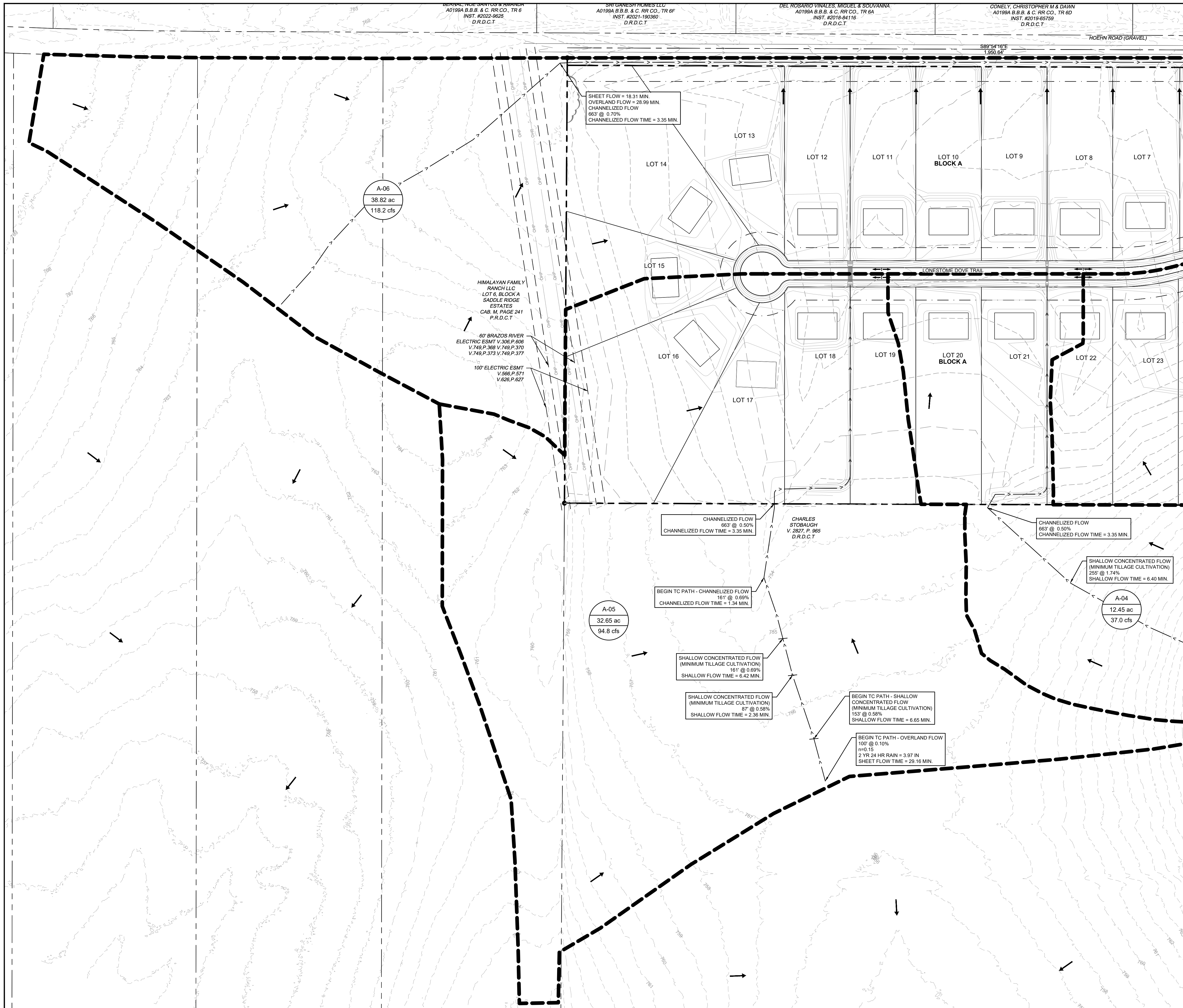
Depth(in) 4 5 5.9 7.2 8.2 9.3

DESIGN POINT SUMMARY

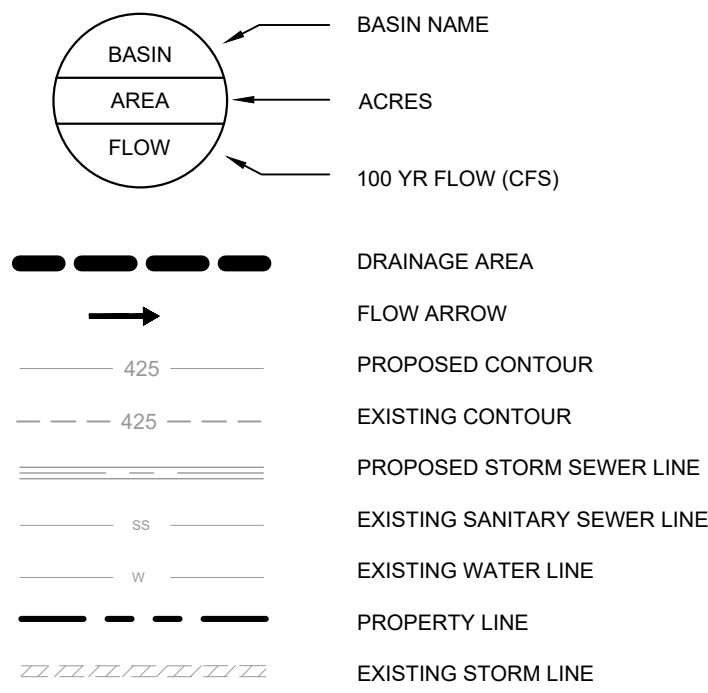
Design Point	Q ₁ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₅₀ (cfs)	Q ₁₀₀ (cfs)	Delta Q ₁₀₀ (cfs)
1	52	59	66	76	84	93
2	94	137	184	252	306	363
3	152	223	287	380	454	535
4	45	66	84	110	131	154

Post Project Sub Basin Summary

Basin	Area (Ac)	Hydrologic Soil Group	CN	Land Use Description	Area (Ac)	Weighted CN	Q ₁ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₅₀ (cfs)	Q ₁₀₀ (cfs)
A-01	10.49	C	71	Meadow	84.18	78	70	103	134	178	213
	22.77	D	78	Meadow							
	2.26	C	77	2 Acre Residential							
	7.74	D	82	2 Acre Residential							
A-02	40.92	D	80	Grassland - Good	18.68	77	15	23	30	40	48
	2.62	C	71	Meadow							
	16.06	D	78	Meadow							
	48.90	D	82	2 Acre Residential							
A-03	0.31	C	77	2 Acre Residential	3.69	82	11	15	19	25	30
	3.36	D	82	2 Acre Residential							
	8.94	C	71	Meadow							
	7.10	D	78	Meadow							
A-04	3.73	C	71	Meadow	33.64	77	31	46	60	80	97
	29.91	D	78	Meadow							
	3.86	C	74	Grassland - Good							
	14.37	D	80	Grassland - Good							
B-01	2.87	D	82	2 Acre Residential	21.10	79	45	66	84	110	131



LEGEND



DRAINAGE AREA MAP NOTES:

1. DRAINAGE CRITERIA FOR THIS DRAINAGE AREA MAP IS BASED ON SURVEY AND COUNTY OF DENTON DRAINAGE REQUIREMENTS

PROPOSED ON-SITE	
TC =	15MIN
C =	0.45
I100 =	7.60 IN/HR
A =	DRAINAGE AREA (ACRES)
Q100 =	C'I100*A (CFS)

BENCHMARK

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Know what's below.
Call before you dig.

CAUTION!!

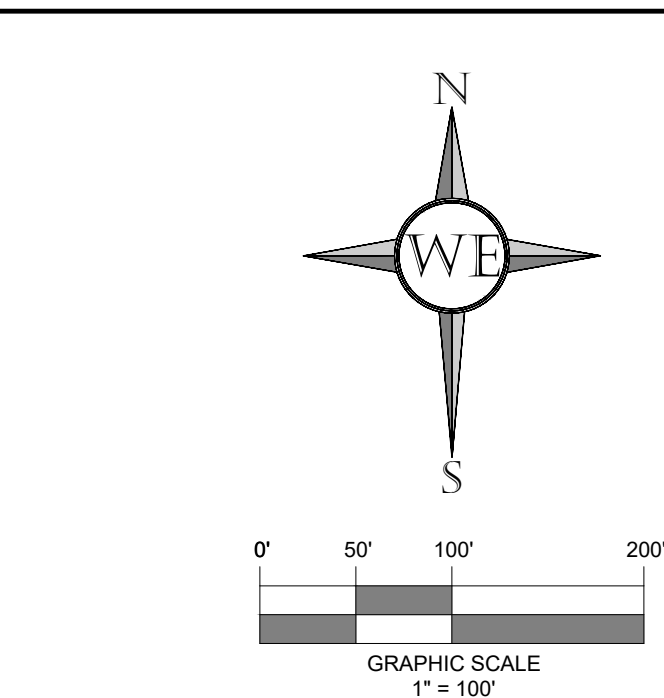
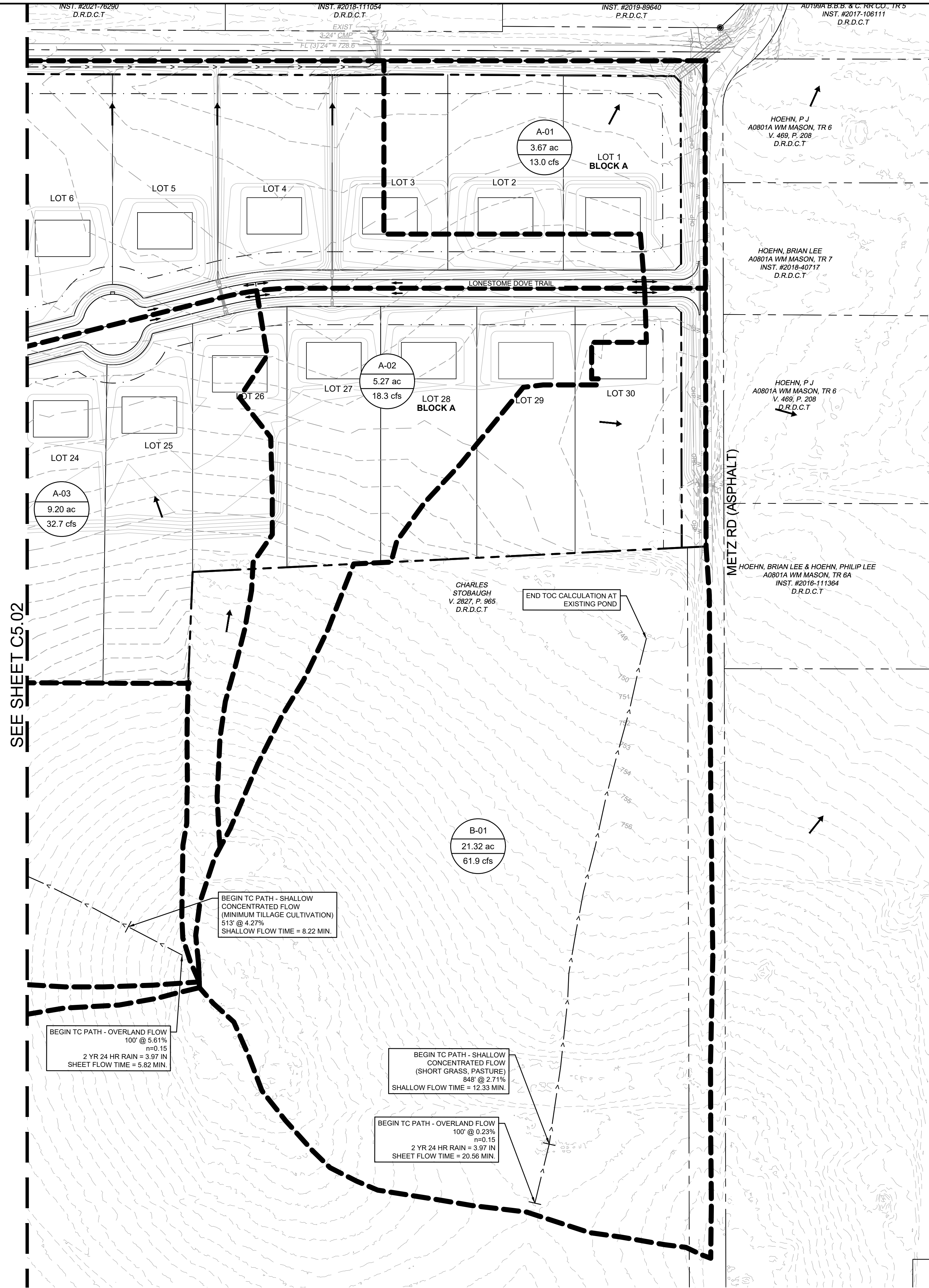
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LONESOME DOVE
LOTS 1-30, BLOCK A
METZ ROAD AND HOEHN ROAD
DENTON COUNTY, SANGER ETJ, TEXAS

DRAINAGE AREA MAP

[illegible]



LEGEND

- BASIN NAME
- ACRES
- 100 YR FLOW (CFS)
- DRAINAGE AREA
- FLOW ARROW
- PROPOSED CONTOUR
- EXISTING CONTOUR
- PROPOSED STORM SEWER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- PROPERTY LINE
- EXISTING STORM LINE

DRAINAGE AREA MAP NOTES:

1. DRAINAGE CRITERIA FOR THIS DRAINAGE AREA MAP IS BASED ON SURVEY AND COUNTY OF DENTON DRAINAGE REQUIREMENTS.

PROPOSED ON-SITE	15MIN
TC =	0.45
C =	1100
A =	7.60 IN/HR
Q100 =	DRAINAGE AREA (ACRES)
	C*1100*A (CFS)

BENCHMARK

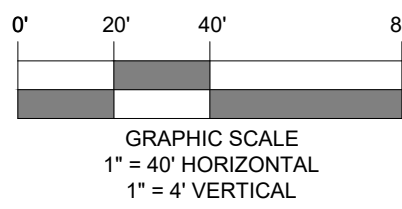
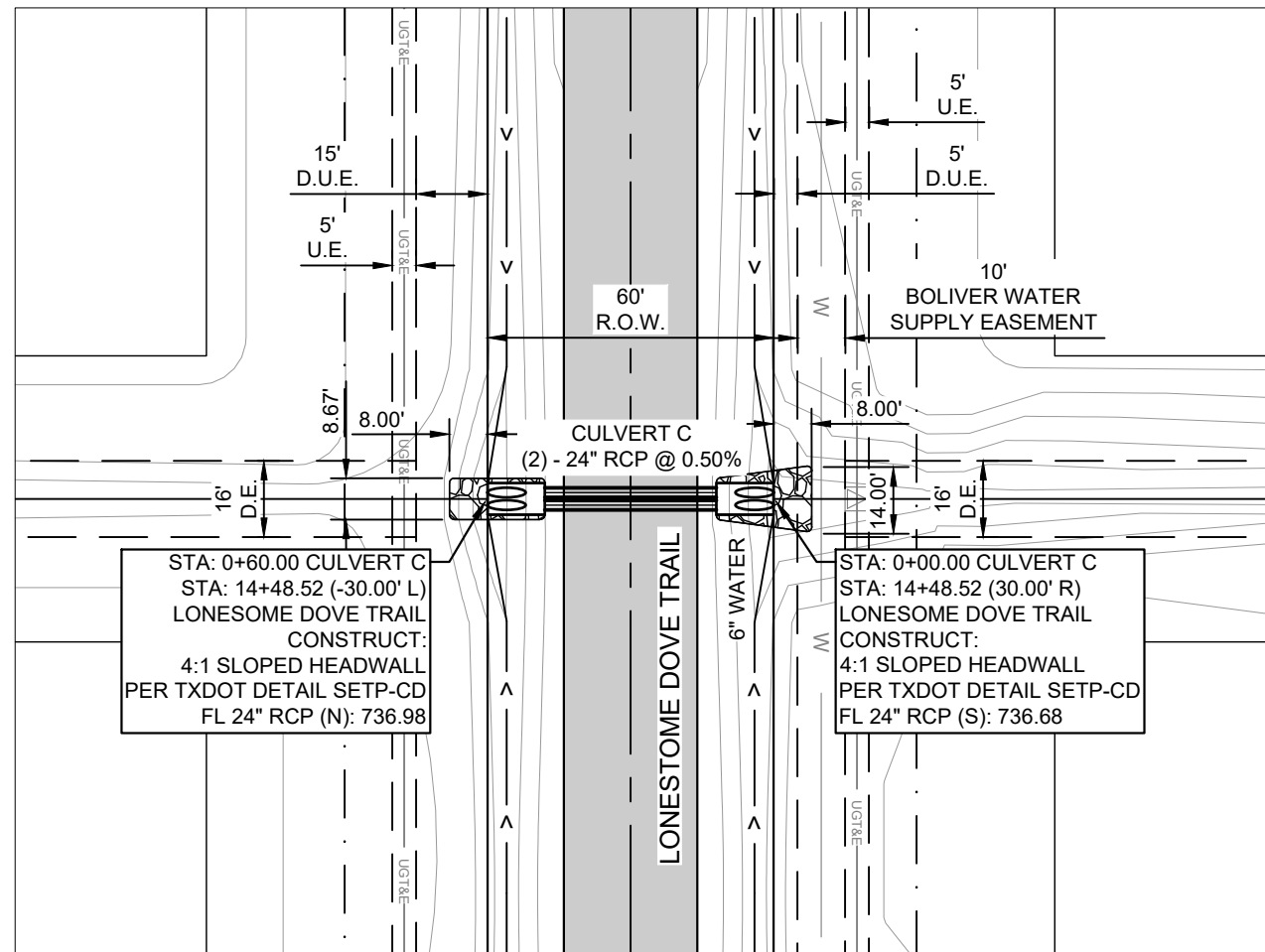
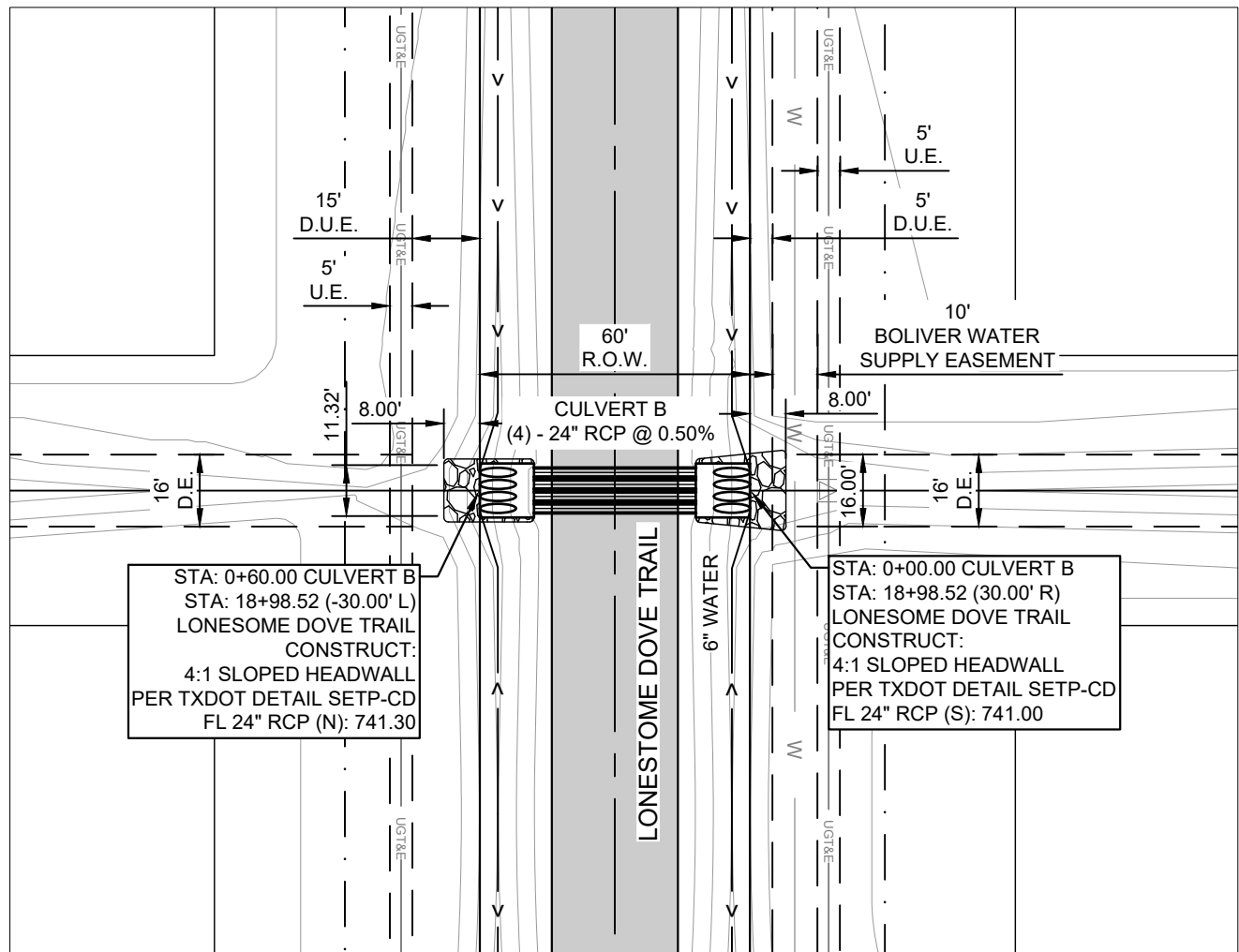
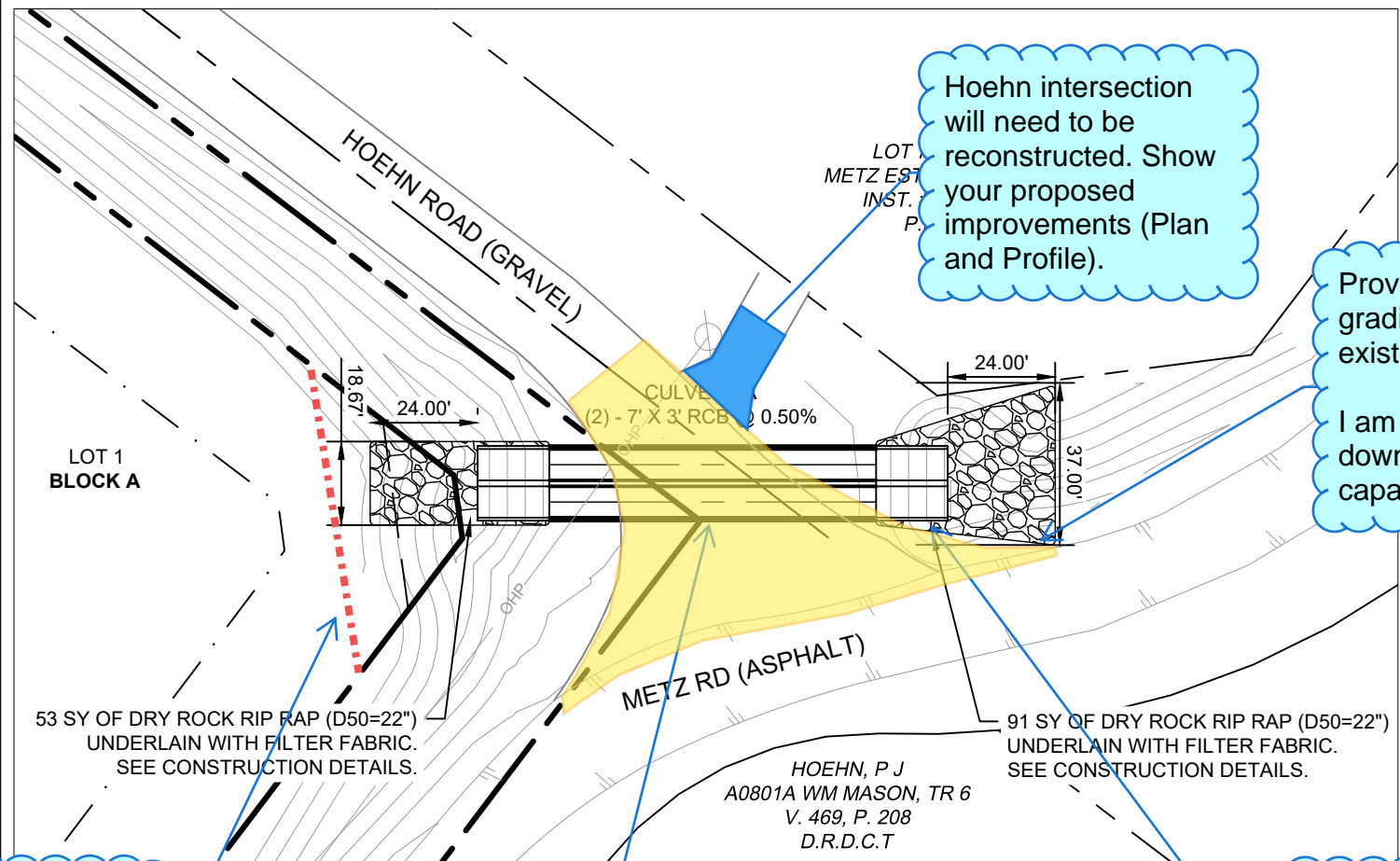
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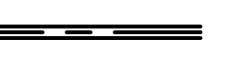
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DRAINAGE AREA TABLE					
DRAINAGE AREA NO.	AREA (ac)	RUNOFF COEFFICIENT "C"	RAINFALL INTENSITY "I"100 (in/hr)	TIME OF CONCENTRATION (minutes)	TOTAL FLOW Q100 (cfs)
A-01	3.67	0.45	7.90	15.0	13.0
A-02	5.27	0.44	7.90	15.0	18.3
A-03	9.20	0.45	7.90	15.0	32.7
A-04	12.45	0.42	7.08	20.0	37.0
A-05	32.65	0.41	7.08	20.0	94.8
A-06	38.82	0.43	7.08	20.0	118.2
B-01	21.32	0.41	7.08	20.0	61.9



LEGEND

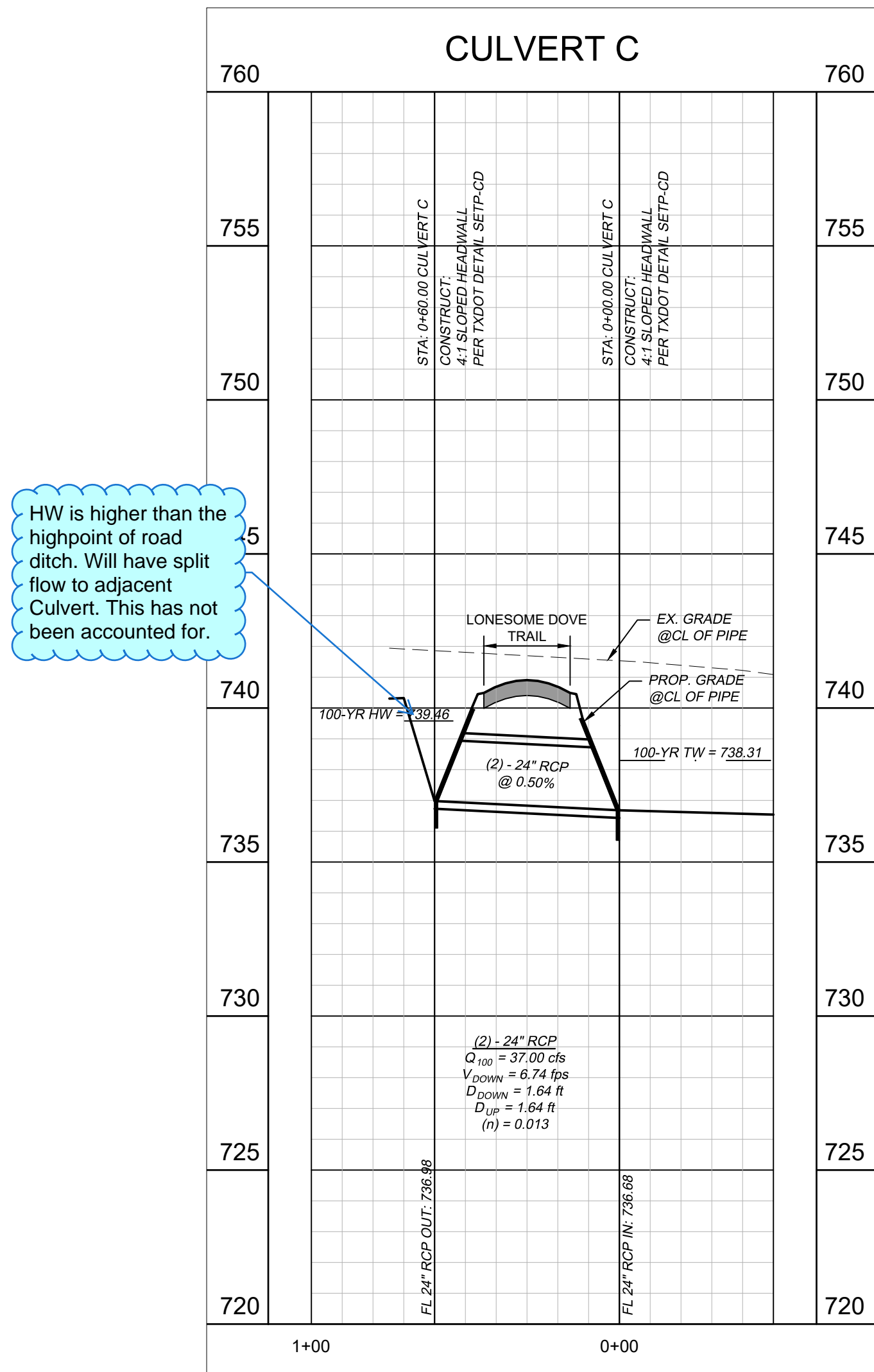
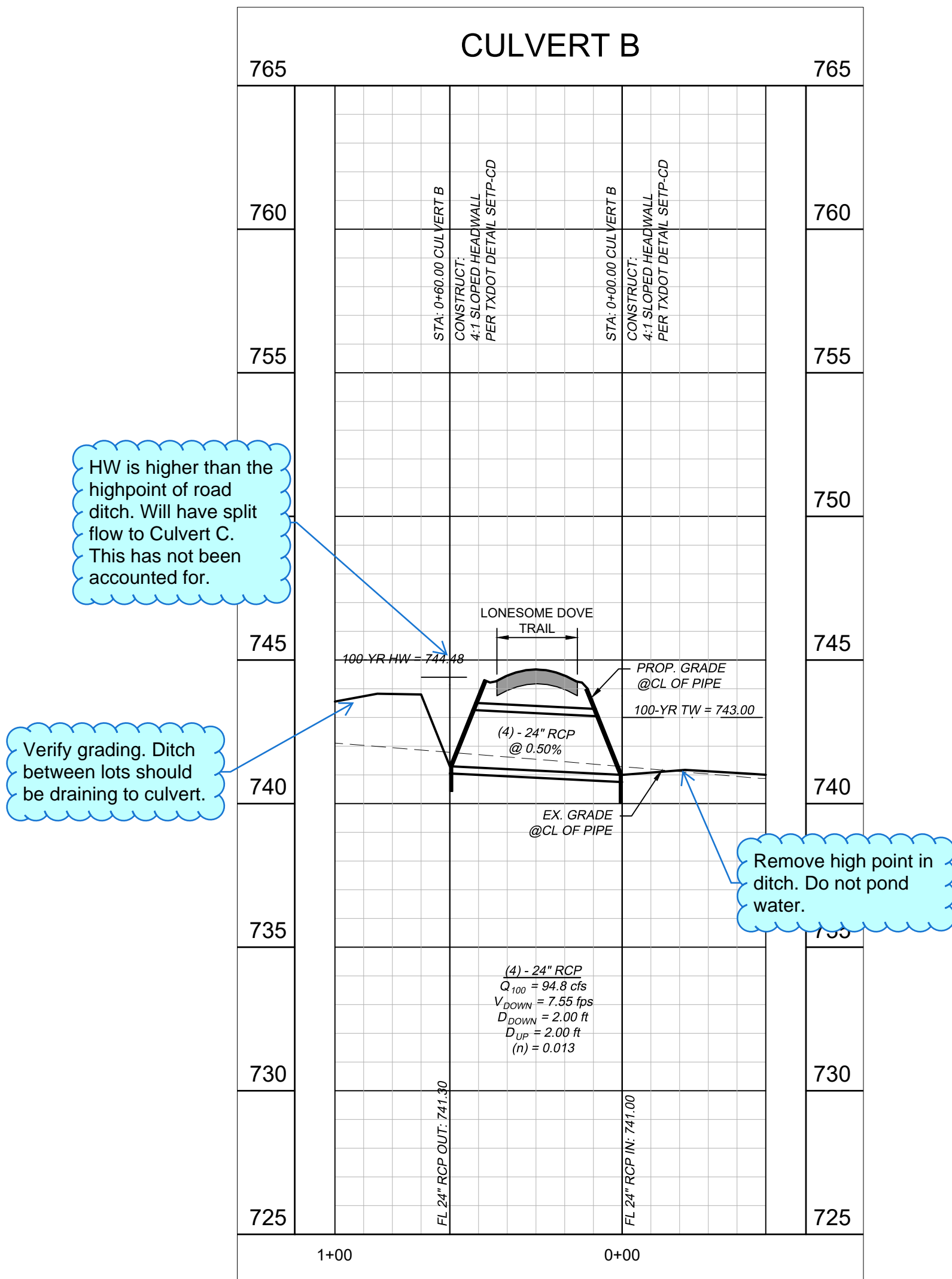
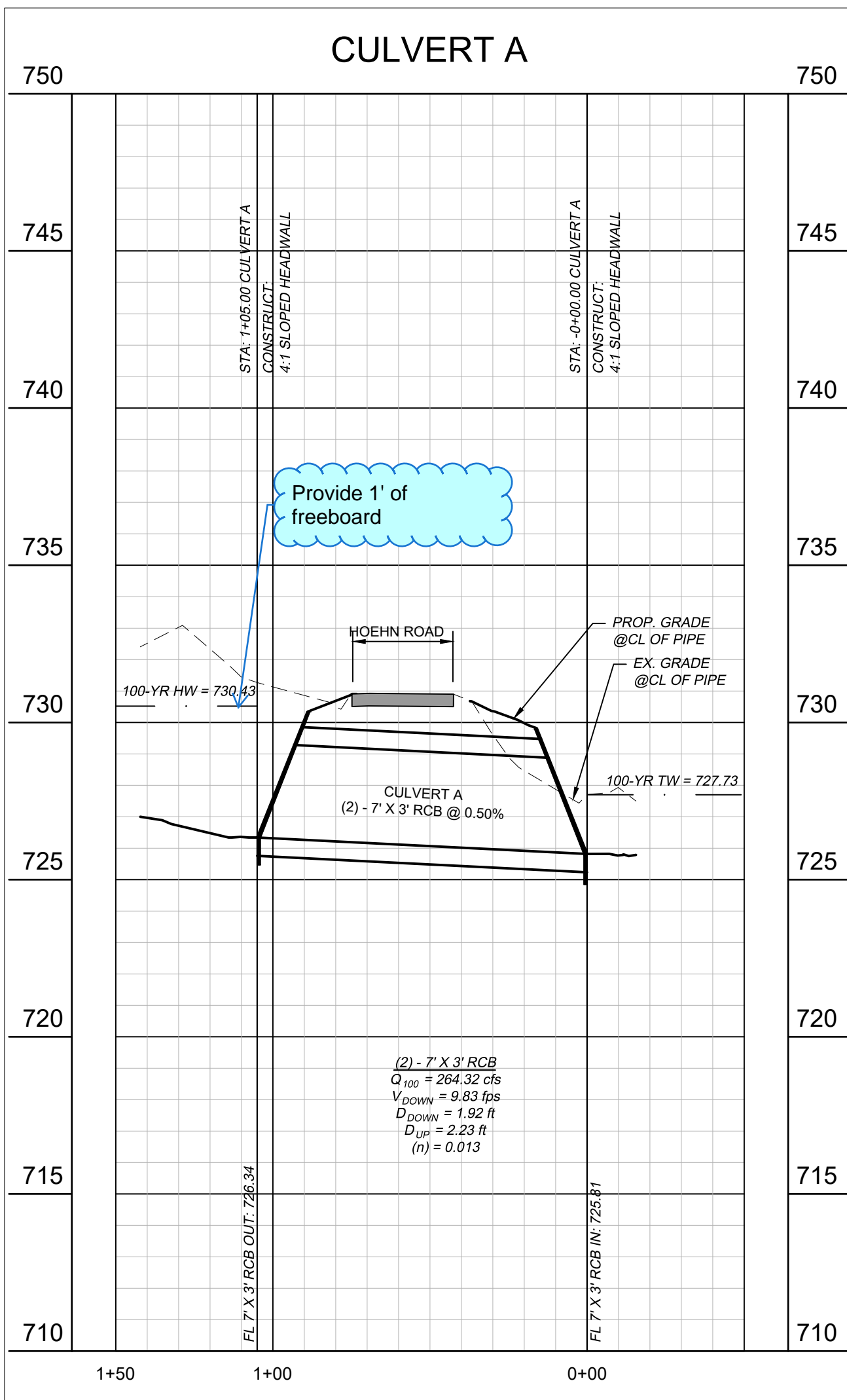


Legend for utility symbols:

- PROPERTY LINE
- PROPOSED STORM LINE
- EXISTING STORM LINE
- EXISTING OVERHEAD ELECTRIC
- EXISTING WATER LINE
- DRAINAGE AND UTILITY EASEMENT
- DRAINAGE EASEMENT
- UTILITY EASEMENT

STORM DRAINAGE NOTES:

1. 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 MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
2. CONTRACTOR SHALL FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES IN THE FIELD PRIOR TO COMMENSAL CONSTRUCTION. NOTIFY EMERGENCY IMMEDIATELY OF ANY DISCREPANCIES.
3. STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
 - a. RCP - ASTM C76 CLASS III
 - b. HDPE - AASHTO M252 TYPE S, M244 TYPE S R ASTM F 2306 SMOOTH WALL
 - c. PVC - ASTM D 3034 SDR35
4. ALL EXISTING AND PROPOSED PIPES AND STRUCTURES ARE TO BE CLEARED OUT AT THE COMPLETION OF CONSTRUCTION TO REMOVE ALL SILT AND DEBRIS.
5. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERIGHT.
6. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RINGS & COVERS, MANHOLES IN UNPAVED AREAS SHALL BE OF ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
7. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.



BENCHMARK

BENCHMARK PROVIDED BY BURKS LAND SURVEYING UTILIZING THE GPS NETWORK IN TEXAS STATE PLANE NORTH CENTRAL (4202).



Know what's below.
Call before you dig

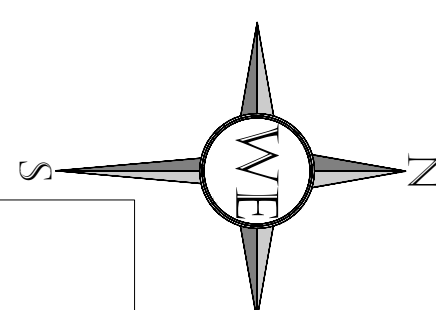
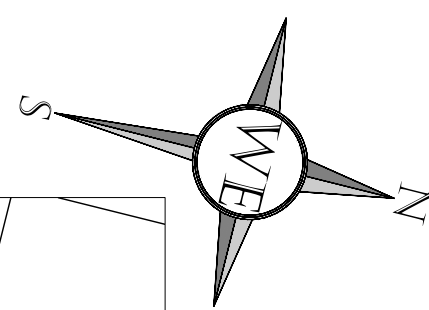
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LONESOME DOVE
LOTS 1-30, BLOCK A
METZ ROAD AND HOEHN ROAD
DENTON COUNTY, SANGER ETJ, TEXAS

STORM CULVERT A AND B AND C PLAN AND PROFILE

[illegible]



- | | |
|--|-------------------------------|
| | PROPERTY LINE |
| | PROPOSED STORM LINE |
| | EXISTING STORM LINE |
| | EXISTING OVERHEAD ELECTRIC |
| | EXISTING WATER LINE |
| | DRAINAGE AND UTILITY EASEMENT |
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STORM DRAINAGE NOTES:

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2. CONTRACTOR SHALL FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES IN THE FIELD PRIOR TO COMMENCEMENT OF CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
3. STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
 - a. RCP - ASTM C77 CLASS III
 - b. HDPE - AASHTO M252 TYPE S, M294 TYPE S R STAIN F 2306 SMOOTH WALL
 - c. PVC - AASHTO D 3034 SDR35
- a. ALL EXISTING AND PROPOSED PIPES AND STRUCTURES ARE TO BE CLEANED OUT AT THE COMPLETION OF CONSTRUCTION TO REMOVE ALL SILT AND DEBRIS.
- b. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
- c. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RINGS & COVERS, MANHOLES IN UNPAVED AREAS SHALL BE ABOVE FINISH GRADE. LIDS SHALL BE Labeled "STORM SEWER".
- d. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.

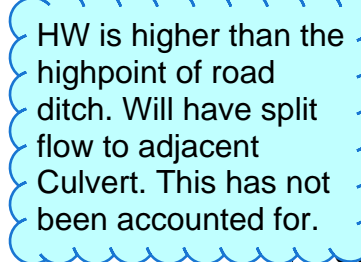
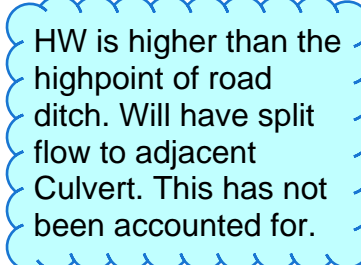
BENCHMARK

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THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION. IF ANY UTILITIES ARE NOTIFIED TO THE CONTRACTOR BY THE CITY OF CHICAGO, THE CITY OF CHICAGO CONSTRUCTION MANAGER AND ENGINEER OF ANY CONFLICTS DISCOVERED, CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN SCOPE OF CONSTRUCTION. IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT HIS OWN EXPENSE. CALL 811 AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION IN VICINITY.



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LONESOME DOVE
LOTS 1-30, BLOCK A
METZ ROAD AND HOEHN ROAD
DENTON COUNTY, SANGER ETJ, T

STORM CULVERT D AND E PLAN AND PROFILE

REVISIONS

No.	DATE
-----	------

DATE
08/01/2022

PROJECT NO
16802

SHEET NO.
C6.01

WESTFALL
ENGINEERING

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LONESOME DOVE
LOTS 1-30, BLOCK A
METZ ROAD AND HOEHN ROAD
DENTON COUNTY, SANGER ETJ, '11

STORM CULVERT CALCULATIONS

DATE
8/01/2022

PROJECT NO
16802

SHEET NO.

SHEET NO.
C6.02

ROADWAY CULVERT CALCULATION

CULVERT ID	DISCHARGE				VELOCITY			DEPTH				HGL				HEADWATER				EGL			
	Ret Pd	Total	Pipe	Overtop	Channel	Down	Up	Down	Up	Normal	Critical	Down	Up	Hw	Hw/D	Down	Up						
	(Years)	(cfs)	(cfs)	(cfs)	(ft/s)	(ft/s)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)						
CULVERT A	100	264.32	264.32	0	0	9.83	8.47	1.92	2.23	1.88	2.23	727.73	728.57	730.43	1.36	729.23	729.68						
CULVERT B	100	94.8	94.8	0	0	7.55	7.54	2	2	2	1.73	743	743.56	744.48	1.59	744.89	744.45						
CULVERT C	100	37	37	0	0	6.74	6.75	1.63	1.63	1.63	1.55	738.31	738.61	739.46	1.24	739.02	739.45						
CULVERT D	100	32.7	32.7	0	0	6.27	6.27	1.55	1.55	1.55	1.46	733.54	733.84	734.56	1.13	734.15	734.45						
CULVERT E	100	18.3	18.3	0	0	6.23	6.23	1.77	1.77	1.77	1.54	732.32	732.63	733.29	1.23	732.19	732.2						

- Verify calculations.
- Appears to be bypass in ditches which are not accounted for in these calcs

BENCHMARK

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1. PIPE: WATER PIPELINES SHALL BE PVC PIPE CONFORMING TO THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. IN GENERAL, THE WATER PIPELINES SHALL BE AWMA STANDARD C-900 WITH CAST-IRON OUTSIDE DIMENSIONS, AND INSTALLED WITH A MINIMUM OF FOUR FEET (4') OF COVER FROM PROPOSED FINAL GRADE, UNLESS OTHERWISE APPROVED BY BOLIVAR WSC.
2. ALL WATER MAINS UNDER PAVEMENT SHALL BE ENCASED AS FOLLOWS:
 - a. 1.8-INCH THROUGH 10-INCH - ENCASE IN STEEL OR APPROVED ALUM.
 - b. 12-INCH AND LARGER - ENCASE IN STEEL PIPE, SIZE AND THICKNESS (1/4" MIN.) TO BE APPROVED BY BOLIVAR'S ENGINEER.
3. ALL PIPES NOT UNDER PAVEMENT SHALL BE INSTALLED IN EMBANKMENT MATERIAL AS SHOWN ON THE STANDARD DETAILS.
4. GATE VALVES: ALL GATE VALVES SHALL CONFORM TO AWMA C-559 STANDARD MANUFACTURED BY MUELLER, GLOW, OR AN APPROVED MANUFACTURER WITH RESILIENT SEAT ONLY AND SHALL CONFORM TO VALVE BE INSTALLED ACCORDING TO THE DESIGN STANDARD.
5. WATER SERVICE CONNECTIONS: SERVICE PIPELINE SHALL BE INSTALLED WITH THE SLOPE WITH THE CONNECTIONS SHOWN ON THE DRAWINGS. THE MATERIALS SHALL BE MUELLER, FORD, AVK OR APPROVED EQUAL AND SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR CONNECTIONS. ALL SERVICE CONNECTIONS SHALL BE COMPRESSION TYPE OR APPROVED EQUAL.
6. BENDS: MEGELOS OR APPROVED EQUAL SHALL BE INSTALLED AT A HORIZONTAL CHANGE IN THE DIRECTIONS OF 45° OR GREATER AND AT ALL VERTICAL CHANGES. ALL BENDS SHALL BE INSTALLED WITH THE RESTRAINTS SHALL BE PLACED AT THE BEND AND AT THE NEXT JOINT IN THE DIRECTION FROM THE BEND.
7. ALL IRRIGATION METERS SHALL HAVE A TESTABLE DOUBLE CHECK BACKFLOW PREVENTER.
8. ALL IRON FITTINGS SHALL BE COVERED AND SECURED WITH PLASTIC WRAP PRIOR TO BACKFILL BEING PLACED.
9. NO IMPORTED MATERIALS.
10. RESIDENTIAL METER BOXES SHALL BE MODEL FM241-233-T-G-NL FORD METER BOX COMPANY.
11. CONTRACTOR SHALL CONFIRM REQUIRED MATERIALS WITH BOLIVAR WATER SUPPLY CORPORATION PRIOR TO CONSTRUCTION.
12. PVC SLEEVES SHALL CONSIST OF SCHEDULE 40 PVC CONDUTITS, BURED 4.5 MIN. BELOW FINISHED GRADE. SLEEVES SHALL EXTEND A MINIMUM OF 2' BEYOND PAVING.

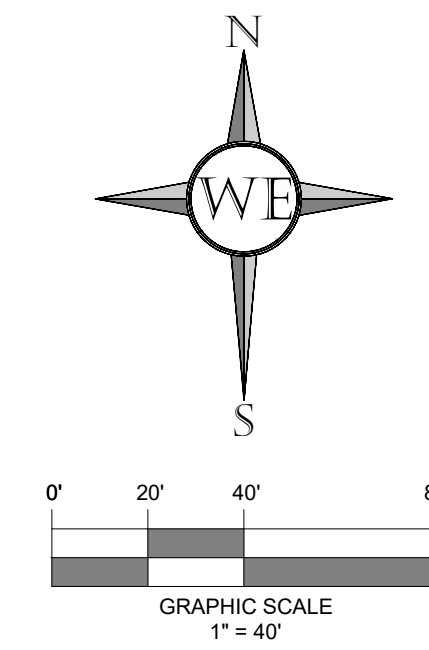
BENCHMARK PROVIDED BY BURKS LAND SURVEYING UTILIZING THE GPS NETWORK IN TEXAS STATE PLANE NORTH CENTRAL (4202).

1 INDIVIDUALLY TAPPED 3/4" SINGLE WATER METER SERVICE

A WATER SERVICE SLEEVE

B STEEL ENCASUREMENT PER BWCS DETAIL

	PROPERTY LINE
	PROPOSED EASEMENT
	PROPOSED WATER LINE
	PROPOSED STORM SEWER LINE
	EXISTING OVERHEAD POWER LINE
	EXISTING WATER LINE
	PROPOSED UNDERGROUND ELECTRICAL LINE
	PROPOSED FIRE HYDRANT (FH)
	PROPOSED WATER METER
	PROPOSED WATER VALVE
	PROPOSED TEE
	PROPOSED BEND
	EXISTING POWER POLE
	TRANSFORMER



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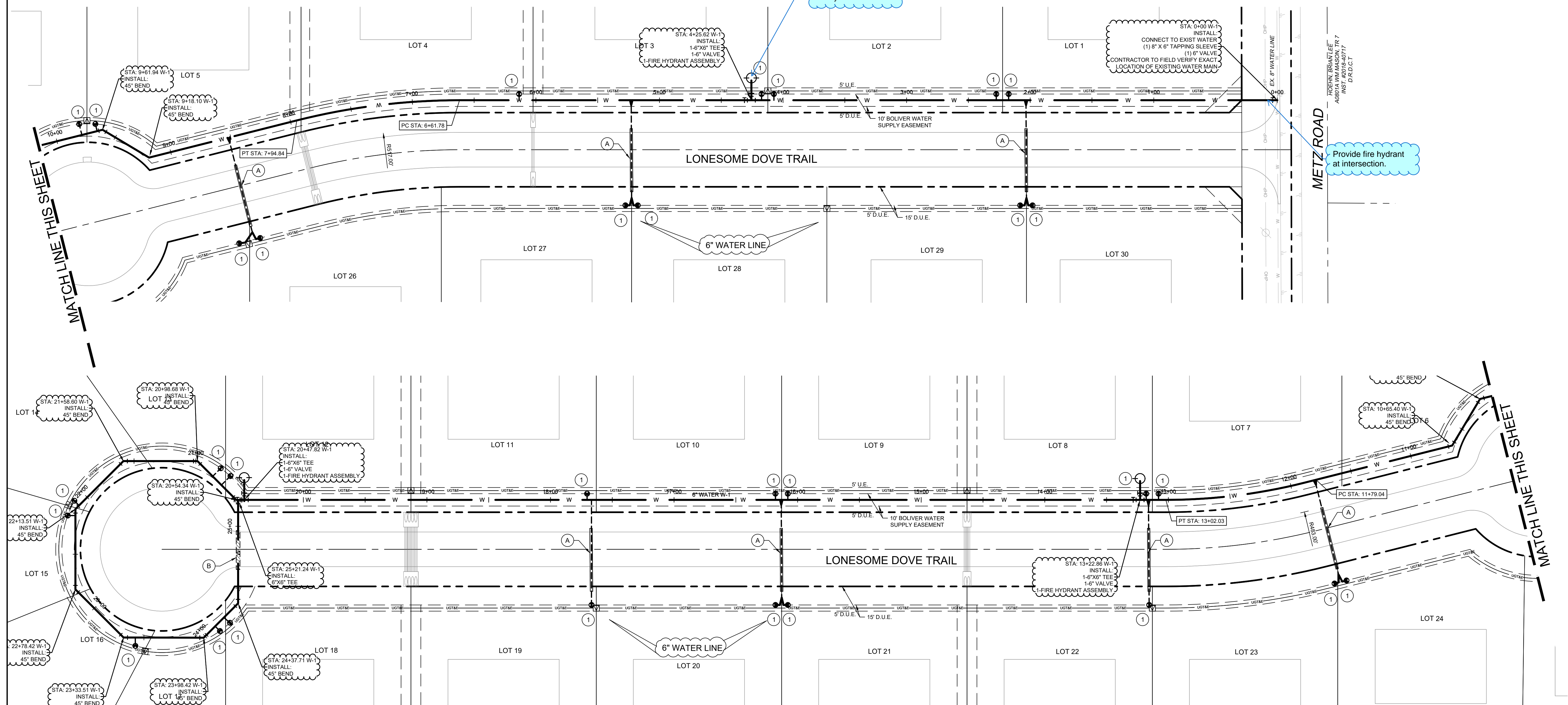


811
Know what's below.
Call before you dig.

City requires letter from Bolivar WSC stating they can supply the subdivision with water and they approve your design.

Max distance between fire hydrants is 500 feet. Evaluate spacing between all fire hydrants.

- Provide fire hydrant at intersection.



WESTFALL
ENGINEERING

1719 ANGEL PARKWAY
STE 400-206, ALLEN, TX 75002
PHONE NO. (214) 846-9397
TBE FIRM REG #19101

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LOTS 1-30, BLOCK A
METZ ROAD AND HOEHN ROAD
DENTON COUNTY, SANGER ETJ, T

UTILITY PLAN

[illegible]



LONESOME DOVE
LOTS 1-30, BLOCK A
METZ ROAD AND HOEHN ROAD
DENTON COUNTY, SANGER ETJ, TX

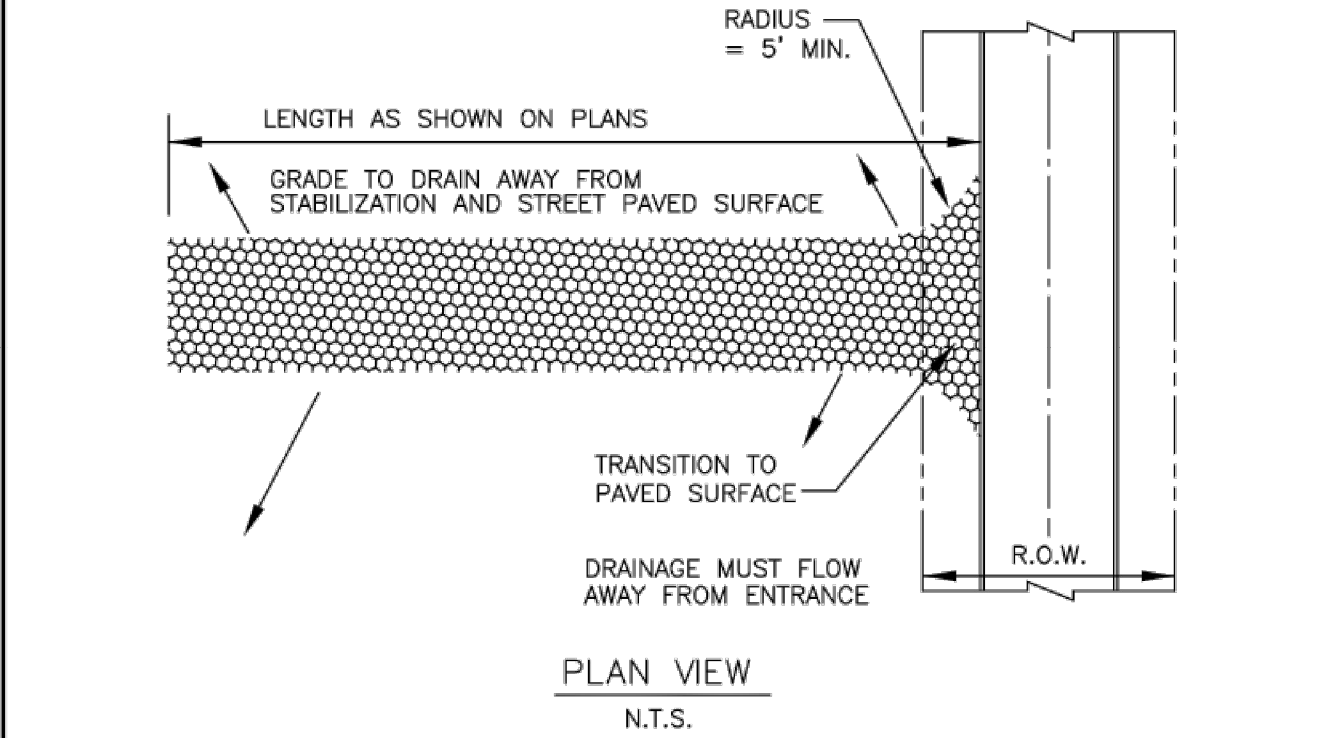
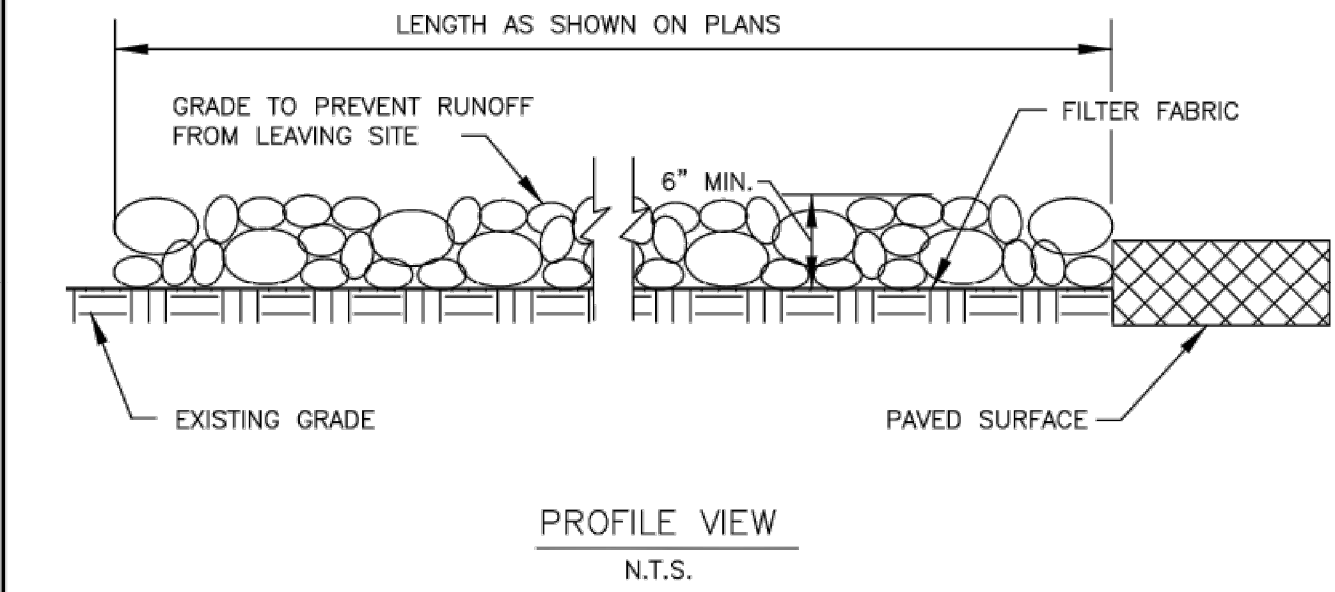
SIGNAGE PLAN

[illegible]

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STABILIZED CONSTRUCTION ENTRANCE		STANDARD SPECIFICATION REFERENCE 202.11 *	
		DATE OCT. '04	STANDARD DRAWING NO. 1070A

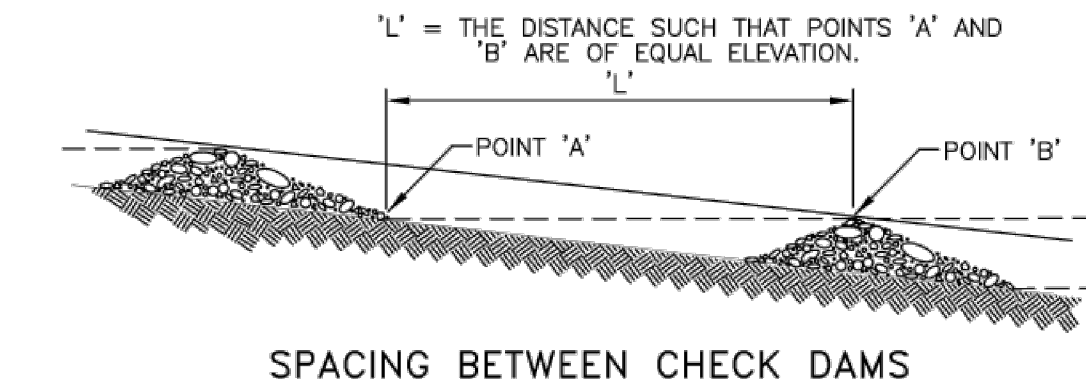
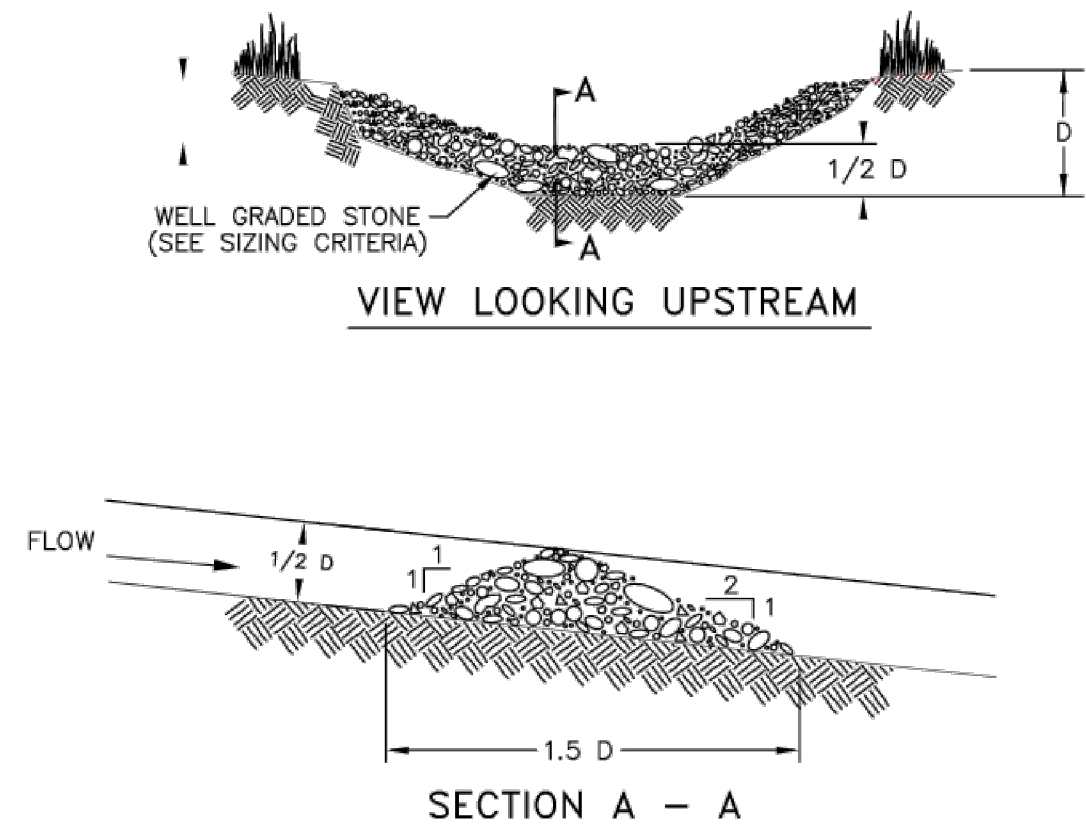
*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*

STABILIZED CONSTRUCTION ENTRANCE GENERAL NOTES:

1. STONE SHALL BE 3 TO 5 INCH DIAMETER COARSE AGGREGATE.
2. LENGTH SHALL BE AS SPECIFIED IN THE SWPPP.
3. THE THICKNESS SHALL NOT BE LESS THAN 12 INCHES.
4. THE WIDTH SHALL BE NO LESS THAN THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WHEN NECESSARY, VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE STREET AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PAVED SURFACES MUST BE REMOVED IMMEDIATELY.
7. THE ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
8. PREVENT SHORTCUTTING OF THE FULL LENGTH OF THE CONSTRUCTION ENTRANCE BY INSTALLING BARRIERS AS NECESSARY.
9. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP.

STABILIZED CONSTRUCTION ENTRANCE		STANDARD SPECIFICATION REFERENCE 202.11 *	
		DATE OCT. '04	STANDARD DRAWING NO. 1070B

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*



ROCK CHECK DAM		STANDARD SPECIFICATION REFERENCE 202.9 *	
		DATE OCT. '04	STANDARD DRAWING NO. 1060A

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*

ROCK CHECK DAM GENERAL NOTES:

1. STONE SHALL BE WELL GRADED WITH SIZE RANGE FROM 1½ TO 3½ INCHES IN DIAMETER DEPENDING ON EXPECTED FLOWS.
2. THE CHECK DAM SHALL BE INSPECTED AS SPECIFIED IN THE SWPPP AND SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
3. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD OF THE HEIGHT OF THE CHECK DAM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF PROPERLY.
4. WHEN THE SITE HAS ACHIEVED FINAL STABILIZATION OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED, THE CHECK DAM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

ROCK CHECK DAM		STANDARD SPECIFICATION REFERENCE 202.9 *	
		DATE OCT. '04	STANDARD DRAWING NO. 1060B

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*

SITE MAP GENERAL NOTES

1. CONTRACTOR IS SOLELY RESPONSIBLE FOR SELECTION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL SWPPP CONTROLS - CONTROLS SHOWN ON THIS SITE MAP ARE SUGGESTED CONTROLS ONLY.
2. CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THE SITE MAP.
3. DRAINAGE PATTERNS ARE SHOWN ON THIS PLAN BY PROPOSED AND EXISTING CONTOURS, FLOW ARROWS AND/OR SLOPES.
4. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMPs SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMPs SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.
5. BMPs HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE, SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.
6. SANITARY SEWER EFFLUENT IS DISPOSED OF VIA AN ONSITE SEWER SYSTEM CONNECTED TO A MUNICIPAL SEWER SYSTEM.

EROSION CONTROL SCHEDULE AND PHASING

THE PROJECT SHALL GENERALLY CONFORM TO THE FOLLOWING:

- PHASE A - GRADING**
1. CONSTRUCT TEMPORARY CONSTRUCTION ENTRANCE, SILT FENCE, DIKE, AND TREE PROTECTION FENCE ACCORDING TO THE APPROXIMATE LOCATION AND SHOWN ON GRADING AND EROSION CONTROL PLAN NOTES AND DETAIL SHEET.
 2. BEGIN CLEARING AND GRADING OF SITE.
 3. SEED AND RE-VEGETATE SLOPES WHERE SHOWN.
- PHASE B - UTILITIES**
1. KEEP ALL STORM WATER POLLUTION PREVENTION MEASURES IN PLACE.
 2. INSTALL STORM DRAINS, SANITARY SEWER, AND WATER AS SPECIFIED ON PLAN SHEETS.
- PHASE C - PAVING**
1. KEEP ALL STORM WATER POLLUTION PREVENTION MEASURES IN PLACE. REMOVE AS NEEDED TO PAVE.
 2. STABILIZE SUB-GRADE.
 3. PAVE STREETS AND SIDEWALKS AS SPECIFIED ON PLAN SHEETS.
 4. RE-INSTALL ANY STORM WATER POLLUTION PREVENTION MEASURES REMOVED FOR PAVING OPERATIONS.
- PHASE D - LANDSCAPING AND SOIL STABILIZATION**
1. RE-VEGETATE LOT AND PARKWAYS
 2. LANDSCAPE CONTRACTOR SHALL RE-VEGETATE ALL AREAS RESERVED FOR LANDSCAPE VEGETATIVE COVERS.
 3. REMOVE EROSION CONTROL DEVICES WHEN MINIMUM 70% GROUND COVER IS ESTABLISHED.
- VEGETATION MUST BE ESTABLISHED BEFORE STRUCTURAL CONTROLS REMOVED.

VEGETATIVE STABILIZATION REQUIREMENTS

TEMPORARY SEEDING
ALL DISTURBED AREAS WHICH WILL BE LEFT DORMANT FOR GREATER THAN 14 DAYS SHALL BE SEEDED WITH FAST-GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING OPERATIONS. SELECTION OF THE SEED WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED (SEE DESCRIPTIONS IN TABLE 2). REFERENCE LANDSCAPE PLAN FOR PERMANENT STABILIZATION REQUIREMENTS. ALL TEMPORARY SEEDING MATERIALS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO APPLICATION.

TABLE 2 VEGETATION TABLE*		
SPECIES	PLANTING RATE	PLANTING-DATES
CRIMSON CLOVER	7#/ACRE	8/15 - 11/30
MILLET, FOXTAIL	30#/ACRE	5/1 - 8/31
RYEGRASS, ANNUAL	30#/ACRE	8/15 - 9/30
SPRANGLETOP, GREEN	2.5#/ACRE	2/1 - 5/1
TALL FESCUE	7#-10#/1000 SF	9/1 - 10/15

*USE ONLY USDA CERTIFIED SEED.

SURFACE PREPARATION FOR TEMPORARY SEEDING

1. INSTALL EROSION STRUCTURES SUCH AS DIKES, DIVERSIONS, ETC. PRIOR TO SEEDING.
2. FURROW SLOPES STEEPER THAN 3:1 ON THE CONTOUR LINE BEFORE SEEDING.
3. ENSURE SEED BED IS PULVERIZED, LOOSE, AND UNIFORM.

APPLICATION

1. WHEN HYDROMULCHING IS USED, DO NOT MIX SEED AND FERTILIZER MORE THAN 30 MINUTES PRIOR TO APPLICATION.
2. APPLY SEED EVENLY USING PROPER EQUIPMENT AND WATER TO AID VEGETATION GROWTH.
3. EROSION CONTROL NETTING SHALL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED TO PROTECT AGAINST EROSION. MULCH (STRAW OR FIBER) SHALL BE USED ON RELATIVELY FLAT SLOPES.

BMP MAINTENANCE SCHEDULE

TEMPORARY STONE CONSTRUCTION ENTRANCE / EXIT:

INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN STORM EVENTS TO ENSURE THAT THE FACILITY IS FUNCTIONING PROPERLY. AGGREGATE PAD SHALL BE WASHED DOWN OR REPLACED WHEN SEDIMENT OR MUD HAS CLOGGED THE VOID SPACES BETWEEN THE STONES OR MUD IS BEING TRACKED ONTO THE PUBLIC ROADWAY. RUNOFF FROM WASHDOWN OPERATION SHALL BE FILTERED THROUGH ANOTHER B.M.P. PRIOR TO DRAINING OFF-SITE.

SILT FENCE:

INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN STORM EVENTS. SEDIMENT SHALL BE REMOVED FROM BEHIND THE FENCE WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO ONE-THIRD THE HEIGHT OF THE FENCE ABOVE GRADE. FENCE SHALL BE INSPECTED FOR GAPS AT BASE. INSPECT SUPPORTING POSTS AND FILTER FABRIC. REPLACE IF REQUIRED.

STONE OVERFLOW STRUCTURE:

INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN STORM EVENTS TO ENSURE THAT THE FACILITY IS FUNCTIONING PROPERLY. SEDIMENT SHALL BE REMOVED FROM THE STORAGE AREA WHEN SEDIMENT DEPTH HAS BUILT UP TO ONE-HALF THE HEIGHT OF THE STONE OUTLET. REPAIR DISLOADED OR MISSING STONE RIP-RAP AND REPAIR ANY DOWNSTREAM EROSION.

ROCK CHECK DAM:

INSPECTIONS SHALL BE MADE WEEKLY AND AFTER ALL RAIN EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY. REMOVE SEDIMENT FROM THE STORAGE AREA UPSTREAM OF THE DAM WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO ONE-HALF OF THE DAM HEIGHT. REPAIR DAMAGE TO THE CHANNEL IN THE VICINITY OF THE CHECK DAMS IMMEDIATELY TO PREVENT ADDITIONAL DAMAGE. REPLACE MISSING OR DISLOADED ROCK AS NEEDED TO MAINTAIN THE DESIGN HEIGHT AND CROSS SECTION OF THE CHECK DAM.

CURB INLET / GRATE INLET / VYIE INLET:

INSPECTIONS SHALL BE MADE WEEKLY AND AFTER ALL RAIN EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY. REMOVE SEDIMENT FROM THE STORAGE AREA SURROUNDING THE INLET/GRATE WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO ONE-HALF OF THE PROTECTION HEIGHT. DEVICE SHALL BE INSPECTED FOR GAPS AT BASE, AND SHALL BE REPLACED AS NEEDED.

