



# AGENDA

## City of Lucas City Council Meeting February 15, 2018

**7:00 PM**

**City Hall – Council Chambers  
665 Country Club Road – Lucas, Texas**

Notice is hereby given that a City of Lucas meeting of the City Council will be held on Thursday, February 15, 2018 at 7:00 pm at Lucas City Hall, 665 Country Club Road, Lucas, Texas, 75002-7651 at which time the following agenda will be discussed. As authorized by Section 551.071 of the Texas Government Code, the City Council may convene into closed Executive Session for the purpose of seeking confidential legal advice from the City Attorney on any item on the agenda at any time during the meeting.

### Call to Order

- Roll Call
- Determination of Quorum
- Reminder to turn off or silence cell phones
- Pledge of Allegiance

### Citizen Input

The Citizens' Input portion of the agenda is an opportunity for the public to address the City Council on any subject. By completing a "Request to Speak" form and submitting it to the City Secretary, citizens have an opportunity to speak at the City Council meeting. However, in accordance with the Texas Open Meetings Act, the City Council cannot discuss issues raised or make any decisions but may refer items to City Staff for research and possible inclusion on a future agenda.

1. Citizen Input (Mayor Jim Olk)

### Community Interest

Pursuant to Section 551.0415 of the Texas Government Code, the City Council may report on the following items: 1) expression of thanks, congratulations or condolences; 2) information about holiday schedules; 3) recognition of individuals; 4) reminders about upcoming City Council events; 5) information about community events; and 6) announcements involving imminent threat to public health and safety.

2. Community Interest. (Mayor Jim Olk)

### **Consent Agenda**

All items listed under the consent agenda are considered routine and are recommend to the City Council for a single vote approval. If discussion is desired, an item may be removed from the consent agenda for a separate vote.

3. Consent Agenda.
  - A. Approval of the minutes of the February 1, 2018 City Council meeting.

### **Regular Agenda**

4. Consider the request by Steve Lenart on behalf of Liberty Bankers Life Insurance Company for an update to the existing approved Development Agreement covering facilities of an off-site waterline extension and off-site road improvements for a parcel of land located at the northwest corner of Snider Lane and E. Lucas Road, otherwise known as Lakeview Downs containing approximately 148.7 +/- acres of land. (**Development Services Director Joe Hilbourn**)

### **Executive Session**

5. Executive Session. An Executive Session is not scheduled for this meeting.
6. Adjournment.

### **Certification**

*I do hereby certify that the above notice was posted in accordance with the Texas Open Meetings Act on the bulletin board at Lucas City Hall, 665 Country Club Road, Lucas, TX 75002 and on the City's website at [www.lucastexas.us](http://www.lucastexas.us) on or before 5:00 p.m. on February 9, 2018.*

\_\_\_\_\_  
*Stacy Henderson, City Secretary*

*In compliance with the American with Disabilities Act, the City of Lucas will provide for reasonable accommodations for persons attending public meetings at City Hall. Requests for accommodations or interpretive services should be directed to Stacy Henderson at 972.912.1211 or by email at [shenderson@lucastexas.us](mailto:shenderson@lucastexas.us) at least 48 hours prior to the meeting.*



# City of Lucas City Council Agenda Request February 15, 2018

Item No. 01

Requester: Mayor Jim Olk

**Agenda Item:**

Citizen Input

**Background Information:**

NA

**Attachments/Supporting Documentation:**

NA

**Budget/Financial Impact:**

NA

**Recommendation:**

NA

**Motion:**

NA



# City of Lucas Council Agenda Request February 15, 2018

Requester: Mayor Jim Olk

**Agenda Item:**

2. Items of Community Interest.

**Background Information:**

NA

**Attachments/Supporting Documentation:**

NA

**Budget/Financial Impact:**

NA

**Recommendation:**

NA

**Motion:**

NA



# City of Lucas Council Agenda Request February 15, 2018

Item No. 03

Requester: City Secretary Stacy Henderson

## **Consent Agenda Items:**

3. Consent Agenda:

A. Approval of the minutes of the February 1, 2018 City Council meeting.

## **Background Information:**

NA

## **Attachments/Supporting Documentation:**

1. Minutes of the February 1, 2018 City Council meeting

## **Budget/Financial Impact:**

NA

## **Recommendation:**

City Staff recommends approval of the Consent Agenda.

## **Motion:**

I make a motion to approve the Consent Agenda as presented.



**City of Lucas  
City Council Meeting  
February 1, 2018  
7:00 P.M.**

**City Hall - 665 Country Club Road – Lucas Texas  
Minutes**

**Call to Order**

Mayor Olk called the meeting to order at 7:00 p.m.

**City Councilmembers Present:**

Mayor Jim Olk  
Mayor Pro Tem Kathleen Peele  
Councilmember Tim Baney  
Councilmember Steve Duke  
Councilmember Philip Lawrence  
Councilmember Debbie Fisher

**Staff Present:**

City Manager Joni Clarke  
City Secretary Stacy Henderson  
Assistant Fire Chief Lance Gant

**City Councilmember Absent:**

Councilmember Wayne Millsap

Mayor Olk determined that a quorum was present. Everyone was reminded to silence their cell phones and the Pledge of Allegiance was recited.

**Citizen Input**

**1. Citizen Input.**

There was no citizen input at this meeting.

**Community Interest**

**2. Community Interest.**

Mayor Olk reminded those in attendance that the City's annual Founders Day event would be held on April 14, 2018. Mayor Pro Tem Peele also discussed the stick horse rodeo event that was part of Founders Day.

Mayor Olk noted that the City's General Election would be taking place on May 5, 2018, and Councilmember Fisher outlined details of the upcoming Primary Election to be held March 6, 2018, noting that Early voting begins February 20, 2018.

## Consent Agenda

### 3. Consent Agenda.

- A. Approval of the minutes of the January 18, 2018 City Council meeting.
- B. Adoption of Ordinance 2018-02-00875 of the City Council of the City of Lucas, Collin County, Texas, ordering a General Election to be held on May 5, 2018, for the purpose of electing two (2) City Councilmembers for Seat No. 3 and Seat No. 4 and the position of Mayor; designating location of polling place; ordering notice of election to be given as prescribed by law in connection with such election; authorizing execution of joint election agreement; and providing for an effective date.

**MOTION:** A motion was made by Councilmember Fisher, seconded by Councilmember Duke to approve the Consent Agenda as presented. The motion passed unanimously by a 6 to 0 vote.

## Regular Agenda

### 4. Consider nominations for the 2018 Service Tree Award Program.

Councilmember Fisher explained that the Service Tree Subcommittee received two nominations for Service Tree Awards that included Tracy Matern and Tonda Frazier. Councilmember Fisher discussed their contributions to the City and stated the Service Tree Subcommittee was in favor of recommending Ms. Matern and Ms. Frazier as recipients of the Service Tree Award for 2018.

**MOTION:** A motion was made by Councilmember Fisher, seconded by Councilmember Duke to nominate Tracy Matern and Tonda Frazier as the Service Tree Award recipients for 2018. The motion passed unanimously by a 6 to 0 vote.

### 5. Consider appointing a Grand Marshal for the 2018 Founders Day Parade.

Councilmember Fisher noted that the Fire-Rescue Department was celebrating its 40<sup>th</sup> Anniversary this year and would like to nominate the City's past Fire Chiefs to be the Grand Marshals for the Founders Day parade.

**MOTION:** A motion was made by Councilmember Fisher, seconded by Mayor Pro Tem Peele to nominate the past Fire Chiefs as the Grand Marshals for the Founders Day parade. The motion passed unanimously by a 6 to 0 vote.

## Executive Session

### 6. Executive Session:

An Executive Session did not occur at this meeting.

**7. Adjournment**

**MOTION:** A motion was made by Mayor Olk, seconded by Mayor Pro Tem Peele to adjourn the meeting at 7:12 pm. The motion passed unanimously by a 6 to 0 vote.

APPROVED:

ATTEST:

\_\_\_\_\_  
Jim Olk, Mayor

\_\_\_\_\_  
Stacy Henderson, City Secretary





# City of Lucas

## City Council Agenda Request

### February 15, 2018

Requester: Development Services Director Joe Hilbourn

#### **Agenda Item:**

Consider the request by Steve Lenart on behalf of Liberty Bankers Life Insurance Company for an update to the existing approved Development Agreement covering facilities of an off-site waterline extension and off-site road improvements for a parcel of land located at the northwest corner of Snider Lane and E. Lucas Road, otherwise known as Lakeview Downs containing approximately 148.7 +/- acres of land.

#### **Background Information:**

The tract is approximately 148.7 +/- acres of land with 106 proposed residential lots, and one 8-acre commercial lot. Lakeview Downs currently has two approved Development Agreements, one for facilities and one for annexation. This agreement completes the original agreement by giving the actual amounts due for off-site improvements instead of general amounts of reimbursements.

#### **Attachments/Supporting Documentation:**

1. Development Agreement

#### **Budget/Financial Impact:**

N/A

#### **Recommendation:**

Approve as presented.

#### **Motion:**

I make a motion to approve/deny the request on behalf of Liberty Bankers Life Insurance Company for an update to the existing approved Development Agreement covering facilities of an off-site waterline extension and off-site road improvements for a parcel of land located on the northwest corner of Snider Lane and E. Lucas Road, otherwise known as Lakeview Downs.



## **Article II Definitions**

For purposes of this Agreement, each of the following terms shall have the meaning set forth herein unless the context clearly indicates otherwise:

“Approved Plans” shall mean the plans and specifications for the Road Improvements and the Waterline Improvements approved by the City and attached as Exhibit “C”.

“City” shall mean the City of Lucas, Texas.

“Commencement of Construction” shall mean that (i) the plans have been prepared and all approvals thereof required by applicable governmental authorities have been obtained for construction of the Road Improvements, and the Waterline Improvements; (ii) all necessary permits for the construction of the Road Improvements, and the Waterline Improvements, pursuant to the respective plans therefore having been issued by all applicable governmental authorities; and (iii) the construction of the Road Improvements, and Waterline Improvements have commenced.

“Completion of Construction” shall mean (i) the construction of the Road Improvements, and Waterline Improvements have been substantially completed; and (ii) the final permanent certificate of completion for the Road Improvements, and Waterline Improvements have been issued to the City, or the City has accepted the Road Improvements, and Waterline Improvements, as the case may be.

“Developer” shall mean Liberty Bankers Life Insurance Company and or its assigns.

“Effective Date” shall mean the last date of execution hereof.

“Force Majeure” shall mean any contingency or cause beyond the reasonable control of Developer, as applicable, including, without limitation, acts of God or the public enemy, war, riot, civil commotion, insurrection, adverse weather, governmental action or inaction (unless caused by negligence or omissions of Developer), fire, explosions or floods, strikes, slowdowns or work stoppages, shortage of materials and labor, or delays by the City.

“Property” shall mean the real property described by meets and bounds in the attached Exhibit “A”.

## **Article III Road Improvements**

3.1 Construction of Road Improvements. Developer agrees to design and install the Road Improvements in accordance with the applicable standards, ordinances, and regulations adopted by the City (“City Standards”) and in conformance with Exhibit “C”. Developer shall submit plans for the design and construction of the Road Improvements (“Construction Plans”) to the City for review and approval by the City. Subject to extensions for delay caused by events of

Force Majeure and to the City's approval of the Approved Plans, Developer agrees, at Developer's sole cost, to construct or have constructed the Road Improvements. Developer agrees and covenants to cause commencement of the Road Improvements on or before February 26, 2018, and to cause completion of construction thereof within eight (8) months thereafter.

3.2 Construction Specifications. It is agreed upon by both Developer and City that the Road Improvements will be constructed per the Approved Plans.

3.3 Roadway Impact Fee Credits. Upon Completion of Construction of the Road Improvements, Developer shall provide City with proof of the Road Improvements cost, which shall include the design costs, engineering costs, material testing costs, inspection fees, right-of-way acquisition costs, easement acquisition costs, and construction costs (the "Road Improvements Cost"). The proof shall be in the form of contracts and/or invoices reflecting the amount actually paid for the Road Improvements. City shall credit the Developer the Roadway Impact Fees applicable to the Property up to the amount of the Road Improvements Cost (the "Roadway Improvements Credit") in an amount not to exceed the amount of road way impact fees collected. The final amount of the Roadway Improvements Credit shall be agreed upon by both Parties after completion of the Road Improvements and established within a secondary letter agreement.

3.4 Roadway Impact Fee Credit Payment. The City shall collect the Roadway Impact Fee from each homebuilder constructing a home on any lot within the Property at such time the City issues a permit for the home construction on each lot. The City shall pay the Developer, on a quarterly basis, any Roadway Impact Fees that have been collected on any lot located within the Property during the previous quarter. In no event shall the City's reimbursement to Developer exceed the Road Improvements Cost. This process will continue until such time that the Roadway Improvements Credit amount has been fully paid to the Developer or this Agreement terminates pursuant to Article VI.

#### **Article IV Waterline Improvements**

4.1 Construction of Waterline Improvements. Developer agrees to design and install the Waterline Improvements in accordance with the applicable standards, ordinances, and regulations adopted by the City ("City Standards"). Developer shall submit plans for the design and construction of the Waterline Improvements ("Construction Plans") to the City for review and approval by the City. Subject to extensions for delay caused by events of Force Majeure and City's approval of the Approved Plans, Developer agrees to construct the Waterline Improvements. The Developer agrees and covenants to cause commencement of the Waterline Improvements on or before December 1, 2017, and to cause completion of construction thereof within eight (8) months thereafter.

4.2 Construction Specifications. It is agreed upon by both Developer and City that the Waterline Improvements will be constructed per the Approved Plans.

4.3 Water Impact Fee Credits. Developer shall provide City with proof of the Waterline Improvements cost, which shall include the design costs, engineering costs, material

testing costs, inspection fees, easement acquisition costs, and construction costs of this eight-inch (8") waterline (the "Waterline Cost"). The proof shall be in the form of contracts and/or invoices reflecting the amount actually paid for the Waterline Improvements. City shall credit the Water Impact Fees applicable to the Property up to the amount of the Waterline Cost (the "Waterline Credit"). The final amount of the Waterline Credit shall be agreed upon by both Parties after completion of the Waterline Improvements and established within a secondary letter agreement.

4.4 Water Impact Fee Credit Payment. The City shall collect the Water Impact Fee from each homebuilder constructing a home on any lot within the Property at such time the City issues a permit for the home construction on each lot. The City shall pay the Developer, on a quarterly basis, any Water Impact Fees that have been collected on any lot located within the Property during the previous quarter. In no event shall the City's reimbursement to Developer exceed the Waterline Improvements Cost. This process will continue until such time that the Waterline Credit amount has been fully paid to the Developer or this Agreement terminates pursuant to Article VI.

## **Article V Notice**

Any notice to be given or to be served upon a Party hereto in connection with this Agreement must be in writing and may be given by certified or registered mail and shall be deemed to have been given and received when a certified or registered letter containing such notice, properly addressed with postage prepaid, is deposited in the United States mail, and if given otherwise than by certified or registered mail, it shall be deemed to have been given and delivered to and received by the Party (or such Party's agent or representative) to whom it is addressed when actually received by the intended recipient. Such notice shall be given to the Parties hereto at the address set forth below. Any Party hereto may, at any time by giving two (2) days written notice to the other Party, designate any other address in substitution of the foregoing address to which such notice shall be given.

If Notice to Developer:

Mr. Brad Phillips  
Liberty Bankers Life Insurance Company  
1605 LBJ Freeway, Suite 710  
Dallas, Texas 75234

With a copy to:

Lenart Development Company, LLC  
520 Central Parkway E. Suite 104  
Plano, Texas 75074

If Notice to Lucas:

Joni Clarke, City Manager  
City of Lucas  
665 Country Club Road  
Lucas, Texas 75002-7651

With a copy to:

Joseph J. Gorfida, Jr.  
Nichols, Jackson, Dillard, Hager & Smith  
500 N. Akard  
Suite 1800  
Dallas, Texas 75201

## **Article VI Termination**

This Agreement may be terminated by: (a) the mutual written agreement of the Parties; (b) either Party providing written notice of such termination to the other Party if the other Party breaches any of the material terms and conditions of this Agreement, and such breach is not cured by such Party within sixty (60) days after receipt of written notice thereof (or, if cure cannot be completed within said time period, if cure of such breach is not commenced within such time period and/or not thereafter diligently and continuously pursued to completion within sixty (60) days after receipt of written notice thereof); (c) by City providing written notice to Developer if Developer suffers an event of bankruptcy or insolvency; (d) by either Party providing written notice to the other Party if any subsequent federal or state legislation or any decision of a court of competent jurisdiction declares or renders this Agreement invalid, illegal or unenforceable; or, (e) as provided in Article I.

## **Article VII Miscellaneous**

7.1 Assignment of Agreement. This Agreement may be assigned by Developer with the prior written consent of the City which consent shall not be unreasonably withheld, conditioned, or delayed. This Agreement may not be assigned, in whole or in part, by the City.

7.2 Venue. This Agreement shall be construed under and in accordance with the laws of the State of Texas and is specifically performable in Collin County, Texas. Exclusive venue shall be in state district court in Collin County, Texas.

7.3 Legal Construction. In case any one or more provisions contained in this Agreement shall be for any reason held invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof, and it is the intention of the Parties to this Agreement that in lieu of each provision that is found to be illegal, invalid, or unenforceable, a provision be added to this Agreement which is legal, valid, and enforceable and is as similar in terms as possible to the provision found to be illegal, invalid, or unenforceable.

7.4 Savings/Severability. In case any one or more provisions contained in this Agreement shall be for any reason held invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof, and it is the intention of the Parties to this Agreement that in lieu of each provision that is found to be illegal, invalid, or unenforceable, a provision be added to this Agreement which is legal, valid, and enforceable and is as similar in terms as possible to the provision found to be illegal, invalid, or unenforceable.

7.5 Authority. Each of the Parties represents and warrants to the other that it has the full power and authority to enter into and fulfill the obligations of this Agreement.

7.6 Entire Agreement. This Agreement contains the entire agreement of the Parties with respect to the matters contained herein and may not be modified or terminated except upon the provisions hereof or by the mutual written agreement of the Parties to this Agreement.

7.7 Consideration. This Agreement is executed by the Parties hereto without coercion or duress and for substantial consideration, the sufficiency of which is forever confessed.

7.8 Counterparts. This Agreement may be executed in a number of identical counterparts, each of which will be deemed an original for all purposes.

7.9 Representations. Each signatory represents this Agreement has been read by the Party for which this Agreement is executed, and that such Party has had an opportunity to confer with it legal counsel.

7.10 Miscellaneous Drafting Provisions. This Agreement shall be deemed drafted equally by all Parties hereto. The language of all parts of this Agreement shall be construed as a whole according to its fair meaning, and any presumption or principle that the language herein is to be construed against any Party shall not apply. Headings in this Agreement are for the convenience of the Parties and are not intended to be used in construing this document.

7.11 Binding Effect. This Agreement will be binding upon and inure to the benefit of the Parties hereto and their respective heirs, executors, administrators, legal representatives, successors, and authorized assigns. This Agreement only inures to the benefit of, and may only be enforced by, the Parties, assignees, lender, successors, and the City. No other person or entity is a third-party beneficiary of this Agreement.

7.12 Authority. The City represents and warrants that this Agreement has been approved by the City Council of the City in accordance with all applicable public meeting and public notice requirements (including, but not limited to, notices required by the Texas Open Meetings Act) and that the individual executing this Agreement on behalf of the City has been authorized to do so. Developer represents and warrants that this Agreement has been approved on behalf of Developer and that the individual executing this Agreement on behalf of Developer has been authorized to do so. Each assignee, lender, or successor who becomes a party to this Agreement represents and warrants that this Agreement has been approved by appropriate action of such assignee, lender, or successor and that the individual executing this Agreement on behalf of such assignee, lender, or successor has been authorized to do so.

7.13 Governmental Powers; Waiver of Immunity. By its execution of this Agreement, City does not waive or surrender any of its governmental powers, immunities, or rights except as to the enforcement of this Agreement.

7.14 No Joint Venture. It is acknowledged and agreed by the Parties that the terms hereof are not intended to and shall not be deemed to create a partnership or joint venture among the Parties, nor to cause City to be deemed to be a constituent partner of the Developer.

7.15 Legal Construction. In case any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or enforceability shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

7.16 Multiple Counterparts and Duplicate Originals. This Agreement may be executed in any number of multiple counterparts and/or duplicate originals, each of which shall be deemed an original and all of which considered together shall be deemed one and the same Agreement.

*(signature page to follow)*



**EXECUTED** on this \_\_\_\_\_ day of \_\_\_\_\_, 2018.

**City of Lucas, Texas**

By: \_\_\_\_\_  
Jim Olk, Mayor

**Approved as to Form:**

By: \_\_\_\_\_  
Joseph J. Gorfida, Jr.  
(01-31-2018/94054)

**THE STATE OF TEXAS           §**  
**§**  
**COUNTY OF COLLIN           §**

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2018, by Jim Olk, Mayor of the City of Lucas, a municipal corporation existing under the laws if the State of Texas, in such capacity on behalf of such municipal corporation.

\_\_\_\_\_  
Stacy Henderson  
Notary Public, State of Texas

**EXECUTED** on this \_\_\_\_\_ day of \_\_\_\_\_, 2018.

**Liberty Bankers Life Insurance Company,**  
a \_\_\_\_\_,

By: \_\_\_\_\_  
Bradford Phillips  
Title: \_\_\_\_\_

**STATE OF TEXAS           §**  
  **§**  
**COUNTY OF COLLIN       §**

This instrument was acknowledged before me on the \_\_\_\_\_ day of \_\_\_\_\_, 2018,  
by Bradford Phillips, as \_\_\_\_\_ of Liberty Bankers Life Insurance  
Company.

\_\_\_\_\_  
Notary Public, State of Texas

**EXHIBIT "A"**  
**LEGAL DESCRIPTION**

BEING a 65.4629 tract of land situated in the Montgomery Birch Survey, Abstract NO. 115 and being part of a tract of land described in deed recorded in Volume 1975, Page 744 of the Deed Records of Collin County, Texas and a 83.2327 acre parcel of land out of T. D. James Survey, Abstract NO. 477, and being part of a tract of land described in deed recorded in Volume 480, Page 141 of the Deed of Records of Collin County, Texas and being more particularly described as follows:

BEGINNING at the Northeast of said 83.2327 acre tract for the POINT OF BEGGING;

THENCE South 01°47'06" West, a distance of 1559.81 feet to an iron rod found;

THENCE South 88°18'53" East, a distance of 1158.69 feet to an iron rod found;

THENCE South 02°30'00" East, a distance of 1282.52 feet to an iron rod found;

THENCE North 60°35'42" East, a distance of 0.02 feet to an iron rod found;

THENCE South 26°03'44" East, a distance of 29.62 feet to an iron rod found;

THENCE South 49°46'37" West, a distance of 156.47 feet to an iron rod found;

THENCE South 39°22'18" West, a distance of 682.78 feet to an iron rod found;

THENCE North 87°39'20" West, a distance of 1535.59 feet to an iron rod found;

THENCE North 02°44'57" East, a distance of 805.91 feet to an iron rod found;

THENCE North 88°23'52" West, a distance of 568.39 feet to an iron rod found;

THENCE North 18°17'35" West, a distance of 651.22 feet to an iron rod found;

THENCE North 00° 11'32" East, a distance of 604.85 feet to an iron rod found;

THENCE South 88°50'24" East, a distance of 390.20 feet to an iron rod found;

THENCE North 01°50'24" East, a distance of 1464.26 feet to an iron rod found;

THENCE South 88°31'45" East, a distance of 1203.50 feet to the POINT OF BEGINNING and containing 6477178 square feet, 148.6956 acres of land, more or less.

# EXHIBIT "B" CONCEPT PLAN



**EXHIBIT “C”  
APPROVED PLANS**

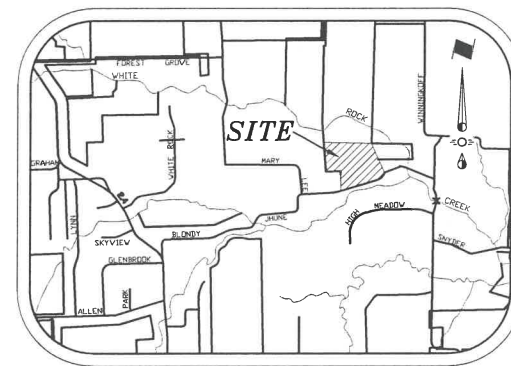
# ENGINEERING PLANS

## CROSS CREEK ACRES

### City of Lucas, Texas

#### Index Of Drawings

	Cover Sheet
	Replat
	Topographic Survey
C 1	Demolition Plan
C 2	Paving Plan & Profile 1
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C 5	Paving Plan & Profile 4
C 6	Grading Plan 1
C 7	Grading Plan 2
C 8	Grading Plan 3
C 9	Drainage Area Map
C 10	Storm Sewer Plan
C 11	Storm Sewer Profiles
C 12	Detention Plan
C 13	Detention Details
C 14	Utility Plan 1
C 15	Utility Plan 2
C 16	Utility Plan 3
C 17	Erosion Control Plan
C 18	Tree Survey
C 19	Tree Preservation Plan
C 20	Tree Replacement Plan
C 21	Construction Details
C 22	Construction Details
C 23	Construction Details



Vicinity Map  
NTS

Prepared For  
**Better Home & Commercial, LLC**  
 1607 Balboa Lane  
 Allen, Texas 75002

Engineer

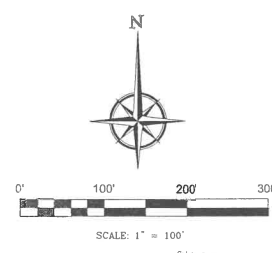
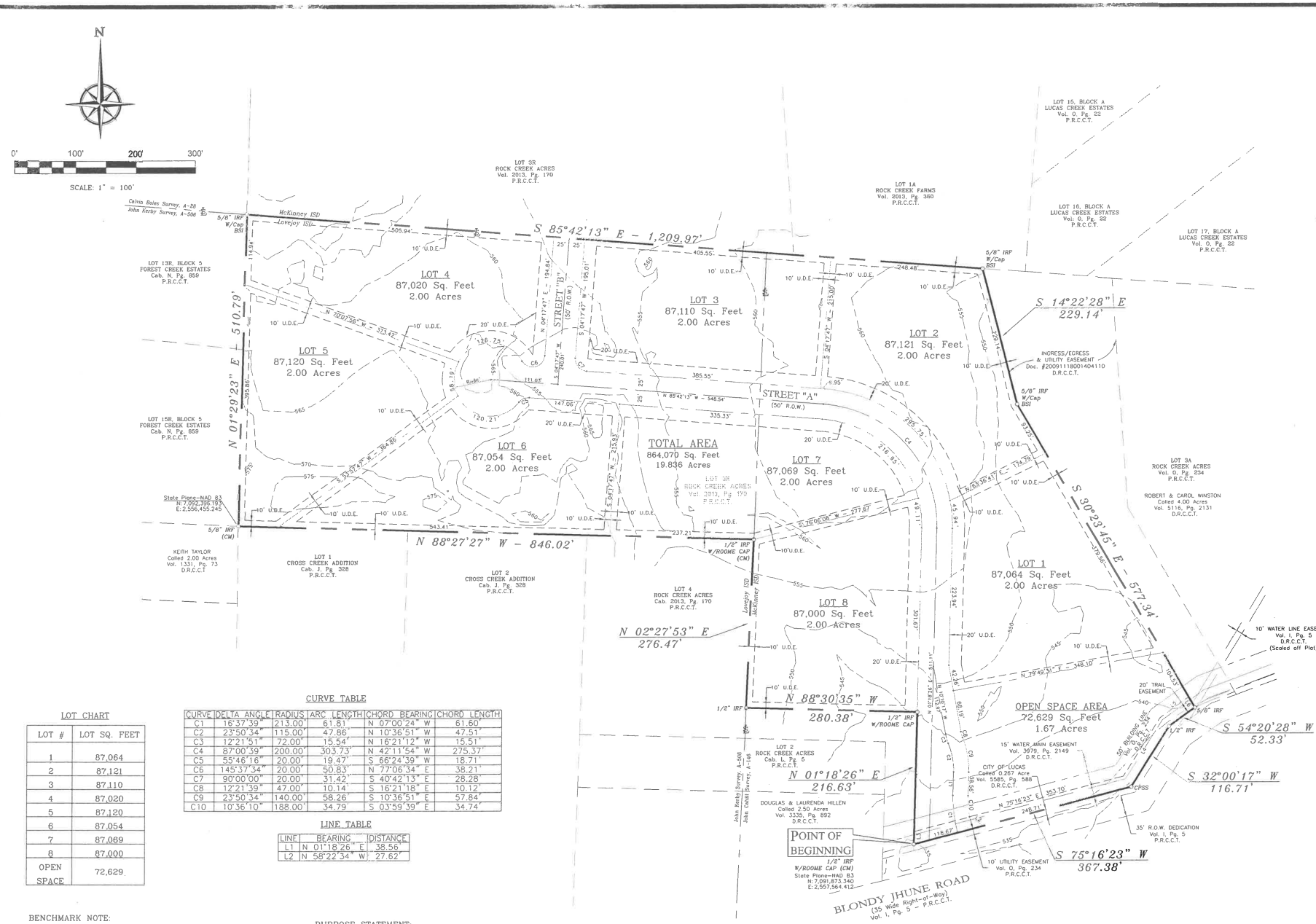
**CROSS ENGINEERING CONSULTANTS**

131 S. Tennessee St. McKinney, Texas 75069  
 972.562.4409 Texas P.E. Firm No. F-5935



ISSUE DATES:	REVISIONS:	DATE	BY
3-29-2016			
4-05-2016			
5-20-2016			

APPROVED  
 CITY OF LUCAS  
 CITY ENGINEER  
 DATE 7-14-16



**LOT CHART**

LOT #	LOT SQ. FEET
1	87,064
2	87,121
3	87,110
4	87,020
5	87,120
6	87,054
7	87,069
8	87,000
OPEN SPACE	72,629

**CURVE TABLE**

CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	16°37'59"	213.00'	61.81'	N 07°00'24" W	61.80'
C2	23°50'54"	115.00'	47.86'	N 10°36'51" W	47.51'
C3	12°21'51"	72.00'	15.54'	N 16°21'12" W	15.51'
C4	87°00'39"	200.00'	303.73'	N 42°11'54" W	275.37'
C5	55°46'16"	20.00'	19.47'	S 66°24'39" W	18.71'
C6	145°37'54"	20.00'	50.83'	N 77°06'34" E	38.21'
C7	90°00'00"	20.00'	31.42'	S 40°42'13" E	28.28'
C8	12°21'39"	47.00'	10.14'	S 16°21'18" E	10.12'
C9	23°50'34"	140.00'	58.26'	S 10°36'51" E	57.84'
C10	10°36'10"	168.00'	34.79'	E 03°59'39" E	34.74'

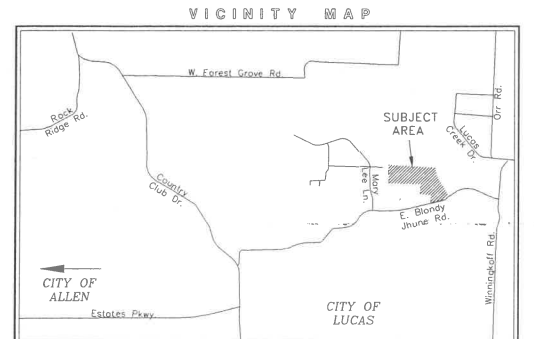
**LINE TABLE**

LINE	BEARING	DISTANCE
L1	N 01°18'26" E	38.56'
L2	N 58°22'54" W	27.62'

**BENCHMARK NOTE:**  
COM-34 = City of McKinney Aluminum Disc in concrete at the northeast corner of FM 546 and CR 722, 3' north of the sign, 90' west of stop sign, & 22' southwest of pole.  
Elev. = 570.224

**PURPOSE STATEMENT:**  
This purpose of this Replat is to subdivide the southern portion of Lot 3R of Rock Creek Acres into 8 Single Family Lots.

**LEGEND**  
Cab. = Cabinet  
Vol. = Volume  
Pg. = Page  
Doc. # = Document Number  
D.R.C.C.T. = Deed Records, Collin County, Texas  
P.R.C.C.T. = Plat Records, Collin County, Texas  
IRF = Iron Rod Found  
BSI = Boundary Solutions, Inc.  
CPSS = Cotton Picker Spindle Set  
RPLS = Registered Professional Land Surveyor



- GENERAL NOTES:**
- The area (acres) shown hereon is based on the mathematical closure of the courses and distances reflected on this Survey. It does not include the tolerances that may be present due to positional accuracy of the boundary monuments in place.
  - Reference Bearing: The bearings shown hereon are referenced to South 01 deg. 10 min. 22 sec. East, along the east line of Lot 1, Block E of Oakwood Estates, Phase III, according to the plat thereof recorded in Cabinet J, Page 607, Plat Records of Collin County, Texas.
  - Selling a portion of any Lot within this addition by metes & bounds is a violation of State Law and City Ordinance and is subject to fines and withholding of utilities and building permits.
  - The Home Owners Association (HOA) will be responsible for maintaining the Open Space Area.
  - The Home Owners Association (HOA) will be responsible for maintaining the Detention Area.

**FLOOD ZONE NOTE:**  
This Surveyor has reviewed Flood Insurance Rate Map No. 48085C04051 (effective date June 2, 2009) published by the Federal Emergency Management Administration for Collin County, Texas and based upon said scaled map and graphic plotting, such review indicates that No Part of the subject parcel shown hereon lies within the 100 Year Flood Plain.

**SURVEYOR'S CERTIFICATE**  
That I, Lawrence H. Ringley, do hereby certify that I have prepared this plat and the field notes shown hereon from an on ground survey of that land, and this plat is a true, correct and accurate representation of the physical evidence found at the time of the survey; that the corner monuments shown hereon were found and/or placed under my personal supervision. This plat was prepared in accordance with the platting rules and regulations of the Town of Fairview, Texas.  
DATED this \_\_\_\_\_ day of \_\_\_\_\_, 2016.

**PRELIMINARY**  
RELEASED 04/05/16 FOR REVIEW PURPOSES ONLY. THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE.  
Lawrence H. Ringley  
State of Texas, No. 4701

STATE OF TEXAS )  
COUNTY OF COLLIN )  
BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, on this day personally appeared LAWRENCE H. RINGLEY, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same in the capacity therein stated and for the purposes and considerations therein expressed.  
WITNESS MY HAND AND SEAL OF OFFICE, this the \_\_\_\_\_ day of \_\_\_\_\_, 2016.  
Notary Public, State of Texas

STATE OF TEXAS )  
COUNTY OF COLLIN )  
OWNER'S CERTIFICATE  
WHEREAS, BLONDY JHUNE ESTATES, A SERIES OF HUGHES LANE, LLC is the owner of that certain tract of land situated in the City of Lucas, in the John Cohill Survey, Abstract No. 146 and the John Kerby Survey, Abstract No. 506 of Collin County, Texas and being part of Lot 3R of Rock Creek Acres, an addition to the City of Lucas, according to the plat thereof, recorded in Cabinet 2013, Page 170, Plat Records, Collin County, Texas (P.R.C.C.T.) and also being that same 19.836 acre tract of land described in a deed to Blondy Jhune Estates, a Series of Hughes Lane, LLC, recorded in Document No. 20151106001408950, Deed Records, Collin County, Texas (D.R.C.C.T.) and being more particularly described by metes & bounds as follows:

BEGINNING at a 1/2 inch iron rod, topped with a plastic cap, stamped "ROOME" (hereinafter referred to as "with cap"), found on the north right-of-way line of Blondy Jhune Road for the most southerly southwest corner of the above described Lot 3R and same being the southeast corner of Lot 4 of the above described Rock Creek Acres;  
THENCE: North 01 deg. 18 min. 26 sec. East, departing from said Blondy Jhune Road, along the common line of said Lot 3R and Lot 4, a distance of 216.63 feet to a 1/2 inch iron rod, with cap, found for an inside ell corner of said Lot 3R and the most easterly northeast corner of said Lot 4;  
THENCE: North 88 deg. 30 min. 35 sec. West, continuing along the common line of said Lots 3R and 4, a distance of 280.38 feet to a 1/2 inch iron rod (no cap), found for a southwest corner of said Lot 3R and an inside ell corner of said Lot 4;  
THENCE: North 02 deg. 27 min. 53 sec. East, continuing along the common line of said Lots 3R and 4, a distance of 276.47 feet to a 1/2 inch iron rod, with cap, found for an inside ell corner of said Lot 3R and the northeast corner of said Lot 4;  
THENCE: North 88 deg. 27 min. 27 sec. West, continuing along the common line of said Lots 3R and 4, at 274.01 feet, passing a 5/8 inch iron rod found for the northwest corner of said Lot 4 and the northeast corner of Cross Creek Addition, an addition to the City of Lucas, according to the plat thereof, recorded in Cabinet 1, Page 326, P.R.C.C.T. and continuing with the common line of said Lot 3R and Cross Creek Addition for a total distance of 846.02 feet to 5/8 inch iron rod (no cap), found for the most westerly southwest corner of said Lot 3R, the northwest corner of Cross Creek Addition, the northeast corner of a called 2.00 acre tract, described in a deed to Keith Taylor, recorded in Volume 1331, Page 73, D.R.C.C.T. and same being the southeast corner of Forest Creek Estates, an addition to the City of Lucas, according to the plat thereof, recorded in Cabinet N, Page 859, P.R.C.C.T.;  
THENCE: North 01 deg. 29 min. 23 sec. East, along the common line of said Lot 3R and Forest Creek Estates, a distance of 510.79 feet to a 5/8 inch iron rod, topped with a plastic cap, stamped "Boundary Solutions", found for the northwest corner of this called 19.836 acre tract;  
THENCE: South 85 deg. 42 min. 13 sec. East, departing from the east line of said Forest Creek Estates, over and across said Lot 3R, with the north line of this called 19.836 acre tract, a distance of 1,209.97 feet to a 5/8 inch iron rod, topped with a plastic cap, stamped "Boundary Solutions", found for the northeast corner of this called 19.836 acre tract and same being the most easterly northeast corner of said Lot 3R and an inside ell corner of Lot 1A of said Rock Creek Farms;  
THENCE: South 14 deg. 22 min. 28 sec. East, along the common line of said Lot 3R and Lot 1A, a distance of 229.14 feet to a 5/8 inch iron rod, topped with a plastic cap, stamped "Boundary Solutions", found for corner;  
THENCE: South 30 deg. 23 min. 45 sec. East, continuing along the common line of said Lot 3R and Lot 1A, a distance of 577.34 feet to a 5/8 inch iron rod (no cap), found on the northerly right-of-way of the above mentioned Blondy Jhune Road, for the southeast corner of said Lot 3R and this called 19.836 acre tract;  
THENCE: South 54 deg. 20 min. 28 sec. West, along the common line of said Lot 3R and Blondy Jhune Road, a distance of 52.33 feet to a 1/2 inch iron rod found for corner;  
THENCE: South 32 deg. 00 min. 17 sec. West, continuing along the common line of said Lot 3R and Blondy Jhune Road, a distance of 116.71 feet to a cotton picker spindle set in the edge of an asphalt road for corner;  
THENCE: South 75 deg. 16 min. 23 sec. West, continuing along the common line of said Lot 3R and Blondy Jhune Road, a distance of 367.38 feet to the POINT OF BEGINNING and containing 864,070 square feet, or 19.836 acres of land.

STATE OF TEXAS )  
COUNTY OF COLLIN )  
DEDICATION  
NOW THEREFORE KNOW ALL MEN BY THESE PRESENTS:  
THAT, BLONDY JHUNE ESTATES, A SERIES OF HUGHES LANE, LLC., does hereby adopt this plat designating the herein described property as CROSS CREEK ACRES, an addition to the City of Lucas, Texas, and does hereby dedicate to the City of Lucas for its use forever, the streets and alleys shown thereon. The streets and alleys are dedicated for street purposes. The Easements and public use areas, as shown, are dedicated, to the City of Lucas's use forever, for the purposes indicated on this plat. No buildings, fences, trees, shrubs or other improvements or placed upon, over or across the Easements as shown. In addition, Utility Easements may also be used for the mutual use and accommodation of all public utilities desiring to use or using the same unless the easement limits the use to particular utilities, said use by public utilities being subordinate to City of Lucas's use thereof. The City of Lucas and public utility entities shall have the right to remove and keep removed all or parts of any buildings, fences, trees, shrubs or other improvements or growths which may in any way endanger or interfere with the systems in said Easements. The City of Lucas and public utility entities shall at all times have the full right of ingress and egress to or from their respective easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining, and adding to or removing all or parts of their respective systems without the necessity at any time procuring the permission from anyone.  
This plat approved subject to all platting ordinances, rules, regulations and resolution of the City of Lucas, Texas.  
FOR: BLONDY JHUNE ESTATES, A SERIES OF HUGHES LANE, LLC.

BY: \_\_\_\_\_  
Ragan Young, Manager  
Blondy Jhune Estates  
STATE OF TEXAS )  
COUNTY OF COLLIN )  
BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, on this day personally appeared RAGAN YOUNG, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same in the capacity therein stated and for the purposes and considerations therein expressed.  
WITNESS MY HAND AND SEAL OF OFFICE,  
this the \_\_\_\_\_ day of \_\_\_\_\_, 2016.  
Notary Public, State of Texas

**CITY APPROVAL CERTIFICATE**  
This plat is hereby approved by the Planning and Zoning Commission of the City of Lucas, Texas.  
Chairman, Planning and Zoning Commission \_\_\_\_\_ Date \_\_\_\_\_  
ATTEST:  
Signature \_\_\_\_\_ Date \_\_\_\_\_  
Name \_\_\_\_\_ Date \_\_\_\_\_

The Director of Public Works of the City of Lucas, Texas hereby certifies that to the best of his/her knowledge or belief, this subdivision plat conforms to all requirements of the Code of Ordinances and with engineering construction standards and processes adopted by the City of Lucas, Texas as to which his/her approval is required.  
Director of Public Works \_\_\_\_\_ Date \_\_\_\_\_  
The Director of Planning and Community Development of the City of Lucas, Texas hereby certifies that to the best of his/her knowledge or belief, this subdivision plat conforms to all requirements of the Code of Ordinances, or as may have been amended or modified, as allowed, by the Planning and Zoning Commission as to which his/her approval is required.  
Director of Planning and Community Development \_\_\_\_\_ Date \_\_\_\_\_

**OWNER**  
BLONDY JHUNE ESTATES  
Attn: Ragan Young, Manager  
15660 N. Dallas Parkway, Suite 700  
Dallas, Texas 75248  
732-927-3908  
Email: Ragan@oakwoodag.com  
**SURVEYOR**  
RINGLEY & ASSOCIATES, INC.  
701 S. Tennessee Street  
McKinney, Texas 75069  
972-542-1266  
Email: LHR@Ringley.com

**REPLAT**  
**CROSS CREEK ACRES**  
**LOTS 1 Through 8**  
19.836 Acres  
Zoned: R-2  
Being A Replat of  
LOT 3R  
of  
ROCK CREEK ACRES  
Cabinet 2013, Page 170  
Plat Records, Collin County, Texas  
situated in the  
John Cohill Survey, Abstract No. 146  
John Kerby Survey, Abstract No. 506  
City of Lucas  
Collin County, Texas

**RINGLEY & ASSOCIATES, INC.**  
SURVEYING-MAPPING-PLANNING  
701 S. Tennessee - McKinney, Texas 75069  
(972) 542-1266  
Texas Firm Registration No. 10061300  
Drawn by: \_\_\_\_\_ Date: 03/28/16 Scale: 1" = 100' Job: 16010 Title: 16010-RP.DWG Sheet: 1 of 1

Lot 13R, Block 5  
Forest Creek Estates  
Vol. N, Pg. 859, CCMR

Lot 15R, Block 5  
Forest Creek Estates  
Vol. N, Pg. 859, CCMR

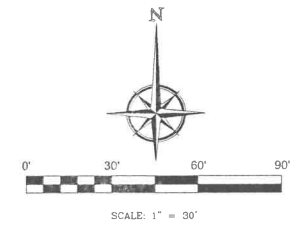
Keith Taylor  
Colled 2.00 Acres  
Vol. 1331, Pg. 73, CCLR

Lot 1  
Cross Creek Addition  
Vol. J, Pg. 328, CCMR

Lot 2  
Cross Creek Addition  
Vol. J, Pg. 328, CCMR

Lot 4  
Rock Creek Acres  
Vol. 2013, Pg. 170, CCMR

Lot 3R  
Rock Creek Acres  
Vol. 2013, Pg. 170, CCMR



**FLOOD ZONE NOTE:**  
This Surveyor has reviewed Flood Insurance Rate Map No. 48085C04051 (effective date June 2, 2009) published by the Federal Emergency Management Administration for Collin County, Texas and based upon said scaled map and graphic plotting, such review indicates that no part of the subject parcel lies within the 100 Year Floodplain.

**LEGEND**

- ⊕ WATER METER
  - ⊙ FIRE HYDRANT
  - ⊕ WATER VALVE
  - ⊕ POWER POLE
  - ⊕ GUY ANCHOR
  - ⊕ TELEPHONE RISER
  - ⊕ MAILBOX
  - ⊕ 8" WOOD POST
  - TREE (Type & Size)
- RCP = REINFORCED CONCRETE PIPE  
CMP = CORRUGATED METAL PIPE  
IRP = IRON ROD FOUND
- BOUNDARY LINE  
--- ASPHALT ROAD  
--- FENCE LINE (Labeled)  
--- OVERHEAD ELECTRIC LINE  
--- STORM SEWER LINE (Various Sizes)

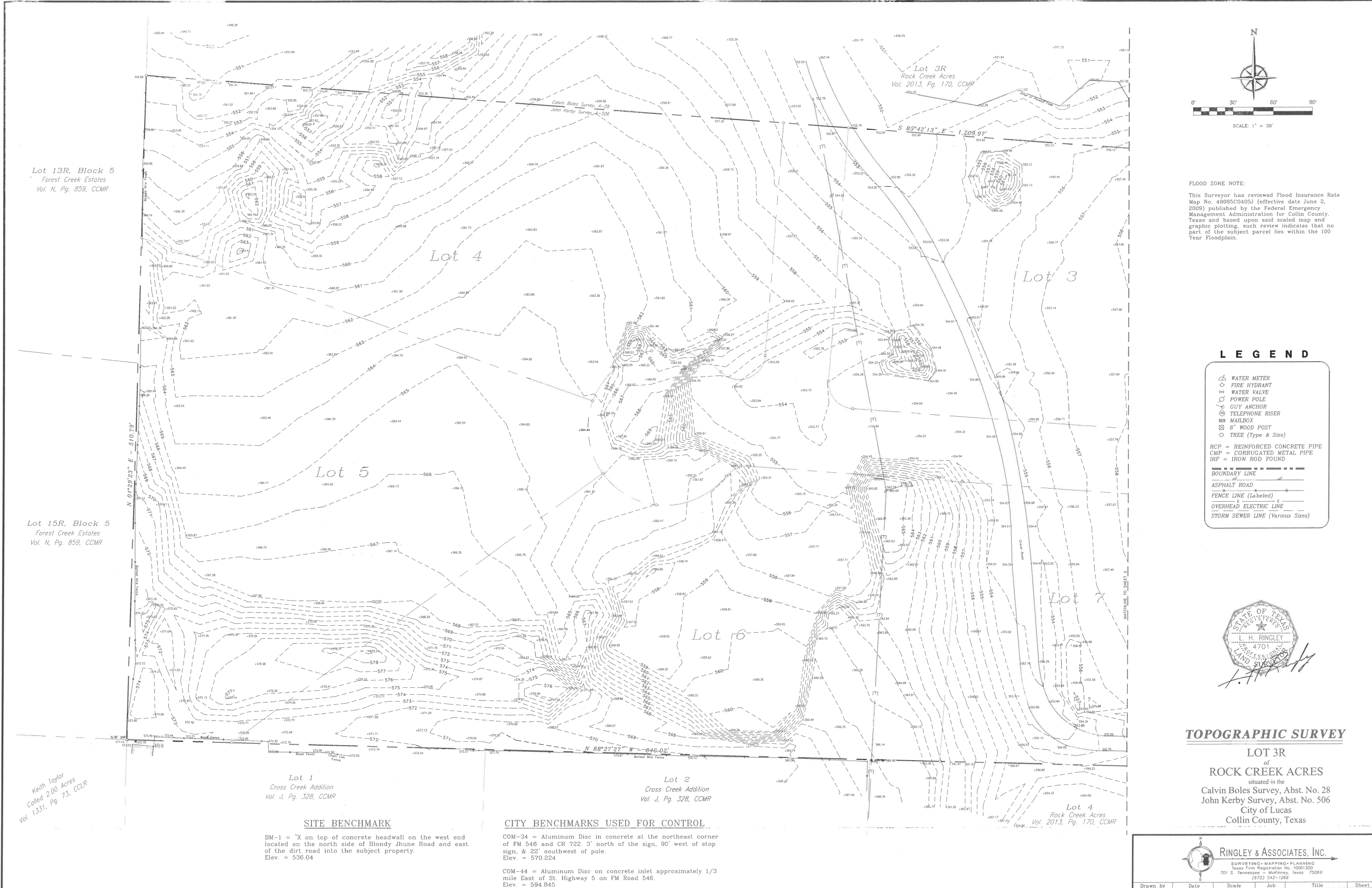


**TOPOGRAPHIC SURVEY**

**LOT 3R**  
of  
**ROCK CREEK ACRES**  
situated in the  
Calvin Boles Survey, Abst. No. 28  
John Kerby Survey, Abst. No. 506  
City of Lucas  
Collin County, Texas

**RINGLEY & ASSOCIATES, INC.**  
SURVEYING • MAPPING • PLANNING  
Texas Firm Registration No. 10061300  
701 S. Tennessee - McKinney, Texas 75069  
(972) 542-1266

Drawn by	Date	Scale	Job	Title	Sheet
Mark Stahl	02/02/16	1" = 30'	15122	15122-T.DWG	1 of 3



**SITE BENCHMARK**

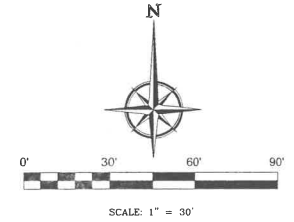
BM-1 = "X" on top of concrete headwall on the west end located on the north side of Blondy Juene Road and east of the dirt road into the subject property.  
Elev. = 536.04

**CITY BENCHMARKS USED FOR CONTROL**

COM-34 = Aluminum Disc in concrete at the northeast corner of FM 546 and CR 722. 3' north of the sign, 90' west of stop sign, & 22' southwest of pole.  
Elev. = 570.224

COM-44 = Aluminum Disc on concrete inlet approximately 1/3 mile East of St. Highway 5 on FM Road 546.  
Elev. = 594.845





Lot 17,  
Lucas Cree  
Vol. 0, Pg. .

Lot 1A  
Rock Creek Farms  
Vol. 2013, Pg. 360, CCMR

Lot 16, Block A  
Lucas Creek Estates  
Vol. 0, Pg. 22, CCMR

**FLOOD ZONE NOTE:**  
This Surveyor has reviewed Flood Insurance Rate Map No. 48085C0405J (effective date June 2, 2009) published by the Federal Emergency Management Administration for Collin County, Texas and based upon said scaled map and graphic plotting, such review indicates that no part of the subject parcel lies within the 100 Year Floodplain.

- LEGEND**
- △ WATER METER
  - ◇ FIRE HYDRANT
  - ⊗ WATER VALVE
  - ⊕ POWER POLE
  - ⊙ GUY ANCHOR
  - ⊕ TELEPHONE RISER
  - ⊕ MAILBOX
  - ⊕ 8" WOOD POST
  - TREE (Type & Size)
- RCP = REINFORCED CONCRETE PIPE  
CMP = CORRUGATED METAL PIPE  
IRF = IRON ROD FOUND
- BOUNDARY LINE  
--- ASPHALT ROAD  
--- FENCE LINE (Labeled)  
--- OVERHEAD ELECTRIC LINE  
--- STORM SEWER LINE (Various Sizes)

**SITE BENCHMARK**  
BM-1 = "X" on top of concrete headwall on the west end located on the north side of Blondy Rhune Road and east of the dirt road into the subject property.  
Elev. = 536.04

**CITY BENCHMARKS USED FOR CONTROL**  
COM-34 = Aluminum Disc in concrete at the northeast corner of FM 546 and CR 722. 3' north of the sign, 90' west of stop sign, & 22' southwest of pole.  
Elev. = 570.224  
COM-44 = Aluminum Disc on concrete inlet approximately 1/3 mile East of St. Highway 5 on FM Road 546.  
Elev. = 594.845

Lot 3A  
Rock Creek Acres  
Vol. 0, Pg. 234, CCMR  
Robert & Carol Winston  
Called 4.00 Acres  
Vol. 5116, Pg. 2131, CCLR

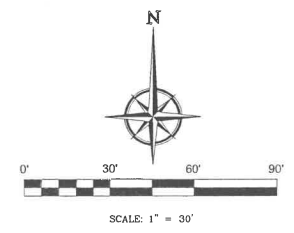


**TOPOGRAPHIC SURVEY**

LOT 3R  
of  
ROCK CREEK ACRES  
situated in the  
Calvin Boles Survey, Abst. No. 28  
John Kerby Survey, Abst. No. 506  
City of Lucas  
Collin County, Texas

**RINGLEY & ASSOCIATES, INC.**  
SURVEYING • MAPPING • PLANNING  
Texas Firm Registration No. 100013002  
701 S. Tennessee - McKinney, Texas 75069  
(972) 542-1266

Drawn by	Date	Scale	Job	Title	Sheet
Mark Haub	02/02/16	1" = 30'	15122	15122-T.DWG	2 of 3



**FLOOD ZONE NOTE:**  
 This Surveyor has reviewed Flood Insurance Rate Map No. 48085C04051 (effective date June 2, 2009) published by the Federal Emergency Management Administration for Collin County, Texas and based upon said scaled map and graphic plotting, such review indicates that no part of the subject parcel lies within the 100 Year Floodplain.

**LEGEND**

- ⊕ WATER METER
  - ⊕ FIRE HYDRANT
  - ⊕ WATER VALVE
  - ⊕ POWER POLE
  - ⊕ GUY ANCHOR
  - ⊕ TELEPHONE RISER
  - ⊕ MAILBOX
  - ⊕ 6" WOOD POST
  - ⊕ TREE (Type & Size)
- RCP = REINFORCED CONCRETE PIPE  
 CMP = CORRUGATED METAL PIPE  
 IRF = IRON ROD FOUND
- BOUNDARY LINE  
 --- ASPHALT ROAD  
 --- FENCE LINE (Labeled)  
 --- OVERHEAD ELECTRIC LINE  
 --- STORM SEWER LINE (Various Sizes)

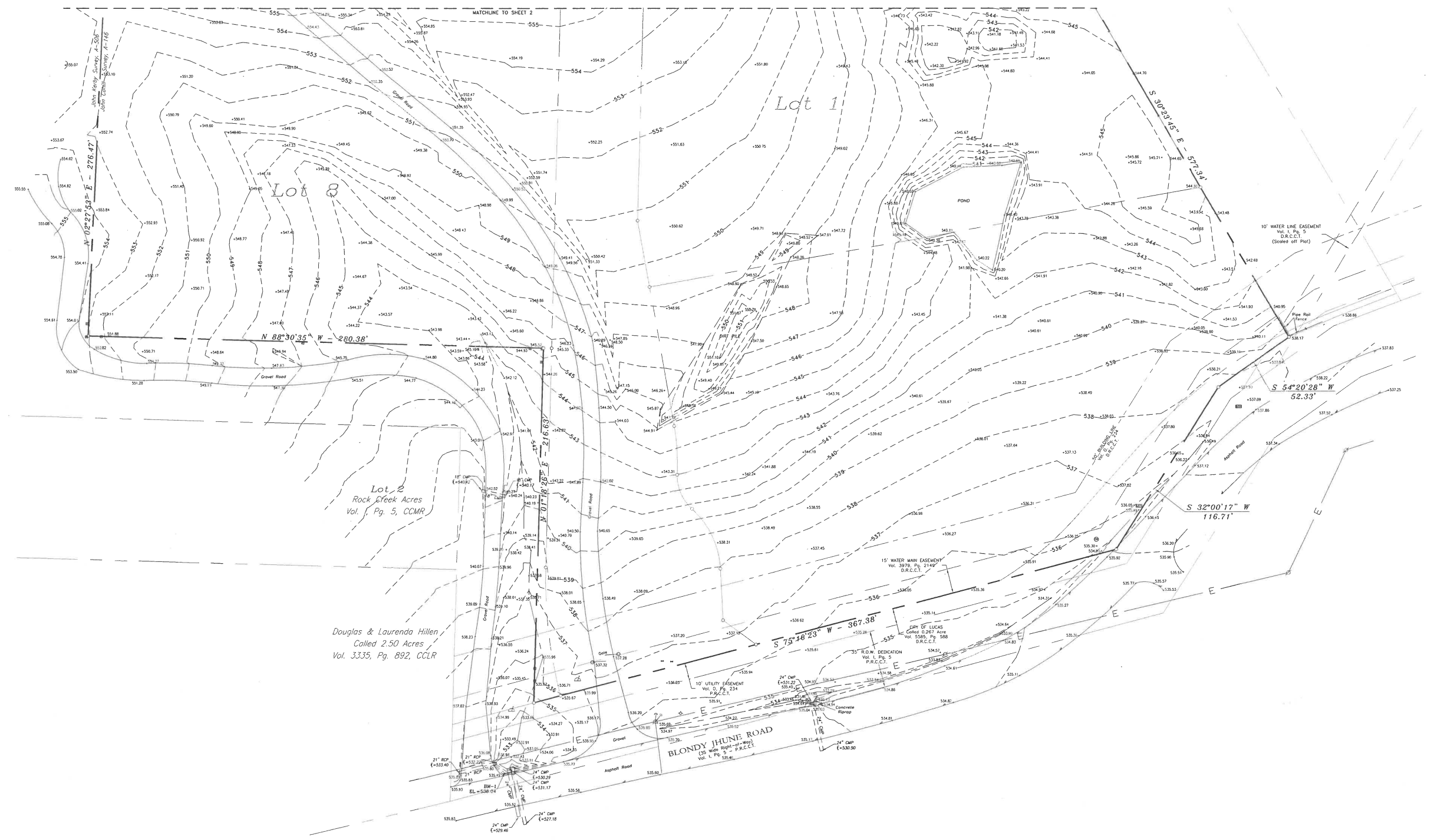


**TOPOGRAPHIC SURVEY**

**LOT 3R**  
 OF  
**ROCK CREEK ACRES**  
 situated in the  
 Calvin Boles Survey, Abst. No. 28  
 John Kerby Survey, Abst. No. 506  
 City of Lucas  
 Collin County, Texas



Drawn by	Date	Scale	Job	Title	Sheet
Mark Hall	02/02/16	1" = 30'	15122	15122-T.DWG	3 of 3



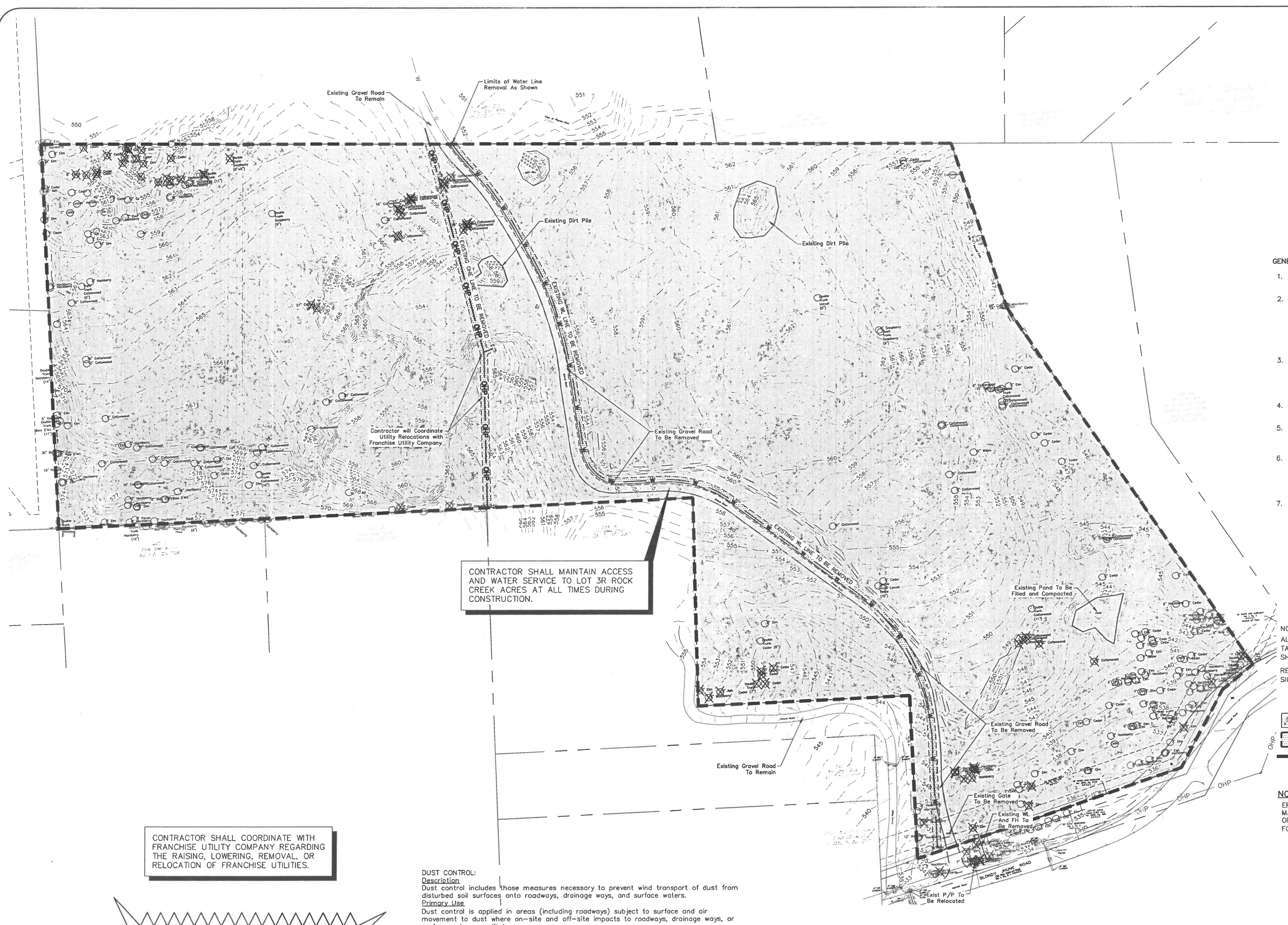
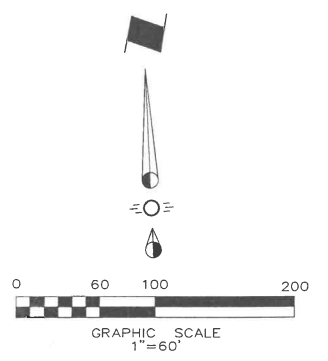
**SITE BENCHMARK**

BM-1 = "X" on top of concrete headwall on the west end located on the north side of Blondy Jhune Road and east of the dirt road into the subject property.  
 Elev. = 536.04

**CITY BENCHMARKS USED FOR CONTROL**

COM-34 = Aluminum Disc in concrete at the northeast corner of FM 546 and CR 722. 3' north of the sign, 90' west of stop sign, & 22' southwest of pole.  
 Elev. = 570.224

COM-44 = Aluminum Disc on concrete inlet approximately 1/3 mile East of St. Highway 5 on FM Road 546.  
 Elev. = 594.845



- GENERAL NOTES**
1. All demolition shall be in accordance with the City of Lucas Standard Specifications and Construction Standards.
  2. Existing utilities are shown schematically and are for the contractors guidance only. The location and/or elevation of existing utilities as shown on these plans are based on records of the various utility companies, and, where possible, measurements taken in the field. The contractor must call the appropriate utility company at least 48 hours prior to any excavation to request exact field location of utilities.
  3. The contractor shall be responsible for protecting all existing improvements in the construction of this project. The contractor is responsible for repairs of damage to any existing improvements not being demolished during construction. Repairs shall be equal to or better than condition prior to construction.
  4. Contractor shall be responsible for hauling and disposal of all paving, trash and debris as a result of demolition.
  5. Contractor shall be responsible for removing all other utility services not shown on this plan and to coordinate with the appropriate authority for their removal.
  6. Contractor to remove Light Pole and all electrical wiring and conduit associated with it within the construction area. If conduit and lead traverse under existing paving to remain, contractor shall properly cap the end of the conduit and notify the owner and the Engineer.
  7. All existing paving striping to be removed within limits of construction.

**NOTES:**  
 ALL WATER AND SANITARY SEWER TAPS THAT ARE NO LONGER NEEDED SHALL BE ABANDONED.  
 REMOVE AND OR RELOCATE EXISTING SIGNAGE INSIDE DEMOLITION AREA

**LEGEND**

- AREA OF DEMOLITION
- UTILITY DEMOLITION / REMOVAL
- LIMITS OF DEMOLITION
- TREE TO BE REMOVED

**NOTE:**  
 EROSION CONTROL TO BE IN PLACE PRIOR TO DEMOLITION COMMENCING. MAKE EXISTING DRIVEWAY CUTS AND PLACE SILT FENCE ACROSS OPENINGS PRIOR TO INTERIOR DEMOLITION. SEE EROSION CONTROL PLAN FOR EROSION CONTROL PLACEMENT LOCATION.

CONTRACTOR SHALL COORDINATE WITH FRANCHISE UTILITY COMPANY REGARDING THE RAISING, LOWERING, REMOVAL, OR RELOCATION OF FRANCHISE UTILITIES.

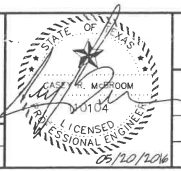
**CAUTION!!**  
 Existing Utilities in Area. Contractor shall determine location and elevation of all utilities prior to construction. Contractor shall inform Engineer of any conflicts prior to construction.

**DUST CONTROL:**  
**Description**  
 Dust control includes those measures necessary to prevent wind transport of dust from disturbed soil surfaces onto roadways, drainage ways, and surface waters.  
**Primary Use**  
 Dust control is applied in areas (including roadways) subject to surface and air movement to dust where on-site and off-site impacts to roadways, drainage ways, or surface waters are likely.  
**Design Criteria**  
 -Vegetate or mulch areas that will not receive vehicle traffic. In areas where planting, mulching, or paving is impractical, apply gravel or landscaping rock.  
 -Limit dust generation by clearing only those areas where immediate activity will take place, leaving the remaining area(s) in the original condition, if stable. Maintain the original cover as long as practical.  
 -Construct natural or artificial windbreaks or windscreens. These may be designed as enclosures for small dust sources.  
 -Sprinkle the site with water until dampened sufficiently to prevent dust and repeat as needed. Do not apply water in quantities to cause runoff.  
 -Irrigation water can be used for dust control. Irrigation systems should be installed as a first step on sites where dust control is a concern.

Issue Dates:	Revisions:	Date:
1 3/29/2016	1	
2 4/05/2016	2	
3 5/20/2016	3	
4	4	
5	5	
6	6	

**CROSS ENGINEERING CONSULTANTS**  
 131 S. Tennessee St. McKinney, Texas 75069  
 972.562.4499 Texas P.E. Firm No. F-5935

Drawn By: C.E.C.I. Checked By: C.E.C.I. Scale: 1"=60'



**DEMOLITION PLAN**

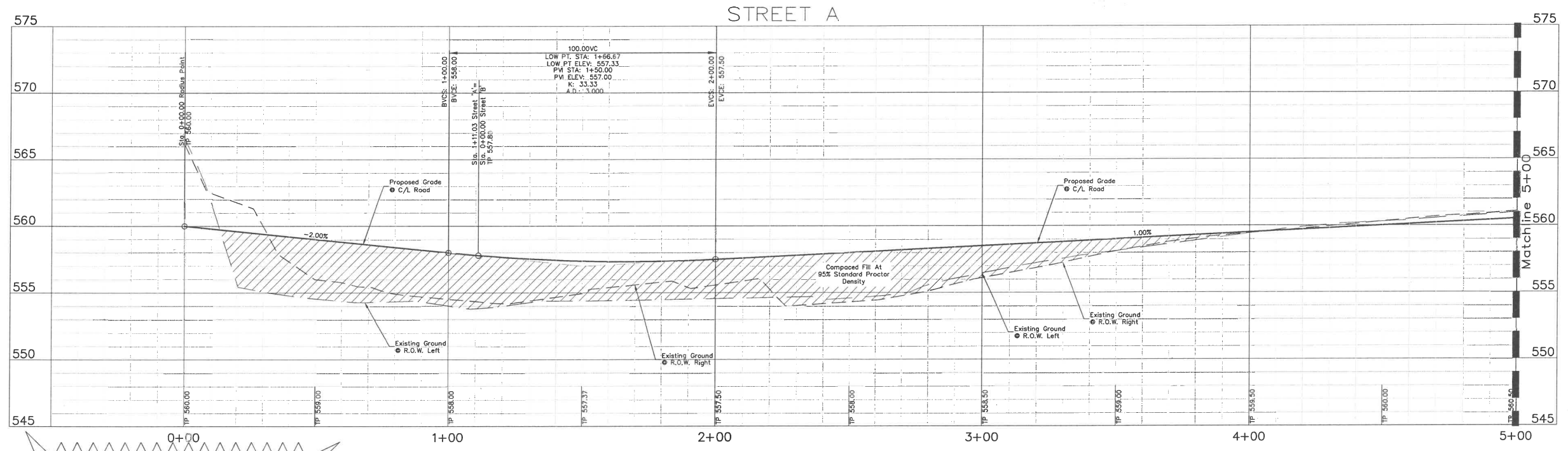
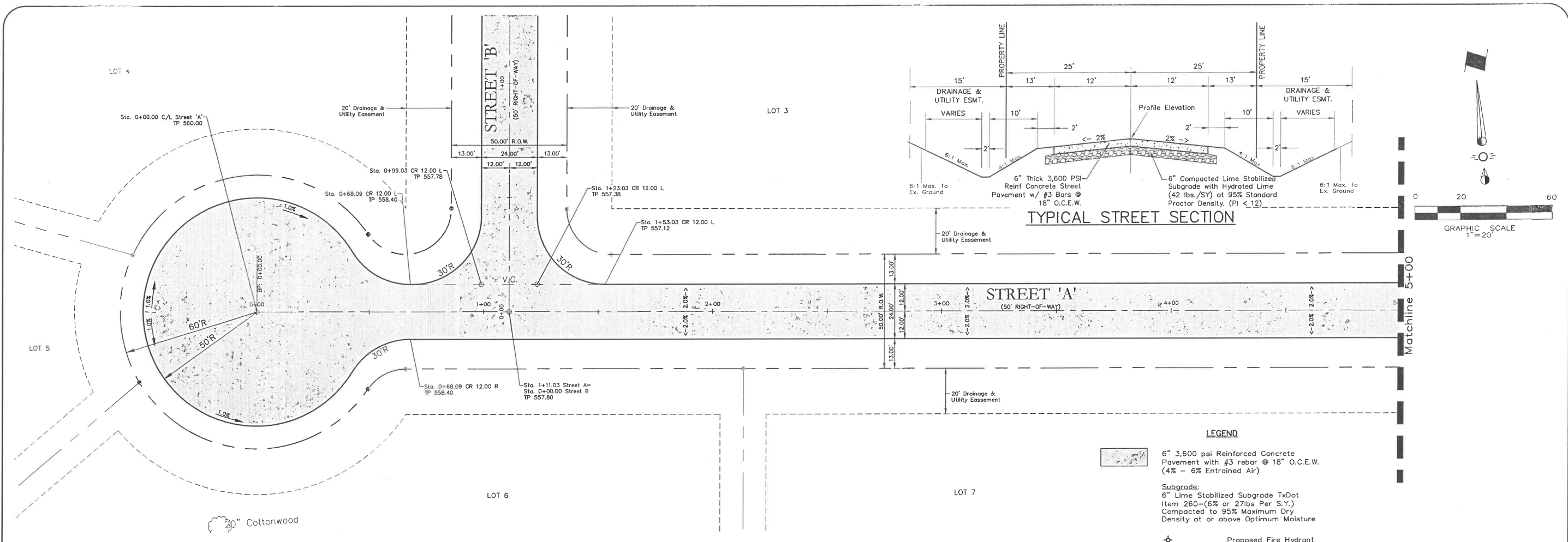
CROSS CREEK ACRES  
 BETTER HOME & COMMERCIAL, LLC  
 CITY OF LUCAS, TEXAS

Sheet No. **C1**  
 Project No. 16006

**STOP!**  
**CALL BEFORE YOU DIG**

Know what's below.  
 (@ least 72 hours prior to digging)

CROSS CREEK ACRES



**CAUTION!!**  
Existing Utilities in Area. Existing utility information shown is for reference only. The General Contractor shall accept the responsibility to notify all franchise utility companies to provide locations and depth of all facilities in the area of construction prior to any construction. Contractor shall notify Engineer of conflicts prior to construction.

**BENCHMARK:**  
BM #1  
"X" on top of concrete headwall on the West end located on the North side of Blondy June road and East of the dirt road into the subject property. Elevation=536.04  
Found 5/8" Iron Rod (RM) at Southwesterly Corner of Lot 38. State Plane-NAD 83 Coord. N: 7,091,873.340 E: 2,557,564.412 Elevation=573.97

Issue Dates:	Revisions:	Date:
1	3/29/2016	1
2	4/05/2016	2
3	5/20/2016	3
4		4
5		5
6		6

**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409 Texas P.E. Firm No. F-5935

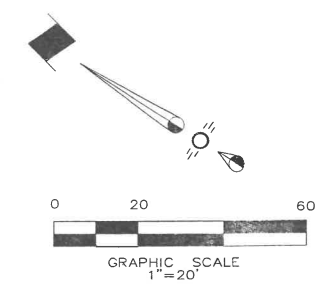
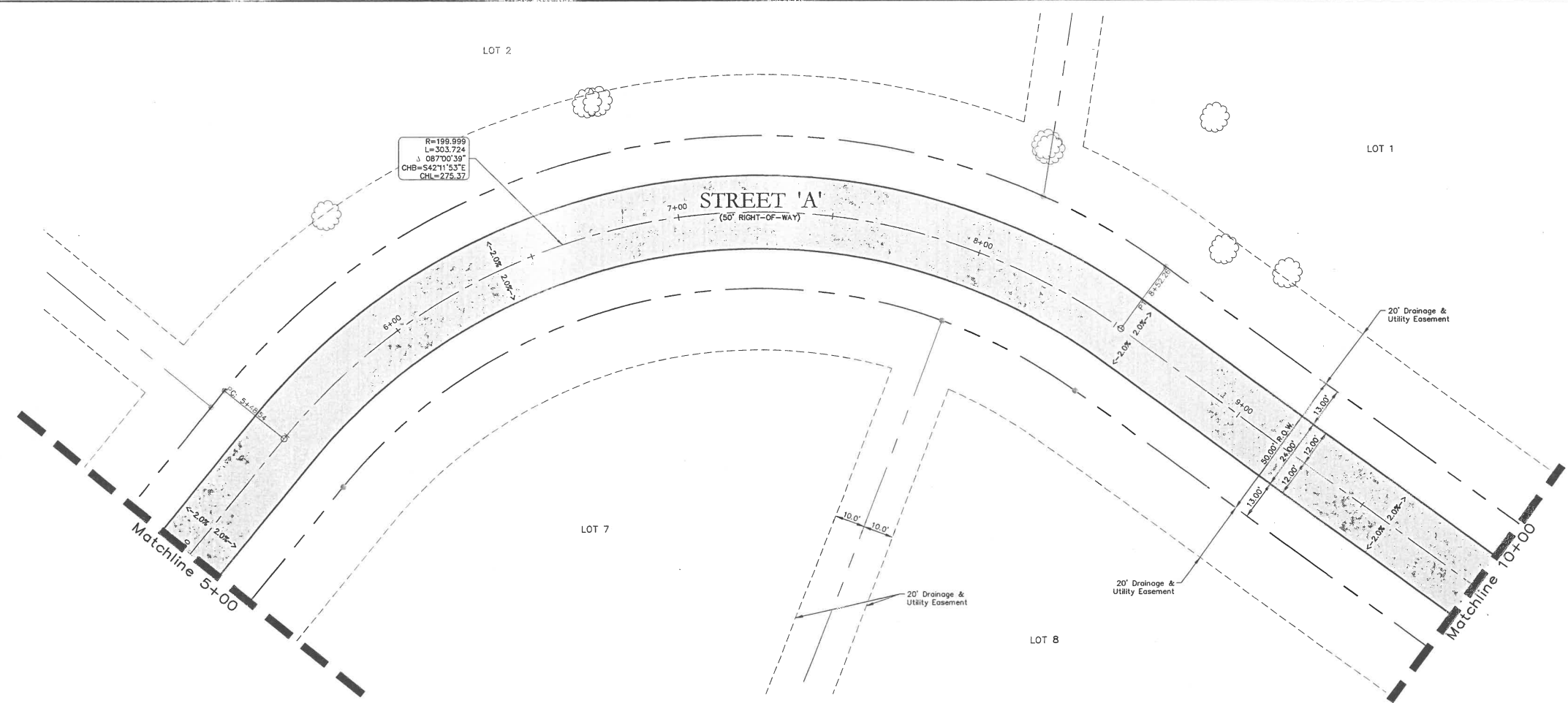
Drawn By: C.E.C.L. Checked By: C.E.C.L. Scale: H: 1"=20' V: 1"=4'



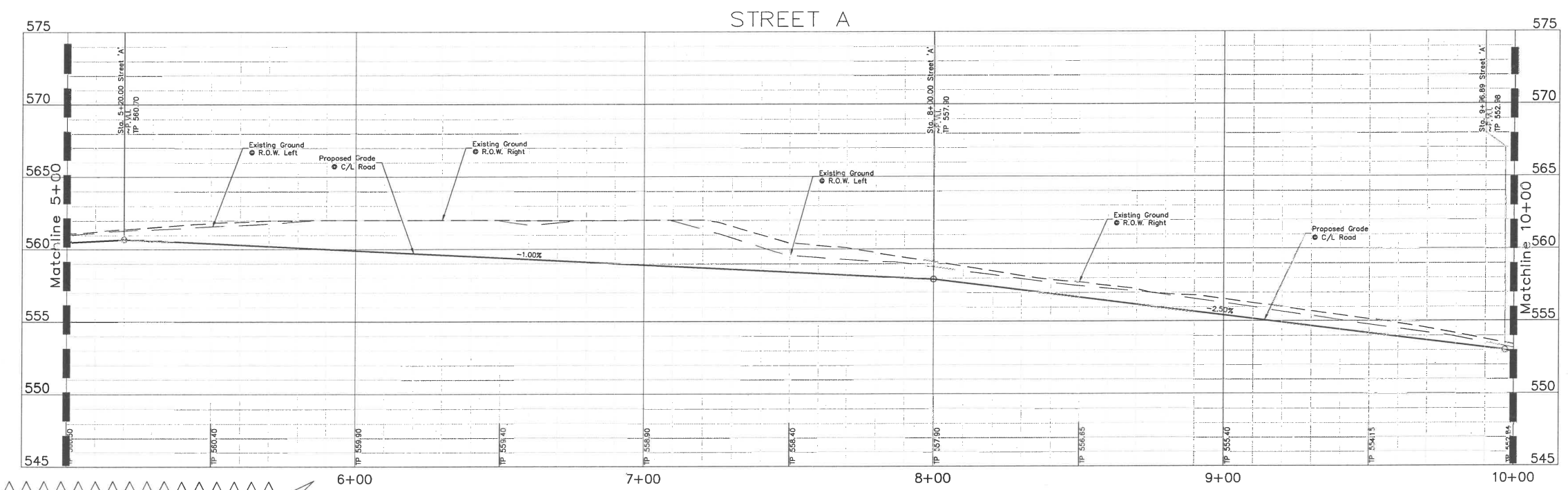
**PAVING PLAN & PROFILE 1**  
CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No. **C2**  
Project No. 16006

CROSS CREEK ACRES



- LEGEND**
- 6" 3,600 psi Reinforced Concrete Pavement with #3 rebar @ 18" O.C.E.W. (4% - 6% Entrained Air)
  - Subgrade:**  
6" Lime Stabilized Subgrade TxDot Item 260-(6% or 27lbs Per S.Y.) Compacted to 95% Maximum Dry Density at or above Optimum Moisture
  - Proposed Fire Hydrant



**CAUTION!!**  
Existing Utilities in Area. Existing utility information is shown here for reference only. The General Contractor shall accept the responsibility to notify all franchise utility companies to provide locations and depth of all facilities in the area of construction prior to any construction. Contractor shall notify Engineer of conflicts prior to construction.

**BENCHMARK:**  
B.M. 11111111  
"X" on top of concrete headwall on the West end located on the North side of Blondy June road and East of the dirt road into the subject property. Elevation=536.04  
Found 5/8" Iron Rod (CM) at Southwesterly Corner of Lot 3K, State Plane-NAD 83 Coord.  
N: 7,091,873.340  
E: 2,557,564.412 Elevation=573.97

Issue Dates:	Revisions:	Date:
1 3/29/2016	1	03/29/2016
2 4/05/2016	2	04/05/2016
3 5/20/2016	3	05/20/2016
4	4	
5	5	
6	6	

**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409 Texas P.E. Firm No. F-5935

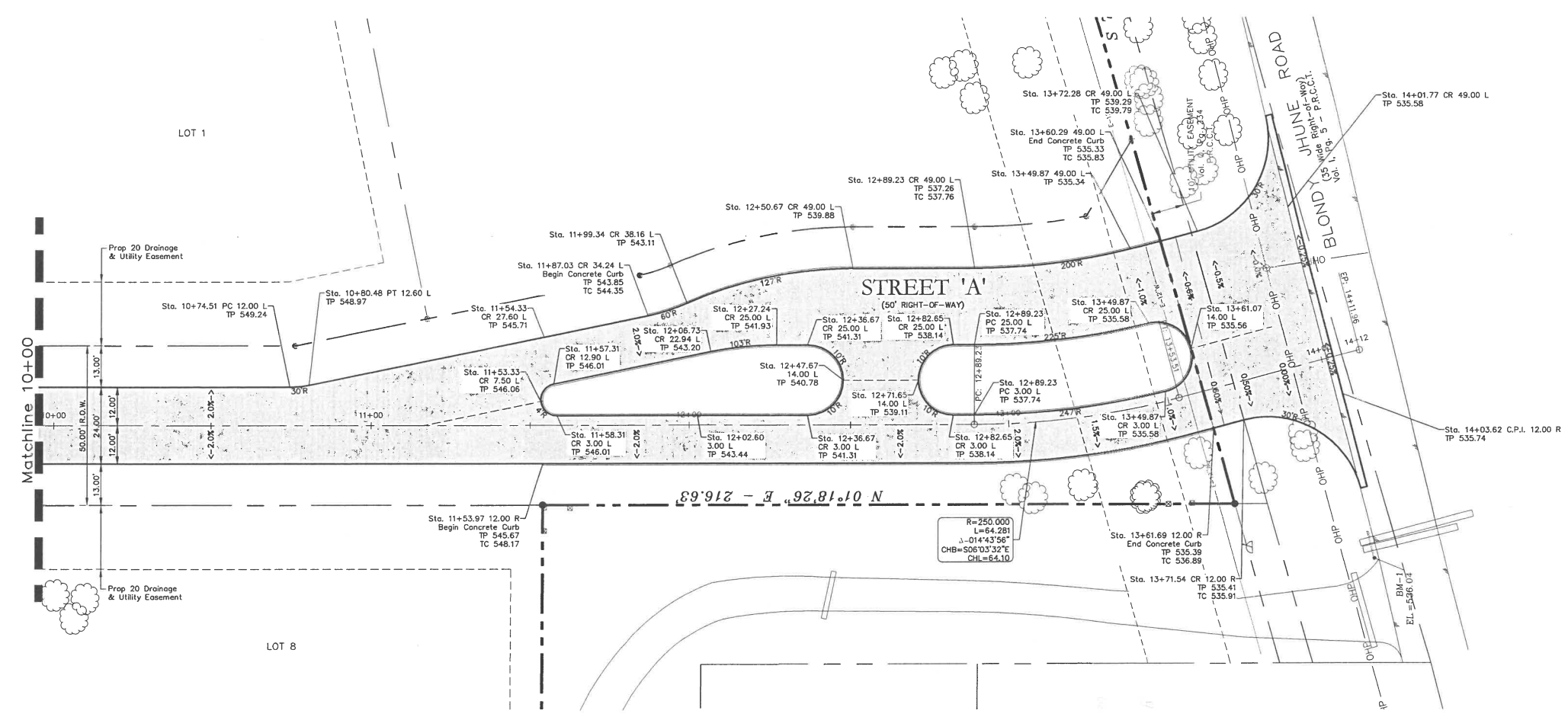
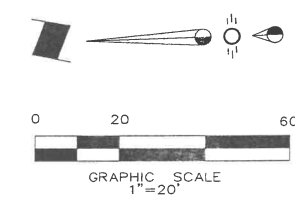
Drawn By: C.E.C.I. Checked By: C.E.C.I. Scale: H: 1"=20' V: 1"=4'



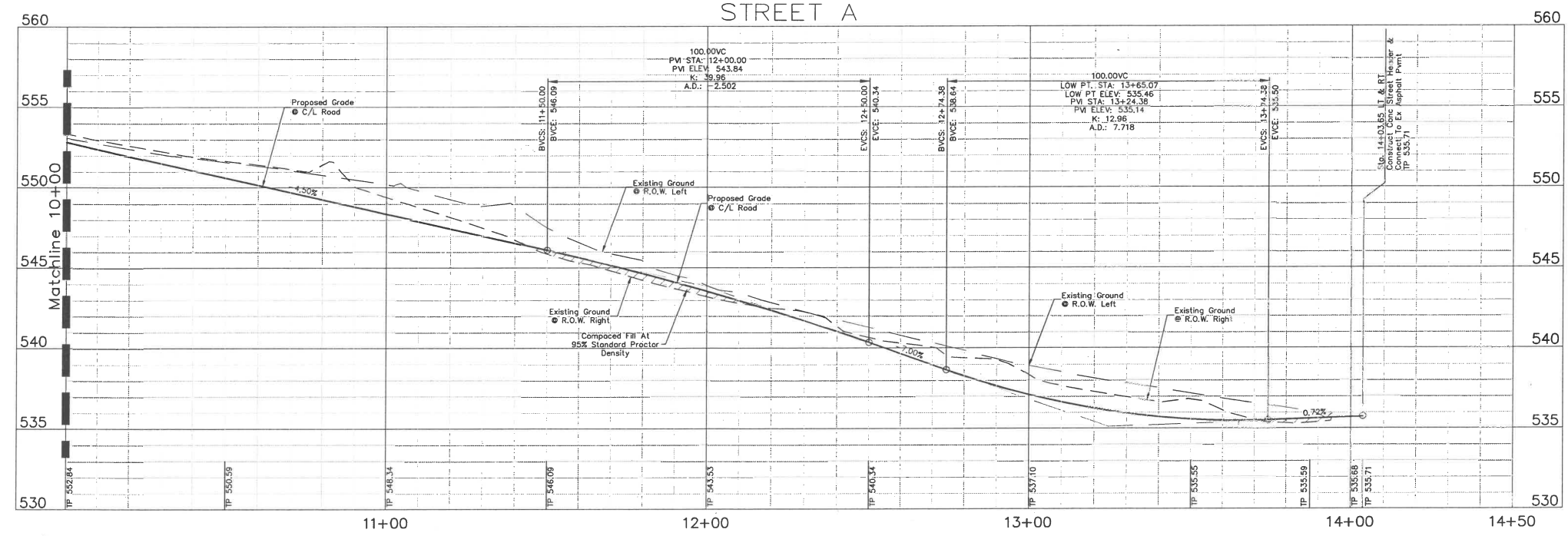
**PAVING PLAN & PROFILE 2**  
CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No. **C3**  
Project No. 16006

CROSS CREEK ACRES



- LEGEND**
- 6" 3,600 psi Reinforced Concrete Pavement with #3 rebar @ 18" O.C.E.W. (4% - 6% Entrained Air)
  - Subgrade:**  
6" Lime Stabilized Subgrade TxDot Item 260-(6% or 27lbs Per S.Y.) Compacted to 95% Maximum Dry Density at or above Optimum Moisture
  - Proposed Fire Hydrant



**CAUTION!!**  
Existing Utilities in Area. Existing utility information shown is for reference only. The General Contractor shall accept the responsibility to notify all franchise utility companies to provide locations and depth of all facilities in the area of construction prior to any construction. Contractor shall notify Engineer of conflicts prior to construction.

**BENCHMARK:**  
BM #1  
"X" on top of concrete headwall on the West end and located on the North side of Blondy Jhune road and East of the dirt road into the subject property. Elevation=536.04  
Found 5/8" Iron Rod (RM) at Southwesterly Corner of Lot 35, State Plane-NAD 83 Coord.  
N: 7,091,873,340  
E: 2,557,564,412  
Elevation=573.97

Issue Dates:	Revisions:	Date:
1 3/29/2016	1	
2 4/05/2016	2	
3 5/20/2016	3	
4	4	
5	5	
6	6	

**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409

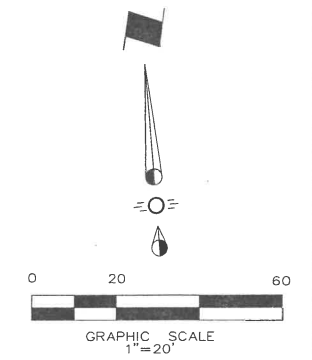
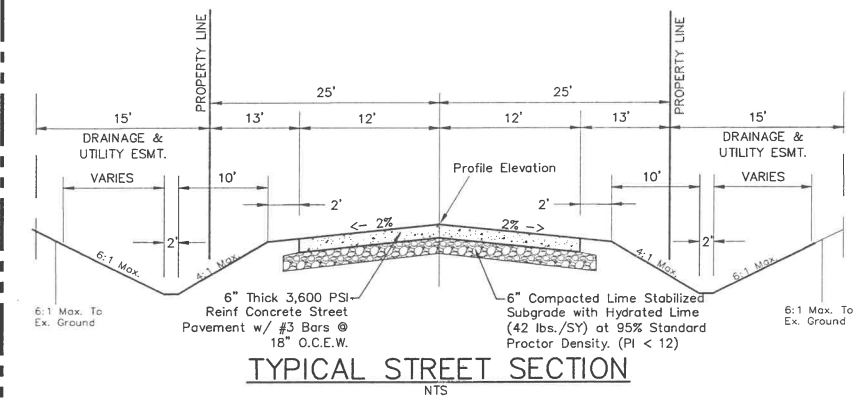
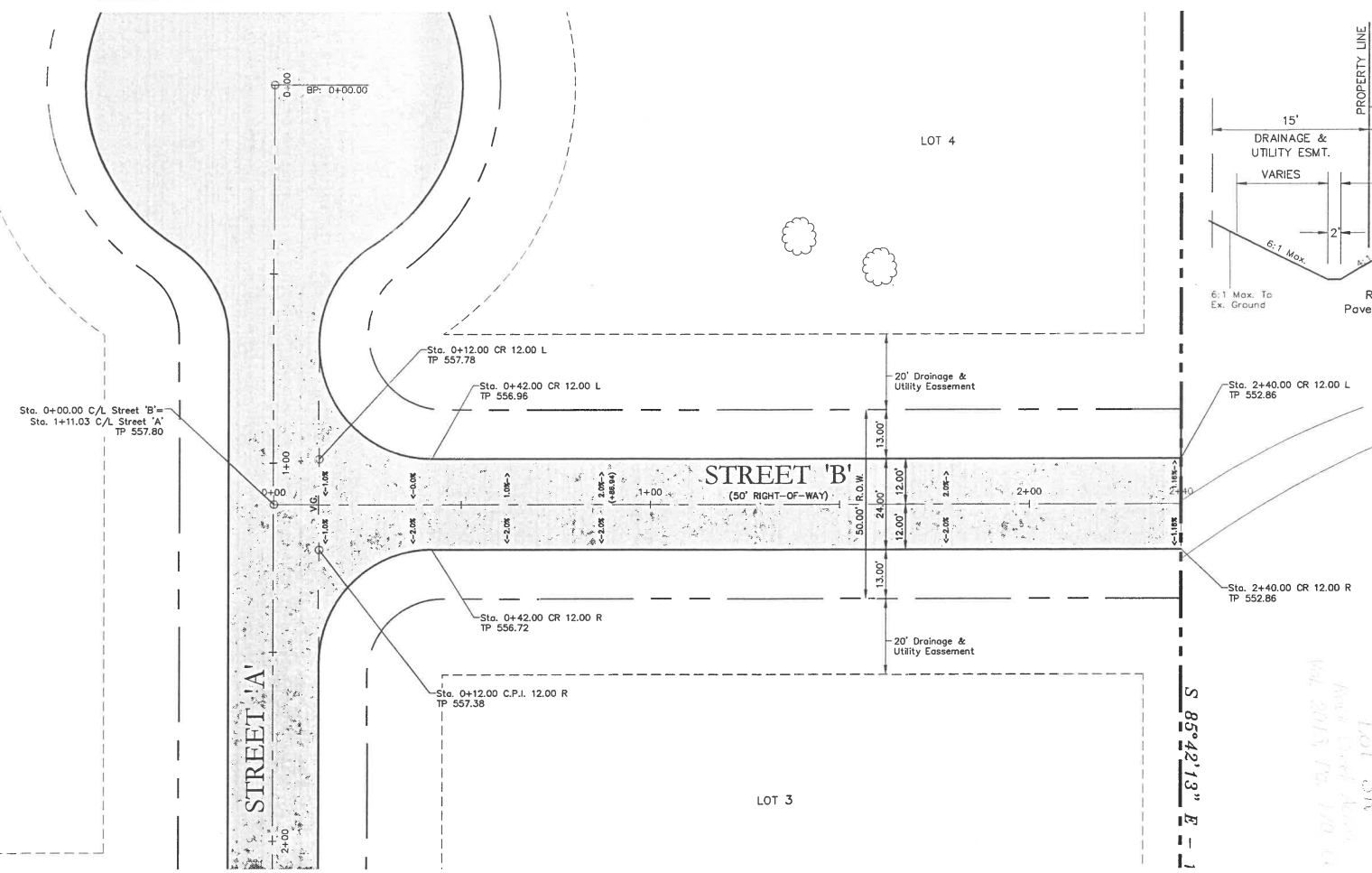
Drawn By: C.E.C.I.  
Checked By: C.E.C.I.  
Scale: H: 1"=20' V: 1"=4'

Professional Engineer Seal: State of Texas, License No. 10104, Date 05/20/2016

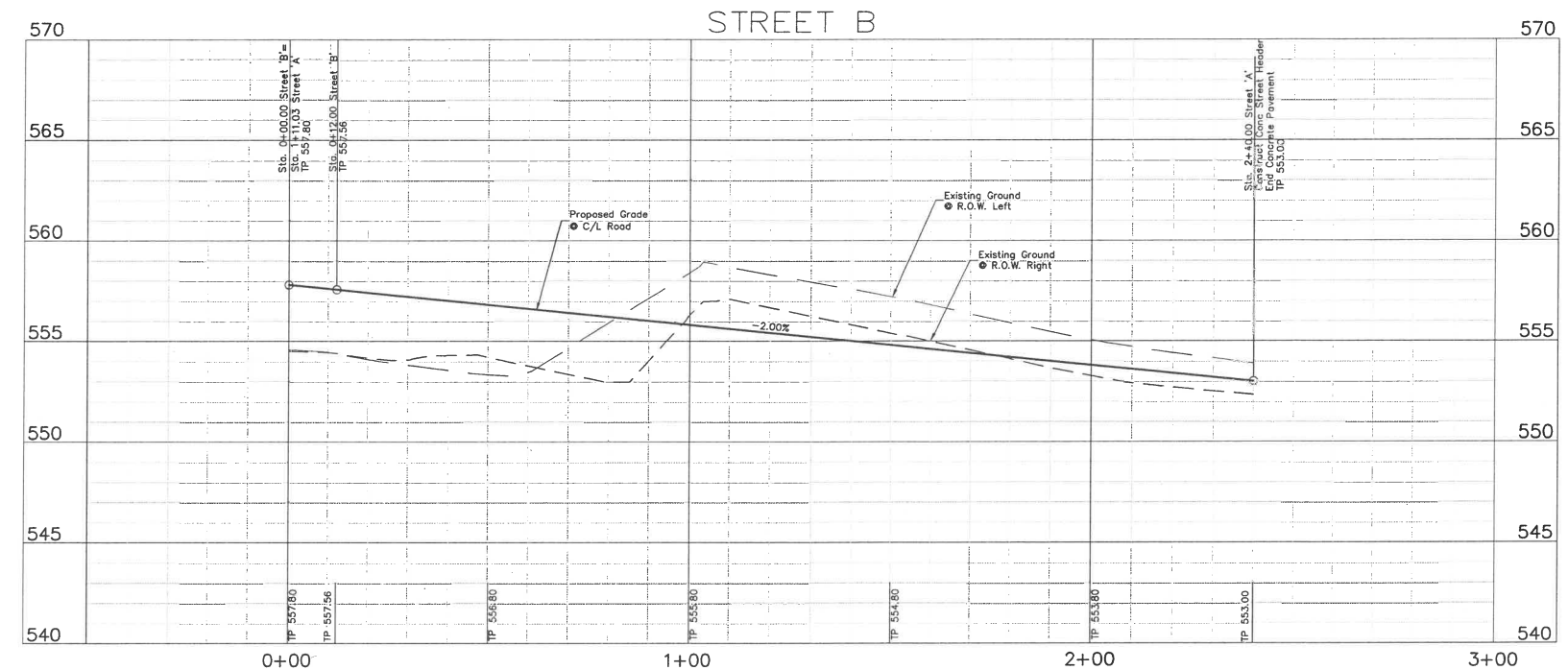
**PAVING PLAN & PROFILE 3**  
CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No: **C4**  
Project No: 16006

CROSS CREEK ACRES



- LEGEND**
- 6" 3,600 psi Reinforced Concrete Pavement with #3 rebar @ 18" O.C.E.W. (4% - 6% Entrained Air)
  - Subgrade: 6" Lime Stabilized Subgrade TxDot Item 260-(6% or 27lbs Per S.Y.) Compacted to 95% Maximum Dry Density at or above Optimum Moisture
  - Proposed Fire Hydrant



**CAUTION!!**  
Existing Utilities in Area. Existing utility information shown is for reference only. The General Contractor shall accept the responsibility to notify all franchise utility companies to provide locations and depth of all facilities in the area of construction prior to any construction. Contractor shall notify Engineer of conflicts prior to construction.

**BENCHMARK:**  
BM #1: "x" on top of concrete headwall on the West end located on the North side of Blondy June road and East of the dirt road into the subject property. Elevation=536.04  
Found 5/8" Iron Rod (CM) at Southwesterly Corner of Lot 3R. State Plane-NAD 83 Coord. N: 7,091,873.340 E: 2,557,564.412 Elevation=573.97

Issue Dates:	Revisions:	Date:
1 3/29/2016	1	
2 4/05/2016	2	
3 5/20/2016	3	
4	4	
5	5	
6	6	

**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409 Texas P.E. Firm No. F-5935

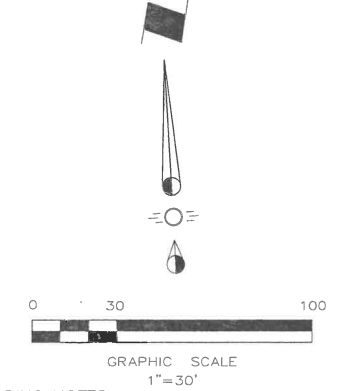
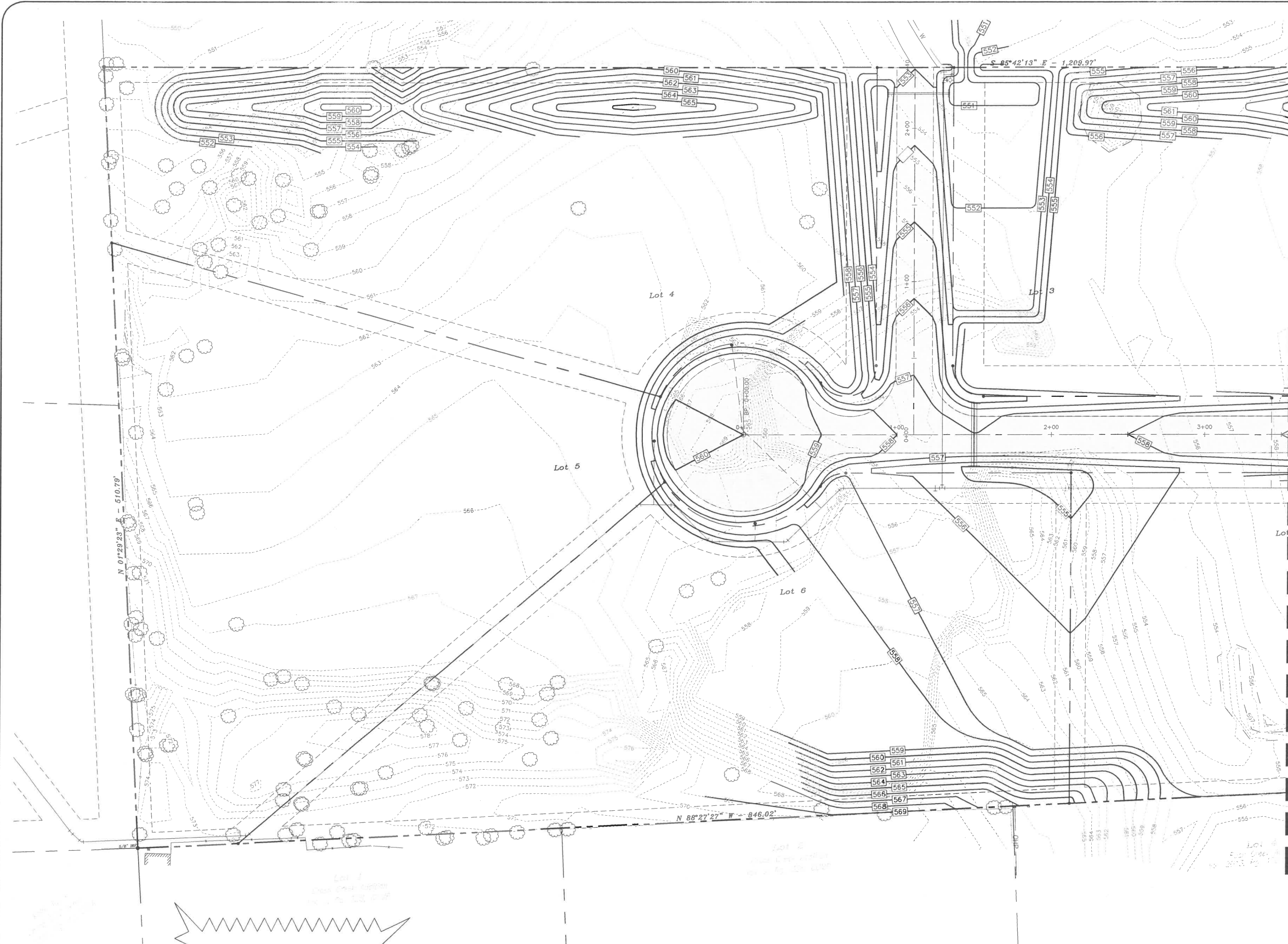
Drawn By: C.E.C.L. Checked By: C.E.C.L. Scale: H: 1"=20' V: 1"=4'



**PAVING PLAN & PROFILE 4**  
CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No. **C5**  
Project No. 16006

CROSS CREEK ACRES



**GRADING NOTES**

1. All materials and construction shall be in accordance with the City of Lucas Standard Specifications and Construction Standards, and Standard Specifications for Public Works Construction prepared by North Central Texas Council of Governments (Latest Revision).
2. Existing utilities are shown schematically and are for the contractors guidance only. The location and/or elevation of existing utilities as shown on these plans are based on records of the various utility companies, and, where possible, measurements taken in the field. The contractor must call the appropriate utility company at least 72 hours prior to any excavation to request exact field location of utilities.
3. The contractor shall be responsible for protecting all existing improvements in the construction of this project. The contractor is responsible for repairs of damage to any existing improvements during construction. Repairs shall be equal to or better than condition prior to construction.
4. All pavement subgrade shall be compacted to at least 95% Standard Proctor Density at or slightly above Optimum as per Geotechnical Report.
5. Erosion Control shall be in place prior to the disturbance of any existing surface.
6. All sidewalk slopes shall conform to A.D.A. requirements as follows:  
 1:20 longitudinal (along the walk)  
 1:50 transverse (across the walk)
7. All proposed grades in landscaped areas are finished grade elevations. Contractor to allow for seeding or sodding of these areas.
8. Proposed spot elevations are top of pavement elevations unless noted otherwise.

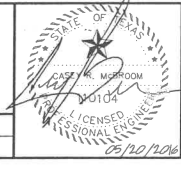
**LEGEND**

- xxx.xx Proposed Top of Pavement Spot Elevation
- Ex. TP  
xxx.xx Existing Top of Pavement Spot Elevation
- xxx Proposed Contour
- Existing Contour
- Valley
- Highpoint
- Flow Arrow

**CAUTION!**  
 Existing Utilities in Area. Contractor to determine location and elevation of all utilities prior to construction. Contractor to inform Engineer of any conflicts prior to construction.

**BENCHMARK:**  
 "BM 31" on top of concrete headwall on the West end located on the North side of Blondy Thune road and East of the dirt road into the subject property. Elevation=536.04  
 Found 5/8" Iron Rod (RM) at Southwesterly Corner of Lot 3R. State Plane=NAD 83 Coord. N: 7,091,873.340 E: 2,557,564.412 Elevation=573.97

Issue Dates:	Revisions:	Date:
1	3/29/2016	
2	4/05/2016	2
3	5/20/2016	3
4		4
5		5
6		6

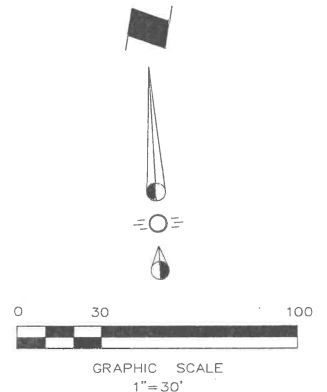
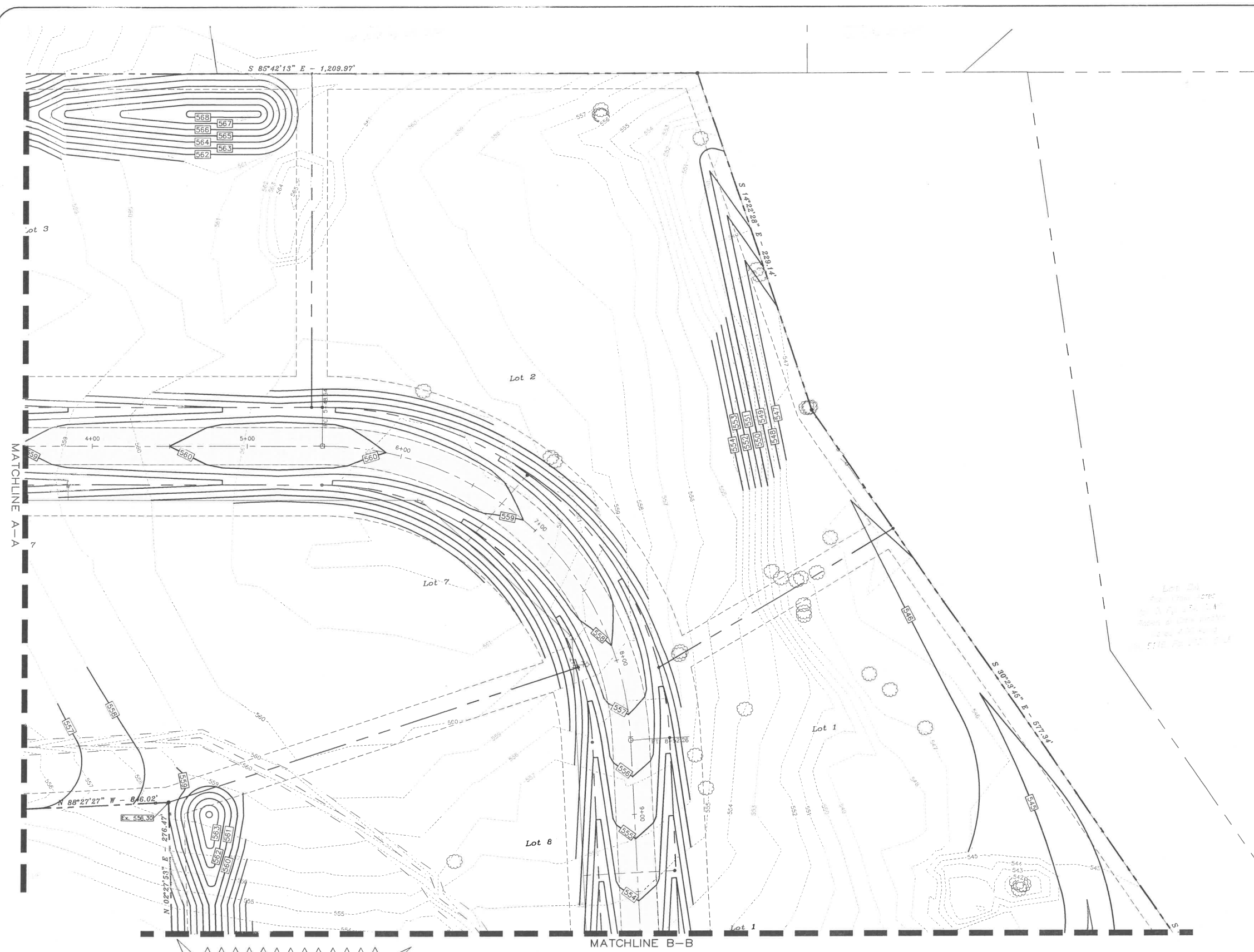


<b>GRADING PLAN 1</b>	Sheet No.
CROSS CREEK ACRES	<b>C6</b>
BETTER HOME & COMMERCIAL, LLC	Project No.
CITY OF LUCAS, TEXAS	16006



CROSS CREEK ACRES



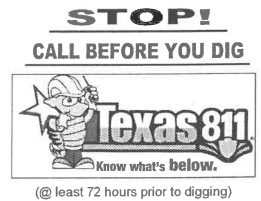


**GRADING NOTES**

1. All materials and construction shall be in accordance with the City of Lucas Standard Specifications and Construction Standards, and Standard Specifications for Public Works Construction prepared by North Central Texas Council of Governments (Latest Revision).
2. Existing utilities are shown schematically and are for the contractors guidance only. The location and/or elevation of existing utilities as shown on these plans are based on records of the various utility companies, and, where possible, measurements taken in the field. The contractor must call the appropriate utility company at least 72 hours prior to any excavation to request exact field location of utilities.
3. The contractor shall be responsible for protecting all existing improvements in the construction of this project. The contractor is responsible for repairs of damage to any existing improvements during construction. Repairs shall be equal to or better than condition prior to construction.
4. All pavement subgrade shall be compacted to at least 95% Standard Proctor Density at or slightly above Optimum as per Geotechnical Report.
5. Erosion Control shall be in place prior to the disturbance of any existing surface.
6. All sidewalk slopes shall conform to A.D.A. requirements as follows:  
 1:20 longitudinal (along the walk)  
 1:50 transverse (across the walk)
7. All proposed grades in landscaped areas are finished grade elevations. Contractor to allow for seeding or sodding of these areas.
8. Proposed spot elevations are top of pavement elevations unless noted otherwise.

**LEGEND**

- xxx.x Proposed Top of Pavement Spot Elevation
- Ex. TP  
xxx.xx Existing Top of Pavement Spot Elevation
- Proposed Contour
- Existing Contour
- Valley
- Highpoint
- Flow Arrow



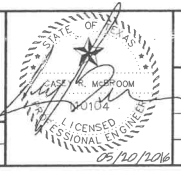
**CAUTION!**  
Existing Utilities in Area. Contractor to determine location and elevation of all utilities prior to construction. Contractor to inform Engineer of any conflicts prior to construction.

**BENCHMARK:**  
BM #1  
"x" on top of concrete headwall on the West end and located on the North side of Blundy June road and East of the dirt road into the subject property. Elevation=536.04  
Found 5/8" Iron Rod (CM) at Southwesterly Corner of Lot 3R, State Plane-NAD 83 Coord.  
N: 7,091,873.340  
E: 2,557,564.412  
Elevation=573.97

Issue Dates:	Revisions:	Date:
1	3/29/2016	1
2	4/05/2016	2
3	5/20/2016	3
4		4
5		5
6		6

**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409 Texas P.E. Firm No. F-5935

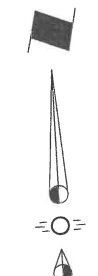
Drawn By: C.E.C.I.      Checked By: C.E.C.I.      Scale: 1"=30'



**GRADING PLAN 2**  
CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No.  
**C7**  
Project No.  
16006

CROSS CREEK ACRES



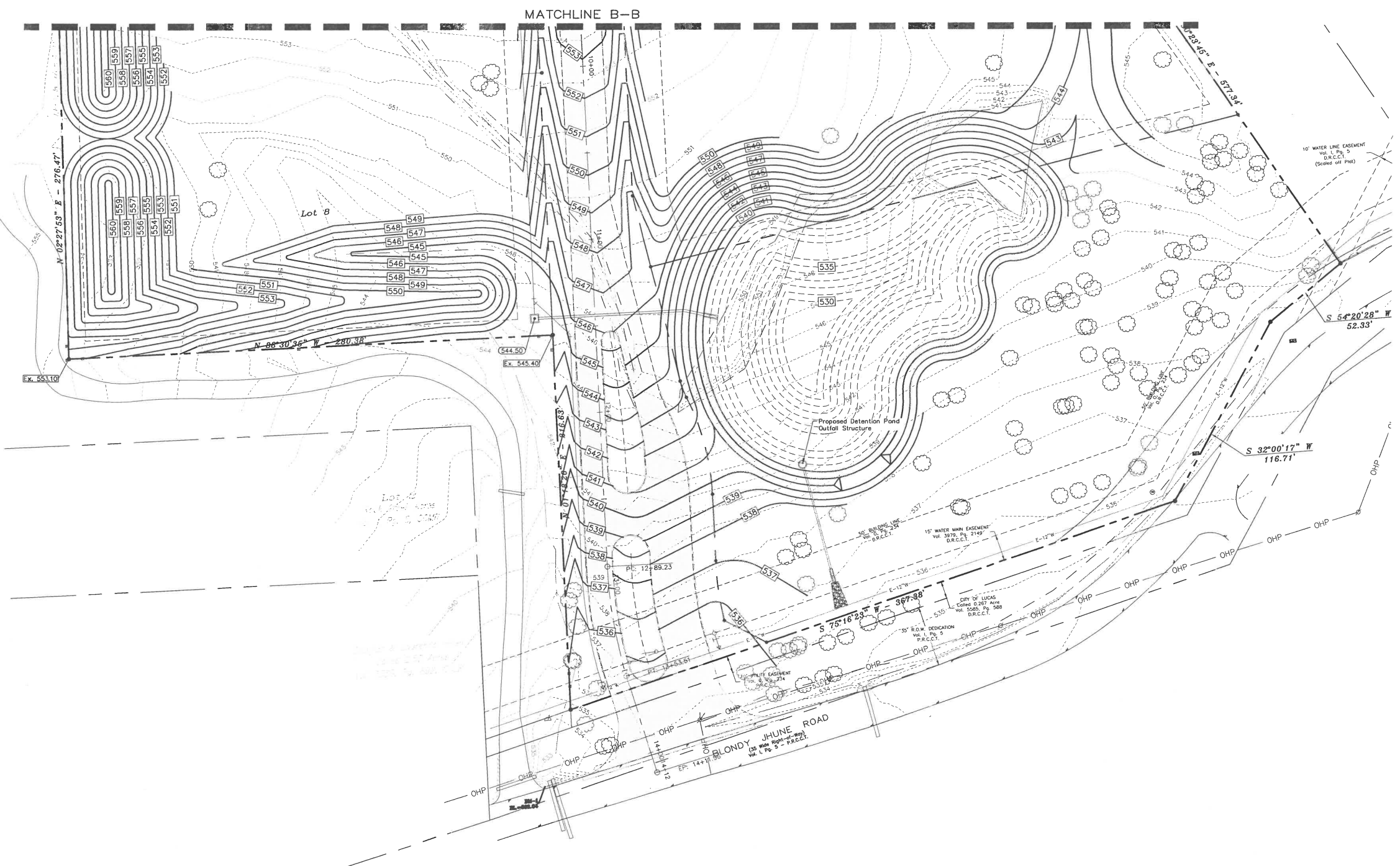
GRAPHIC SCALE  
1"=30'

**GRADING NOTES**

- All materials and construction shall be in accordance with the City of Lucas Standard Specifications and Construction Standards, and Standard Specifications for Public Works Construction prepared by North Central Texas Council of Governments (Latest Revision).
- Existing utilities are shown schematically and are for the contractor's guidance only. The location and/or elevation of existing utilities as shown on these plans are based on records of the various utility companies, and, where possible, measurements taken in the field. The contractor must call the appropriate utility company at least 72 hours prior to any excavation to request exact field location of utilities.
- The contractor shall be responsible for protecting all existing improvements in the construction of this project. The contractor is responsible for repairs of damage to any existing improvements during construction. Repairs shall be equal to or better than condition prior to construction.
- All pavement subgrade shall be compacted to at least 95% Standard Proctor Density at or slightly above Optimum as per Geotechnical Report.
- Erosion Control shall be in place prior to the disturbance of any existing surface.
- All sidewalk slopes shall conform to A.D.A. requirements as follows:  
1:20 longitudinal (along the walk)  
1:50 transverse (across the walk)
- All proposed grades in landscaped areas are finished grade elevations. Contractor to allow for seeding or sodding of these areas.
- Proposed spot elevations are top of pavement elevations unless noted otherwise.

**LEGEND**

- Proposed Top of Pavement Spot Elevation
- Existing Top of Pavement Spot Elevation
- Proposed Contour
- Existing Contour
- Valley
- Highpoint
- Flow Arrow



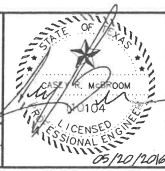
**CAUTION!**  
Existing Utilities in Area. Contractor to determine location and elevation of all utilities prior to construction. Contractor to inform Engineer of any conflicts prior to construction.

**BENCHMARK:**  
BM #1: "X" on top of concrete headwall on the West and located on the North side of Blondy Jhune road and East of the dirt road into the subject property. Elevation=536.04  
Found 5/8" Iron Rod (CM) at Southwesterly Corner of Lot 3B, State Plane-NAD 83 Coord.  
N: 7,091,873.340  
E: 2,557,564.412  
Elevation=573.97

Issue Dates:	Revisions:	Date:
1	3/29/2016	1
2	4/05/2016	2
3	5/20/2016	3
4		4
5		5
6		6

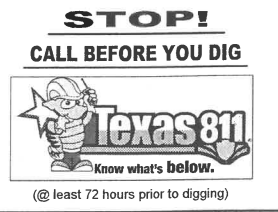
**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St.  
972.562.4409

McKinney, Texas 75069  
Texas P.E. Firm No. F-5935

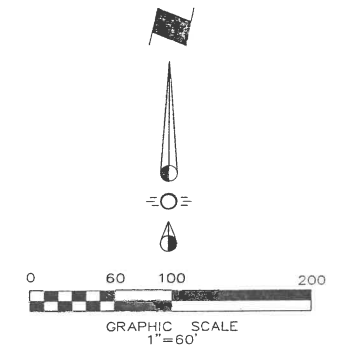
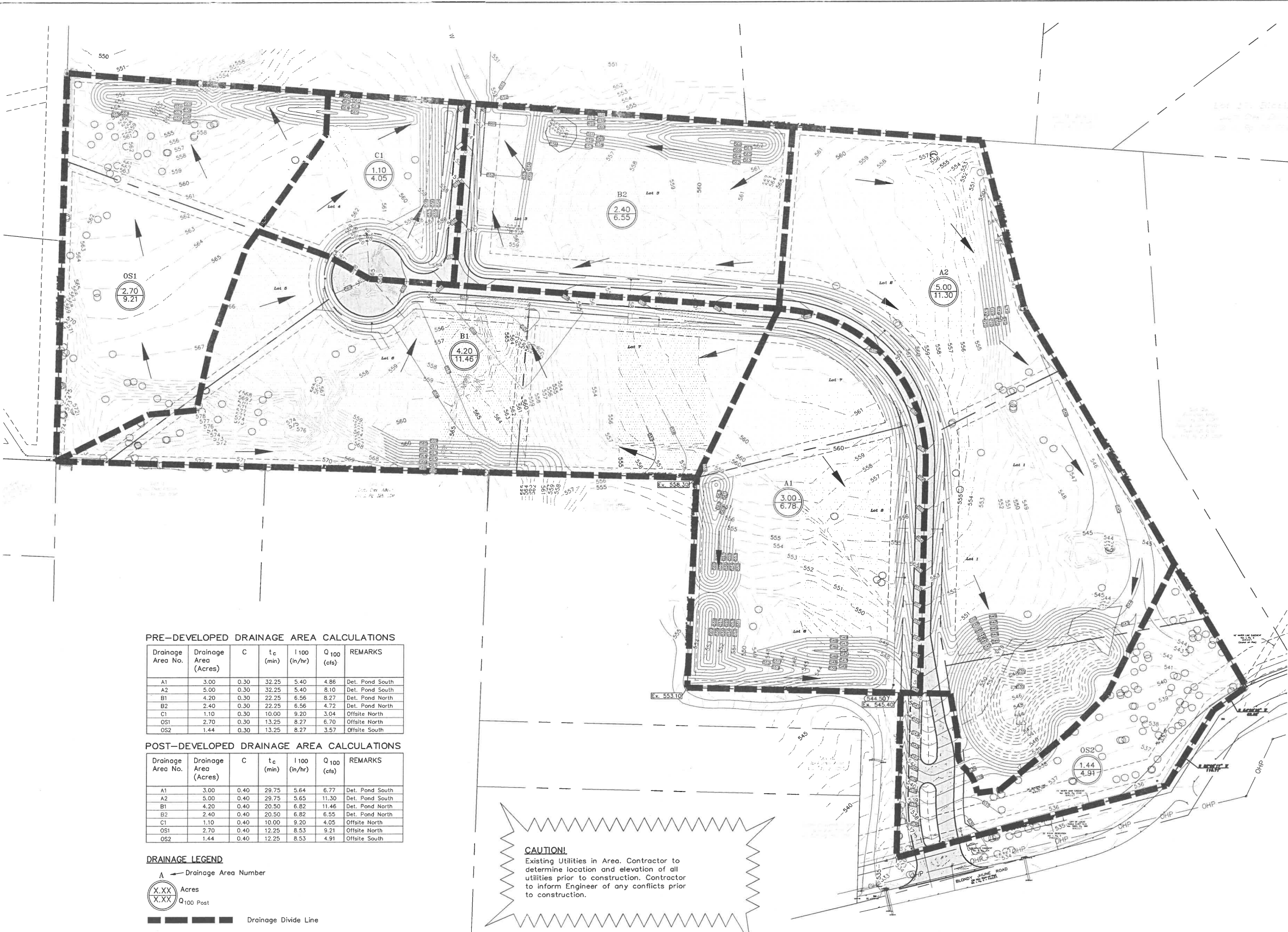


**GRADING PLAN 3**  
CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No.  
**C8**  
Project No.  
16006



CROSS CREEK ACRES



**GENERAL/DRAINAGE NOTES**

1. All materials and construction shall be in accordance with the City of Lucas Standard Specifications and Construction Standards, and Standard Specifications for Public Works Construction prepared by North Central Texas Council of Governments (Latest Revision).
2. Existing utilities are shown schematically and are for the contractor's guidance only. The location and/or elevation of existing utilities as shown on these plans are based on records of the various utility companies, and, where possible, measurements taken in the field. The contractor must call the appropriate utility company at least 72 hours prior to any excavation to request exact field location of utilities.
3. The contractor shall be responsible for protecting all existing improvements in the construction of this project. The contractor is responsible for repairs of damage to any existing improvements during construction. Repairs shall be equal to or better than condition prior to construction.
4. All storm sewer pipe 18" and larger shall be Class III RCP. All storm sewer pipe 15" and smaller shall be PVC drainage pipe or approved equal.
5. Contractor shall be responsible for maintaining trench safety requirements in accordance with the latest standards of O.S.H.A. or any other agency having jurisdiction for excavation and trenching procedures. Contractor shall provide and implement a trench safety plan complying with O.S.H.A.
6. All RCP pipe joints shall have Ram-Neck joint sealer, in the absence of a City Standard for joint sealer.
7. All roof drain laterals shall be 0.50% min. slope.

**PRE-DEVELOPED DRAINAGE AREA CALCULATIONS**

Drainage Area No.	Drainage Area (Acres)	C	t <sub>c</sub> (min)	I 100 (in/hr)	Q 100 (cfs)	REMARKS
A1	3.00	0.30	32.25	5.40	4.86	Det. Pond South
A2	5.00	0.30	32.25	5.40	8.10	Det. Pond South
B1	4.20	0.30	22.25	6.56	8.27	Det. Pond North
B2	2.40	0.30	22.25	6.56	4.72	Det. Pond North
C1	1.10	0.30	10.00	9.20	3.04	Offsite North
OS1	2.70	0.30	13.25	8.27	6.70	Offsite North
OS2	1.44	0.30	13.25	8.27	3.57	Offsite South

**POST-DEVELOPED DRAINAGE AREA CALCULATIONS**

Drainage Area No.	Drainage Area (Acres)	C	t <sub>c</sub> (min)	I 100 (in/hr)	Q 100 (cfs)	REMARKS
A1	3.00	0.40	29.75	5.64	6.77	Det. Pond South
A2	5.00	0.40	29.75	5.65	11.30	Det. Pond South
B1	4.20	0.40	20.50	6.82	11.46	Det. Pond North
B2	2.40	0.40	20.50	6.82	6.55	Det. Pond North
C1	1.10	0.40	10.00	9.20	4.35	Offsite North
OS1	2.70	0.40	12.25	8.53	8.21	Offsite North
OS2	1.44	0.40	12.25	8.53	4.91	Offsite South

**DRAINAGE LEGEND**

- ▲ Drainage Area Number
- X.XX Acres
- X.XX Q<sub>100</sub> Post
- Drainage Divide Line
- Direction of Flow

**CAUTION!**  
Existing Utilities in Area. Contractor to determine location and elevation of all utilities prior to construction. Contractor to inform Engineer of any conflicts prior to construction.

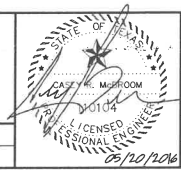
**BENCHMARK:**

BM #1  
"X" on top of concrete headwall on the West end located on the North side of Blandy June road and East of the dirt road into the subject property. Elevation=536.04  
Found 5/8" Iron Rod (CM) at Southwesterly Corner of Lot 3R. State Plane-NAD 83 Coord. N: 7,091,873.340 E: 2,557,564.412 Elevation=573.97

Issue Dates:	Revisions:	Date:
1	3/29/2016	1
2	4/05/2016	2
3	5/20/2016	3
4		4
5		5
6		6

**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409 Texas P.E. Firm No. F-5935

Drawn By: C.E.C.I. Checked By: C.E.C.I. Scale: 1"=60'



**DRAINAGE AREA MAP**  
CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

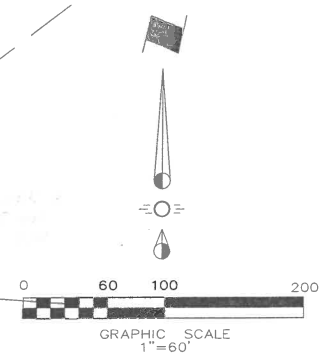
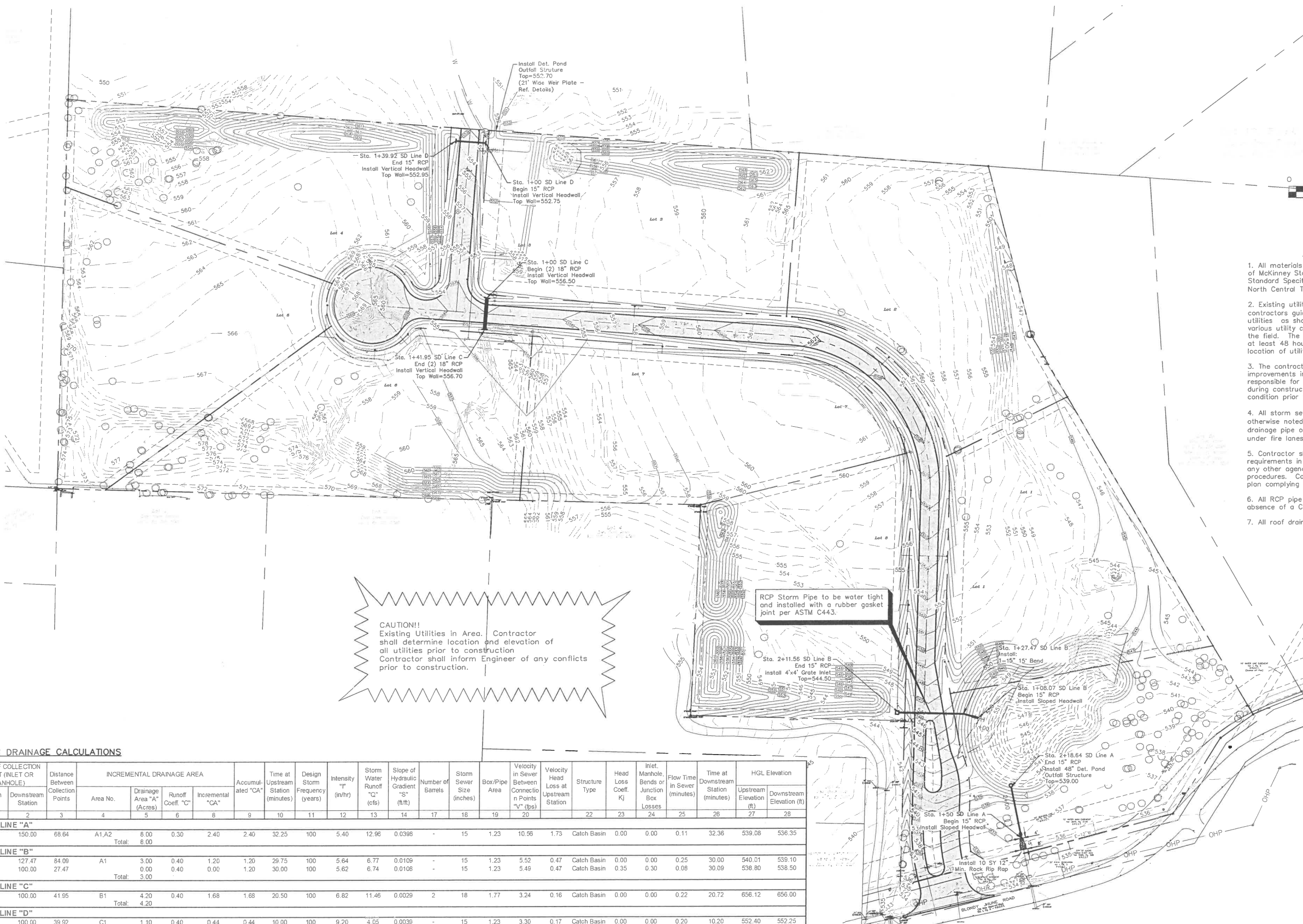
Sheet No. C9  
Project No. 16006

**STOP! CALL BEFORE YOU DIG**



(@ least 72 hours prior to digging)

CROSS CREEK ACRES



**GENERAL/DRAINAGE NOTES**

1. All materials and construction shall be in accordance with the City of McKinney Standard Specifications and Construction Standards, and Standard Specifications for Public Works Construction prepared by North Central Texas Council of Governments (Latest Revision).
2. Existing utilities are shown schematically and are for the contractors guidance only. The location and/or elevation of existing utilities as shown on these plans are based on records of the various utility companies, and, where possible, measurements taken in the field. The contractor must call the appropriate utility company at least 48 hours prior to any excavation to request exact field location of utilities.
3. The contractor shall be responsible for protecting all existing improvements in the construction of this project. The contractor is responsible for repairs of damage to any existing improvements during construction. Repairs shall be equal to or better than condition prior to construction.
4. All storm sewer pipe 18" and larger shall be Class III RCP unless otherwise noted. All storm sewer pipe 15" and smaller shall be PVC drainage pipe or approved equal, unless under fire lane (RCP only under fire lanes).
5. Contractor shall be responsible for maintaining trench safety requirements in accordance with the latest standards of O.S.H.A. or any other agency having jurisdiction for excavation and trenching procedures. Contractor shall provide and implement a trench safety plan complying with O.S.H.A.
6. All RCP pipe joints shall have Ram-Neck joint sealer, in the absence of a City Standard for joint sealant.
7. All roof drain laterals shall be 0.50% min. slope.

**CAUTION!!**  
Existing Utilities in Area. Contractor shall determine location and elevation of all utilities prior to construction. Contractor shall inform Engineer of any conflicts prior to construction.

RCP Storm Pipe to be water tight and installed with a rubber gasket joint per ASTM C443.

**STORM DRAINAGE CALCULATIONS**

RUNOFF COLLECTION POINT (INLET OR MANHOLE)		Distance Between Collection Points		INCREMENTAL DRAINAGE AREA				Accumulated "CA"	Time at Upstream Station (minutes)	Design Storm Frequency (years)	Intensity "I" (in/hr)	Storm Water Runoff "Q" (cfs)	Slope of Hydraulic Gradient "S" (ft/ft)	Number of Barrels	Storm Sewer Size (inches)	Box/Pipe Area	Velocity in Sewer Between Connection Points "V" (fps)	Velocity Head Loss at Upstream Station	Structure Type	Head Loss Coeff. K <sub>j</sub>	Inlet, Manhole, Bends or Junction Box Losses	Flow Time in Sewer (minutes)	Time at Downstream Station (minutes)	HGL Elevation			
Upstream Station	Downstream Station	1	2	Area No.	Drainage Area "A" (Acres)	Runoff Coeff. "C"	Incremental "CA"																	27	28		
<b>STORM LINE "A"</b>																											
218.64	150.00	68.64		A1,A2	8.00	0.30	2.40	2.40	32.25	100	5.40	12.96	0.0398	-	15	1.23	10.56	1.73	Catch Basin	0.00	0.00	0.11	32.36	539.08	536.35		
Total: 8.00																											
<b>STORM LINE "B"</b>																											
211.56	127.47	84.09		A1	3.00	0.40	1.20	1.20	29.75	100	5.64	6.77	0.0109	-	15	1.23	5.52	0.47	Catch Basin	0.00	0.00	0.25	30.00	540.01	539.10		
127.47	100.00	27.47			0.00	0.40	0.00	1.20	30.00	100	5.62	6.74	0.0108	-	15	1.23	5.49	0.47	Catch Basin	0.35	0.30	0.08	30.09	538.80	538.50		
Total: 3.00																											
<b>STORM LINE "C"</b>																											
141.95	100.00	41.95		B1	4.20	0.40	1.68	1.68	20.50	100	6.82	11.46	0.0029	2	18	1.77	3.24	0.16	Catch Basin	0.00	0.00	0.22	20.72	656.12	656.00		
Total: 4.20																											
<b>STORM LINE "D"</b>																											
139.92	100.00	39.92		C1	1.10	0.40	0.44	0.44	10.00	100	9.20	4.05	0.0038	-	15	1.23	3.30	0.17	Catch Basin	0.00	0.00	0.20	10.20	552.40	552.25		
Total: 1.10																											

**Note:**  
Existing Utilities Shown Per As-Built Documents. Contractor to Field Verify Location and Depth of All Utilities Prior to Construction and Notify Engineer of any Discrepancies.

Issue Dates:	Revisions:	Date:
1 3/29/2016	1	
2 4/05/2016	2	
3 5/20/2016	3	
4	4	
5	5	
6	6	

**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409 Texas P.E. Firm No. P-5935

Drawn By: C.E.C.L. Checked By: C.E.C.L. Scale: 1"=60'

**STOP! CALL BEFORE YOU DIG**

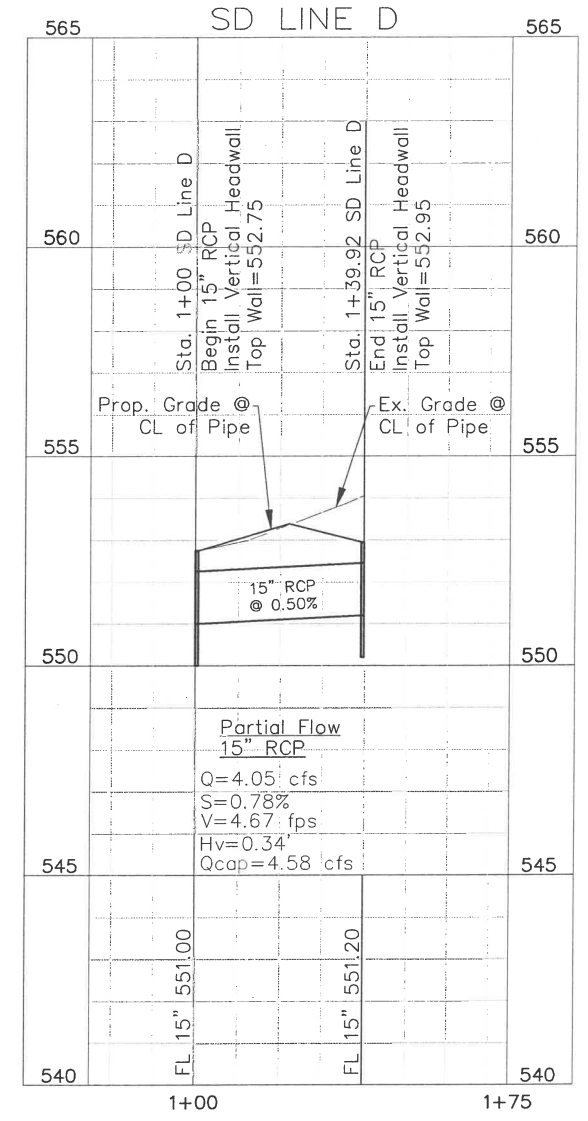
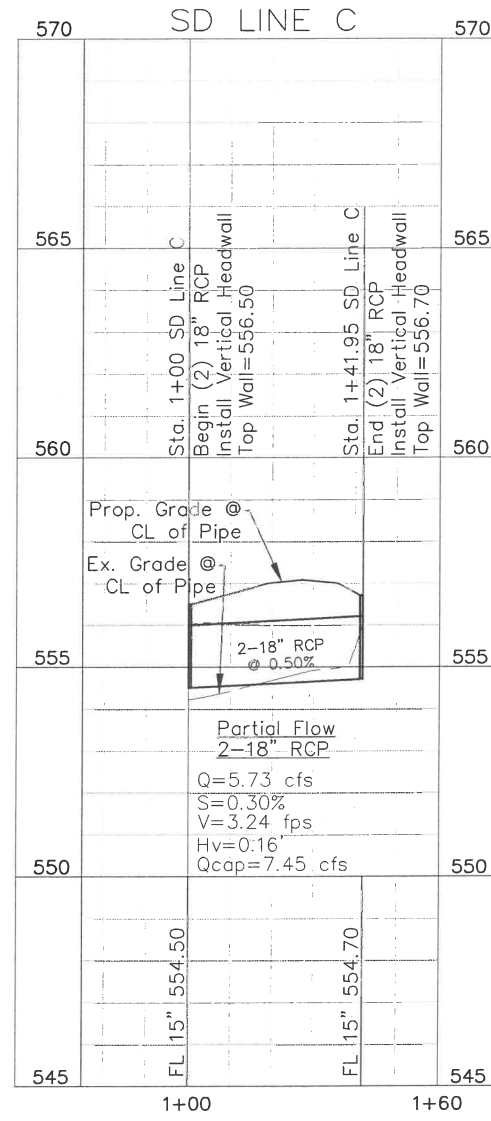
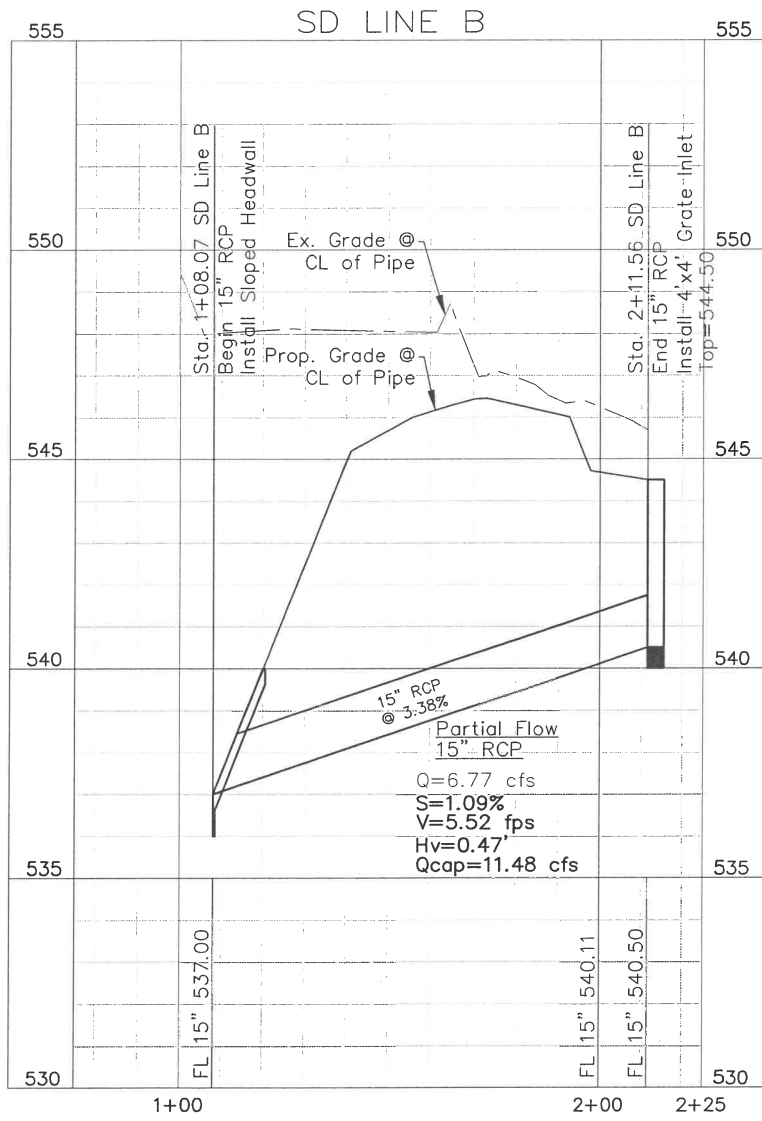
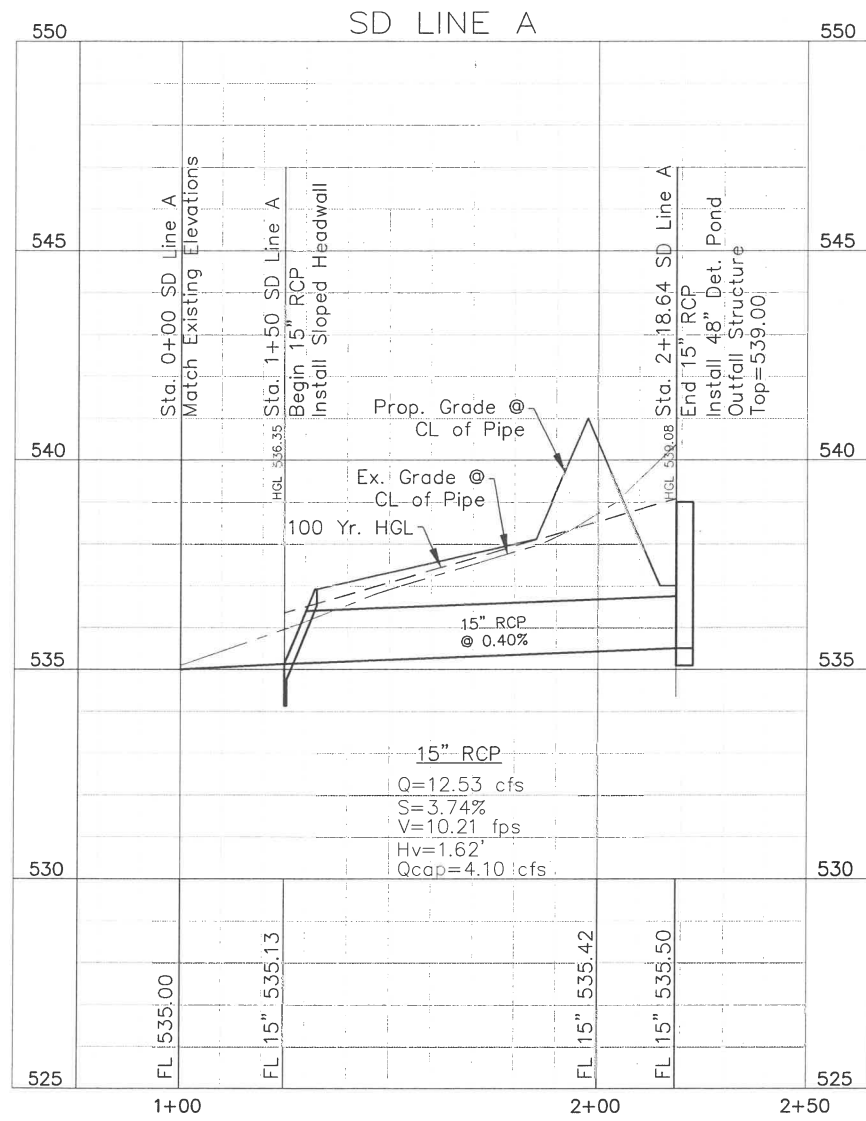
**Texas 811**  
Know what's below.  
(@ least 72 hours prior to digging)

**STORM SEWER PLAN**  
CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No. **C10**  
Project No. 16006

CROSS CREEK ACRES

RCP Storm Pipe to be water tight and installed with a rubber gasket joint per ASTM C443.



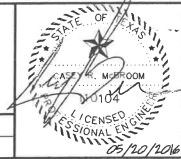
**STOP!**  
CALL BEFORE YOU DIG

Know what's below.  
(@ least 72 hours prior to digging)

Issue Dates:	Revisions:	Date:
1 3/29/2016	1	
2 4/05/2016	2	
3 5/20/2016	3	
4	4	
5	5	
6	6	

**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409 Texas P.E. Firm No. F-9335

Drawn By: C.E.C.I. Checked By: C.E.C.I. Scale: 1"=20'

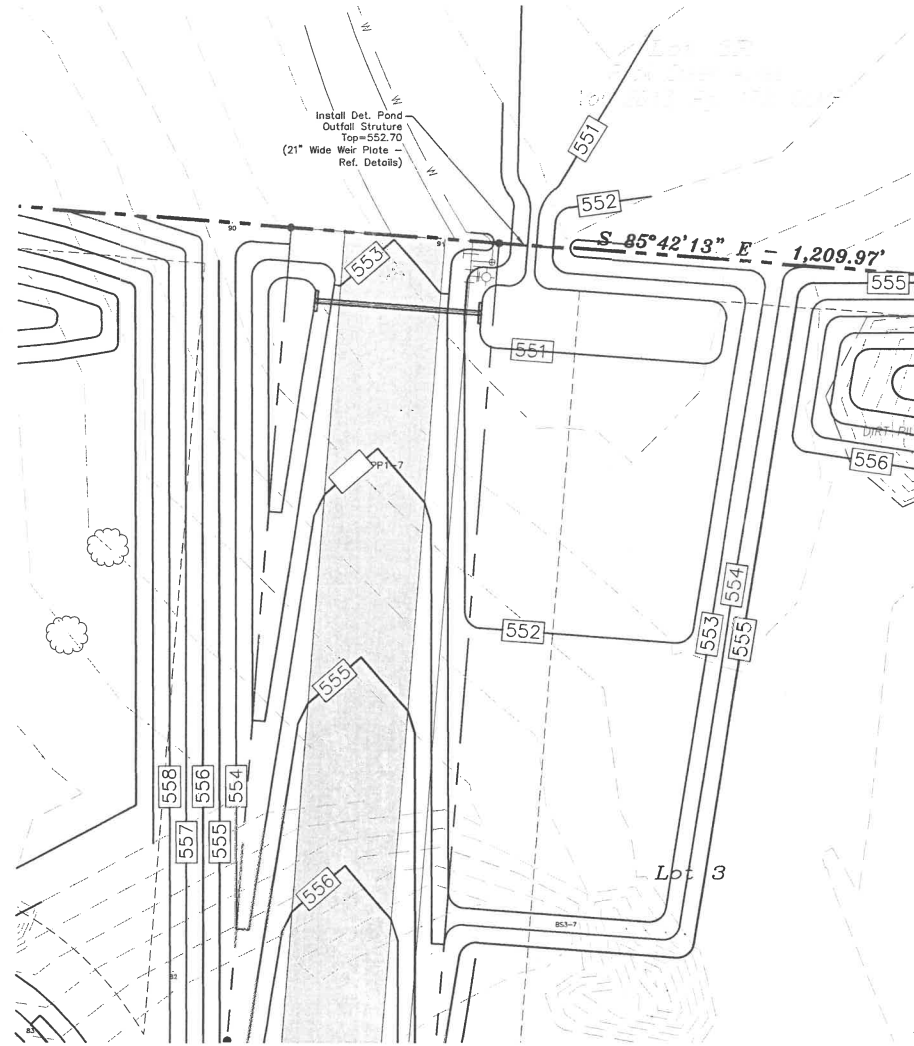


STORM SEWER PROFILES  
CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No. C11  
Project No. 16006

CROSS CREEK ACRES

Detention Pond B



DETENTION POND A SUMMARY (100-Yr. Modified Rational)

**EXISTING CONDITIONS**  
 Existing Drainage Area = 8.00 ac  
 100-Yr Rainfall Intensity = 5.40 in/hr  
 C = 0.30  
 Tc = 32.25 min.

Q<sub>100</sub> Peak = 12.96 cfs

**PROPOSED CONDITIONS**  
 Proposed to Pond Site = 8.00 ac  
 100-Yr Rainfall Intensity = 5.65 in/hr  
 C = 0.40  
 Tc = 29.75 min.

Q<sub>100</sub> Peak 18.08 cfs  
 Q<sub>100</sub> Maximum Release Rate = 12.96 cfs

**DETENTION POND SUMMARY**

Q<sub>100</sub> Peak Detention Pond In = 18.08 cfs  
 Q<sub>100</sub> Peak Detention Pond Out = 12.53 cfs  
 Allowable Site Release = Existing Conditions  
 Existing Conditions = 12.96 cfs  
 Site Release = 12.53 cfs  
 Detention Storage Required = 0.35 Ac-Ft  
 Detention Storage Provided = 0.52 Ac-Ft  
 Peak Detention Elevation = 540.00 ft

Elevation	Cum. Vol. (cf)	Cum. Vol. (ac-ft)	15' Orifice Discharge (cfs)
539.00	0	0.00	0.00
540.00	2256.00	0.51781	12.53

DETENTION POND B SUMMARY (100-Yr. Modified Rational)

**EXISTING CONDITIONS**  
 Existing Drainage Area = 7.70 ac  
 100-Yr Rainfall Intensity = 6.56 in/hr  
 C = 0.30  
 Tc = 22.25 min.

Q<sub>100</sub> Peak = 15.15 cfs

**PROPOSED CONDITIONS**  
 Proposed to Pond Site = 7.70 ac  
 100-Yr Rainfall Intensity = 6.82 in/hr  
 C = 0.40  
 Tc = 20.50 min.

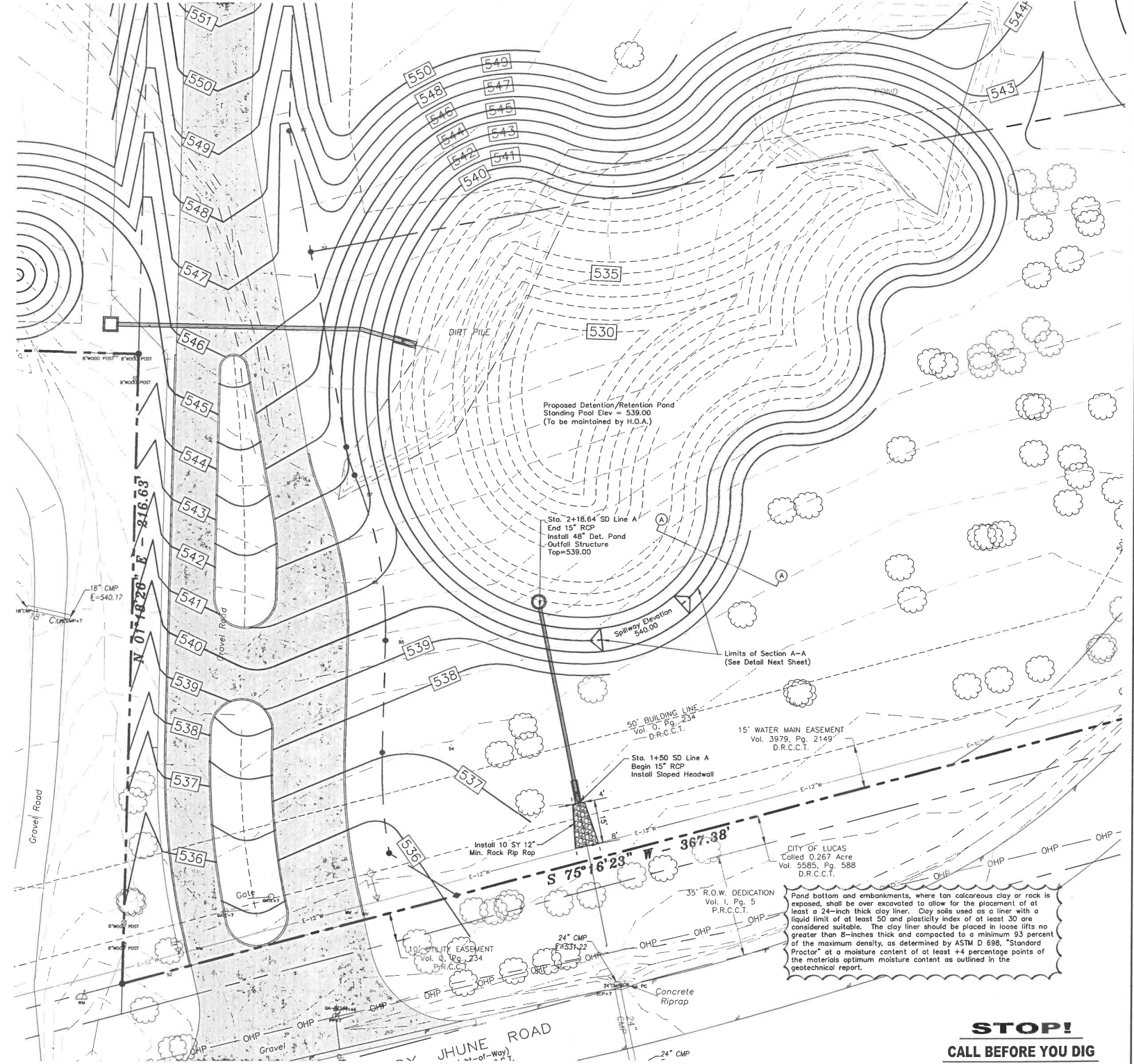
Q<sub>100</sub> Peak 21.01 cfs  
 Q<sub>100</sub> Maximum Release Rate = 15.12 cfs

**DETENTION POND SUMMARY**

Q<sub>100</sub> Peak Detention Pond In = 21.01 cfs  
 Q<sub>100</sub> Peak Detention Pond Out = 14.69 cfs  
 Allowable Site Release = Existing Conditions  
 Existing Conditions = 15.15 cfs  
 Site Release = 15.12 cfs  
 Detention Storage Required = 0.18 Ac-Ft  
 Detention Storage Provided = 0.19 Ac-Ft  
 Peak Detention Elevation = 552.70 ft

Elevation	Cum. Vol. (cf)	Cum. Vol. (ac-ft)	21' Wide Weir Discharge (cfs)
550.80	0	0.00	0.00
551.00	58.00	0.00135	0.52
552.00	2849.00	0.06540	7.59
552.70	8144.50	0.19637	15.12
553.00	10414.00	0.23507	18.84
554.00	21299.00	0.48896	33.05

Detention Pond A



Pond bottom and embankments, where tan calcareous clay or rock is exposed, shall be over excavated to allow for the placement of at least a 24-inch thick clay liner. Clay soils used as a liner with a liquid limit of at least 50 and plasticity index of at least 30 are considered suitable. The clay liner should be placed in loose lifts no greater than 8-inches thick and compacted to a minimum 93 percent of the maximum density, as determined by ASTM D 698, "Standard Proctor" at a moisture content of at least +4 percentage points of the materials optimum moisture content as outlined in the geotechnical report.

**STOP!**  
**CALL BEFORE YOU DIG**

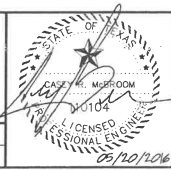


(@ least 72 hours prior to digging)

Issue Dates:	Revisions:	Date:
1	3/29/2016	1-
2	4/05/2016	2
3	5/20/2016	3
4		4
5		5
6		6

**CROSS ENGINEERING CONSULTANTS**  
 131 S. Tennessee St. McKinney, Texas 75069  
 972.562.4409 Texas P.E. Firm No. F-5935

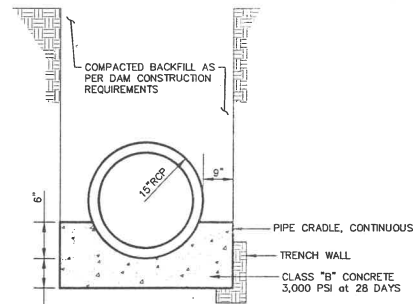
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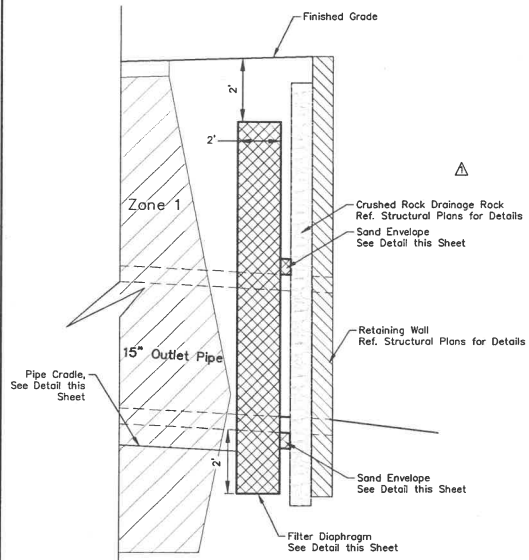
DETENTION POND  
 CROSS CREEK ACRES  
 BETTER HOME & COMMERCIAL, LLC  
 CITY OF LUCAS, TEXAS

Sheet No. **C12**  
 Project No. 16006

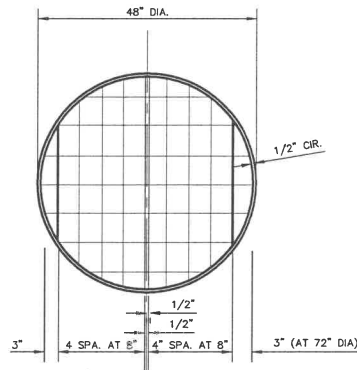
CROSS CREEK ACRES



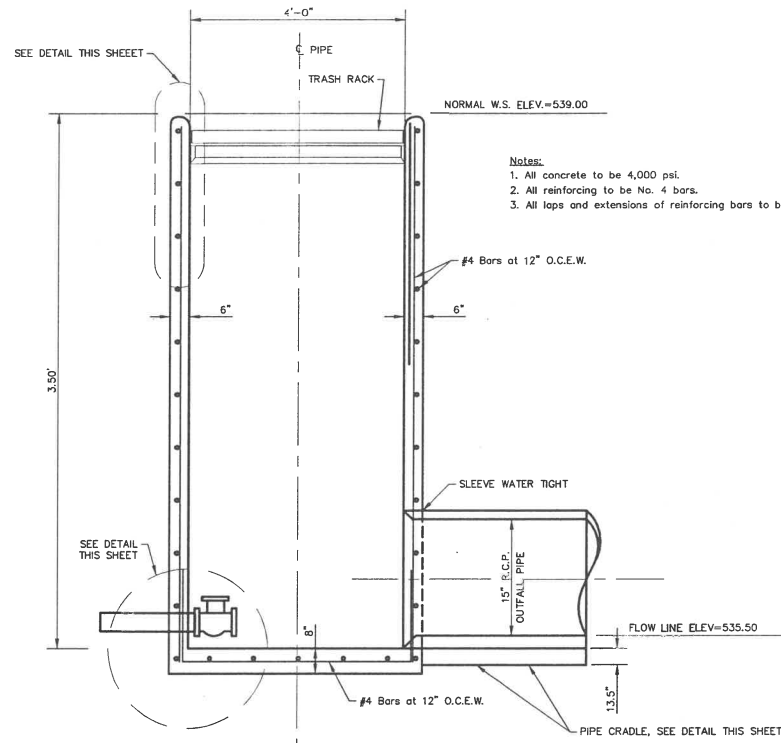
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(N.T.S.)



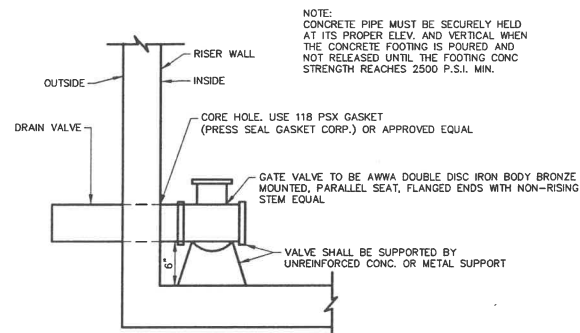
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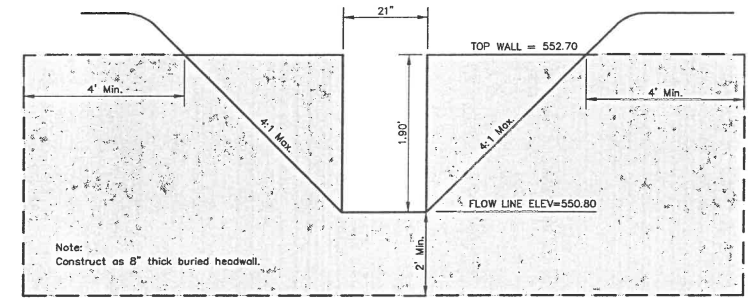
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(N.T.S.)



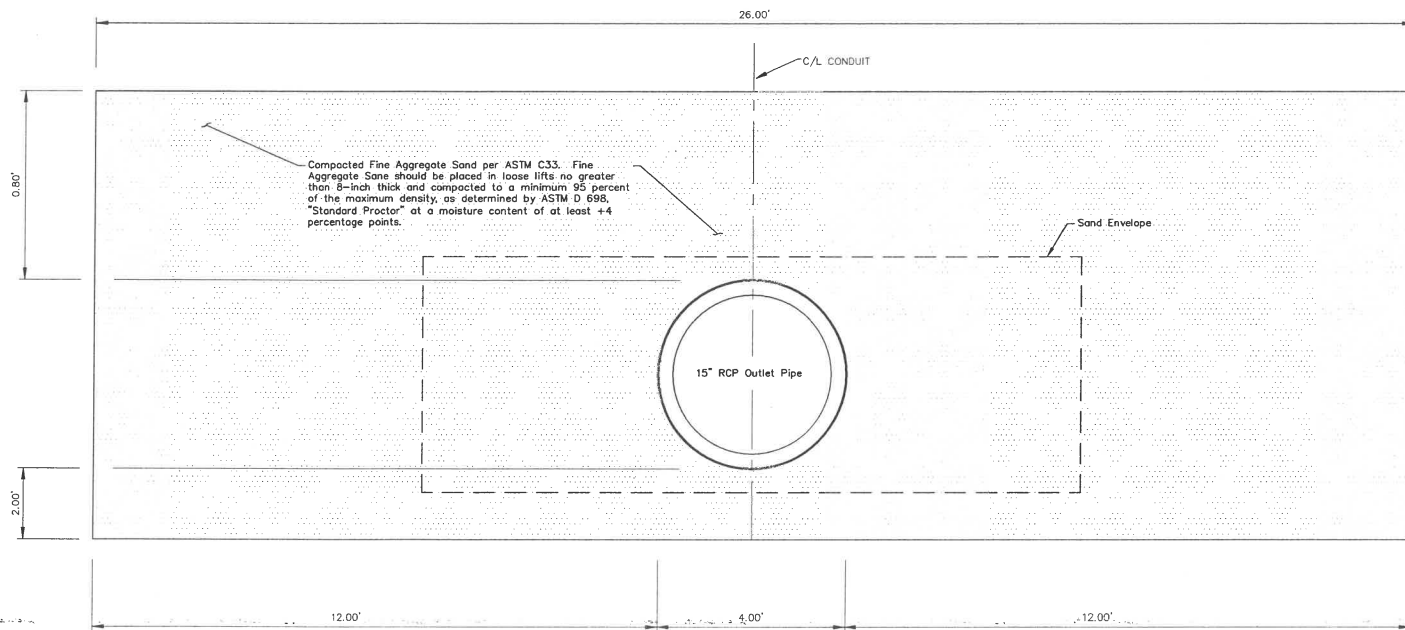
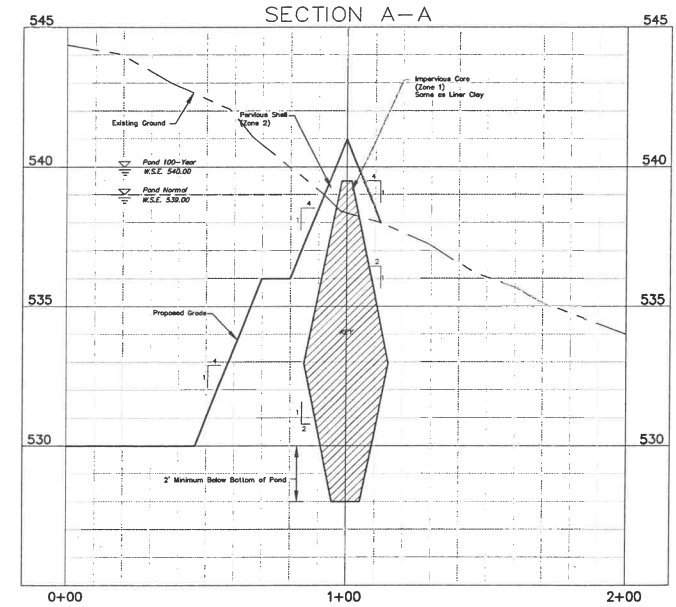
**SECTION "A-A"**  
(N.T.S.)



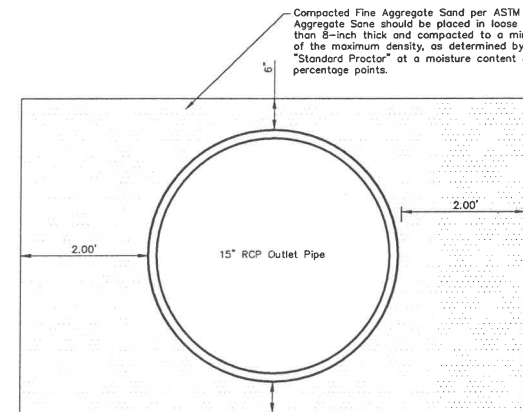
**BLEEDER DETAIL**  
(N.T.S.)



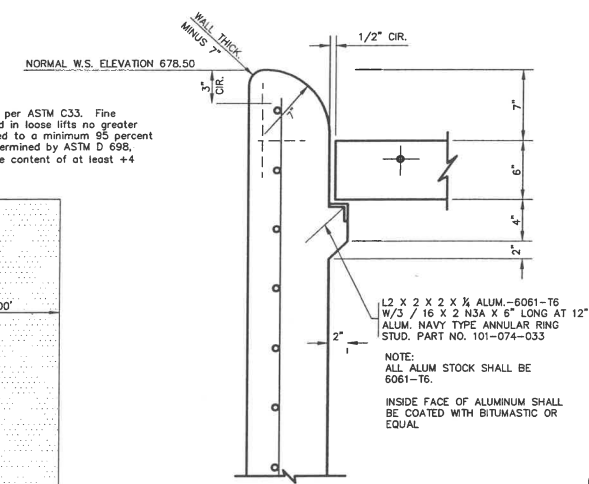
**CONCRETE RECTANGULAR WEIR**  
(N.T.S.)



**FILTER DIAPHRAGM**  
(N.T.S.)



**SAND ENVELOPE**  
(N.T.S.)



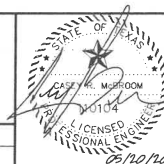
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Issue Dates:	Revisions:	Date:
1	3/29/2016	1
2	4/05/2016	2
3	5/20/2016	3
4		4
5		5
6		6

**CROSS ENGINEERING CONSULTANTS**

131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409 Texas P.E. Firm No. F-5935

Drawn By: C.E.C.I. Checked By: C.E.C.I. Scale: N.T.S.



**DETENTION DETAILS**

CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No.  
**C13**

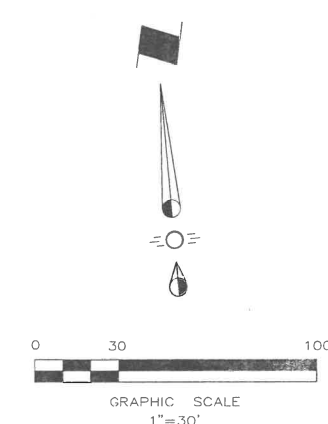
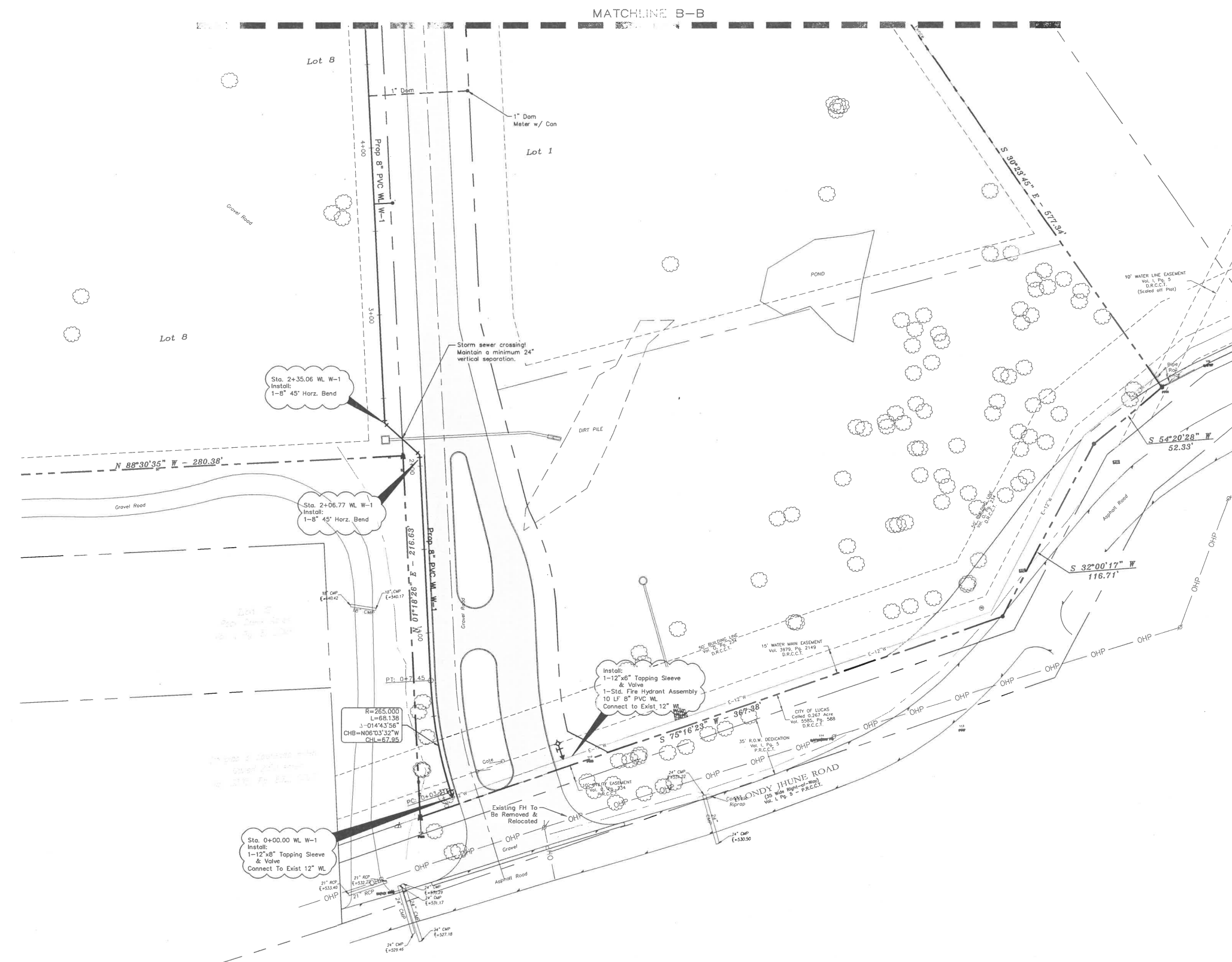
Project No.  
16006

**STOP!**  
**CALL BEFORE YOU DIG**



(@ least 72 hours prior to digging)

CROSS CREEK ACRES



**WATER NOTES**

1. All materials and construction shall be in accordance with the City of Lucas Standard Specifications and Construction Standards, and Standard Specifications for Public Works Construction prepared by North Central Texas Council of Governments (Latest Revision), and to the regulations of The Texas Commission on Environmental Quality.
2. Existing utilities are shown schematically and are for the contractors guidance only. The location and/or elevation of existing utilities as shown on these plans are based on records of the various utility companies, and, where possible, measurements taken in the field. The contractor must call the appropriate utility company at least 72 hours prior to any excavation to request exact field location of utilities.
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4. All water pipe 8" and larger shall be Class 150 DR 18 PVC water pipe, conforming to AWWA C900 standards, except Fire Line.
5. Contractor shall be responsible for maintaining trench safety requirements in accordance with the latest standards of O.S.H.A. or any other agency having jurisdiction for excavation and trenching procedures. Contractor shall provide and implement a trench safety plan complying with O.S.H.A.
6. Fire sprinkler line shall be sized and installed by a state licensed contractor. Fire Line shown for reference only.
7. Fire protection rooms shall have no roof access, mopsinks, electrical panels, storage. Fire Protection rooms are for Fire Alarm and Control systems uses.

**Note:**  
Existing Utilities Shown Per As-Built Documents. Contractor to Field Verify Location and Depth of All Utilities Prior to Construction and Notify Engineer of any Discrepancies.

**LEGEND**

---	Proposed S.S. Line
---	Proposed Water Line
---	Proposed Service Line
⊕	Proposed Fire Hydrant
⊕	Proposed Water Tee
⊕	Proposed Water Valve
⊕	Proposed Water Bend
⊕	Proposed Blow Off Valve
⊕	Existing Fire Hydrant
---	Existing S.S. Line
---	Existing Water Line
---	Existing Underground Elec
---	Existing Gas Line

**WATER METER CHART**

No.	Proposed Meter	Size
1	Domestic Meter	1"
2	Irrigation Meter	1"

**CAUTION!**  
Existing Utilities in Area. Contractor shall determine location and elevation of all utilities prior to construction. Contractor shall inform Engineer of any conflicts prior to construction.

**STOP!**  
**CALL BEFORE YOU DIG**

Know what's below.  
(@ least 72 hours prior to digging)

Issue Dates:	Revisions:	Date:
1	3/29/2016	1
2	4/05/2016	2
3	5/20/2016	3
4		4
5		5
6		6

**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409 Texas P.E. Firm No. P-5935

Drawn By: C.E.C.L. Checked By: C.E.C.L. Scale: 1"=30'

Professional Engineer Seal: State of Texas, License No. 10104, Date 05/20/2016

**UTILITY PLAN 1**

CROSS CREEK ACRES

BETTER HOME & COMMERCIAL, LLC

CITY OF LUCAS, TEXAS

Sheet No. **C14**

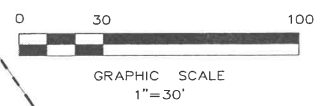
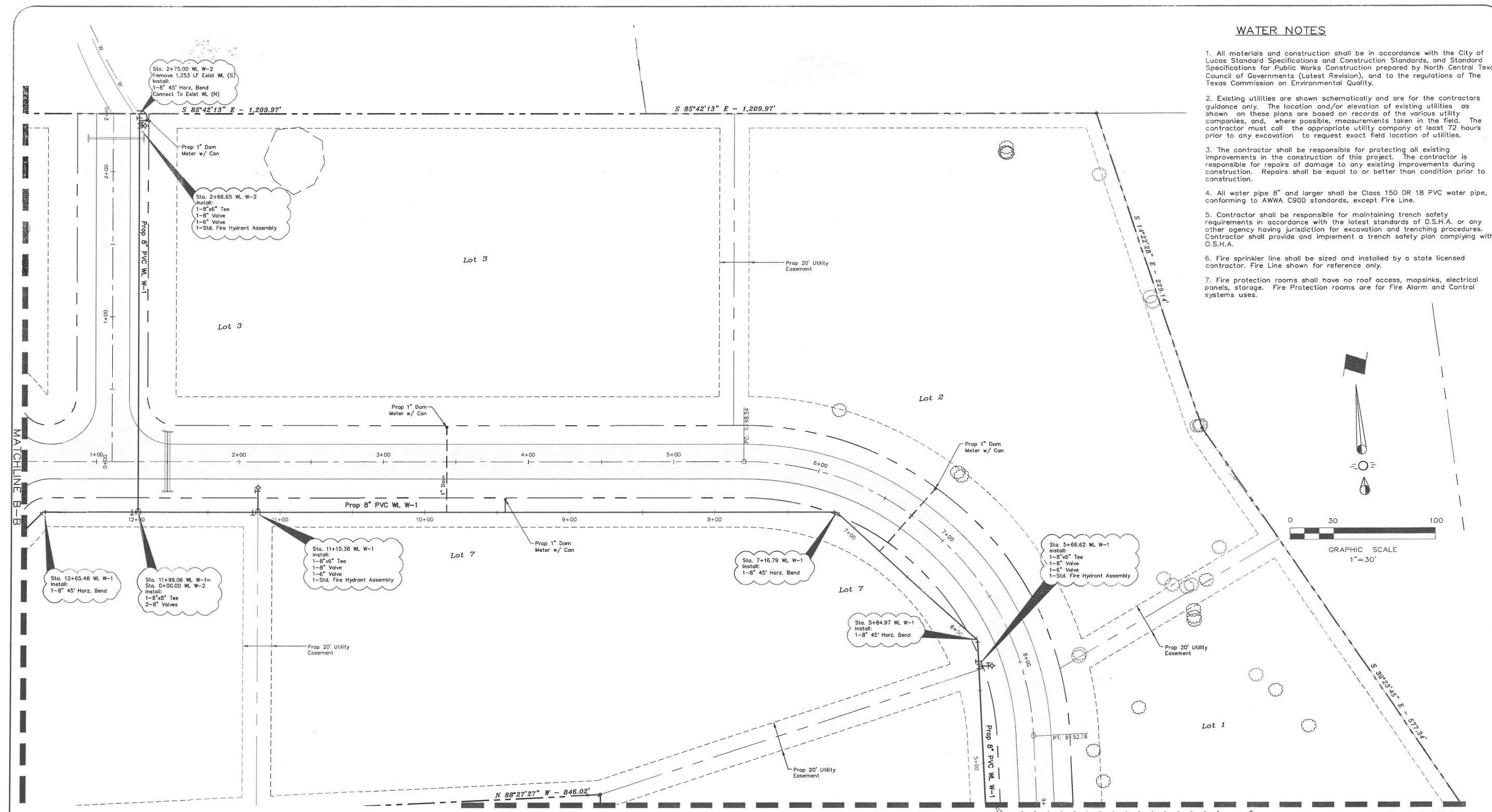
Project No. 16006

CROSS CREEK ACRES



**WATER NOTES**

1. All materials and construction shall be in accordance with the City of Lucas Standard Specifications and Construction Standards, and Standard Specifications for Public Works Construction prepared by North Central Texas Council of Governments (Latest Revision), and to the regulations of The Texas Commission on Environmental Quality.
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**Note:**  
Existing Utilities Shown Per As-Built Documents. Contractor to Field Verify Location and Depth of All Utilities Prior to Construction and Notify Engineer of any Discrepancies.

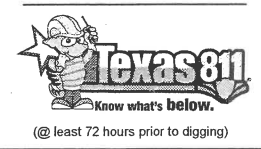
WATER METER CHART		
No.	Proposed Meter	Size
1	Domestic Meter	1"
2	Irrigation Meter	1"

**LEGEND**

	Proposed S.S. Line
	Proposed Water Line
	Proposed Service Line
	Proposed Fire Hydrant
	Proposed Water Tee
	Proposed Water Valve
	Proposed Water Bend
	Proposed Blow Off Valve
	Existing Fire Hydrant
	Existing S.S. Line
	Existing Water Line
	Existing Underground Elec
	Existing Gas Line

**STOP!**  
**CALL BEFORE YOU DIG**

CAUTION!!  
Existing Utilities in Area. Contractor shall determine location and elevation of all utilities prior to construction. Contractor shall inform Engineer of any conflicts prior to construction.



Issue Dates:	Revisions:	Date:
1	3/29/2016	1
2	4/05/2016	2
3	5/20/2016	3
4		4
5		5
6		6

**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St.  
972.562.4409

McKinney, Texas 75069  
Texas P.E. Firm No. F-5933

Drawn By: C.E.C.I.  
Checked By: C.E.C.I.  
Scale: 1"=30'

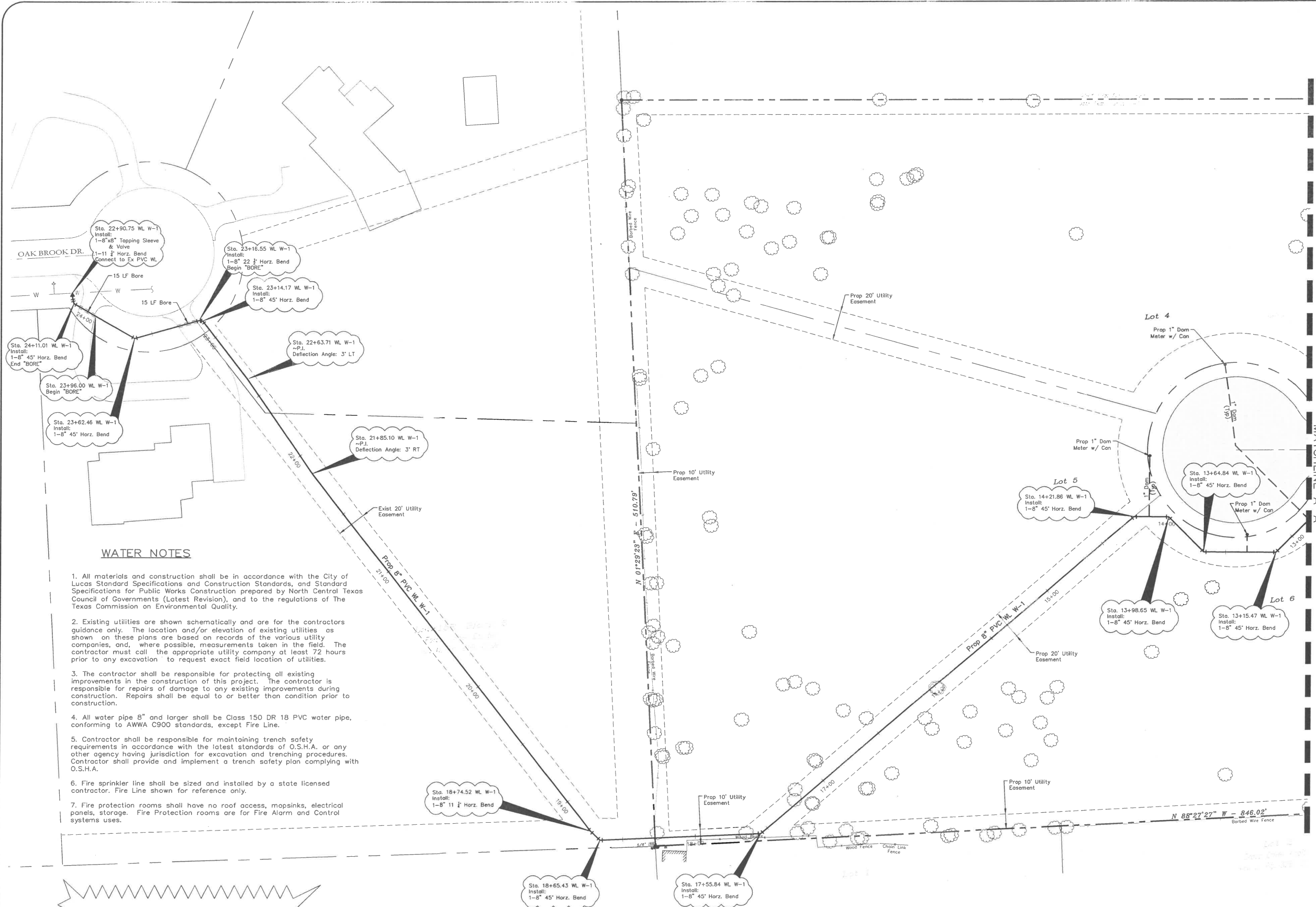
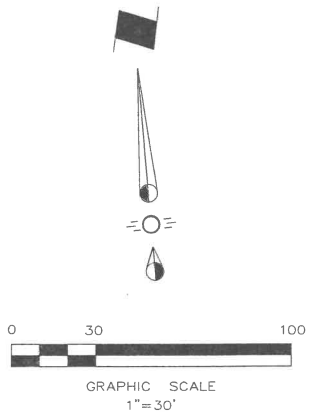


**UTILITY PLAN 2**

CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No.	Project No.
C15	16006

CROSS CREEK ACRES



**WATER NOTES**

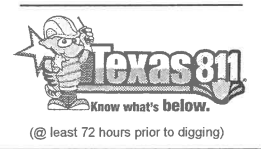
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**Note:**  
Existing Utilities Shown Per As-Built Documents. Contractor to Field Verify Location and Depth of All Utilities Prior to Construction and Notify Engineer of any Discrepancies.

WATER METER CHART		
No.	Proposed Meter	Size
1	Domestic Meter	1"
2	Irrigation Meter	1"

LEGEND	
---	Proposed S.S. Line
---	Proposed Water Line
---	Proposed Service Line
⊕	Proposed Fire Hydrant
⊕	Proposed Water Tee
⊕	Proposed Water Valve
⊕	Proposed Water Bend
⊕	Proposed Blow Off Valve
⊕	Existing Fire Hydrant
---	Existing S.S. Line
---	Existing Water Line
---	Existing Underground Elec
---	Existing Gas Line

**STOP!**  
**CALL BEFORE YOU DIG**

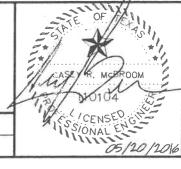


**CAUTION!!**  
Existing Utilities in Area. Contractor shall determine location and elevation of all utilities prior to construction. Contractor shall inform Engineer of any conflicts prior to construction.

Issue Dates	Revisions	Date
1	3/29/2016	1
2	4/05/2016	2
3	5/20/2016	3
4		4
5		5
6		6

**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409 Texas P.E. Firm No. F-5935

Drawn By: C.E.C.L. Checked By: C.E.C.L. Scale: 1"=30'

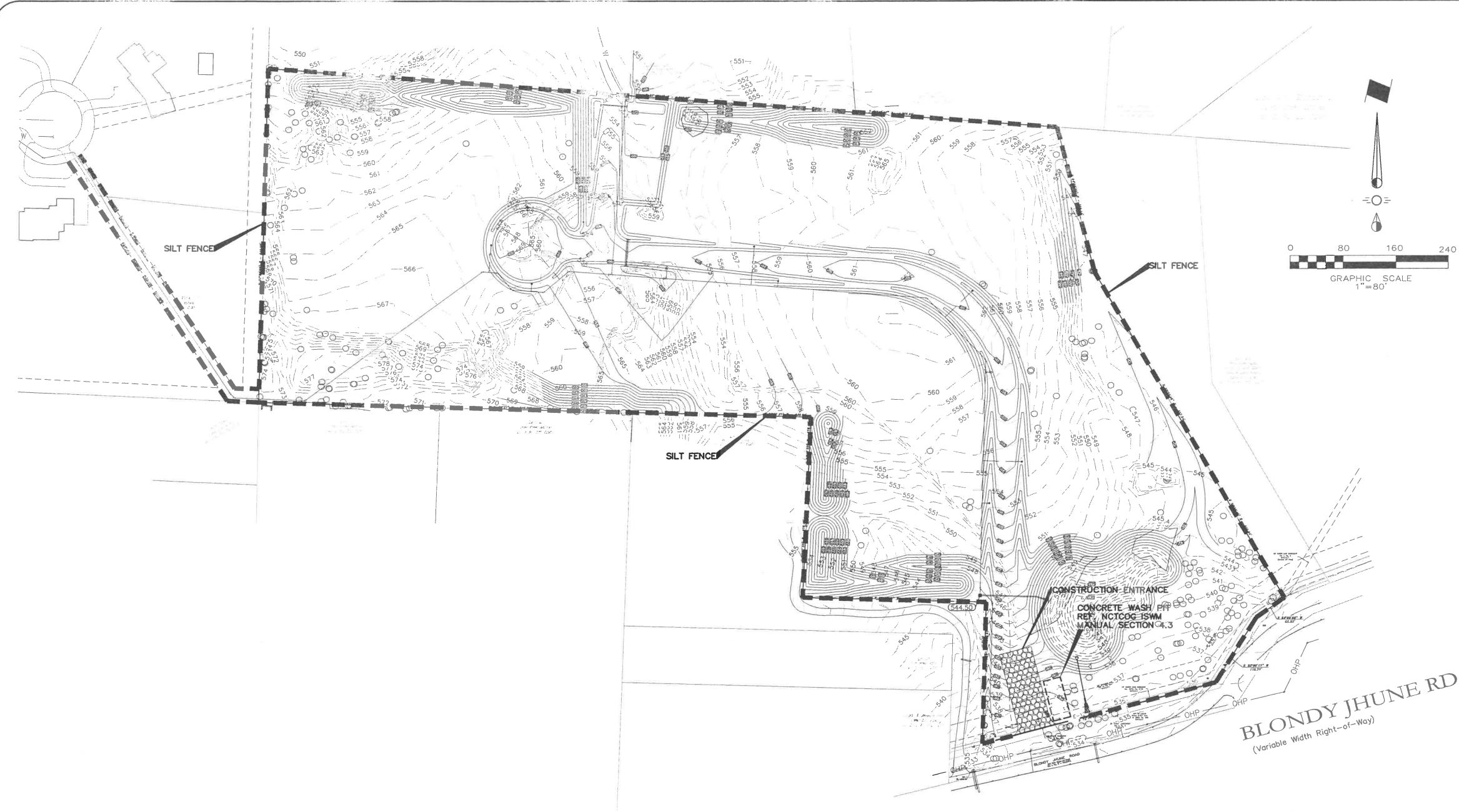


**UTILITY PLAN 3**

CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No. **C16**  
Project No. 16006

CROSS CREEK ACRES



**STORMWATER POLLUTION PREVENTION NOTES**

- It is the intent of the information provided on this sheet to be used as the general guidelines of the storm water pollution prevention plan for this project to establish a minimum basis of compliance with federal regulations. The Storm Water Pollution Prevention Plan shall meet the requirements for storm water discharges from construction sites published in the TPDES general permit no. TXR 150000, dated March 5, 2013, issued pursuant to section 26.040 of the Texas Water Code and Section 402 of the Clean Water Act, by the Texas Commission on Environmental Quality (TCEQ).
- The Storm Water Pollution Prevention Plan should address three goals:
  - diversion of upslope water around disturbed areas of the site;
  - limit the exposure of disturbed areas to the shortest duration possible; and
  - removal of sediment from storm water before it leaves the site.
- The contractor shall have the Storm Water Pollution Prevention Plan available onsite.
- The contractor must amend plans whenever there is a change in design, construction, operation, or maintenance of the plan, or when the existing plan proves ineffective. Modifications including design and all additional materials and work shall be accomplished by the contractor at no additional expense to the owner.
- Stabilization measures are to be inspected at a minimum of once every 7 days and within 24 hours after any storm event greater than 0.50 inches. Repairs and inadequacies revealed by the inspection must be implemented within 1 calendar day following the inspection. Rain gauge shall be placed on-site to measure and record.
- An inspection report that summarizes inspection activities and implementation of the storm water pollution prevention plan shall be retained and made part of the plan.
- All contractors and subcontractors identified in the plan must certify as to an understanding of the NPDES general permit before conducting any activity identified in the pollution prevention plan.
- The contractor shall adopt appropriate construction site management practices to prevent the discharge of oils, grease, paints, gasoline, and other pollutants to storm water. Appropriate practices can include: Designating areas for equipment maintenance and repair; regular collection of wastes; conveniently located waste receptacles; and designating and controlling equipment washdown.
- The contractor shall amend or modify this plan as required by construction means, methods, and sequence. Modifications shall not compromise the intent of the requirements of the law and this plan. Modifications shall not be basis for additional cost to the owner.
- Areas of construction elsewhere on the jobsite shall conform to the detail shown on the plans.
- Borrow areas, if excavated, shall be protected and stabilized utilizing the plan details. All work shall conform to governmental requirements and become part of the Storm Water Pollution Prevention Plan (SWPPP). This work shall be done by the contractor at no additional expense to the owner.
- All non-paved areas shall be mulched and seeded with erosion protection immediately upon completion of final grading. This includes all ditches and embankments. The contractor shall maintain final grading and keep seeded areas watered until fully established and accepted by owner.
- The contractor shall construct a stabilized construction entrance/exit at designated traffic entrance/exit points prior to entering/exiting onto any paved roadway.
- The contractor shall construct a silt fence at all locations shown on plans. The silt fence shall be constructed as detailed this sheet.
- All disturbed ground areas shall be re-vegetated with a combination of perennial rye and bermuda, upon completion of final grading.

**BLONDY JHUNE RD**  
(Variable Width Right-of-Way)

**DISTURBED AREA = 15.00 ACRES**

- PHASING**
- INSTALL SILT FENCE AND CONSTRUCTION ENTRANCE
  - INSTALL INLET PROTECTION WHEN INLET AND FRONT PAVING ARE COMPLETE.
  - REMOVE SILT FENCE AT PAVING CONNECTION POINTS FOR DRIVE CONNECTIONS.
  - REMOVE CONSTRUCTION ENTRANCE AFTER ALL INTERIOR CONSTRUCTION IS COMPLETE AND POUR ENTRY PAVING.
  - REMOVE SILT FENCE AND INLET PROTECTION WHEN PERMANENT BMP'S ARE IN PLACE.

**LEGEND**

- SILT FENCE
- INLET PROTECTION
- TEMPORARY CONSTRUCTION ENTRANCE
- EXISTING TREE TO REMAIN



**SILT FENCE CONSTRUCTION NOTES**

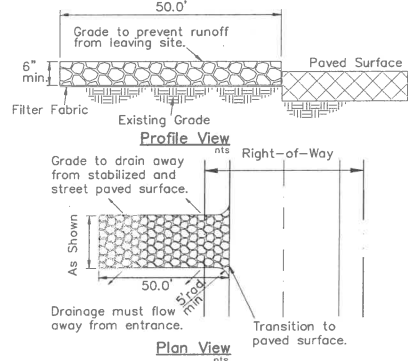
- Steel posts which support the silt fence shall be installed on a slight angle toward the anticipated runoff source. The post must be embedded a minimum of one foot.
- The toe of the silt fence shall be trenched in with a spade or mechanical trencher, so that the downslope face of the trench is flat 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.
- 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.
- Silt fence shall be securely fastened to each steel support post or to woven wire, which is in turn attached to the steel support post. There shall be a 6 inch double overlap, securely fastened where ends of fabric meet.
- Inspection shall be made weekly or after each rainfall. Repair or replacement shall be made promptly as needed.
- Silt fence shall be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.
- 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.

**BENCHMARK:**

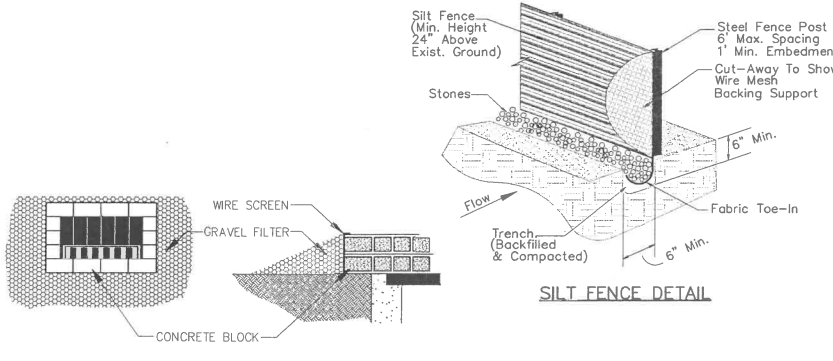
BM #1  
"x" on top of concrete headwall on the West end located on the North side of Blondy Jhune road and East of the dirt road into the subject property. Elevation=536.04  
Found 5/8" Iron Rod (RM) at Southwesterly Corner of Lot 3R, State Plans=NAD 83 Coord. N: 7,091,873.340 E: 2,557,564.412 Elevation=573.97

**STABILIZED CONSTRUCTION ENTRANCE NOTES:**

- Stone shall be 3 to 5 inch diameter rock or stone.
- 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 a area stabilized with stone with drainage flowing away from both the street and the stabilized entrance/exit. All sediment shall be prevented from entering any storm drain, ditch or watercourse using approved methods.
- The entrance/exit 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.
- The entrance/exit must be properly graded or incorporate a drainage swale to prevent runoff from leaving the construction site.
- Revegetate TxDot R.O.W. per TxDot spec. book (2004) items 162& 164. Remove all erosion control devices from TxDot R.O.W. upon establishment of 70% vegetative cover inside TxDot R.O.W.



**STABILIZED CONSTRUCTION ENTRANCE/EXIT**

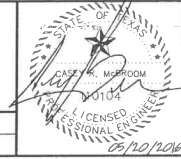


**SILT FENCE DETAIL**

**DROP INLET PROTECTION**

**BLOCK AND GRAVEL PROTECTION**  
Concrete blocks are to be placed on their sides in a single row around the perimeter of the inlet, with ends abutting. Opening in the blocks should face outward, not upward. Wire mesh shall then be placed over the outside face of the blocks covering the holes. Filter stone shall then be piled against the wire mesh to the top of the blocks with the base of the stone being a minimum of 18 inches from the blocks. Periodically, when the stone filter becomes clogged, the stone must be removed and cleaned in a proper manner or replaced with new stone and piled back against the wire mesh.

Issue Dates:	Revisions:	Date:
1	3/29/2016	1
2	4/05/2016	2
3	5/20/2016	3
4		4
5		5
6		6



**EROSION CONTROL PLAN**

CROSS CREEK ACRES

BETTER HOME & COMMERCIAL, LLC

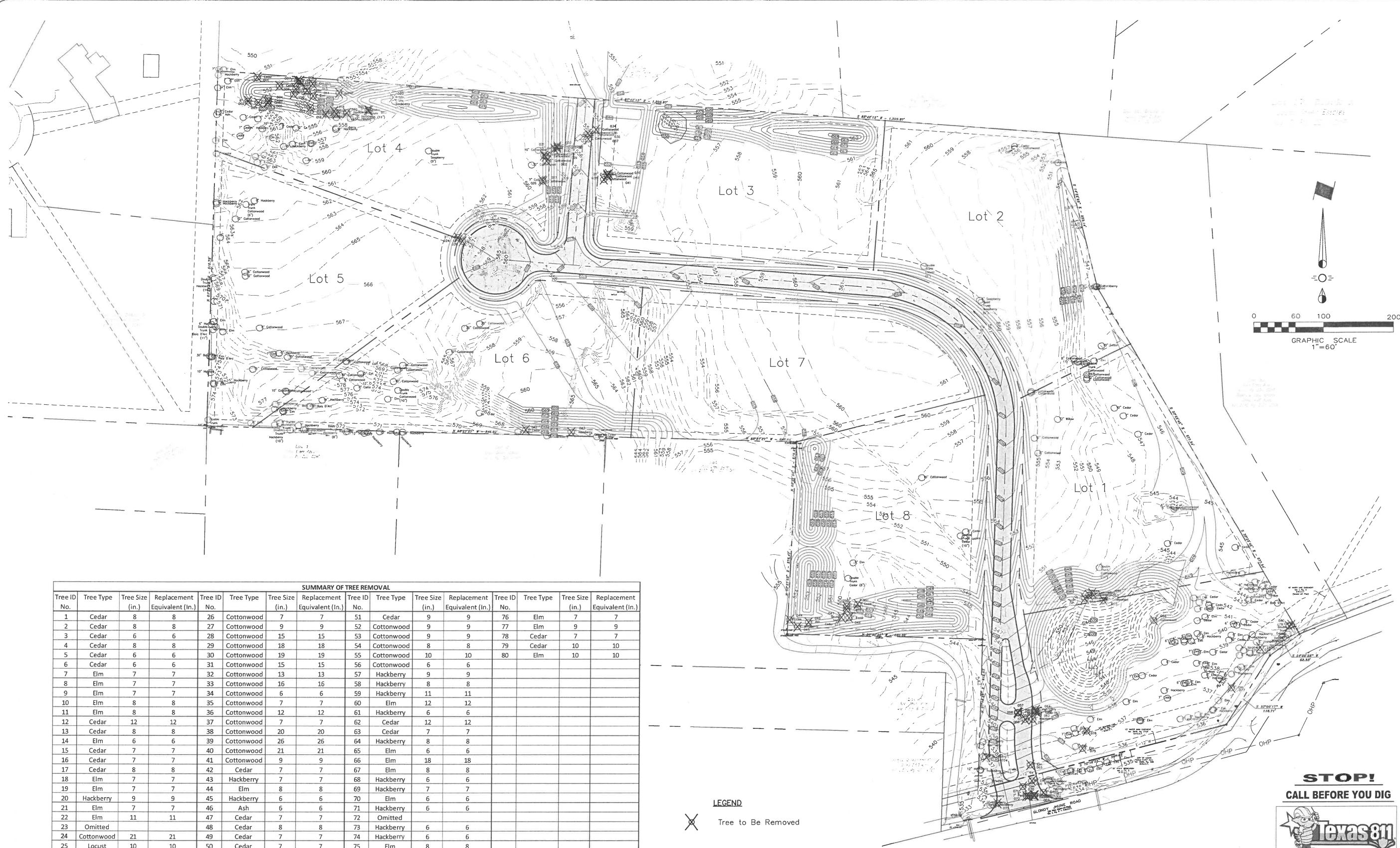
CITY OF LUCAS, TEXAS

Sheet No. **C17**

Project No. 16006


CROSS CREEK ACRES





SUMMARY OF TREE REMOVAL															
Tree ID No.	Tree Type	Tree Size (in.)	Replacement Equivalent (in.)	Tree ID No.	Tree Type	Tree Size (in.)	Replacement Equivalent (in.)	Tree ID No.	Tree Type	Tree Size (in.)	Replacement Equivalent (in.)	Tree ID No.	Tree Type	Tree Size (in.)	Replacement Equivalent (in.)
1	Cedar	8	8	26	Cottonwood	7	7	51	Cedar	9	9	76	Elm	7	7
2	Cedar	8	8	27	Cottonwood	9	9	52	Cottonwood	9	9	77	Elm	9	9
3	Cedar	6	6	28	Cottonwood	15	15	53	Cottonwood	9	9	78	Cedar	7	7
4	Cedar	8	8	29	Cottonwood	18	18	54	Cottonwood	8	8	79	Cedar	10	10
5	Cedar	6	6	30	Cottonwood	19	19	55	Cottonwood	10	10	80	Elm	10	10
6	Cedar	6	6	31	Cottonwood	15	15	56	Cottonwood	6	6				
7	Elm	7	7	32	Cottonwood	13	13	57	Hackberry	9	9				
8	Elm	7	7	33	Cottonwood	16	16	58	Hackberry	8	8				
9	Elm	7	7	34	Cottonwood	6	6	59	Hackberry	11	11				
10	Elm	8	8	35	Cottonwood	7	7	60	Elm	12	12				
11	Elm	8	8	36	Cottonwood	12	12	61	Hackberry	6	6				
12	Cedar	12	12	37	Cottonwood	7	7	62	Cedar	12	12				
13	Cedar	8	8	38	Cottonwood	20	20	63	Cedar	7	7				
14	Elm	6	6	39	Cottonwood	26	26	64	Hackberry	8	8				
15	Cedar	7	7	40	Cottonwood	21	21	65	Elm	6	6				
16	Cedar	7	7	41	Cottonwood	9	9	66	Elm	18	18				
17	Cedar	8	8	42	Cedar	7	7	67	Elm	8	8				
18	Elm	7	7	43	Hackberry	7	7	68	Hackberry	6	6				
19	Elm	7	7	44	Elm	8	8	69	Hackberry	7	7				
20	Hackberry	9	9	45	Hackberry	6	6	70	Elm	6	6				
21	Elm	7	7	46	Ash	6	6	71	Hackberry	6	6				
22	Elm	11	11	47	Cedar	7	7	72	Omitted						
23	Omitted			48	Cedar	8	8	73	Hackberry	6	6				
24	Cottonwood	21	21	49	Cedar	7	7	74	Hackberry	6	6				
25	Locust	10	10	50	Cedar	7	7	75	Elm	8	8				
Total Replacement Caliper Inches															726

**BENCHMARK:**  
 BM #1  
 "X" on top of concrete headwall on the West end located on the North side of Blondy June road and East of the dirt road into the subject property. Elevation=536.04  
 Found 5/8" Iron Rod (CM) at Southwesterly Corner of Lot 3. State Plane-NAD 83 Coord. N: 7,091,873.340 E: 2,557,564.412 Elevation=573.97

**LEGEND**  
 Tree to Be Removed

**STOP!**  
**CALL BEFORE YOU DIG**  
  
 Know what's below.  
 (@ least 72 hours prior to digging)

Issue Dates:	Revisions:	Date:
1	3/29/2016	1
2	4/05/2016	2
3	5/20/2016	3
4		4
5		5
6		6

**CROSS ENGINEERING CONSULTANTS**  
 131 S. Tennessee St. McKinney, Texas 75069  
 972.562.4409 Texas P.E. Firm No. P-59135  
 Drawn By: C.E.C.L. Checked By: C.E.C.L. Scale: 1"=60'



**TREE PRESERVATION PLAN**  
 CROSS CREEK ACRES  
 BETTER HOME & COMMERCIAL, LLC  
 CITY OF LUCAS, TEXAS

Sheet No. **C19**  
 Project No. 16006

CROSS CREEK ACRES



**Table 1**  
**In-Place Protection Riprap Gradation Requirements**

Thickness	Maximum Size (lb.)	90% Size (lb.)	50% Size (lb.)	5% Size - Minimum (lb.)
12 in.	200	80-180	30-75	3
15 in.	320	175-300	60-165	20
18 in.	520	240-425	105-220	22
21 in.	800	460-720	175-360	23
24 in.	1,000	550-850	200-375	30
30 in.	2,600	1,150-2,250	400-900	40

1. As defined in Tex-401-A, Part II.

Provide bedding stone that in-place meets the gradation requirements shown in Table 2 or as otherwise shown on the plans. Determine size distribution in accordance with Tex-401-A, Part I.

1. **Type R.** Construct riprap as shown in Figure 1 and as shown on the plans. Place stones in a single layer with close joints so that most of their weight is carried by the earth and not by the adjacent stones. Place the upright axis of the stones at an angle of approximately 90° to the embankment slope. Place each course from the bottom of the embankment upward with the larger stones in the lower courses.

Fill open joints between stones with spalls. Place stones to create a uniform finished top surface. Do not exceed a 6-in. variation between the tops of adjacent stones. Replace, embed deeper, or chip away stones that project more than the allowable amount above the finished surface.

When the plans require Type R stone riprap to be grouted, prevent earth, sand, or foreign material from filling the spaces between the stones. After the stones are in place, wet the stones thoroughly, fill the spaces between the stones with grout, and pack. Sweep the surface of the riprap with a stiff broom after grouting.

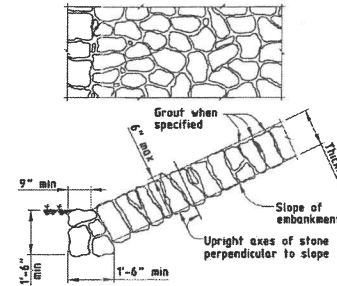
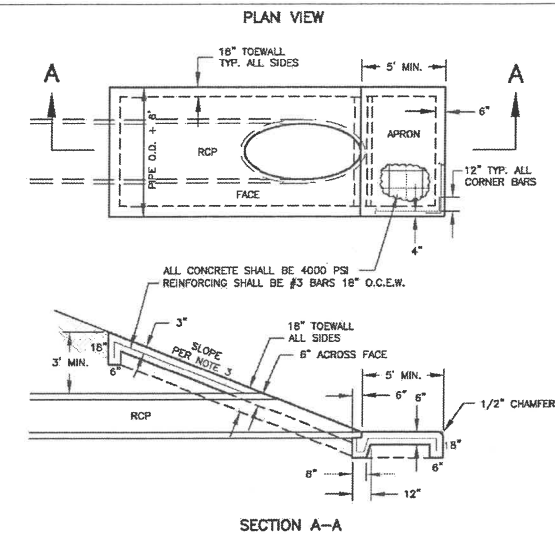
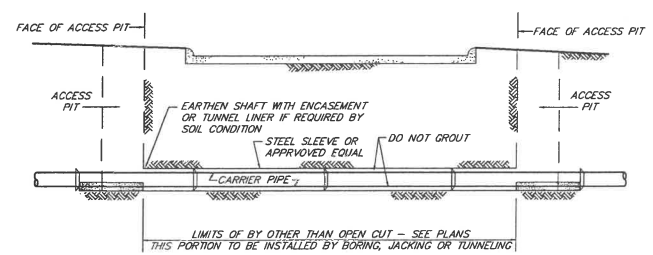


Figure 1  
Type R stone riprap, dry or grouted.



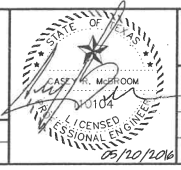
- NOTES:**
1. ROCK RIP-RAP PROVIDED BEYOND APRON SHALL BE AS SPECIFIED IN PLANS BY DESIGN ENGINEER.
  2. POSITIVE DRAINAGE MUST BE PROVIDED BEYOND CONCRETE APRON.
  3. HEADWALL SLOPE SHALL BE SPECIFIED IN PLANS BY DESIGN ENGINEER (MAX. 3:1).
  4. CONCRETE SHALL BE 4000 PSI.



- ROAD BORE**  
N.T.S.
- GENERAL NOTES
- 1) CARRIER PIPE TO BE MADE UP OUTSIDE THE LIMITS OF BY OTHER THAN OPEN CUT AREA, THEN PUSHED THROUGH SHAFT AREA.
  - 2) CARRIER PIPE TO BE SUPPORTED BY 3000psi CONCRETE CRADLE, POURED UP TO QUARTER POINT OF PIPE & EXTENDING FROM THE TUNNEL TO FIRST PIPE JOINT IN DITCH SECTION.

**BENCHMARK:**  
BM #1  
"X" on top of concrete headwell on the West end located on the North side of Blondy June road and East of the dirt road into the subject property. Elevation=536.04  
Found 5/8" Iron Rod (QM) at Southwesterly Corner of Lot 3R, State Plane-NAD 83 Coord. N: 7,091,873.340 E: 2,557,564.412 Elevation=573.97

Issue Dates:	Revisions:	Date:
1	3/29/2016	1
2	4/05/2016	2
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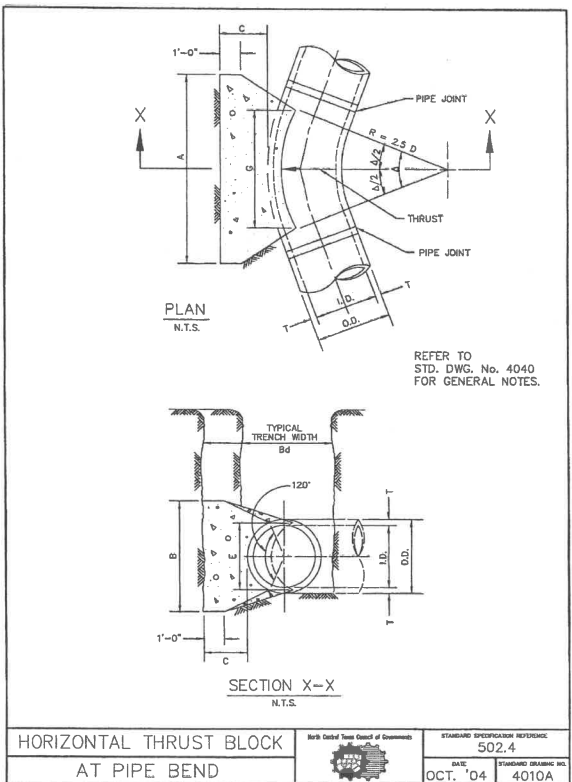
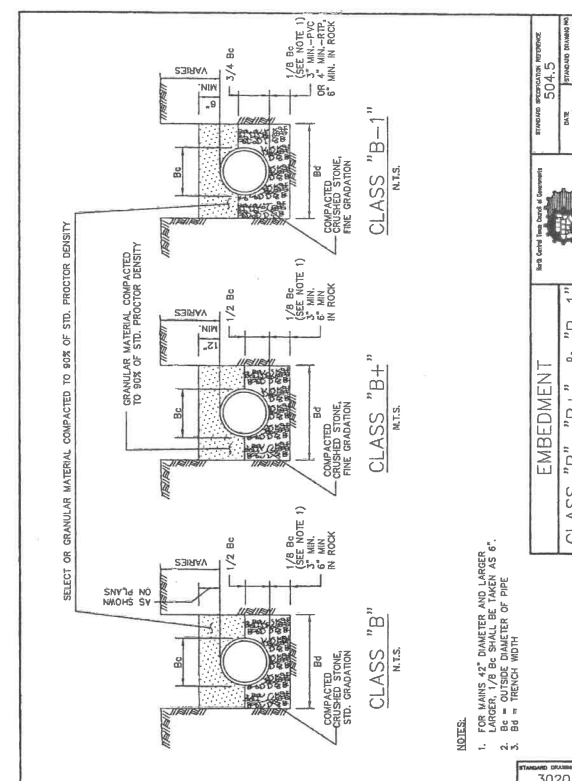
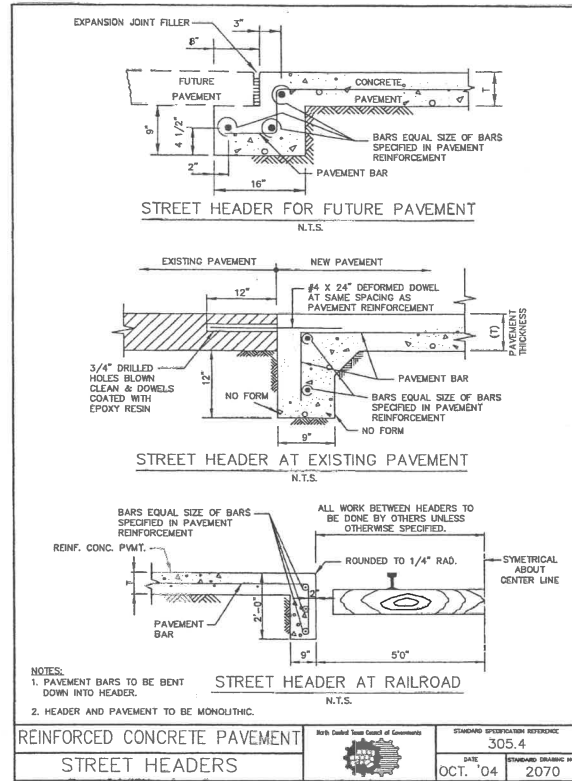
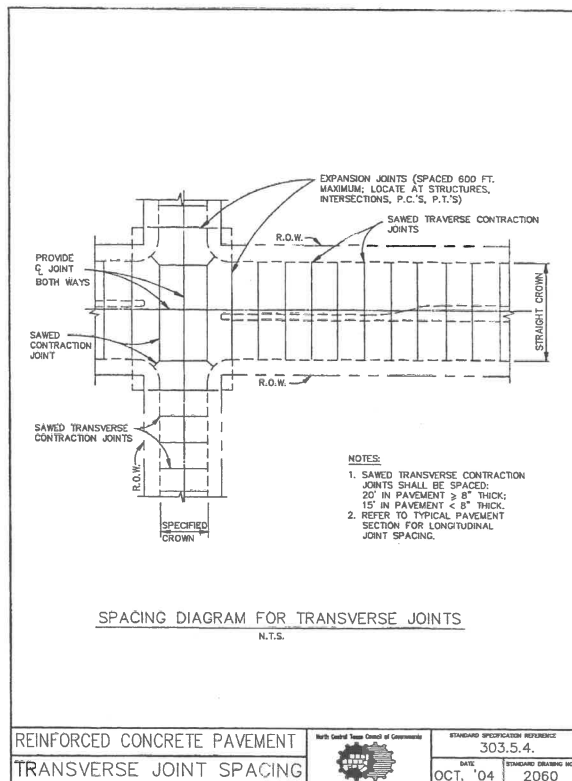
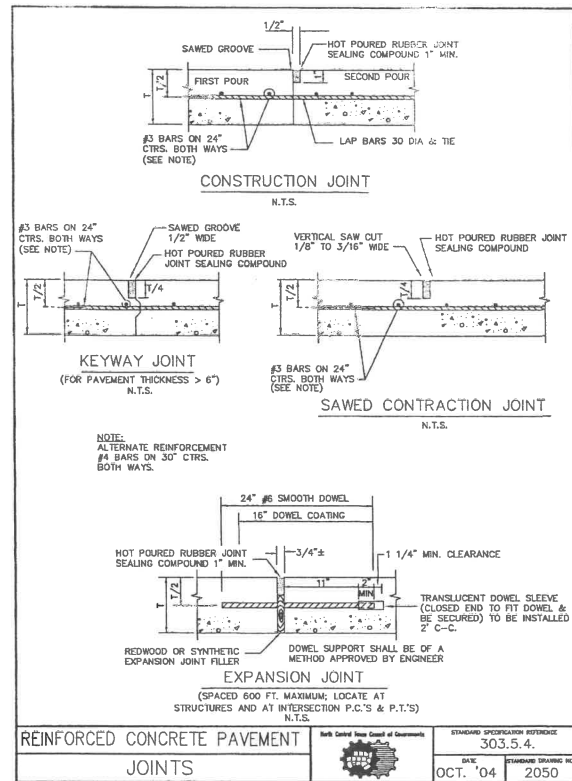
**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409 Texas P.E. Firm No. F-5935

Drawn By: C.E.C.I.    Checked By: C.E.C.I.    Scale: N.T.S.

**CONSTRUCTION DETAILS**  
CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No. **C21**  
Project No. 16006

CROSS CREEK ACRES



**TABLES OF DIMENSIONS AND QUANTITIES**

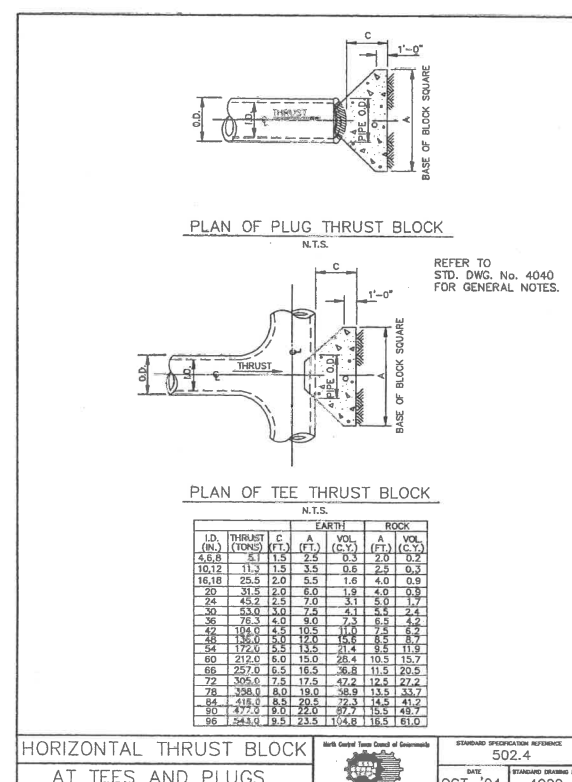
L.D. (IN.)	C (FT.)	EARTH				ROCK				
		A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)			
4.6,8	1.0	1.0	1.5	0.1	1.0	1.5	0.1	1.0	1.0	0.1
10,12	1.5	1.5	2.5	0.3	2.0	3.0	0.5	2.0	2.5	0.3
16,18	2.0	2.0	3.5	0.5	2.5	4.0	0.7	2.5	3.0	0.5
20	2.5	2.5	4.5	0.7	3.0	4.5	1.0	3.0	3.5	0.7
24	3.0	3.0	5.5	1.0	3.5	5.0	1.3	3.5	4.0	1.0
30	3.5	3.5	6.5	1.3	4.0	6.0	1.7	4.0	4.5	1.3
36	4.0	4.0	7.5	1.7	4.5	7.0	2.1	4.5	5.0	1.7
42	4.5	4.5	8.5	2.1	5.0	8.0	2.5	5.0	5.5	2.1
48	5.0	5.0	9.5	2.5	5.5	9.0	3.0	5.5	6.0	2.5
54	5.5	5.5	10.5	3.0	6.0	10.0	3.5	6.0	6.5	3.0
60	6.0	6.0	11.5	3.5	6.5	11.0	4.0	6.5	7.0	3.5
66	6.5	6.5	12.5	4.0	7.0	12.0	4.5	7.0	7.5	4.0
72	7.0	7.0	13.5	4.5	7.5	13.0	5.0	7.5	8.0	4.5
78	7.5	7.5	14.5	5.0	8.0	14.0	5.5	8.0	8.5	5.0
84	8.0	8.0	15.5	5.5	8.5	15.0	6.0	8.5	9.0	5.5
90	8.5	8.5	16.5	6.0	9.0	16.0	6.5	9.0	9.5	6.0
96	9.0	9.0	17.5	6.5	9.5	17.0	7.0	9.5	10.0	6.5

**HORIZONTAL THRUST BLOCK AT PIPE BEND**  
DATE: OCT. '04  
STANDARD DRAWING NO.: 4010B

**TABLES OF DIMENSIONS AND QUANTITIES**

L.D. (IN.)	C (FT.)	EARTH				ROCK				
		A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)			
4.6,8	2.1	2.1	3.0	0.3	2.0	3.0	0.5	2.0	2.0	0.2
10,12	3.1	3.1	4.5	0.5	3.0	4.5	0.7	3.0	3.5	0.5
16,18	4.1	4.1	6.0	0.7	4.0	6.0	1.0	4.0	4.5	0.7
20	5.1	5.1	7.5	1.0	4.5	7.5	1.3	4.5	5.0	1.0
24	6.1	6.1	9.0	1.3	5.0	9.0	1.7	5.0	5.5	1.3
30	7.1	7.1	10.5	1.7	5.5	10.5	2.1	5.5	6.0	1.7
36	8.1	8.1	12.0	2.1	6.0	12.0	2.5	6.0	6.5	2.1
42	9.1	9.1	13.5	2.5	6.5	13.5	3.0	6.5	7.0	2.5
48	10.1	10.1	15.0	3.0	7.0	15.0	3.5	7.0	7.5	3.0
54	11.1	11.1	16.5	3.5	7.5	16.5	4.0	7.5	8.0	3.5
60	12.1	12.1	18.0	4.0	8.0	18.0	4.5	8.0	8.5	4.0
66	13.1	13.1	19.5	4.5	8.5	19.5	5.0	8.5	9.0	4.5
72	14.1	14.1	21.0	5.0	9.0	21.0	5.5	9.0	9.5	5.0
78	15.1	15.1	22.5	5.5	9.5	22.5	6.0	9.5	10.0	5.5
84	16.1	16.1	24.0	6.0	10.0	24.0	6.5	10.0	10.5	6.0
90	17.1	17.1	25.5	6.5	10.5	25.5	7.0	10.5	11.0	6.5
96	18.1	18.1	27.0	7.0	11.0	27.0	7.5	11.0	11.5	7.0

**HORIZONTAL THRUST BLOCK AT TEES AND PLUGS**  
DATE: OCT. '04  
STANDARD DRAWING NO.: 4010C



**BENCHMARK:**  
BM #1  
"1" on top of concrete headwall on the West end located on the North side of Bloody Run road and East of the dirt road into the subject property. Elevation=536.04  
Found 5/8" Iron Rod (GM) at Southwesterly Corner of Lot 3R, State Plane-NAD 83 Coord. N: 7,091,873.340 E: 2,557,564.412 Elevation=573.97

**CROSS ENGINEERING CONSULTANTS**  
131 S. Tennessee St. McKinney, Texas 75069  
972.562.4409 Texas P.E. Firm No. F-5935

Issue Dates: 3/29/2016, 4/05/2016, 5/20/2016, 4, 5, 6  
Revisions: 1, 2, 3, 4, 5, 6  
Date: N.T.S.

Drawn By: C.E.C.I. Checked By: C.E.C.I. Scale: N.T.S.

**CONSTRUCTION DETAILS**  
CROSS CREEK ACRES  
BETTER HOME & COMMERCIAL, LLC  
CITY OF LUCAS, TEXAS

Sheet No. C22  
Project No. 16006

CROSS CREEK ACRES





# City of Lucas Council Agenda Request February 15, 2018

Requester: Mayor Jim Olk

**Agenda Item:**

**5. Executive Session.**

An Executive Session is not scheduled for this meeting.

**Background Information:**

NA

**Attachments/Supporting Documentation:**

NA

**Budget/Financial Impact:**

NA

**Recommendation:**

NA

**Motion:**

NA