



November 27, 2024
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: **Sanger Town Center South Preliminary Plat - Review #1**

Dear Ms. Hammonds,

Halff Associates, Inc. was requested by the City of Sanger to review the Preliminary Plat for Sanger Town Center South. This submittal was prepared by KJE Inc. and was received on November 13th, 2024.

General Comments

1. Please address comments on attached markups and provide annotated responses on markups. Please note, not all comments are written on letter since some comments are easier to show and explain on the markups. Please annotate markup with responses.
2. Please note additional comments may be provided in subsequent reviews once additional data/responses is received.

Preliminary Plat

1. Please reconcile discrepancies in acreage for Tract 2.
2. Please ensure that easements called out in the Civil set match those called out in the preliminary plat

Paving Plan

1. Commercial/Industrial streets shall be constructed with an eight-inch thickness of 4,000 psi reinforced concrete pavement on a compacted sub-base per Ordinance § 10.106(b)(2)(B)(ii)
2. Driveway returns onto commercial and industrial property shall be a minimum of fifteen feet (15') and a maximum of twenty-five feet (25') except in special cases per ordinance § 10.106(b)(3)(C)

Drainage Calculation Comments

1. Please revise time of concentration for existing drainage areas to 15 minutes per Ordinance § 10.106(d)(2)(D)(iii)b
2. Please update rainfall intensities based on Appendix A. Intensity-Duration-Frequency Curve per Ordinance § 10.106(d)(2)(D)(i)
3. Please use runoff coefficients from the City of Sanger Ordinance § 10.106(d)(2)(D)(i) for proposed drainage area calculations

4. Please provide more information on how the drainage crossing into Sable Creek Boulevard is being handled.

Storm Drain Profile Comments

1. Please verify that pipe sizes called out in the hydraulic calculations match those in the profiles.
2. Please provide more information to back up the basis of the starting HGL for the outflow pipe from the detention pond.

Grading

1. Please show proposed storm drain and sanitary layout in the grading plan
2. Verify there is no lot to lot drainage along fence line. Where lot to lot drainage occurs, the lot lines shall be aligned, and a dedicated private drainage easement shall be provided per Ordinance § 10.106(d)(12)
3. Please show more contour labels on grading plan sheets
4. Detention pond slopes look very steep and would impede maintenance to control weeds and discourage woody growth to observe ordinance § 10.106(d)(10)(H)

Water Line

1. Please revise and ensure fire hydrant spacing follows City of Sanger Ordinance § 5.701 requiring 300 ft spacing for all commercial structures and a maximum of 500 ft along fire apparatus access roadways
2. Please specify water line size and material

Sanitary Sewer

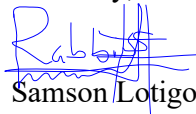
1. Please revise sanitary sewer line stations and flow lines in the plan and profiles

Standard Details

1. Please reference latest NCTCOG standard specifications for public works construction for all improvements under the jurisdictions of the City of Sanger ordinance § 10.106(a)

If you have any questions or need additional information, please do not hesitate to call me at (817) 764-7498.

Sincerely,

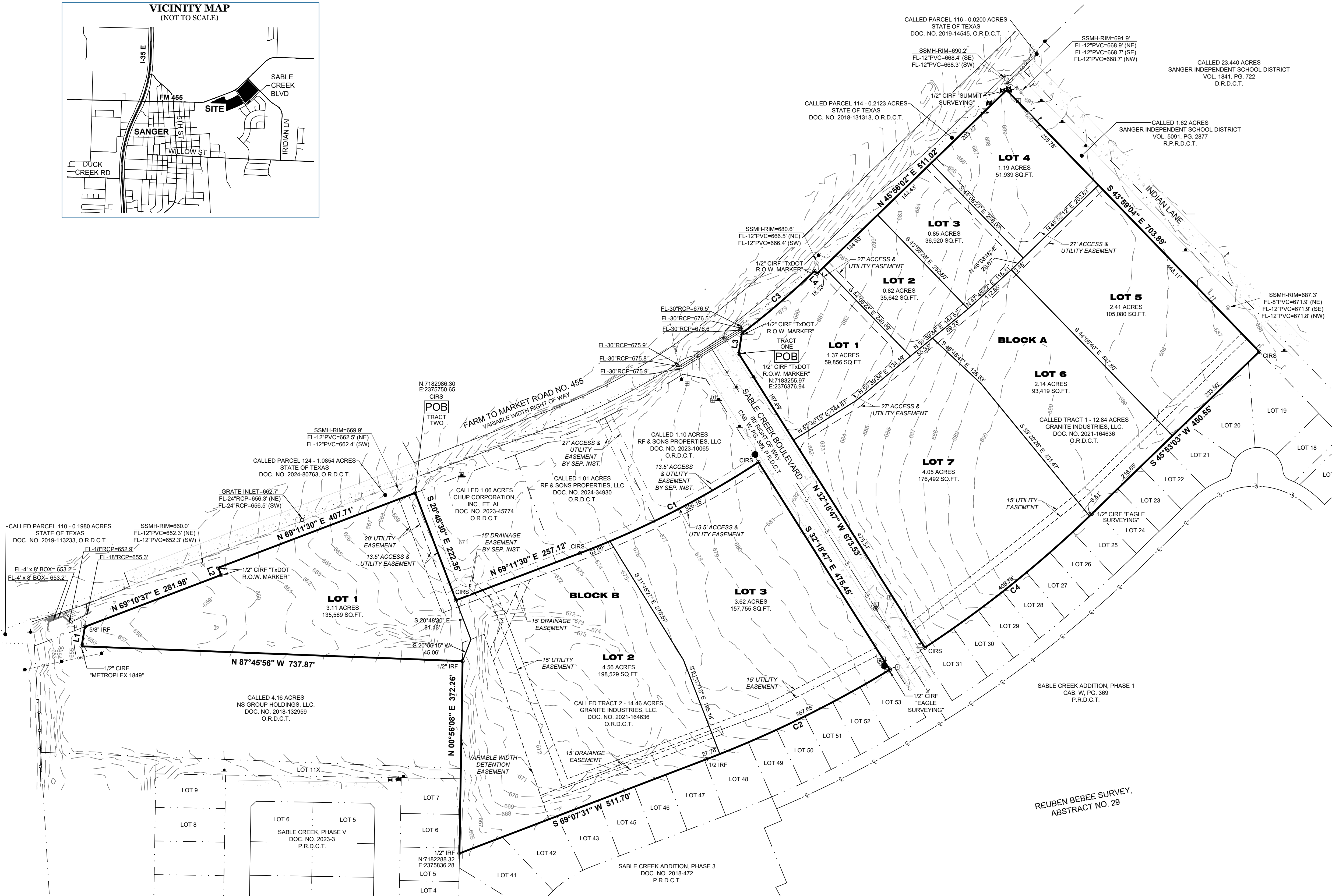
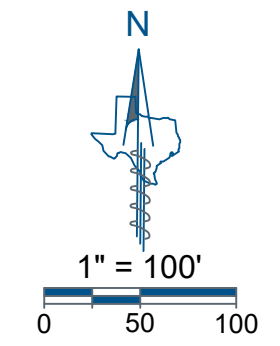
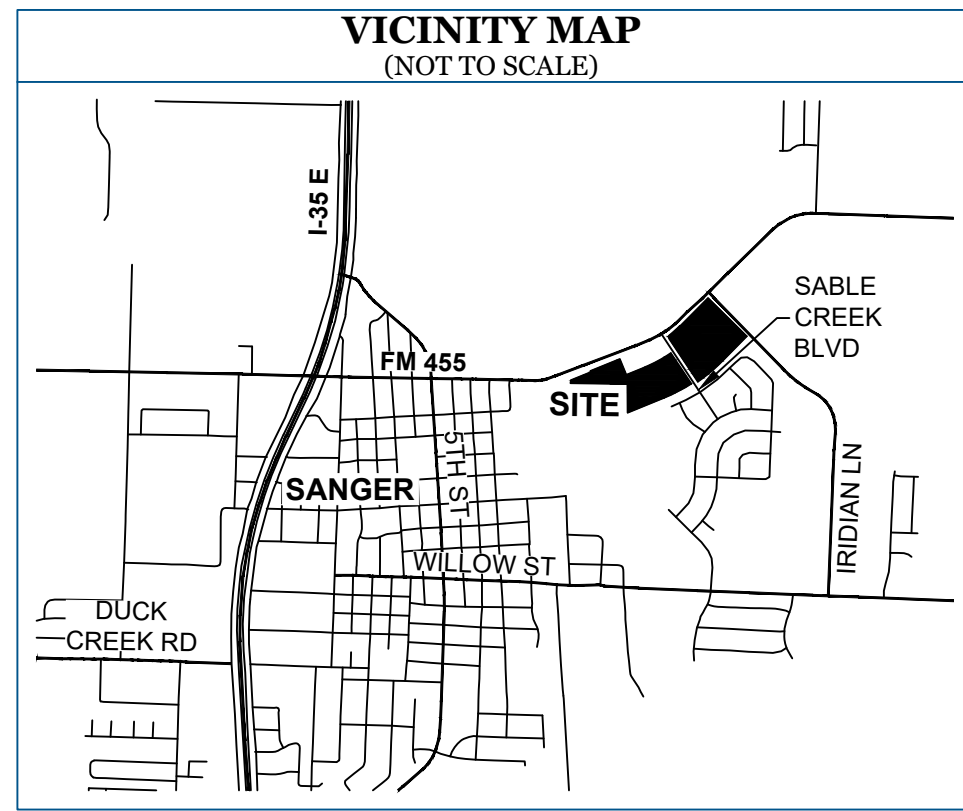


Samson Lotigo, PE

HALFF

Firm No. 0312

Attachments: Preliminary Civil Construction Plans markups



LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 09°25'57" E	38.34'
L2	N 20°46'45" W	15.08'
L3	N 08°36'41" E	39.69'
L4	S 43°51'44" E	6.98'

CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	388.16'	1787.35'	12°26'35"	N 62°58'21" E	387.40'
C2	395.46'	2196.52'	10°18'55"	S 63°57'43" W	394.92'
C3	185.39'	1565.00'	6°47'15"	N 49°20'03" E	185.29'
C4	415.59'	2196.52'	10°50'26"	S 51°17'41" W	414.97'

GENERAL NOTES

- The purpose of this plat is to create ten lots of record from unplatted land.
- This property is located in **Non-Shaded Zone "X"** as scaled from the F.E.M.A. Flood Insurance Rate Map dated April 18, 2011 and is located in Community Number 480786 as shown on Map Number 4812C0210G. The location of the Flood Zone is approximate, no vertical datum was collected at the time of the survey. For the exact Flood Zone designation, please contact 1-(877) FEMA MAP.
- The grid coordinates shown on this plat are based on GPS observations utilizing the AllTerra RTK Network. North American Datum of 1983 (Adjustment Realization 2011).
- 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/or withholding of utilities and building permits.
- All interior property corners are marked with a 1/2-inch iron rod with a green plastic cap stamped "EAGLE SURVEYING" unless noted otherwise.
- The bearings shown on this plat are based on GPS observations utilizing the AllTerra RTK Network. North American Datum of 1983 (Adjustment Realization 2011).
- The elevations shown on this plat are based on GPS observations utilizing the AllTerra RTK Network. North American Vertical Datum of 1988, (Geoid 12A).
- Lot to lot drainage shall not be allowed.
- All lots comply with the minimum size requirements of the zoning district.
- This property may be subject to charges related to impact fees and the applicant should contact the city regarding any applicable fees due.
- All common areas, drainage easements, and detention facilities will be owned and maintained by the HOA/property owner. Any common area within the city's right-of-way will require a facilities agreement, to be reviewed and approved by the city.
- This plat does not alter or remove existing deed restriction, if any, on this property.

**PRELIMINARY PLAT
SANGER TOWN
CENTER SOUTH
LOTS 1-7, BLOCK A
LOTS 1-3, BLOCK B
24.13 ACRES**

REUBEN BEBEE SURVEY, ABSTRACT NUMBER 29
CITY OF SANGER, DENTON COUNTY, TEXAS

JOB NUMBER 1802.021-17
DATE 11/12/2024
REVISION
DRAWN BY TAR

EAGLE SURVEYING

Eagle Surveying, LLC
222 South Elm Street
Suite: 200
Denton, TX 76201
940.222.3009
www.eaglesurveying.com
TX Firm # 10194177

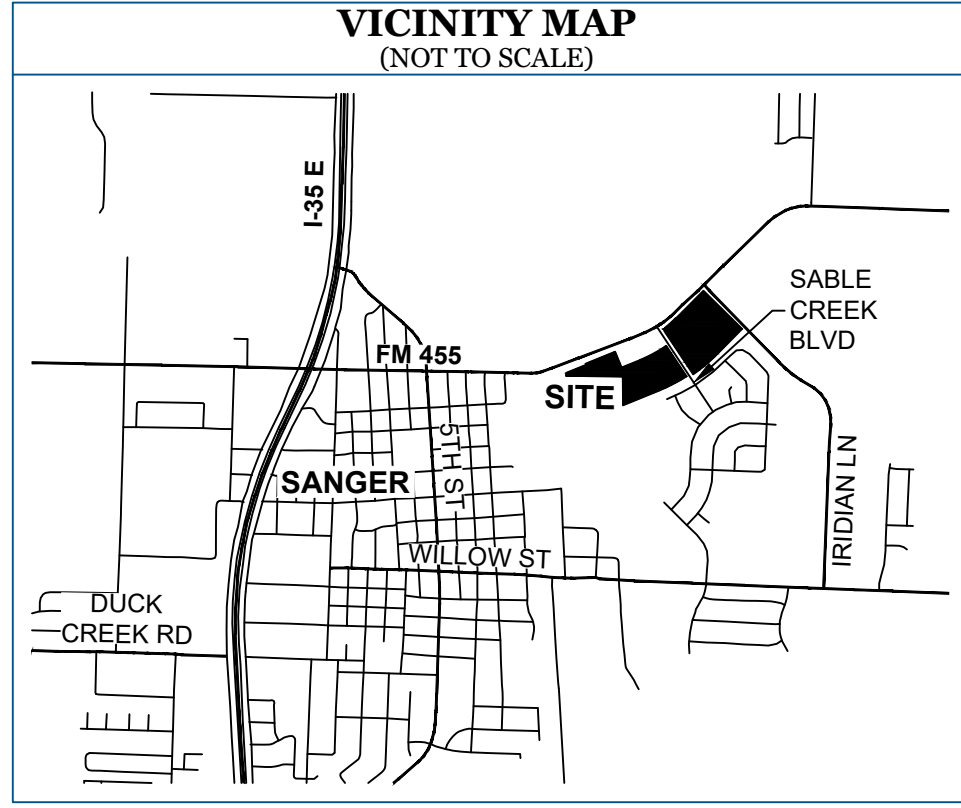
LEGEND

Electric Box	Cable Riser	Telecommunications Riser	Overhead Utilities	Concrete	VOL	Volume
Electric Meter	Buried Cable Sign	Telecommunications Vault	Storm Drain Line	Stone	PG.	Page
Electric Vault	Gas Meter	Fiber Optic Utility Sign	Edge of Gravel	()	DOC NO.	Document Number
Electric Transformer	Buried Gas Utility Sign	Telecommunications Utility Mark	Edge of Asphalt	()	O.R.D.C.T.	Deed Records
Guy Wire	Gas Utility Mark	Water Meter	Water Meter	CRS	O.R.D.C.T.	Denton County, Texas
Power Pole	Sanitary Manhole	Water Valve	Water Valve	CRF	O.R.D.C.T.	Denton County, Texas
Light Pole	Gate Inlet	Fire Hydrant	Fire Hydrant	IRF	P.R.D.C.T.	Denton County, Texas
Sign				R.O.W.	R.P.R.D.C.T.	Denton County, Texas
				CAB.		

SURVEYOR
Eagle Surveying, LLC
222 S. Elm Street, Suite: 200
Denton, TX 76201
(940) 222-3009

ENGINEER
KJE
Contact: Ian Norfolk
500 Moseley Road
Cross Roads, TX 76227
(940) 387-0805

OWNER
Granite Industries, LLC
161 W 3rd Street, Suite 110
Prosper, TX 75078



OWNER'S CERTIFICATE & DEDICATION

WHEREAS, **GRANITE INDUSTRIES, LLC** is the owner of two (2) tracts of land out of the Reuben Bebee Survey, Abstract Number 29, situated in Denton County, Texas, Tract One being all of a called Tract 1 - 12.84 acre tract of land conveyed by General Warranty Deed of record in Document Number 2021-164636 of the Official Records of Denton County, Texas, Tract Two being a portion of a called Tract 2 - 14.46 acre tract of land conveyed by said General Warranty Deed and being more particularly described by metes and bounds as follows:

TRACT ONE - 12.84 ACRE TRACT

BEGINNING, at a 1/2 inch iron rod with pink plastic cap stamped "TXDOT RIGHT OF WAY MARKER" found at the South end of a cutback line at the intersection of the Southeast right-of-way line of Farm to Market Road Number 455 (variable width right-of-way) and the East right-of-way line of Sable Creek Boulevard (80' Right-of-way, Cab. W, Pg 369 of the Plat Records of Denton County, Texas), being the Southwest corner of a called Parcel 114 - 0.2123 acre tract of land conveyed to the State of Texas by deed of record in Document Number 2018-131313 of said Official Records, being the Northwest corner of said 12.84 acre tract;

THENCE, along the Southeast right-of-way line of Farm to Market Road Number 455, being the South line of said Parcel 114, also being the common North line of said 12.84 acre tract, the following four (4) courses and distances:

- N08°36'41"E, a distance of 39.69 feet to a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set at the North end of said cutback line;
- Along a non-tangent curve to the left, having a radius of 1565.00 feet, a chord bearing of N49°20'03"E, a chord length of 185.29 feet, a delta angle of 06°47'15", an arc length of 185.39 feet to a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set at the end of said curve;
- S43°51'44"E, a distance of 6.98 feet to a 1/2 inch iron rod with pink plastic cap stamped "TXDOT RIGHT OF WAY MARKER" found;
- N45°56'02"E, a distance of 511.02 feet to a 1/2 inch iron rod with yellow plastic cap stamped "SUMMIT SURVEYING" found in the West right-of-way line of Indian Lane, being the West line of a called 1.62 acre tract of land conveyed to Sanger Independent School District by deed of record in Volume 5091, Page 2877 of the Real Property Records of Denton County, Texas, being the Southeast corner of said Parcel 114, also being the Northeast corner of said 12.84 acre tract;

THENCE, S43°59'04"E, along the West right-of-way line of Indian Lane, being the common East line of said 12.84 acre tract, a distance of 703.89 feet to a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set at the North corner of Lot 19, Block N of Sabel Creek Addition, Phase I, a subdivision of record in Cabinet W, Page 369 of said Plat Records, being the Southeast corner of said 12.84 acre tract ;

THENCE, leaving the West right-of-way line of Indian Lane, along the North lines of Lots 19-31 of said Block N of Sabel Creek Addition, Phase I, the following two (2) courses and distances:

- S45°53'03"W, a distance of 450.55 feet to a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set at the point of curvature of a non-tangent curve to the right;
- Along said non-tangent curve to the right, having a radius of 2196.52 feet, a chord bearing of S51°17'41"W, a chord length of 414.97 feet, a delta angle of 10°50'26", an arc length of 415.59 feet to a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set at the end of said curve, being in the East right-of-way line of Sable Creek Boulevard, also being the Southwest corner of said 12.84 acre tract;

THENCE, N32°18'47"W, leaving the North line of said Lot 31, along the East right-of-way line of Sable Creek Boulevard, being the common West line of said 12.84 acre tract, a distance of 673.53 feet to the **POINT OF BEGINNING** and containing an area of 12.84 Acres, or (559347 Square Feet) of land, more or less.

TRACT TWO - 11.29 ACRE TRACT

BEGINNING, at a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set in the Southeast right-of-way line of Farm to Market Road Number 455 (variable width right-of-way), being in the South line of a called Parcel 124 - 1.0854 acre tract of land conveyed to the State of Texas by Agreed Final Judgement of record in Document Number 2024-80763 of said Official Records, being the Northwest corner of a called 1.06 acre tract of land conveyed to Chup Corporation, Inc. et. al. by deed of record in Document Number 2023-457774 of said Official Records;

THENCE, S20°48'30"E, leaving the Southeast right-of-way line of Farm to Market Road Number 455, along the West line of said 1.06 acre tract, a distance of 222.35 feet to a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set at the Southwest corner of said 1.06 acre tract;

THENCE, in part, along the South line of said 1.06 acre tract, in part, along the South line of a called 1.01 acre tract of land conveyed to RF & Sons Properties, LLC by deed of record in Document Number 2023-10085 of said Official Records, the following two (2) courses and distances:

- N69°11'30"E, a distance of 257.12 feet to a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set at the point of curvature of a tangent curve to the left;
- Along said tangent curve to the left, having a radius of 1787.35 feet, a chord bearing of N62°58'21"E, a chord length of 387.40 feet, a delta angle of 12°26'35", an arc length of 388.16 feet to a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set at the end of said curve, being in the West right-of-way line of Sable Creek Boulevard (80' Right-of-way, Cab. W, Pg 369 of the Plat Records of Denton County, Texas), being the Southeast corner of said 1.10 acre tract, for the Northeast corner hereof;

THENCE, S32°18'47"E, along the West right-of-way line of Sable Creek Boulevard, a distance of 475.45 feet to a 1/2 inch iron rod with green plastic cap stamped "EAGLE SURVEYING" set in the curving North line of Lot 53, Block E of Sable Creek Addition, Phase 3, a subdivision of record in Document Number 2018-472 of said Plat Records, being the common South line of said 14.46 acre tract, for the Southeast corner hereof;

THENCE, leaving the West right-of-way line of Sable Creek Boulevard, along the North lines of Lots 53-41 of said Sable Creek Addition, Phase 3, being the common South line of said 14.46 acre tract, the following two (2) courses and distances:

- Along a non-tangent curve to the right, having a radius of 2196.52 feet, a chord bearing of S63°57'43"W, a chord length of 394.92 feet, a delta angle of 10°18'55", an arc length of 395.46 feet to a 1/2 inch iron rod found at the point of tangency of said curve;
- S69°07'31"W, a distance of 511.70 feet to a 1/2 inch iron rod found the East line of Lot 5, Block L of Sable Creek Addition, Phase V, a subdivision of record in Document Number 2023-3 of said Plat Records, being the most Southerly Southwest corner of said 14.46 acre tract;

THENCE, N00°56'08"E, along the irregular West line of said 14.46 acre tract, being in part, the common East lines of Lots 5-7 of said Block L, in part, the common East line of Lot 11X, Block K of said Sable Creek Addition, Phase V and in part, the common East line of a called 4.16 acre tract of land conveyed to NS Group Holdings, LLC by deed of record in Document Number 2018-132959 of said Official Records, a distance of 372.26 feet to a 1/2 inch iron rod found at the Northeast corner of said 4.16 acre tract;

THENCE, along the irregular North line of said 4.16 acre tract, being the common Irregular West line of said 14.46 acre tract, the following two (2) courses and distances:

- N87°45'56"W, a distance of 737.87 feet to a 1/2 inch iron rod with yellow plastic cap stamped "METROPLEX 1849" found at the most Westerly Southwest corner of said 14.46 acre tract;
- N09°25'57"E, a distance of 38.34 feet to a 5/8" iron rod found in the Southeast right-of-way line of Farm to Market Road Number 455, being the Southeast corner of a called Parcel 110 - 0.1980 acre tract of land conveyed to the State of Texas by Deed of record in Document Number 2019-113233 of said Official Records, being the Southwest corner of said Parcel 124;

THENCE, along the Southeast right-of-way line of Farm to Market Road Number 455, being the South line of said Parcel 124, the following three (3) courses and distances:

- N69°10'37"E, a distance of 281.98 feet to a 1/2 inch iron rod with pink plastic cap stamped "TXDOT RIGHT OF WAY MARKER" found;
- N20°46'45"W, a distance of 15.08 feet to a 1/2 inch iron rod with pink plastic cap stamped "TXDOT RIGHT OF WAY MARKER" found;
- N69°11'30"E, a distance of 407.71 feet to the **POINT OF BEGINNING** and containing an area of 11.29 Acres, or (491,853 Square Feet) of land, more or less.

STATE OF TEXAS §
COUNTY OF DENTON §

I, **MATTHEW RAABE**, Registered Professional Land Surveyor, do hereby certify that this plat is true and correct and was prepared from an actual survey made on the ground and that the monuments shown hereon were found or placed with 1/2-inch iron rods with green plastic caps stamped "EAGLE SURVEYING" under my direction and supervision in accordance with the current provisions of the Texas Administrative Code and the Ordinances of the City of Sanger, Denton County, Texas.

PRELIMINARY
this document shall not be recorded for any purpose and shall not be used or viewed or relied upon as a final survey document
Matthew Raabe, R.P.L.S. # 6402 Date

STATE OF TEXAS §
COUNTY OF DENTON §

BEFORE ME, the undersigned authority, on this day personally appeared **MATTHEW RAABE**, known to me to be the person whose name is subscribed to the 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 THE OFFICE this _____ day of _____, 2024.

Notary Public in and for the State of Texas

STATE OF TEXAS §
COUNTY OF DENTON §

NOW THEREFORE KNOW ALL MEN BY THESE PRESENTS:

THAT, **GRANITE INDUSTRIES, LLC**, acting herein by and through its duly authorized office, does hereby adopt this plat designating the hereinabove described property as **SANGER TOWN CENTER SOUTH**, an addition to the City of Sanger, Texas, and does hereby dedicate to the public use foreverby 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, or 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 of procuring permission from anyone.

OWNER: **GRANITE INDUSTRIES, LLC**

BY: _____ Date

STATE OF TEXAS §
COUNTY OF _____ §

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be the person whose name is subscribed to the 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 THE OFFICE this _____ day of _____, 2024.

Notary Public in and for the State of Texas

APPROVED AND ACCEPTED

Approved for preparation of Final Plat

City of Sanger, TX Planning and Zoning Commission _____ Date _____

**PRELIMINARY PLAT
SANGER TOWN
CENTER SOUTH
LOTS 1-7, BLOCK A
LOTS 1-3, BLOCK B
24.13 ACRES**

REUBEN BEBEE SURVEY, ABSTRACT NUMBER 29
CITY OF SANGER, DENTON COUNTY, TEXAS

PRELIMINARY PLAT FOR REVIEW PURPOSES ONLY

JOB NUMBER 1802.021-17	 <p>Eagle Surveying, LLC 222 South Elm Street Suite: 200 Denton, TX 76201 940.222.3009 www.eaglesurveying.com TX Firm # 10194177</p>
DATE 11/12/2024	
REVISION -	
DRAWN BY TAR	

<p>SURVEYOR KJE Eagle Surveying, LLC 222 S. Elm Street, Suite: 200 Denton, TX 76201 (940) 222-3009</p>	<p>ENGINEER KJE Contact: Ian Norfolk 500 Moseley Road Cross Roads, TX 76227 (940) 387-0805</p>	<p>OWNER Granite Industries, LLC 161 W 3rd Street, Suite 110 Prosper, TX 75078</p>
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GENERAL NOTES

- 1. SITE TOPOGRAPHIC INFORMATION WAS TAKEN FROM A SURVEY PREPARED BY EAGLE SURVEYING, DATED 10/11/2024.
2. THE PLANS SHOW SUBSURFACE STRUCTURES, ABOVE GROUND STRUCTURES AND/OR UTILITIES FROM FIELD LOCATION AND RECORD MAPPING. EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED.
3. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS.
4. THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT.
5. THE CONTRACTOR SHALL RESTORE LAWNS, DRIVEWAYS, CULVERTS, SIGNS AND OTHER PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD A CONDITION AS BEFORE BEING DISTURBED AS DETERMINED BY THE ENGINEER.
6. PRIOR TO COMMENCEMENT OF STORM AND/OR SANITARY SEWER CONSTRUCTION, CONTRACTOR IS TO VERIFY BOTH HORIZONTAL AND VERTICAL POSITION OF EXISTING SEWER AT CONNECTION POINT.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES, ETC. AND SHALL COMPLY WITH ALL REQUIRED PERMITS.
8. ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES, STANDARDS, ORDINANCES, RULES, AND REGULATIONS.
9. ALL PROPOSED UTILITIES AND APPURTENANCES TO BE CONSTRUCTED IN COMPLIANCE WITH THE LOCAL MUNICIPALITIES' CODES AND REGULATIONS GOVERNING THE INSTALLATION OF SUCH UTILITIES.
10. ALL PLANS SHALL COMPLY WITH LOCAL AND/OR NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION), OR BEST PRACTICES.
11. FIELD VERIFICATION AND ADJUSTMENTS ARE PERMISSIBLE WITH THE ENGINEER'S WRITTEN APPROVAL.
12. THE ENGINEER RESERVES THE RIGHT TO EXAMINE ANY WORK DONE ON THIS PROJECT AT ANY TIME TO DETERMINE THE CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OF THIS PROJECT, AS INTENDED AND INTERPRETED BY THE ENGINEER.
13. MISCELLANEOUS WORK NOT SPECIFICALLY SHOWN ON THE CONTRACT DRAWINGS SUCH AS PATCHING, BLOCKING, TRIMMING, ETC., SHALL BE PERFORMED AS REQUIRED TO MAKE THE WORK COMPLETE.
14. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE ENGINEER OR OWNER, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A TEXAS LICENSED LAND SURVEYOR.
15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND COORDINATE WORK WITH ALL OTHER CONTRACTS FOR THE SITE.
16. THE CONTRACTOR SHALL:
A. VERIFY ALL CONDITIONS IN THE FIELD PRIOR TO COMMENCEMENT OF WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
B. EXAMINE THE SITE AND INCLUDE IN HIS WORK THE EFFECT OF ALL EXISTING CONDITIONS ON THE WORK.
C. PROVIDE AND INSTALL ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH RECOGNIZED GOOD STANDARD PRACTICE.
D. HOLD THE OWNER HARMLESS AGAINST ANY AND ALL CLAIMS ARISING FROM WORK DONE BY THE CONTRACTOR ON THE SITE.
17. ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH THE LATEST REVISIONS OF OSHA REGULATIONS FOR CONSTRUCTION. SHEET PILING SHALL BE DESIGNED AND SEALED BY A LICENSED TEXAS PROFESSIONAL ENGINEER.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK AND SHALL SUBMIT A DEWATERING PLAN DESIGNED AND SEALED BY A LICENSED TEXAS PROFESSIONAL ENGINEER. CONTRACTOR SHALL MAINTAIN EXISTING SITE DRAINAGE PATTERNS THROUGHOUT CONSTRUCTION UNLESS OTHERWISE SHOWN ON THE PLANS.
19. ALL UTILITY WORK INVOLVING CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE UTILITY OWNER. NOTIFY THE UTILITY OWNER 72 HOURS BEFORE EACH AND EVERY CONNECTION TO EXISTING SYSTEMS IS MADE.

- 18. CONSTRUCTION OF ALL PROPOSED UTILITIES MUST BEGIN AT ITS POINT OF CONNECTION TO THE EXISTING UTILITY OR AT THE LOWEST POINT IN THE SYSTEM, RIMS, GRATES, INVERTS, CLEARANCES, AND LOCATION AT CROSSINGS MUST BE VERIFIED PRIOR TO THE BEGINNING OF CONSTRUCTION.
19. MAINTAIN FLOW FOR ALL EXISTING UTILITIES.
20. ALL FRAMES/COVERS WITHIN PAVED AREAS SHALL HAVE THE TOPS SET FLUSH WITH THE EXISTING PAVEMENT GRADE. IN LANDSCAPED AREAS, ALL FRAMES SHALL BE 0.1' ABOVE GRADE.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT. THE CONTRACTOR SHALL TAKE TIES TO ALL UTILITY CONNECTIONS AND PROVIDE MARKED-UP AS-BUILT PLANS FOR ALL UTILITIES SHOWING TIES TO CONNECTIONS, BENDS, VALVES, LENGTHS OF LINES, AND INVERTS. AS-BUILT PLANS SHOWING ALL UNDERGROUND UTILITIES INSTALLED OR ENCOUNTERED SHALL BE REVIEWED BY THE OWNER AND HIS REPRESENTATIVES. THE CONTRACTOR SHALL PROVIDE ANY CORRECTION OR ADMISSIONS TO THE SATISFACTION OF THE OWNER AND HIS REPRESENTATIVES BEFORE UTILITIES WILL BE ACCEPTED.
22. TEMPORARY PAVEMENT SHALL BE PLACED WITHIN 48 HOURS OF COMPLETION OF EXCAVATION AND BACKFILL OPERATIONS WITHIN THE EXISTING PAVEMENT LIMITS.
23. CONTRACTOR SHALL MAINTAIN ALL TRAFFIC IN ALL AREAS IN ACCORDANCE WITH THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
24. ALL EXCAVATIONS SHALL BE BACKFILLED TO EXISTING GRADE AT THE END OF EACH WORK DAY.
25. CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO EXISTING UTILITIES. DAMAGED UTILITIES SHALL BE IMMEDIATELY REPAIRED BY CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

CONSTRUCTION NOTES

- 1. BUILDING SILL ELEVATIONS AND SEWER INVERTS ARE APPROXIMATE AND SHOULD BE CONFIRMED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK.
2. THE MINIMUM SLOPE FOR SANITARY SEWER LATERALS SHALL BE 0.010 FT/FT.
3. PROGRESSION OF WORK: IN GENERAL WORK SHALL PROCEED FROM THE DOWNSTREAM END OF A SEWER LINE SEGMENT TO THE UPSTREAM END OF THE SEGMENT.
4. THE MAXIMUM LENGTH OF OPEN TRENCH SHALL BE LIMITED TO NO MORE THAN THREE PIPE LENGTHS IN A SEWER SEGMENT.
5. THE MINIMUM TRENCH WIDTH SHOULD BE NO LESS THAN 24 INCHES OR ONE FOOT GREATER THAN OUTSIDE DIAMETER OF THE PIPE, WHICHEVER IS GREATER.
6. THE MINIMUM DEPTH OF COVER ABOVE THE TOP OF PIPE FOR WATER LINE INSTALLATIONS SHALL BE 4 FEET.
7. WATER MAINS AND SERVICES: LOCATIONS SHOWN ARE APPROXIMATE AND ARE INDICATED FOR GENERAL REFERENCE ONLY UNLESS OTHERWISE NOTED.
8. ALL EXISTING UNDERGROUND FEATURES SUCH AS SEPTIC TANKS, LEACH FIELDS, SANITARY SEWERS, ETC. ARE APPROXIMATE ONLY AND ARE INDICATED FOR GENERAL REFERENCE AND DESIGN UNLESS OTHERWISE NOTED.
9. WORK IN PRIVATE PROPERTY: THE CONTRACTOR SHALL OBTAIN WRITTEN AUTHORIZATION FROM THE OWNER PRIOR TO BEGINNING WORK IN ANY PRIVATELY OWNED AREAS WHICH WILL REQUIRE EASEMENTS FOR CONSTRUCTION.

SOIL PREPARATION AND GRADING NOTES

- 1. THE SOIL BENEATH THE PAVEMENT SHALL BE TREATED AS FOLLOWS:
A. REMOVE ALL VEGETATION, ORGANIC MATERIAL OR OTHER DELETERIOUS MATERIALS.
B. PERFORM ANY CUT OPERATIONS AS NEEDED AND PROOF ROLL THE PAVEMENT AREAS WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK. ANY AREAS WHICH RUT EXCESSIVELY OR PUMP SHALL BE UNDERCUT AND REPLACED WITH COMPACTED FILL.
C. PERFORM ALL FILL OPERATIONS. ALL FILL SHALL BE INSTALLED IN MAXIMUM 8 INCH LIFTS AND COMPACTED TO AT LEAST 93% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D 698 (STANDARD PROCTOR), AND TO AT LEAST +3 PERCENTAGE POINTS OF ITS OPTIMUM MOISTURE CONTENT. DO NOT USE ANY SAND AS FILL UNDER THE PAVEMENT. ANY IMPORTED FILL SHALL BE SIMILAR TO THE ON SITE SOILS AND APPROVED BY EIKON CONSULTING GROUP.
2. SITE SHALL BE GRADED TO ASSURE DRAINAGE OF SURFACE WATER FROM BUILDINGS.
3. REMOVE EXCESS SOILS FROM THE SITE AND LEGALLY DISPOSE OF THE SOILS.
4. GRADES NOT OTHERWISE INDICATED ON THE PLANS SHALL BE UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE GIVEN. ABRUPT CHANGES IN SLOPES SHALL BE WELL ROUNDED. THE CONTRACTOR IS RESPONSIBLE FOR POSITIVE SITE DRAINAGE.
5. ALL SITE EXCAVATION SHALL BE CONSIDERED UNCLASSIFIED EXCAVATION.
6. THE EXISTING GRADES AND CONTOURS SHOWN IN THESE PLANS REPRESENT THE ELEVATIONS AS INDICATED ON THE TOPOGRAPHIC SURVEY BY EAGLE SURVEYING ON 10/11/2024. DUE TO MANY FACTORS INCLUDING POSSIBLE DISTURBANCE OF THE SOIL OR BENCH MARKS BY OTHER PARTIES AND THE EXPANSIVE/SHRINKAGE NATURE OF THE SOIL, THE ELEVATIONS MAY BE SIGNIFICANTLY DIFFERENT IN THE FUTURE (INCLUDING THE BENCH MARKS). NORMAL EQUIPMENT AND MEASUREMENT ACCURACIES SHOULD BE TAKEN INTO ACCOUNT WHEN USING THESE ELEVATIONS. REFER TO THE GEOTECHNICAL INVESTIGATION FOR THE GEOTECHNICAL RAMIFICATIONS.

- 7. ALL SLOPES IN UNPAVED AREAS SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.

- 8. REFER TO THE GEOTECHNICAL REPORT FOR COMPLETE INFORMATION ON SOIL CHARACTERISTICS AND ANY OTHER RECOMMENDATIONS NOT CONTAINED HEREIN.

PAVING NOTES

- 1. REFER TO GRADING PLAN FOR SOIL PREPARATION SPECIFICATIONS UNDER PAVEMENT.
2. CONCRETE FOR THE CONCRETE PAVEMENT SHALL HAVE A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 3,500 PSI, A MINIMUM OF 5.5 SACKS OF PORTLAND CEMENT PER CUBIC YARD, 20% CLASS C FLYASH, 4% TO 6% AIR CONTENT USING AIR ENTRAINING AGENT AS REQUIRED, MID RANGE WATER REDUCING AGENT, AND A 5-6" SLUMP.
3. CONCRETE FOR PRIVATE SIDEWALKS, CURBS, GUTTERS AND DRAINAGE STRUCTURES SHALL HAVE A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 3,000 PSI, A MINIMUM OF 5 SACKS OF CEMENT PER CUBIC YARD, 4% TO 6% AIR CONTENT USING AIR ENTRAINING AGENT AS REQUIRED, 20% CLASS C FLYASH, A 5-6 INCH SLUMP. REFER TO CITY OF LINDSAY AND/OR NCTCOG CONSTRUCTION SPECIFICATIONS FOR ALL PUBLIC IMPROVEMENTS.
4. THE MID RANGE WATER REDUCING AGENT ADMIXTURE CONFORMING TO ASTM C-494, TYPE A OR D SHALL BE CHOSEN FROM ONE OF THE FOLLOWING (OR APPROVED EQUAL):
EUCON X-20 OR EUCON MR BY EUCLID
SIKAMENT NL BY SIKA
PLASTIMIX MR BY PROMIX TECHNOLOGIES
MIRA 85 BY W.R.GRACE AND CO.
POLYHEED 1020 BY DEGUSSA ADMIXTURES

THE AMOUNT OF MID RANGE WATER REDUCER SHALL BE AS RECOMMENDED BY THE ADMIXTURE SUPPLIER TO INCREASE THE SLUMP OF THE CONCRETE BY 50 PERCENT OVER THE SLUMP WITHOUT THE ADMIXTURE. THE SLUMP GIVEN IN THE CONCRETE NOTES ARE AT THE POINT OF DISCHARGE.

- 5. IF THE AIR TEMPERATURE IS GREATER THAN 90 DEGREES WITHIN 24 HOURS AFTER PLACEMENT, HOT WEATHER CONCRETE PROCEDURES SHALL BE USED. THE CONTRACTOR SHALL SUBMIT A PROCEDURE TO THE ENGINEER FOR APPROVAL. THESE PROCEDURES MAY INCLUDE THE FOLLOWING:
A. PLACING THE CONCRETE IN THE EARLY MORNING HOURS
B. THE USE OF EVAPORATION REDUCER (SEE BELOW)
C. THE USE OF MISTING AS A CURING METHOD
D. THE USE OF WET BLANKETS AS A CURING METHOD
E. THE USE OF A RETARDING ADMIXTURE (NOT PREFERABLE)

- 6. ANY CONCRETE TO BE PLACED FURTHER THAN 16 FEET FROM THE END OF A CONCRETE TRUCK SHALL BE PUMPED WITH A COMMERCIAL CONCRETE PUMPING TRUCK OR OTHER PLACEMENT METHOD APPROVED BY THE ENGINEER. THE CONCRETE TRUCK SHALL NOT BE ALLOWED TO DRIVE OVER THE SUBGRADE OR THE PAVEMENT REINFORCEMENT UNLESS APPROVED BY THE ENGINEER.
7. REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO A.S.T.M. A-615 GRADE 60.
8. REINFORCING BARS, BAR SUPPORTS, AND SPACERS SHALL BE DETAILED AND PROVIDED IN ACCORDANCE WITH THE A.C.I. DETAILING MANUAL. CHAIRS SHALL NOT BE PLACED FURTHER THAN 4 FEET APART. BAR SUPPORTS SHALL BE THE FOLLOWING DAYTON/RICHMOND PRODUCTS (800-745-3703) OR EQUAL:
A. AT CONCRETE PAVEMENT: (CONCRETE THICKNESS MINUS 1 1/2 INCHES) HIGH, TYPE R21, OR TYPE BBP

- 9. MASTER BUILDERS CONFORM OR EUCOBAR EVAPORATION REDUCERS SHALL BE USED AFTER EACH FINISHING OPERATION ON THE CAST-IN-PLACE CONCRETE PAVEMENT UNLESS PRIOR APPROVAL FROM THE ENGINEER HAS BEEN OBTAINED TO NOT USE THIS PRODUCT.

- 10. SAWCUTS IN CONCRETE PAVEMENT SHALL BE MADE AS SOON AS THE CONCRETE IS OF SUFFICIENT STRENGTH TO SAW WITHOUT RAVELING THE AGGREGATE. ANY TIME LAPSE GREATER THAN 8 HOURS AFTER PLACING THE CONCRETE SHALL BE PERMITTED ONLY IF APPROVED BY THE ENGINEER.
11. NO PIPING OR CONDUITS SHALL BE INSTALLED IN ANY CONCRETE WITHOUT THE APPROVAL OF THE ENGINEER.

- 12. PAVING CONTRACTOR IS RESPONSIBLE FOR ALL LAY DOWN CURBS AT INTERSECTIONS WHERE BARRIER FREE RAMPS ARE TO BE CONSTRUCTED.
13. THE CONTRACTOR SHALL PROVIDE, CONSTRUCT AND MAINTAIN BARRICADES AND SIGNS IN ACCORDANCE WITH THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
14. SAWCUTS SHALL HAVE A MAXIMUM SPACING OF 15' EACH WAY.

- 15. EXPANSION JOINTS SHALL BE SMOOTH DOWEL JOINTS WITH THE PAVEMENT THICKNESS INCREASED BY 25%. ONE END OF DOWELS TO BE GREASED AND CAPPED AND USE 1" EXPANSION JOINT MATERIAL IN THE JOINT. REDWOOD OR OTHER RIGID MATERIAL SHOULD BE AVOIDED. SPACE EXPANSION JOINTS BETWEEN 80' AND 100' APART AND AT ALL LOCATIONS IN WHICH LARGE PAVEMENT SECTIONS INTERSECT SMALLER SECTIONS.
16. ALL JOINTS & SAWCUTS MUST BE SEALED WITH A BITUMINOUS JOINT SEALANT OR APPROVED EQUAL.

- 17. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ACQUIRE ALL NECESSARY PERMITS FROM THE CITY OF SANGER AND TXDOT BEFORE CONSTRUCTION WITHIN CITY RIGHT-OF-WAY.
18. ALL DIMENSIONS ARE TO BACK OF CURB, UNLESS OTHERWISE NOTED.
19. GREASE TRAPS, MANHOLES, AND VALVE COVERS IN PAVED AREAS SHALL BE TRAFFIC BEARING AND RIM ELEVATIONS SHALL MATCH FINAL PAVING ELEVATION.

SITE UTILITY NOTES

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PRIVATE OR PUBLIC, PRIOR TO EXCAVATING. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON THE INFORMATION AND DATA FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPEARANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA, AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA. FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK, THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PRIVATE OR PUBLIC, PRIOR TO EXCAVATING. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON THE INFORMATION AND DATA FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPEARANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA, AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA. FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK, THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

- 3. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL THE MATERIALS AND APPURTENANCES NECESSARY FOR THE COMPLETE INSTALLATION OF THE UTILITIES. ALL PIPE AND FITTINGS SHALL BE INSPECTED BY THE CITY INSPECTOR PRIOR TO BEING COVERED.

- 4. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS AND REQUIREMENTS.

- 5. THE SITE UTILITY CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE <UTILITY OWNER> FOR THE CONNECTIONS TO THE EXISTING WATER MAIN.

- 6. THE CONTRACTOR SHALL ADJUST THE LOCATION OF THE PROPOSED WATER LINES AS REQUIRED TO AVOID CONFLICTS WITH THE OTHER UTILITIES.

- 7. THRUST BLOCKS SHALL BE PROVIDED AT ALL TEES, ELBOWS AND BENDS, AND WILL BE OF SUFFICIENT SIZE TO COMPLY WITH CITY STANDARDS FOR EXISTING SOIL CONDITIONS.

- 8. ALL FIRE PROTECTIONS MATERIAL SHALL BE U.L. LISTED, FACTORY MUTUAL APPROVED, AND NFPA STANDARDS, UNLESS OTHERWISE DIRECTED BY THE PROJECT MANAGER.

- 9. THE LOCATION (HORIZONTAL & VERTICAL) OF ALL UTILITY LEAD-INS TO THE BUILDING SHALL BE VERIFIED WITH THE BUILDING MECHANICAL PLANS.

- 10. MATCH ALL MANHOLES AND VAULTS WITH PROPOSED GROUND ELEVATIONS.

- 11. UNDERGROUND TELEPHONE LINE SHALL BE WITHIN 3" OF CONDUIT, BURIED A MINIMUM OF 24", AND TERMINATING AT RIGHT-OF-WAY WITH PULL STRING AND FLAG.

- 12. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.

- 13. ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.

- 14. WATER & SANITARY SEWER UTILITIES SHALL BE KEPT TEN FEET (10') APART (PARALLEL) OR WHEN CROSSING 2' VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE, UNLESS OTHERWISE NOTED.)

- 15. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.

- 16. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND TO BE ONE FOOT ABOVE FINISHED GROUND ELEVATIONS WITH WATER TIGHT LIDS.

- 17. ALL CONCRETE FOR ENCASEMENT SHALL HAVE A MINIMUM 28-DAY COMPRESSION STRENGTH AT 3000 P.S.I.

- 18. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 48" COVER BELOW FINISHED GRADE ON ALL WATERLINES.

- 19. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE IN POSSESSION BEFORE THE FINAL CONNECTION OF SERVICE.

- 20. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.

- 21. IN THE EVENT OF VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOIST AT LEAST 10 FEET ON BOTH SIDES OF CROSSING. THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 24" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR A21.11 (AWWA C-151) (CLASS 50).

- 22. OWNER/CONTRACTOR SHALL COORDINATE WITH THE CITY FIRE MARSHALL TO PROVIDE ANY ADDITIONAL FIRE SAFETY FEATURES, INCLUDING FIRE HYDRANTS, NOT SHOWN AND NOTIFY ENGINEER OF CHANGES.

EROSION CONTROL NOTES

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PRIVATE OR PUBLIC, PRIOR TO EXCAVATING. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON THE INFORMATION AND DATA FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPEARANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA, AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA. FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK, THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPEARANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA, AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA. FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK, THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

- 2. EROSION CONTROL MEASURES MAY ONLY BE PLACED IN FRONT OF INLETS, OR IN CHANNELS, DRAINAGEWAYS OR BORROW DITCHES AT RISK OF CONTRACTOR. CONTRACTOR SHALL REMAIN LIABLE FOR ANY DAMAGE CAUSED BY THE MEASURES, INCLUDING FLOODING DAMAGE, WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE. AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGEWAYS AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREGGED OF ANY SEDIMENT GENERATED BY THE PROJECT OR DEPOSITED AS A RESULT OF EROSION CONTROL MEASURES.

- 3. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES (INCLUDING STORM WATER POLLUTION PREVENTION PLAN.) THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE APPROVED TPDES SWPPP DRAWINGS DURING CONSTRUCTION OPERATIONS.

- 4. PRIOR TO COMMENCING ANY CONSTRUCTION, A CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCE SHALL BE INSTALLED AT THE LOCATIONS SHOWN, OR AS DESCRIBED IN THE SWPPP.

- 5. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL SYSTEM DESCRIBED WITHIN THE CONSTRUCTION DOCUMENTS SHOULD BE CONSIDERED TO REPRESENT THE MINIMUM ACCEPTABLE STANDARDS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDENT UPON THE STAGE OF CONSTRUCTION, THE SEVERITY OF THE RAINFALL EVENT AND/OR AS DEEMED NECESSARY AS A RESULT OF ON-SITE INSPECTIONS BY THE OWNER, THEIR REPRESENTATIVES OR THE JURISDICTIONAL AUTHORITIES. THESE ADDITIONAL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER. IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO ASSURE THAT THE STORM WATER DISCHARGE FROM THE SITE DOES NOT EXCEED THE TOLERANCES ESTABLISHED BY ANY OF THE JURISDICTIONAL AUTHORITIES.

- 6. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.

- 7. AS INLETS ARE COMPLETED, TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED.

- 8. AT THE COMPLETION OF THE PAVING AND FINAL GRADING, THE DISTURBED AREA(S) SHALL BE RE-VEGETATED IN ACCORDANCE WITH THE SWPPP.

- 9. THE SPECIFIC PLANT MATERIALS PROPOSED TO PROTECT FILL AND EXCAVATED SLOPES SHALL BE AS INDICATED WITHIN THE SWPPP. PLANT MATERIALS MUST BE SUITABLE FOR USE UNDER LOCAL CLIMATE AND SOIL CONDITIONS. IN GENERAL, HYDROSEEDING OR SODDING BERMUDA GRASS IS ACCEPTABLE DURING THE SUMMER MONTHS (MAY 1 TO AUGUST 30). WINTER RYE OR FESCUE GRASS MAY BE PLANTED DURING TIMES OTHER THAN THE SUMMER MONTHS AS A TEMPORARY MEASURE UNTIL SUCHTIME AS THE PERMANENT PLANTING CAN BE MADE.

- 10. SILT FENCE AND INLET SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL RE-VEGETATION HAS BEEN COMPLETED.

- 11. DISTURBED AREAS THAT ARE SEEDDED OR SODDED SHALL BE CHECKED PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND RESEEDDED OR RESODDED, IF NECESSARY. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.

- 12. SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASIN BEFORE IT IS 50% FULL, IF IMPLEMENTED BY THE SWPPP.

- 13. FREQUENT INSPECTIONS OF THE SILT FENCE SHALL BE MADE. ALL REPAIRS OR REPLACEMENTS SHALL BE MADE IMMEDIATELY.

- 14. THE CONTRACTOR SHALL INSPECT HIS STABILIZATION AND EROSION CONTROL MEASURES AT MINIMUM OF ONCE EVERY 14 DAYS, AND WITHIN 24 HOURS OF ANY STORM EVENT GREATER THAN 0.5 INCHES. THE CONTRACTOR SHALL REPAIR INSUFFICIENCIES REVEALED BY THE INSPECTION BEFORE THE NEXT STORM EVENT AND SHALL MODIFY HIS SWPPS WITHIN 7 DAYS OF THE INSPECTION. ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF WHEN IT REACHES A DEPTH OF SIX (6) INCHES.

- 15. CONTRACTOR SHOULD ATTAIN A 75% BERMUDA COVERING BY SEEDING OR SODDING OVER ALL AFFECTED CONSTRUCTION AREAS BEFORE EROSION CONTROL CAN BE REMOVED.

- 16. CONTRACTOR IS RESPONSIBLE FOR PREPARING, FILING, & MAINTAINING THE SWPPP & THE NOI.

- 17. WHERE SILT FENCE CAN NOT BE USED, THE CONTRACTOR MAY SUBSTITUTE WITH THE FOLLOWING:
-TRIANGULAR SEDIMENT FILTER DIKE PER NCTCOG SPEC 1050A
-"TEXAS POWER MULCH" MULCH FILLER FILTER SOCK

- 18. THE CONTRACTOR SHALL REFER TO EROSION CONTROL NARRATIVE AND SWPPP COORDINATION/INVESTIGATION DOCUMENTATION PROVIDED BY OTHERS FOR APPROPRIATE EROSION CONTROL MEASURES AND PROCEDURES FOR THIS PROJECT.

Table with columns: #, Description, Date. Includes rows for Issue Record and Benchmarks.

Table with columns: TBM X-CUT, TBM X-CUT, TBM X-CUT. Includes rows for N7162983.6, E-2376864.4, ELEV.682.2.



www.kje-us.com
Texas Firm F-12214
KJE
500 Moseley Rd
Cross Roads, TX 76277
Phone 940-387-0805
Fax 940-387-0830

ENGINEERS & ENVIRONMENTAL

PRELIMINARY

"THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF IAN NORFOLK, P.E. 93550 ON 11/13/2024. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES."



SANGER TOWN CENTER SOUTH
NOT FOR CONSTRUCTION IN PROGRESS
FM 455 AND INDIAN LN
SANGER, TEXAS

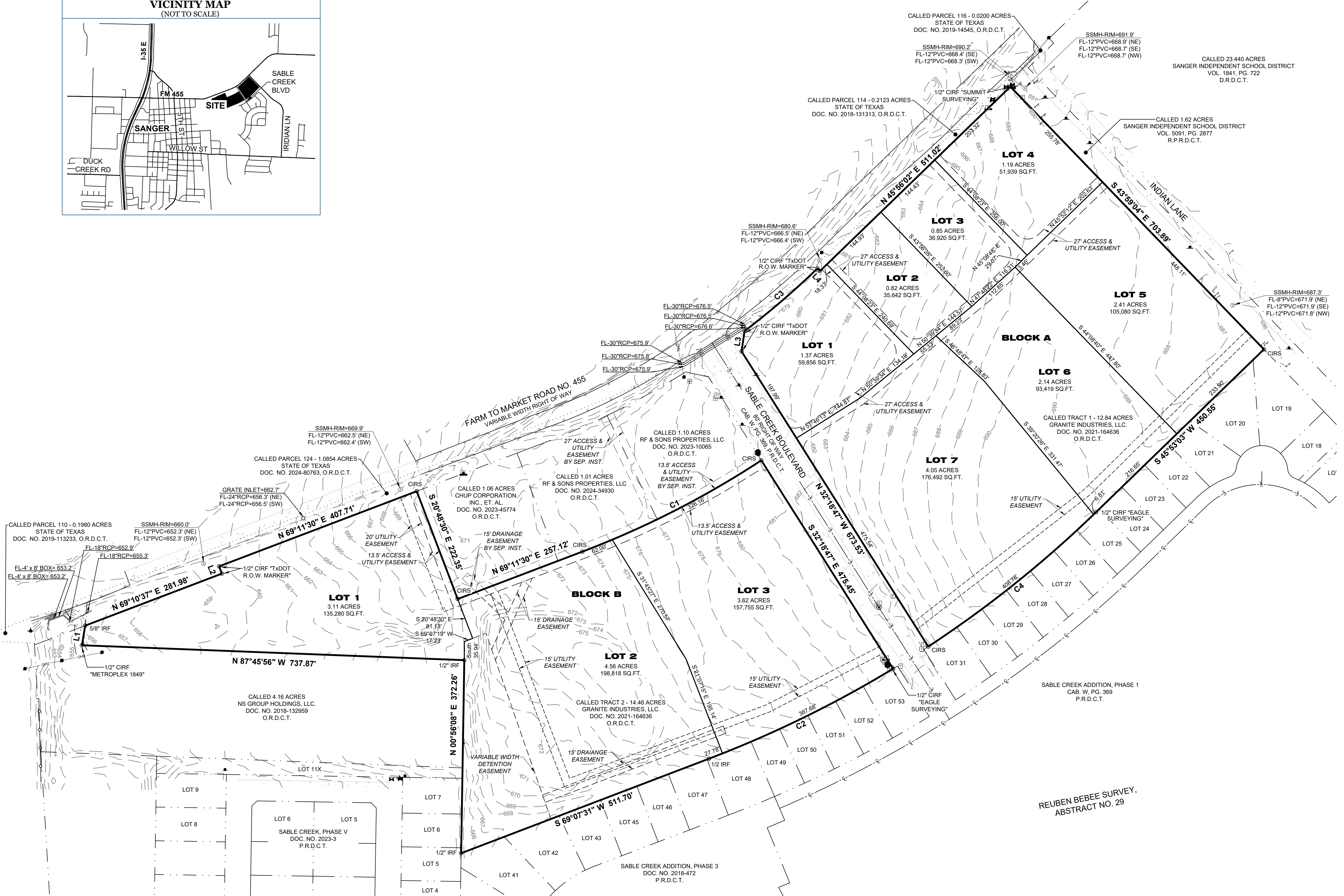
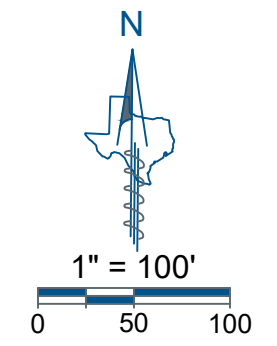
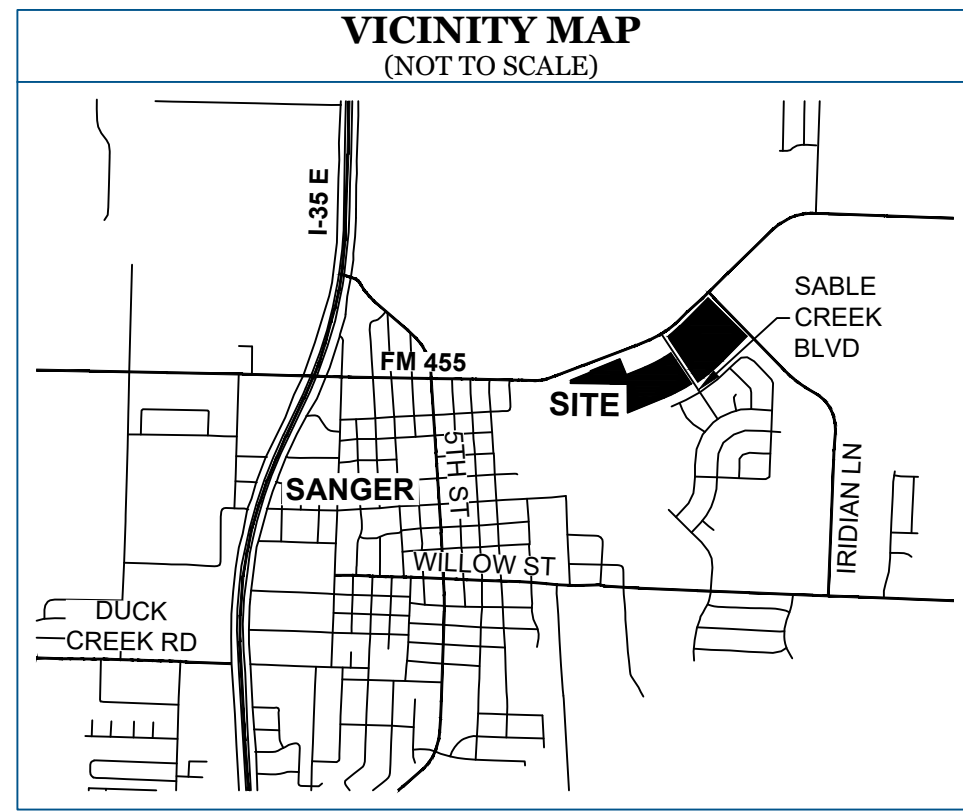
Issued Date: 11/12/2024
Project No: 240117

Drawn By: RP
Checked By: IN
Designed By: IN

Issue Record

Table with columns: #, Description, Date

GENERAL NOTES



LINE TABLE			
LINE	BEARING	DISTANCE	
L1	N 05°25'57" E	38.34'	
L2	N 20°46'45" W	15.08'	
L3	N 08°36'41" E	39.69'	
L4	S 43°51'44" E	6.98'	

CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	388.16'	1787.35'	12°26'35"	N 62°58'21" E	387.40'
C2	395.46'	2196.52'	10°18'55"	S 63°57'43" W	394.92'
C3	185.39'	1565.00'	6°47'15"	N 49°20'03" E	185.29'
C4	415.59'	2196.52'	10°50'26"	S 51°17'41" W	414.97'

GENERAL NOTES

- The purpose of this plat is to create ten lots of record from unplatted land.
- This property is located in **Non-Shaded Zone "X"** as scaled from the F.E.M.A. Flood Insurance Rate Map dated April 18, 2011 and is located in Community Number 480786 as shown on Map Number 48121C0210G. The location of the Flood Zone is approximate, no vertical datum was collected at the time of the survey. For the exact Flood Zone designation, please contact 1-(877) FEMA MAP.
- The grid coordinates shown on this plat are based on GPS observations utilizing the AllTerra RTK Network. North American Datum of 1983 (Adjustment Realization 2011).
- 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/or withholding of utilities and building permits.
- All interior property corners are marked with a 1/2-inch iron rod with a green plastic cap stamped "EAGLE SURVEYING" unless noted otherwise.
- The bearings shown on this plat are based on GPS observations utilizing the AllTerra RTK Network. North American Datum of 1983 (Adjustment Realization 2011).
- The elevations shown on this plat are based on GPS observations utilizing the AllTerra RTK Network. North American Vertical Datum of 1988, (Geoid 12A).
- Lot to lot drainage shall not be allowed.
- All lots comply with the minimum size requirements of the zoning district.
- This property may be subject to charges related to impact fees and the applicant should contact the city regarding any applicable fees due.
- All common areas, drainage easements, and detention facilities will be owned and maintained by the HOA/property owner. Any common area within the city's right-of-way will require a facilities agreement, to be reviewed and approved by the city.
- This plat does not alter or remove existing deed restriction, if any, on this property.

**PRELIMINARY PLAT
SANGER TOWN
CENTER SOUTH
LOTS 1-3, BLOCK A
LOTS 1-7, BLOCK B
24.13 ACRES**

REUBEN BEBEE SURVEY, ABSTRACT NUMBER 29
CITY OF SANGER, DENTON COUNTY, TEXAS

JOB NUMBER 1802.021-xx
DATE 11/12/2024
REVISION
DRAWN BY TAR

Eagle Surveying, LLC
222 South Elm Street
Suite: 200
Denton, TX 76201
940.222.3009
www.eaglesurveying.com
TX Firm # 10194177

LEGEND

Electric Box	Cable Riser	Telecommunications Riser	Overhead Utilities	Concrete	Volume
Electric Meter	Buried Cable Sign	Telecommunications Vault	Storm Drain Line	Stone	Page
Electric Vault	Gas Meter	Fiber Optic Utility Sign	Edge of Gravel	Record Call	Document Number
Electric Transformer	Buried Gas Utility Sign	Telecommunications Utility Mark	Edge of Asphalt		
Guy Wire	Gas Utility Mark	Water Meter			
Power Pole	Sanitary Manhole	Water Valve			
Light Pole	Cable Inlet	Fire Hydrant			
Sign		Boundary Monumentation		Cabinet	

SURVEYOR
Eagle Surveying, LLC
222 S. Elm Street, Suite: 200
Denton, TX 76201
(940) 222-3009

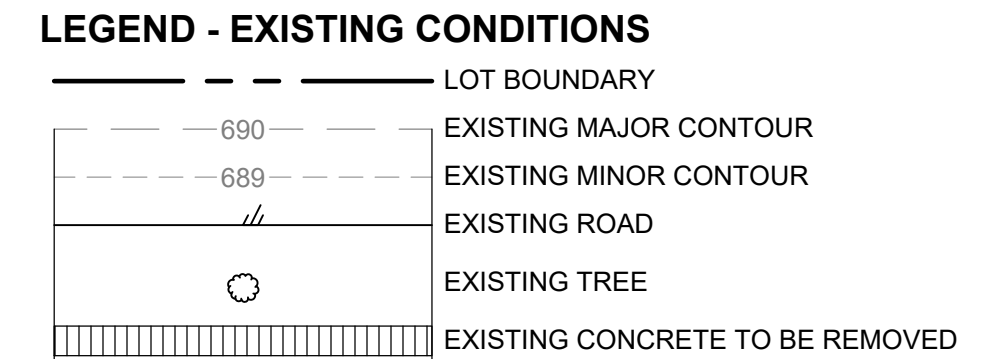
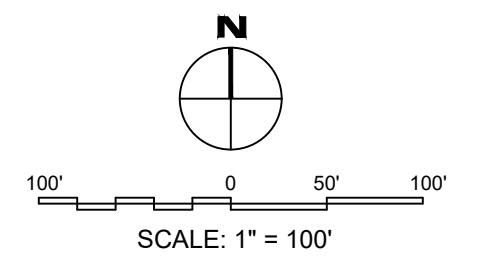
ENGINEER
KJE
Contact: Ian Norfolk
500 Mosley Road
Cross Roads, TX 76227
(940) 387-0805

OWNER
Granite Industries, LLC
161 W 3rd Street, Suite 110
Prosper, TX 75078

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 09°25'57" E	38.34'
L2	N 20°46'45" W	15.08'
L3	N 08°36'41" E	39.69'
L4	S 43°51'44" E	6.96'

CURVE TABLE					
CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	388.16'	1787.33'	127.35°	N 62°39'21" E	387.43'
C2	395.46'	2196.52'	101°18'55"	S 63°57'43" W	394.92'
C3	185.39'	1565.00'	6°47'15"	N 49°20'03" E	185.29'
C4	415.59'	2196.52'	10°50'26"	S 51°17'41" W	414.97'

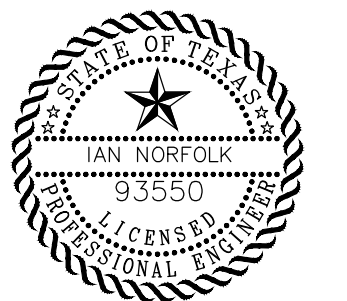
TREE TABLE			TREE TABLE			TREE TABLE			TREE TABLE		
ID	COMMON NAME	DBH (INCHES)	ID	COMMON NAME	DBH (INCHES)	ID	COMMON NAME	DBH (INCHES)	ID	COMMON NAME	DBH (INCHES)
2175	HACKBERRY	8	2203	OAK	6	2230	HACKBERRY	8	2257	HACKBERRY	8
2176	HACKBERRY	14	2204	PINE	14	2231	HACKBERRY	6	2258	HACKBERRY	10
2177	HACKBERRY	8	2205	PINE	16	2232	HACKBERRY	12	2259	HACKBERRY	6
2178	HACKBERRY	10	2206	PINE	14	2233	HACKBERRY	28	2260	HACKBERRY	14
2179	HACKBERRY	8	2207	PINE	14	2234	HACKBERRY	26	2261	HACKBERRY	10
2180	HACKBERRY	14	2208	LIVE OAK	8	2235	HACKBERRY	6	2262	HACKBERRY	8
2181	HACKBERRY	14	2209	OAK	6	2236	HACKBERRY	6	2263	HACKBERRY	6
2182	HACKBERRY	8	2210	OAK	6	2237	HACKBERRY	6	2264	HACKBERRY	8
2183	HACKBERRY	6	2211	LIVE OAK	8	2238	HACKBERRY	6	2265	HACKBERRY	10
2184	HACKBERRY	8	2212	LIVE OAK	6	2239	HACKBERRY	24	2266	HACKBERRY	8
2185	HACKBERRY	10	2213	HACKBERRY	26	2240	HACKBERRY	16	2267	HACKBERRY	6
2186	HACKBERRY	6	2214	HACKBERRY	10	2241	HACKBERRY	26	2268	HACKBERRY	18
2187	HACKBERRY	6	2215	HACKBERRY	14	2242	HACKBERRY	28	2269	HACKBERRY	10
2188	HACKBERRY	22	2216	HACKBERRY	6	2243	CEDAR	6	2270	HACKBERRY	12
2189	HACKBERRY	8	2217	HACKBERRY	10	2244	HACKBERRY	12	2271	HACKBERRY	8
2190	HACKBERRY	12	2218	HACKBERRY	6	2245	HACKBERRY	16	2272	HACKBERRY	6
2191	HACKBERRY	14	2219	HACKBERRY	8	2246	HACKBERRY	14	2273	HACKBERRY	8
2192	HACKBERRY	24	2220	HACKBERRY	10	2247	HACKBERRY	10	2274	HACKBERRY	8
2193	HACKBERRY	6	2221	HACKBERRY	14	2248	HACKBERRY	10	2275	HACKBERRY	6
2194	HACKBERRY	6	2222	HACKBERRY	6	2249	HACKBERRY	12	2276	HACKBERRY	6
2195	HACKBERRY	8	2223	HACKBERRY	28	2250	HACKBERRY	12	2277	HACKBERRY	8
2196	WILLOW	26	2224	HACKBERRY	20	2251	HACKBERRY	12	2278	HACKBERRY	10
2197	PINE	18	2225	HACKBERRY	6	2252	HACKBERRY	10	2279	ELM	6
2198	PINE	18	2226	HACKBERRY	6	2253	HACKBERRY	8	2280	ELM	8
2199	PINE	16	2227	HACKBERRY	36	2254	HACKBERRY	10	2281	HACKBERRY	6
2200	PINE	14	2228	HACKBERRY	12	2255	HACKBERRY	6	2282	HACKBERRY	14
2201	PINE	12	2229	HACKBERRY	6	2256	HACKBERRY	10	2283	HACKBERRY	8
2202	OAK	6									



OKJE
www.okje-us.com
Texas Firm F-12214
ENGINEERS & ENVIRONMENTAL

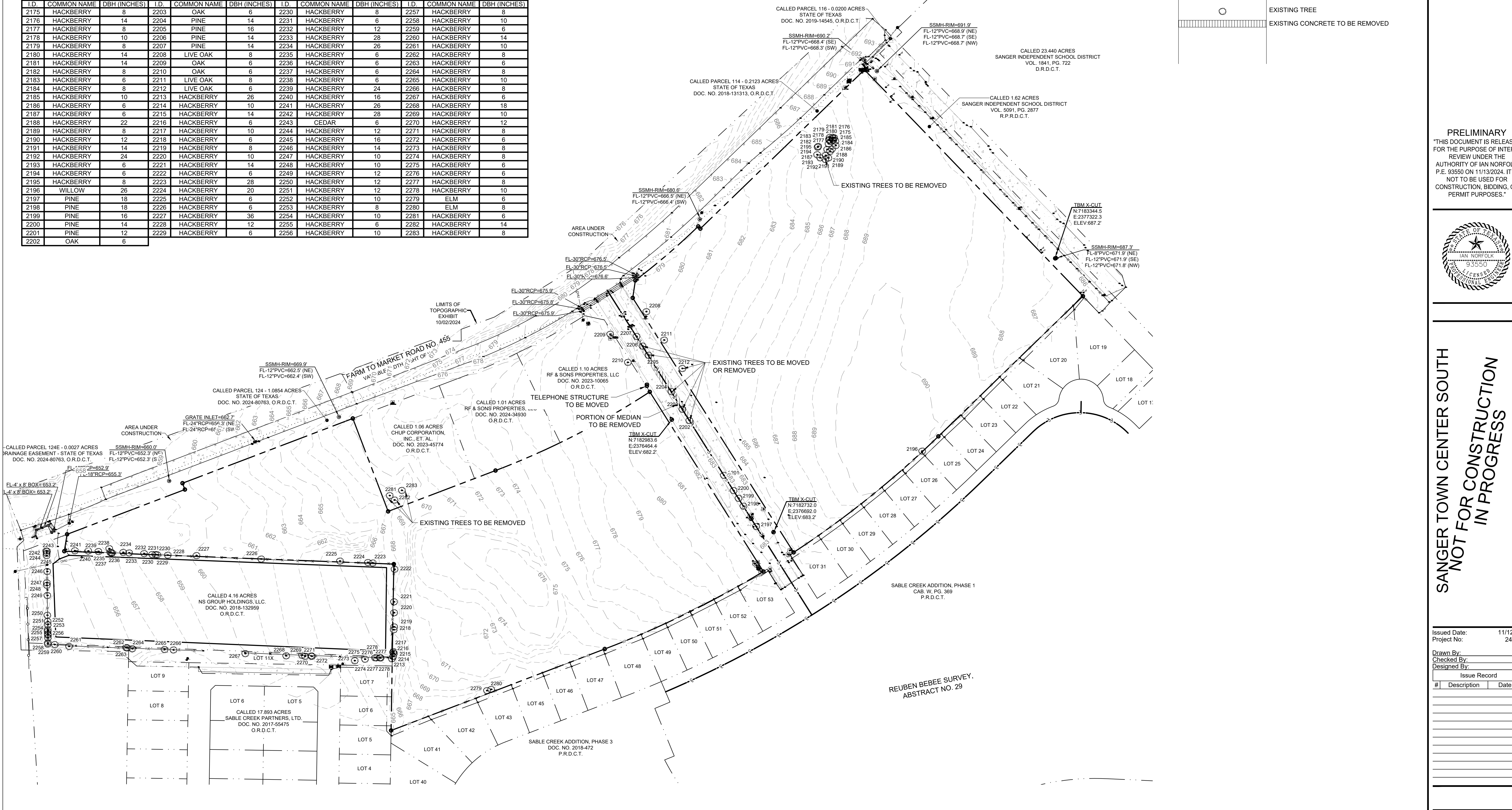
KJE
500 Moseley Rd
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Phone 940-387-0805
Fax 940-387-0830

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SANGER TOWN CENTER SOUTH
NOT FOR CONSTRUCTION
IN PROGRESS

FM 455 AND INDIAN LN
SANGER, TEXAS



BENCHMARKS:

TBM X-CUT N 7182983.6 E 2376464.4 ELEV 682.2'	TBM X-CUT N 7182732.0 E 2376692.0 ELEV 683.2'	TBM X-CUT N 7182983.6 E 2376464.4 ELEV 682.2'
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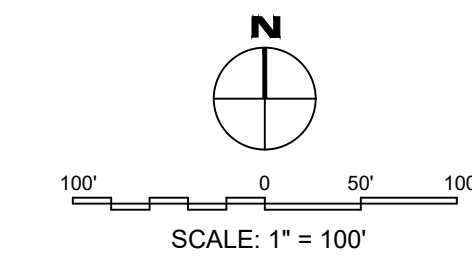
Issued Date: 11/12/2024
Project No: 240117

Drawn By: RP
Checked By: IN
Designed By: IN

Issue Record

#	Description	Date

OVERALL EXISTING CONDITIONS

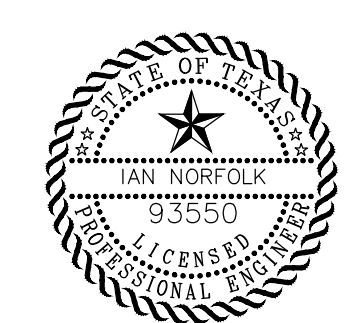


LEGEND - PAVING PLAN
[Symbol] PROPOSED 6" THICK CONCRETE PAVEMENT
[Symbol] LOT BOUNDARY
[Symbol] DETENTION POND

PAVING NOTES

- REFER TO SOIL PREPARATION & GRADING NOTES ON THE GRADING PLAN FOR SOIL PREPARATION SPECIFICATIONS UNDER PAVEMENT.
- CONCRETE FOR THE CONCRETE PAVEMENT SHALL HAVE A 28 DAY DESIGN COMPRESSIVE STRENGTH OF 4,000 PSI. A MINIMUM OF 5.5 SACKS OF PORTLAND CEMENT PER CUBIC YARD, 20% MAX CLASS C FLY ASH, 4% TO 6% AIR CONTENT USING AIR ENTRAINING AGENT AS REQUIRED, MID RANGE WATER REDUCING AGENT AND A 4" MAX SLUMP.
- IF THE AIR TEMPERATURE IS GREATER THAN 90 DEGREES WITHIN 24 HOURS AFTER PLACEMENT, HOT WEATHER CONCRETE PROCEDURES SHALL BE USED. THE CONTRACTOR SHALL SUBMIT A PROCEDURE TO THE ENGINEER FOR APPROVAL. IN ADDITION TO MEMBRANE CURING COMPOUND, THESE PROCEDURES MAY INCLUDE THE FOLLOWING:
 - PLACING THE CONCRETE IN THE EARLY MORNING HOURS
 - THE USE OF EVAPORATION REDUCER (SEE BELOW)
 - THE USE OF MISTING AS A CURING METHOD
 - THE USE OF WET BLANKETS AS A CURING METHOD
 - THE USE OF A RETARDING ADMIXTURE (NOT PREFERABLE)
- CONCRETE SHALL NOT BE PLACED WHEN AIR TEMPERATURE IS LESS THAN 40°F AND FALLING, BUT MAY BE PLACED WHEN THE AIR TEMPERATURE IS 35°F AND RISING.
- FOUR CONCRETE CYLINDERS SHALL BE MADE FOR EVERY 75 CUBIC YARDS, ONE TO BE TESTED AT 7 DAYS, TWO AT 28 DAYS, AND ONE TO HOLD. THE CONCRETE SLUMP, TEMPERATURE, AND AIR CONTENT SHALL BE MEASURED EVERY TIME A SET OF FOUR CYLINDERS IS MADE.
- ANY CONCRETE TO BE PLACED FURTHER THAN 16 FEET FROM THE END OF A CONCRETE TRUCK SHALL BE PUMPED WITH A COMMERCIAL CONCRETE PUMPING TRUCK OR OTHER PLACEMENT METHOD APPROVED BY THE ENGINEER. THE CONCRETE TRUCK SHALL NOT BE ALLOWED TO DRIVE OVER THE SUBGRADE OR THE PAVEMENT REINFORCEMENT UNLESS APPROVED BY THE ENGINEER.
- REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO A.S.T.M. A-615 GRADE 60.
 - AT CONCRETE PAVEMENT: (1/2 OF CONCRETE THICKNESS) HIGH, TYPE R21, OR TYPE BBP
- MASTER BUILDERS CONFIRM OR EUCOBAR EVAPORATION REDUCERS SHALL BE USED AFTER EACH FINISHING OPERATION ON THE CAST-IN-PLACE CONCRETE PAVEMENT UNLESS PRIOR APPROVAL FROM THE ENGINEER HAS BEEN OBTAINED TO NOT USE THIS PRODUCT.
- SAWCUTS IN CONCRETE PAVEMENT SHALL BE MADE AS SOON AS THE CONCRETE IS OF SUFFICIENT STRENGTH TO SAW WITHOUT RAVELING THE SURFACE. ALL SAWING OPERATIONS SHALL BE CONDUCTED AND COMPLETED WITHIN FIVE (5) TO EIGHT (8) HOURS AFTER CONCRETE PLACEMENT. ANY TIME LAPSE GREATER THAN 8 HOURS AFTER PLACING THE CONCRETE SHALL BE PERMITTED ONLY IF APPROVED BY THE ENGINEER.
- NO PIPING OR CONDUITS SHALL BE INSTALLED IN ANY CONCRETE WITHOUT THE APPROVAL OF THE ENGINEER.
- PAVING CONTRACTOR IS RESPONSIBLE FOR ALL LAY DOWN CURBS AT INTERSECTIONS WHERE BARRIER FREE RAMPS ARE TO BE CONSTRUCTED.
- THE CONTRACTOR SHALL PROVIDE, CONSTRUCT AND MAINTAIN BARRICADES AND SIGNS IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- SAWCUTS IN CONCRETE PAVING SHALL HAVE A MAXIMUM SPACING OF 15' EACH WAY. ALL JOINTS SHALL BE SEALED WITH SEALANT.
- ALL CONTROL, CONSTRUCTION AND EXPANSION JOINTS MUST BE SEALED WITH A JOINT SEALANT.
- IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ACQUIRE ALL NECESSARY PERMITS FROM CITY, COUNTY OR STATE BEFORE CONSTRUCTION IN THE RIGHT-OF-WAY.
- ALL DIMENSIONS ARE TO THE BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
- MANHOLES AND VALVE COVERS IN PAVED AREAS SHALL BE TRAFFIC BEARING AND RIM ELEVATIONS SHALL MATCH FINAL PAVING ELEVATION.

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**SANGER TOWN CENTER SOUTH
NOT FOR CONSTRUCTION
IN PROGRESS**
FM 455 AND INDIAN LN
SANGER, TEXAS

Issued Date:	11/12/2024	
Project No:	240117	
Drawn By:	RP	
Checked By:	IN	
Designed By:	IN	
Issue Record		
#	Description	Date

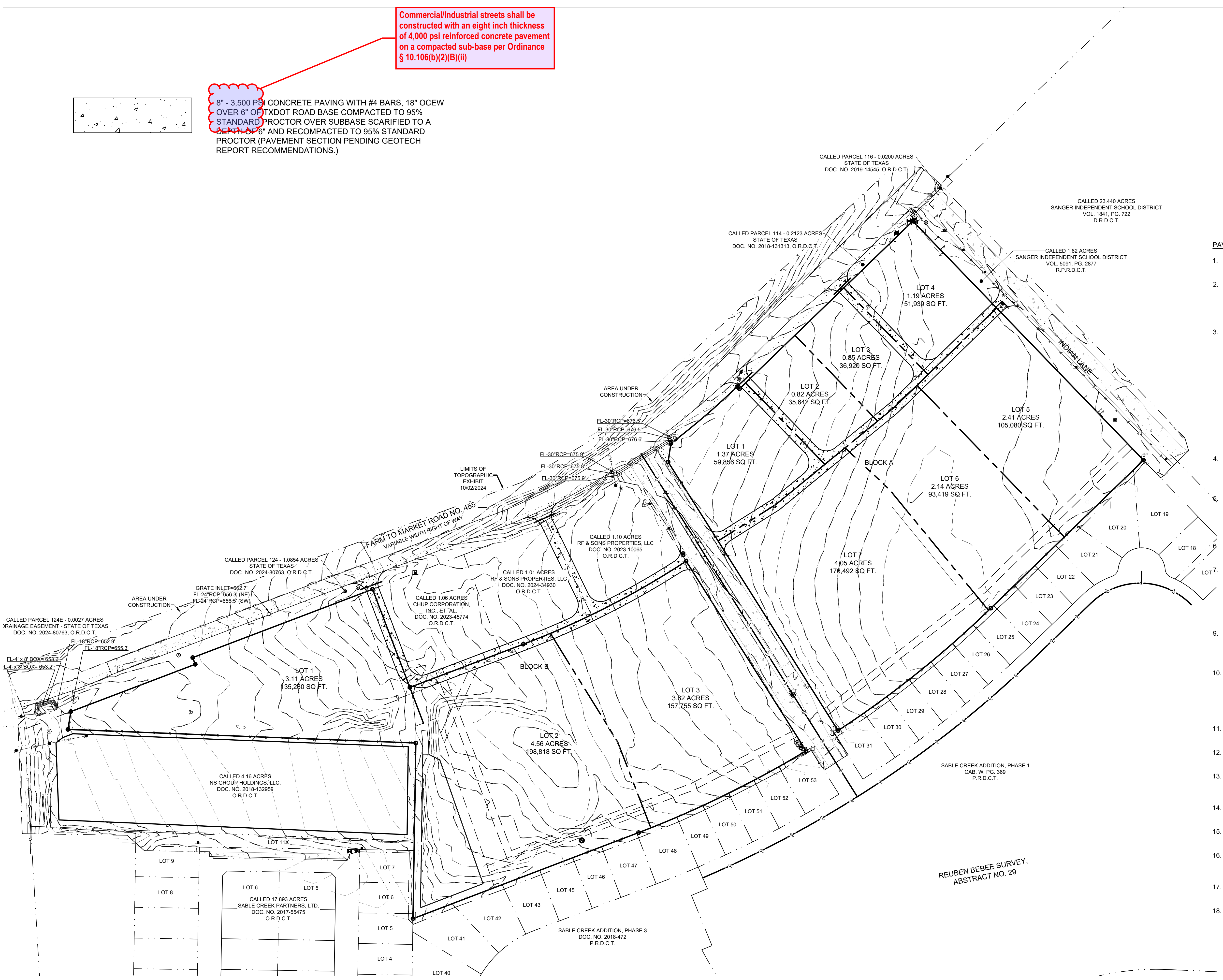
BENCHMARKS:

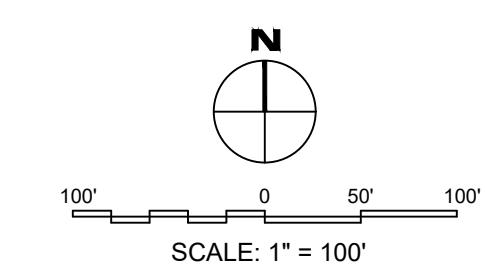
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OVERALL PAVING PLAN

Commercial/Industrial streets shall be constructed with an eight inch thickness of 4,000 psi reinforced concrete pavement on a compacted sub-base per Ordinance § 10.106(b)(2)(B)(ii)

8" - 3,500 PSI CONCRETE PAVING WITH #4 BARS, 18" OCEW OVER 6" OF TXDOT ROAD BASE COMPACTED TO 95% STANDARD PROCTOR OVER SUBBASE SCARIFIED TO A DEPTH OF 6" AND RECOMPACTED TO 95% STANDARD PROCTOR (PAVEMENT SECTION PENDING GEOTECH REPORT RECOMMENDATIONS.)





GENERAL DEVELOPMENT NOTE:
ALL DEVELOPMENT SHOWN ON THE PLAN OUTSIDE OF THE FIRE LANE/ ACCESS PAVING AND UTILITIES TO EACH LOT IS SHOWN AS POSSIBLE COMMERCIAL DEVELOPMENT AND MAY NOT REPRESENT THE FINAL SITE LAYOUT FOR ANY GIVEN LOT. ALL DEVELOPMENT WILL COMPLY WITH CITY OF SANGER RULES AND REGULATIONS AND WILL BE SUBMITTED AS INDIVIDUAL DEVELOPMENT PLANS.

LEGEND - GRADING PLAN

- LOT BOUNDARY
- BUILDING
- DETENTION POND
- 580 PROPOSED MAJOR CONTOUR
- 583 PROPOSED MINOR CONTOUR
- TC TOP OF CURB
- TP TOP OF PAVING
- G GUTTER
- TS SIDEWALK
- TW TOP OF WALL
- BW BOTTOM OF WALL
- TG TOP OF GRATE
- FLOW ARROW

GRADING NOTES

- SITE SHALL BE GRADED TO ASSURE DRAINAGE OF SURFACE WATER AWAY FROM BUILDING.
- GRADES NOT OTHERWISE INDICATED ON THE PLANS SHALL BE UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE GIVEN. ABRUPT CHANGES IN SLOPES SHALL BE WELL ROUNDED. THE CONTRACTOR IS RESPONSIBLE FOR POSITIVE SITE DRAINAGE.
- ACCESSIBLE ROUTES NOT TO EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE. HANDICAP PARKING AND ACCESS AISLES NOT TO EXCEED 2% SLOPE IN ANY DIRECTION.
- GREASE TRAPS, MANHOLES, AND VALVE COVERS IN PAVED AREAS SHALL BE TRAFFIC BEARING AND RIM ELEVATIONS SHALL MATCH FINAL PAVING ELEVATION.
- ALL SITE EXCAVATION SHALL BE CONSIDERED UNCLASSIFIED EXCAVATION.
- THE GRADES AND CONTOURS SHOWN ON THIS PLAN REPRESENT THE ELEVATIONS AS INDICATED ON THE TOPOGRAPHIC SURVEY BY CROWLEY SURVEYING DATED 09/2022. DUE TO MANY FACTORS INCLUDING POSSIBLE DISTURBANCE OF THE SOIL OR BENCH MARKS BY OTHER PARTIES AND THE EXPANSION/SHRINKAGE NATURE OF THE SOIL, THE ELEVATIONS MAY BE SIGNIFICANTLY DIFFERENT IN THE FUTURE (INCLUDING THE BENCH MARKS). NORMAL EQUIPMENT AND MEASUREMENT ACCURACIES SHOULD BE TAKEN INTO ACCOUNT WHEN USING THESE ELEVATIONS.
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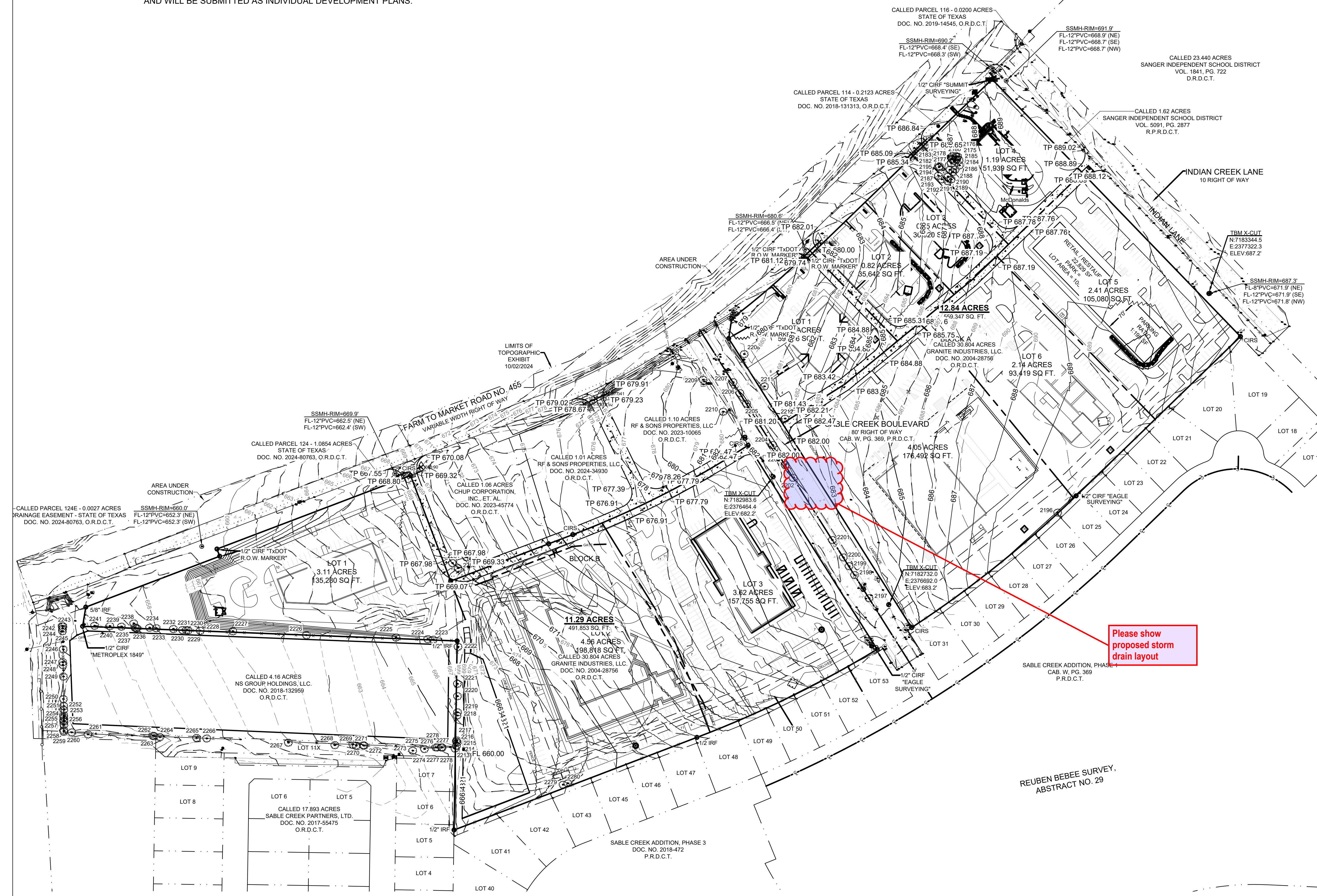
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- THE SOIL BENEATH ALL PAVING SHALL BE TREATED AS FOLLOWS:
 - REMOVE ALL VEGETATION, ORGANIC MATERIAL OR OTHER DELETERIOUS MATERIALS.
 - PERFORM ANY CUT OPERATIONS AS NEEDED AND PROOF ROLL THE PAVEMENT AREAS WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK. ANY AREAS WHICH RUT EXCESSIVELY OR PUMP SHALL BE UNDERCUT AND REPLACED WITH COMPACTED FILL.
 - PERFORM ALL FILL OPERATIONS. ALL FILL SHALL BE INSTALLED IN MAXIMUM 8-INCH LOOSE LIFTS AND COMPACTED TO BETWEEN 95% AND 100% OF STANDARD PROCTOR DENSITY AT A MOISTURE CONTENT AT OR ABOVE OPTIMUM.
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 - ANY IMPORTED FILL SHALL BE SIMILAR TO THE ON SITE SOILS AND APPROVED BY THE GEOTECHNICAL ENGINEER.
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SANGER TOWN CENTER SOUTH
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FM 455 AND INDIAN LN
SANGER, TEXAS



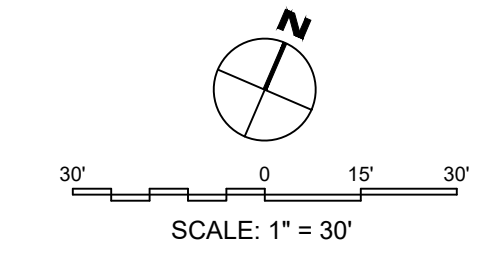
BENCHMARKS:

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OVERALL GRADING PLAN

PLANS TOPOGRAPHIC EXHIBIT 10/02/2024

FARM TO MARKET ROAD NO. 455
VARIABLE WIDTH RIGHT OF WAY



LEGEND - GRADING PLAN

- LOT BOUNDARY
- BUILDING
- DETENTION POND
- 580 PROPOSED MAJOR CONTOUR
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- TC TOP OF CURB
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Verify there is no lot to lot drainage along fence line. Where lot to lot drainage occurs, the lot lines shall be aligned, and a dedicated private drainage easement shall be provided per Ordinance § 10.106(d)(12)

Include more proposed contour labels

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MATCH LINE - SEE SHEET C3.02

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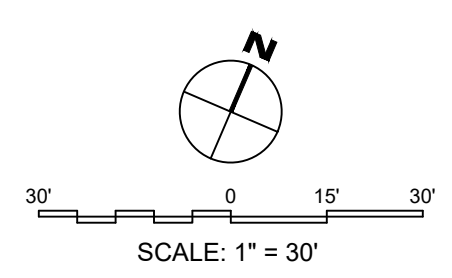
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GRADING PLAN I

OF PHIC

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- TG --- TOP OF GRATE
- FLOW ARROW

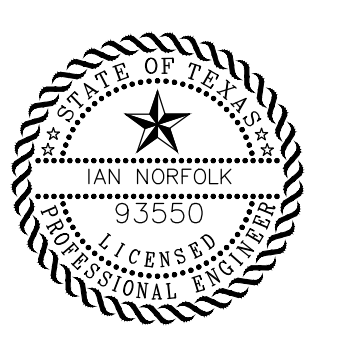
GRADING NOTES

1. SITE SHALL BE GRADED TO ASSURE DRAINAGE OF SURFACE WATER AWAY FROM BUILDING.
2. GRADES NOT OTHERWISE INDICATED ON THE PLANS SHALL BE UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE GIVEN. ABRUPT CHANGES IN SLOPES SHALL BE WELL ROUNDED. THE CONTRACTOR IS RESPONSIBLE FOR POSITIVE SITE DRAINAGE.
3. ACCESSIBLE ROUTES NOT TO EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE. HANDICAP PARKING AND ACCESS AISLES NOT TO EXCEED 2% SLOPE IN ANY DIRECTION.
4. GREASE TRAPS, MANHOLES, AND VALVE COVERS IN PAVED AREAS SHALL BE TRAFFIC BEARING AND RIM ELEVATIONS SHALL MATCH FINAL PAVING ELEVATION.
5. ALL SITE EXCAVATION SHALL BE CONSIDERED UNCLASSIFIED EXCAVATION.
6. THE GRADES AND CONTOURS SHOWN ON THIS PLAN REPRESENT THE ELEVATIONS AS INDICATED ON THE TOPOGRAPHIC SURVEY BY CROWLEY SURVEYING DATED 09/2022. DUE TO MANY FACTORS INCLUDING POSSIBLE DISTURBANCE OF THE SOIL OR BENCH MARKS BY OTHER PARTIES AND THE EXPANSIVE/SHRINKAGE NATURE OF THE SOIL, THE ELEVATIONS MAY BE SIGNIFICANTLY DIFFERENT IN THE FUTURE (INCLUDING THE BENCH MARKS). NORMAL EQUIPMENT AND MEASUREMENT ACCURACIES SHOULD BE TAKEN INTO ACCOUNT WHEN USING THESE ELEVATIONS.
7. ALL SLOPES IN UNPAVED AREAS SHALL BE 4:1 OR FLATTER UNLESS OTHERWISE NOTED.
8. ALL ELEVATIONS ARE TO TOP OF PAVEMENT OR GROUND, UNLESS OTHERWISE NOTED.

SOIL PREPARATION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PRIVATE OR PUBLIC, PRIOR TO EXCAVATING. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON THE INFORMATION AND DATA FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPEARANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA. AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA. FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK, THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
2. THE SOIL BENEATH ALL PAVING SHALL BE TREATED AS FOLLOWS:
 - A. REMOVE ALL VEGETATION, ORGANIC MATERIAL OR OTHER DELETERIOUS MATERIALS.
 - B. PERFORM ANY CUT OPERATIONS AS NEEDED AND PROOF ROLL THE PAVEMENT AREAS WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK. ANY AREAS WHICH RUT EXCESSIVELY OR PUMP SHALL BE UNDERCUT AND REPLACED WITH COMPACTED FILL.
 - C. PERFORM ALL FILL OPERATIONS. ALL FILL SHALL BE INSTALLED IN MAXIMUM 8-INCH LOOSE LIFTS AND COMPACTED TO BETWEEN 95% AND 100% OF STANDARD PROCTOR DENSITY AT A MOISTURE CONTENT AT OR ABOVE OPTIMUM.
 - D. DO NOT USE ANY SAND AS FILL UNDER THE PAVEMENT.
 - E. ANY IMPORTED FILL SHALL BE SIMILAR TO THE ON SITE SOILS AND APPROVED BY THE GEOTECHNICAL ENGINEER.
 - F. DENSITY AND MOISTURE CONTROL TESTS SHALL BE RUN PER EACH 5,000 SQUARE FEET.

PRELIMINARY
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SANGER TOWN CENTER SOUTH
NOT FOR CONSTRUCTION IN PROGRESS
FM 455 AND INDIAN LN
SANGER, TEXAS

Issued Date: 11/12/2024
Project No: 240117

Drawn By: RP
Checked By: IN
Designed By: IN

Issue Record

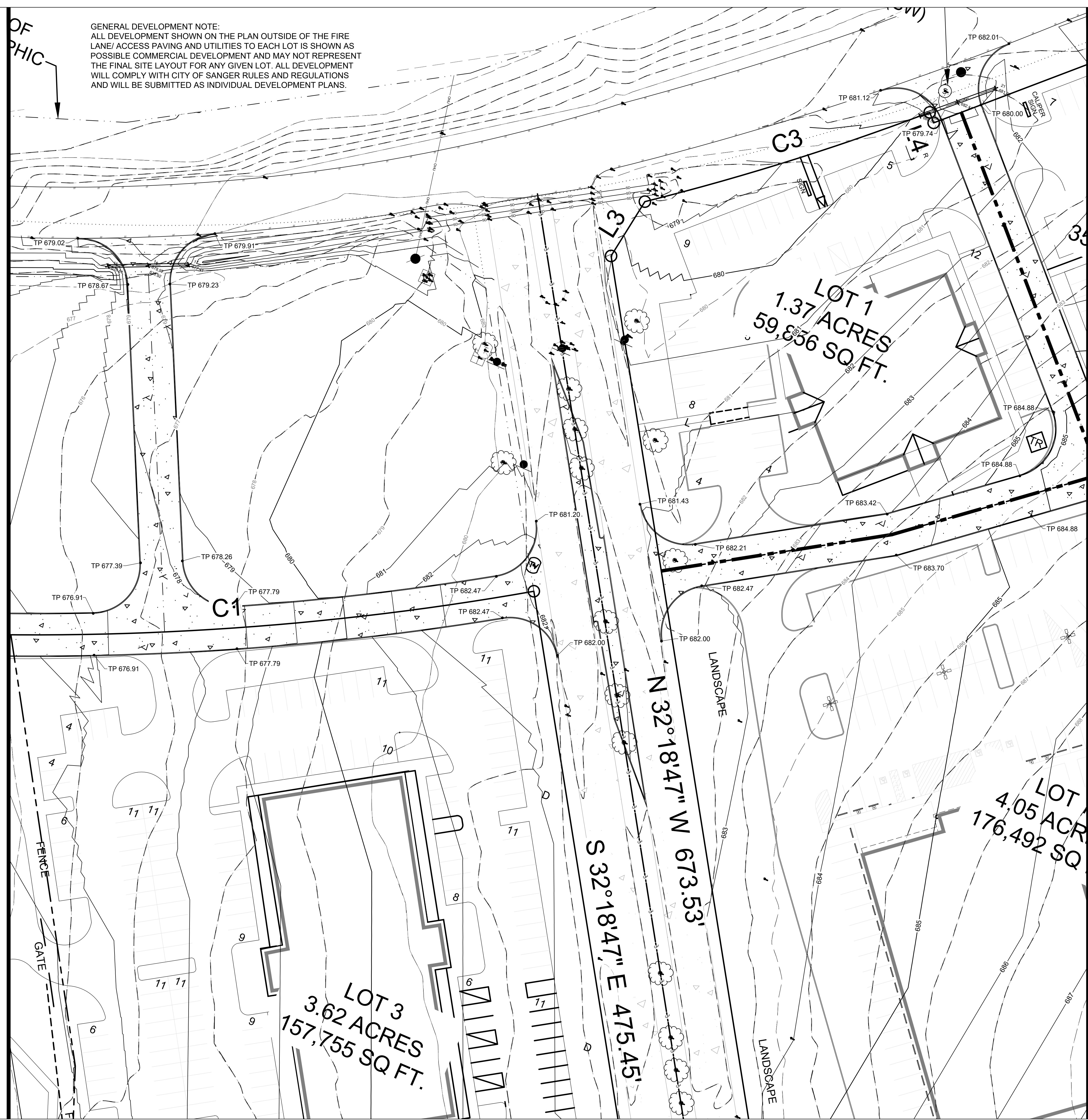
#	Description	Date

BENCHMARKS:

Benchmark	N	E	ELEV
TBM X-CUT	N7182983.6	N7182732.0	N7182983.6
	E:2376864.4	E:2376892.0	E:2376864.4
	ELEV:682.2'	ELEV:683.2'	ELEV:682.2'

MATCH LINE - SEE SHEET C3.01

MATCH LINE - SEE SHEET C3.03

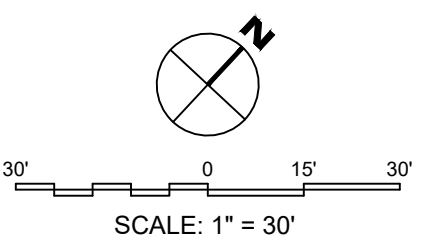




www.kje-us.com
Texas Firm F-12214

ENGINEERS & ENVIRONMENTAL

KJE
500 Moseley Rd
Cross Roads, TX 76277
Phone 940-387-0805
Fax 940-387-0830



GENERAL DEVELOPMENT NOTE:
ALL DEVELOPMENT SHOWN ON THE PLAN OUTSIDE OF THE FIRE LANE/ ACCESS PAVING AND UTILITIES TO EACH LOT IS SHOWN AS POSSIBLE COMMERCIAL DEVELOPMENT AND MAY NOT REPRESENT THE FINAL SITE LAYOUT FOR ANY GIVEN LOT. ALL DEVELOPMENT WILL COMPLY WITH CITY OF SANGER RULES AND REGULATIONS AND WILL BE SUBMITTED AS INDIVIDUAL DEVELOPMENT PLANS.

LEGEND - GRADING PLAN

- LOT BOUNDARY
- BUILDING
- DETENTION POND
- 580 --- PROPOSED MAJOR CONTOUR
- 583 --- PROPOSED MINOR CONTOUR
- TC --- TOP OF CURB
- TP --- TOP OF PAVING
- G --- GUTTER
- TS --- SIDEWALK
- TW --- TOP OF WALL
- BW --- BOTTOM OF WALL
- TG --- TOP OF GRATE
- FLOW ARROW

GRADING NOTES

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3. ACCESSIBLE ROUTES NOT TO EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE. HANDICAP PARKING AND ACCESS AISLES NOT TO EXCEED 2% SLOPE IN ANY DIRECTION.
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7. ALL SLOPES IN UNPAVED AREAS SHALL BE 4:1 OR FLATTER UNLESS OTHERWISE NOTED.
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SOIL PREPARATION NOTES

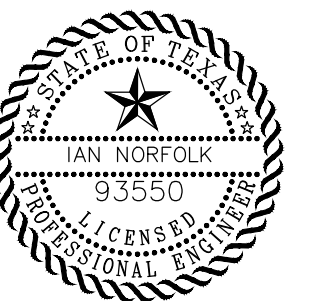
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2. THE SOIL BENEATH ALL PAVING SHALL BE TREATED AS FOLLOWS:
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 - B. PERFORM ANY CUT OPERATIONS AS NEEDED AND PROOF ROLL THE PAVEMENT AREAS WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK. ANY AREAS WHICH RUT EXCESSIVELY OR PUMP SHALL BE UNDERCUT AND REPLACED WITH COMPACTED FILL.
 - C. PERFORM ALL FILL OPERATIONS. ALL FILL SHALL BE INSTALLED IN MAXIMUM 8-INCH LOOSE LIFTS AND COMPACTED TO BETWEEN 95% AND 100% OF STANDARD PROCTOR DENSITY AT A MOISTURE CONTENT AT OR ABOVE OPTIMUM.
 - D. DO NOT USE ANY SAND AS FILL UNDER THE PAVEMENT.
 - E. ANY IMPORTED FILL SHALL BE SIMILAR TO THE ON SITE SOILS AND APPROVED BY THE GEOTECHNICAL ENGINEER.
 - F. DENSITY AND MOISTURE CONTROL TESTS SHALL BE RUN PER EACH 5,000 SQUARE FEET.

BENCHMARKS:

TBM X-CUT N:7182983.6 E:2376464.4 ELEV:682.2'	TBM X-CUT N:7182732.0 E:2376692.0 ELEV:683.2'	TBM X-CUT N:7182983.6 E:2376464.4 ELEV:682.2'
--------------------------------------------------------	--------------------------------------------------------	--------------------------------------------------------

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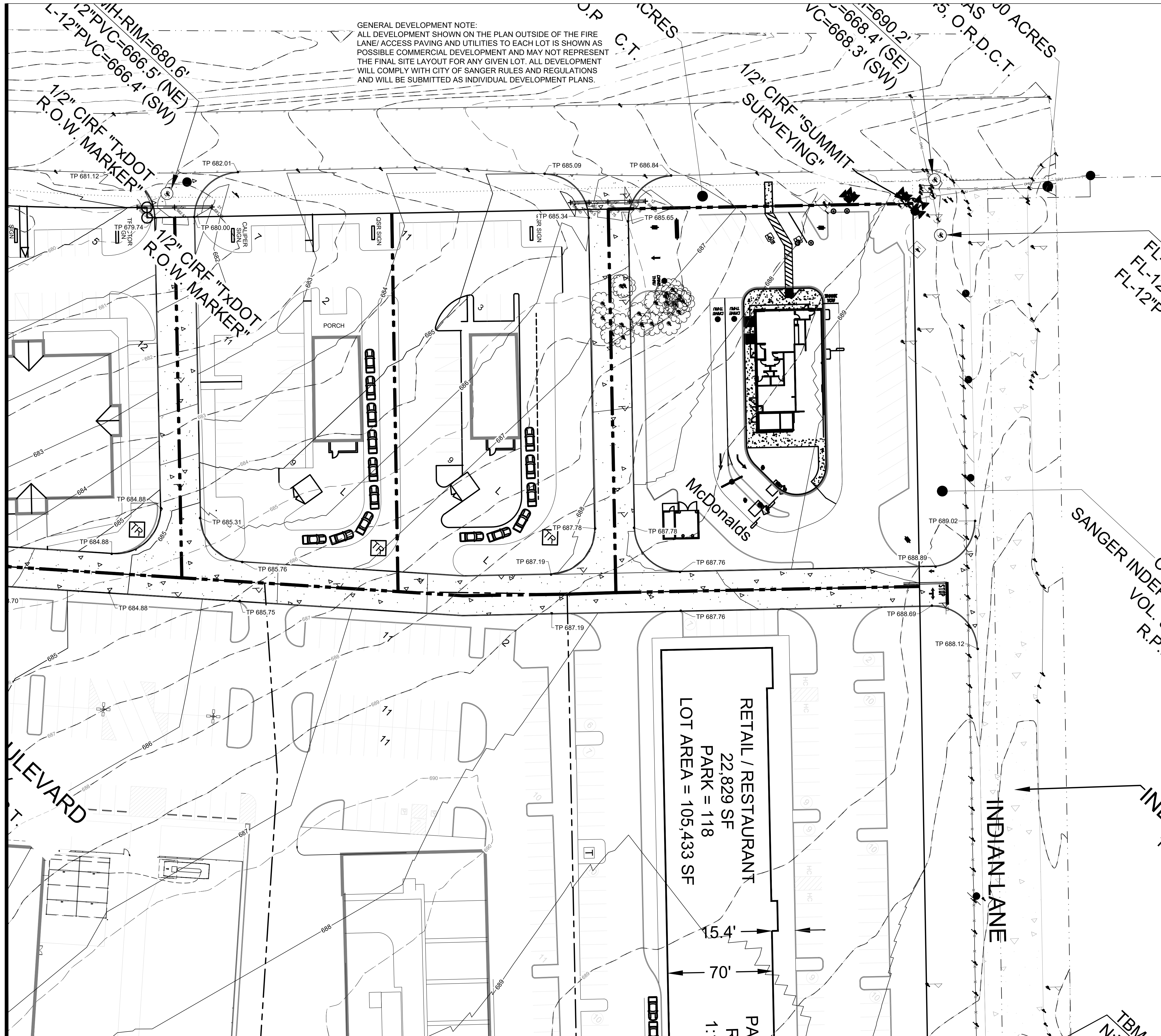
SANGER TOWN CENTER SOUTH
NOT FOR CONSTRUCTION IN PROGRESS
FM 455 AND INDIAN LN
SANGER, TEXAS

Issue Date: 11/12/2024
Project No: 240117

Drawn By: RP
Checked By: IN
Designed By: IN

Issue Record
Description Date

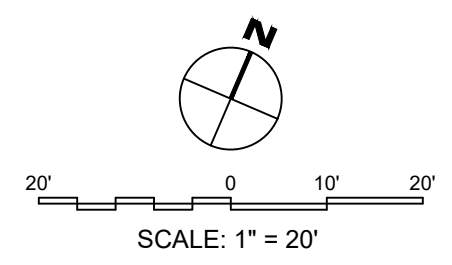
GRADING PLAN III



MATCH LINE - SEE SHEET C3.02

RETAIL / RESTAURANT
22,829 SF
PARK = 118
LOT AREA = 105,433 SF

15.4'
70'



LEGEND - GRADING PLAN

- LOT BOUNDARY
- BUILDING
- DETENTION POND
- 580 PROPOSED MAJOR CONTOUR
- 583 PROPOSED MINOR CONTOUR
- TOP OF CURB
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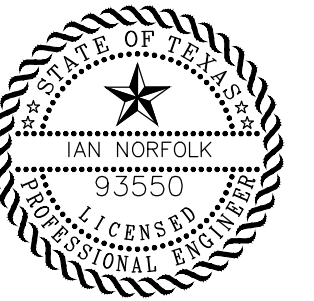
BENCHMARKS:

TBM X-CUT N:7182983.6 E:2376464.4 ELEV:682.2'	TBM X-CUT N:7182732.0 E:2376692.0 ELEV:683.2'	TBM X-CUT N:7182983.6 E:2376464.4 ELEV:682.2'
--------------------------------------------------------	--------------------------------------------------------	--------------------------------------------------------

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Detention pond slopes look very steep and would impede maintenance to control weeds and discourage woody growth to observe ordinance § 10.106(d)(10)(H)

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**SANGER TOWN CENTER SOUTH
NOT FOR CONSTRUCTION
IN PROGRESS**

FM 455 AND INDIAN LN
SANGER, TEXAS

Issued Date: 11/12/2024
Project No: 240117

Drawn By: RP
Checked By: IN
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Issue Record

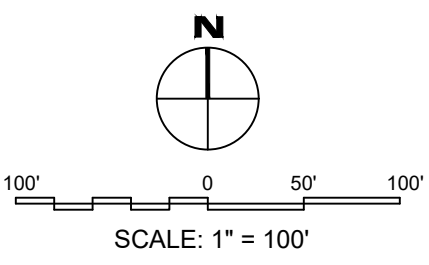
#	Description	Date
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DETENTION POND
GRADING

EXISTING DRAINAGE AREAS											COMMENTS		
AREA	C	CF	C'CF	Tc	I	Q	CF	C'CF	Tc	I		Q	
(acres)				(min)	(in/hr)	(cfs)			(min)	(in/hr)		(cfs)	
EX	27.35	0.30	1.00	0.30	10	5.25	43.05	100	0.30	10	9.67	79.98	

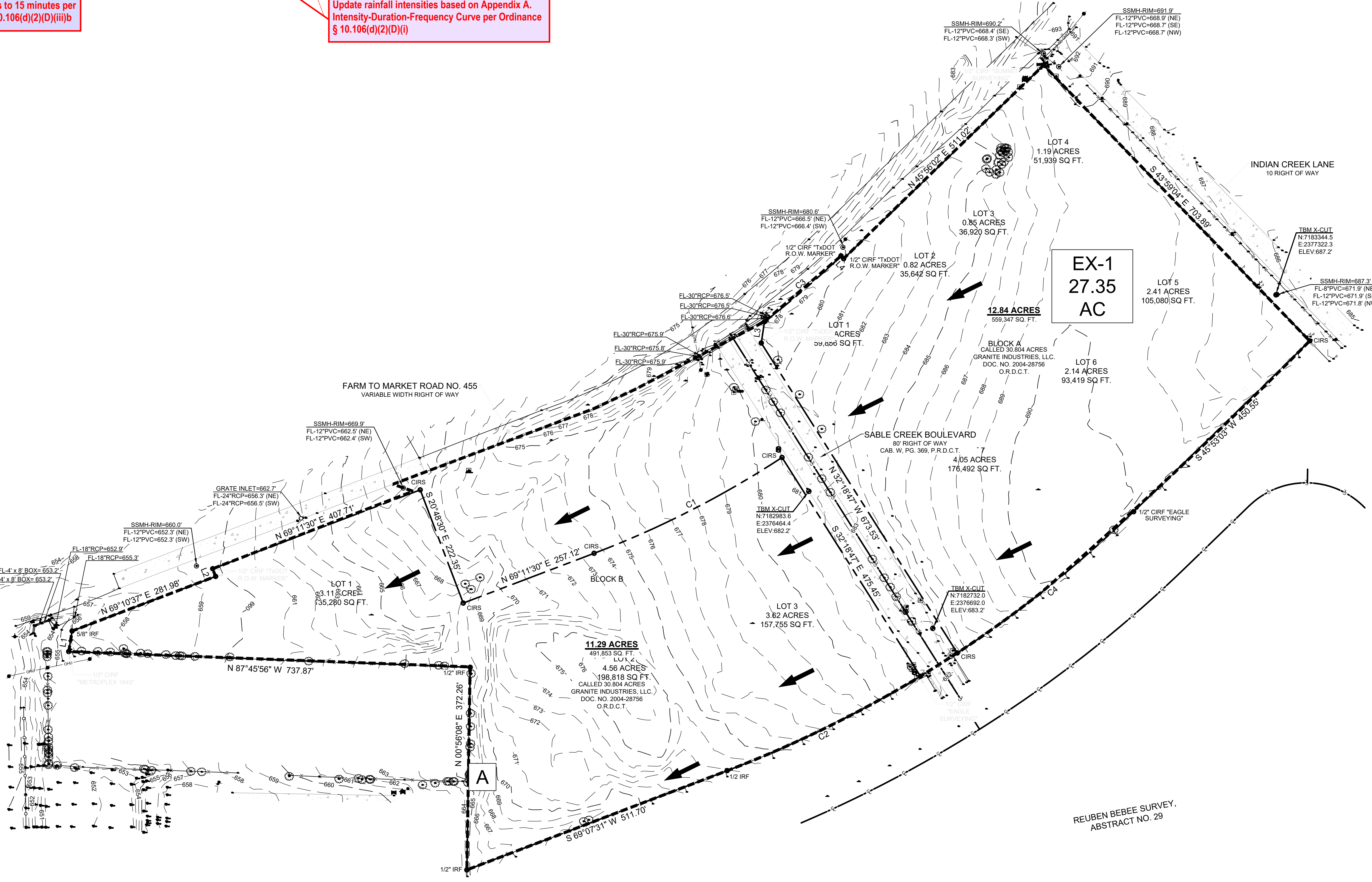
Please revise time of concentration for existing drainage areas to 15 minutes per Ordinance § 10.106(d)(2)(D)(iii)b

Update rainfall intensities based on Appendix A. Intensity-Duration-Frequency Curve per Ordinance § 10.106(d)(2)(D)(i)



LEGEND - EXISTING DRAINAGE AREA MAP

- SITE BOUNDARY
- PROPOSED EASEMENT
- BUILDING SETBACK
- DRAINAGE AREA DIVIDE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- FLOW ARROW
- XX AREA DESIGNATOR
- XX AC AREA IN ACRES



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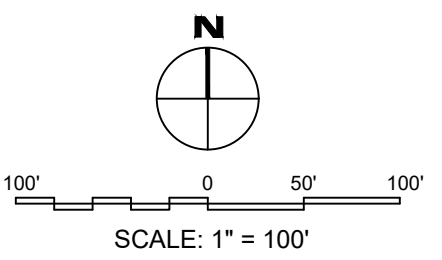
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Issue Record		
#	Description	Date

PRE DRAINAGE AREA MAP

BENCHMARKS:

TBM X-CUT N 7182983.6 E 2376464.4 ELEV 682.2'	TBM X-CUT N 7182732.0 E 2376692.0 ELEV 683.2'	TBM X-CUT N 7182983.6 E 2376464.4 ELEV 682.2'
--------------------------------------------------------	--------------------------------------------------------	--------------------------------------------------------



BASIN	AREA (acres)	PROPOSED DRAINAGE AREAS											COMMENTS
		C	CF	C*CF	Tc	I	Q	CF	C*CF	Tc	I	Q	
		1.00			10	50	50	1.25			10	100	
		(min)	(in/hr)	(cfs)	(min)	(in/hr)	(cfs)	(min)	(in/hr)	(cfs)			
A-1	3.08	0.90	1.00	0.90	10	8.71	24.14	1.25	1.00	10	9.67	26.81	DRAINS TO STUB-OUT
A-2	1.06	0.90	1.00	0.90	10	8.71	8.31	1.25	1.00	10	9.67	9.23	DRAINS TO STUB-OUT
A-3	1.01	0.90	1.00	0.90	10	8.71	7.92	1.25	1.00	10	9.67	8.79	DRAINS TO STUB-OUT
A-4	1.11	0.90	1.00	0.90	10	8.71	8.70	1.25	1.00	10	9.67	9.66	DRAINS TO STUB-OUT
A-5	1.37	0.90	1.00	0.90	10	8.71	10.74	1.25	1.00	10	9.67	11.92	DRAINS TO STUB-OUT
A-6	0.82	0.90	1.00	0.90	10	8.71	6.43	1.25	1.00	10	9.67	7.14	DRAINS TO STUB-OUT
A-7	0.85	0.90	1.00	0.90	10	8.71	6.66	1.25	1.00	10	9.67	7.40	DRAINS TO STUB-OUT
A-8	1.19	0.90	1.00	0.90	10	8.71	9.33	1.25	1.00	10	9.67	10.36	DRAINS TO STUB-OUT
A-9	4.59	0.90	1.00	0.90	10	8.71	35.98	1.25	1.00	10	9.67	39.95	DRAINS TO STUB-OUT
A-10.1	2.64	0.90	1.00	0.90	10	8.71	20.69	1.25	1.00	10	9.67	22.98	DRAINS TO STUB-OUT
A-10.2	0.98	0.90	1.00	0.90	10	8.71	7.68	1.25	1.00	10	9.67	8.53	DRAINS TO STUB-OUT
A-11	4.16	0.90	1.00	0.90	10	8.71	32.61	1.25	1.00	10	9.67	36.20	DRAINS TO STUB-OUT
A-12	2.06	0.90	1.00	0.90	10	8.71	16.15	1.25	1.00	10	9.67	17.93	DRAINS TO STUB-OUT
A-13	2.40	0.90	1.00	0.90	10	8.71	18.81	1.25	1.00	10	9.67	20.89	DRAINS TO STUB-OUT
A-4+A-10.1	3.75	0.90	1.00	0.90	10	8.71	29.40	1.25	1.00	10	9.67	32.64	
POND	27.35	0.30	1.00	0.30	10	8.71	71.47	1.25	0.38	10	9.67	79.98	

Please use runoff coefficients from the City of Sanger Ordinance § 10.106(d)(2)(D)(i)

Update rainfall intensities based on Appendix A. Intensity-Duration-Frequency Curve per Ordinance § 10.106(d)(2)(D)(i)

How is the drainage crossing into Sable Creek Boulevard being handled?

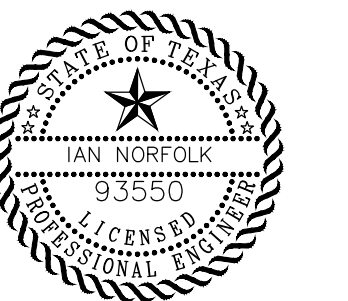
LEGEND - PROPOSED DRAINAGE AREA MAP

- SITE BOUNDARY
- PROPOSED EASEMENT
- BUILDING SETBACK
- DRAINAGE AREA DIVIDE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- FLOW ARROW
- XX AC AREA DESIGNATOR
- XX AC AREA IN ACRES

STUBOUT NOTE:
ALL DRAINAGE FOR INTERNAL LOTS WILL BE COLLECTED BY THE MAIN STORM TRUNK LINE AND STUB OUTS TO EACH LOT. EACH STUB OUT IS SIZED FOR FULLY DEVELOPED FLOW.

STUBOUTS ARE EXTENDED INTO EACH LOT ONLY TO THE EXTENT OF NOT IMPACTING PROPOSED UTILITES OR PAVING. EXTENSIONS INTO THE LOTS AFTER THAT POINT ARE FOR THE PURPOSES OF FIELD LOCATION ONLY WITH WYE INLETS. WYE INLETS ARE NO INTENDED TO COLLECT UNDEVELOPED FLOWS.

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BENCHMARKS:

TBM X-CUT N:7182983.6 E:2376464.4 ELEV:682.2	TBM X-CUT N:7182732.0 E:2376692.0 ELEV:683.2	TBM X-CUT N:7182983.6 E:2376464.4 ELEV:682.2
-------------------------------------------------------	-------------------------------------------------------	-------------------------------------------------------

DA Name	C		A	Tc	i ₁₀₀	Q (cfs)	
	EX.	PR.	Area (ac)	(min)	(in/hr)	EX. 100-yr	PR. 100-yr
TOTAL	0.3	0.9	27.3	10	9.67	79.83	239.49

DA Name	C		A	Tc	i ₅₀	Q (cfs)	
	EX.	PR.	Area (ac)	(min)	(in/hr)	EX. 50-yr	PR. 50-yr
TOTAL	0.3	0.9	27.3	10	8.71	71.91	215.72

DA Name	C		A	Tc	i ₂₅	Q (cfs)	
	EX.	PR.	Area (ac)	(min)	(in/hr)	EX. 25-yr	PR. 25-yr
TOTAL	0.3	0.9	27.3	10	7.79	64.31	192.93

DA Name	C		A	Tc	i ₁₀	Q (cfs)	
	EX.	PR.	Area (ac)	(min)	(in/hr)	EX. 10-yr	PR. 10-yr
TOTAL	0.3	0.9	27.3	10	6.61	54.57	163.71

DA Name	C		A	Tc	i ₂	Q (cfs)	
	EX.	PR.	Area (ac)	(min)	(in/hr)	EX. 10-yr	PR. 10-yr
TOTAL	0.3	0.9	27.3	10	4.69	38.72	116.16

Update intensities and runoff coefficients to make City of Sanger Drainage and Storm sewer improvements ordinances (§ 10.106(d) Drainage and Storm Sewer Improvements)

Ultimate Run-Off Volume - Frequency: 100 years					
Area: 27.3 acres C _{factor} : 0.9					
D (min)	i (in/hr)	Q _{PR} (cfs)	V _r (cu-ft)	Q _{allowable} (cfs)	V _s (cu-ft)
5	12.10	299.68	89902.61	79.83	65954
10	9.67	239.49	143695.58	79.83	95798
15	7.98	197.64	177873.43	79.83	106026
20	7.16	177.33	212794.28	79.83	116998
30	5.51	136.46	245634.74	79.83	101941

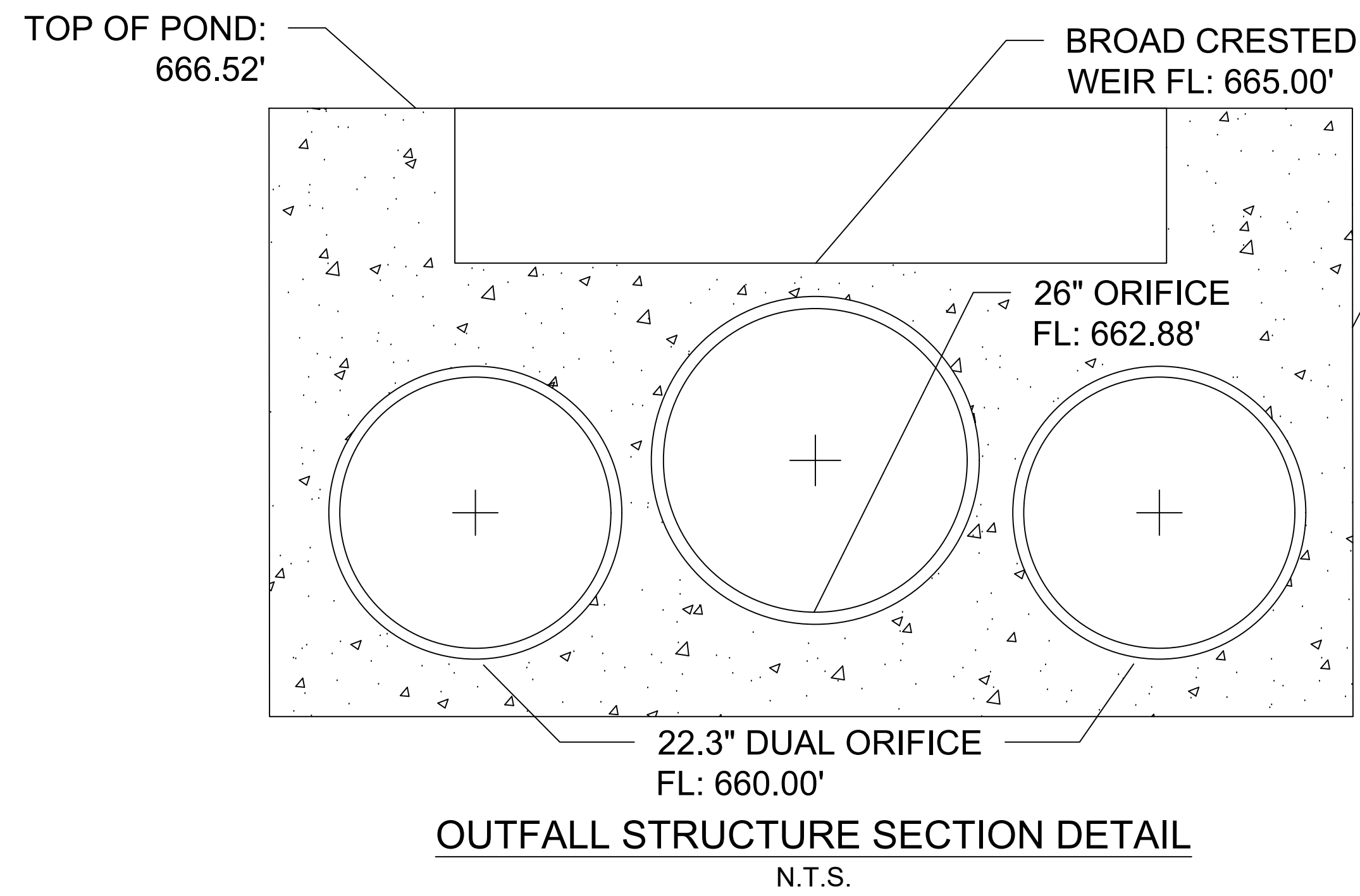
Ultimate Run-Off Volume - Frequency: 50 years					
Area: 27.3 acres C _{factor} : 0.9					
D (min)	i (in/hr)	Q _{PR} (cfs)	V _r (cu-ft)	Q _{allowable} (cfs)	V _s (cu-ft)
5	10.80	267.48	80243.65	71.91	58672
10	8.71	215.72	129430.04	71.91	86287
15	7.17	177.58	159818.61	71.91	95104
20	6.43	159.17	190999.71	71.91	104713
30	4.94	122.35	220224.25	71.91	90794

Ultimate Run-Off Volume - Frequency: 25 years					
Area: 27.3 acres C _{factor} : 0.9					
D (min)	i (in/hr)	Q _{PR} (cfs)	V _r (cu-ft)	Q _{allowable} (cfs)	V _s (cu-ft)
5	9.71	240.48	72144.99	64.31	52852
10	7.79	192.93	115758.90	64.31	77173
15	6.43	159.25	143324.08	64.31	85445
20	5.77	142.82	171384.60	64.31	94212
30	4.44	109.96	197934.35	64.31	82175

Ultimate Run-Off Volume - Frequency: 10 years					
Area: 27.3 acres C _{factor} : 0.9					
D (min)	i (in/hr)	Q _{PR} (cfs)	V _r (cu-ft)	Q _{allowable} (cfs)	V _s (cu-ft)
5	8.24	204.08	61222.94	54.57	44852
10	6.61	163.71	98224.18	54.57	65483
15	5.46	135.23	121702.88	54.57	72591
20	4.90	121.36	145627.37	54.57	80145
30	3.78	93.62	168511.67	54.57	70287

Ultimate Run-Off Volume - Frequency: 5 years					
Area: 27.3 acres C _{factor} : 0.9					
D (min)	i (in/hr)	Q _{PR} (cfs)	V _r (cu-ft)	Q _{allowable} (cfs)	V _s (cu-ft)
5	5.86	145.13	43539.61	38.72	31924
10	4.69	116.16	69693.10	38.72	46462
15	3.89	96.34	86707.73	38.72	51861
20	3.49	86.52	103821.42	38.72	57359
30	2.70	66.87	120365.48	38.72	50672

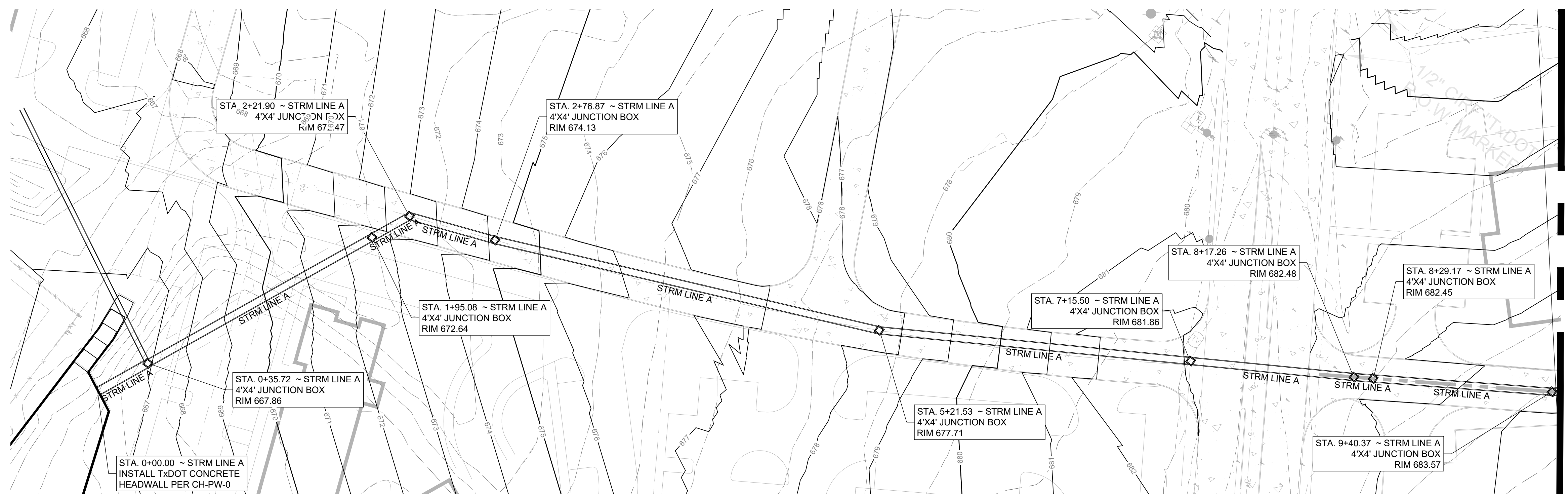
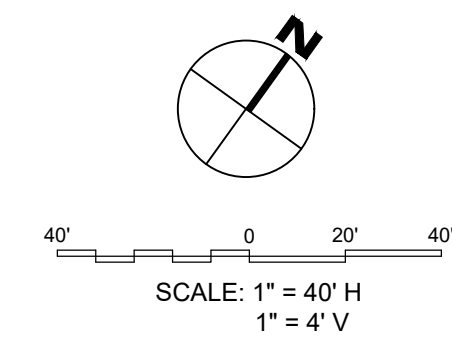
Sanger Town Center South Outfall Structure Calculations																
Elevation (ft)	Depth (ft)	Pond Volume (ft ³)	Dual Orifice - Q=0.6(A)(2gh) ^{0.5} D(in)= 22.3			Orifice - Q=0.6(A)(2gh) ^{0.5} D(in)= 26			Broad Crest Weir - Q=2.68LH ^{1.5} L(ft)= 2.6			Water Quality Discharge 24hr (cfs)	Proposed Flow with detention (cfs)	Allowable Flow (cfs)	Compare Flow (cfs)	Storm Event (yr)
			FL= 660.00 ft			FL= 662.88 ft			FL= 665.00 ft							
			Orifice Dia. (in)	Head (ft)	Outflow Q (cfs)	Orifice Dia. (in)	Head (ft)	Outflow Q (cfs)	Length (ft)	Head (ft)	Outflow Q (cfs)					
660.00	0.00	0.00	22.28	0.00	0.00	25.50	0.00	0.00	2.61	0.00	0.00	0.00	0.00			
661.00	1.00	12.639	22.28	1.00	6.98	25.50	0.00	0.00	2.61	0.00	0.00	0.00	6.98			
662.00	2.00	31.723	22.28	2.00	26.99	25.50	0.00	0.00	2.61	0.00	0.00	0.00	26.99			
663.00	3.00	54.160	22.28	3.00	37.53	25.50	0.13	0.00	2.61	0.00	0.00	0.00	37.53			
663.13	3.13	57.359	22.28	3.13	38.70	25.50	0.26	0.00	2.61	0.00	0.00	0.00	38.70	38.72	-0.01	2
664.00	4.00	78.389	22.28	4.00	45.70	25.50	1.13	4.27	2.61	0.00	0.00	0.00	45.70	54.57	-2.16	10
664.07	4.07	80.145	22.28	4.07	46.21	25.50	1.19	6.20	2.61	0.00	0.00	0.00	46.21	64.31	-0.01	25
664.63	4.63	94.212	22.28	4.63	50.13	25.50	1.75	14.17	2.61	0.00	0.00	0.00	50.13	71.91	-1.06	50
665.00	5.00	103.680	22.28	5.00	52.61	25.50	2.13	17.60	2.61	0.00	0.00	0.00	52.61	79.83	-0.01	100
665.04	5.04	104.713	22.28	5.04	52.87	25.50	2.16	17.93	2.61	0.04	0.06	0.06	52.87	79.83	-0.01	100
665.51	5.51	116.998	22.28	5.51	55.82	25.50	2.64	21.43	2.61	0.51	2.57	2.57	55.82	79.83	-0.01	100
666.00	6.00	129.657	22.28	6.00	58.72	25.50	3.13	24.52	2.61	1.00	6.99	6.99	58.72	79.83	-0.01	100



See H&H Comment #14 - please provide more information

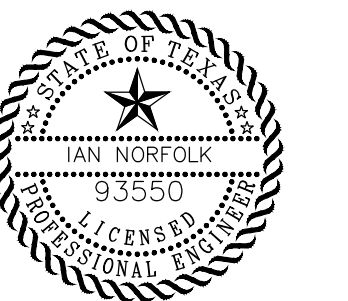
CONCRETE COMBINATION BOX TO BE DESIGNED PER CITY OF SANGER STANDARD FOR MINIMUM REINFORCEMENTS FOR SIDEWALKS

SANGER TOWN CENTER SOUTH																																	
RUNOFF COLLECTION POINT (Inlet or Manhole)								INCREMENTAL DRAINAGE											HYDRAULIC GRADE											INLET TOP ELEVATION			
LINE/LAT	AREA	JUNCTIONS	AREA	UPSTREAM STATION	DOWNSTREAM STATION	DISTANCE BETWEEN COLLECTION POINTS	DRAINAGE AREA "A" (acres)	RUNOFF COEFF. C _c	INCREMENTAL "CA"	INCOMING CA FROM WYE OR MH (LINK TO LATERALS)	ACCUMULATED "CA"	TIME AT UPSTREAM STATION (minutes)	DESIGN STORM FREQUENCY (yrs.)	INTENSITY "I" (in/hr)	STORM WATER RUNOFF "Q" (c.f.s.)	SLOPE OF HYDRAULIC GRADIENT "S"	# BARRELS	SELECTED STORM SEWER SIZE SPAN FOR RCB	RISE ONLY FOR RCB (feet)	VELOCITY IN SEWER BETWEEN COLLECTION POINTS "V" (feet)	STANDARD LOSS "K"	MINOR LOSS COEFF. "K"	VELOCITY HEAD (V ² /2g) (feet)	FLOW TIME IN SEWER DISTANCE V x 60 (minutes)	DS HYD. GRADE	FRICITION LOSSES	HYD. GRADE AFTER FRICTION LOSS	JUNCTION LOSSES	MINOR LOSSES	HYD. GRADE AFTER HYD. JUMP	INLET TOP ELEVATION		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	
LINE A		INLET		A-13	1515.13	1455.01	60.12	2.40	0.90	2.16		2.16	10.00	100.00	9.67	20.89	0.00	1.00	30.00				4.26	1.50	0.28	0.24	676.32	0.13	676.46	0.00	0.42	676.88	688.32
		BEND 45°			1455.01	1389.35	65.66				2.16	10.24	100.00	9.59	20.71	0.00	1.00	30.00				4.22	0.35	0.28	0.26	676.08	0.14	676.23	0.00	0.10	676.32	688.32	
		MH 0°		A-8	1389.35	1219.23	170.12	1.19	0.90	1.07		3.23	10.49	100.00	9.49	30.67	0.00	1.00	36.00				4.34	0.50	0.29	0.65	675.63	0.31	675.94	0.00	0.15	676.08	688.00
		MH 0°		A-7	1219.23	1146.95	72.28	0.85	0.90	0.77		4.00	11.15	100.00	9.26	37.01	0.00	1.00	36.00				5.24	0.50	0.43	0.23	675.23	0.19	675.42	0.00	0.21	675.63	687.03
		MH 0°		A-12	1146.95	1091.24	55.71	2.06	0.90	1.85		5.85	11.38	100.00	9.18	53.70	0.00	1.00	48.00				4.27	0.50	0.28	0.22	675.02	0.07	675.09	0.00	0.14	675.23	686.49
		MH 0°		A-6	1091.24	940.48	150.76	0.82	0.90	0.74		6.59	11.60	100.00	9.10	59.96	0.00	1.00	48.00				4.77	0.50	0.35	0.53	674.62	0.22	674.84	0.00	0.18	675.02	686.04
		BEND 30°			940.48	829.27	111.21				6.59	12.12	100.00	8.91	58.73	0.00	1.00	48.00				4.67	0.25	0.34	0.40	674.38	0.16	674.54	0.00	0.08	674.62	684.88	
		WYE 45°		A-11	829.27	817.36	11.91	4.16	0.90	3.74		10.33	12.52	100.00	8.77	90.65	0.00	1.00	48.00				7.21		0.81	0.03	674.34	0.04	674.38	0.00	0.00	674.38	682.75
		MH 0°		A-5	817.36	715.62	101.74	1.37	0.90	1.23		11.57	12.55	100.00	8.76	101.35	0.00	1.00	48.00				8.07	0.50	1.01	0.21	673.40	0.43	673.83	0.00	0.51	674.34	682.52
		MH 0°			715.62	521.53	194.09				11.57	12.76	100.00	8.69	100.48	0.00	1.00	48.00				8.00	0.50	0.99	0.40	672.09	0.81	672.90	0.00	0.50	673.40	680.41	
		MH 0°		A-4+A-10.1	521.53	276.87	244.66	3.75	0.90	3.38		14.94	13.16	100.00	8.54	127.66	0.01	1.00	48.00				10.16	0.50	1.60	0.40	669.64	1.65	671.29	0.00	0.80	672.09	677.61
		MH 0°		A-3	276.87	221.90	54.97	1.01	0.90	0.91		15.85	13.56	100.00	8.40	0.01	1.00	48.00				10.60	0.50	1.74	0.09	668.37	0.40	668.77	0.00	0.87	669.64	674.13	
		MH 45°			221.90	195.08	26.82				15.85	13.65	100.00	8.37	132.67	0.01	1.00	48.00				10.56	0.50	1.73	0.04	667.31	0.19	667.50	0.00	0.87	668.37	672.48	
		WYE 60°		A-2	195.08	35.72	159.36	1.06	0.90	0.95		16.80	13.69	100.00	8.36	140.40	0.01	1.00	48.00				11.17		1.94	0.24	666.01	1.30	667.31	0.00	0.00	667.31	669.46
		MH 0°		A-1	35.72		35.72	3.08	0.90	2.77		19.58	13.93	100.00	8.27	161.91	0.01	1.															



MATCHLINE ~ STA 9+43 SEE SHEET C4.04

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SANGER TOWN CENTER SOUTH
NOT FOR CONSTRUCTION
IN PROGRESS
FM 455 AND INDIAN LN
SANGER, TEXAS

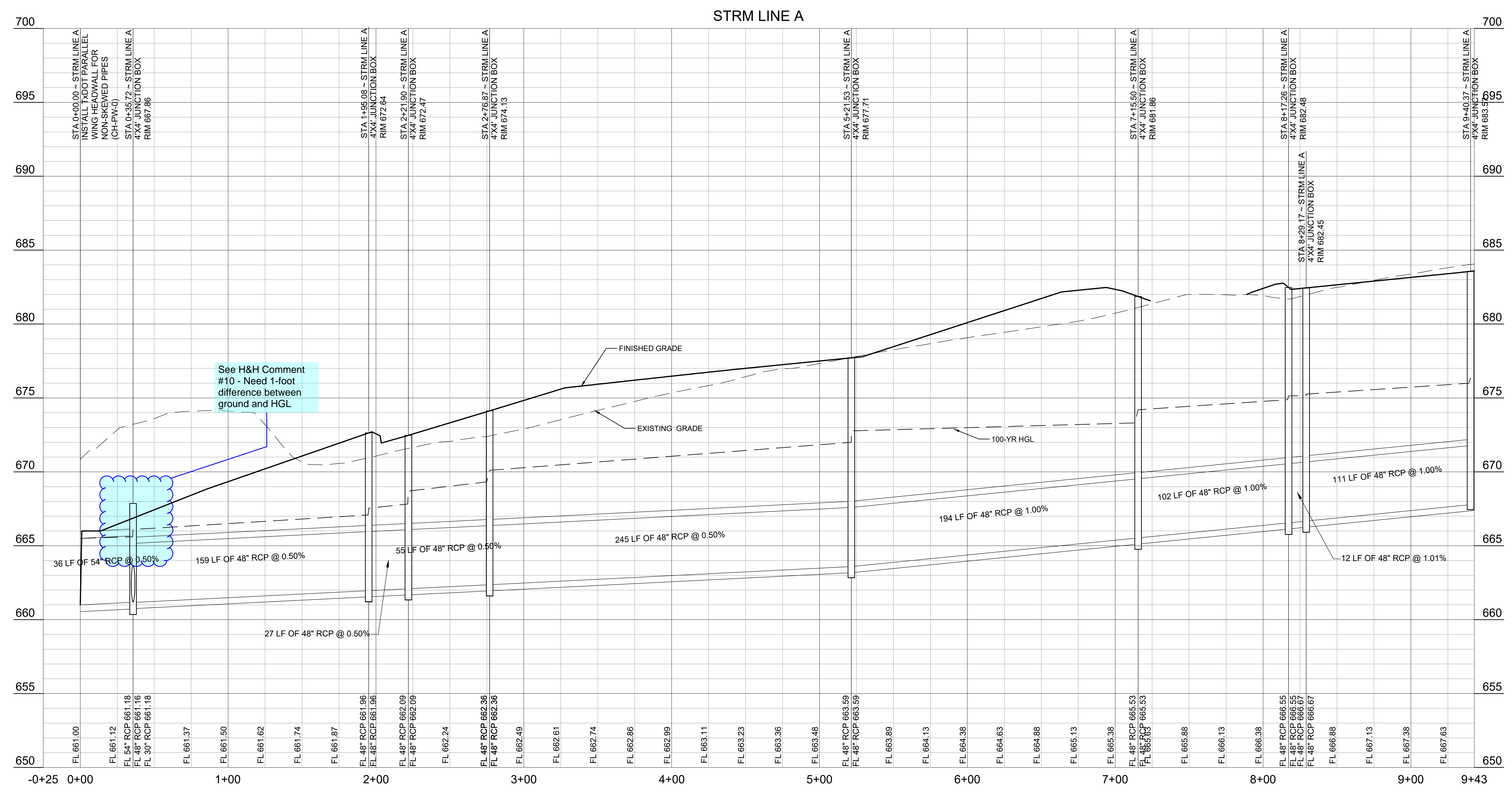
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Project No: 240117

Drawn By: RP
Checked By: IN
Designed By: IN

Issue Record

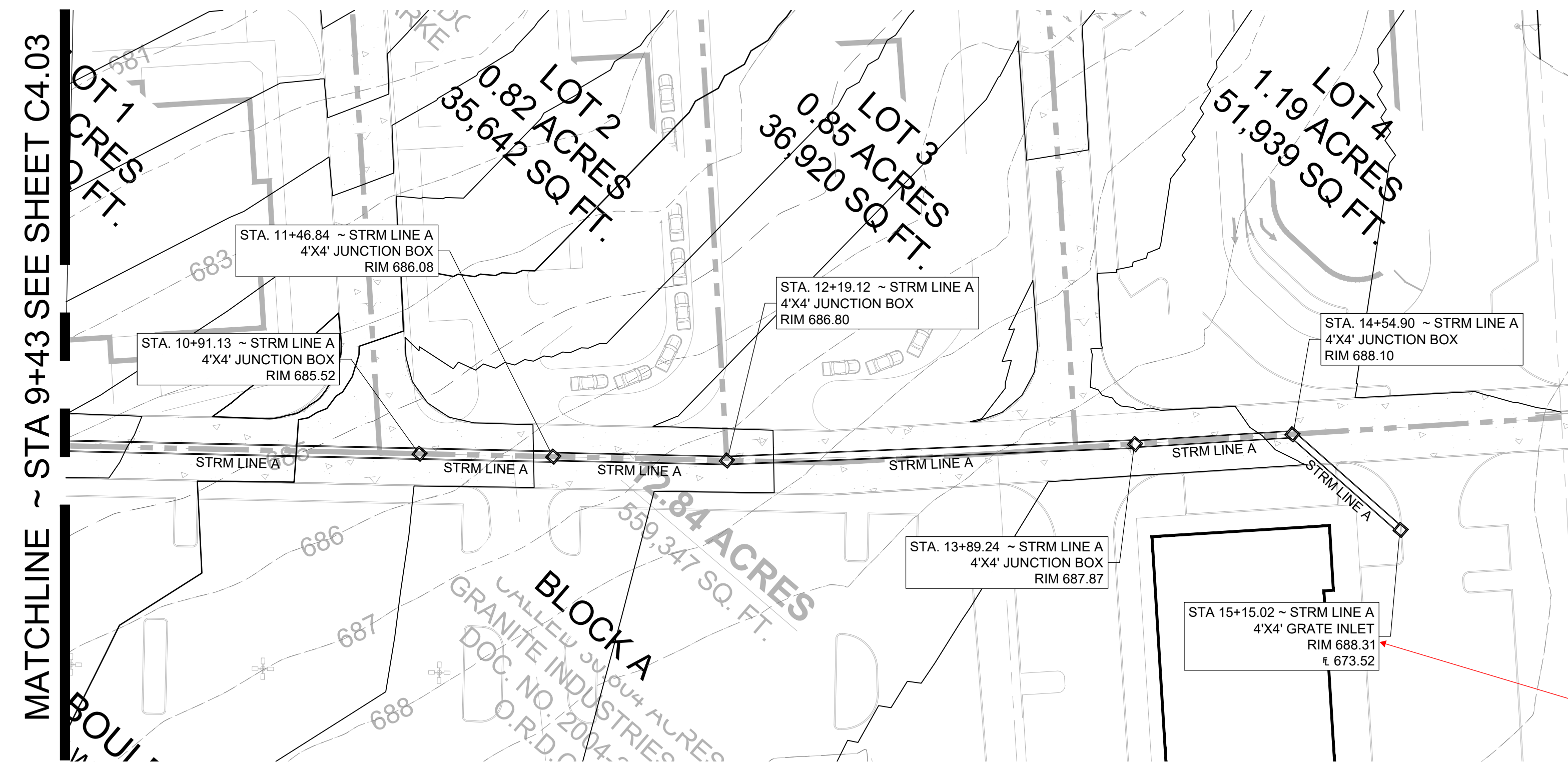
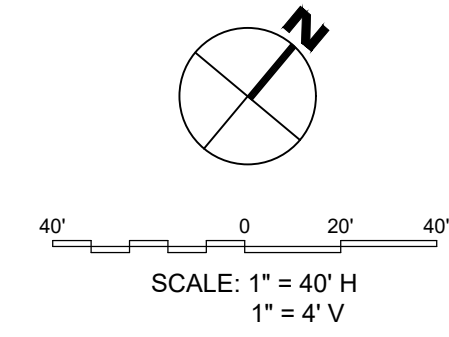
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STORM LINE A PLAN & PROFILE STA. 0+00 TO STA. 9+43

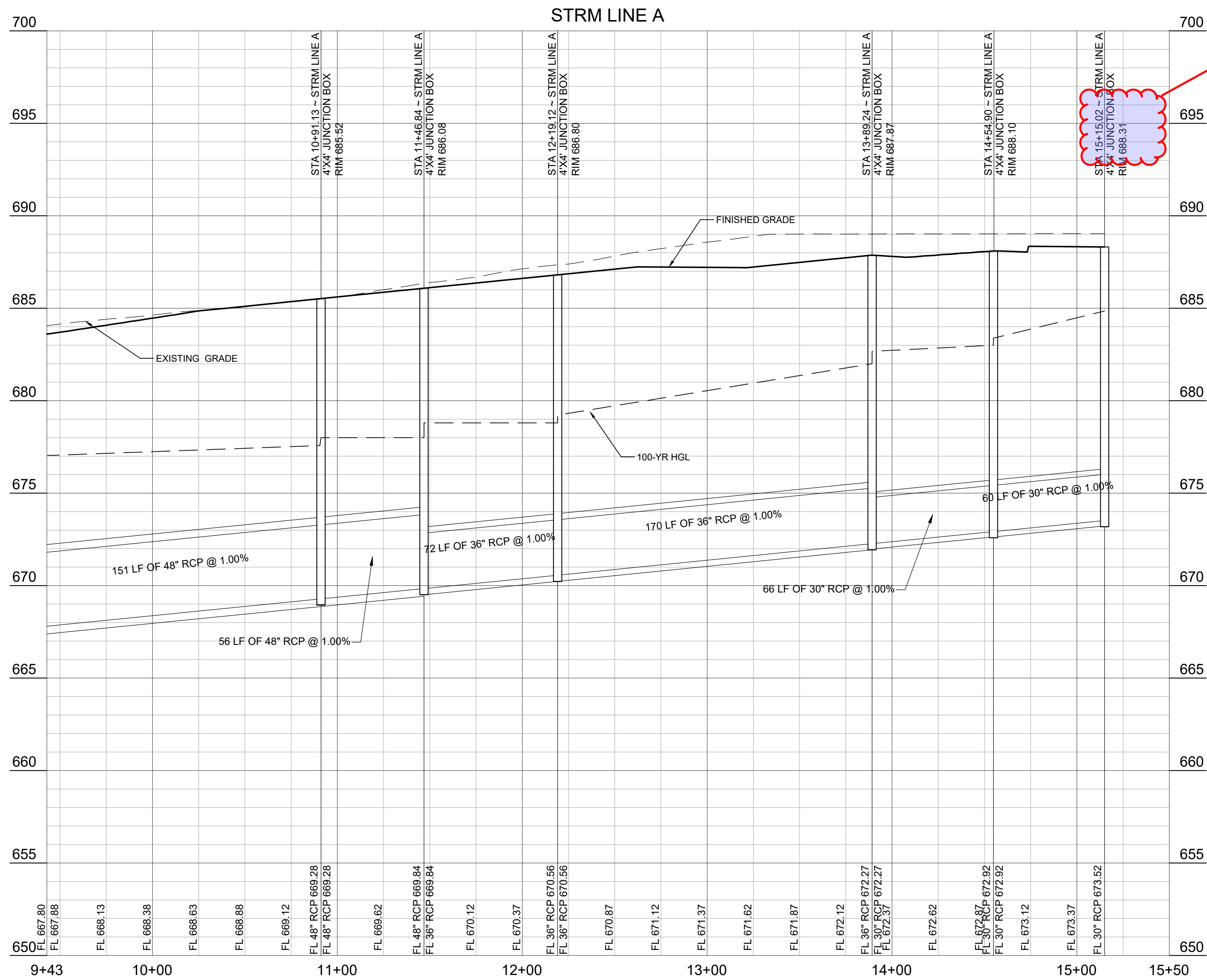


BENCHMARKS:

TBM X-CUT N: 7162293.6 E: 2376464.4 ELEV: 682.2'	TBM X-CUT N: 7162732.0 E: 2376692.0 ELEV: 683.2'	TBM X-CUT N: 7162983.6 E: 2376464.4 ELEV: 682.2'
-----------------------------------------------------------	-----------------------------------------------------------	-----------------------------------------------------------

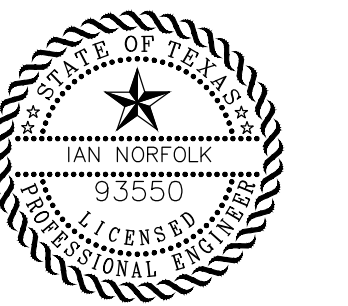


Is this a grate inlet or junction box. Please verify discrepancy



BENCHMARKS:

TBM X-CUT N:7182983.6 E:2376464.4 ELEV:682.2'	TBM X-CUT N:7182732.0 E:2376692.0 ELEV:683.2'	TBM X-CUT N:7182983.6 E:2376464.4 ELEV:682.2'
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SANGER TOWN CENTER SOUTH
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SANGER, TEXAS

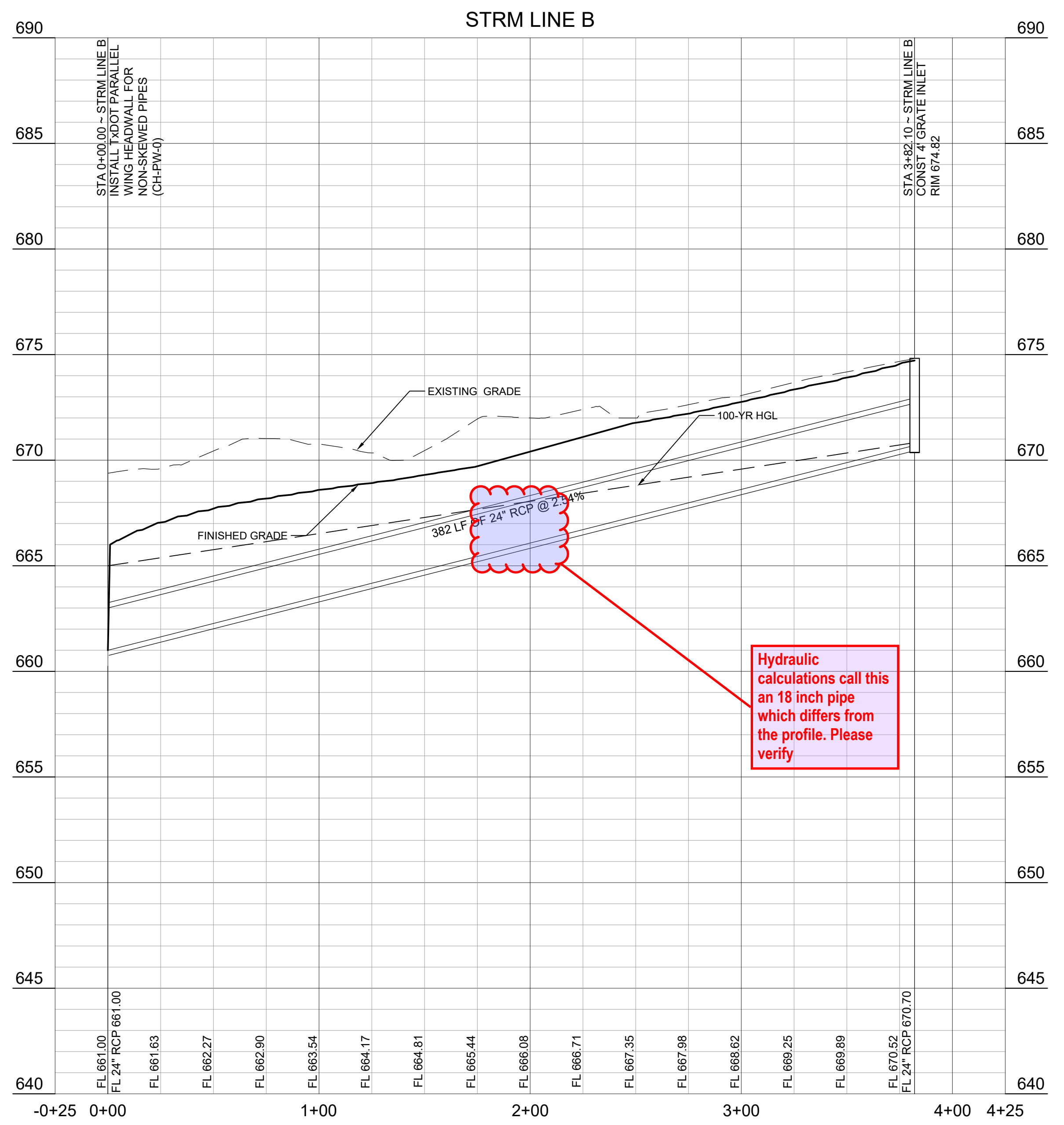
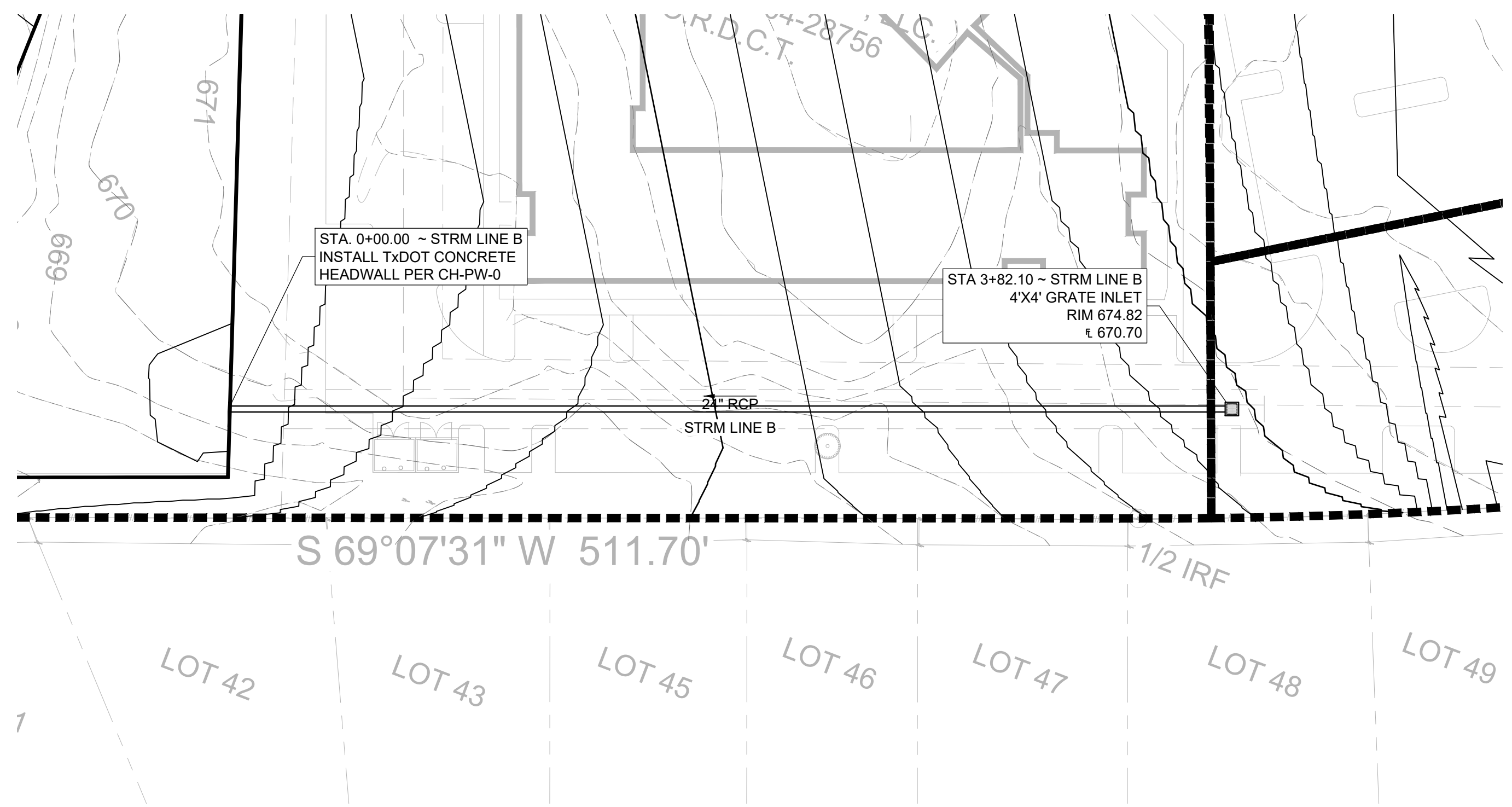
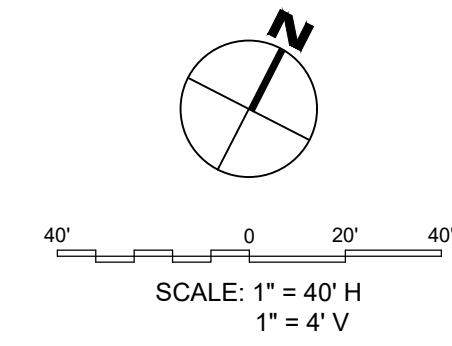
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Project No: 240117

Drawn By: RP
Checked By: IN
Designed By: IN

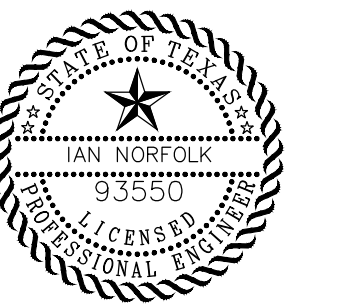
Issue Record

#	Description	Date

STORM LINE A PLAN
& PROFILE STA.
9+43 TO END



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SANGER TOWN CENTER SOUTH
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 SANGER, TEXAS

Issued Date: 11/12/2024
Project No: 240117

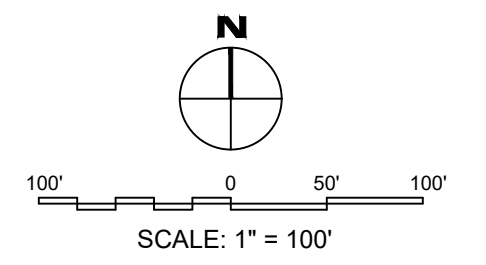
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Checked By: IN
Designed By: IN

Issue Record		
#	Description	Date

STORM LINE B PLAN & PROFILE STA. 0+00 TO STA. 3+82

BENCHMARKS:

TBM X-CUT	TBM X-CUT	TBM X-CUT
N: 7162983.6	N: 7162732.0	N: 7162983.6
E: 2376464.4	E: 2376692.0	E: 2376464.4
ELEV: 682.2'	ELEV: 683.2'	ELEV: 682.2'



LEGEND - UTILITY PLAN

- SITE BOUNDARY
- PROPOSED EASEMENT
- BUILDING SETBACK
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE
- PROPOSED WATER METER
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED CLEANOUT

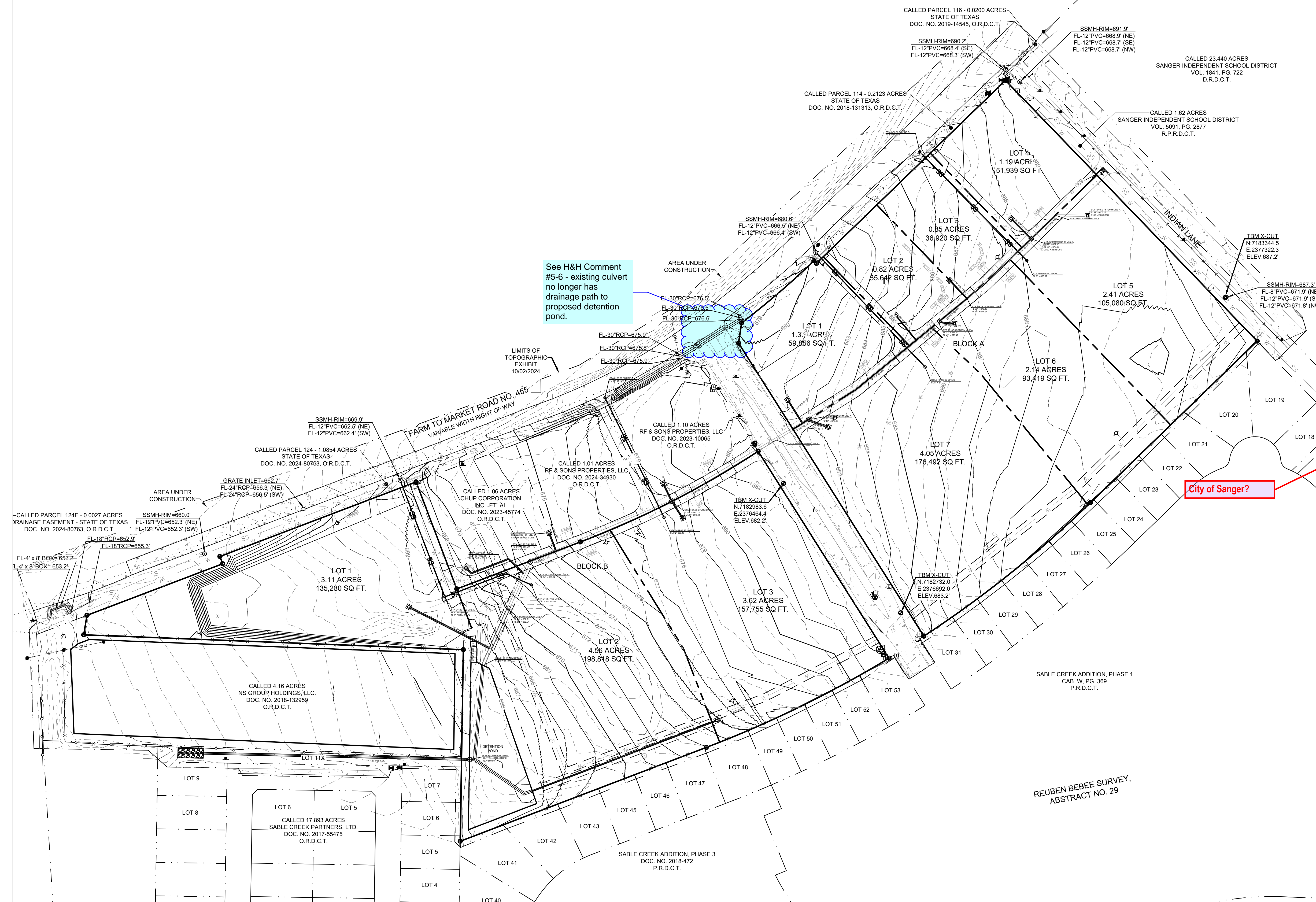
SITE UTILITY NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PRIVATE OR PUBLIC, PRIOR TO EXCAVATING. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON THE INFORMATION AND DATA FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPEARANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA; AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERE TO RESULTING FROM THE WORK, THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION AND IS RESPONSIBLE FOR COSTS INCURRED BY PROCEEDING WITH ELEVATIONS OF EXISTING UTILITIES THAT DIFFER FROM THOSE PRESENTED ON THESE PLANS. DISCREPANCIES SHALL BE PRESENTED TO THE ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH WORK. CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES, AGENCIES AND ENGINEER AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
2. ALL UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF SANGER PUBLIC WORKS SPECIFICATIONS.
3. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL THE MATERIALS AND APPURTENANCES NECESSARY FOR THE COMPLETE INSTALLATION OF THE UTILITIES. ALL PIPE AND FITTINGS SHALL BE INSPECTED BY THE CITY INSPECTOR PRIOR TO BEING COVERED.
4. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND STANDARDS AND REQUIREMENTS.
5. THE SITE UTILITY CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE CITY OF SANGER FOR THE CONNECTIONS TO THE EXISTING WATER AND WASTEWATER MAINS.
6. THE CONTRACTOR SHALL ADJUST THE LOCATION OF THE PROPOSED WATER LINES AS REQUIRED TO AVOID CONFLICTS WITH THE OTHER UTILITIES.
7. THRUST BLOCKS SHALL BE PROVIDED AT ALL TEES, ELBOWS AND BENDS, AND WILL BE OF SUFFICIENT SIZE TO COMPLY WITH CITY STANDARDS FOR EXISTING SOIL CONDITIONS.
8. ALL FIRE PROTECTION MATERIALS SHALL BE U.L. LISTED, FACTORY MUTUAL APPROVED, AND TO NFPA STANDARDS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
9. MATCH TOPS OF ALL MANHOLES AND VAULTS WITH PROPOSED GROUND ELEVATIONS.
10. ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
11. WATER & SANITARY SEWER UTILITIES SHALL BE KEPT TEN FEET (10') APART (PARALLEL) OR, WHEN CROSSING PROVIDE 24" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE, UNLESS OTHERWISE NOTED.)
12. UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
13. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND ARE TO BE ONE FOOT ABOVE FINISHED GROUND ELEVATIONS WITH WATER TIGHT LIDS.
14. ALL CONCRETE FOR ENCASEMENT SHALL HAVE A MINIMUM 28-DAY COMPRESSION STRENGTH OF 3000 P.S.I.
15. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 48" COVER BELOW FINISHED GRADE TO TOP OF ALL WATERLINES.
16. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE IN POSSESSION BEFORE THE FINAL CONNECTION OF SERVICE.
17. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
18. ACTUAL ROUTING OF ELECTRICAL SERVICE FROM THE EXISTING TRANSFORMER IS TO BE COORDINATED WITH THE ELECTRICAL UTILITY.
19. ACTUAL ROUTING OF GAS SERVICE FROM THE EXISTING GAS LINE TO THE TERMINUS POINT TO THE BUILDING IS TO BE COORDINATED WITH THE GAS UTILITY.
20. ACTUAL ROUTING OF TELEPHONE SERVICE FROM THE EXISTING TELEPHONE LINE TO THE BUILDING IS TO BE COORDINATED WITH THE TELEPHONE UTILITY.
21. IN THE EVENT OF VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 24" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR A21.11 (AWWA C-151) (CLASS 50).
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N718283.0	E:2376892.0	E:2376464.4	E:237682.2
N718334.5	E:2377322.3	ELEV:687.2	
N719283.0	E:2376892.0	ELEV:683.2	

See H&H Comment #5-6 - existing culvert no longer has drainage path to proposed detention pond.

City of Sanger?



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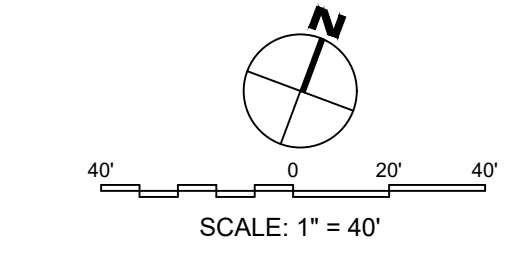
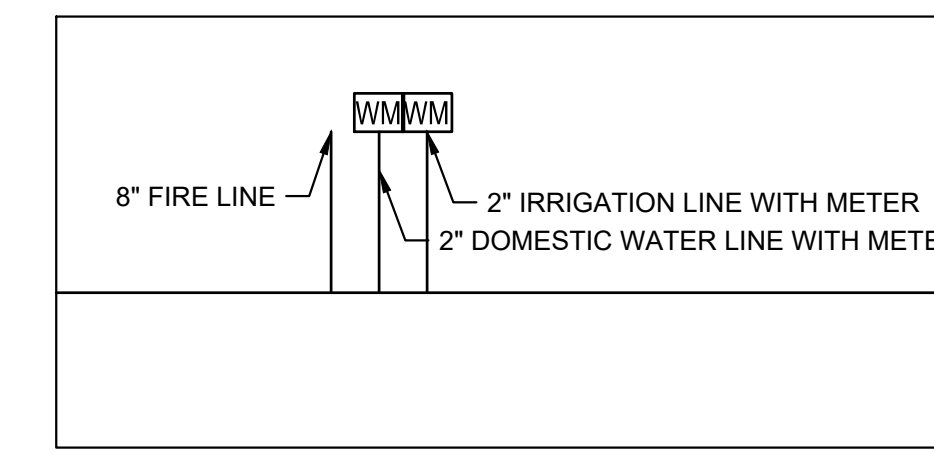


SANGER TOWN CENTER SOUTH
NOT FOR CONSTRUCTION
IN PROGRESS
FM 455 AND INDIAN LN
SANGER, TEXAS

Issued Date:	11/12/2024	
Project No:	240117	
Drawn By:	RP	
Checked By:	IN	
Designed By:	IN	
Issue Record		
#	Description	Date

OVERALL UTILITY PLAN

TYPICAL WATER TAPS



LEGEND - UTILITY PLAN

- SITE BOUNDARY
- - - PROPOSED EASEMENT
- - - BUILDING SETBACK
- - - PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE
- PROPOSED WATER METER
- - - PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY SEWER MANHOLE

SITE UTILITY NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PRIVATE OR PUBLIC, PRIOR TO EXCAVATING. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON THE INFORMATION AND DATA FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPEARANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA; AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION AND IS RESPONSIBLE FOR COSTS INCURRED BY PROCEEDING WITH ELEVATIONS OF EXISTING UTILITIES THAT DIFFER FROM THOSE PRESENTED ON THESE PLANS. DISCREPANCIES SHALL BE PRESENTED TO THE ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH WORK. CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES, AGENCIES AND ENGINEER AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
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6. THE CONTRACTOR SHALL ADJUST THE LOCATION OF THE PROPOSED WATER LINES AS REQUIRED TO AVOID CONFLICTS WITH THE OTHER UTILITIES.
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SANGER TOWN CENTER SOUTH
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 FM 455 AND INDIAN LN
 SANGER, TEXAS

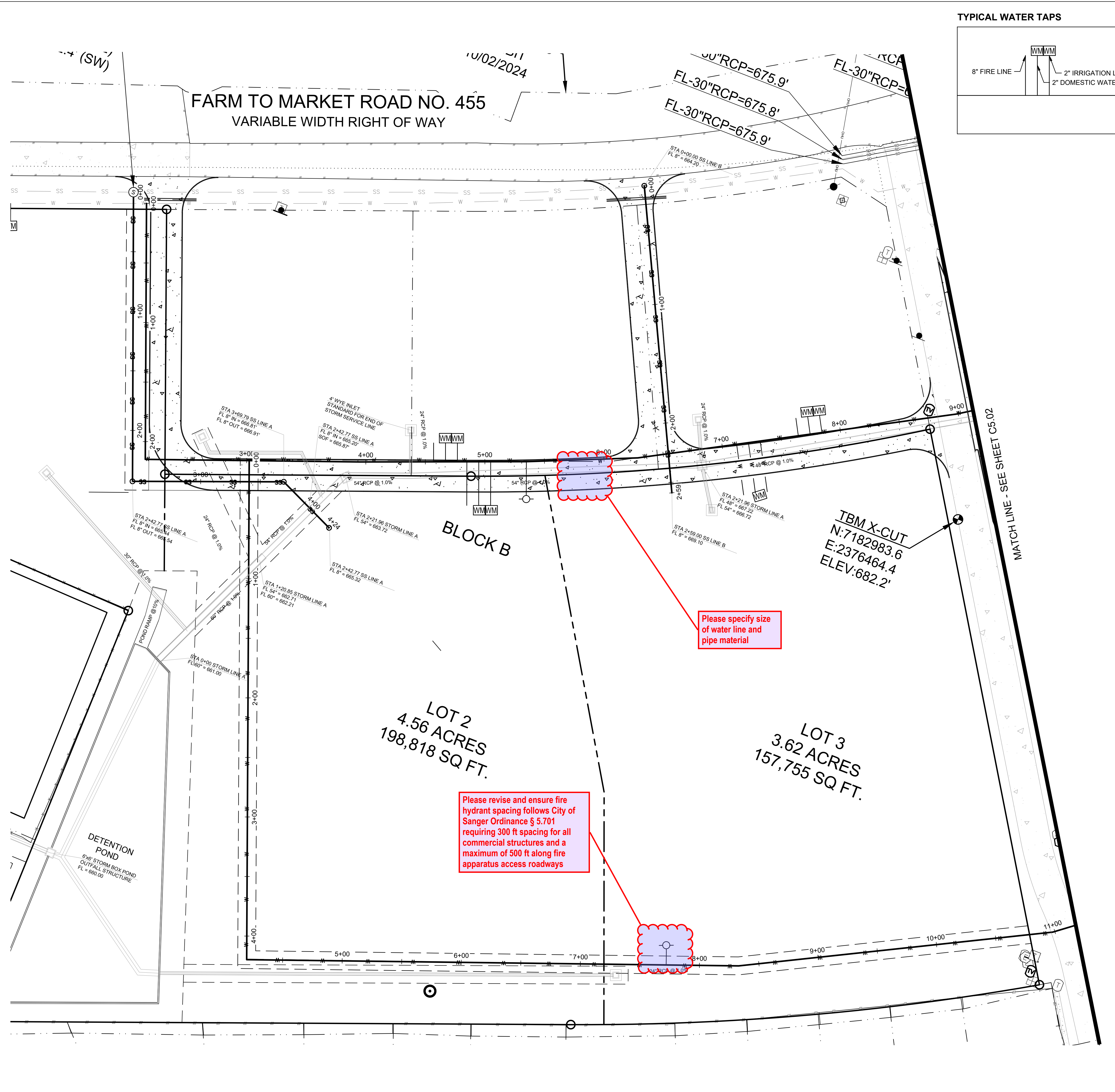
Issue Date: 11/12/2024
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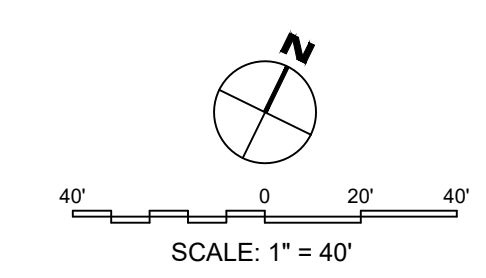
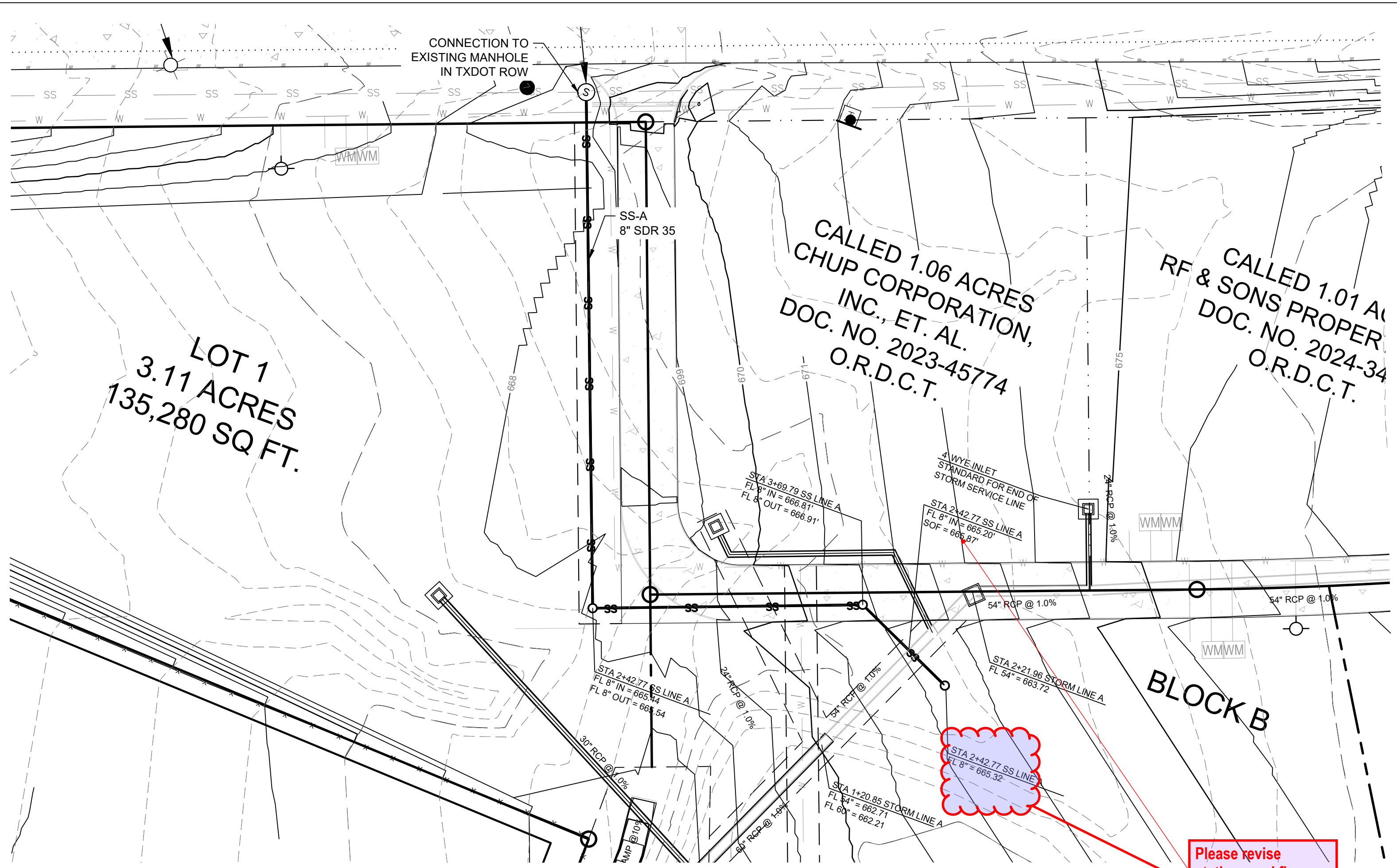
Drawn By: RP
Checked By: IN
Designed By: IN

Issue Record		
#	Description	Date

BENCHMARKS:
TBM X-CUT TBM X-CUT TBM X-CUT
ELEV: 682.2' ELEV: 682.2' ELEV: 682.2'

WATER PLAN





- LEGEND - UTILITY PLAN**
- - - - - SITE BOUNDARY
 - - - - - PROPOSED EASEMENT
 - - - - - BUILDING SETBACK
 - — — PROPOSED WATER LINE
 - — ○ PROPOSED FIRE HYDRANT
 - — ○ PROPOSED VALVE
 - ◻ — ◻ PROPOSED WATER METER
 - — ○ PROPOSED SANITARY SEWER LINE
 - — ○ PROPOSED SANITARY SEWER MANHOLE
 - — ○ PROPOSED CLEANOUT

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Please revise stations and flow lines to match profile

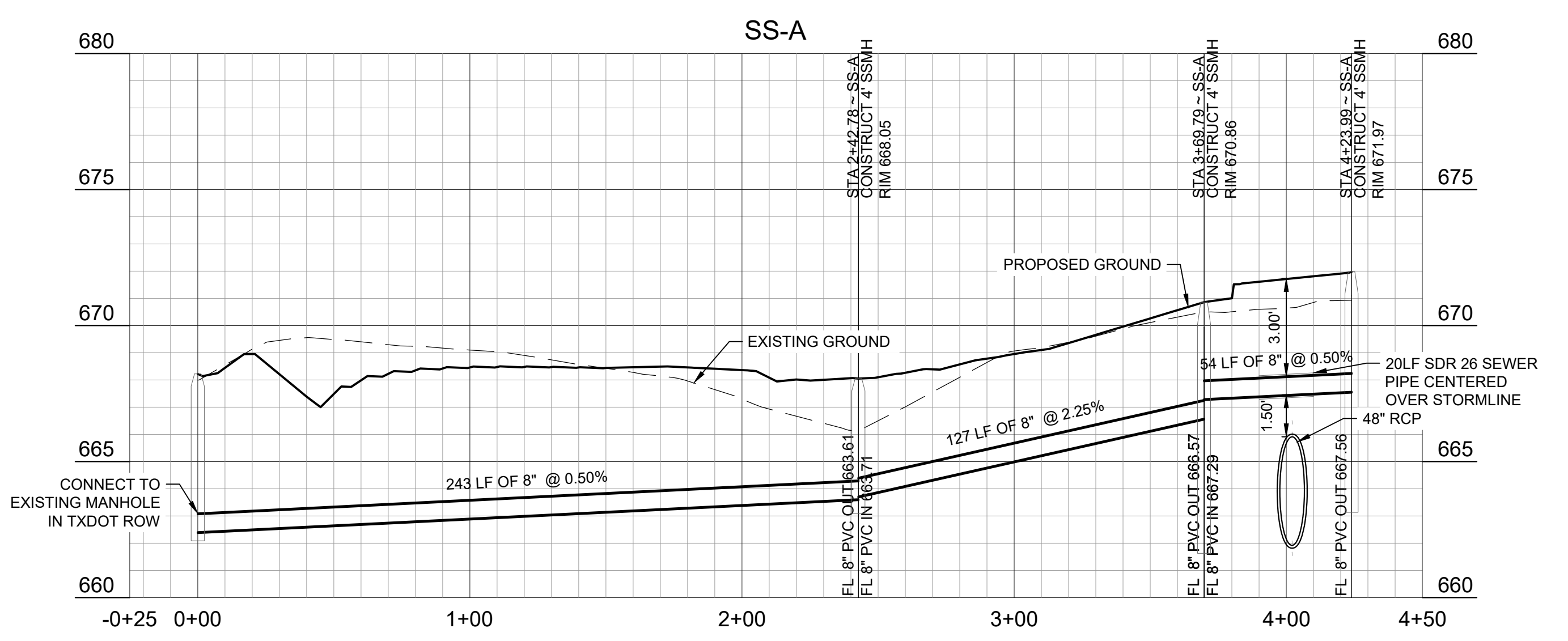
City of Sanger

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**SANGER TOWN CENTER SOUTH
 NOT FOR CONSTRUCTION
 IN PROGRESS**
 FM 455 AND INDIAN LN
 SANGER, TEXAS

Issued Date:	11/12/2024	
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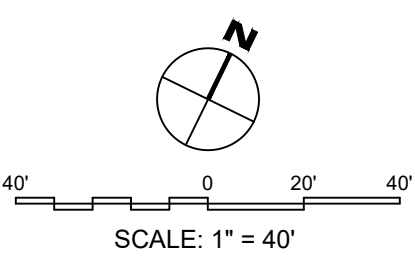
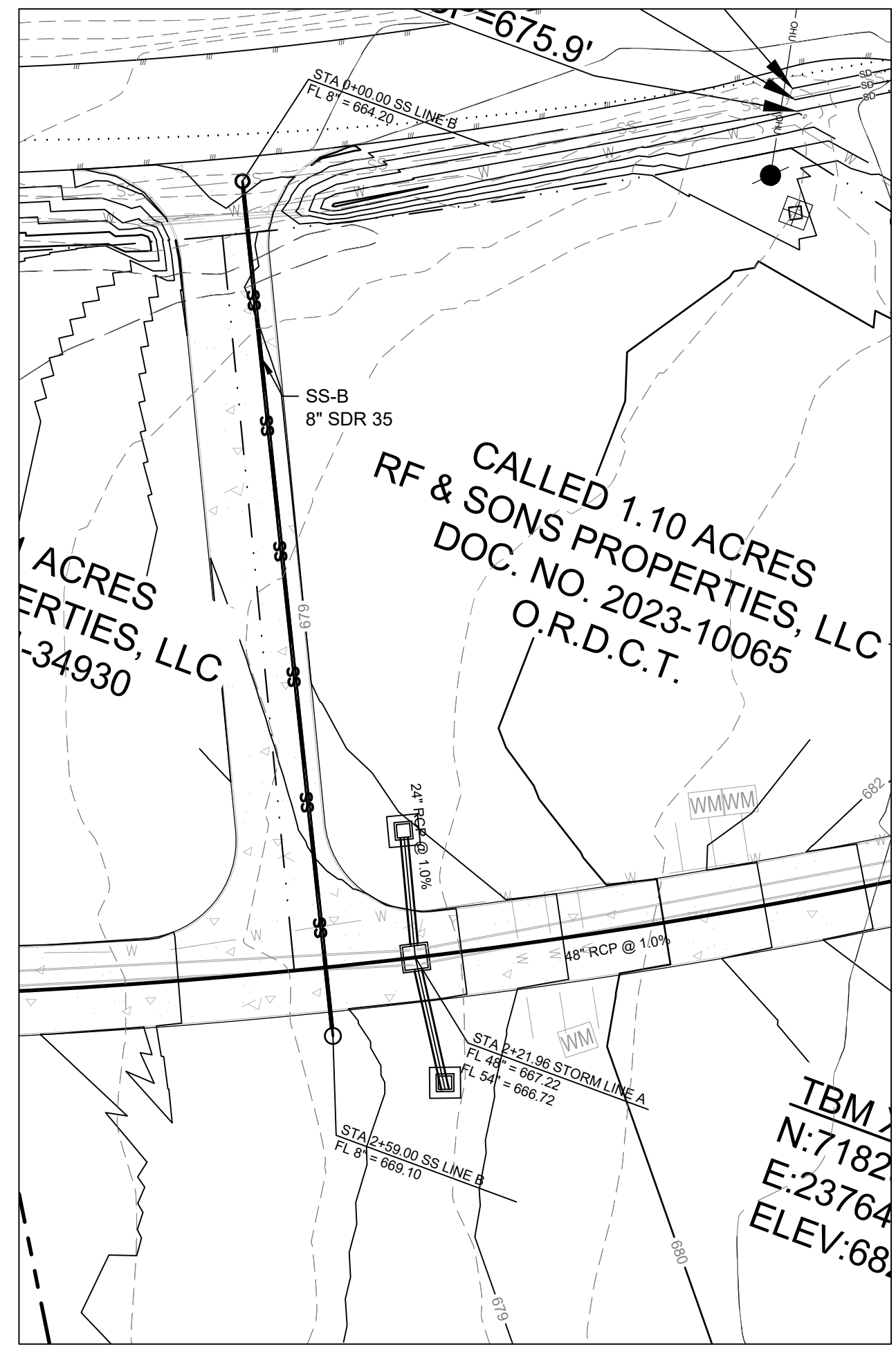


BENCHMARKS:

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SANITARY SEWER LINE SS-A

C5.03



LEGEND - UTILITY PLAN

- SITE BOUNDARY
- - - - PROPOSED EASEMENT
- - - - BUILDING SETBACK
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- ⊥ PROPOSED VALVE
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- PROPOSED SANITARY SEWER MANHOLE
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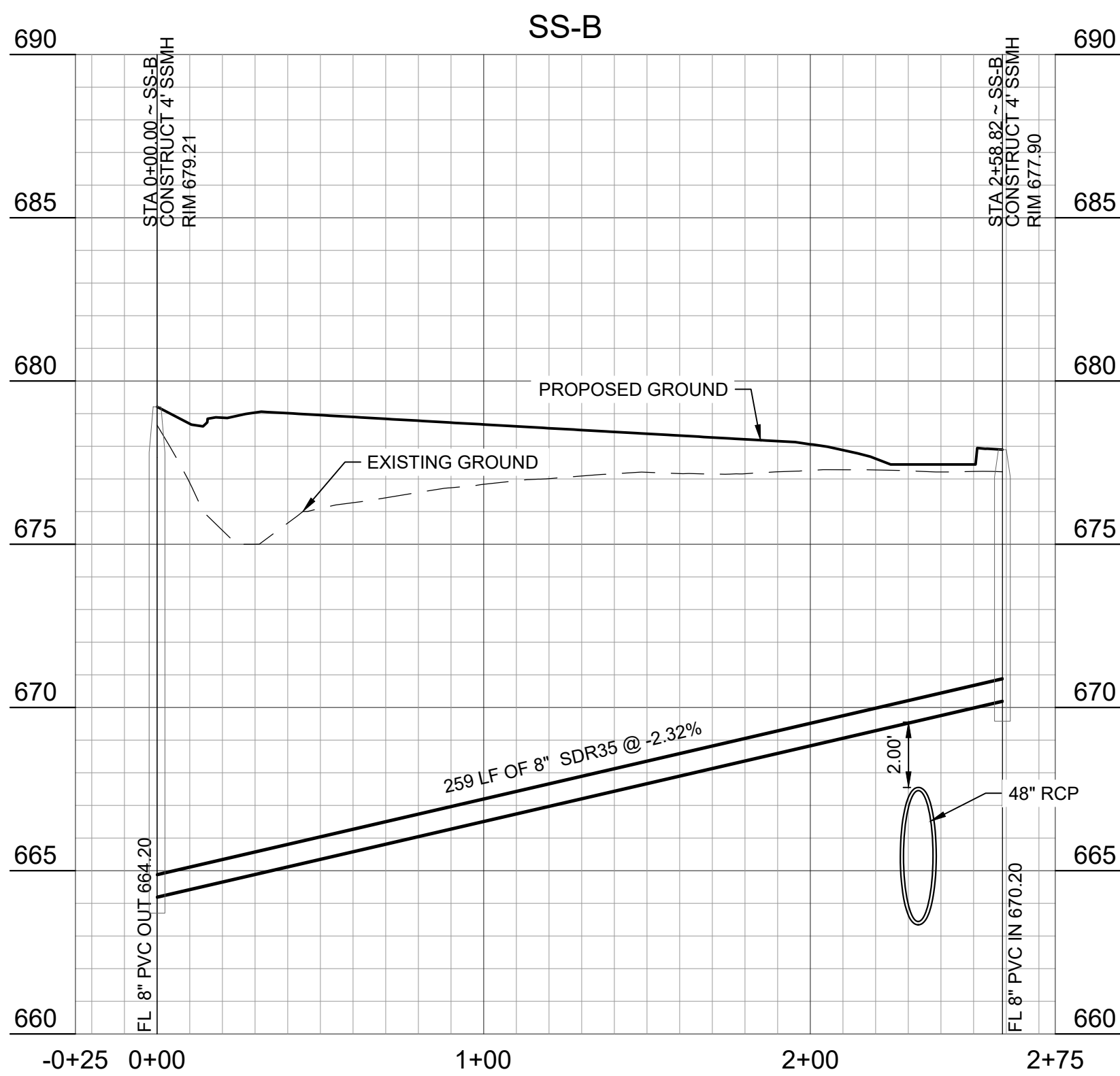
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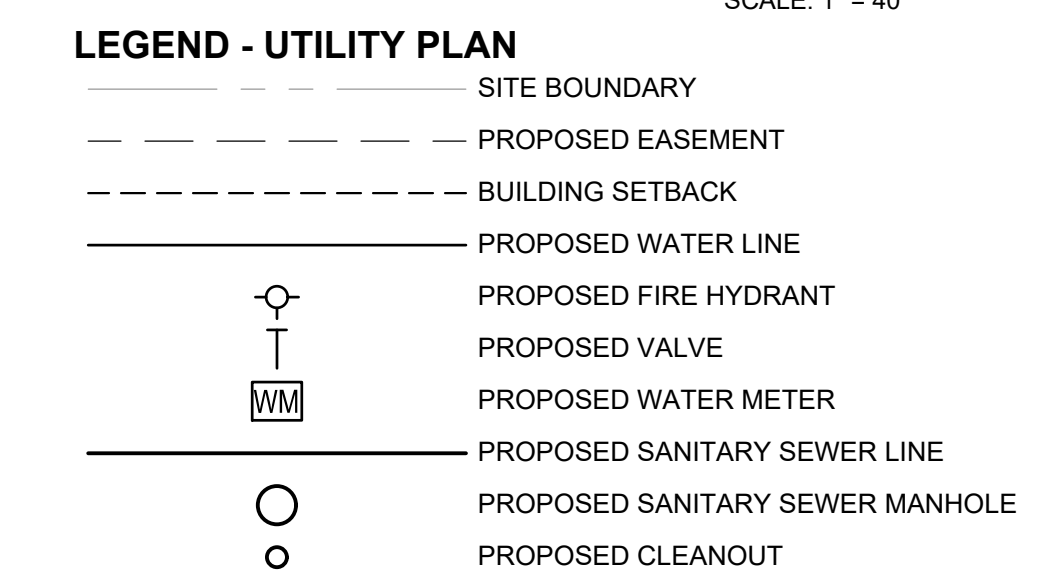
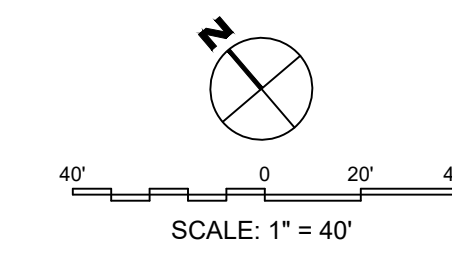
SANGER TOWN CENTER SOUTH
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BENCHMARKS:

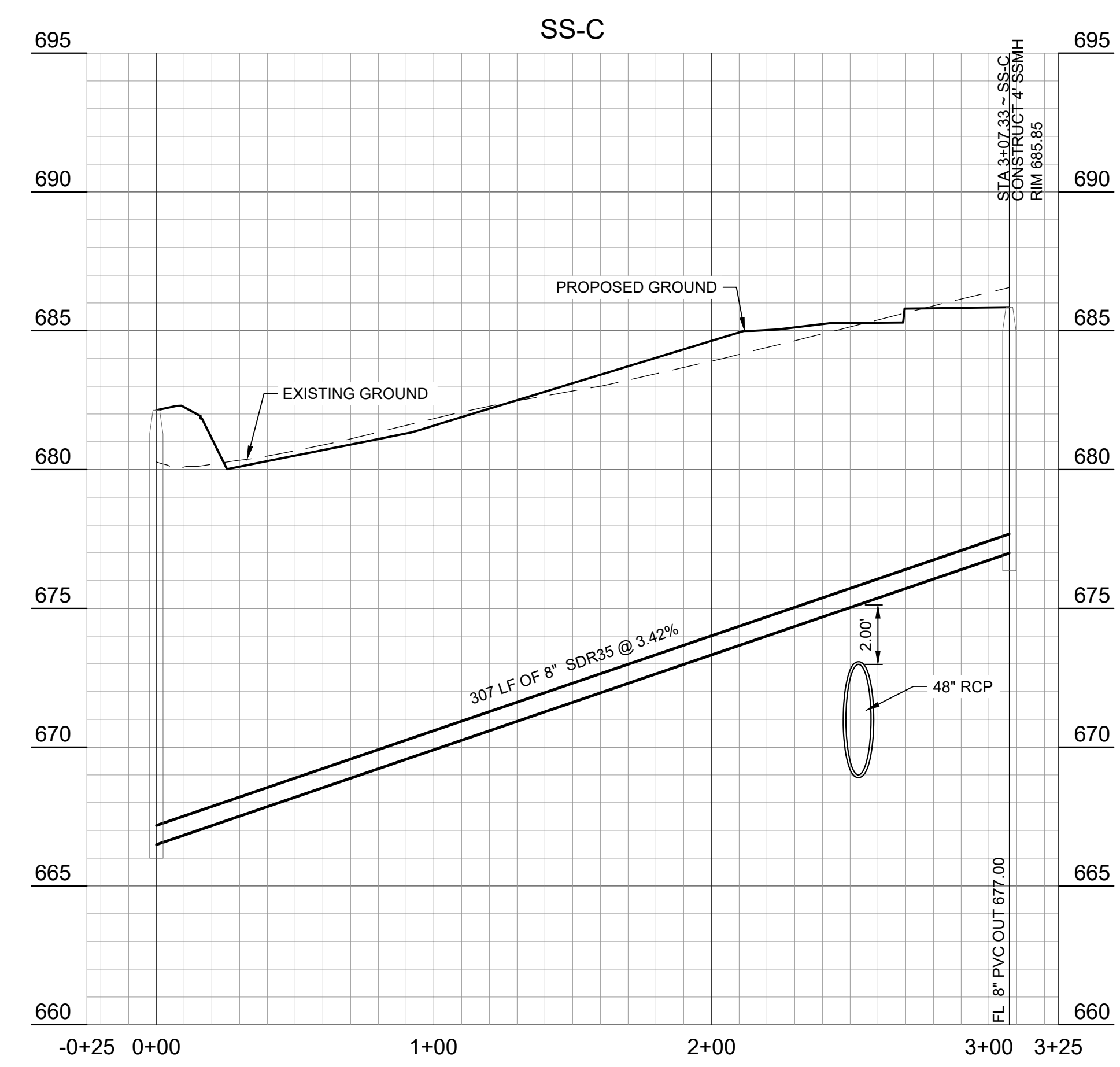
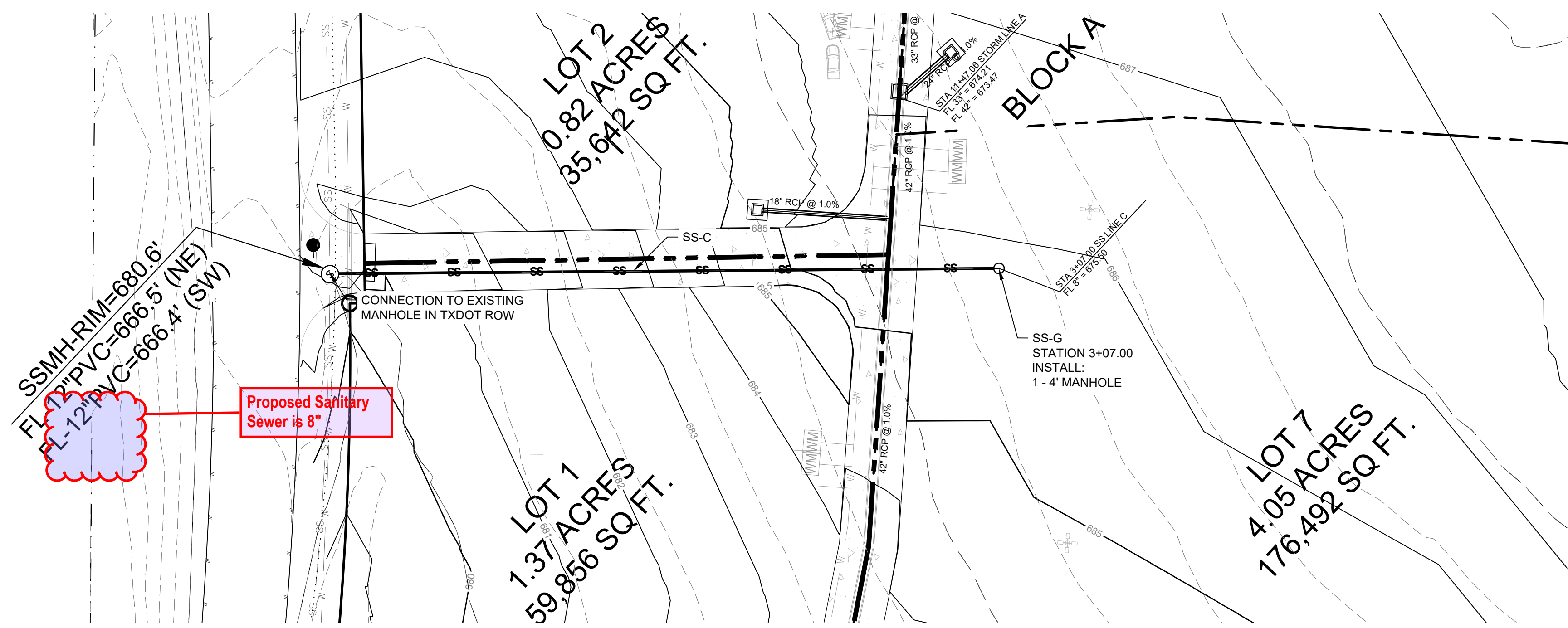
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N:718293.6	N:7182732.0	N:7182983.6
E:2376464.4	E:2376892.0	E:2376464.4
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SANITARY SEWER
LINE SS-B



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7. THRUST BLOCKS SHALL BE PROVIDED AT ALL TEES, ELBOWS AND BENDS, AND WILL BE OF SUFFICIENT SIZE TO COMPLY WITH CITY STANDARDS FOR EXISTING SOIL CONDITIONS.
8. ALL FIRE PROTECTION MATERIALS SHALL BE U.L. LISTED, FACTORY MUTUAL APPROVED, AND TO NFPA STANDARDS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
9. MATCH TOPS OF ALL MANHOLES AND VAULTS WITH PROPOSED GROUND ELEVATIONS.
10. ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
11. WATER & SANITARY SEWER UTILITIES SHALL BE KEPT TEN FEET (10') APART (PARALLEL) OR, WHEN CROSSING PROVIDE 24" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE, UNLESS OTHERWISE NOTED.)
12. UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
13. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND ARE TO BE ONE FOOT ABOVE FINISHED GROUND ELEVATIONS WITH WATER TIGHT LIDS.
14. ALL CONCRETE FOR ENCASUREMENT SHALL HAVE A MINIMUM 28-DAY COMPRESSION STRENGTH OF 3000 P.S.I.
15. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 48" COVER BELOW FINISHED GRADE TO TOP OF ALL WATERLINES.
16. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE IN POSSESSION BEFORE THE FINAL CONNECTION OF SERVICE.
17. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
18. ACTUAL ROUTING OF ELECTRICAL SERVICE FROM THE EXISTING TRANSFORMER IS TO BE COORDINATED WITH THE ELECTRICAL UTILITY.
19. ACTUAL ROUTING OF GAS SERVICE FROM THE EXISTING GAS LINE TO THE TERMINUS POINT TO THE BUILDING IS TO BE COORDINATED WITH THE GAS UTILITY.
20. ACTUAL ROUTING OF TELEPHONE SERVICE FROM THE EXISTING TELEPHONE LINE TO THE BUILDING IS TO BE COORDINATED WITH THE TELEPHONE UTILITY.
21. IN THE EVENT OF VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 24" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR A21.11 (AWWA C-151) (CLASS 50).
22. CONTRACTOR SHALL COORDINATE ALL UTILITY POLE RELOCATIONS WITH THE APPROPRIATE UTILITY COMPANY.
23. CONTRACTOR SHALL COORDINATE WITH THE CITY FIRE MARSHAL TO PROVIDE ANY ADDITIONAL FIRE SAFETY FEATURES, INCLUDING FIRE HYDRANTS, NOT SHOWN AND NOTIFY ENGINEER OF CHANGES.



BENCHMARKS:

TBM X-CUT N7182983.6 E2376692.0 ELEV:682.2'	TBM X-CUT N7182732.0 E2376692.0 ELEV:683.2'	TBM X-CUT N7182983.6 E2376692.0 ELEV:682.2'
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**SANGER TOWN CENTER SOUTH
NOT FOR CONSTRUCTION
IN PROGRESS**
 FM 455 AND INDIAN LN
SANGER, TEXAS

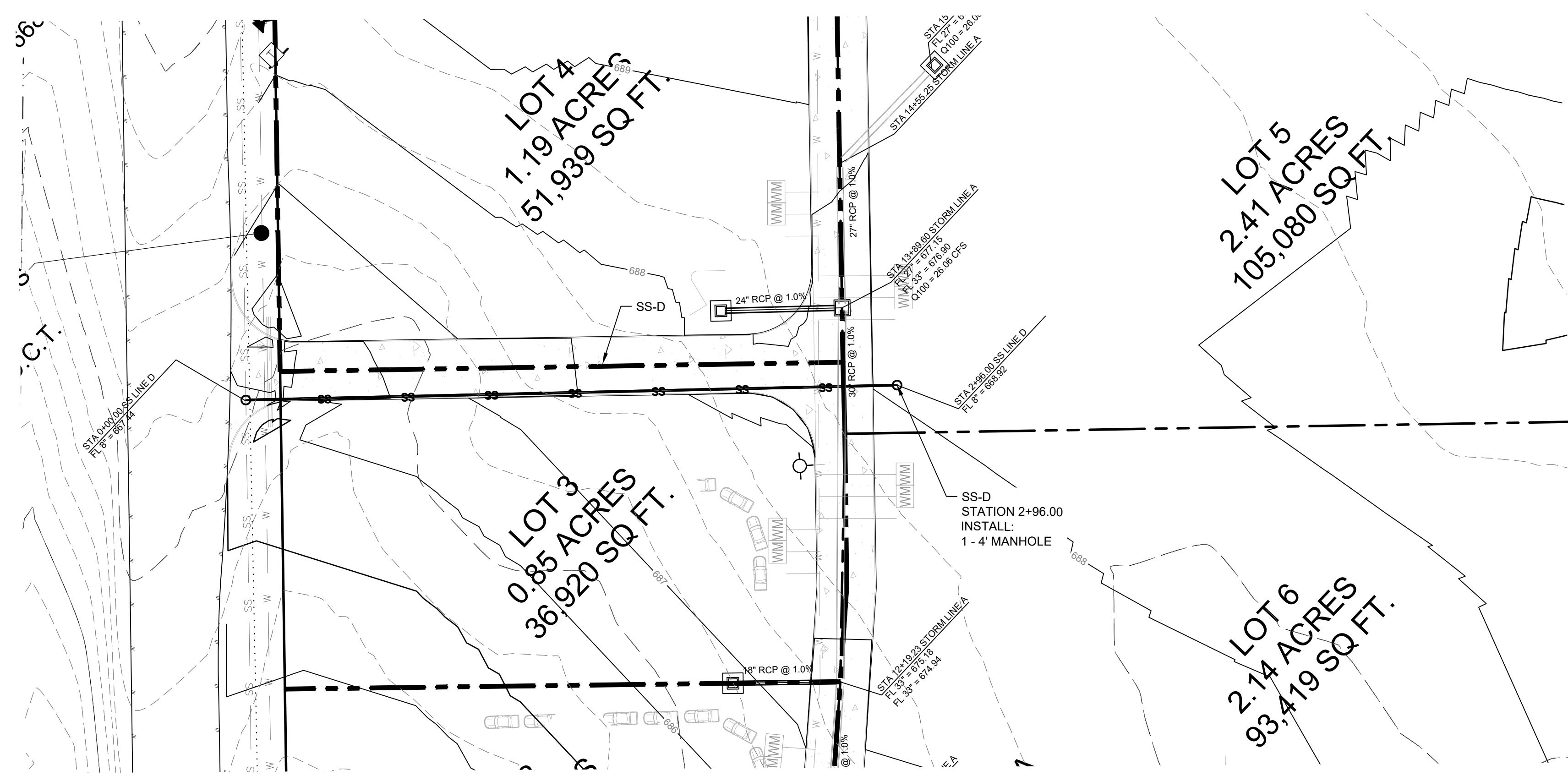
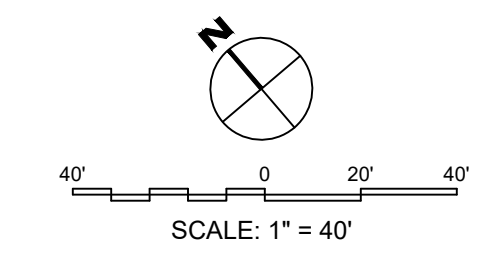
Issued Date: 11/12/2024
Project No: 240117

Drawn By: RP
Checked By: IN
Designed By: IN

Issue Record

#	Description	Date

**SANITARY SEWER
LINE SS-D**

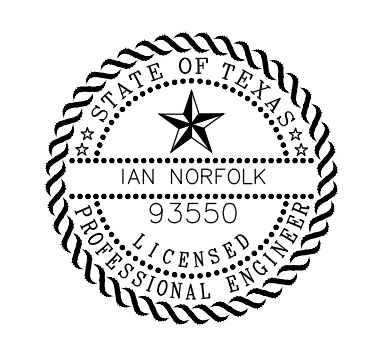


- LEGEND - UTILITY PLAN**
- SITE BOUNDARY
 - - - PROPOSED EASEMENT
 - - - BUILDING SETBACK
 - PROPOSED WATER LINE
 - PROPOSED FIRE HYDRANT
 - T PROPOSED VALVE
 - WM PROPOSED WATER METER
 - - - PROPOSED SANITARY SEWER LINE
 - PROPOSED SANITARY SEWER MANHOLE
 - PROPOSED CLEANOUT

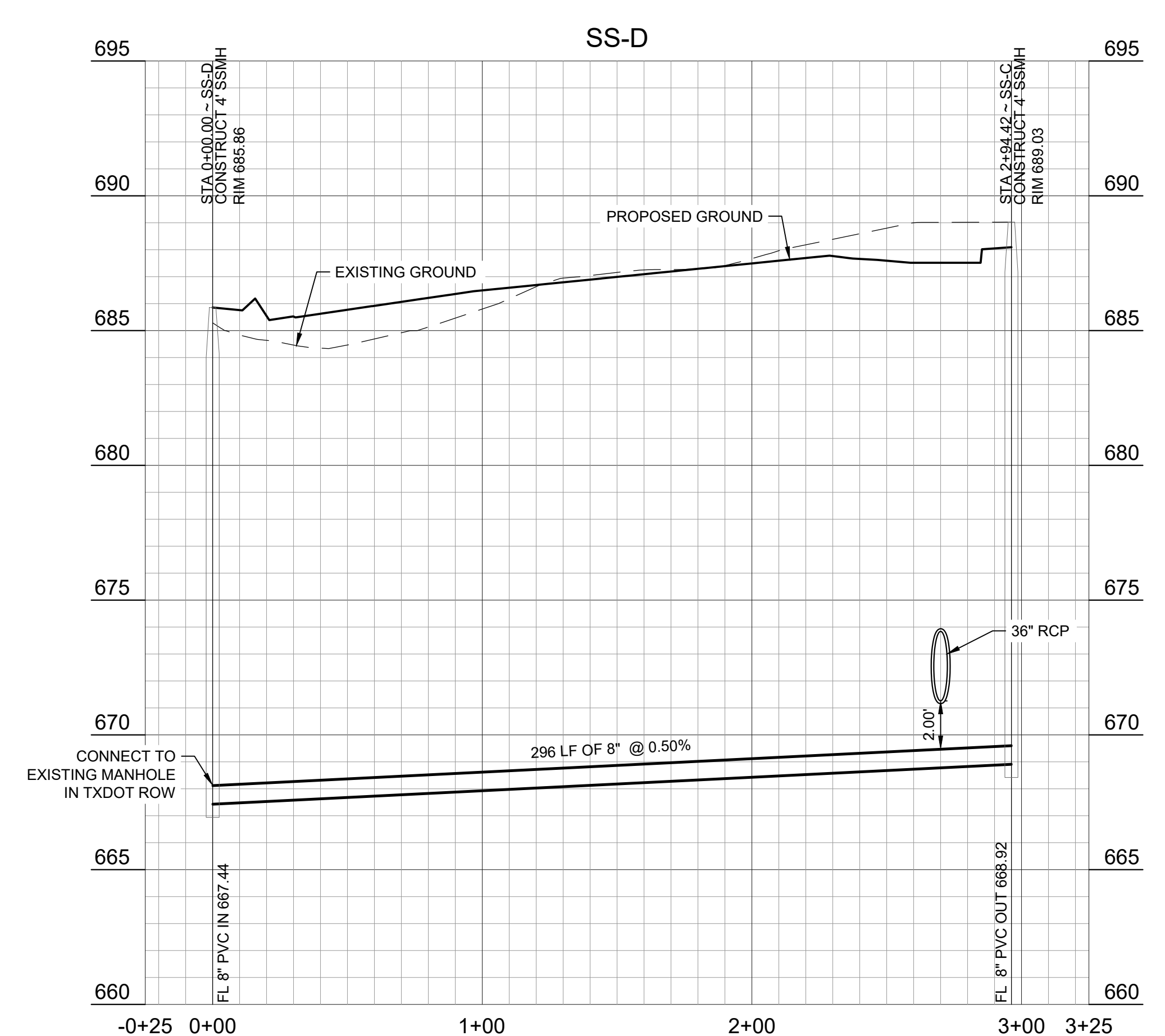
SITE UTILITY NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PRIVATE OR PUBLIC, PRIOR TO EXCAVATING. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON THE INFORMATION AND DATA FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPEARANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA; AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES. FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK, THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION AND IS RESPONSIBLE FOR COSTS INCURRED BY PROCEEDING WITH ELEVATIONS OF EXISTING UTILITIES THAT DIFFER FROM THOSE PRESENTED ON THESE PLANS. DISCREPANCIES SHALL BE PRESENTED TO THE ENGINEER FOR REVIEW PRIOR TO PROCEEDING WITH WORK. CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES, AGENCIES AND ENGINEER AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
2. ALL UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF _____ PUBLIC WORKS SPECIFICATIONS.
3. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL THE MATERIALS AND APPURTENANCES NECESSARY FOR THE COMPLETE INSTALLATION OF THE UTILITIES. ALL PIPE AND FITTINGS SHALL BE INSPECTED BY THE CITY INSPECTOR PRIOR TO BEING COVERED.
4. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS AND REQUIREMENTS.
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22. CONTRACTOR SHALL COORDINATE ALL UTILITY POLE RELOCATIONS WITH THE APPROPRIATE UTILITY COMPANY.
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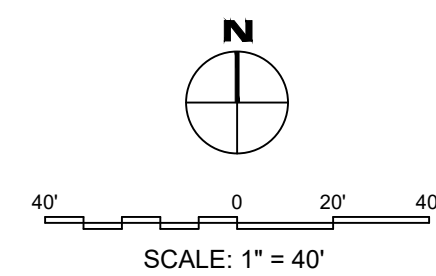


SANGER TOWN CENTER SOUTH
NOT FOR CONSTRUCTION
IN PROGRESS
FM 455 AND INDIAN LN
SANGER, TEXAS



BENCHMARKS:

Benchmark	Elevation
TBM X-CUT N7162983.6	N7162732.0
E:2376464.4	E:2376692.0
ELEV:682.2	ELEV:683.2
	ELEV:682.2



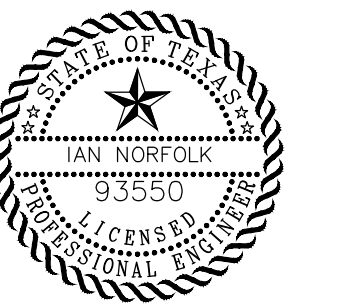
LEGEND - EROSION CONTROL

- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- SITE BOUNDARY
- PROPOSED EASEMENT
- BUILDING SETBACK
- SILT FENCE
- INLET PROTECTION
- FLOW ARROW

EROSION CONTROL NOTES

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2. EROSION CONTROL MEASURES MAY ONLY BE PLACED IN FRONT OF INLETS, OR IN CHANNELS, DRAINAGEWAYS OR BORROW DITCHES AT RISK OF CONTRACTOR. CONTRACTOR SHALL REMAIN LIABLE FOR ANY DAMAGE CAUSED BY THE MEASURES, INCLUDING FLOODING DAMAGE, WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE. AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGEWAYS AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREGGED OF ANY SEDIMENT GENERATED BY THE PROJECT OR DEPOSITED AS A RESULT OF EROSION CONTROL MEASURES.
3. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES (INCLUDING STORM WATER POLLUTION PREVENTION PLAN). THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE APPROVED TPDES SWPPP DRAWINGS DURING CONSTRUCTION OPERATIONS.
4. PRIOR TO COMMENCING ANY CONSTRUCTION, A CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCE SHALL BE INSTALLED AT THE LOCATIONS SHOWN, OR AS DESCRIBED IN THE SWPPP.
5. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL SYSTEM DESCRIBED WITHIN THE CONSTRUCTION DOCUMENTS SHOULD BE CONSIDERED TO REPRESENT THE MINIMUM ACCEPTABLE STANDARDS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDENT UPON THE STAGE OF CONSTRUCTION, THE SEVERITY OF THE RAINFALL EVENT AND/OR AS DEEMED NECESSARY AS A RESULT OF ON-SITE INSPECTIONS BY THE OWNER, THEIR REPRESENTATIVES OR THE JURISDICTIONAL AUTHORITIES. THESE ADDITIONAL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER. IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO ASSURE THAT THE STORM WATER DISCHARGE FROM THE SITE DOES NOT EXCEED THE TOLERANCES ESTABLISHED BY ANY OF THE JURISDICTIONAL AUTHORITIES.
6. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
7. AS INLETS ARE COMPLETED, TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED.
8. AT THE COMPLETION OF THE PAVING AND FINAL GRADING, THE DISTURBED AREA(S) SHALL BE REVEGETATED IN ACCORDANCE WITH THE SWPPP.
9. THE SPECIFIC PLANT MATERIALS PROPOSED TO PROTECT FILL AND EXCAVATED SLOPES SHALL BE AS INDICATED WITHIN THE SWPPP. PLANT MATERIALS MUST BE SUITABLE FOR USE UNDER LOCAL CLIMATE AND SOIL CONDITIONS. IN GENERAL, HYDROSEEDING OR SODDING BERMUDA GRASS IS ACCEPTABLE DURING THE SUMMER MONTHS (MAY 1 TO AUGUST 30). WINTER RYE OR FESCUE GRASS MAY BE PLANTED DURING TIMES OTHER THAN THE SUMMER MONTHS AS A TEMPORARY MEASURE UNTIL SUCHTIME AS THE PERMANENT PLANTING CAN BE MADE.
10. SILT FENCE AND INLET SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL REVEGETATION HAS BEEN COMPLETED.
11. DISTURBED AREAS THAT ARE SEEDED OR SODDED SHALL BE CHECKED PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND RESEEDED OR RESODDED, IF NECESSARY. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
12. SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASIN BEFORE IT IS 50% FULL, IF IMPLEMENTED BY THE SWPPP.
13. FREQUENT INSPECTIONS OF THE SILT FENCE SHALL BE MADE. ALL REPAIRS OR REPLACEMENTS SHALL BE MADE IMMEDIATELY.
14. THE CONTRACTOR SHALL INSPECT HIS STABILIZATION AND EROSION CONTROL MEASURES AT MINIMUM OF ONCE EVERY 14 DAYS, AND WITHIN 24 HOURS OF ANY STORM EVENT GREATER THAN 0.5 INCHES. THE CONTRACTOR SHALL REPAIR INADEQUACIES REVEALED BY THE INSPECTION BEFORE THE NEXT STORM EVENT AND SHALL MODIFY HIS SWP3 WITHIN 7 DAYS OF THE INSPECTION. ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF WHEN IT REACHES A DEPTH OF SIX (6) INCHES.
15. CONTRACTOR SHOULD ATTAIN A 75% BERMUDA COVERING BY SEEDING OR SODDING OVER ALL AFFECTED CONSTRUCTION AREAS BEFORE EROSION CONTROL CAN BE REMOVED.
16. CONTRACTOR IS RESPONSIBLE FOR PREPARING, FILING, & MAINTAINING THE SWPPP & THE NOI.
17. WHERE SILT FENCE CAN NOT BE USED, THE CONTRACTOR MAY SUBSTITUTE WITH THE FOLLOWING:
 - TRIANGULAR SEDIMENT FILTER DIKE PER SECTION 1050A
 - TEXAS POWER MULCH[®] MULCH FILLED FILTER SOCK
18. THE CONTRACTOR SHALL REFER TO THE PROVISIONS OF THE NARRATIVE AND SWPPP FOR ADDITIONAL INFORMATION.
 - N 7182983.6
 - N 7182732.0
 - N 7182983.6
19. COORDINATION/INVESTIGATION REQUIRED BY THE PROJECT SHALL BE COMPLETED BY THE CONTRACTOR FOR APPROPRIATE EROSION CONTROL MEASURES AND PROCEDURES FOR THIS PROJECT.

PRELIMINARY
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SANGER TOWN CENTER SOUTH
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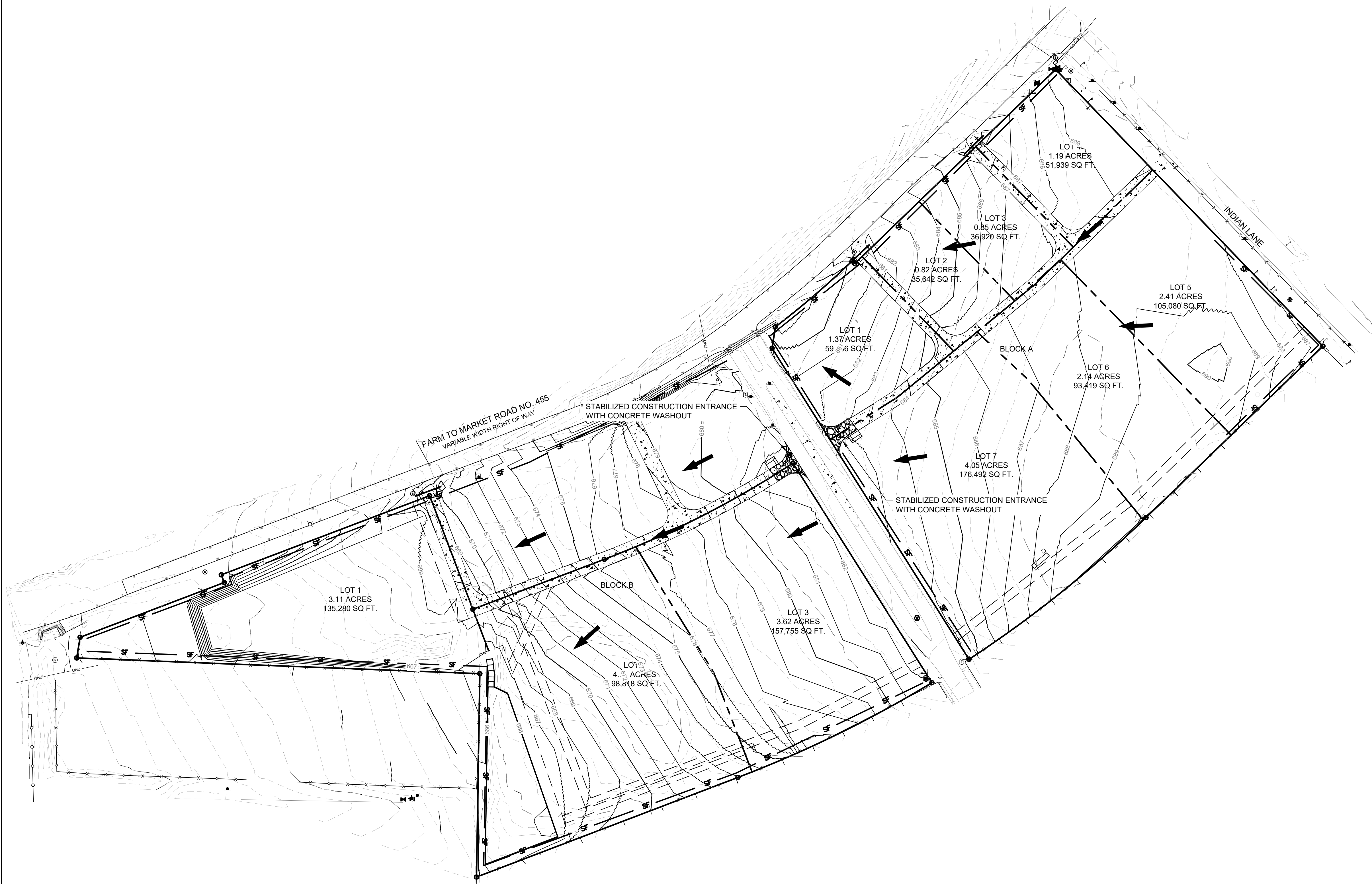
Issued Date: 11/12/2024
Project No: 240117

Drawn By: RP
Checked By: IN
Designed By: IN

Issue Record

#	Description	Date

EROSION CONTROL



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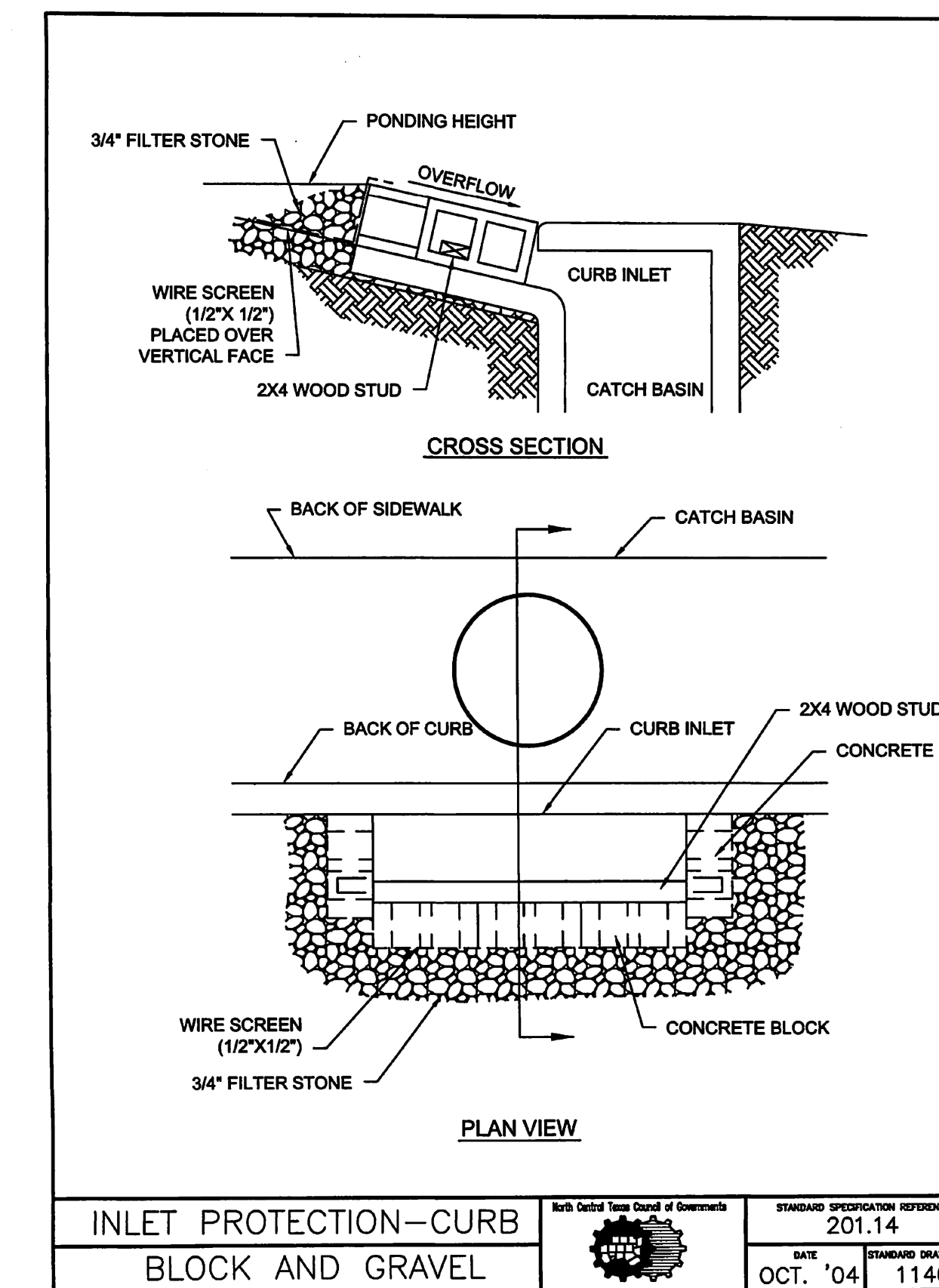
Issue Record

#	Description	Date

EROSION CONTROL DETAILS

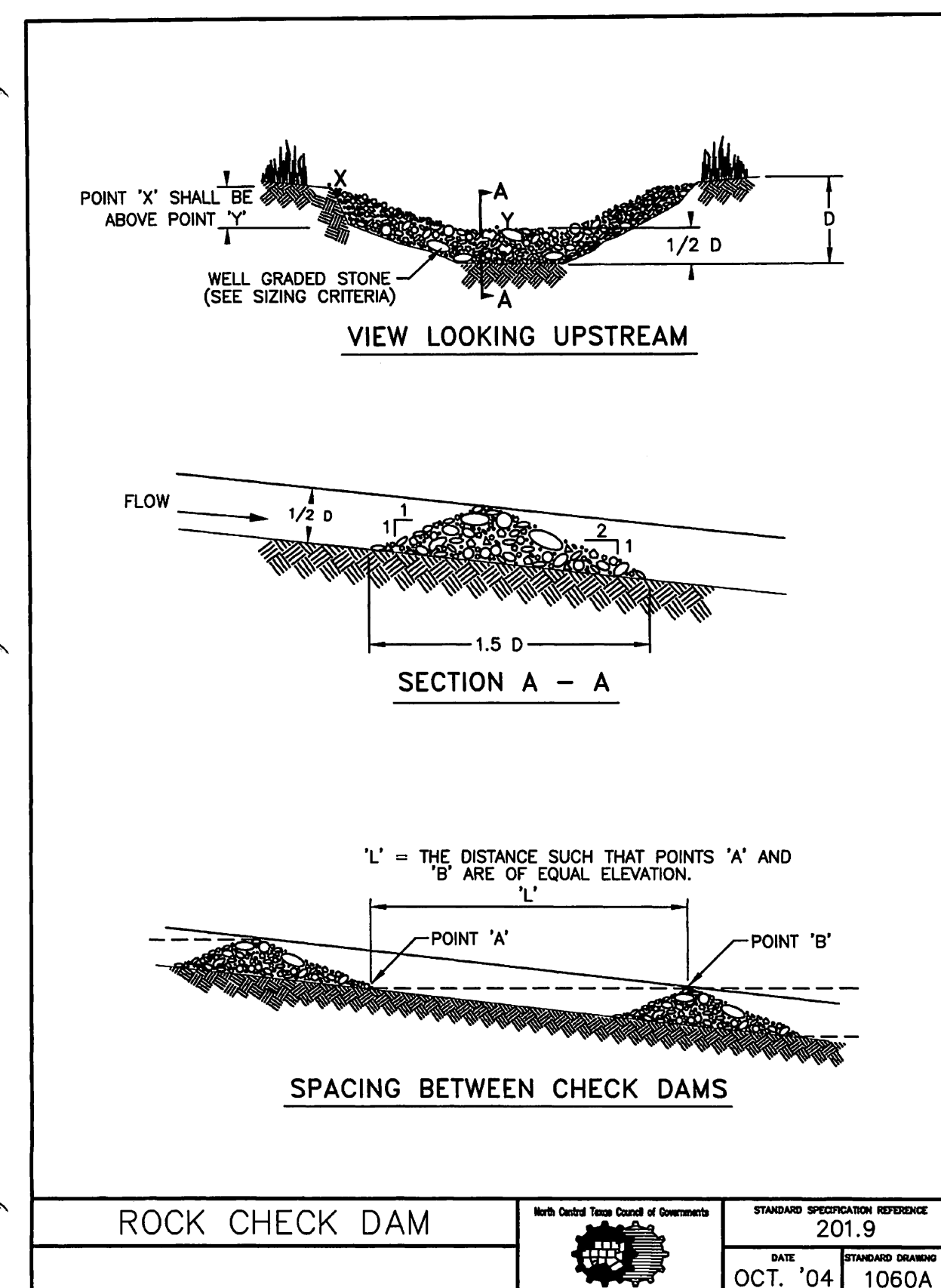
BENCHMARKS:

TBM X-CUT N:7182983.6 E:2376464.4 ELEV:682.2	TBM X-CUT N:7182732.0 E:2376692.0 ELEV:683.2	TBM X-CUT N:7182983.6 E:2376464.4 ELEV:682.2
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INLET PROTECTION-CURB BLOCK AND GRAVEL

North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 201.14
DATE: OCT. '04	STANDARD DRAWING NO. 1140A



ROCK CHECK DAM

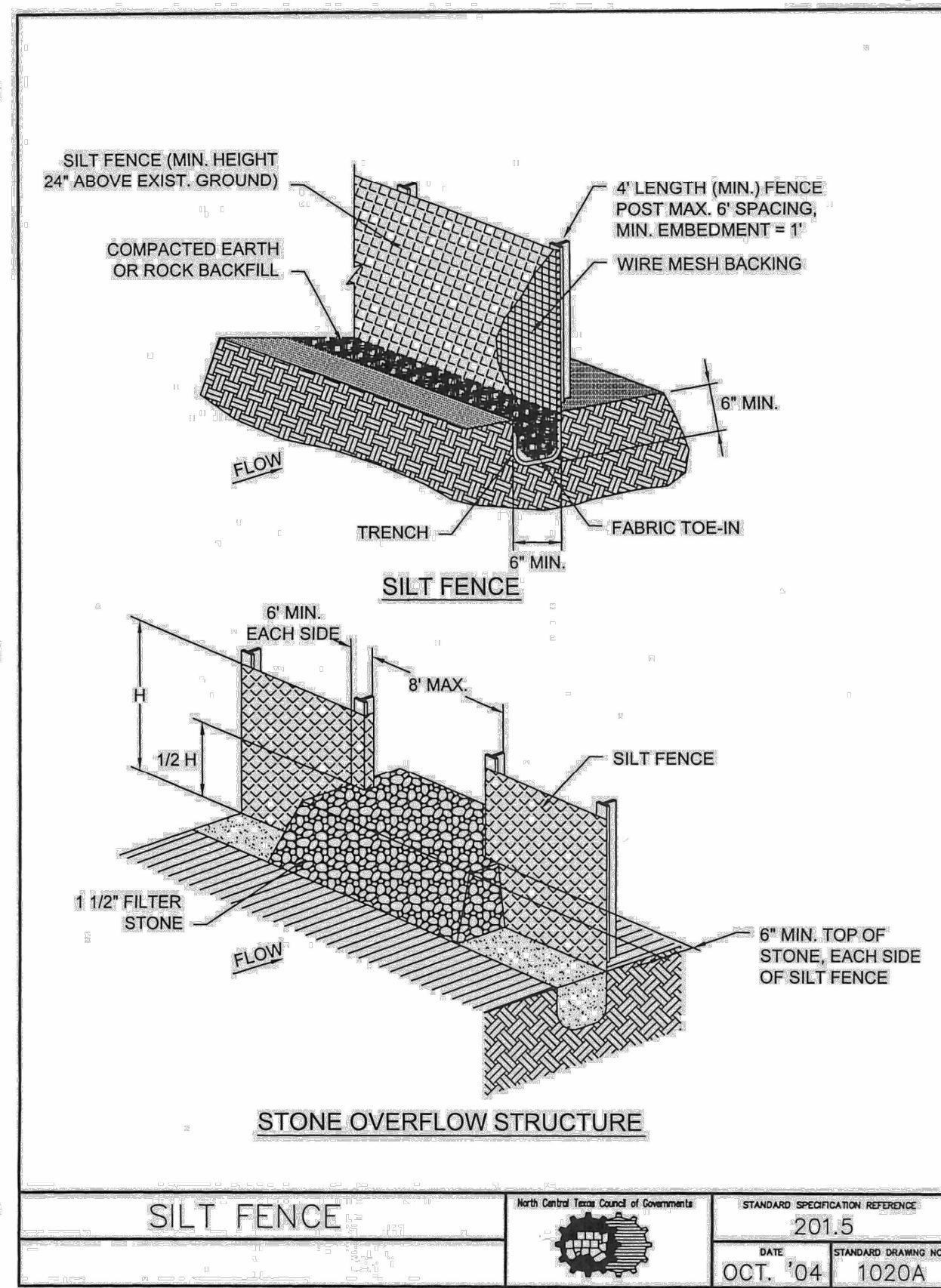
North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 201.9
DATE: OCT. '04	STANDARD DRAWING NO. 1060A

SILT FENCE GENERAL NOTES:

1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WIRE BACKING, WHICH IN TURN IS ATTACHED TO THE FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN FINAL STABILIZATION IS ACHIEVED OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

SILT FENCE

North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 201.5
DATE: OCT. '04	STANDARD DRAWING NO. 1020B



SILT FENCE

North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 201.5
DATE: OCT. '04	STANDARD DRAWING NO. 1020A

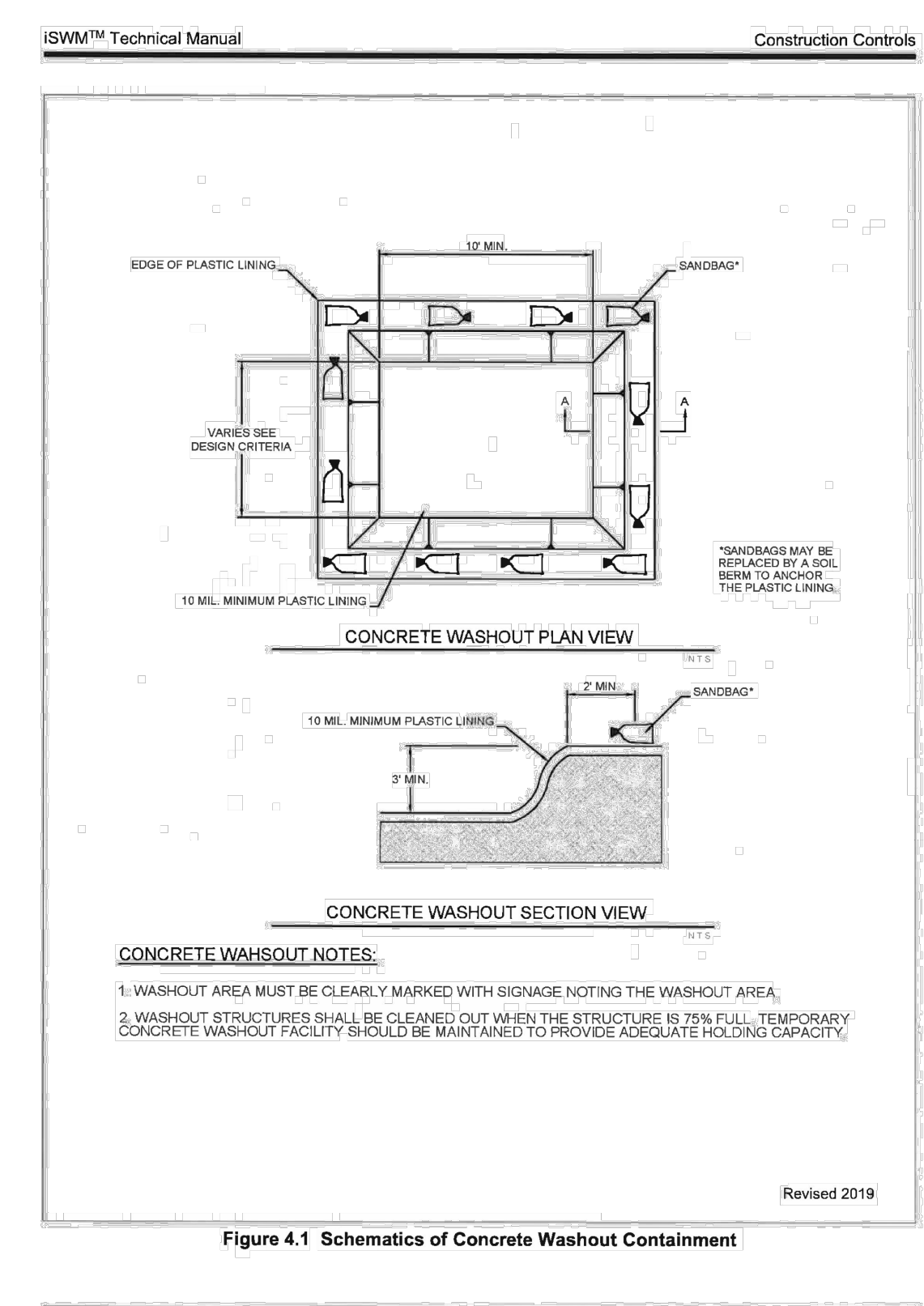


Figure 4.1 Schematics of Concrete Washout Containment

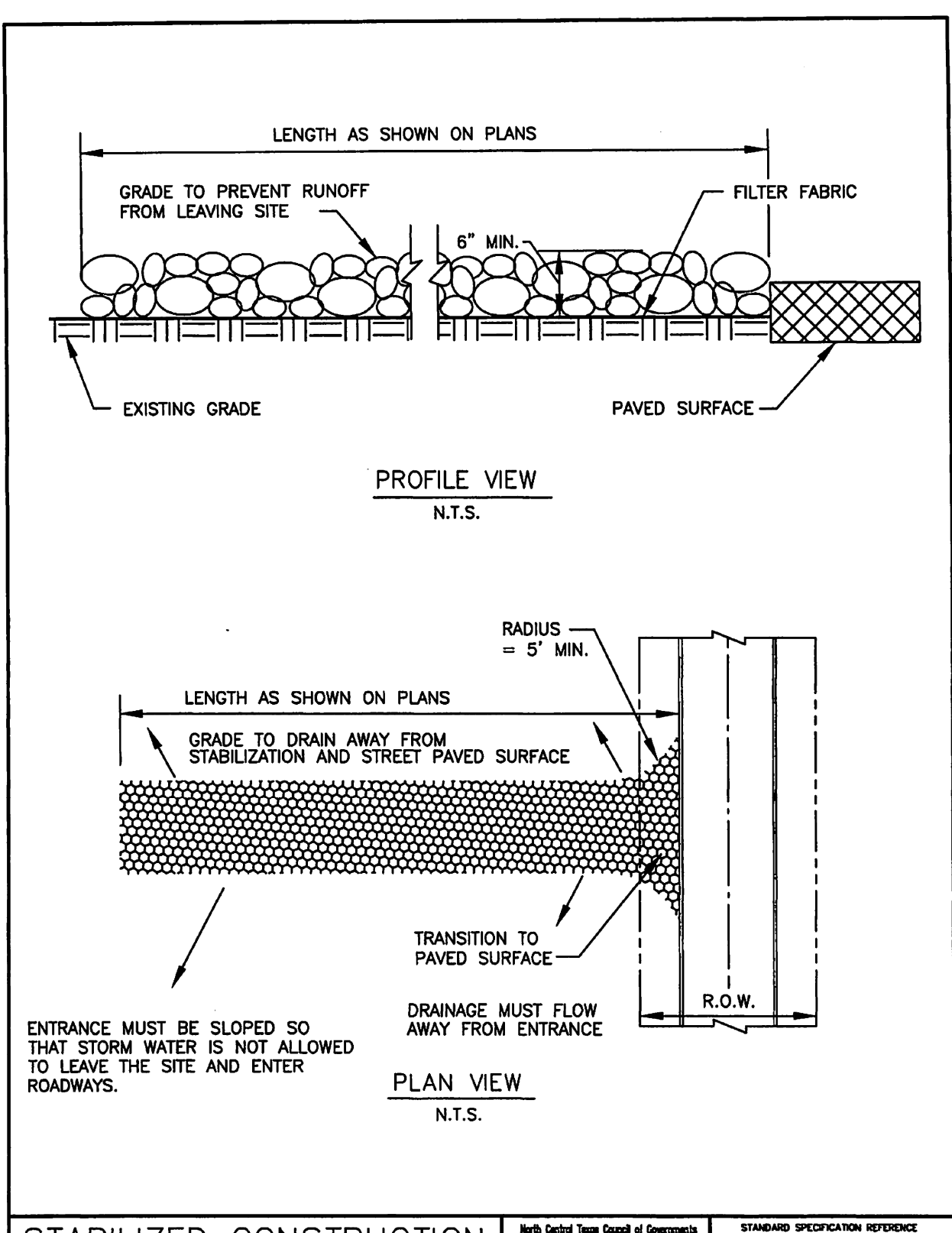
Concrete Waste Management
April 2010, Revised 9/2014

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

North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 201.11
DATE: OCT. '04	STANDARD DRAWING NO. 1070B



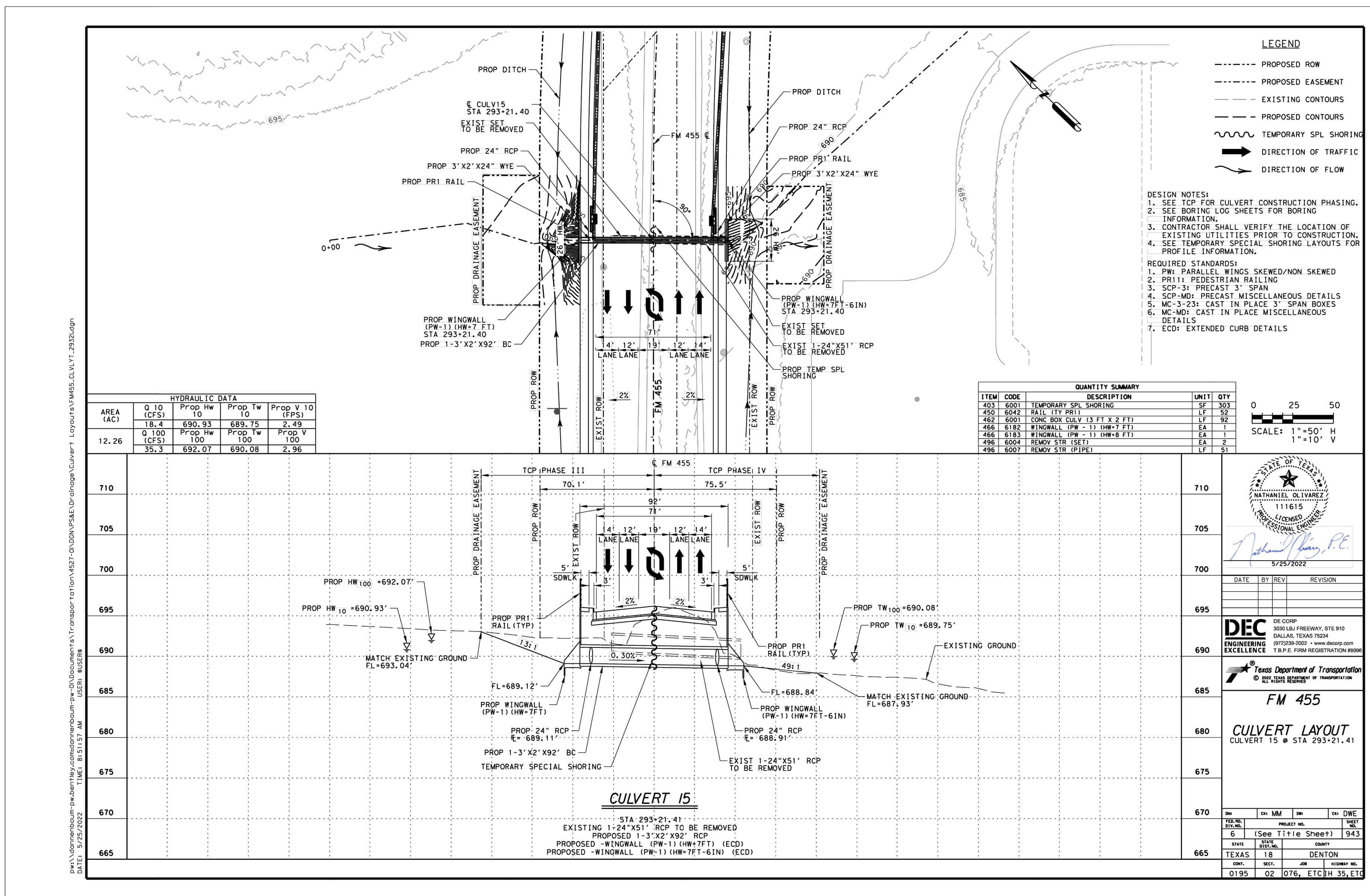
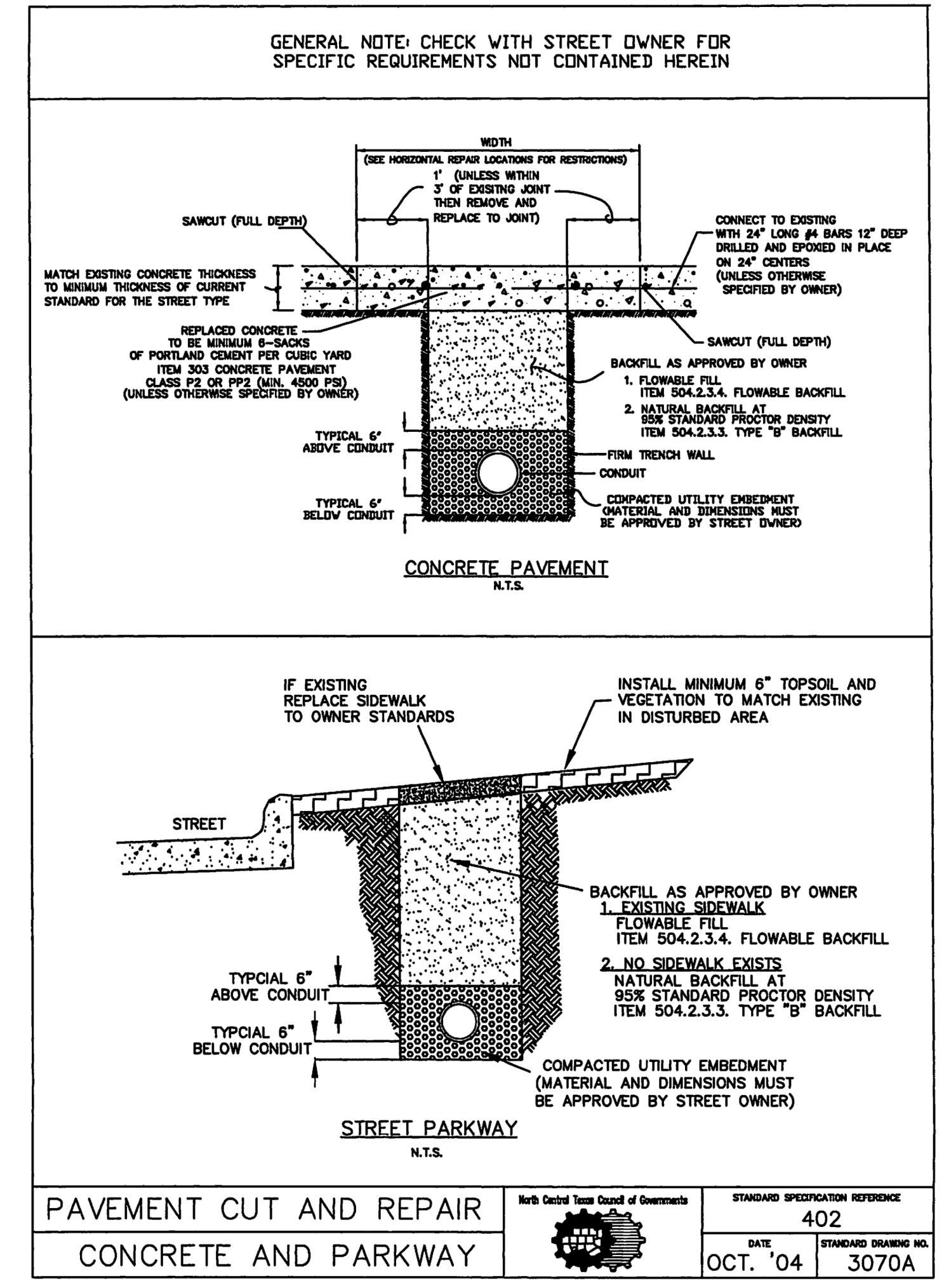
STABILIZED CONSTRUCTION ENTRANCE

North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE: 201.10
DATE: OCT. '04	STANDARD DRAWING NO. 1070A

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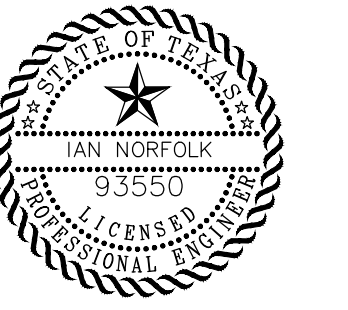
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 FM 455 AND INDIAN LN
 SANGER, TEXAS



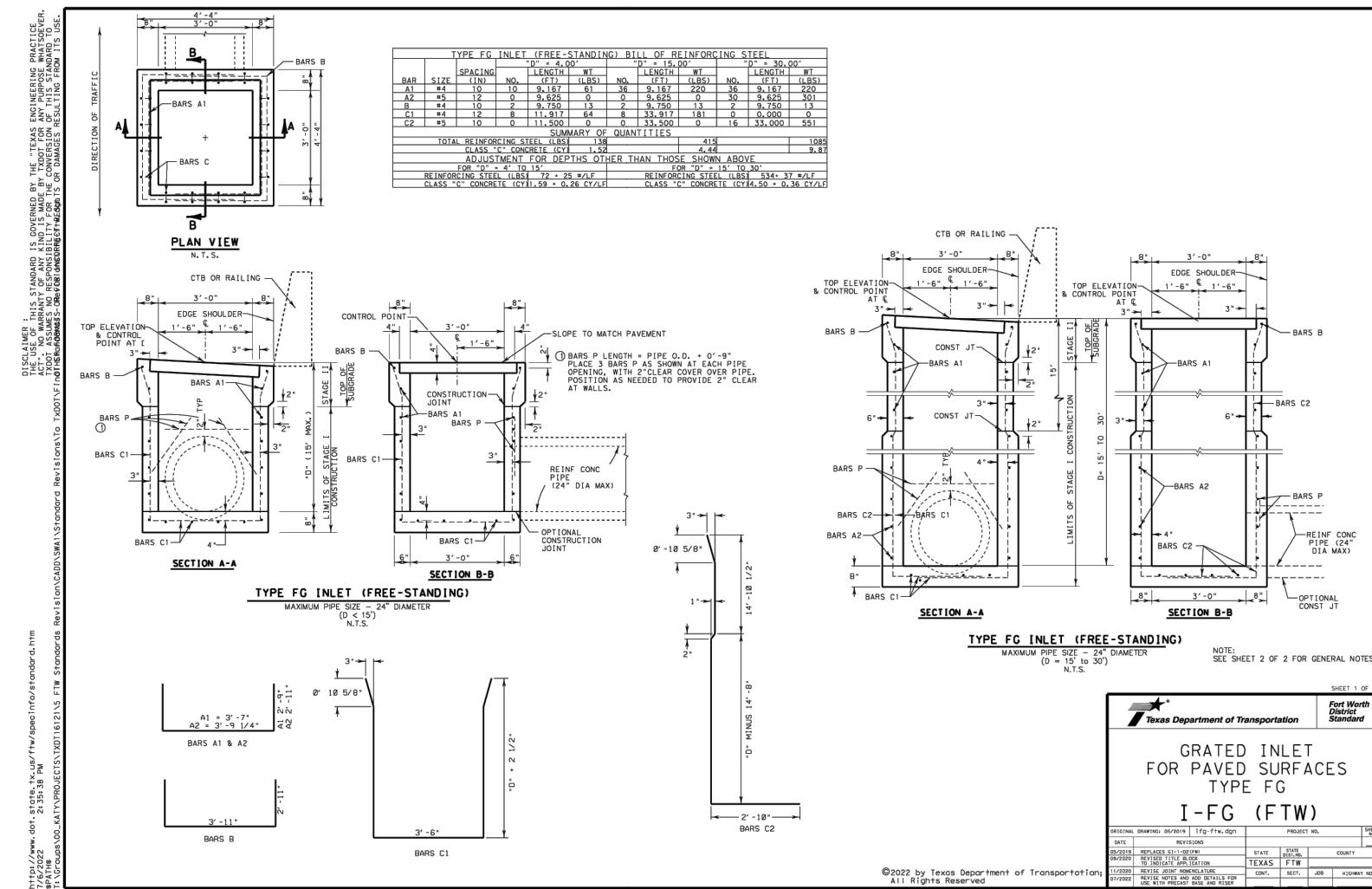
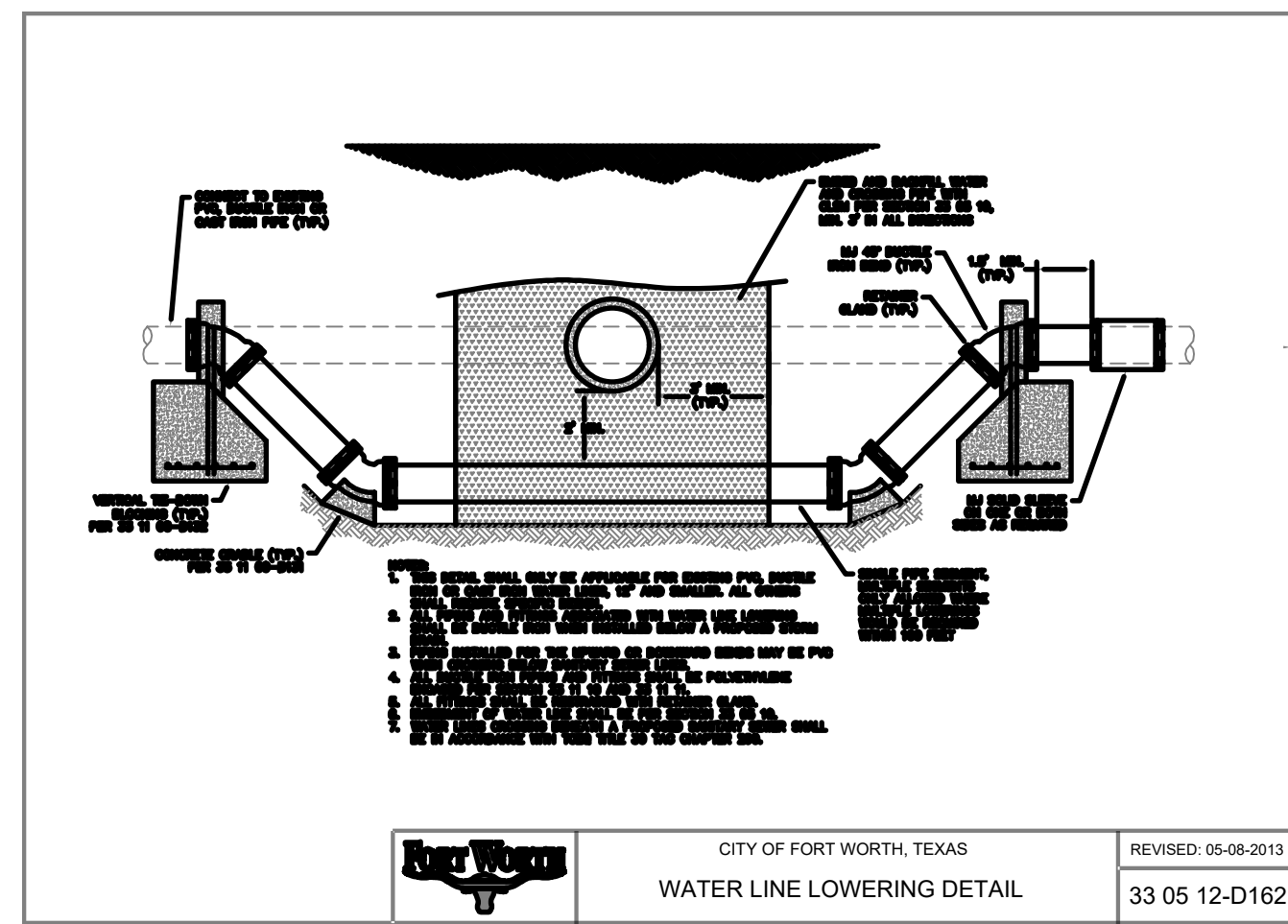
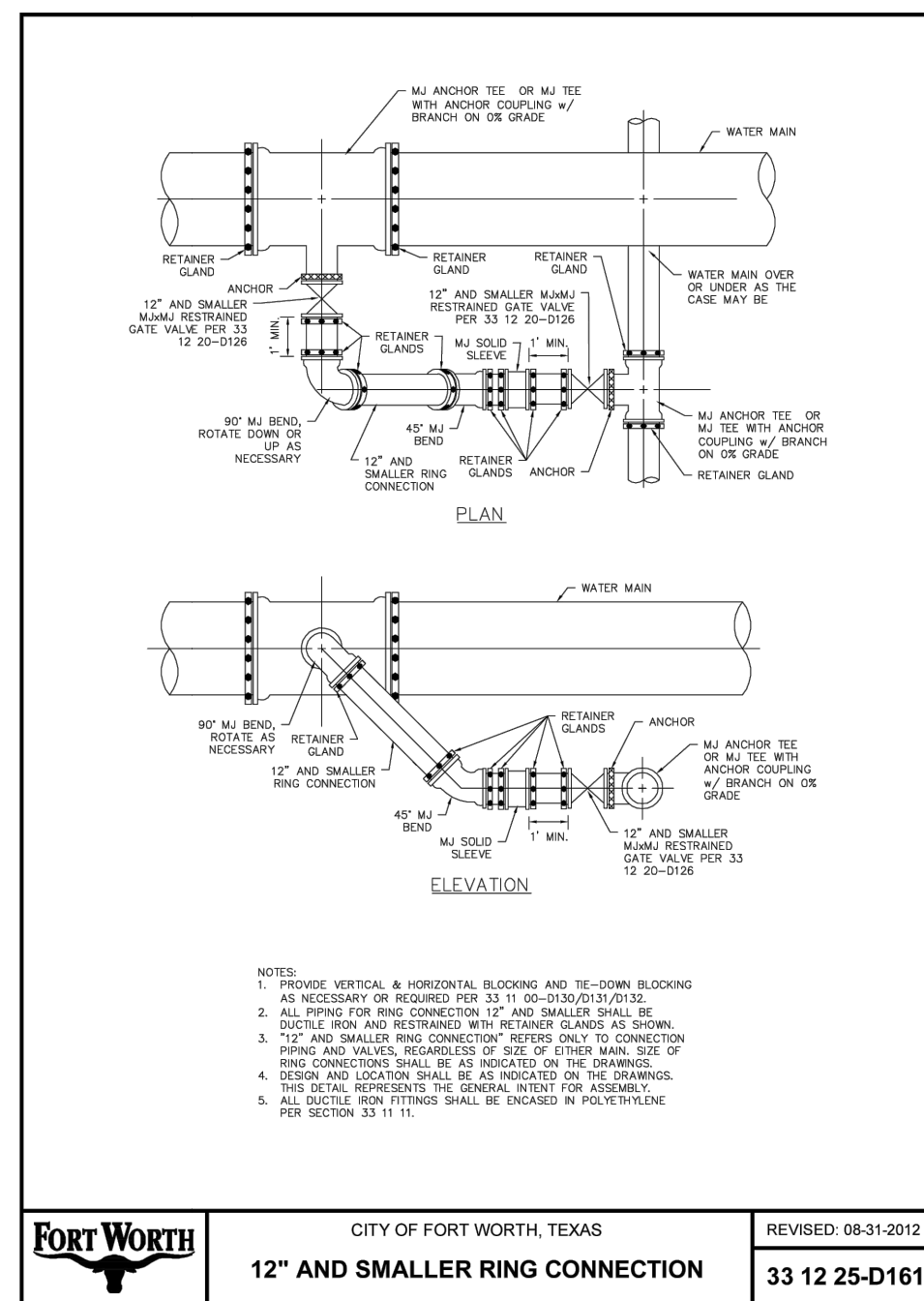
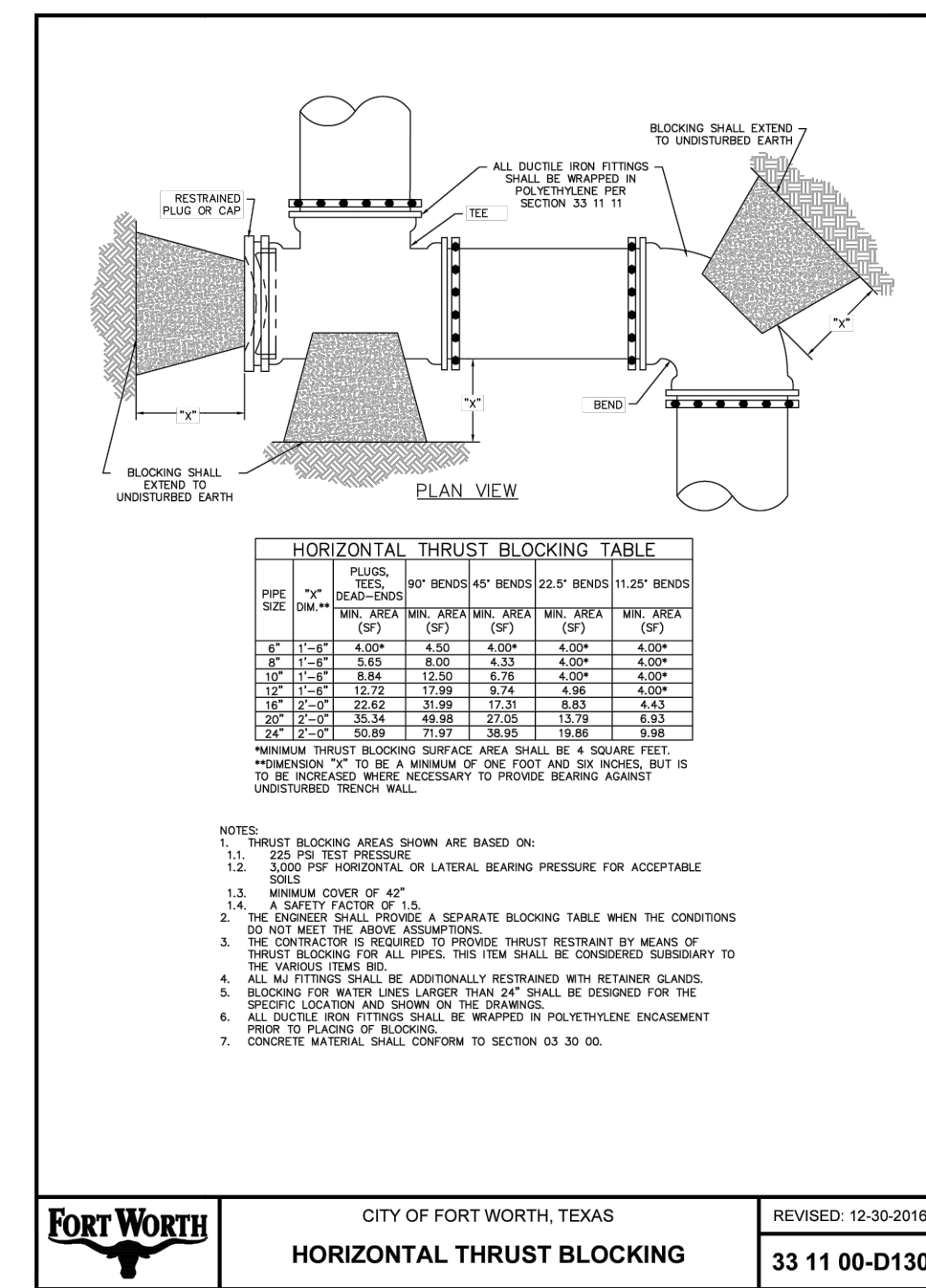
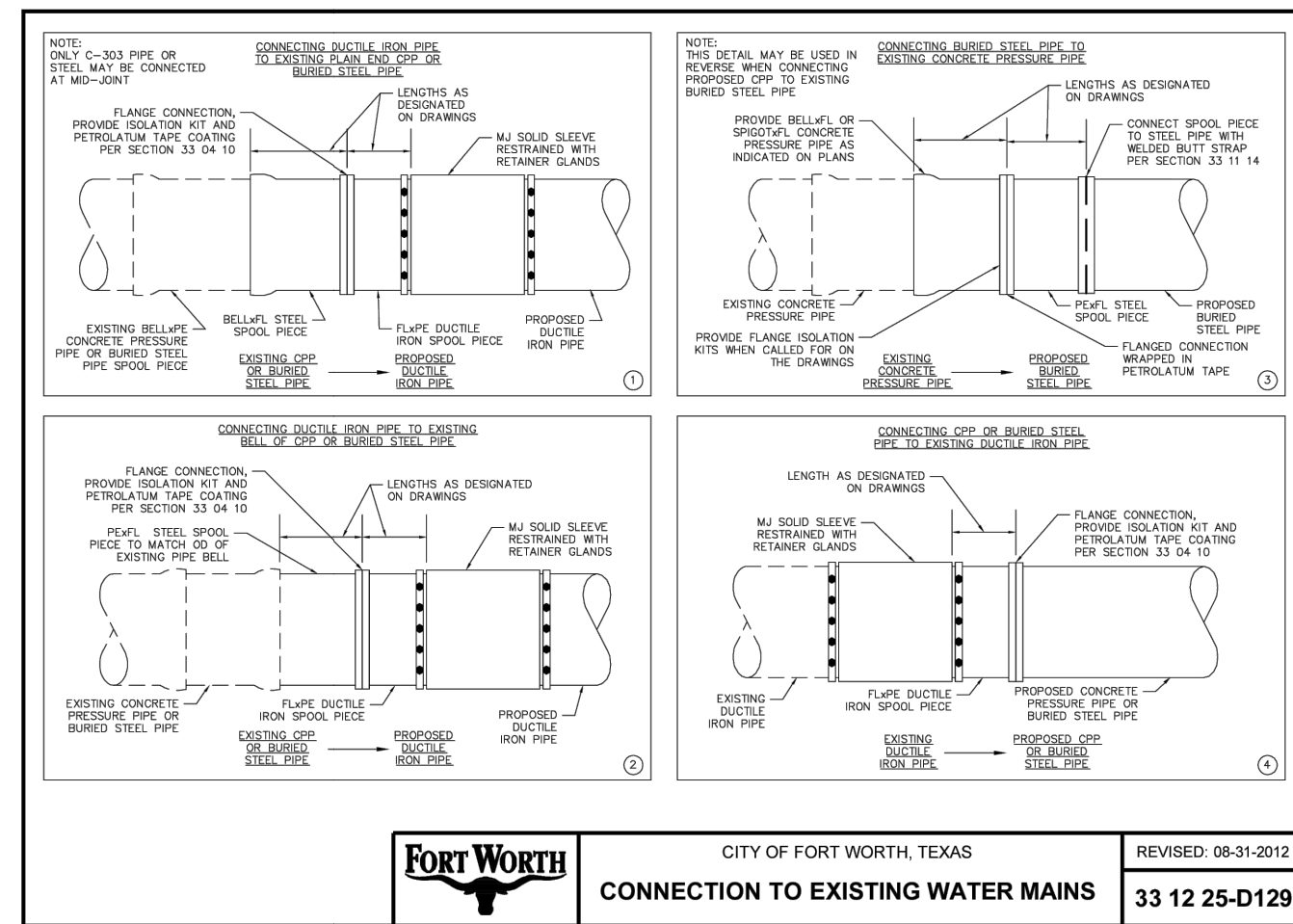
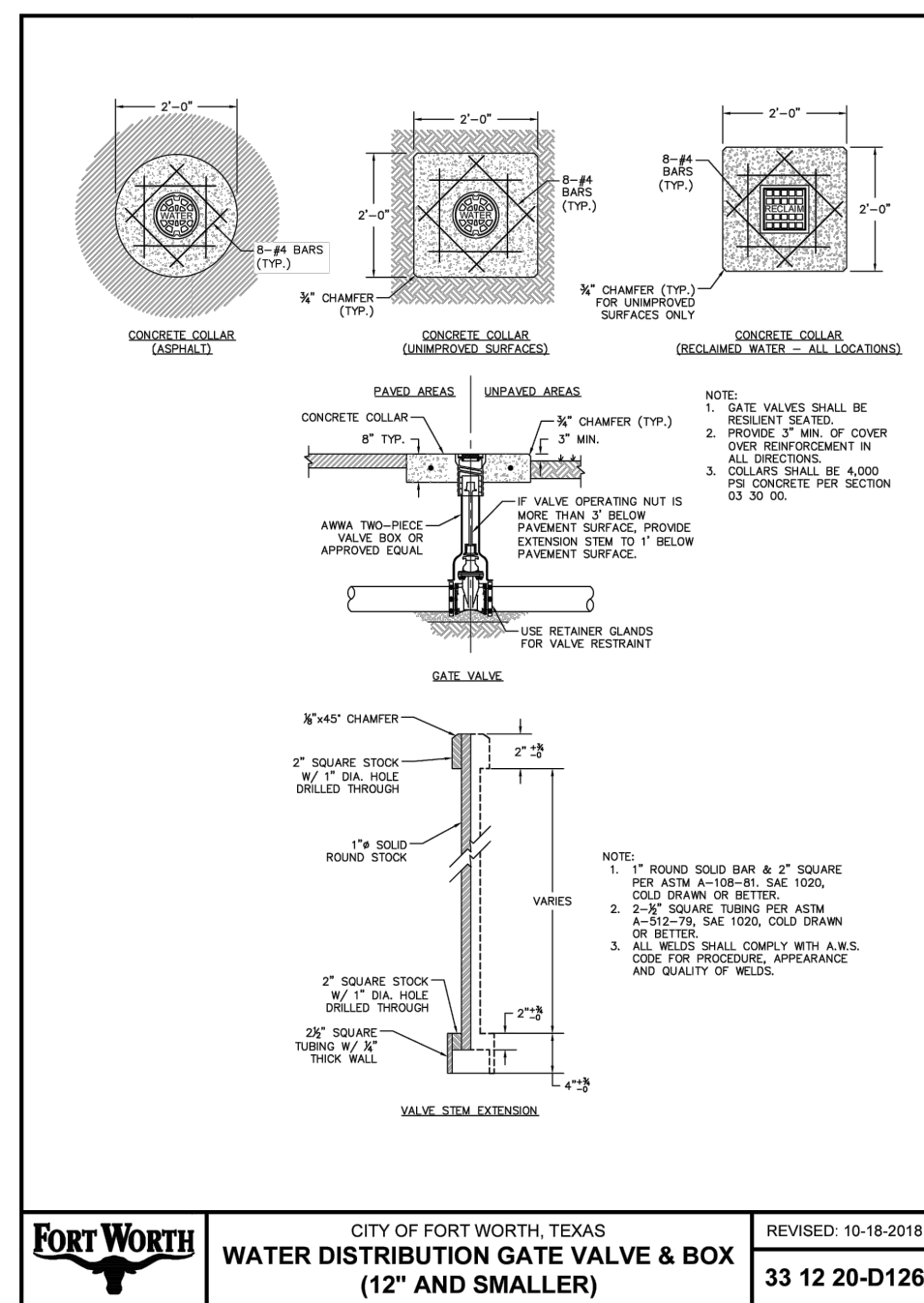
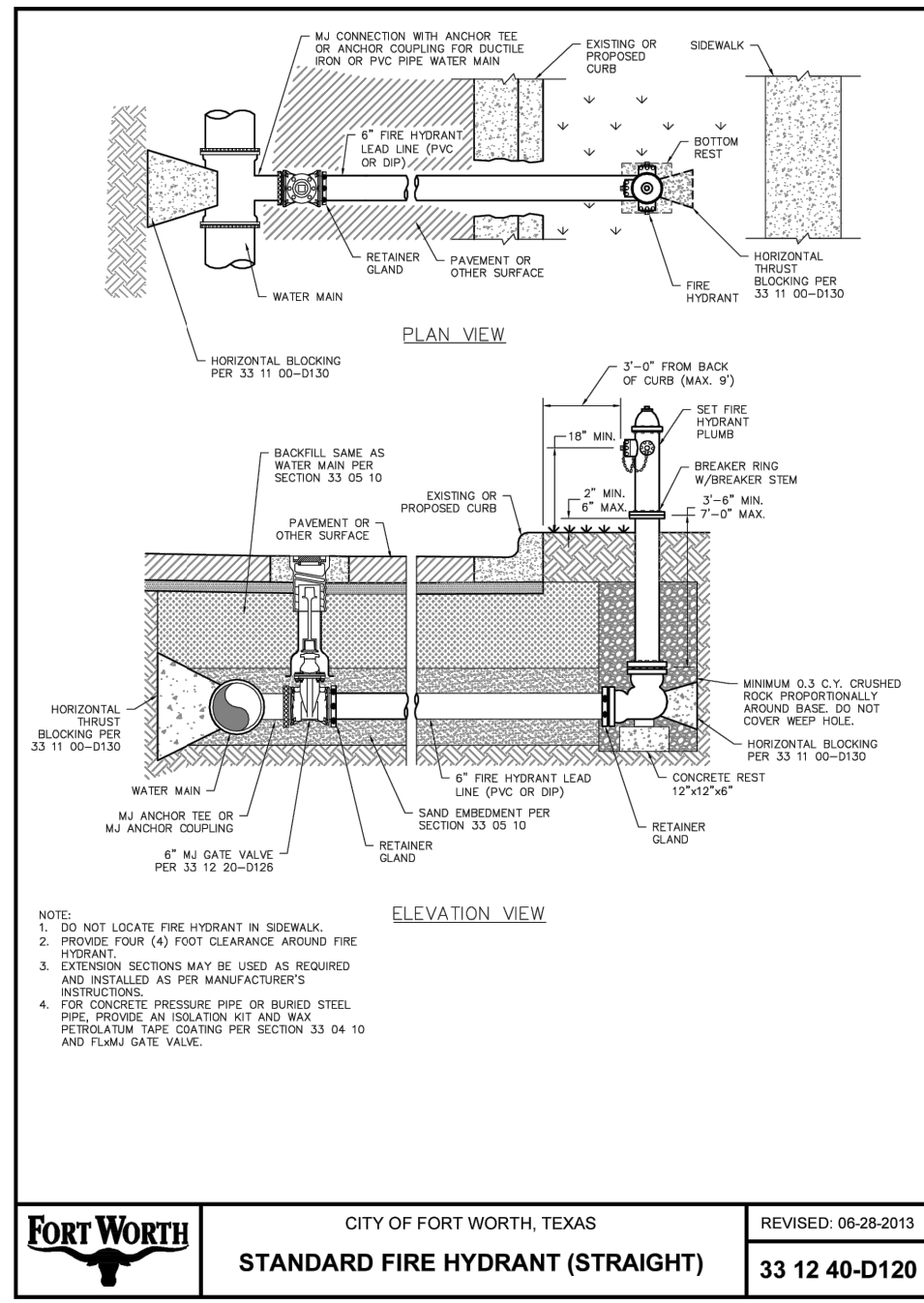
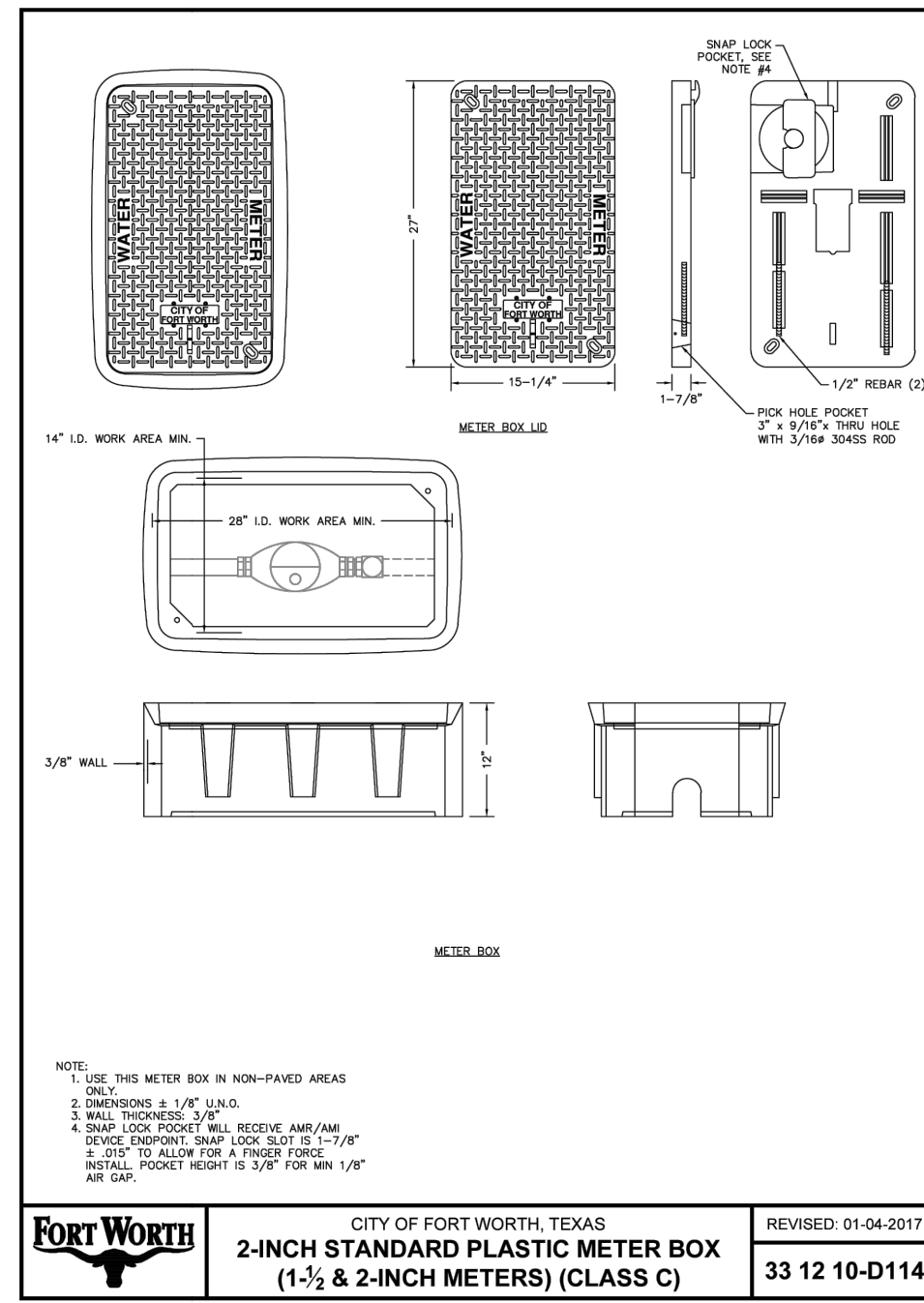
BENCHMARKS:

TBM X-CUT N7182983.6	TBM X-CUT N7182732.0	TBM X-CUT N7182983.6
E-2376464.4	E-2376692.0	E-2376464.4
ELEV:682.2'	ELEV:683.2'	ELEV:682.2'

PRELIMINARY
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF IAN NORFOLK, P.E. 93550 ON 11/13/2024. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.*



SANGER TOWN CENTER SOUTH
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FM 455 AND INDIAN LN
SANGER, TEXAS



BENCHMARKS:
TBM X-CUT N7182983.6 ELEV.682.2
TBM X-CUT N7182732.0 ELEV.683.2
TBM X-CUT N7182983.6 ELEV.682.2

GENERAL DETAILS VII