GRADING, DRAINAGE, PAVING & WATER CONSTRUCTION PLANS

FOR

CAMERON ESTATES

CITY OF LUCAS, COLLIN COUNTY, TEXAS

JULY 14, 2006

Note: To Contractor(s)
The contractor(s) is (are) to provide "red lined" mark-ups of these plans to the engineer for any field changes made during construction after the project is complete.
These mark-ups will be used to prepare "Construction Record Drawings" per City of Lucas requirements.

At least 48 hours prior to beginning construction in the vicinity of existing underground utilities, the contractor shall notify the following as applicable.

UTILITY CONTACTS

ELECTRIC	G.C.E.C.	(903) 482-7183
GAS	ATMOS	(972) 881-4163
TELEPHONE	SBC	(972) 569-3070
WATER	CITY OF LUCAS	(972) 727-8999
LINE LOCATE SERVICE	DIG TESS	(800) DIG-TESS

LOCATION MAP

NOT TO SCALE

SHEET INDEX	
SHEET NO.	DESCRIPTION
	COVER SHEET
	FINAL PLAT (1 SHEET)
	TREE SURVEY (1 SHEET)
1	TYPICAL SECTIONS, DETAILS & CONSTRUCTION NOTES
2	DRAINAGE AREA MAP & CALCULATIONS
3	EROSION CONTROL PLAN & DETAILS
4	GRADING PLAN
5	PAVING PLAN & PROFILE: JUSTINA DRIVE - (BEGIN TO STA 10+00)
6	PAVING PLAN & PROFILE: JUSTINA DRIVE - (STA 10+00 TO END)
7	STORM SEWER PLAN & PROFILE: LINE "B" & GRADE-TO-DRAIN
8	WATER PLAN
9	OFF-SITE WATER LINE PLAN (NOT PART OF THIS SUBMITTAL)
SETP-PD	TxDOT SAFETY END TREATMENT HEADWALL DETAILS

DEVLOPER & APPLICANT

RED GROUP DEVELOPMENT
1771 INTERNATIONAL PARKWAY - SUITE 127
RICHARDSON, TEXAS 75081
PHONE: 972.235.2400
FAX: 972.699.3507
CONTACT: SKIP KLINEFELTER

LAND OWNERS

DR. NICHOLAS Q. LEE &
SABRINA B. PHUNG
3314 CREEK MEADOW LANE
GARLAND, TEXAS 75040

CALL BEFORE YOU DIG
1-800-245-4545
TEXAS ONE CALL SYSTEM

BENCHMARKS

BENCHMARK #1
P.K. NAIL NEAR THE WEST EDGE OF THE ASPHALT IN SHADY LANE APPROX. 115' NORTH OF THE CENTER OF SNIDER LANE.
ELEV. = 512.60'

BENCHMARK #1
P.K. NAIL NEAR THE SOUTH EDGE OF THE ASPHALT IN SNIDER LANE APPROX. 45' SOUTH & 20' WEST OF S.E. PROPERTY CORNER.
ELEV. = 537.36'

PRELIMINARY

NOT FOR CONSTRUCTION!!!

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RECEIVED
JUL 17 06
BY

RELEASED ON 07/14/06
FOR CITY REVIEW
PURPOSES ONLY!

STATE OF TEXAS
CECIL A. CHESHIER
92674
LICENSED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CECIL A. CHESHIER, P.E. #92674

PEAK XV
ENGINEERING GROUP, INC.
Civil Engineering • Land Development
4009 CLIPPER COURT
PLANO, TX 75023-6509
PHONE 469.261.6840
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www.peakxveng.com

Job No. 09-0501, CAMERON ESTATES

Mon Jul 17 10:02:22 2006

M:\009-Red Group Development\2005\09-0501 Lucas 32.6 Acres\09-0501 Const Plans.pro

0 100 200

SCALE: 1"=100'

BASIS OF BEARINGS
EAST LINE OF SUBJECT TRACT
S 00°10'35" E
(VOLUME 5967, PAGE 456, D.R.C.C.T.)

LEGEND

1/2" I.R.F.C.	1/2" IRON ROD FOUND WITH PLASTIC CAP STAMPED "ROOME"
B.L.	BUILDING LINE
D.E.	DRAINAGE EASEMENT
D.R.C.C.T.	DEED RECORDS, COLLIN COUNTY, TEXAS
D.U.E.	DRAINAGE & UTILITY EASEMENT
M.R.C.C.T.	MAP RECORDS, COLLIN COUNTY, TEXAS
P.K.F.	P.K. NAIL FOUND
P.K.S.	P.K. NAIL SET
R.D.& U.E.	ROADWAY DRAINAGE & UTILITY EASEMENT
V.E.	VISIBILITY EASEMENT

LOT TABLE

LOT	S.F.	ACRES
BLOCK A		
1	87,821	2.0161
2	87,821	2.0161
3	87,762	2.0147
4	88,171	2.0241
5	87,351	2.0053
6	87,324	2.0047
7	87,206	2.0020

LOT TABLE

LOT	S.F.	ACRES
BLOCK B		
1	87,750	2.0145
2	87,750	2.0145
3	87,750	2.0145
4	87,750	2.0145
5	87,750	2.0145
6	87,750	2.0145
7	87,750	2.0145

LINE TABLE

NUMBER	DIRECTION	DISTANCE
L1	S 45°16'05" W	10.50'
L2	S 12°44'55" E	238.03'
L3	S 51°14'26" E	63.44'
L4	S 50°13'53" W	61.72'
L5	S 10°11'40" W	162.74'
L6	S 53°32'10" E	67.82'
L7	N 55°18'16" E	57.68'

CURVE TABLE

NUMBER	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	69°30'28"	60.00'	72.79'	N 80°01'20" E	68.41'
C2	74°40'24"	60.00'	78.20'	S 27°53'14" E	72.78'
C3	35°49'07"	60.00'	37.51'	S 27°21'32" W	36.90'

LOCATION MAP
SCALE: 1"=2000'

OWNERS CERTIFICATE

STATE OF TEXAS §
COUNTY OF COLLIN §

WHEREAS Nicholas Q. Lee and Sabrina B. Phung are the owners of a tract of land situated in the City of Lucas, Collin County, Texas out of the J. Thompson Survey, Abstract No. 893 and being all of a 32.80 acre tract of land conveyed to Nicholas Q. Lee and Sabrina B. Phung according to the deed filed for record in Volume 5967, Page 00456, Deed Records, Collin County, Texas and being more particularly described by metes and bounds as follows:

BEGINNING at a P.K. nail found at the intersection of Shady Lane (undedicated right of way) and Snider Lane (undedicated right of way), the southwest corner of said 32.80 acre tract, also being the southeast corner of a tract of land conveyed to John & Dorothy Burke according to the deed filed for record in Volume 4754, Page 1204, Deed Records, Collin County, Texas;

THENCE, partway with the approximate middle of Shady Lane, the west line of said 32.80 acre tract and being the east line of said Burke tract, the east line of a 2.7 acre tract of land conveyed to Bobby Bailey according to the deed filed for record in Volume 587, Page 370, Deed Records, Collin County, Texas, the east line of Lots 1-3, Petway Farm Subdivision according to the plat thereof recorded in Cabinet G, Page 643, Map Records, Collin County, Texas, North 00 degrees, 16 minutes, 05 seconds East, a distance of 1,346.40 feet to a P.K. nail set, the northwest corner of said 32.80 acre tract, also being the southwest corner of a 5.00 acre tract conveyed to Bobby Bailey according to the deed filed for record in Volume 770, Page 683, Deed Records, Collin County, Texas;

THENCE, along the north line of said 32.80 acre tract, the south line of said 5.00 acre tract, South 89 degrees, 43 minutes, 55 seconds East, a distance of 1,056.00 feet to a 1/2" iron rod found with plastic cap stamped "Roome", the northeast corner of said 32.80 acre tract, the southeast corner of said 5.00 acre tract and also being the northwest corner of a 62 acre tract of land conveyed to Snider's Family Trust according to the deed filed for record in Volume 4225, Page 206, Deed Records, Collin County, Texas, the southwest corner of a tract of land conveyed to Jimmy E. Ashby according to the deed filed for record in Volume 1063, Page 595, Deed Records, Collin County, Texas;

THENCE, along the east line of said 32.80 acre tract, the west line of said 62 acre tract, South 00 degrees, 10 minutes, 35 seconds East, a distance of 1,346.44 feet to a P.K. nail found in the approximate center of said Snider Lane, the southeast corner of said 32.80 acre tract, also being the southwest corner of said 62 acre tract;

THENCE, along the south line of said 32.80 acre tract, with the approximate center of said Snider Lane, North 89 degrees, 43 minutes, 55 seconds West, a distance of 1,066.45 feet to the **POINT OF BEGINNING** and containing 1,428,831 square feet or 32.8014 acres of land, more or less.

OWNERS DEDICATION

THAT We, Nicholas Q. Lee and Sabrina B. Phung, the owners, do hereby adopt this plat designating the herein described property as **CAMERON ESTATES**, an addition to the City of Lucas, Texas, and do hereby dedicate to the public 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, for the public use forever, for the purposes indicated on this plat. No buildings, fences, trees, shrubs or other improvements or growths shall be constructed 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 to particular utilities, said use by public utilities being subordinate to the Public's and City of Lucas's use thereof. The City of Lucas and public utility entities shall have the right to remove all or parts of any buildings, fences, trees, shrubs or other improvements or growths which may in any way endanger or interfere with the construction, maintenance or efficiency of their respective 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 resolutions of the City of Lucas, Texas.

WITNESS, MY HAND, this _____ day of _____, 2006.

_____ _____
Nicholas Q. Lee, Owner Sabrina B. Phung, Owner

STATE OF TEXAS §
COUNTY OF COLLIN §

Before me, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared Nicholas Q. Lee, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he or she executed the same for the purpose and considerations therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this ____ day of _____, 2006.

_____
Notary Public for the State of Texas

STATE OF TEXAS §
COUNTY OF COLLIN §

Before me, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared Sabrina B. Phung, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he or she executed the same for the purpose and considerations therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this ____ day of _____, 2006.

_____
Notary Public for the State of Texas

SURVEYOR'S CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS:

THAT I, Douglas S. Loomis, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that the corner monuments shown thereon were properly placed under my supervision. All easements of which I have knowledge or have been advised of are shown. This plat was prepared in accordance with the subdivision rules and regulations of the City of Lucas, Texas.

RELEASED 07/14/06 FOR REVIEW PURPOSES ONLY. THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE.

_____
Douglas S. Loomis
Registered Professional Land Surveyor No. 5199

STATE OF TEXAS §
COUNTY OF COLLIN §

Before me, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared Douglas S. Loomis, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he or she executed the same for the purpose and considerations therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this ____ day of _____, 2006.

_____
Notary Public for the State of Texas

APPROVAL

Recommended for Approval

_____ _____
Chairman, Planning and Zoning Commission Date
City of Lucas, Texas

Approved for Preparation of Final Plat

_____ _____
Mayor, City of Lucas, Texas Date

The undersigned, the City Secretary of the City of Lucas, Texas, hereby certifies that the foregoing final plat of the **CAMERON ESTATES** Subdivision or Addition to the City of Lucas was submitted to the City Council on the _____ day of _____, 2006, and the Council, by formal action, then and there accepted the dedication of streets, alleys, parks, easements, public places, and water and sewer lines, as shown and set forth in and upon said plat, and said Council further authorized the Mayor to note the acceptance thereof for construction by signing his/her name as hereinabove subscribed.

Witness my hand this _____ day of _____ A.D., 2006.

_____
City Secretary
City of Lucas, Texas

NOTES

Notice: Selling a portion of this addition by metes and bounds is a violation of city ordinance and state law and is subject to fines and withholding of utilities and building permits.

MONUMENTATION NOTE

All lot corners shown hereon are 5/8" iron rod set with red plastic cap stamped "R.P.L.S. 5199" unless otherwise noted.

FINAL PLAT
CAMERON ESTATES
32.8014 ACRES
14 SINGLE FAMILY RESIDENTIAL LOTS
(ZONED "R2" 2.0 ACRE MINIMUM)
LOTS 1-7, BLOCK A - LOTS 1-7, BLOCK B
out of
J. THOMPSON SURVEY, ABSTRACT No. 893
CITY OF LUCAS, COLLIN COUNTY, TEXAS

PLANNER / ENGINEER:
PEAK XV ENGINEERING GROUP
4009 Clipper Court
Plano, Texas 75023
(469) 261-6840

OWNERS:
NICHOLAS Q. LEE
SABRINA B. PHUNG
3314 Creek Meadow Lane
Garland, Texas 75040

PROJECT INFORMATION
Date of Survey: 06/20/2006
Date of Drawing: 07/14/2006
Job Number: 0615601
Drawn By: M.M.D.
File: Final Plat.Dwg
SHEET 1 OF 1

Survey Consultants, Inc.
811 E. Plano Parkway
Suite 117
Plano, Texas 75074
(972) 424-7002 Voice
(972) 633-1702 Fax
WWW.SurveyConsultantsInc.Com

0 100 200

SCALE: 1"=100'

BASIS OF BEARINGS
EAST LINE OF SUBJECT TRACT
S 00°10'35" E
(VOLUME 5967, PAGE 456, D.R.C.C.T.)

LEGEND

1/2" I.R.F.C.	1/2" IRON ROD FOUND WITH PLASTIC CAP STAMPED "ROOME"
B.L.	BUILDING LINE
D.E.	DRAINAGE EASEMENT
D.R.C.C.T.	DEED RECORDS, COLLIN COUNTY, TEXAS
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R.D.& U.E.	ROADWAY DRAINAGE & UTILITY EASEMENT
V.E.	VISIBILITY EASEMENT

LOCATION MAP
SCALE: 1"=2000'

TREE TABLE

410	36" Pecan	517	12" Cedar Elm
411	16" Willow	518	10" Cedar Elm
412	18" Willow	519	11" Cedar Elm
413	29" Pecan	520	12" Cedar Elm
414	9" Cedar Elm	521	12" Cedar Elm
415	8" Cedar Elm	522	24" Pecan
416	7" Cedar	523	18" Cedar Elm
417	24" Pecan	524	13" Cedar Elm
418	24" Pecan	525	12" Pecan
419	24" Pecan	526	10" Pecan
420	19" Pecan	527	24" Cedar Elm
421	8" Cedar Elm	528	12" Cedar Elm
422	24" Pecan	529	8" Cedar Elm
423	15" Cedar	530	8" Cedar Elm
424	15" Cedar Elm	531	8" Cedar Elm
427	24" Cedar Elm	571	15" Cedar Elm
428	27" Cottonwood	572	36" Cedar Elm
429	10" Maple	573	15" Cedar Elm
430	10" Cedar	574	10" Cedar Elm
431	8" Cedar	575	15" Cedar Elm
432	10" Cedar	576	7" Cedar Elm
433	8" Cedar Elm	577	13" Cedar Elm
434	32" Pecan	578	13" Cedar Elm
435	38" Pecan	579	8" Cedar Elm
439	14" Cedar Elm	580	20" Cedar Elm
440	18" Cedar Elm	581	12" Cedar Elm
441	8" Pecan	582	30" Cedar Elm
442	8" Pecan	583	2 12" Cedar Elm
443	3 9" Willow	584	14" Cedar Elm
444	2 11" Cottonwood	585	8" Cedar Elm
445	23" Cottonwood	586	2 8" Cedar Elm
446	20" Cottonwood	587	10" Cedar Elm
447	2 18" Cottonwood	588	11" Cedar Elm
448	11" Cottonwood	589	9" Mulberry
449	12" Cottonwood	590	12" Cedar Elm
450	24" Willow	591	8" Cedar Elm
451	13" Cedar	592	16" Cedar Elm
454	15" Cedar	593	7" Cedar Elm
455	14" Cedar	594	13" Cedar Elm
456	12" Cedar	595	13" Cedar Elm
457	11" Cedar	596	10" Cedar Elm
458	9" Cedar	597	8" Cedar Elm
459	10" Cedar	598	13" Cedar Elm
503	2 24" Cedar	599	10" Cedar Elm
504	9" Cedar Elm	600	13" Cedar Elm
505	11" Cedar	601	12" Cedar Elm
506	12" Cedar	602	15" Cedar Elm
507	21" Cedar Elm		
508	12" Cedar Elm		
509	9" Cedar Elm		
510	2 20" Cedar Elm		
511	32" Hackberry		

TREE SURVEY
CAMERON ESTATES
32.8014 ACRES
14 SINGLE FAMILY RESIDENTIAL LOTS
(ZONED "R2" 2.0 ACRE MINIMUM)
LOTS 1-7, BLOCK A - LOTS 1-7, BLOCK B
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OWNERS:
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3314 Creek Meadow Lane
Garland, Texas 75040

PROJECT INFORMATION
Date of Survey: 06/20/2006
Date of Drawing: 07/14/2006
Job Number: 0615601
Drawn By: M.M.D.
File: Tree Survey.Dwg
SHEET 1 OF 1

Survey Consultants, Inc.
811 E. Plano Parkway
Suite 117
Plano, Texas 75074
(972) 424-7002 Voice
(972) 633-1702 Fax
WWW.SurveyConsultantsInc.Com

CONSTRUCTION GENERAL NOTES

1. All construction shall conform to the City of Lucas Subdivision Ordinances
   All work is subject to inspection by the City of Lucas.
2. The existence and locations of all underground utilities shown (main lines, no lateral or services shown) on the drawings were obtained from available records and are approximate. Neither the owner nor the engineer assumes any responsibility for utilities not shown or not in the location shown. The contractor shall determine the depth and location of all existing underground utilities prior to excavation and shall be required to take any precautionary measures to protect all lines shown and/or any other underground utilities not of record or not shown on the plans. Contractor shall be responsible for contacting all franchise and city utilities at least 48 hours prior to starting construction.
3. Any contractor/subcontractor performing work on this project shall familiarize himself with the site and shall be solely responsible for any damage to existing facilities resulting directly or indirectly from his operations. Said existing improvements shall include but not be limited to structures, ditches, fences, plants, etc. Any removal or damage to existing improvements shall be replaced or repaired by the contractor at his expense and shall be approved by the governing authority.
4. All construction, testing and materials shall meet or exceed all standards & specifications of the North Central Texas Council of Governments – "Standard Specifications for Public Works Construction," latest edition.
5. All contractors to use standard details per N.C.T.C.O.G. unless shown otherwise.
6. Installation, maintenance and removal of any traffic safety devices for all construction in or contiguous to existing roads will be at the expense of the contractor and will follow as a guide the "Manual of Uniform Traffic Control Devices," latest edition.

GRADING GENERAL NOTES

1. All grading shall conform to N.C.T.C.O.G. Standards and Specifications (latest edition).
2. Right–of–way compaction shall be 95–98% std. proctor density with moisture 0–4% above optimum in accordance with the geo–technical report.
3. Remove topsoil in right–of–way to a minimum depth of 4"
4. The Grading Contractor is to provide compaction testing for each lift as directed in the geo–technical report.
5. All lots are to be left in a smooth, bladed condition, without any severe change in slope or low spots. Minimum grade across any lot is to be 1.0%. Maximum slope is to be 4 : 1 unless specifically shown otherwise on the plans.
6. TOLERANCES FOR GRADING ARE:

	ROUGH GRADING	FINAL GRADING
Streets & Ditches	±0.20'	±0.10'
Other Areas	±0.30'	±0.20'

7. Any stockpiled material will be placed as directed by the owner's representative. Do not block any natural drainage ways.

PAVING GENERAL NOTES

1. Unless otherwise noted, all materials and construction shall conform to the applicable specifications of The City of Lucas and The North Central Texas Council of Governments "Standard Specifications for Public Works Construction", Parts II and III, latest edition.
2. All dimensions are to the edge of pavement.
3. Pavement reinforcing will be grade 60.
4. For additional details of paving joints see N.C.T.C.O.G. "Standard Construction Details," latest edition.
5. Contractor will be responsible for field verifying the location of all existing utilities prior to his operations.
6. Bar chairs or an approved device shall be furnished.
7. Bar laps shall be thirty diameters.
8. Concrete pavement joints shall not exceed 15 feet.
9. STREET PAVEMENT REQUIREMENTS
   6" thick concrete having a minimum compressive strength of 3600 psi at 28 days (5.5 sacks of cement/CY). Reinforced with #4 bars placed at 18" on–center in both directions. All pavement shall be constructed on a 6" lime stabilized subgrade with lime applied at a minimum rate as directed in the geo–technical report, but not less than 27#/SY and compacted to a density not less than 95 percent Standard Proctor.

DRAINAGE GENERAL NOTES

1. Unless otherwise noted all materials and construction shall conform to the applicable specifications and standards of the City of Lucas and The North Central Texas Council of Governments – "Standard Specifications for Public Works Construction," latest edition.
2. All reinforcement shall be grade 60.
3. Jetting of embedment and backfill will not be allowed as a method of compaction.
4. Minimum compaction adjacent to and above storm sewers and drainage structures will be 95–98% standard proctor density w/ moisture 0–4% above optimum in accordance w/ geo–tech. report
5. Lifts will not exceed 6" and results will be obtained by Ramex, hand–tamping or as approved in writing by the owner's representative.
6. Contractor will be responsible for field verifying the location of all existing utilities prior to his operations.
7. All bends and connections other than those at junction boxes shall be prefabricated by the factory.
8. All storm sewer pipes shall be ASTM C–76 RCP with tongue and groove connections (Class III or greater).

ABBREVIATIONS LEGEND

IRFC = IRON ROD FOUND W/ CAP
PKF = P.K. NAIL FOUND
PKS = P.K. NAIL SET
MIN. FF = MINIMUM FINISHED FLOOR ELEV.
RCP = REINFORCED CONCRETE PIPE (DRAINAGE)
CMP = CORRUGATED METAL PIPE (DRAINAGE)
TR = TELEPHONE RISER
WV = WATER VALVE
FH = FIRE HYDRANT
PP = POWER OR UTILITY POLE
OHE = OVERHEAD POWER OR UTILITY LINE
ROW = RIGHT–OF–WAY
℄ = CENTERLINE
℗ = PROPERTY LINE
BL = BUILDING LINE
DE = DRAINAGE EASEMENT
UE = UTILITY EASEMENT
VE = VISIBILITY EASEMENT
WE = WATER LINE EASEMENT
DUE = DRAINAGE & UTILITY EASEMENT
RDUE = ROADWAY, DRAINAGE & UTILITY EASEMENT
DRCCT = DEED RECORDS OF COLLIN COUNTY, TX
MRCCT = MAP RECORDS OF COLLIN COUNTY, TX

STEEL LAYOUT PLAN
–NO SCALE–

WATER LINE GENERAL NOTES

1. All water main construction within public right–of–way or easement shall conform to the requirements of the Texas Natural Resources Conservation Commission (T.N.R.C.C.) guidelines for construction of public water and sewer systems. Contractor shall maintain a copy of the design documents at the jobsite at all times.
2. All proposed water lines shall be located in an easement outside the road right–of–way with a minimum width of twenty feet (20').
3. The contractor shall be required to maintain all necessary warning and safety devices (flashing lights, barricades, signs, etc.) to protect the public safety and health until all work has been completed and accepted.
4. Contractor shall maintain existing water service at all times during construction.
5. The contractor shall provide legible and clearly marked "as–built" plans to the owner so that the plans may be corrected to reflect "as–built" conditions.
6. The locations, elevations and dimensions of existing utilities shown on the plans were obtained from available city and utility company records and plans and are considered APPROXIMATE. It shall be the contractor's responsibility to verify all locations, elevations and dimensions of adjacent and/or conflicting utilities sufficiently in advance of construction in order that adjustments can be made to provide adequate clearances. The contractor shall preserve and protect public utilities at all times during construction. Any damage to utilities resulting from contractor's operations, shall be restored at his expense. The engineer shall be notified when proposed water line grades conflict with existing utility grades. At least forty–eight (48) hours prior to beginning construction in the vicinity of existing utilities, the contractor shall notify utility companies to locate all underground utilities.
7. All dimensions shown are to centerline of pipe unless noted otherwise.
8. All water mains shall be Class 200 PVC pipe.
9. The contractor shall provide a trench safety plan prior to beginning his work.
10. All water mains shall have a minimum cover of forty–two inches (42") to the top of pipe.
11. All fittings shall be mechanical and shall be restrained with "Megalug" retainer glands.
12. Pipe embedment and thrust blocking shall be per "N.C.T.C.O.G. Standard Specifications for Public Works Construction."
13. All piping under pavement shall be continuous with no joints.
14. All proposed water lines shall be pressure tested, flushed and sterilized upon completion of the work prior to final acceptance. Documentation of the same shall be provided to City.
15. All piping shall be inspected by the City prior to covering. A minimum of twenty–four (24) hours notice shall be given to the City.

EXPANSION JOINT DETAIL

LONGITUDINAL JOINT

GROOVED TRANSVERSE JOINT

SAWED TRANSVERSE JOINT

PAVEMENT JOINT DETAILS
–NO SCALE–

ASPHALT PAVEMENT PATCH
–NO SCALE–

NOTE:
TRENCH WALLS WITHIN THE PIPE ZONE AREA SHALL BE MAINTAINED VERTICAL. THE TRENCH WALLS ABOVE THE PIPE ZONE AREA MAY BE EITHER VERTICAL OR SLOPED DEPENDENT ON EASEMENT WIDTH AND CRITERIA SET FORTH IN THE "TRENCH AND/OR EXCAVATION SAFETY PLAN." ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE FEDERAL OSHA STANDARDS.

SAND EMBEDMENT MECHANICALLY COMPACTED

NOTE:
THE CLEAR DISTANCE "CD" BETWEEN THE PIPE WALL AND THE TRENCH WALL SHALL BE 9" FOR PIPE DIAMETER S UP TO AND INCLUDING 30".

THE "CD" SHALL BE A MINIMUM OF 12" FOR PIPE W/A DIAMETER OF 33" OR LARGER.

NOTE:
SAND FOR EMBEDMENT SHALL BE A FREE FLOWING SANDY MATERIAL WHICH CONTAINS NO CLAY, IS REASONABLY FREE FROM ORGANIC MATERIAL AND DOES NOT FORM MUCK OR MUD WHEN WET. THE GRADATION SHALL BE SUCH THAT A MINIMUM OF 95% IS RETAINED ON A #100 SIEVE. THE P.I. OF THE SOIL PASSING THE NO. 40 SIEVE SHALL NOT BE GREATER THAN FIVE (5).

CLASS "B" EMBEDMENT
–NO SCALE–

CONTRACTOR SHALL USE N.C.T.C.O.G.
"Standard Details & Specifications"
FOR CONSTRUCTION OF ALL
WATER SYSTEM INPROVEMENTS"

SECTION A–A

FUTURE PAVEMENT
HEADER DETAIL
–NO SCALE–

TYPICAL
LONGITUDINAL SECTION
–NO SCALE–

TYPICAL 25' WIDE CONCRETE STREET SECTION
NTS

PRELIMINARY

NOT FOR CONSTRUCTION!!!

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NO.	REVISIONS NUMBER	BY	DATE
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PEAK XV ENGINEERING GROUP INC
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STATE OF TEXAS — CECIL A. CHESHIER 92674 — LICENSED PROFESSIONAL ENGINEER

TYPICAL SECTIONS, DETAILS & CONSTRUCTION NOTES	JOB NUMBER 09–0501
CAMERON ESTATES	SHEET NUMBER
CITY OF LUCAS, COLLIN COUNTY, TEXAS	1

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M:\09-Red Group Development\09001\09-0501 Lucas 32.8 Acres\09-0501 Const Plans.pln

TYPICAL ROADSIDE DITCH SECTION

(NTS)

DRAINAGE NOTES:

1. THERE SHALL BE A MIN. 20' DRAINAGE & UTILITY EASEMENT REQUIRED ALONG ALL LOTS WHERE ADJACENT TO OR FRONTING A STREET.
2. BLOCKING THE FLOW OF WATER OR CONSTRUCTION OF STRUCTURAL IMPROVEMENTS IN DRAINAGE EASEMENTS, AND FILLING OR OBSTRUCTION OF THE FLOODWAY IS PROHIBITED.
3. THE EXISTING CREEKS OR DRAINAGE CHANNELS TRAVERSING ALONG OR ACROSS THE ADDITION WILL REMAIN AS OPEN CHANNELS AND WILL BE MAINTAINED BY INDIVIDUAL OWNERS OF THE LOT OR LOTS THAT ARE TRAVERSED BY OR ADJACENT TO THE DRAINAGE COURSE ALONG OR ACROSS SAID LOTS.

UNDEVELOPED DRAINAGE CALCULATIONS

AREA NO.	ACRES	C	Tc	I_{100}	Q_{100}	PICK-UP POINT
A	16.71	0.30	15	7.52	37.7	EX. 30" CMP
B	5.70	0.30	15	7.52	12.9	TO AREA "A"
C	10.78	0.30	15	7.52	24.3	EX. 30" CMP
D	9.41	0.30	15	7.52	21.2	EX. 24" CMP

DEVELOPED DRAINAGE CALCULATIONS

AREA NO.	ACRES	C	Tc	I_{100}	Q_{100}	PICK-UP POINT
A	16.71	0.40	15	7.52	50.3	EX. 30" CMP
B	5.70	0.40	15	7.52	17.1	LINE "B"
C	10.78	0.40	15	7.52	32.4	EX. 30" CMP
D	9.41	0.40	15	7.52	28.3	EX. 24" CMP

DRIVEWAY CULVERT SIZING TABLE

LOT	BLOCK	MIN. CULVERT SIZE
1	A	
2	A	
3	A	
4	A	
5	A	
6	A	
7	A	
1	B	
2	B	
3	B	
4	B	
5	B	
6	B	
7	B	

NOTE:
THE CULVERT SIZES SHOWN ARE BASED ON THE CULVERT BEING PLACED AT THE DOWNSTREAM LOT LINE (MAX. FLOW SCENARIO). AN INDIVIDUAL CULVERT PERMIT MAY BE REQUIRED BY THE CITY OR COUNTY PRIOR TO ANY INSTALLATION. REFER TO THE GRADING PLAN TO DETERMINE THE PROPOSED CULVERT FLOWLINE GRADES BASED ON THE PROPOSED DRIVEWAY'S WIDTH AND LOCATION.

NOTE:
2' CONTOURS SHOWN ON THIS DRAINAGE AREA MAP WERE OBTAINED FROM AERIAL TOPOGRAPHIC DATA.

!!! CAUTION !!!
NUMEROUS UNDERGROUND UTILITIES MAY EXIST IN THE VICINITY. CONTRACTOR DETERMINE EXACT LOCATIONS PRIOR TO ANY EXCAVATION!

NOTE:
ALL DISTURBED AREAS SHALL BE SEEDED OR HYDROMULCED AND SHALL HAVE A SIGNIFICANT STAND OF VEGETATION BEFORE FINAL CITY APPROVAL!

0 100 200
GRAPHIC SCALE IN FEET

RATIONAL METHOD

Q=CIA

Q ~ Flow (c.f.s.)
C ~ Runoff Coefficient
I ~ Intensity (in./hr.)
A ~ Drainage Area (Acres)

LEGEND

- X / 5.3 — PROPOSED AREA DESIGNATION / 100-yr DEVELOPED RUNOFF IN C.F.S.
- PROPOSED DRAINAGE AREA DIVIDE
- 460 — EXISTING CONTOURS
- DIRECTION OF FLOW
- PROPOSED EASEMENT
- PROPOSED DRAINAGE DITCH OR CHANNEL
- PROPOSED STORM SEWER
- X-1 — DESIGN POINT/INLET NUMBER

BENCHMARKS

BENCHMARK #1
P.K. NAIL NEAR THE WEST EDGE OF THE ASPHALT IN SHADY LANE APPROX. 115' NORTH OF THE CENTER OF SNIDER LANE.
ELEV. = 512.60'

BENCHMARK #1
P.K. NAIL NEAR THE SOUTH EDGE OF THE ASPHALT IN SNIDER LANE APPROX. 45' SOUTH & 20' WEST OF S.E. PROPERTY CORNER.
ELEV. = 537.36'

PRELIMINARY

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STATE OF TEXAS — CECIL A. CHESHIER — 92674 — LICENSED PROFESSIONAL ENGINEER

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DRAINAGE AREA MAP & CALCULATIONS

CAMERON ESTATES

CITY OF LUCAS, COLLIN COUNTY, TEXAS

JOB NUMBER 09-0501

SHEET NUMBER 2

Mon Jul 17 10:05:27 2006

W:\2009-Peak Group Development\2009\09-0501 Lucas 32.8 Acres\09-0501 Const Plans.pre

Silt Fence Erosion Control to be installed by the Earthwork Contractor prior to stripping site as shown in details. Exact fence location is to be coordinated with the Engineer prior to installation. (TYPICAL)

!!! CAUTION !!!
NUMEROUS UNDERGROUND UTILITIES MAY EXIST IN THE VICINITY. CONTRACTOR DETERMINE EXACT LOCATIONS PRIOR TO ANY EXCAVATION!

NOTE:
2' CONTOURS SHOWN ON THIS EROSION CONTROL PLAN WERE OBTAINED FROM AERIAL TOPOGRAPHIC DATA.

0 100 200
GRAPHIC SCALE IN FEET

NOTE:
ALL DISTURBED AREAS SHALL BE SEEDED OR HYDROMULCED AND SHALL HAVE A SIGNIFICANT STAND OF VEGETATION BEFORE FINAL CITY APPROVAL!

N.O.I. SIGN BOARD

N.T.S.

CONST. ENTRANCE GENERAL NOTES:

1. Crushed stone for construction entrance shall be 2"-3" at greatest dimension and shall be installed to a compacted depth of 10 inches.
2. Filter fabric is to be Marafi 100X or equal. (Marafi, Inc.: 800-438-1855)
3. If construction entrance crosses a drainage ditch, swale, etc., a drainage pipe shall be installed with min. 12 inches cover of crushed stone.

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

SILT FENCE GENERAL NOTES:

1. No woven wire mesh shall be used unless otherwise noted on these plans.
2. The toe of the silt fence shall be trenched in with a spade or mechanical trencher, so that the downslope face of the trench is flat and perpendicular to the line of flow.
3. The trench should be a minimum of six inches deep and four inches wide to allow for the silt fence to be laid in the ground and backfilled.
4. Silt fence should be securely fastened to each support post.
5. Inspection shall be frequent and repair or replacement shall be made promptly as needed.
6. Silt fence shall be removed when it has served its usefulness, so as not to block or impede storm flow or drainage.
7. Sediment trapped by this practice shall be disposed of in an approved site in a manner that will not contribute to additional siltation.
8. Accumulated silt shall be removed when it reaches a depth of six inches and disposed of in an approved spoil site or as in No. 7 above.
9. At point of surface flow concentration reinforce silt fence with wire mesh backing on downstream side of fence.
10. Filter fabric is to be Marafi 100X or approved equal. (Marafi, Inc.: 800-438-1855)

SILT FENCE EROSION CONTROL

N.T.S.

SILT FENCE CHECK DAM

N.T.S.

ROCK CHECK DAM GENERAL NOTES:

1. Rock shall be open graded rock 4-8 inches in diameter.
2. Rock Check Dam shall be enclosed by a woven wire sheathing with a maximum opening of one inch and a minimum wire size of 20 gauge.
3. When silt reaches a depth equal to one-third of the height of the dam or one foot, whichever is less, the silt shall be removed and disposed of at an acceptable location.

ROCK CHECK DAM

N.T.S.

GENERAL NOTES FOR THE EROSION CONTROL PLAN

1. All operators and/or contractors shall conform to the terms and conditions of the National Pollution Discharge Elimination Systems (NPDES) General Permit as published in the Federal Register, Vol. 63, No. 128, July 6, 1998, by the Environmental Protection Agency (EPA). All erosion control operations and devices shall be in accordance with the current City Sediment and Erosion Control Ordinance.
2. The Notice of Intent (NOI), as required by the General Permit, must be properly displayed on site at all times by each operator.
3. All releases of reportable quantities of hazardous substances shall be reported immediately to the facility operator and EPA.
4. The Contractor shall inspect the site at least once every fourteen days and within 24 hours of a 1/2-inch or greater rainfall event. The Contractor shall document the results. Copies of the inspection reports shall accompany the Contractor's monthly pay request. The Contractor shall not be paid until said reports are presented to the Owner/Owner's Represenative. The Earthwork Contractor shall be responsible for inspection until the Utility Contractor begins his work. The Utility Contractor shall be responsible for inspections until the Paving Contractor begins his work. The Paving Contractor shall be responsible for inspections until the Earthwork Contractor begins lot benching operations. The Earthwork Contractor shall make remaining inspections until project is accepted by the County.
5. If the Pollution Control Plan, as approved cannot control pollution and off-site sedimentation from the project, then revisions to the plan will be required and additional pollution control devices may be required on site. Modifications to the Storm Water Pollution Prevention Plan shall be implemented and be in-place within a seven calendar day period. All changes are to be approved by the design engineer and the County.
6. If any contractor sees a violation by an operator or another contractor, he shall notify the operator and contractor in violation, as well as the facility operator.
7. Erosion control as shown on the Erosion Control Plan shall be installed prior to the start of land disturbing activities.
8. Accumulated silt deposits shall be removed from silt fences and hay bale dikes when silt depth reaches six inches. Removal of silt deposits by the contractor shall be incidental to the performance of the contract and a separate bid item shall not be included.
9. The contractor shall add or delete erosion protection at the request and direction of the Operator or the County.
10. After installation of pavement, final lot benching and general cleanup, the grass groundcover shall be established in all street parkways, lots and all other disturbed areas. Materials shall be as specified in Item 2.15 and seeding shall be in accordance with Item 3.10 of the NCTCOG Standard Specifications. Depending upon schedule for house construction, grass establishment may be waived on a single lot basis if house construction begins immediately on that lot.
11. It shall be the contractor's responsibility to control and limit silt and sediment leaving the site. Specifically, the contractor shall protect all public streets, alleys, streams and storm drainage systems from erosion deposits.
12. If any erosion control is removed for construction and/or access purposes, the contractor shall replace it at the end of the work day.
13. All releases of reportable quantities of hazardous substances shall be reported immediately to the facility operator and EPA.
14. It shall be the contractor's responsibility to provide a dumpster (or equal) to collect solid waste materials during construction. The containers shall be hauled to landfill by the Contractor.
15. The attached Drainage Area Map, as prepared by Alliance Area Surveying Corp., specifically for this project, shall be made part of the Storm Water Pollution Prevention Plan.
16. All hazardous materials shall be handled and disposed of by the contractor in accordance with Federal, State and Local regulations.
17. It is anticipated that the following non-storm water discharges may be associated with this project. These discharges are authorized through the construction general permit:
    A. Fire hydrant flushings
    B. Water used to wash vehicles and to control dust
    C. Potable water sources including waterline flushings
    D. Irrigation drainage
    E. Pavement washdown
    F. Uncontaminated ground water
    G. Construction water
18. Upon completion of fine grading by Paving and Grading Contractor, all areas not otherwise permanently stabilized shall be seeded and maintained until a uniform coverage of 75% minimum density, as determined by the Owner's representative and the County, is achieved.
19. Site entry and exit locations shall be maintained in a condition which will prevent tracking or flowing of sediment onto public roadways. All sediment spilled, dropped, washed or tracked on a public roadway must be removed immediately. When washing is required to remove sediment prior to entrance to a public roadway, it shall be done on an area stabilized with crushed stone which drains into an approved sediment basin. The contractor is responsible for any citations and/or fines resulting from tracked sediment in the public roadways.
20. If off-site soil borrow or spoil sites are used in conjunction with this project, this information shall be disclosed and shown on the Pollution Control Plan. Off-site borrow and spoil areas are considered a part of the project site and therefore shall comply with the Pollution Control Plan. These areas shall be stabilized with permanent ground cover prior to final approval of the project.
21. A Storm Water Pollution Prevention Plan (SWPPP) Narrative will be prepared by the Owner's Representive and distributedto the Contractors prior to the start of construction. The Narrative and the Erosion Control Pan (drawings), together make up this project's SWPPP.

LEGEND

- SILT FENCE/ EROSION CONTROL DEVICE ON-SITE CONTRACTOR TO MAINTAIN UNTIL PROJECT COMPLETION
- STABILIZED CONSTRUCTION ENTRANCE
- ROCK CHECK DAM
- SILT FENCE CHECK DAM
- DIRECTION OF FLOW
- 500 EXISTING CONTOURS
- PROTECTED TREE TO BE PRESERVED BY THE CONTRACTOR
- TREE TO BE REMOVED BY THE CONTRACTOR

BENCHMARKS

BENCHMARK #1
P.K. NAIL NEAR THE WEST EDGE OF THE ASPHALT IN SHADY LANE APPROX. 115' NORTH OF THE CENTER OF SNIDER LANE.
ELEV. = 512.60'

BENCHMARK #1
P.K. NAIL NEAR THE SOUTH EDGE OF THE ASPHALT IN SNIDER LANE APPROX. 45' SOUTH & 20' WEST OF S.E. PROPERTY CORNER.
ELEV. = 537.36'

PRELIMINARY

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STATE OF TEXAS · CECIL A. CHESHIER · 92674 · LICENSED · PROFESSIONAL ENGINEER

EROSION CONTROL
PLAN & DETAILS
CAMERON ESTATES
CITY OF LUCAS, COLLIN COUNTY, TEXAS

JOB NUMBER 09-0501

SHEET NUMBER 3

Mon Jul 17 10:06:32 2006

M:\09-Red Oak Development\2005\09-0501 Lucas 32.8 Acres\09-0501 Const Plans.pro

TYPICAL 25' WIDE CONCRETE STREET SECTION

NTS

!!! CAUTION !!!
NUMEROUS UNDERGROUND UTILITIES MAY EXIST IN THE VICINITY. CONTRACTOR DETERMINE EXACT LOCATIONS PRIOR TO ANY EXCAVATION!

NOTE:
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TYPICAL DRAINAGE SWALE

(NTS)

LOT GRADING TYPE A

LOT GRADING TYPE B

LOT GRADING TYPE C

0 60 120

GRAPHIC SCALE IN FEET

NOTE:
PLACE AND COMPACT ANY EXCESS DIRT AS DIRECTED BY THE OWNERS REPRESENTATIVE IN AREAS DESIGNATED AS FILL AREAS. DO NOT IMPEDE EXISTING DRAINAGE PATTERNS.

LEGEND

- EXISTING CONTOUR
- MIN. FF= 500.00 — MINIMUM FINISHED FLOOR ELEVATION
- PROPOSED CONTOUR
- DIRECTION OF FLOW
- PROPOSED RIP-RAP
- CENTERLINE DITCH
- PROTECTED TREE TO BE PRESERVED BY THE CONTRACTOR
- TREE TO BE REMOVED BY THE CONTRACTOR

BENCHMARKS

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GRADING PLAN

CAMERON ESTATES

CITY OF LUCAS, COLLIN COUNTY, TEXAS

JOB NUMBER 09-0501

SHEET NUMBER 4

M:\0809-Fred Group Development\2009\09-0501 Lucas 52.8 Acres\09-0501 Const Plans.pro

Mon Jul 17 10:12:51 2006

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TYPICAL 25' WIDE CONCRETE STREET SECTION

NTS

NOTE:
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LEGEND

TP	TOP OF PROP. PAVEMENT
CR	CURVE RETURN
CPI	℄ POINT OF INTERSECTION
TG	TOP OF PROP. GROUND
FL	FLOW LINE
EP	TOP OF EX. PAVEMENT
20'R	CR RADIUS AT EDGE OF PVMT.
	PROTECTED TREE TO BE PRESERVED BY THE CONTRACTOR
	TREE TO BE REMOVED BY THE CONTRACTOR

HORIZONTAL 0 40 80
VERTICAL 0 5 10
GRAPHIC SCALE IN FEET

BENCHMARKS

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ELEV. = 512.60'

BENCHMARK #1
P.K. NAIL NEAR THE SOUTH EDGE OF THE ASPHALT IN SNIDER LANE APPROX. 45' SOUTH & 20' WEST OF S.E. PROPERTY CORNER.
ELEV. = 537.36'

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PAVING PLAN & PROFILE

JUSTINA DRIVE (BEGIN TO STA 10+00)

CAMERON ESTATES

CITY OF LUCAS, COLLIN COUNTY, TEXAS

JOB NUMBER 09-0501

SHEET NUMBER 5

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Mon Jul 17 10:15:52 2006

TYPICAL 25' WIDE CONCRETE STREET SECTION

NTS

!!! CAUTION !!!
NUMEROUS UNDERGROUND UTILITIES MAY EXIST IN THE VICINITY. CONTRACTOR DETERMINE EXACT LOCATIONS PRIOR TO ANY EXCAVATION!

LEGEND

TP	TOP OF PROP. PAVEMENT
CR	CURVE RETURN
CPI	℄ POINT OF INTERSECTION
TG	TOP OF PROP. GROUND
FL	FLOW LINE
EP	TOP OF EX. PAVEMENT
20'R	CR RADIUS AT EDGE OF PVMT.
	PROTECTED TREE TO BE PRESERVED BY THE CONTRACTOR
	TREE TO BE REMOVED BY THE CONTRACTOR

HORIZONTAL 0 40 80
VERTICAL 0 5 10
GRAPHIC SCALE IN FEET

NOTE:
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PAVING PLAN & PROFILE

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CAMERON ESTATES

CITY OF LUCAS, COLLIN COUNTY, TEXAS

JOB NUMBER 09-0501

SHEET NUMBER 6

Mon Jul 17 10:28:02 2006

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!!! CAUTION !!!
NUMEROUS UNDERGROUND UTILITIES MAY EXIST IN THE VICINITY. CONTRACTOR DETERMINE EXACT LOCATIONS PRIOR TO ANY EXCAVATION!

HORIZONTAL 0 40 80
VERTICAL 0 5 10
GRAPHIC SCALE IN FEET

BENCHMARKS

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STATE OF TEXAS — CECIL A. CHESHIER — 92674 — LICENSED PROFESSIONAL ENGINEER

STORM SEWER	JOB NUMBER
PLAN & PROFILE	09-0501
CAMERON ESTATES	SHEET NUMBER
CITY OF LUCAS, COLLIN COUNTY, TEXAS	7

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Mon Jul 17 10:19:07 2006

TYPICAL FIRE HYDRANT ASSEMBLY DETAIL
N.T.S.

ALL LOTS SHALL BE SERVED BY SEPTIC SYSTEMS. SEPTIC SYSTEMS SHALL BE OF THE APPROPRIATE TYPE AND THE SYSTEM MUST BE APPROVED BY A STATE LICENSED SANITARIAN OR ENGINEER.

!!! CAUTION !!!
NUMEROUS UNDERGROUND UTILITIES MAY EXIST IN THE VICINITY. CONTRACTOR DETERMINE EXACT LOCATIONS PRIOR TO ANY EXCAVATION!

NOTE:
2' CONTOURS SHOWN ON THIS WATER PLAN WERE OBTAINED FROM AERIAL TOPOGRAPHIC DATA.

0 60 120
GRAPHIC SCALE IN FEET

LEGEND

- Proposed Fire Hydrant (see detail)
- Proposed Gate Valve
- Proposed Tee
- Proposed Waterline
- Proposed Water Service
- Existing Waterline

BENCHMARKS

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WATER PLAN

CAMERON ESTATES

CITY OF LUCAS, COLLIN COUNTY, TEXAS

JOB NUMBER 09-0501

SHEET NUMBER 8

M:\009-Red Group Development\2005\09-0501 Lucas 32.8 Acres\09-0501 Const Plans.pre

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