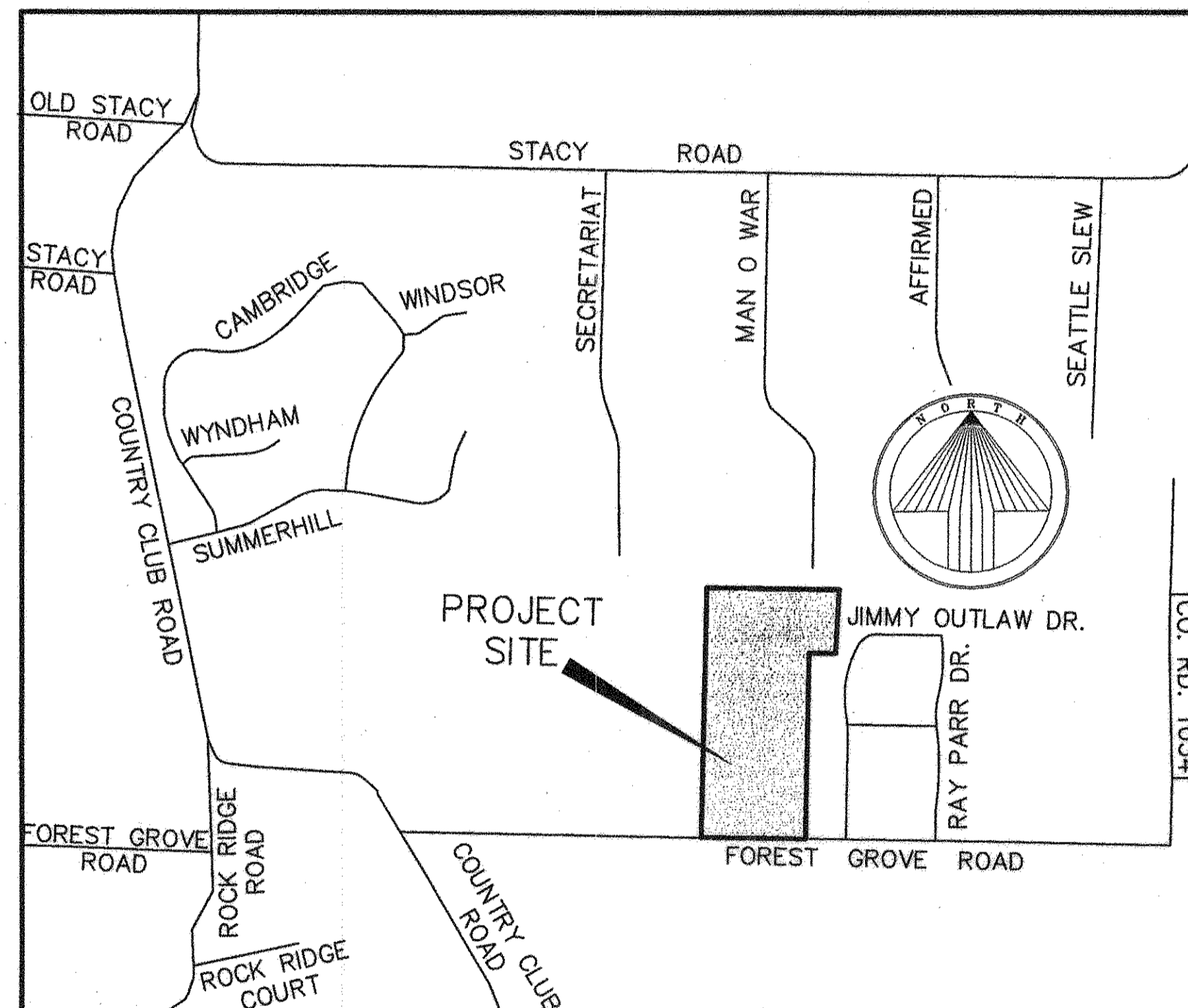


DEVELOPMENT PLANS FOR THE RESERVE AT FOREST GROVE CITY OF LUCAS, TEXAS

GENERAL NOTES

1. All street and alley intersections and connections shall be built by the developer.
2. Excavation from streets shall be deposited in low areas to allow proper drainage, except existing creek.
3. All existing ditches, except as noted on drainage plans, shall be filled to conform to surrounding terrain.
4. It will be the responsibility of the developer and/or the contractor to protect and maintain to proper line and grade all public utilities, manholes, cleanouts, valve boxes, fire hydrants, etc. during the construction of this project, prior to and after placing permanent pavement.
5. All materials and workmanship shall conform to City of Lucas Standards and Specifications.
6. Provide street name signs, with City of Lucas Logo.
7. Provide City of Lucas approved Stop sign.
8. Provide Dark Sky type street lights at intersections.



LOCATION MAP
NOT TO SCALE

INDEX

| Sheet No. | Description |
|-----------|--------------------------------------|
| 1 | Final Plat |
| 2-3 | Paving Plans |
| 4 | Drainage Area Map |
| 5 | Grading Plan |
| 6 | Water Plan |
| 7 | Stormwater Pollution Prevention Plan |
| 8 | Tree Survey |
| 9-10 | Detail Plans |

PREPARED FOR
THE HOLMES FAMILY INTERESTS, INC.

2616 Thomas Avenue ~ Dallas, Texas 75204
(214) 748-7172

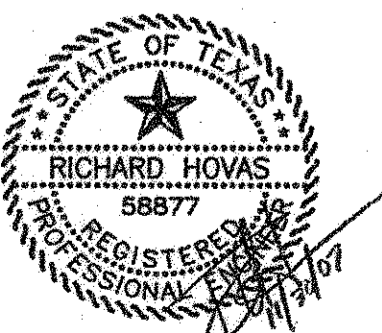
AS BUILT PLANS
11/30/2007

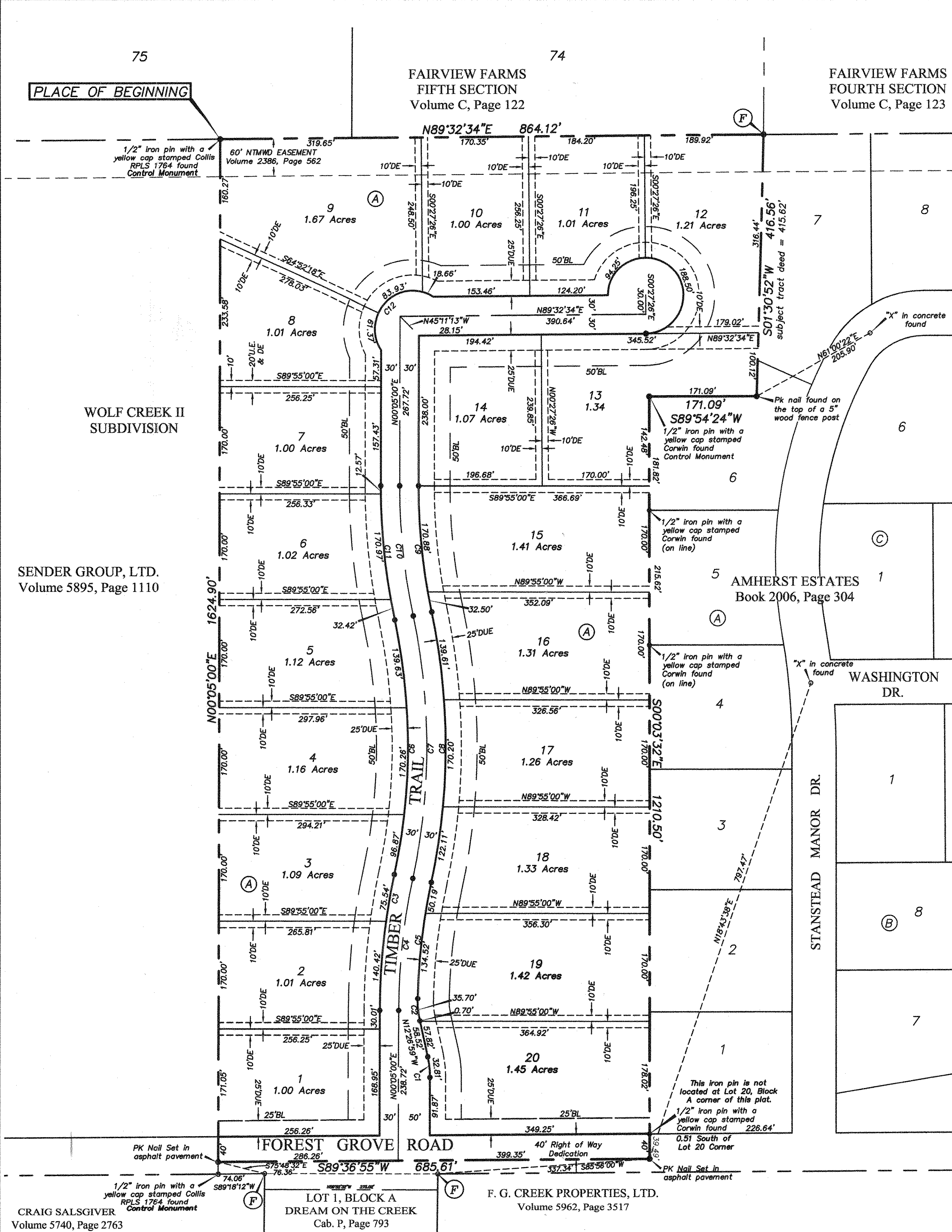
The alignment and grade were set on the ground for construction per the plans. The engineer did not verify alignment or grades after construction. We are not aware of any changes or revisions to these plans during construction except as noted.



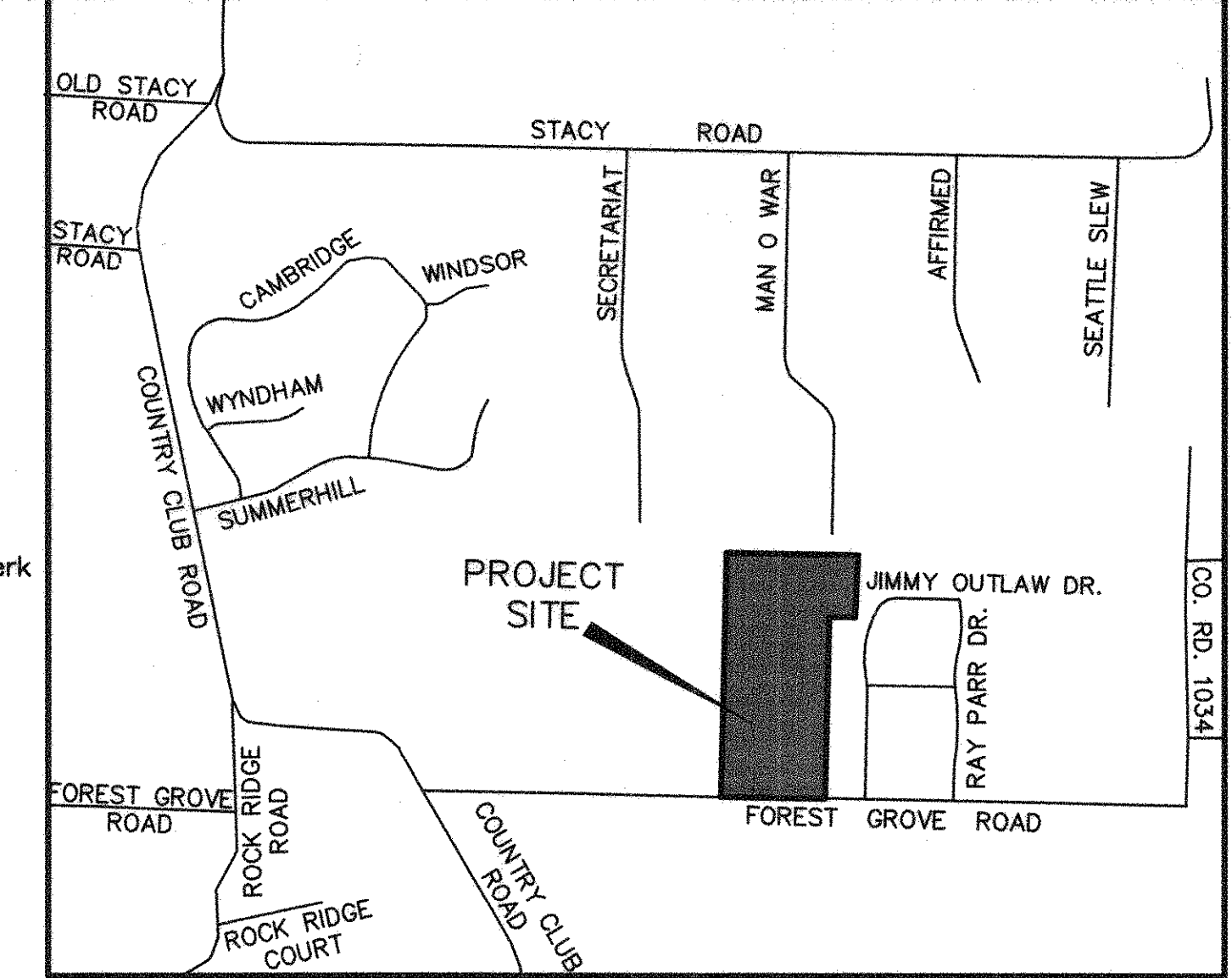
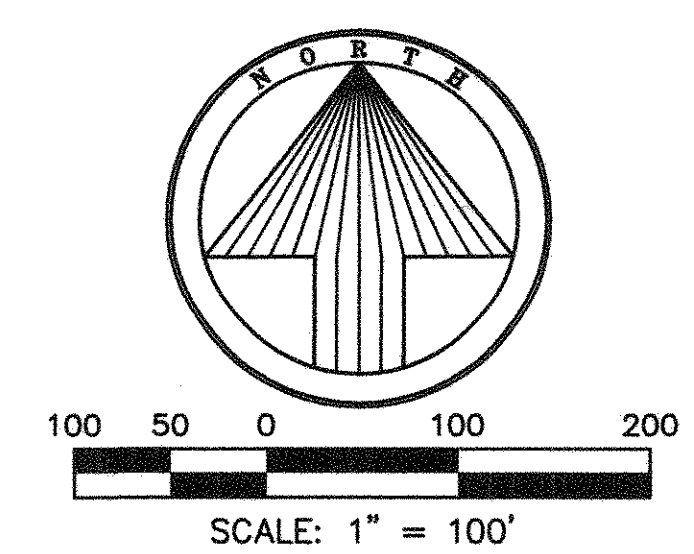
TIPTON ENGINEERING, INC.

6330 Broadway Blvd. ~ Suite C ~ Garland, Texas 75043 (972) 226-2967





| CURVE | RADIUS | DELTA | TANGENT | LENGTH | CHORD | BEARING |
|-------|----------|------------|---------|---------|---------|-------------|
| C1 | 150.00' | 123°59' | 16.47' | 32.81' | 32.75' | N06°10'59"W |
| C2 | 150.00' | 133°38'10" | 17.93' | 35.70' | 35.62' | S05°37'54"E |
| C3 | 1030.00' | 12°00'48" | 108.38' | 215.98' | 215.67' | S08°35'24"W |
| C4 | 1000.00' | 12°00'48" | 105.22' | 208.67' | 208.28' | S08°35'24"W |
| C5 | 970.00' | 10°54'36" | 92.63' | 184.71' | 184.43' | S06°38'30"W |
| C6 | 970.00' | 24°01'36" | 206.42' | 406.76' | 403.79' | N00°05'00"E |
| C7 | 1000.00' | 24°01'36" | 212.80' | 419.34' | 416.28' | N00°05'00"E |
| C8 | 1030.00' | 24°01'36" | 218.18' | 431.92' | 428.77' | N00°05'00"E |
| C9 | 970.00' | 12°00'48" | 102.07' | 203.38' | 203.01' | S08°35'24"E |
| C10 | 1000.00' | 12°00'48" | 105.22' | 208.67' | 208.28' | S08°35'24"E |
| C11 | 1030.00' | 12°00'48" | 108.38' | 215.98' | 215.67' | S08°35'24"E |
| C12 | 60.00' | 156°34'27" | 289.40' | 163.96' | 117.50' | S44°48'47"W |
| C13 | 60.00' | 270°00'00" | 60.00' | 282.74' | 84.85' | N44°32'34"E |



STATE OF TEXAS)
 COUNTY OF COLLIN)

OWNERS CERTIFICATE

WHEREAS, The Holmes Family Interests, Inc., a Texas Corporation is the owner of a tract of land situated in the G. Fitzhugh Survey, Abstract No. 318, Collin County, Texas according to the General Warranty Deed With Vendor's Lien recorded in County Clerk File Number 20070726001034630 of the Land Records of Collin County, Texas (LRCTT), the subject tract being more particularly described as follows;

BEGINNING at a 1/2" iron pin found on the south line of Fairview Farms Fifth Section, an addition to the Town of Fairview according to the file plat recorded in Cabinet C, Page 122 (DRCTT) said Beginning Point further being the northwest corner of the subject tract and the northeast corner a tract of land conveyed to Sender Group, Ltd. according to the deed recorded in Volume 5895, Page 1110 (LRCTT);

THENCE, N 89° 32' 34" E, along the north line of the subject tract and the south line of said Fairview Farms Fifth Section, a distance of 864.12 feet to a 1/2" iron pin found at the northeast corner of the subject tract and the northwest corner of Lot 7, Block A of Amherst Estates, an addition to the City of Lucas, Collin County, Texas according to the file plat recorded in Book 2006, Page 304 (LRCTT);

THENCE, S 01° 30' 52" W, along the east line of the subject tract and the west line of said Amherst Estates, a distance of 416.56 feet (deed = 415.62 feet) to a PK nail found on top of a 5" diameter wood post at corner, and from which an "X" found in the concrete pavement of Stanstead Manor Dr. bears N 61° 00' 22" E, a distance of 205.90 feet;

THENCE, S 89° 54' 24" W, along a south line of the subject tract and a north line of said Amherst Estates, a distance of 171.09 feet to a 1/2" iron pin with a yellow cap stamped Corwin found at corner;

THENCE, S 00° 03' 32" E, along the east line of the subject tract and the west line of said Amherst Estates, passing at a distance of 181.82 feet a 1/2" iron pin with a yellow cap stamped "Corwin" found, and passing at a distance of 1171.01 feet, a 1/2" iron pin with a yellow cap stamped "Corwin" found, and continuing to make a total distance of 1210.50 feet to a PK nail set in asphalt pavement of Forest Grove Road at the southeast corner of the subject tract and from which a 1/2" iron pin found bears S 85° 56' 00" W, a distance of 337.34 feet;

THENCE, S 89° 36' 55" W, along the south line of the subject tract and along the approximate center line of said Forest Grove Road, a distance of 685.61 feet to a PK nail set in asphalt pavement at the southwest corner of the subject tract and from which a 1/2" iron pin with a yellow cap stamped Collis RPLS 1764 found bears S 00° 05' 00" W, a distance of 19.62 feet and another 1/2" iron pin found bears S 75° 48' 32" E, a distance of 76.36 feet;

THENCE, N 00° 05' 00" E, along the west line of the subject tract and the east line of said Sender Group Ltd. tract, a distance of 1624.90 feet to the PLACE OF BEGINNING with the subject tract containing 1,184,545 square feet or 27.1934 acres of land.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

THAT, THE HOLMES FAMILY INTERESTS, INC. acting herein by and through its duly authorized officer, do hereby adopt this plat designating the herein described property as THE RESERVE AT FOREST GROVE, an addition to the City of Lucas, Texas and do hereby dedicate, in fee simple, to the public use forever, the streets, alleys and public areas shown thereon. The easements, as shown, are hereby dedicated for the purposes as indicated. The Utility and Drainage Easements being hereby dedicated for the mutual use and accommodation of the City of Lucas and all public utilities desiring to use or using same. All and any public utility and the City of Lucas shall have the right to remove and keep removed all or parts of any building, fences, shrubs, trees, or other improvements or growths, which in anyway endanger or interfere with the construction, maintenance or efficiency of its respective systems on said Easements, and the City of Lucas and all public utilities shall, at all times, have the full Right of Ingress and Egress to or from and upon said Easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining, and adding to or removing all or part of its' respective systems, without the necessity, at any time or procuring the permission of anyone.

This plat approved subject to all platting ordinances, rules, regulations, and resolutions of the City of Lucas, Texas.

WITNESS MY HAND AT _____, TEXAS this the _____ day of _____, 2008.

By: ROBERT HOLMES, II
 THE HOLMES FAMILY INTERESTS, INC.

STATE OF TEXAS)
 COUNTY OF COLLIN)

BEFORE ME, the undersigned authority, on this day personally appeared _____ of said entity, known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same as the act of said entity and that he executed the same as the act of said entity for the purpose and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, This _____ day of _____, 2008.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

SURVEYORS CERTIFICATE

I, Gregory A. McCall, Registered Professional Land Surveyor for Tipton Engineering, Inc., do hereby certify that the plat shown hereon accurately represents the results of an on-the-ground survey made in December 2007, under my direction and supervision, and further certify that all corners are as shown thereon, and that said plat has been prepared in accordance with the platting rules and regulations of the City of Lucas, Texas. No interior lot corners were staked at the time of this filing;

Date: This the _____ day of _____, 2008.

TIPTON ENGINEERING, INC.

Gregory A. McCall
 Registered Professional Land Surveyor
 No. 4396

THE STATE OF TEXAS)
 COUNTY OF DALLAS)

BEFORE ME, the undersigned authority, on this day personally appeared DARREN K. BROWN, whose name is subscribed to the foregoing instrument and acknowledged to me that the same was the act of the said Tipton Engineering, Inc., a Texas Corporation, and that he executed the same as the act of such corporation for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND SEAL OF OFFICE, This _____ day of _____, 2008

NOTARY PUBLIC, IN AND FOR THE STATE OF TEXAS

The undersigned, the City Secretary of the City of Lucas, Texas, hereby certifies that the foregoing Plat of THE RESERVE AT FOREST GROVE was submitted to me on the _____ day of _____, 2008, and the Council, by formal action, then and there accepted the dedication of streets, easements, public places and water lines as shown and set forth in and upon said plat, and said Council further authorized the Mayor to note acceptance thereof for the construction by signing his/her name as herein above subscribed.

Witness my hand the _____ day of _____, 2008

City Secretary
 City of Lucas, Texas

RECOMMENDED FOR APPROVAL

Chairman, Planning and Zoning Commission
 City of Lucas, Texas

APPROVED FOR PREPARATION OF FINAL PLAT

Mayor
 City of Lucas, Texas

FINAL PLAT
THE RESERVE AT FOREST GROVE

G. FITZHUGH SURVEY, ABSTRACT NO. 318
 CITY OF LUCAS, COLLIN COUNTY, TEXAS
 OWNER

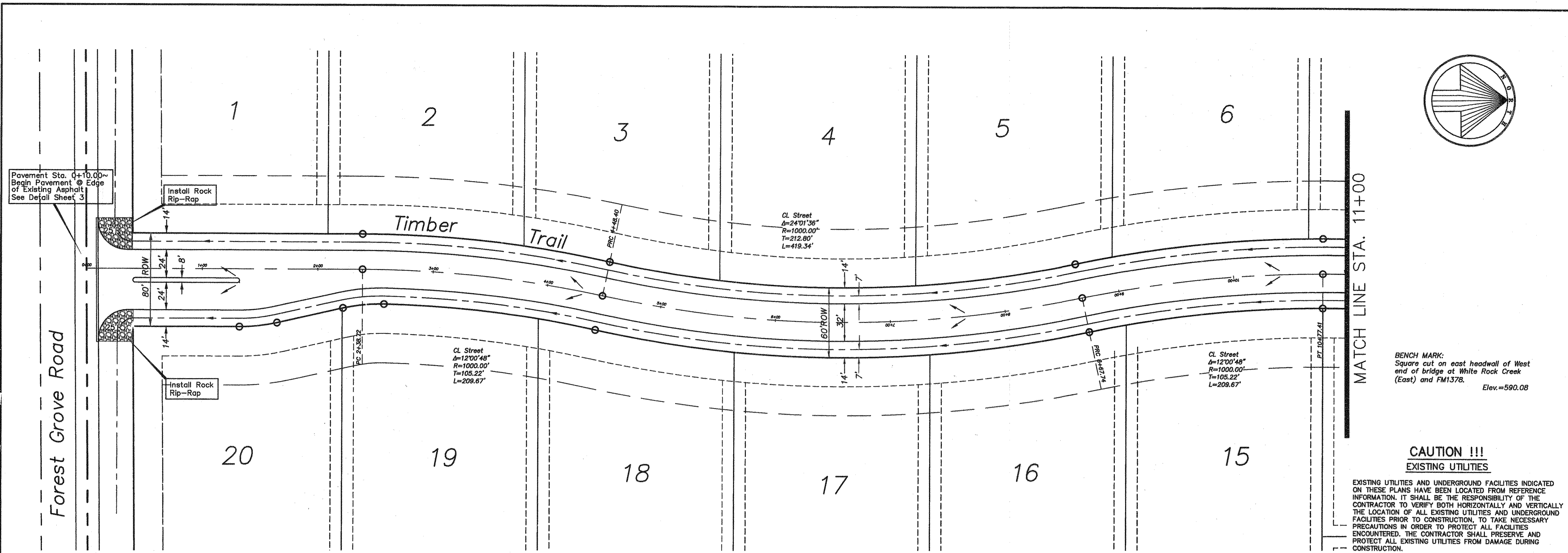
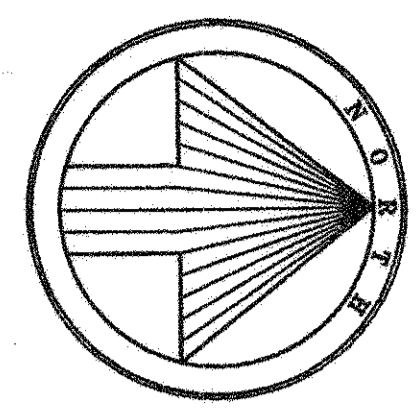
THE HOLMES FAMILY INTERESTS, INC.
 2816 Thomas Avenue ~ Dallas, Texas 75204
 214-748-7172

TIPTON ENGINEERING, INC.
 ENGINEERING • SURVEYING • PLANNING
 6330 Broadway Blvd. • Suite C • Garland, Texas 75043 (972) 226-2967

NOTES:
 Selling a portion of this addition by metes and bounds is a violation of city ordinance and state law and is subject to fines and withholding of utilities and building permits.
 No floodplain exists on this site.

Lots 9-12, Block A are effected by a NTMWD Easement as follows:
 The NTMWD easement restricts construction of permanent structures such as foundations, walls, pools, and permanent storage buildings. Fences and landscaping are permitted within or crossing the easement. Items such as driveways and sprinkler systems that encroach on the NTMWD easement are allowed. However, the NTMWD assumes no responsibility for damages resulting from the need to repair or maintain the NTMWD pipelines. Further, any cost for repair or damage to the pipelines resulting from construction by the developer, contractor or owner will be the responsibility of the developer, contractor or owner.

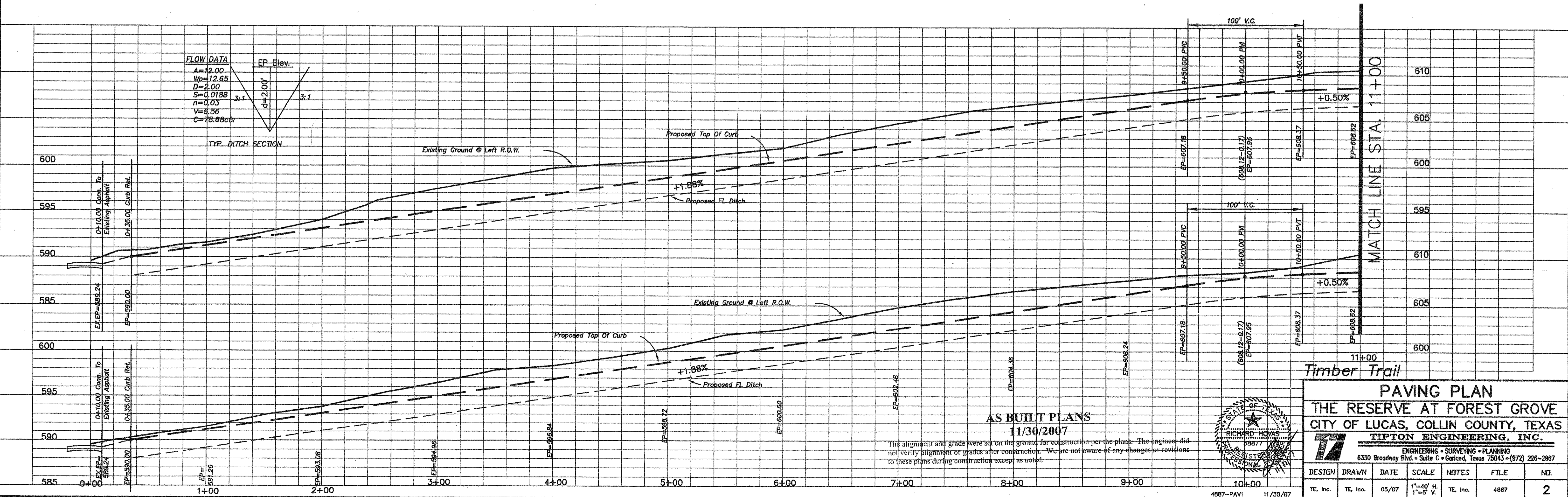
- LEGEND**
- DE - Drainage Easement
 - DUE - Drainage & Utility Easement
 - BL - Building Line
 - UE - Utility Easement
 - (F) - 1/2" Iron pin found

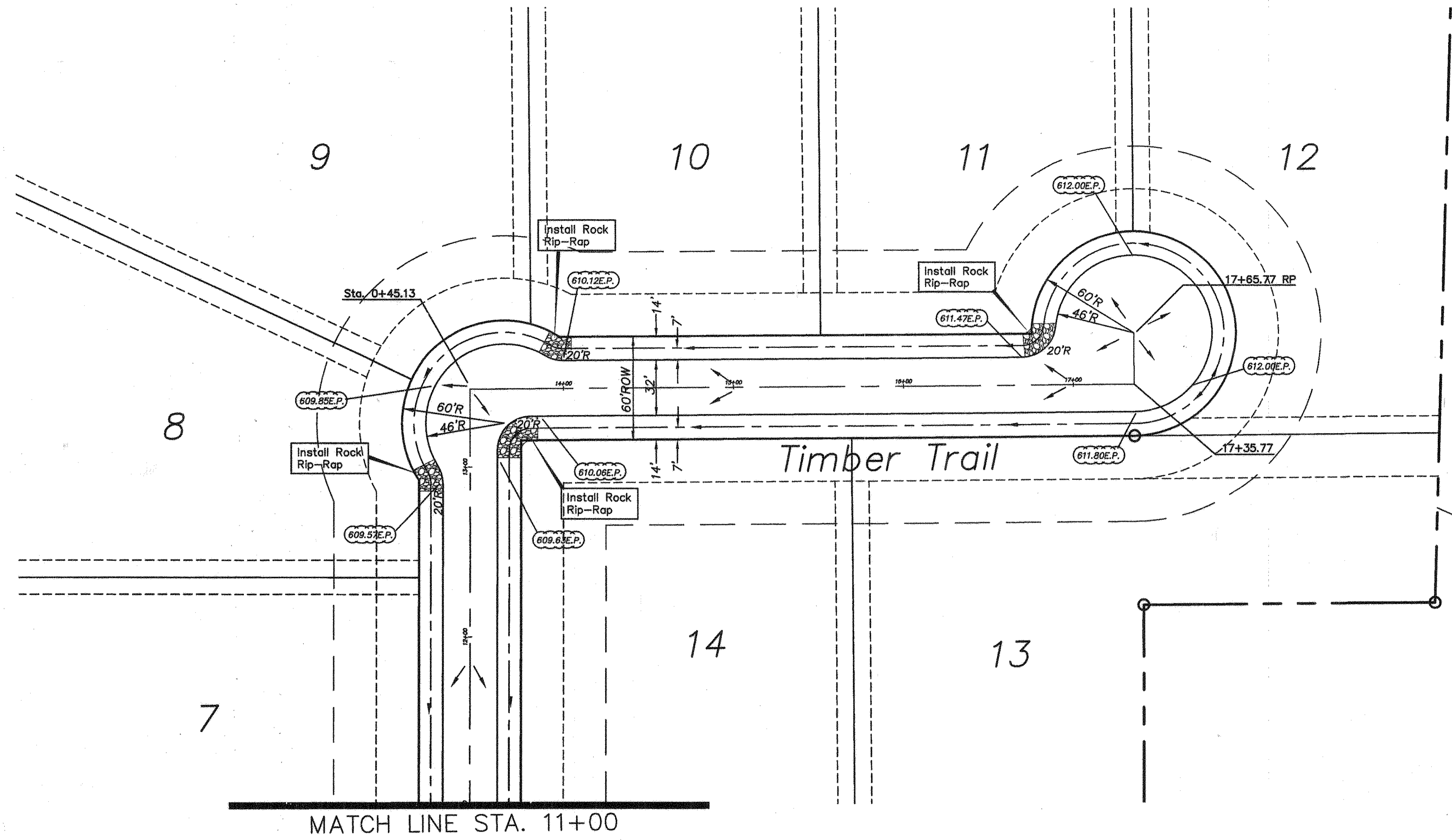
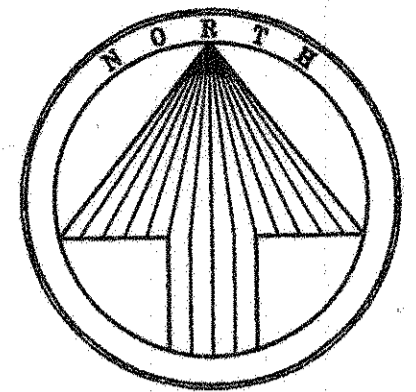


BENCH MARK:
 Square cut on east headwall of West end of bridge at White Rock Creek (East) and FM1376.
 Elev. = 590.08

CAUTION !!!
EXISTING UTILITIES

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.



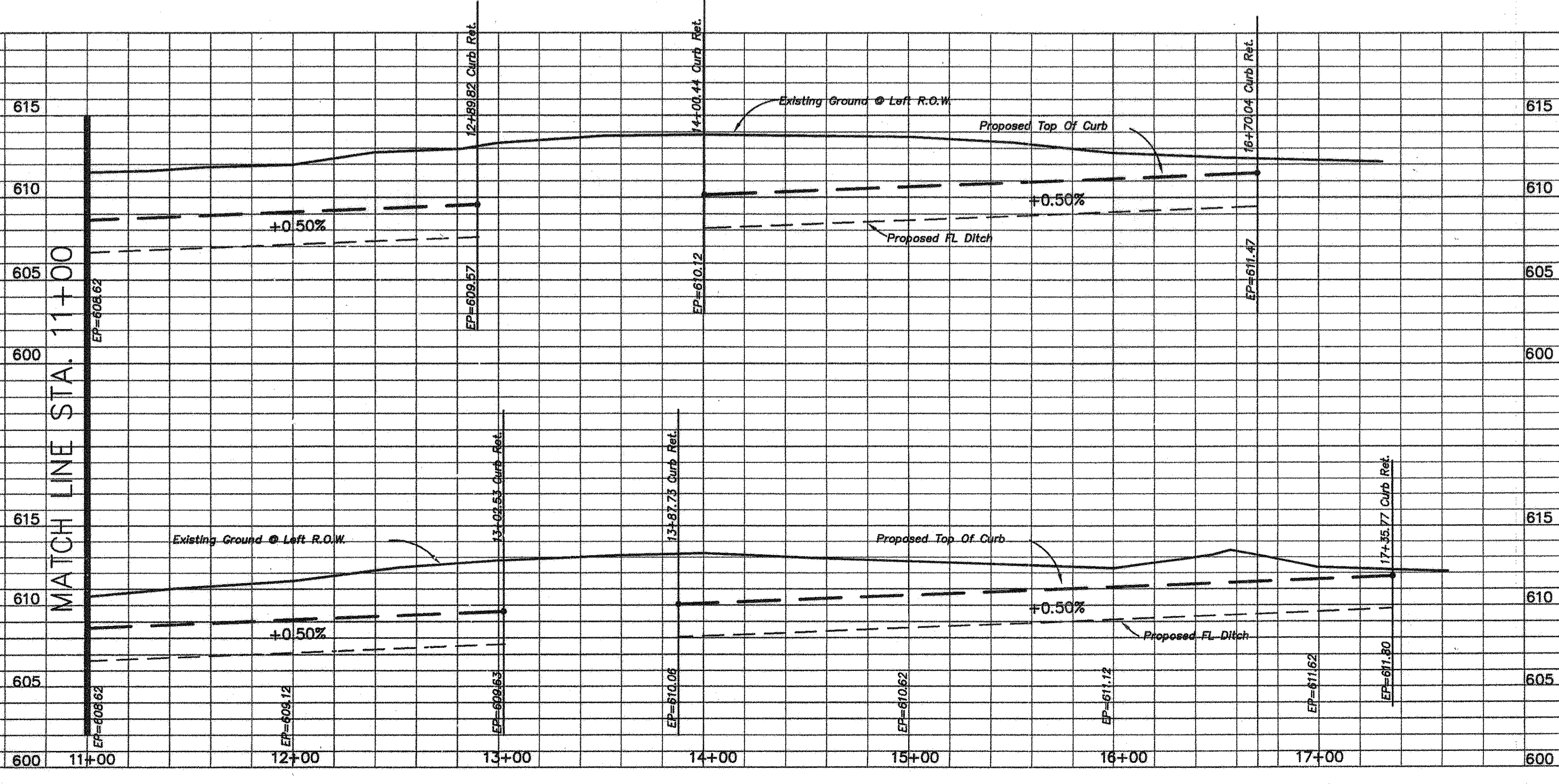


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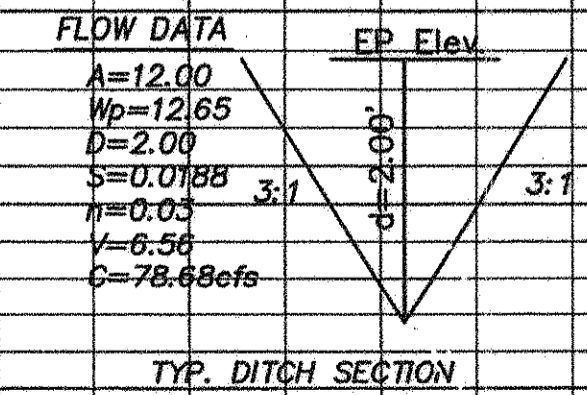
BENCH MARK:
Square cut on east headwall of West end of bridge at White Rock Creek (East) and FM1378.
Elev.=590.08

MATCH LINE STA. 11+00



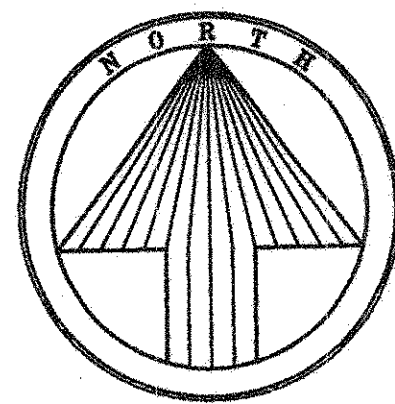
AS BUILT PLANS
11/30/2007

The alignment and grade were set on the ground for construction per the plans. The engineer did not verify alignment or grades after construction. We are not aware of any changes or revisions to these plans during construction except as noted.



Timber Trail

| PAVING PLAN | | | | | | |
|---|----------|-------|-----------------------|----------|------|-----|
| THE RESERVE AT FOREST GROVE | | | | | | |
| CITY OF LUCAS, COLLIN COUNTY, TEXAS | | | | | | |
| TIPTON ENGINEERING, INC. | | | | | | |
| ENGINEERING • SURVEYING • PLANNING | | | | | | |
| 6330 Broadway Blvd. • Suite C • Garland, Texas 75043 • (972) 226-2967 | | | | | | |
| DESIGN | DRAWN | DATE | SCALE | NOTES | FILE | NO. |
| TE, Inc. | TE, Inc. | 05/07 | 1"=40' H. 1"=5' V. | TE, Inc. | 4887 | 3 |



| DRAINAGE DATA | | | | |
|---------------|-------|------|-------|-------|
| AREA | ACRES | C | I 100 | Q 100 |
| A | 14.87 | 0.45 | 7.50 | 50.19 |
| B | 12.32 | 0.45 | 7.50 | 41.58 |

Legend

- = Area
- = Q₁₀₀
- = Drainage Area Divide
- = Existing Contours
- = Direction Of Flow
- = Retention Area

Subdivision

C = 0.45 I₁₀₀ = 7.50 T_c = 15 min

DRIVEWAY CULVERT CHART

| Block | Lot | L.T.D.C. | Area | Q (cfs) | Pipe Dia. (in) |
|-------|-----|----------|-------|---------|----------------|
| A | 1 | 1-12 | 13.67 | 33.59 | 27 |
| A | 2 | 2-12 | 12.54 | 30.81 | 24 |
| A | 3 | 3-12 | 11.34 | 27.86 | 24 |
| A | 4 | 4-12 | 10.06 | 24.72 | 24 |
| A | 5 | 5-12 | 8.81 | 21.65 | 21 |
| A | 6 | 6-12 | 7.66 | 18.82 | 27 |
| A | 7 | 7-12 | 6.55 | 16.09 | 27 |
| A | 8 | 8-12 | 5.46 | 13.42 | 24 |
| A | 9 | 9-12 | 3.72 | 9.14 | 21 |
| A | 10 | 10-12 | 2.60 | 6.39 | 18 |
| A | 11 | 11-12 | 1.48 | 3.64 | 18 |
| A | 12 | 12 | N.A. | N.A. | N.A. |
| A | 13 | 13 | 0.51 | 1.25 | 18 |
| A | 14A | 13-14 | 1.79 | 4.40 | 18 |
| A | 14B | 13-14 | 2.96 | 7.27 | 18 |
| A | 15 | 13-15 | 3.15 | 7.74 | 21 |
| A | 16 | 13-16 | 4.67 | 11.47 | 18 |
| A | 17 | 13-17 | 6.09 | 14.96 | 21 |
| A | 18 | 13-18 | 7.48 | 18.38 | 21 |
| A | 19 | 13-19 | 8.94 | 21.97 | 24 |
| A | 20 | 13-20 | 10.48 | 25.75 | 24 |

Drive Culverts

C = 0.45 I₁₀₀ = 5.46 T_c = 15 min

**CAUTION !!!
EXISTING UTILITIES**

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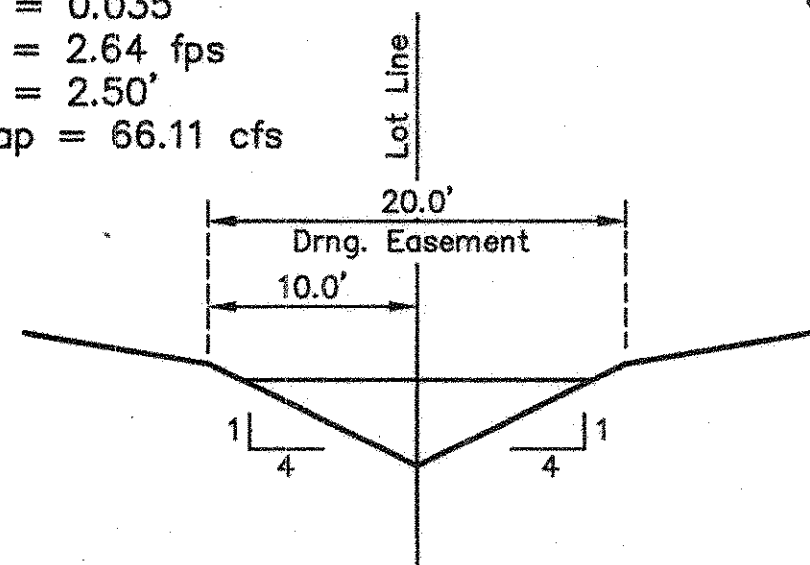
BENCH MARK:
Square cut on east headwall of West end of bridge at White Rock Creek (East) and FM1378. Elev.=590.08

RETENTION CALCULATION

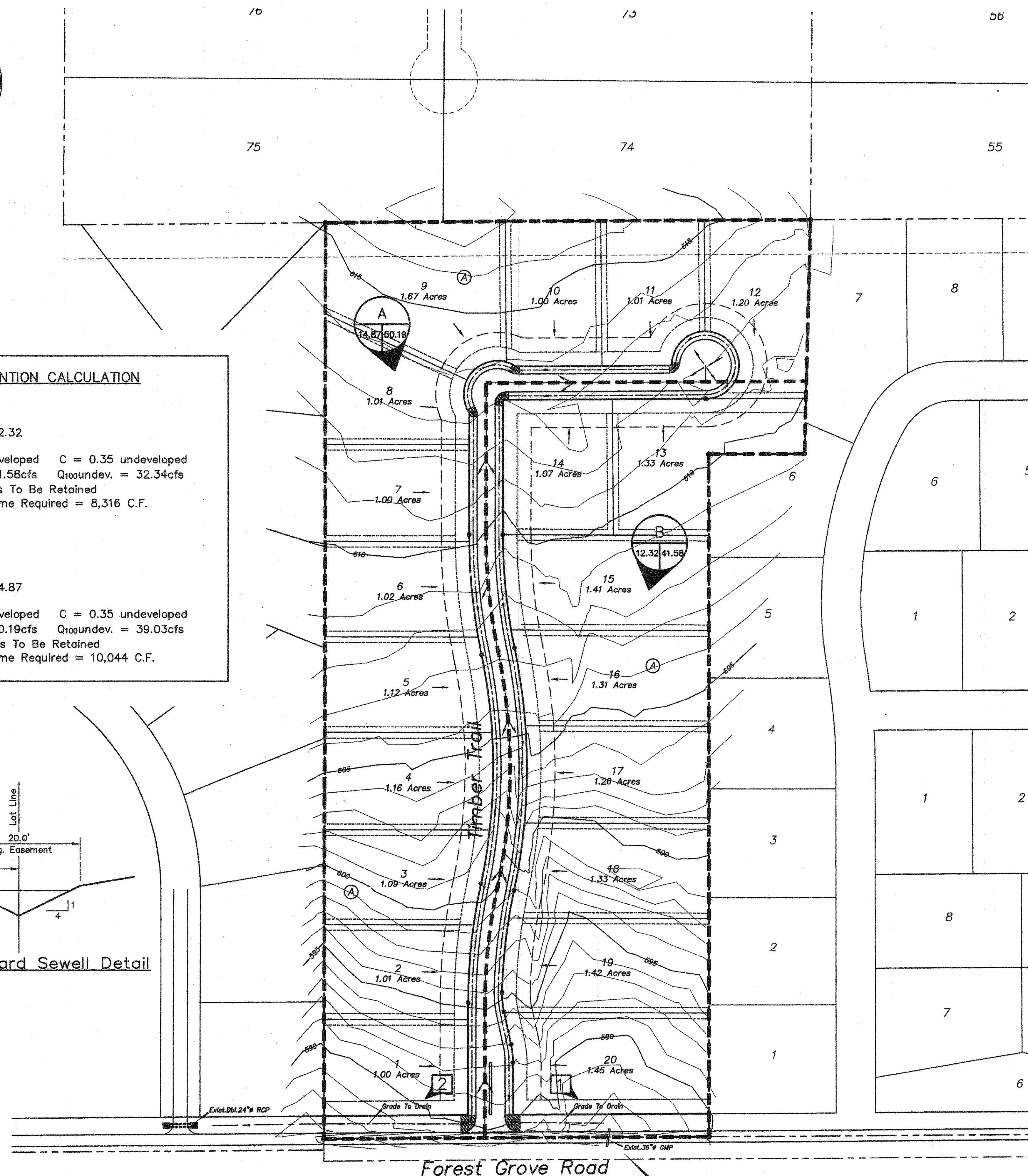
AREA 1
 Acreage = 12.32
 I₁₀₀ = 7.50
 C = 0.45 developed C = 0.35 undeveloped
 Q_{100dev.} = 41.58cfs Q_{100unde.} = 32.34cfs
 Q₁₀₀ = 9.24cfs To Be Retained
 Storage Volume Required = 8,316 C.F.

AREA 2
 Acreage = 14.87
 I₁₀₀ = 7.50
 C = 0.45 developed C = 0.35 undeveloped
 Q_{100dev.} = 50.19cfs Q_{100unde.} = 39.03cfs
 Q₁₀₀ = 11.16cfs To Be Retained
 Storage Volume Required = 10,044 C.F.

A = 25.00 sq.ft.
 WP = 20.62 ft.
 S = 0.0030 ft/ft
 N = 0.035
 V = 2.64 fps
 D = 2.50'
 Cap = 66.11 cfs



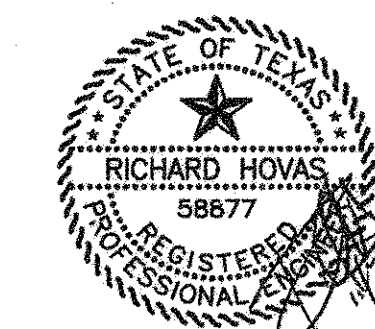
Typical Sideyard Sewer Detail



Exist. 36" Pipe
 Q=41.58cfs
 C=0.45
 S=0.0050
 Vp=6.59

AS BUILT PLANS
 11/30/2007

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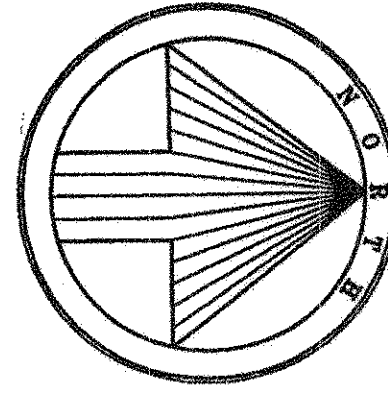


4887-DRNG 11/30/07

DRAINAGE AREA MAP
THE RESERVE AT FOREST GROVE
CITY OF LUCAS, COLLIN COUNTY, TEXAS

TIPTON ENGINEERING, INC.
 ENGINEERING • SURVEYING • PLANNING
 6330 Broadway Blvd. • Suite C • Garland, Texas 75043 • (972) 228-2987

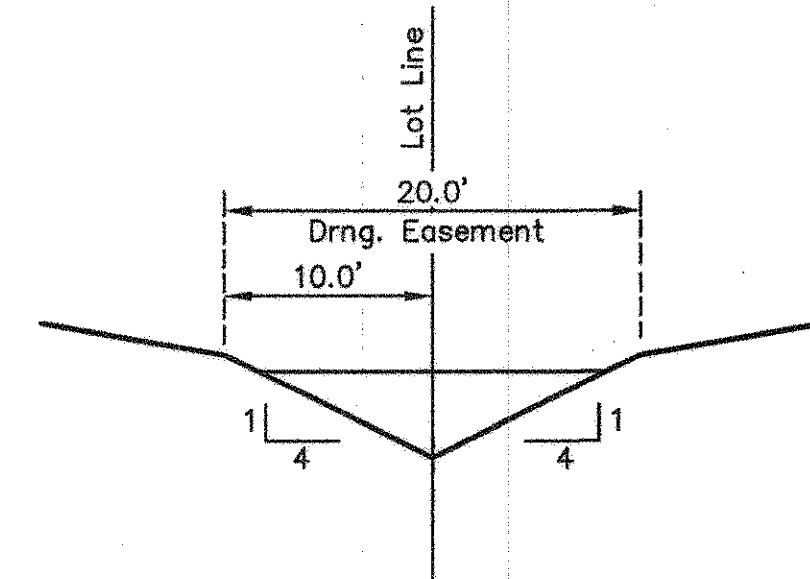
| DESIGN | DRAWN | DATE | SCALE | NOTES | FILE | NO. |
|----------|----------|-------|---------|----------|------|-----|
| TE, Inc. | TE, Inc. | 05/07 | 1"=100' | TE, Inc. | 4887 | 4 |



**CAUTION !!!
EXISTING UTILITIES**

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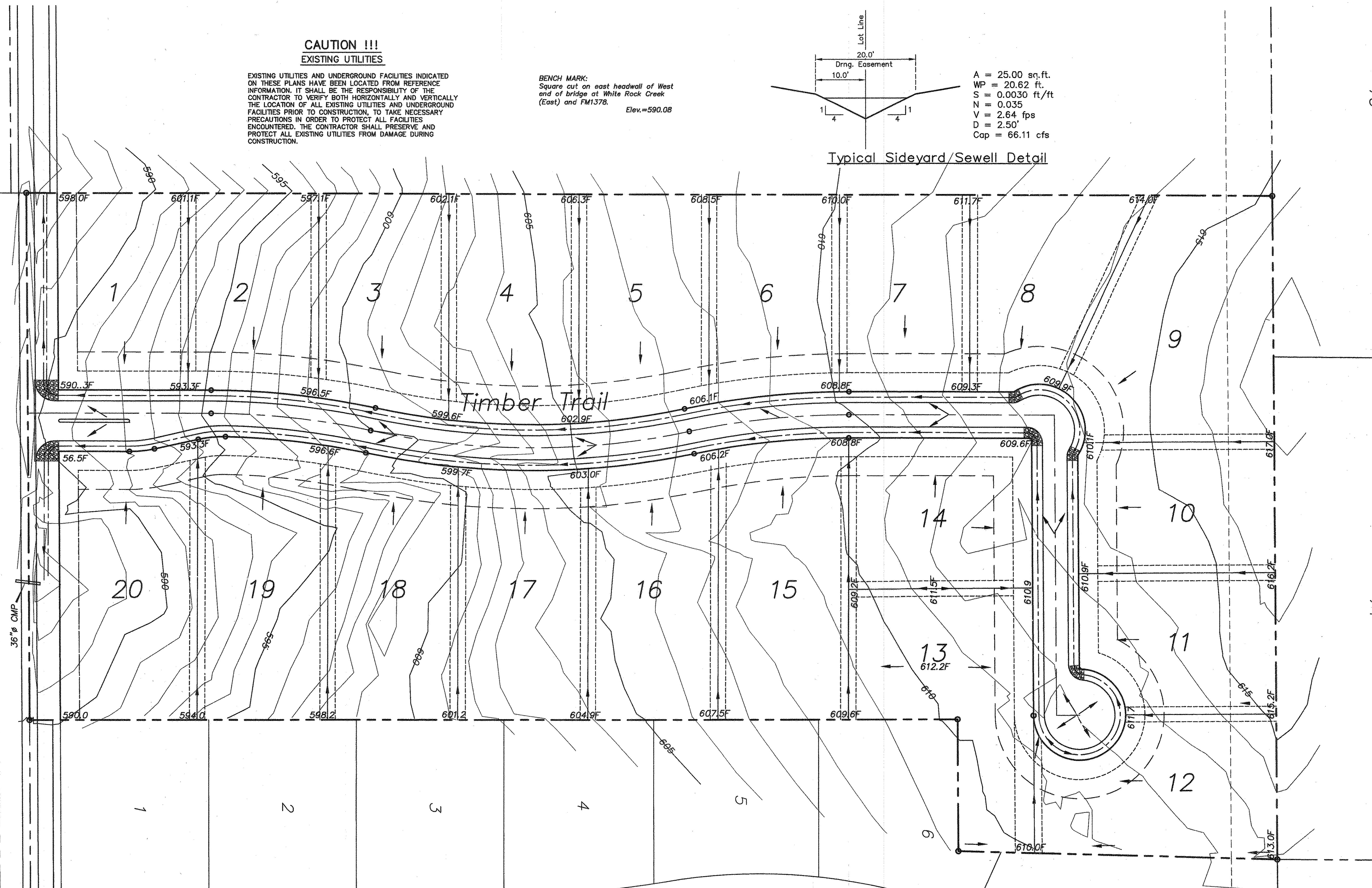
BENCH MARK:
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Elev.=590.08



A = 25.00 sq.ft.
WP = 20.62 ft.
S = 0.0030 ft/ft
N = 0.035
V = 2.64 fps
D = 2.50'
Cap = 66.11 cfs

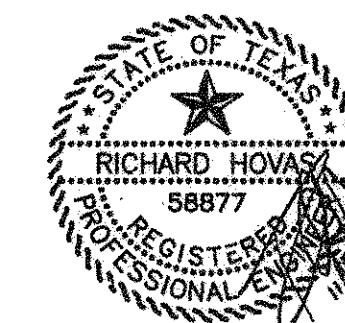
Typical Sideyard/Sewell Detail

Forest Grove Road



AS BUILT PLANS
11/30/2007

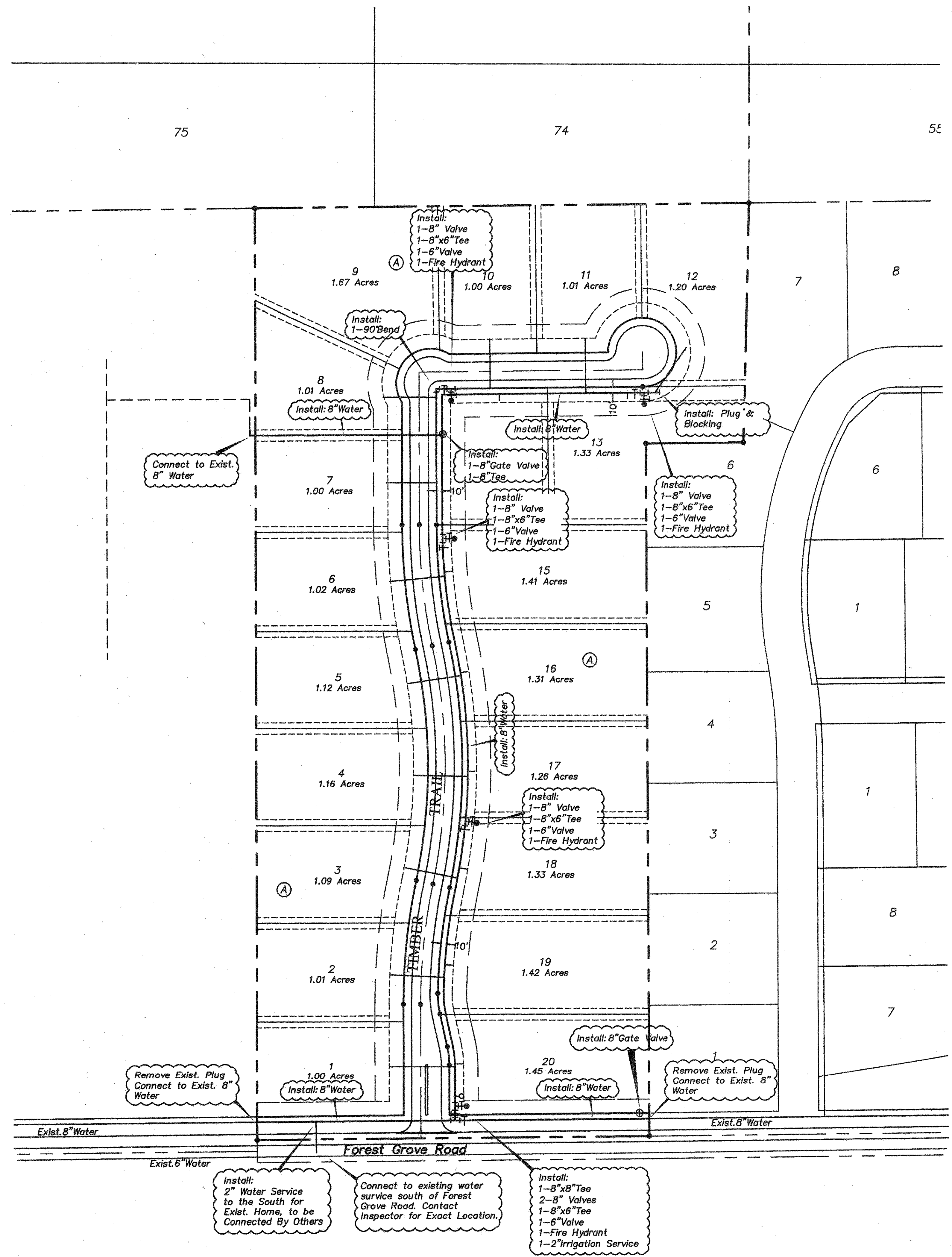
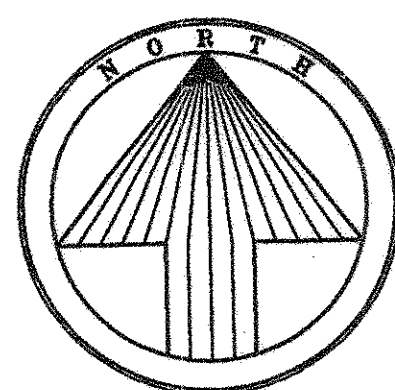
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GRADING PLAN
THE RESERVE AT FOREST GROVE
CITY OF LUCAS, COLLIN COUNTY, TEXAS

TIPTON ENGINEERING, INC.
 ENGINEERING • SURVEYING • PLANNING
 6330 Broadway Blvd. • Suite C • Garland, Texas 75043 • (972) 226-2967

| DESIGN | DRAWN | DATE | SCALE | NOTES | FILE | NO. |
|----------|----------|-------|---------|----------|------|-----|
| TE, Inc. | TE, Inc. | 05/07 | 1"=100' | TE, Inc. | 4887 | 5 |



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GENERAL NOTES

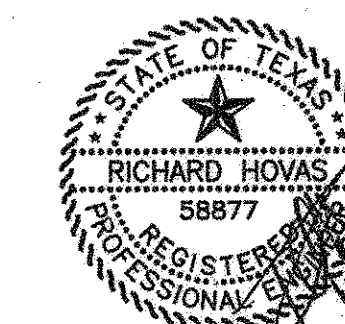
1. WATER MAINS SHALL BE CENTERED WITHIN THE 20' UTILITY EASEMENT.
2. ALL WATER MAINS SHALL BE 8 INCH, ALL FIRE HYDRANT LEADS SHALL BE 6 INCH, UNLESS NOTED OTHERWISE.
3. ALL WATER LINES UNDER STREET PAVEMENT SHALL BE ENCASED.
4. ALL WATER SERVICES SHALL BE ONE INCH AND LOCATED IN CENTER OF LOT, UNLESS NOTED OTHERWISE.
5. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF THE CITY OF LUCAS, TEXAS.
6. ALL WATER VALVES AND FITTINGS SHALL BE LOCATED OUTSIDE OF STREET PAVEMENT.
7. NO TAPPING SADDLES UNDER PAVEMENT.
8. PROVIDE BLUE RAISE PAVEMENT REFLECTORS AT FH LOCATIONS.
9. SCORE PAVEMENT AT VALVE AND WATER SERVICE LOCATIONS.
10. PROVIDE MEGA-LUGS AT ALL MECHANICAL JOINT LOCATIONS.
11. ALL FIRE HYDRANTS TO MUELLER OR EQUIVALENT.

| SERVICE SCHEDULE | | |
|------------------|------|-----|
| TYPE | SIZE | NO. |
| Water | 1" | 20 |
| Irrigation | 2" | 1 |

AS BUILT PLANS
11/30/2007

The alignment and grade were set on the ground for construction per the plans. The engineer did not verify alignment or grades after construction. We are not aware of any changes or revisions to these plans during construction except as noted.

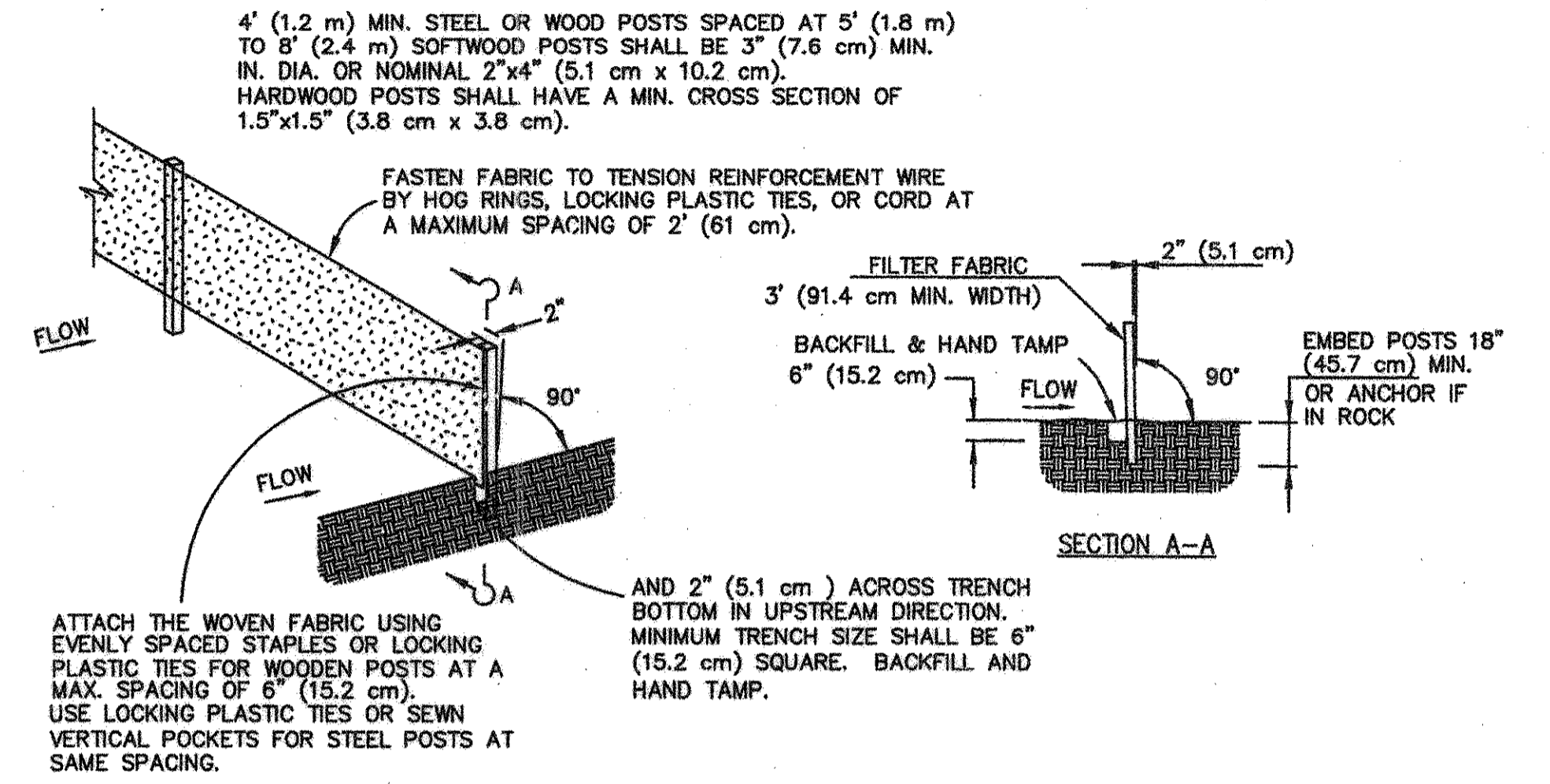
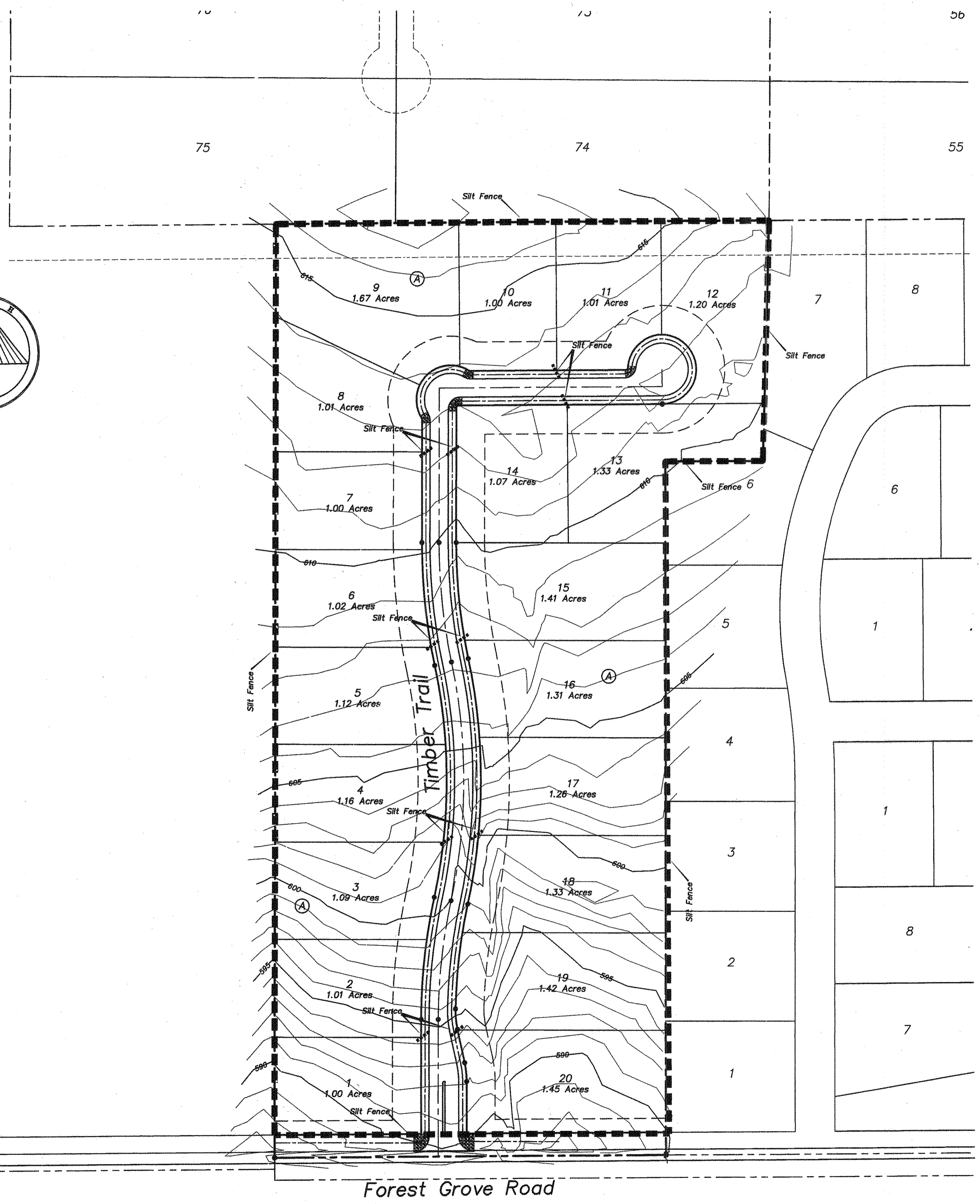
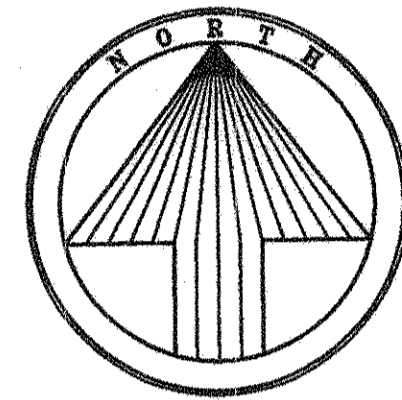
BENCH MARK:
Square cut on east headwall of West end of bridge at White Rock Creek (East) and FM137B.
Elev.=590.08



WATER PLAN
THE RESERVE AT FOREST GROVE
CITY OF LUCAS, TEXAS

TIPTON ENGINEERING, INC.
ENGINEERING • SURVEYING • PLANNING
6330 Broadway Blvd. • Suite C • Garland, Texas 75043 • (972) 226-2867

| DESIGN | DRAWN | DATE | SCALE | NOTES | FILE | NO. |
|----------|----------|-------|---------|----------|------|-----|
| TE, Inc. | TE, Inc. | 05/07 | 1"=100' | TE, Inc. | 4887 | 6 |



SILT FENCE
Not To Scale

CONSTRUCTION NOTES - SILT FENCE

1. Posts which support the silt fence shall be installed on a slight angle toward the anticipated runoff source. The post must be embedded a minimum of 18 inches.
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 washed gravel on the uphill side to prevent flow 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 shall be securely fastened to each support post or to woven wire, which is in turn attached to the support post. There shall be a 6 inch double overlap, securely fastened where ends of fabric meet.
5. Inspection shall be made weekly or after each rainfall. Repair or replacement shall be made promptly as needed.
6. Silt fence shall be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.
7. Accumulated silt shall be removed when it reached a depth of 6 inches. The silt shall be disposed of at an approved site and in such a manner as to not contribute to additional siltation.

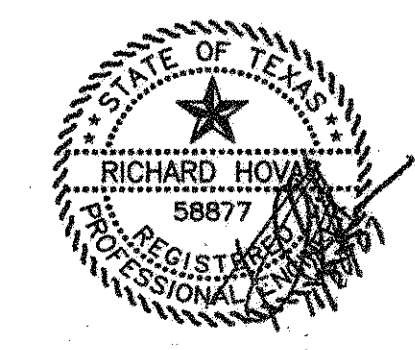
AS BUILT PLANS
11/30/2007

The alignment and grade were set on the ground for construction per the plans. The engineer did not verify alignment or grades after construction. We are not aware of any changes or revisions to these plans during construction except as noted.

BENCH MARK:
Square cut on east headwall of West end of bridge at White Rock Creek (East) and FM1378. Elev.=590.08

CAUTION !!!
EXISTING UTILITIES

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

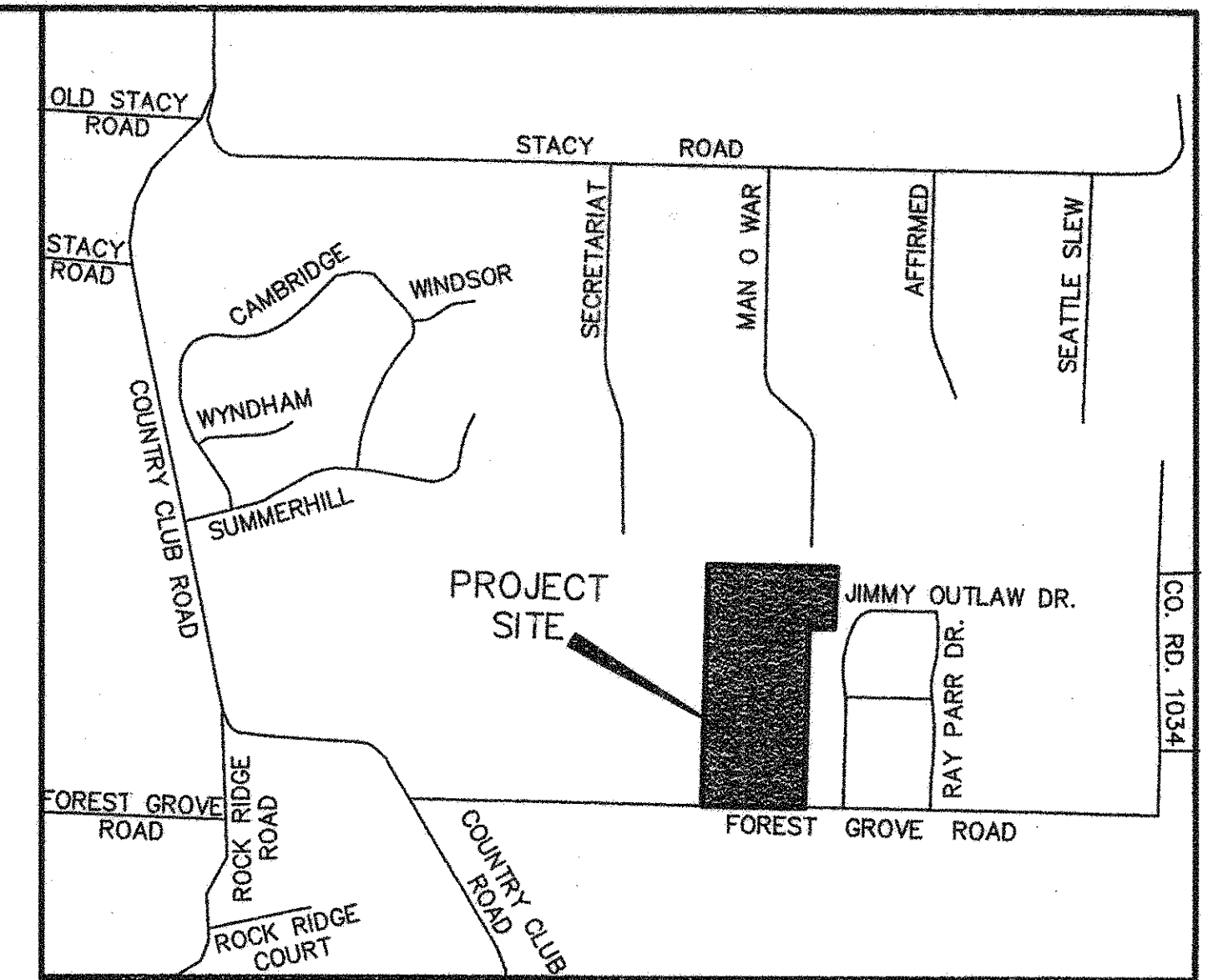
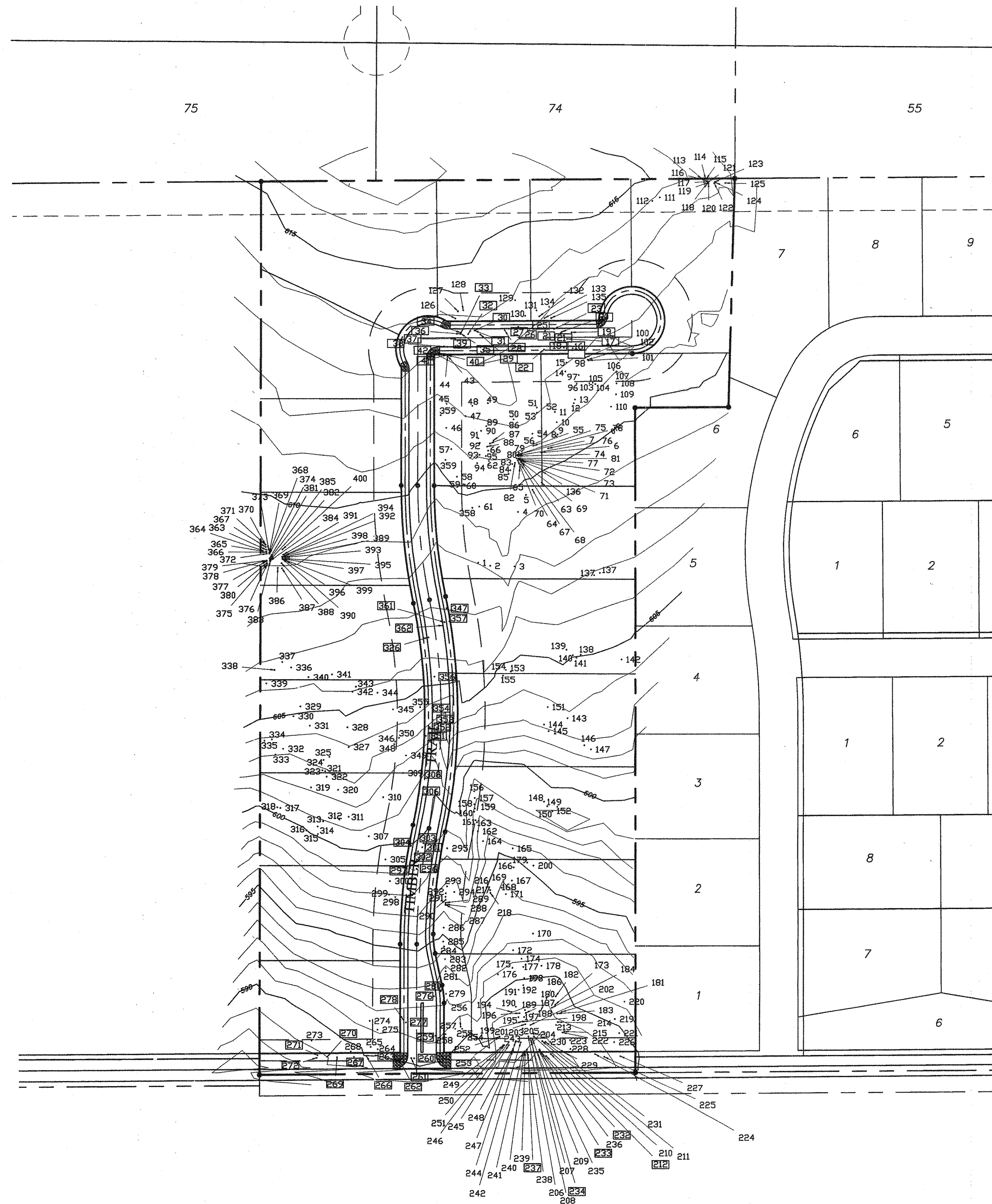


STORM WATER POLLUTION PREVENTION PLAN

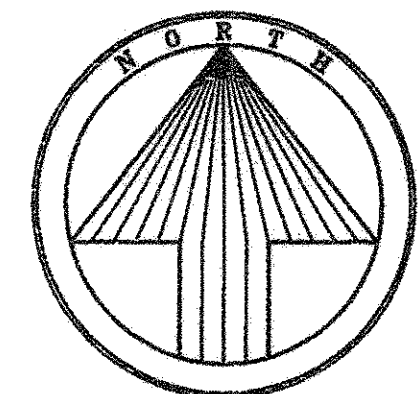
THE RESERVE AT FOREST GROVE
CITY OF LUCAS, COLLIN COUNTY, TEXAS

TIPTON ENGINEERING, INC.
ENGINEERING • SURVEYING • PLANNING
6330 Broadway Blvd. • Suite C • Garland, Texas 75043 • (972) 226-2967

| DESIGN | DRAWN | DATE | SCALE | NOTES | FILE | NO. |
|----------|----------|-------|-----------|----------|------|-----|
| TE, Inc. | TE, Inc. | 05/07 | 1"=40' H. | TE, Inc. | 4887 | 7 |



LOCATION MAP
NOT TO SCALE



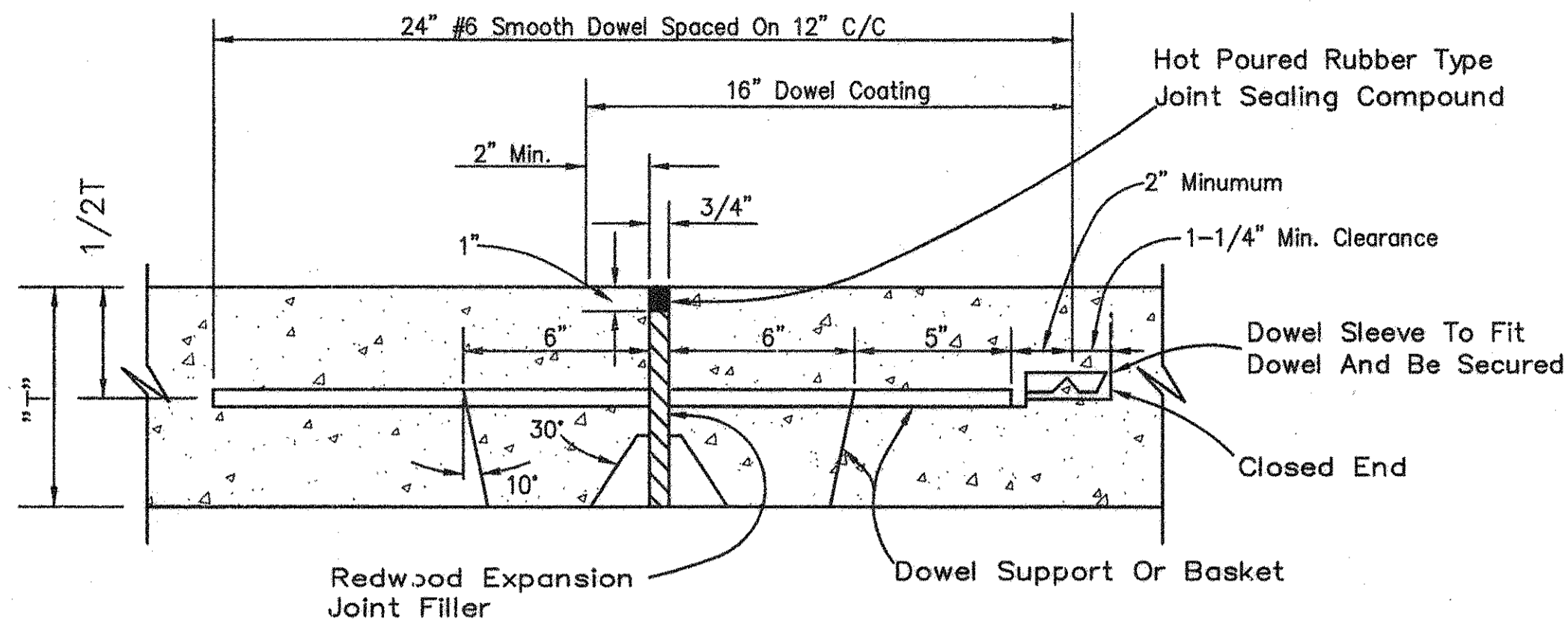
SCALE: 1" = 100'

Bearings based on the west line of the deed recorded in Volume 5886, Page 1786, Deed Records of Collin County, Texas.

301 Denotes Trees To Be Removed

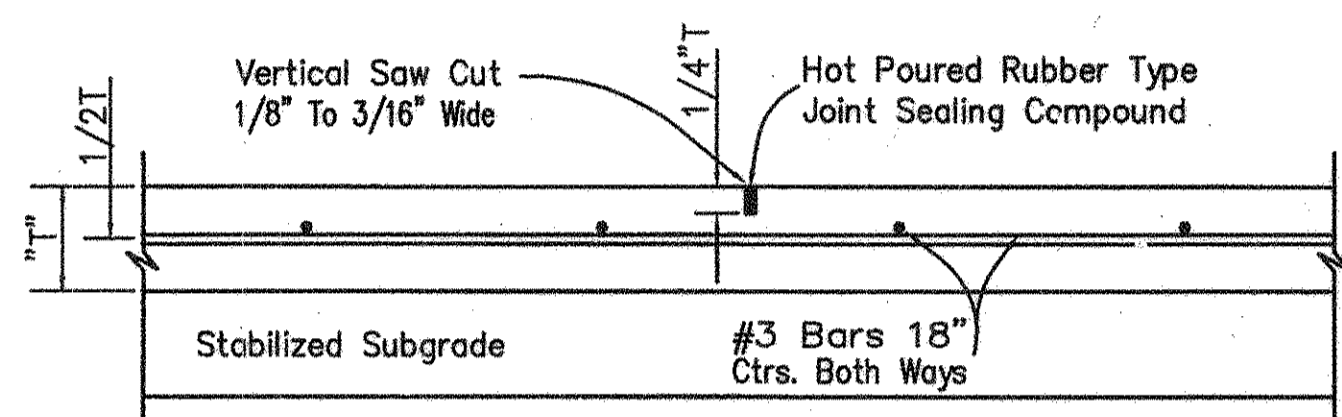
Tree Mitigation to be per the City of Lucas Ordinance 2001-09-00449, sec.1, adopted 9/3/01

| TREE SURVEY | | | | | | |
|---|----------|--------|---------|----------|-----------|-----|
| THE RESERVE AT FOREST GORVE | | | | | | |
| CITY OF LUCAS, COLLIN COUNTY, TEXAS | | | | | | |
| TIPTON ENGINEERING, INC. | | | | | | |
| ENGINEERING • SURVEYING • PLANNING | | | | | | |
| 6330 Broadway Blvd. • Suite C • Garland, Texas 75043 • (972) 226-2967 | | | | | | |
| DESIGN | DRAWN | DATE | SCALE | NOTES | FILE | NO. |
| TE, Inc. | TE, Inc. | 5/9/07 | 1"=100' | TE, Inc. | 4887-Tree | 8 |



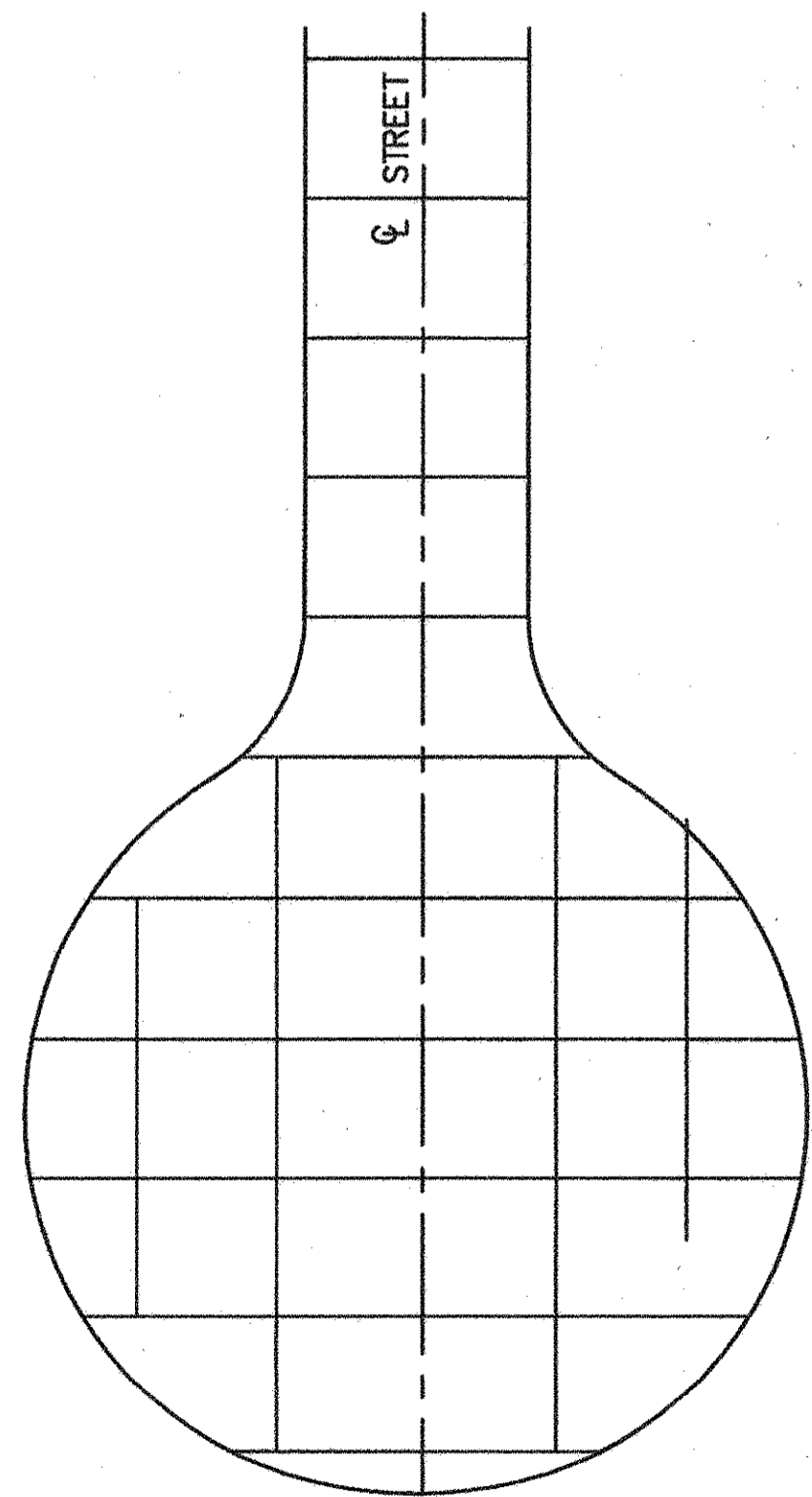
TYPICAL EXPANSION JOINT

Maximum Spacing = 60' O.C.E.W.
Not To Scale



SAWED DUMMY JOINT

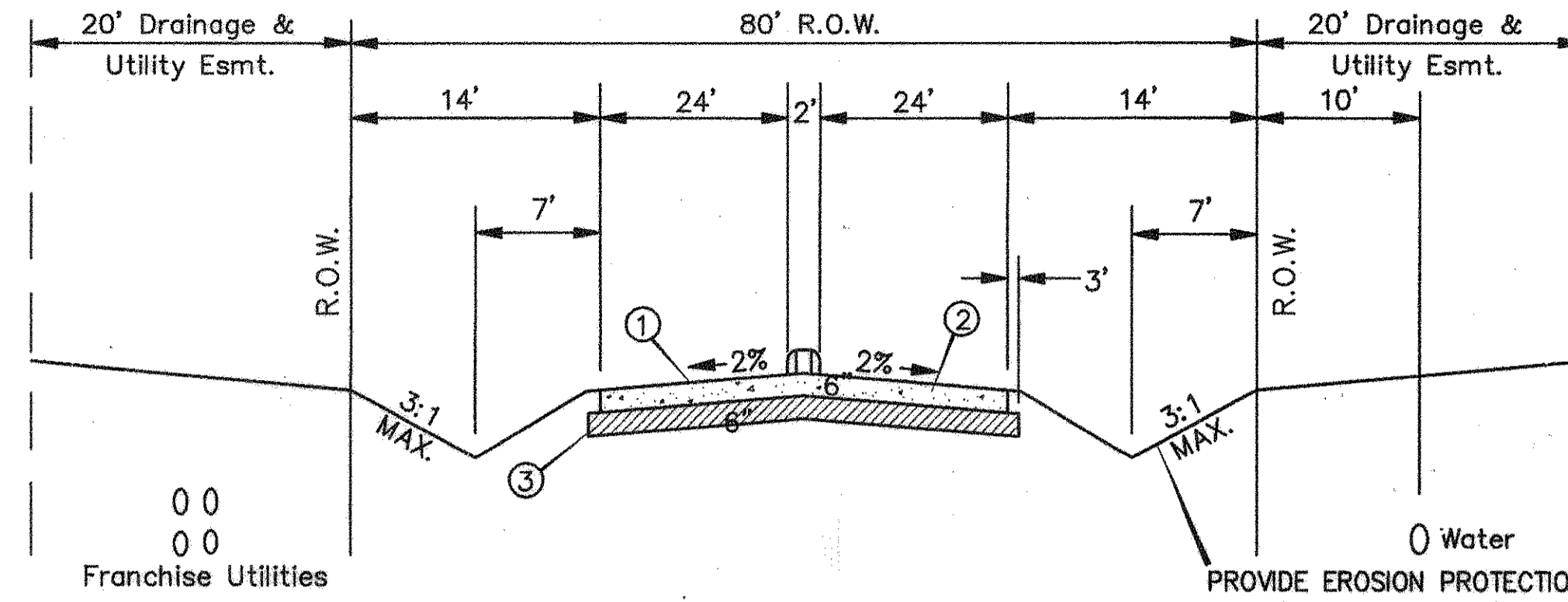
Not To Scale



TYPICAL CUL-DE-SAC (50'R)

Typical Spacing = 15' O.C.E.W.
Not To Scale

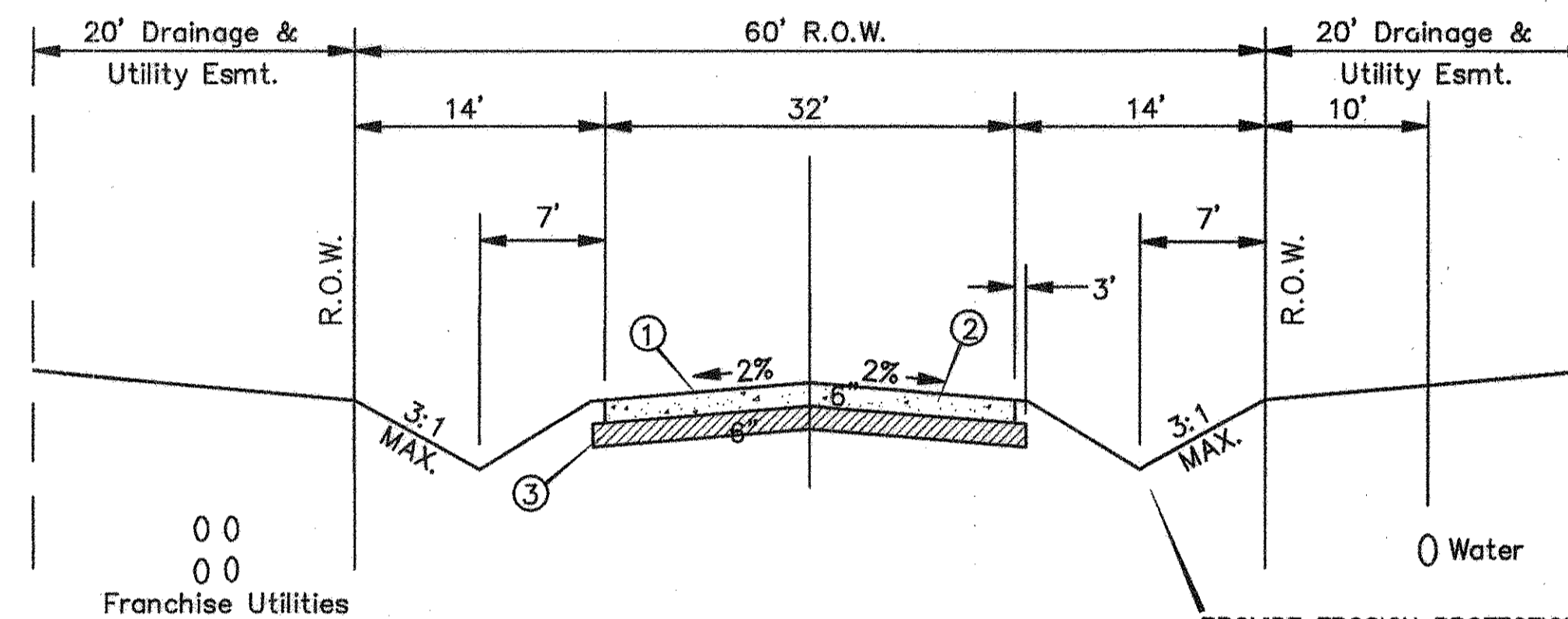
NOTE: CROSSING SAWCUTS SHALL BE A MINIMUM OF 5' FROM EDGE OF PAVEMENT



TYPICAL PAVING (ENTRY) DETAIL

Not To Scale

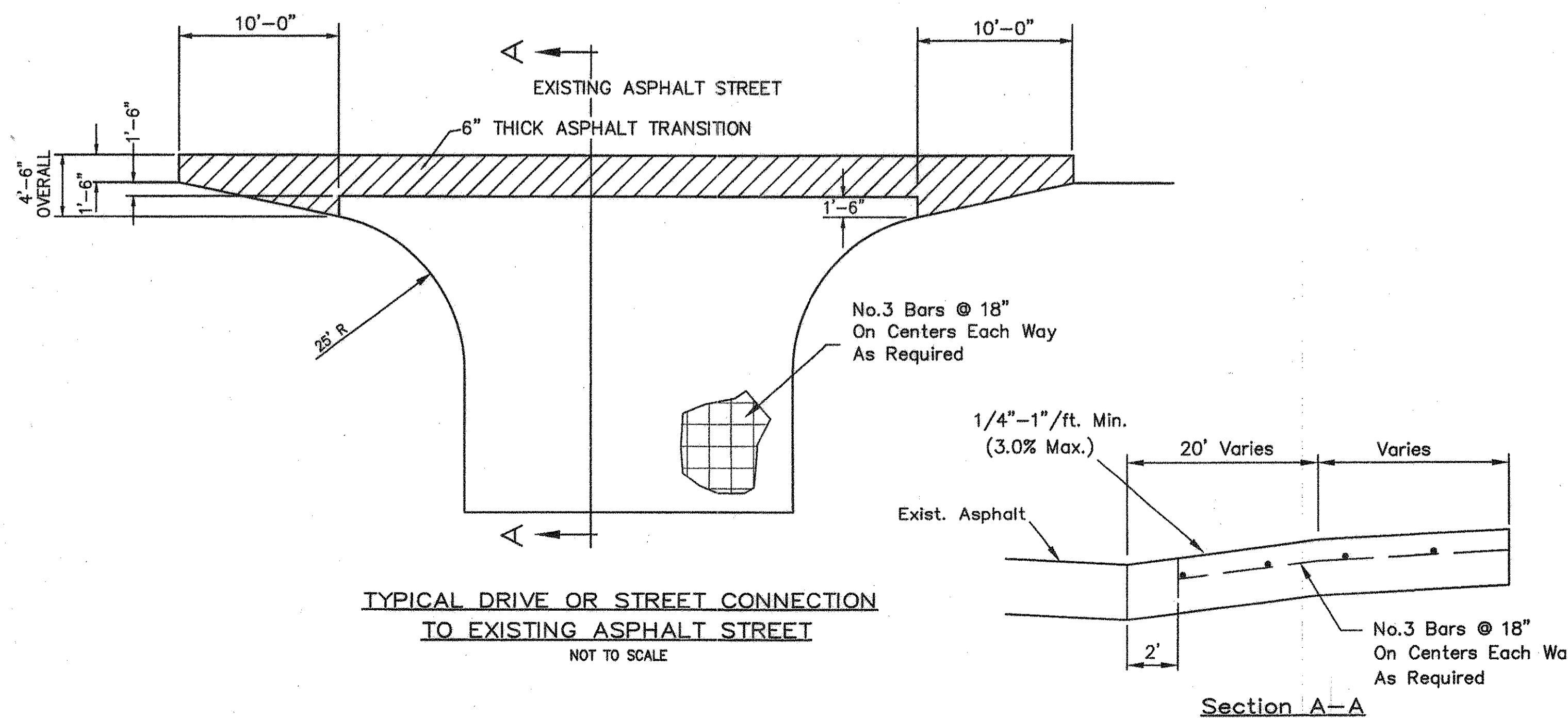
- 3600psi Concrete @ 28 days.
- No. 3 Bars on 18" Centers - Both Ways.
- 7% Lime Stabilized Subgrade Compacted 95% Modified Proctor Density.
- Chairs For Steel Bars Shall Be Of Sufficient Number To Maintain The Position Of The Steel.
- Sawed Construction Or Construction Joints As Specified By City of Lucas.
- Provide Approved Asphalt Crack Sealer.
- All Utilities Located On Any Street Right-of-Way Shall Be At A Minimum Depth of 36" Below The Flow Line Of The Drainage Ditch.



TYPICAL PAVING DETAIL

Not To Scale

- 3600psi Concrete @ 28 days.
- No. 3 Bars on 18" Centers - Both Ways.
- 7% Lime Stabilized Subgrade Compacted 95% Modified Proctor Density.
- Chairs For Steel Bars Shall Be Of Sufficient Number To Maintain The Position Of The Steel.
- Sawed Construction Or Construction Joints As Specified By City of Lucas.
- Provide Approved Asphalt Crack Sealer.
- All Utilities Located On Any Street Right-of-Way Shall Be At A Minimum Depth of 36" Below The Flow Line Of The Drainage Ditch.



TYPICAL DRIVE OR STREET CONNECTION TO EXISTING ASPHALT STREET

NOT TO SCALE

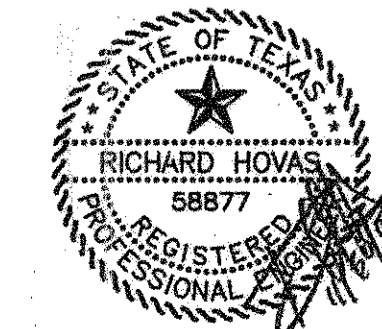
NOTE:

All materials and construction shall conform to "Standard Specifications for Public Works Construction" by North Central Texas Council of Governments(NCTCOG) most recent amendment if not covered by City of Lucas's standards or specified on the plans.

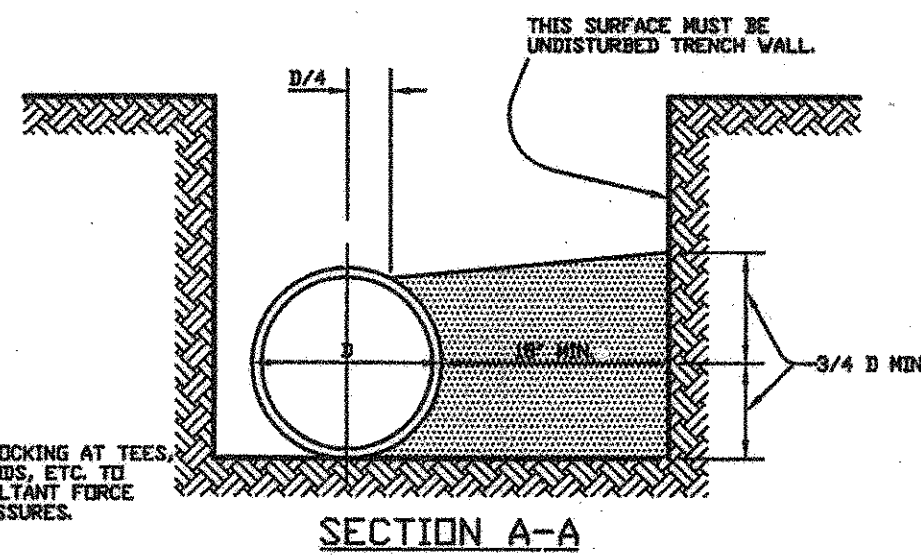
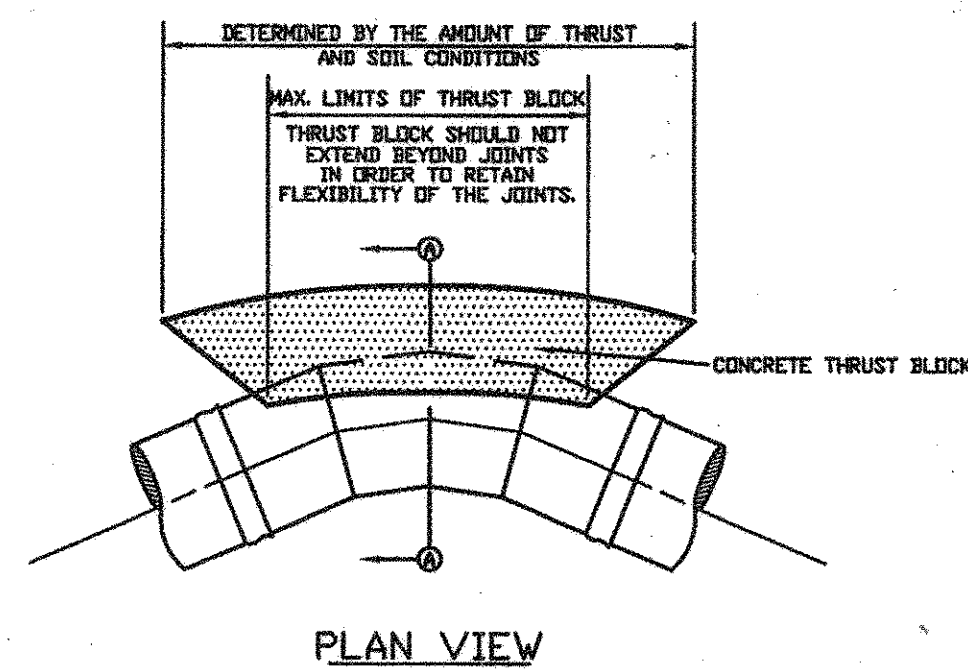
AS BUILT PLANS

11/30/2007

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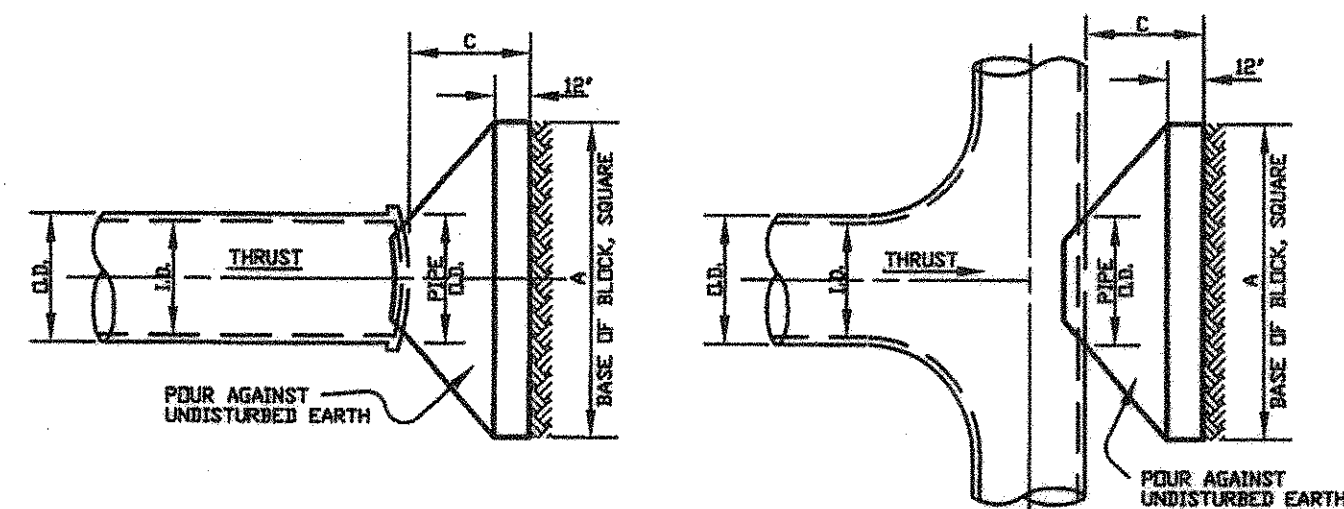


| DETAIL PLAN | | | | | | |
|--|-----------|---------|-----------|-------|------|-----|
| THE RESERVE AT FOREST GROVE | | | | | | |
| CITY OF LUCAS, COLLIN COUNTY, TEXAS | | | | | | |
| TIPTON ENGINEERING, INC. | | | | | | |
| 6330 Broadway Blvd. ~ Suite C ~ Garland, Texas 75043 | | | | | | |
| DESIGN | DRAWN | DATE | SCALE | NOTES | FILE | NO. |
| T.E. Inc. | T.E. Inc. | 05-2007 | PLOT 1=50 | | 4887 | 9 |



THRUST BLOCK DETAIL
NTS

| ID. IN INCHES | THRUST IN TONS FOR VERTICAL BENDS | | | | | | | |
|---------------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|
| | 11.25° | 15° | 22.5° | 30° | 45° | 60° | 75° | 90° |
| 12 | | | | | | | | |
| 14 | | | | | | | | |
| 16 | 2.94 | 3.90 | 5.78 | 7.54 | 10.66 | 13.06 | 14.56 | 15.08 |
| 18 | 3.72 | 4.94 | 7.30 | 9.54 | 13.50 | 16.52 | 18.42 | 19.08 |
| 20 | 4.60 | 6.10 | 9.02 | 11.78 | 16.66 | 20.40 | 22.76 | 23.56 |
| 24 | 6.62 | 8.78 | 12.98 | 16.96 | 23.98 | 29.38 | 32.76 | 33.92 |
| 30 | 10.34 | 13.72 | 20.28 | 26.52 | 37.50 | 45.92 | 51.22 | 53.02 |

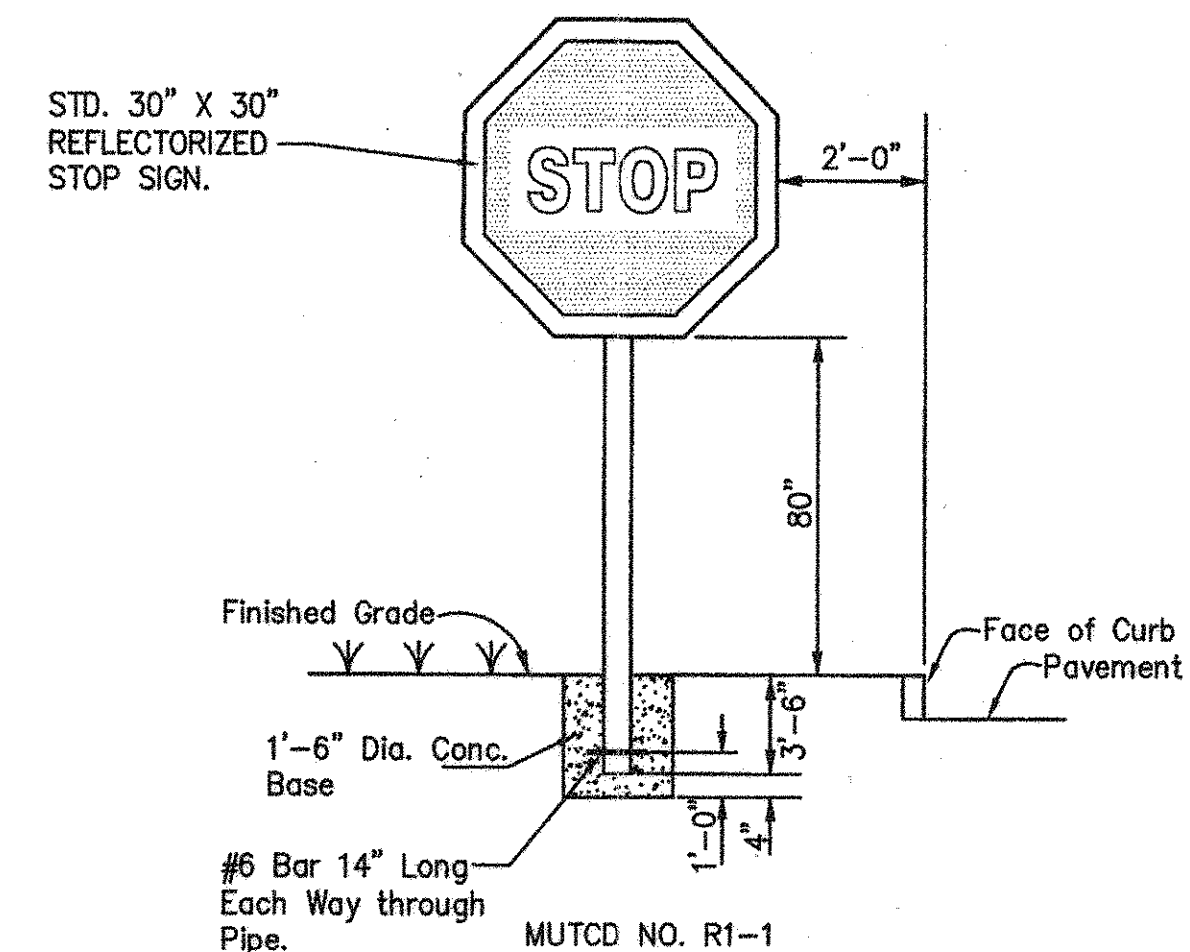


THRUST IN TONS FOR VERTICAL BENDS

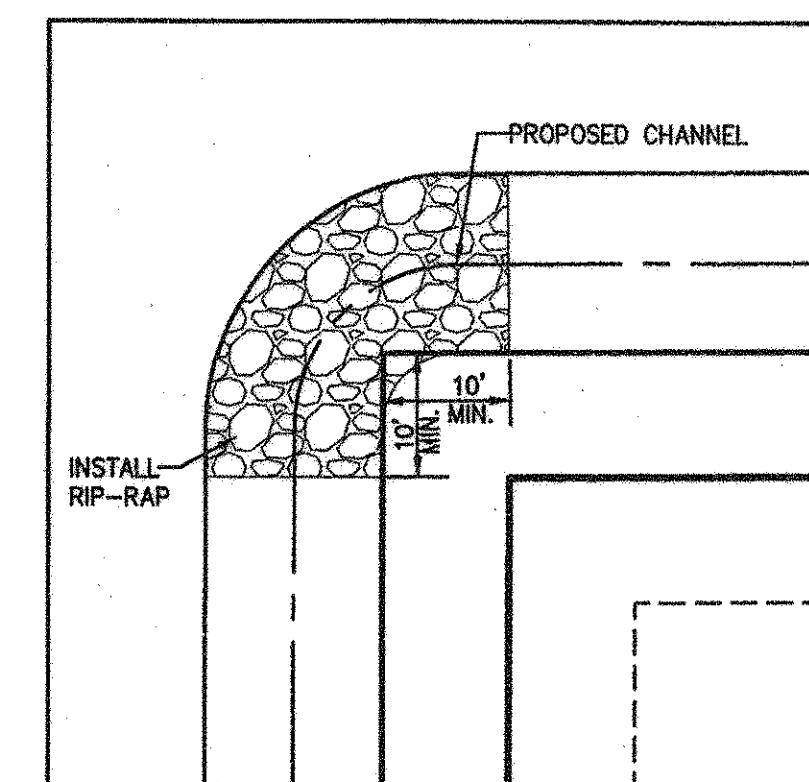
| ID. IN INCHES | THRUST IN TONS FOR VERTICAL BENDS | | | | | | | |
|---------------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|
| | 11.25° | 15° | 22.5° | 30° | 45° | 60° | 75° | 90° |
| 12 | | | | | | | | |
| 14 | | | | | | | | |
| 16 | 2.94 | 3.90 | 5.78 | 7.54 | 10.66 | 13.06 | 14.56 | 15.08 |
| 18 | 3.72 | 4.94 | 7.30 | 9.54 | 13.50 | 16.52 | 18.42 | 19.08 |
| 20 | 4.60 | 6.10 | 9.02 | 11.78 | 16.66 | 20.40 | 22.76 | 23.56 |
| 24 | 6.62 | 8.78 | 12.98 | 16.96 | 23.98 | 29.38 | 32.76 | 33.92 |
| 30 | 10.34 | 13.72 | 20.28 | 26.52 | 37.50 | 45.92 | 51.22 | 53.02 |

| ID. IN INCHES | TEES & PLUGS | | |
|---------------|--------------|-------|-------------|
| | A FT. | C FT. | THRUST TONS |
| 12 | | | |
| 14 | | | |
| 16 | 3.87 | 1.57 | 15.08 |
| 18 | 4.37 | 1.77 | 19.09 |
| 20 | 4.85 | 1.97 | 23.56 |
| 24 | 5.82 | 2.36 | 33.93 |
| 30 | 7.28 | 2.95 | 53.04 |

- GENERAL NOTES:
- ALL CALCULATIONS ARE BASED ON TOTAL INTERNAL PRESSURE OF 150 P.S.I.
 - ALLOWABLE SOIL BEARING PRESSURES MUST BE AT LEAST ONE TON PER SQUARE FOOT FOR THE THRUST BLOCKS SHOWN IN SOILS OF LESSER CAPACITY, INCREASE SIZE AND BEARING AREA PROPORTIONATELY. VOLUMES OF VERTICAL BEND THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED AND THE CORRESPONDING WEIGHT OF THE CONCRETE (AT 4000/C.Y.) EQUALS THE VERTICAL COMPONENT OF THRUST ON THE VERTICAL BEND. ALL BEARING SURFACES OF THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
 - CONCRETE FOR BLOCKING SHALL BE 2,000 P.S.I. CONCRETE.
 - DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER, BUT SHALL NOT BE LESS THAN THE DIMENSIONS SHOWN HERE.
 - ALL ANCHOR FITTINGS TO BE CONCRETE THRUST BLOCKED. ALL BRACKETS OR CAST IRON FITTINGS AND OR PIPE TO BE POLYWRAPPED.
 - ALL FIRE HYDRANTS TO MUELLER OR EQUIVALENT.

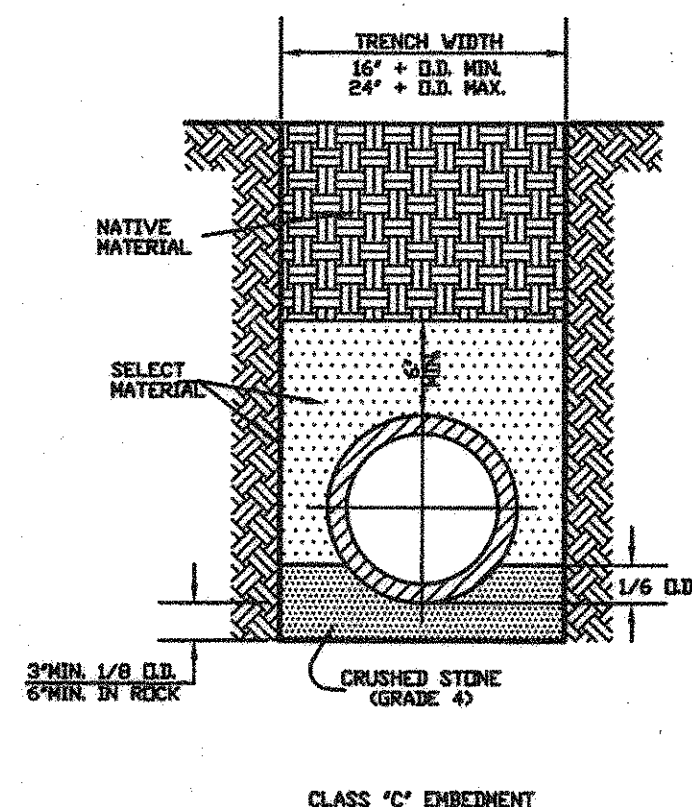


STOP SIGN DETAIL
NOT TO SCALE

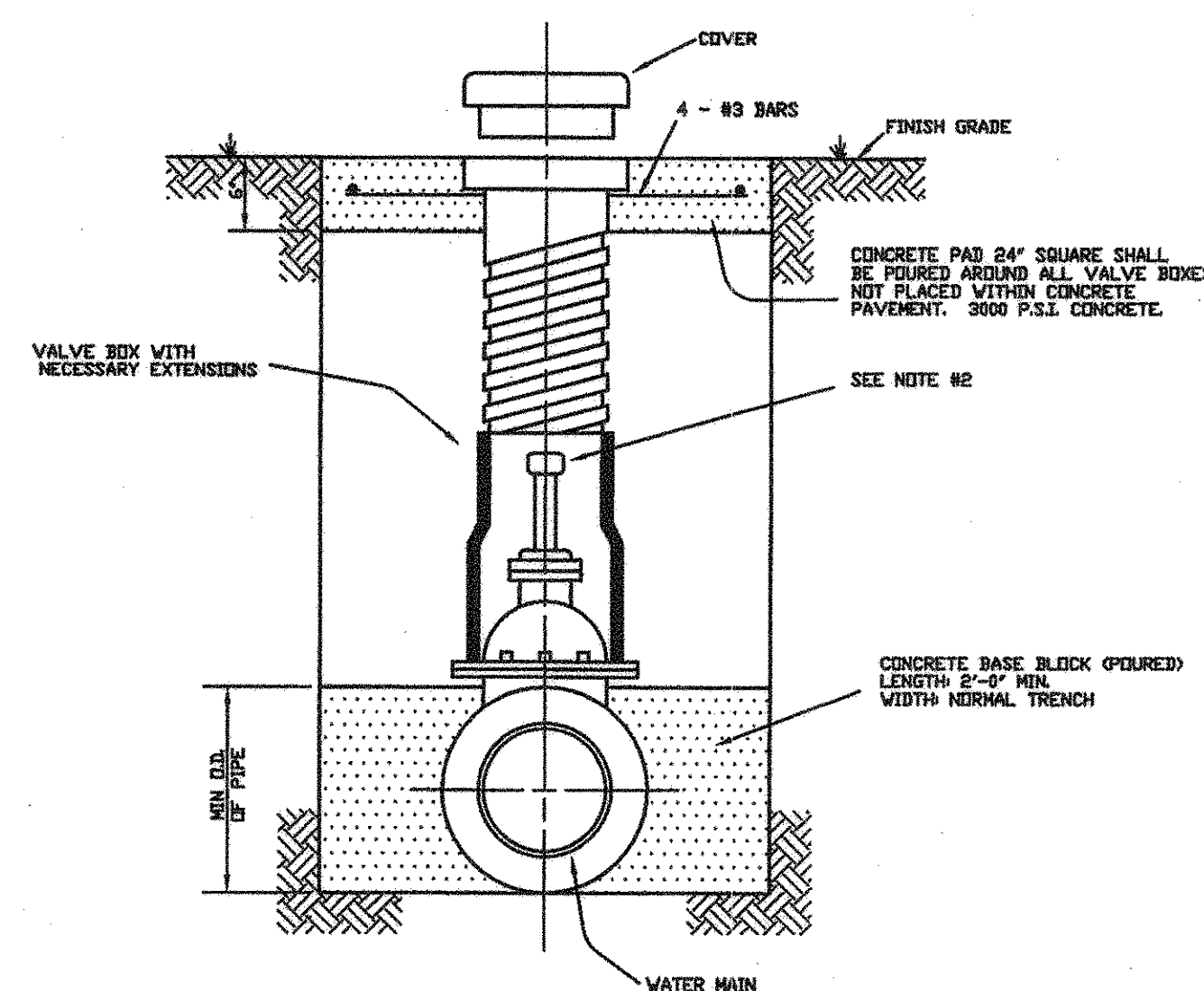


ROCK RIP-RAP DETAIL FOR BENDS
NOT TO SCALE

NOTE:
All materials and construction shall conform to "Standard Specifications for Public Works Construction" by North Central Texas Council of Governments(NCTCOG) most recent amendment if not covered by City of Lucas's standards or specified on the plans.



TYPICAL BACKFILL WATER MAIN
DUCTILE IRON OR PCCP
NTS



- NOTE:
- 4"-12" R.S. GATE VALVES SHALL BE IN ACCORDANCE WITH ANMA STANDARD C-509
 - ALL VALVES SHALL BE FITTED WITH AN EXTENSION OF SUFFICIENT LENGTH TO INSURE THAT THE TOP IS WITHIN 12" OF THE VALVE BOX LID.
 - DUCTILE IRON OR C-900 PVC PIPE SHALL BE USED FOR VALVE STACKS WITH TWO PIECE ADJUSTABLE GIBBY VALVE BOXES.
 - SCORE PAVEMENT AT VALVE AND WATER SERVICE LOCATIONS.

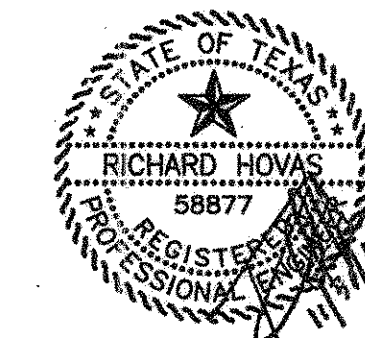
TYPICAL VALVE SETTING AND BOX
NTS

GENERAL NOTES

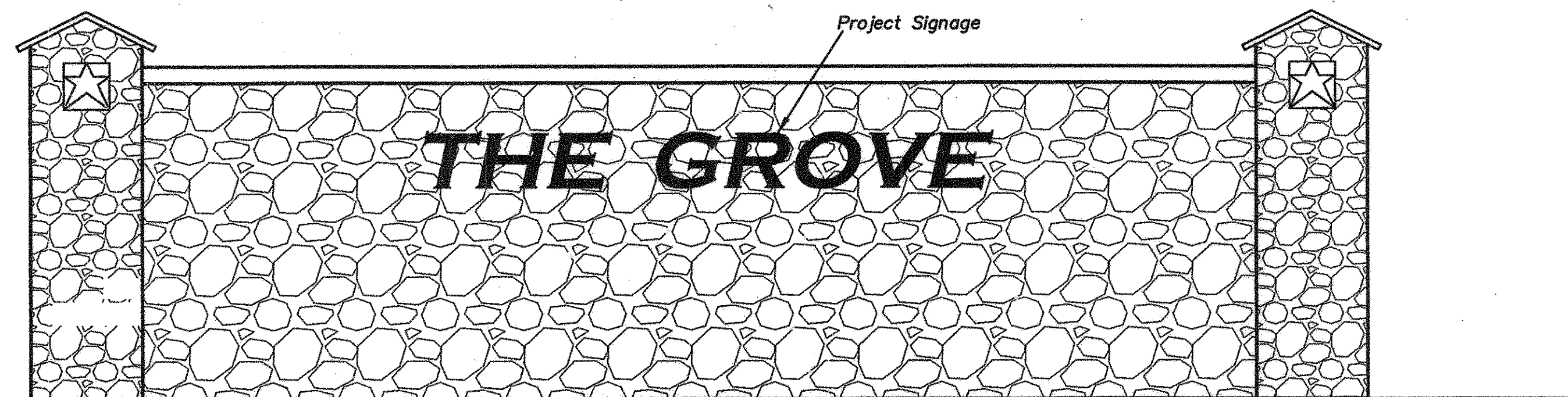
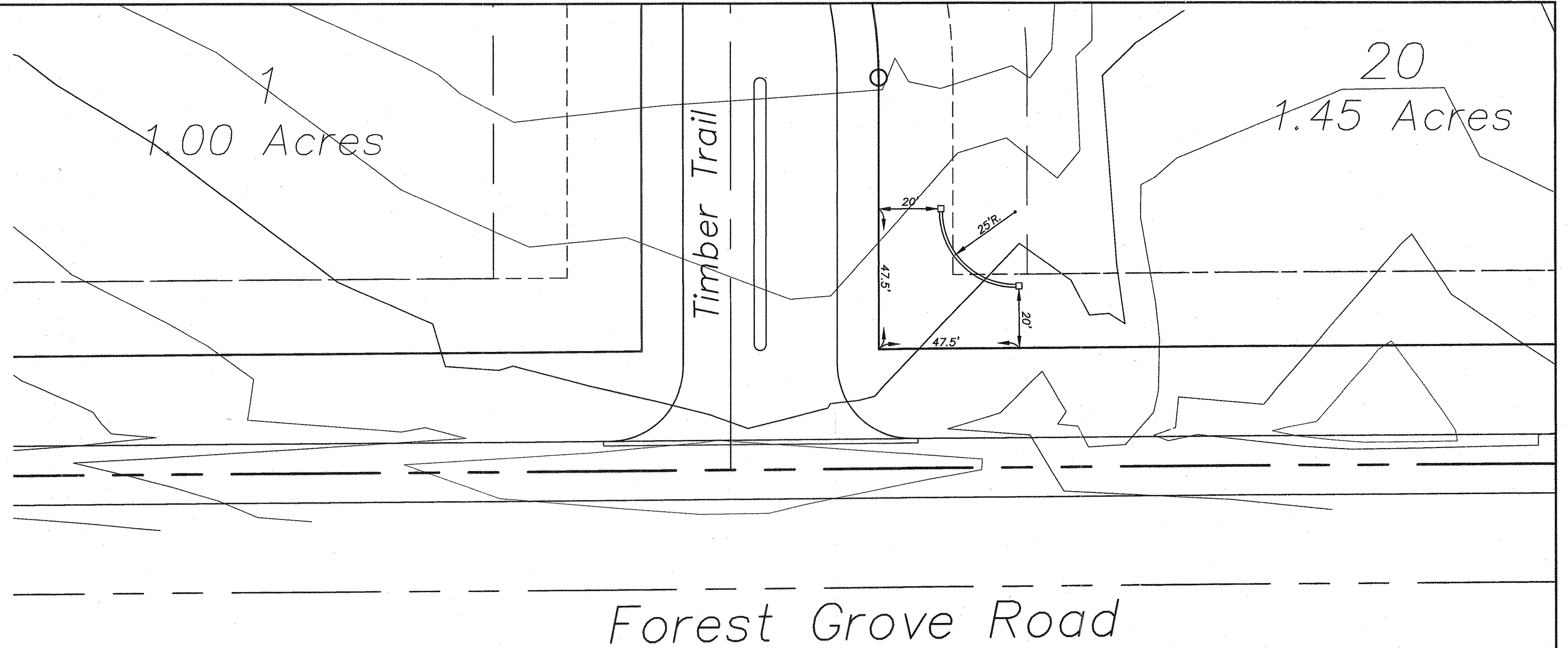
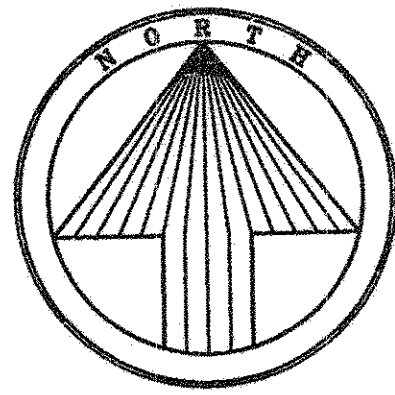
- All street and alley intersections and connections shall be built by the developer.
- Excavation from streets shall be deposited in low areas to allow proper drainage, except existing creek.
- All existing ditches, except as noted on drainage plans, shall be filled to conform to surrounding terrain.
- It will be the responsibility of the developer and/or the contractor to protect and maintain to proper line and grade all public utilities, manholes, cleanouts, valve boxes, fire hydrants, etc. during the construction of this project, prior to and after placing permanent pavement.
- All materials and workmanship shall conform to City of Lucas Standards and Specifications.
- Provide street name signs, with City of Lucas Logo.
- Provide City of Lucas approved Stop sign.
- Provide Dark Sky type street lights at intersections.

AS BUILT PLANS
11/30/2007

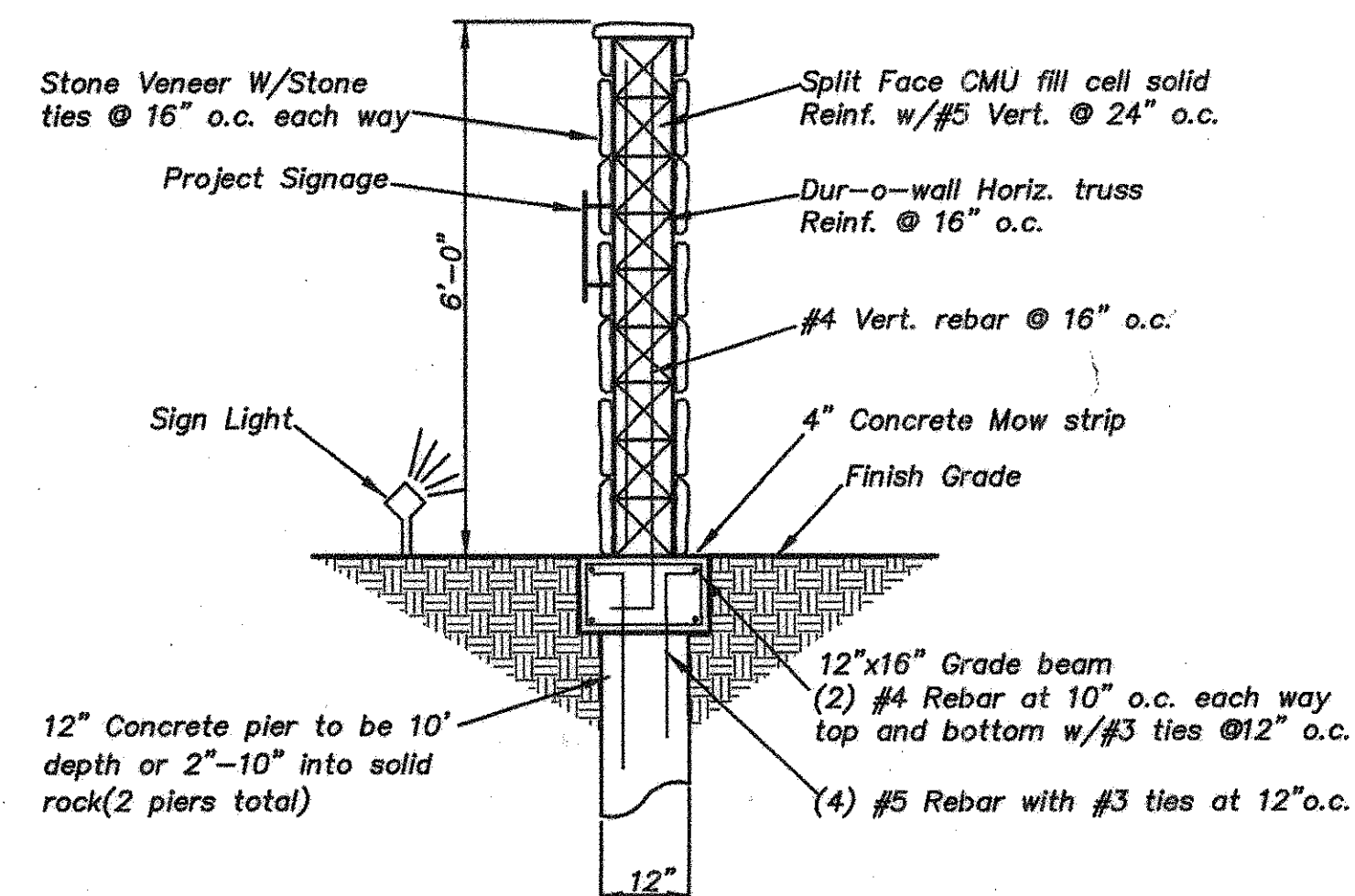
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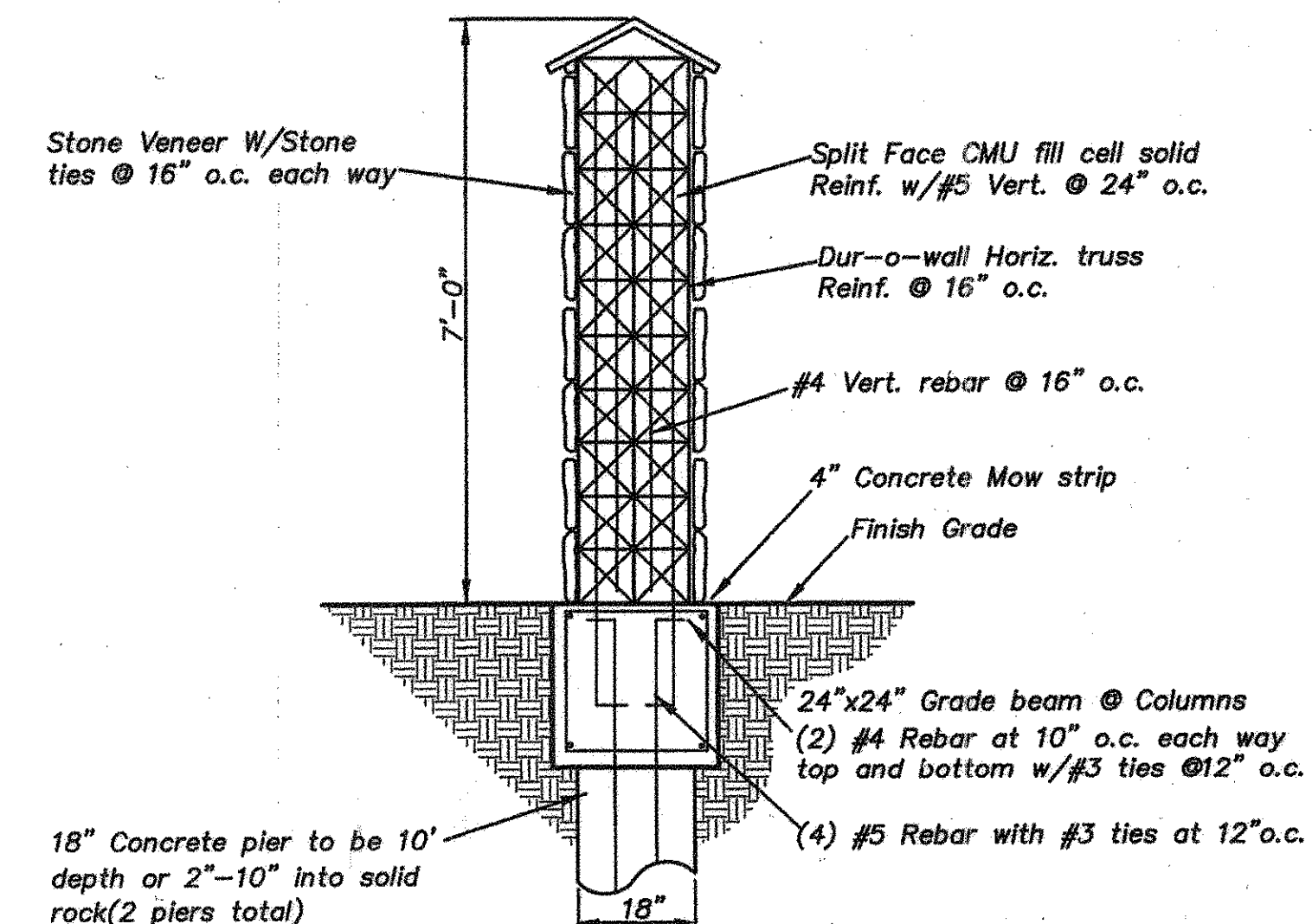
| DETAIL PLAN | | | | | | | |
|--|-----------|---------|-------------|-------|------|-----|--|
| THE RESERVE AT FOREST GROVE | | | | | | | |
| CITY OF LUCAS, COLLIN COUNTY, TEXAS | | | | | | | |
| TIPTON ENGINEERING, INC. | | | | | | | |
| 6330 Broadway Blvd. ~ Suite C ~ Garland, Texas 75043 | | | | | | | |
| DESIGN | DRAWN | DATE | SCALE | NOTES | FILE | NO. | |
| T.E. Inc. | T.E. Inc. | 10-2006 | Plot 1"=50' | | 4810 | 10 | |



ENTRY SIGN WALL SECTION



STONE COLUMN DETAIL



CAUTION !!!
EXISTING UTILITIES

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

BENCH MARK:
Square cut on east headwall of West end of bridge at White Rock Creek (East) and FM1378.
Elev.=590.08

| ENTRY WALL PLAN | | | | | |
|---|----------|-------|--------|----------|----------|
| THE RESERVE AT FOREST GROVE | | | | | |
| CITY OF LUCAS, COLLIN COUNTY, TEXAS | | | | | |
| TIPTON ENGINEERING, INC. | | | | | |
| ENGINEERING • SURVEYING • PLANNING | | | | | |
| 6330 Broadway Blvd. • Suite C • Garland, Texas 75043 • (972) 226-2967 | | | | | |
| DESIGN | DRAWN | DATE | SCALE | NOTES | FILE NO. |
| TE, Inc. | TE, Inc. | 07/07 | 1"=20' | TE, Inc. | 4887 |