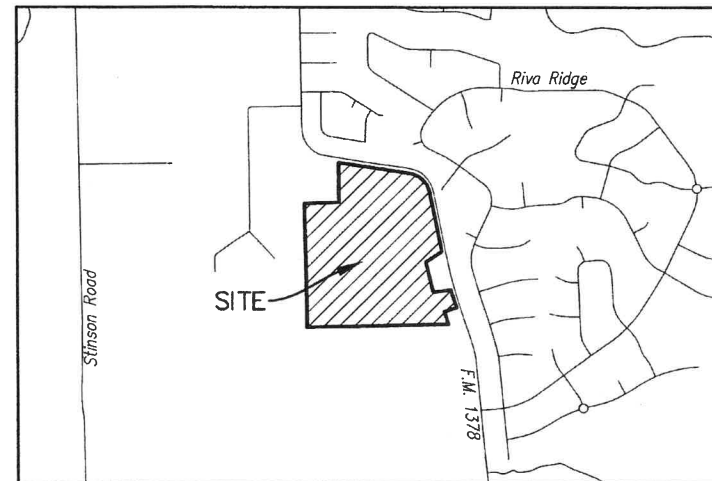


CONSTRUCTION PLANS for LEWIS PARK ESTATES

LOT 1-16, 1-20, BLOCK A, B
LEWIS PARK ESTATES
60.858 Acres

in the
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
CITY OF LUCAS
COLLIN COUNTY, TEXAS
NOVEMBER, 2014

APPROVED
CITY OF LUCAS
CITY ENGINEER *[Signature]* DATE *5-20-15*



VICINITY MAP 1"=1000'

OWNER/DEVELOPER
CADG LEWIS PARK LLC
C/O LENART DEVELOPMENT COMPANY, LLC
520 CENTRAL PARKWAY E. SUITE 104 PLANO,
TX 75074
Ph. (972) 422-9880
Contact: Steve Lenart

G&A SITE PLANNING CIVIL ENGINEERING PLATTING
CONSULTANTS, LLC
LAND SURVEYING LANDSCAPE ARCHITECTURE
111 Hillside Drive • Lewisville, TX 75057 • P: 972.436.8712 • F: 972.436.8715
610 Byron Nelson Blvd, Suite 114 • Roanoke, TX 76262 • P: 882.831.9712 • F: 817.890.4043
TBPLS Firm No. 10047700
TBPE Firm No. 1798
Contact: R. Van Beougher, P.E.

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LEWIS PARK ESTATES
Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
60.858 Acres
in the
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
CITY OF LUCAS
COLLIN COUNTY, TEXAS

COVER SHEET

STATE OF TEXAS
DOUGLAS W. WEAVER
117386
REGISTERED
CIVIL ENGINEER
5/19/2015
G&A CONSULTANTS, LLC.
TBPE F-1798

Drawn By: T.F.
Date: 11/07/2014
Scale: N/A
Revisions:

14026
C

Printed on Recycled Paper by *[Printer Name]*

LEWIS PARK ESTATES
CONSTRUCTION PLANS

GENERAL NOTES

- THE TERM MUNICIPALITY REFERS TO THE CITY OF LUCAS.
- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MUNICIPALITY AND SHALL BE IN ACCORDANCE WITH THE MUNICIPAL STANDARD DETAILS AND SPECIFICATIONS FOR CONSTRUCTION. ALL WORK NOT COVERED IN THE CONTRACT DOCUMENTS AND MUNICIPAL STANDARD DETAILS AND SPECIFICATIONS FOR CONSTRUCTION SHALL BE GOVERNED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- EXISTING UTILITY LOCATIONS SHOWN ARE GENERALLY SCHEMATIC IN NATURE AND MAY NOT ACCURATELY REFLECT THE SIZE AND LOCATION OF EACH PARTICULAR UTILITY. EXISTING UTILITIES SHOWN HAVE BEEN BASED ON AVAILABLE RECORD DRAWINGS AND SURFACE APPURTENANCE FIELD TIES ONLY. SOME UTILITY LINES AND SURFACE LOCATIONS MAY NOT BE SHOWN. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ACTUAL FIELD LOCATIONS AND PROTECTION OF EXISTING UTILITIES WHETHER SHOWN OR NOT. THE CONTRACTOR SHALL ALSO ASSUME RESPONSIBILITY FOR REPAIRS TO EXISTING UTILITIES WHETHER SHOWN OR NOT, DAMAGED BY THE CONTRACTOR'S ACTIVITIES. DIFFERENCES IN HORIZONTAL OR VERTICAL LOCATIONS OF EXISTING UTILITIES SHALL NOT BE BASIS FOR ADDITIONAL COMPENSATIONS TO THE CONTRACTOR.
- THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY MONUMENTATION AND PRIMARY CONTROL. ANY SUCH POINTS WHICH THE CONTRACTOR BELIEVES WILL BE DESTROYED SHALL HAVE OFFSET POINTS ESTABLISHED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY MONUMENTATION DESTROYED BY THE CONTRACTOR SHALL BE REESTABLISHED AT CONTRACTOR'S EXPENSE BY A REGISTERED PROFESSIONAL LAND SURVEYOR.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO: A.) PREVENT ANY DAMAGES TO PRIVATE PROPERTY AND PROPERTY OWNER'S POLES, FENCES, SHRUBS, ETC. B.) PROTECT ALL UNDERGROUND UTILITIES. C.) NOTIFY ALL UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO EXCAVATION IN ACCORDANCE WITH TEXAS LAW. D.) FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES IN THE VICINITY OF CONSTRUCTION ACTIVITIES PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNIDENTIFIED POTENTIAL CONFLICTS THAT MAY EXIST BETWEEN THE EXISTING UTILITIES AND CONSTRUCTION PLANS.
- ANY DAMAGES THAT MAY OCCUR TO REAL PROPERTY OR EXISTING IMPROVEMENTS, INCLUDING EXISTING PRIVATE AND PUBLIC LANDSCAPE IRRIGATION SYSTEMS, SHALL BE RESTORED BY THE CONTRACTOR TO AT LEAST THE SAME CONDITION THAT THE REAL PROPERTY OR EXISTING IMPROVEMENT WERE IN PRIOR TO THE DAMAGES. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR THE ADJUSTMENT OF SPRINKLER HEADS TO FINAL GRADE AND RELOCATION IF NECESSARY.
- THE CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION. THE PONDING OF WATER IN STREETS, DRIVES, TRENCHES, ETC. WILL NOT BE ALLOWED. THE CONTRACTOR SHALL MAINTAIN EXISTING DRIVEWAYS ACCESS AT ALL TIME.
- THE CONTRACTOR SHALL MAINTAIN EXISTING WATER SERVICES AT ALL TIMES DURING CONSTRUCTION.
- AREAS OF THE SITE THAT WILL UNDERLIE FILL SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES, FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES IN UNCOMPACTED THICKNESS. ALL FILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY WITH A MOISTURE CONTENT FROM -3% TO +1% OF OPTIMUM OR PER GEOTECH RECOMMENDATION. FIELD DENSITY TESTS PER MUNICIPAL REQUIREMENTS.
- THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS GOVERNING EXCAVATION. THE CONTRACTOR SHALL PROVIDE DETAILED PLANS AND SPECIFICATION FOR TRENCH SAFETY SYSTEMS THAT COMPLY WITH APPLICABLE LAWS GOVERNING EXCAVATION. THESE PLANS SHALL BE SEALED BY AN ENGINEER EXPERIENCED IN THE DESIGN OF TRENCH SAFETY SYSTEM, REGISTERED IN THE STATE OF TEXAS. THE CONTRACTOR SHALL SUBMIT COMPLETED TRENCH SAFETY PLANS TO THE MUNICIPALITY PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL ASPECTS OF WORK RELATED TO EXCAVATION. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR, OSHA, "CONSTRUCTION SAFETY AND HEALTH REGULATIONS".
- WORK MAY NOT BE BACKFILLED OR COVERED UNTIL IT HAS BEEN INSPECTED BY THE MUNICIPALITY.
- ALL EXCAVATION ON THE PROJECT IS UNCLASSIFIED.
- CONTRACTOR SHALL COORDINATE THE PROTECTION OF EXISTING FRANCHISE UTILITIES AND APPURTENANCES INCLUDING EXISTING UTILITY POLES IN THE VICINITY OF CONSTRUCTION OPERATIONS WHETHER UTILITIES ARE SHOWN ON PLANS OR NOT. ANY DAMAGE INCURRED TO EXISTING FRANCHISE UTILITIES, APPURTENANCES, UTILITY POLES, LIGHT STANDARDS, ETC., BY CONSTRUCTION RELATED ACTIVITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL LOCATE AND RECORD EXISTING IRRIGATION SYSTEMS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL TEMPORARILY REMOVE AND CAP IRRIGATION SYSTEM AS NECESSARY FOR CONSTRUCTION AND SHALL REPLACE THE PORTION REMOVED WITH EQUIVALENT SYSTEMS. CONTRACTOR SHALL COORDINATE ANY IRRIGATION WORK WITH THE MUNICIPALITY AND PROPERTY OWNER'S REPRESENTATIVES.
- THE CONTRACTOR MUST CEASE ALL CONSTRUCTION OPERATIONS IMMEDIATELY IF A SUSPECTED ARCHEOLOGICAL OBJECT/ARTIFACT IS UNCOVERED DURING CONSTRUCTION. THE CONTRACTOR MUST IMMEDIATELY CONTACT THE TEXAS HISTORICAL COMMISSION AND THE MUNICIPALITY. PROJECT WORK WILL NOT COMMENCE UNTIL PROPER PERMITS ARE IN PLACE AND PROVIDED TO THE MUNICIPALITY.
- ALL PAVING DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPLIANCE WITH ALL HANDICAPPED ACCESSIBILITY REQUIREMENTS INCLUDING SIGNAGE, TEXTURES, COLORING, MARKINGS, AND SLOPES OF ADA/TAS 2012 ACCESSIBLE ROUTES & RAMPS, AND PARKING SPACES.
- ALL PIPE LENGTHS MEASURED FROM STATION TO STATION BASED ON THE CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL NOTIFY ENGINEER IF ANY DISCREPANCIES ARISE.

GENERAL NOTES FOR WATER IMPROVEMENTS

- ALL WATER LINES SHALL BE PVC PIPE CONFORMING TO A.W.W.A. STANDARD C-900 SDR-18 MINIMUM, WITH NSF SEAL, PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH MUNICIPAL AND/OR NCTCOG STD. SPECS., UNLESS OTHERWISE NOTED WITHIN THE CONSTRUCTION PLANS.
- CONTRACTOR SHALL NOT DIG WITHIN 20 FEET OF ANY WATERLINES ON FRIDAY, SATURDAY OR SUNDAY WITHOUT WRITTEN PERMISSION OF THE CITY ENGINEER.

GENERAL NOTES FOR PAVING IMPROVEMENTS

- THE SUB GRADE SHALL BE PROOF ROLLED AND OBSERVED BY THE CONSTRUCTION INSPECTOR PRIOR TO AND AFTER SUB-GRADE STABILIZATION.
- INDIVIDUAL WATER AND SEWER SERVICES AND WATER VALVES SHALL BE MARKED IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS.
- THE CONTRACTOR SHALL PROCEED WITH PAVING NO MORE THAN SEVENTY-TWO (72) HOURS AFTER DENSITY/MOISTURE TESTS HAVE BEEN TAKEN AND PASSED BY A REGISTERED TESTING FIRM. COPIES OF THE TEST RESULTS SHALL BE FURNISHED TO THE MUNICIPALITY. IN THE EVENT PAVING OPERATIONS HAVE NOT COMMENCED WITHIN THE SEVENTY-TWO (72) HOUR LIMIT, A RETEST SHALL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.
- MANHOLE RIM ELEVATIONS, CLEAN-OUTS, VALVE BOXES, FIRE HYDRANTS, ETC. SHALL BE ADJUSTED TO FINISHED GRADE BY THE PAVING CONTRACTOR AT THE TIME OF PAVING.
- THE PAVING CONTRACTOR SHALL INSTALL A BLUE REFLECTOR IN THE STREET OR FIRE LANE CENTERLINE AT THE LOCATION OF EACH FIRE HYDRANT.
- THE CONTRACTOR SHALL PREPARE ALL TRAFFIC CONTROL PLANS AND SUBMIT TO THE MUNICIPALITY PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMITS FOR WORK WITHIN THE MUNICIPALITY. THE PLAN SHALL BE PREPARED IN ACCORDANCE WITH THE CURRENT EDITION OF THE M.U.T.C.D AND AS MODIFIED BY THE TxDOT SUPPLEMENT TO THE M.U.T.C.D. THE PLAN SHALL ADDRESS THE REQUIREMENTS FOR ALL SIGNS, BARRICADES, FLAGMEN, LIGHTS, HOURS OF CONSTRUCTION, AND OTHER DEVICES AS NECESSARY FOR SAFE TRAFFIC CONTROL.

PROJECT GENERAL NOTES

- THE TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) MUST APPROVE ANY WORK TO BE DONE IN THE STATE HIGHWAY RIGHT-OF-WAY. AN APPLICATION AND APPROPRIATE PLANS MUST BE SUBMITTED TO THE CITY OF LUCAS FOR REVIEW AND APPROVED BY THE MUNICIPALITY WHERE THE WORK WILL BE PERFORMED.
- THE LOCATION OF UNDERGROUND FACILITIES INDICATED ON THE PLANS IS TAKEN FROM PUBLIC RECORDS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES PRIOR TO WORKING IN THE AREA TO CONFIRM THEIR EXACT LOCATION AND TO DETERMINE WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UNDERGROUND FACILITIES. IF THE EXISTING UNDERGROUND UTILITIES ARE DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPAIRING THE UTILITY.
- WHERE EXISTING UTILITIES, SERVICE LINES OR IRRIGATION LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL REPLACE OR REPAIR THE UTILITIES, SERVICE LINES OR IRRIGATION LINES WITH THE SAME TYPE OF ORIGINAL MATERIAL AND CONSTRUCTION, OR BETTER, UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS, AT HIS OWN COST AND EXPENSE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICTS IN GRADES AND ALIGNMENTS.
- CONTRACTOR SHALL NOT DIG WITHIN 20 FEET OF ANY WATERLINES ON FRIDAY, SATURDAY OR SUNDAY WITHOUT WRITTEN PERMISSION OF THE CITY ENGINEER.
- ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR, OSHA, "CONST. SAFETY AND HEALTH REGULATIONS." VOL. 29, SUBPART P. PG. 128-137, AND ANY AMENDMENTS THERETO. THE CONTRACTOR SHALL PREPARE AND IMPLEMENT A TRENCH SAFETY PLAN FOR THIS PROJECT.
- THE CONTRACTOR SHALL RESTORE ALL AREAS, ONSITE AND OFFSITE, DISTURBED BY CONSTRUCTION TO ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE, BUT ARE NOT LIMITED TO: TRENCH BACKFILL, SIDE SLOPES, FENCES, CULVERT PIPES, DRAINAGE SWALES, STAGING AREAS, DRIVEWAYS, PRIVATE YARDS AND ROADWAYS. UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE DRAWINGS, RESTORATION SHALL INCLUDE SODDING ALL DISTURBED AREAS. ESTABLISHMENT OF GRASS THROUGH PROPER WATERING IS LEFT UP TO THE CONTRACTOR'S MEANS AND METHODS, UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE/IRRIGATION DRAWINGS.
- THE CONTRACTOR SHALL KEEP RECORDS FOR AS-BUILTS DRAWINGS AND SHALL SUBMIT MARK-UPS TO THE MUNICIPALITY INSPECTOR PRIOR TO SCHEDULING A FINAL WALK THROUGH INSPECTION.
- PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH REPRESENTATIVES FROM ALL CONTRACTORS, THE ENGINEER, AND THE MUNICIPALITY.
- ALL CONSTRUCTION MUST ADHERE TO THE TREE PRESERVATION REQUIREMENTS OF THE MUNICIPALITY.
- THE CONTRACTOR, AND HIS AGENTS, AND SUB-CONTRACTOR, ARE COMPLETELY RESPONSIBLE FOR THE VERIFICATION OF THE ACCURACY OF THE DIMENSION CONTROL FURNISHED HEREIN. THE OWNER, ENGINEER AND THEIR AGENTS, ARE NOT RESPONSIBLE FOR THE ACCURACY OF THE COORDINATES FURNISHED. THE CONTRACTOR IS REQUIRED TO VERIFY ALL COORDINATES FOR ACCURACY AND CONFIRM THE LOCATIONS OF ALL UTILITIES TO BE CONSTRUCTED, BOTH HORIZONTAL AND VERTICALLY. DISCREPANCIES FOUND BY THE CONTRACTOR SHALL BE REPORTED, IN WRITING, TO THE OWNER IMMEDIATELY FOR RECONCILIATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PREPARE, IMPLEMENT AND MAINTAIN THE SWPPP IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT TCEQ AND NPDES GENERAL PERMIT AS DESCRIBED IN THE FEDERAL REGISTER, PAGES 36489 THROUGH 36519.

GENERAL NOTES FOR STORM DRAIN IMPROVEMENTS

- ALL STORM SEWER AND CULVERT PIPE AND FITTINGS SHALL BE ASTM C76, CLASS III REINFORCED CONCRETE PIPE (RCP), INSTALLED WITH COMPRESSIVE TYPE JOINTS UNLESS NOTED OTHERWISE.
- AFTER COMPLETION OF ALL STORM SEWER INSTALLATION, THE CONTRACTOR SHALL ENSURE THAT ALL DEBRIS AND SILTATION HAS BEEN REMOVED.

MISCELLANEOUS NOTES AND CONSTRUCTION ITEMS

- ALL EXISTING MAILBOXES IN CONFLICT WITH THE PROPOSED IMPROVEMENTS SHALL BE RELOCATED AND REPLACED WITH AN EQUIVALENT MAILBOX AT NO COST UNLESS SPECIFIED AS A BID ITEM.

LEGEND	
C.R.F.	Copper Rebar Found
C.R.S.	Copper Rebar Set
C.M.	Control Monument
CP	Control Point
Mon.	Monument
BM	Benchmark
FH	Fire Hydrant
WM	Water Meter
WV	Water Valve
WL	Water Line
ICV	Irrigation Control Valve
SSMH	Sanitary Sewer Manhole
CO	Sanitary Sewer Cleanout
UP	Utility Pole
LP	Light Pole
PP	Power Pole
Ex TC	Existing Top of Curb
Ex TP	Existing Top of Pavement
TC	Top of Curb
G	Gutter
PG	Proposed Grade
TP	Grade at Top of Pavement
TA	Grade at Top of Asphalt
TW	Grade at Top of Wall
BW	Grade at Bottom of Wall
RW	Grade at Retaining Wall
TG	Grade at Top of Grate
RR	Roll road
FG	Finished Grade
FF	Finished Floor
FP	Finished Pad
FL	Flowline
U.E.	Utility Easement
D.E.	Drainage Easement
B.L.	Building Line
R.O.W.	Right-of-Way
D.R.	Deed Records
P.R.	Plot Records
P.A.E.	Pedestrian Access Easement
S.B.	Setback line
WLE	Waterline Easement
MAE	Mutual Access Easement
	Overhead Power Lines
	Down Guy Wire
	Existing Contours
	Proposed Contours
	Concrete Pavement
	Asphalt Pavement
	Wood Fence
	Chain Link Fence
	Wire Fence
	Masonry Wall
	Existing Tree
	(FL) Flowline
	Centerline of Creek, Swale, or Waterway

LEWIS PARK ESTATES
 CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE
 111 Hensley Drive, Lewisville, TX 75077 • P: 972-488-9712 • F: 972-488-9718
 610 Bryan Nelson Blvd., Ste 114 • Rowlett, TX 75087 • P: 972-283-1972 • F: 972-283-0465
 TXPE Firm No. 1798

LEWIS PARK ESTATES
 Lot 1-16, 1-20, Block A, B
 LEWIS PARK ESTATES
 60.958 Acres
 JAMES ANDERSON SURVEY, ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

GENERAL NOTES

STATE OF TEXAS
 DOUGLAS W. WEAVER
 117386
 REGISTERED PROFESSIONAL ENGINEER
 5/19/2015

G&A CONSULTANTS, LLC
 TBPE F-1798

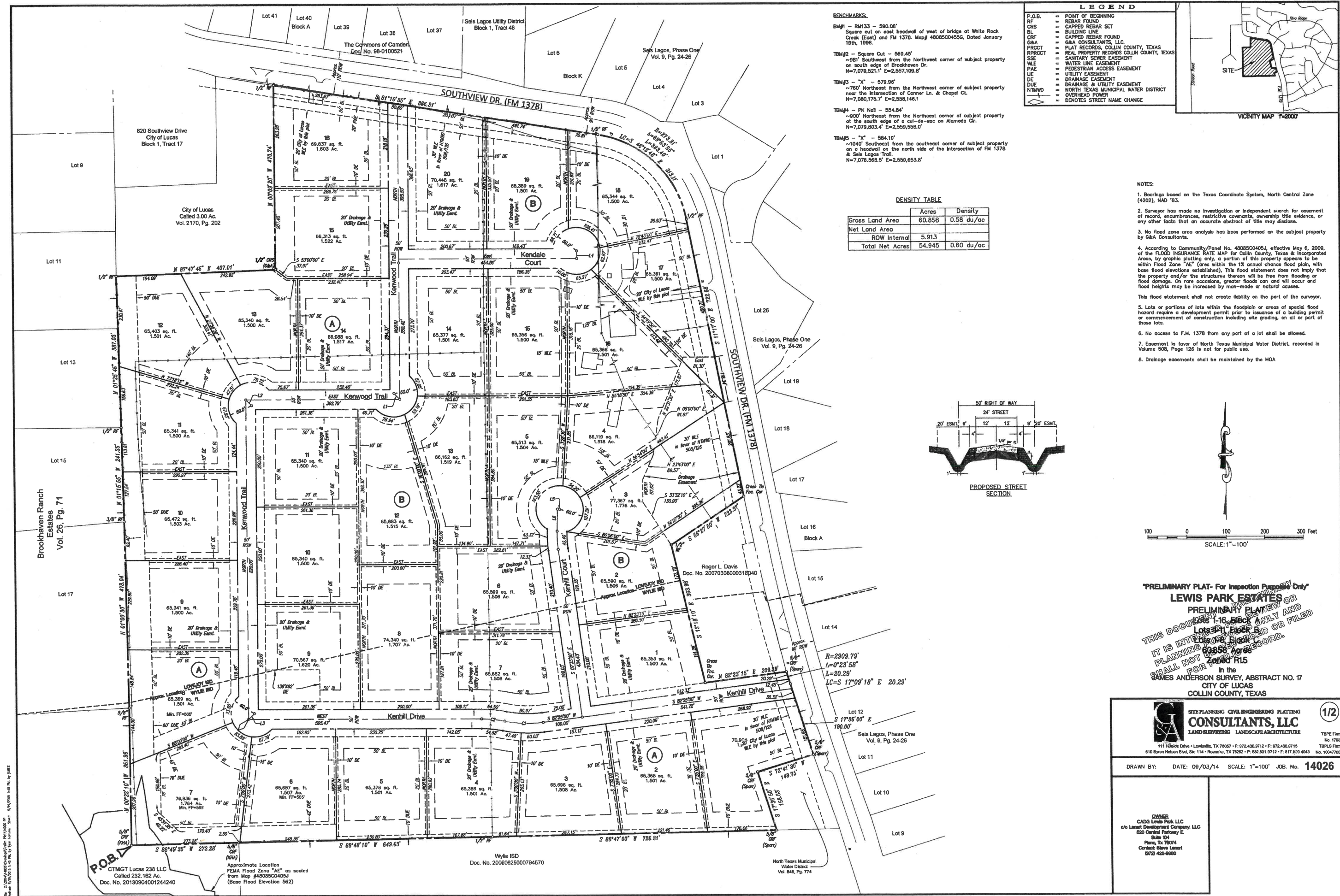
Drawn By: T.J.F.
 Date: 11/07/2014
 Scale: N/A
 Revisions:

14026

C1

OWNER/DEVELOPER
 CADQ LEWIS PARK LLC
 C/O LENART DEVELOPMENT COMPANY, LLC
 520 CENTRAL PARKWAY E. SUITE 104
 PLANO, TX 75074
 Ph. (972) 422-8880
 Contact: Steve Lenart

Dr. J. Scott Anderson, P.E., Civil, Professional Engineer, State of Texas, License No. 1798
 Date: 5/19/2015 1:40 PM, by: J. Scott Anderson, State of Texas, License No. 1798



This drawing was prepared by the undersigned on 06/03/14. It is based on the information provided by the owner and is not to be used for any other purpose without the written consent of the undersigned.

BENCHMARKS:

BM#1 - RM133 - 590.08'
 Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Mop# 4808504056, Dated January 18th, 1998.

BM#2 - Square Cut - 569.45'
 -891' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
 N=7,078,521.1' E=2,557,109.8'

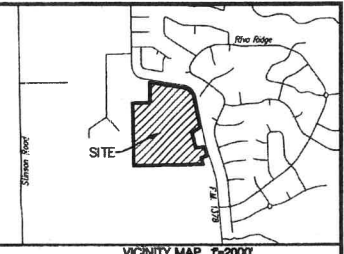
BM#3 - "X" - 579.95'
 -760' Northeast from the Northwest corner of subject property near the intersection of Corner Ln. & Chapel Ct.
 N=7,080,175.7' E=2,558,148.1'

BM#4 - PK Nail - 554.84'
 -900' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Ct.
 N=7,079,803.4' E=2,559,558.0'

BM#5 - "Y" - 584.19'
 -1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Sels Lages Trail.
 N=7,078,568.5' E=2,559,653.6'

LEGEND

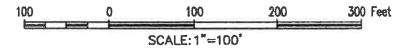
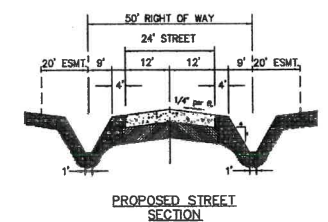
- P.O.B. = POINT OF BEGINNING
- RF = REBAR FOUND
- CRS = CAPPED REBAR SET
- BL = BUILDING LINE
- CRF = CAPPED REBAR FOUND
- G&A = G&A CONSULTANTS, L.L.C.
- PRCCT = PLAT RECORDS, COLLIN COUNTY, TEXAS
- RPRCCT = REAL PROPERTY RECORDS COLLIN COUNTY, TEXAS
- SSE = SANITARY SEWER EASEMENT
- WLE = WATER LINE EASEMENT
- PAE = PEDESTRIAN ACCESS EASEMENT
- UE = UTILITY EASEMENT
- DE = DRAINAGE EASEMENT
- DUE = DRAINAGE & UTILITY EASEMENT
- NTHWD = NORTH TEXAS MUNICIPAL WATER DISTRICT
- OP = OVERHEAD POWER
- NTMWD = DENOTES STREET NAME CHANGE



DENSITY TABLE

	Acres	Density
Gross Land Area	60.858	0.58 du/ac
Net Land Area	5.913	
ROW Internal	5.913	
Total Net Acres	54.945	0.60 du/ac

- NOTES:**
- Bearings based on the Texas Coordinate System, North Central Zone (4202), NAD '83.
 - Surveyor has made no investigation or independent search for easement of record, encumbrances, restrictive covenants, ownership title evidence, or any other facts that an accurate abstract of title may disclose.
 - No flood zone area analysis has been performed on the subject property by G&A Consultants.
 - According to Community/Panel No. 480850405J, effective May 6, 2009, of the FLOOD INSURANCE RATE MAP for Collin County, Texas & Incorporated Areas, by graphic plotting only, a portion of this property appears to be within Flood Zone "AE" (area within the 1% annual chance flood plain, with base flood elevations established). This flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes.
- This flood statement shall not create liability on the part of the surveyor.
- Lots or portions of lots within the floodplain or areas of special flood hazard require a development permit prior to issuance of a building permit or commencement of construction including site grading, on all or part of those lots.
 - No access to F.M. 1378 from any part of a lot shall be allowed.
 - Easement in favor of North Texas Municipal Water District, recorded in Volume 505, Page 126 is not for public use.
 - Drainage easements shall be maintained by the HOA.



"PRELIMINARY PLAT- For Inspection Purposes Only"

LEWIS PARK ESTATES

PRELIMINARY PLAT ONLY
 THIS DOCUMENT IS NOT TO BE USED FOR RECORD OR FILED
 IT IS INTENDED FOR RECORD ONLY AND
 PLANNING AND RECORDING DEPARTMENTS
 SHALL NOT BE RESPONSIBLE FOR RECORD.
 6858 Acres
 2000 R15
 in the
 GAMES ANDERSON SURVEY, ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

SITE PLANNING CIVIL ENGINEERING PLATTING

CONSULTANTS, L.L.C.

LAND SURVEYING LANDSCAPE ARCHITECTURE

1/2

1111 Lakeland Drive - Lewisville, TX 75057 - P: 972.436.9712 - F: 972.436.9715
 610 Byron Nelson Blvd., Ste 114 - Rowlett, TX 75082 - P: 982.251.9712 - F: 972.890.4063 No. 10047200

TYPE Firm No. 1789 TDS-15 Firm No. 10047200

DRAWN BY: DATE: 06/03/14 SCALE: 1"=100' JOB. No. **14026**

OWNER

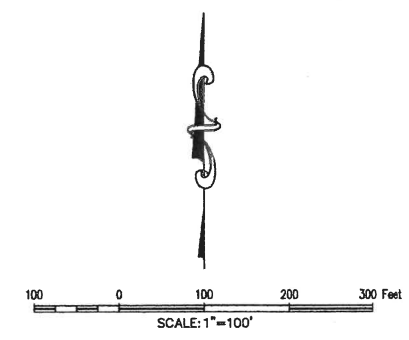
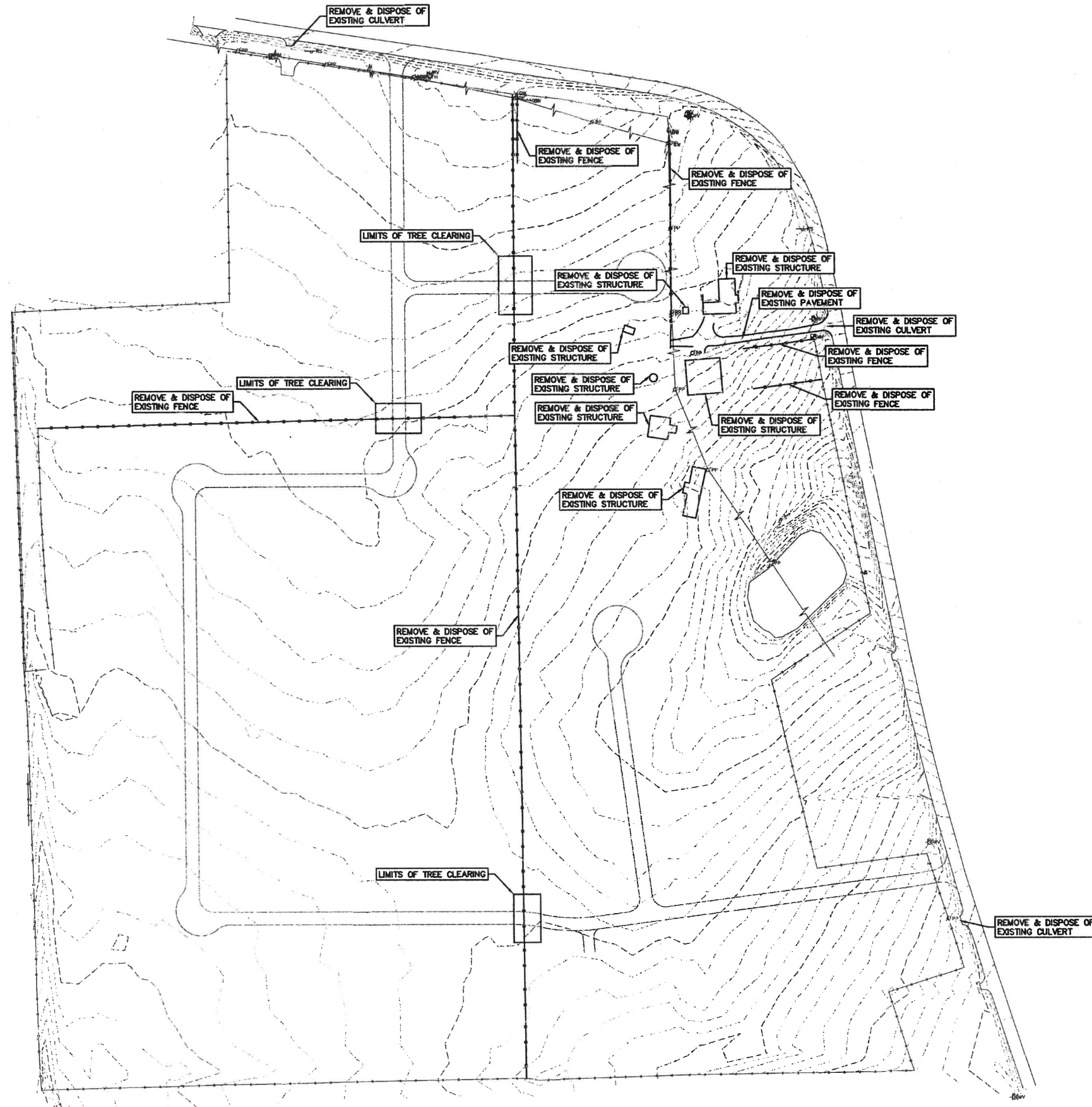
CADG Lewis Park LLC
 c/o Lantem Development Company, LLC
 850 Central Parkway E.
 Suite 104
 Plano, TX 75074
 Corbett Steve Lantem
 972.422.4600

Wylie ISD
 Doc. No. 2009082900794570

CTMGT Lucas 236 LLC
 Called 232.162 Ac.
 Doc. No. 20130904001244240

Approximate Location
 FEMA Flood Zone "AE" as scaled
 from Map #480850405J
 (Base Flood Elevation 562)

North Texas Municipal
 Water District
 Vol. 848, Pg. 774



BENCHMARKS:

BM#1 - RM133 - 590.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 48085004556, Dated January 19th, 1996.

TM#2 - Square Cut - 589.45'
~681' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,079,521.1' E=2,557,109.8'

TM#3 - "X" - 579.96'
~760' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
N=7,080,175.7' E=2,558,146.1

TM#4 - "X" - 554.84'
~900' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cir.
N=7,079,803.4' E=2,559,558.0'

TM#5 - "X" - 584.19'
~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Sale Lagos Trail.
N=7,076,568.5' E=2,559,653.8'

LEGEND		
C.R.F.	Capped Rebar Found	Overhead Power Lines
C.R.S.	Capped Rebar Set	Down Guy Wire
C.M.	Control Monument	Existing Contours
Mon.	Monument	Proposed Contours
BM	Benchmark	Concrete Pavement
FH	Fire Hydrant	Asphalt Pavement
WM	Water Meter	Wood Fence
WV	Water Valve	Chain Link Fence
W/L	Water Line	Wire Fence
ICV	Irrigation Control Valve	Masonry Wall
SSMH	Sanitary Sewer Manhole	Existing Tree
CO	Sanitary Sewer Cleanout	(FL) Flowline
UP	Utility Pole	Centerline of Creek, Swale, or Waterway
LP	Light Pole	Creek, Swale, or Waterway Embankment
TC	Top of Curb	
TP	Top of Pavement	
TW	Top of Wall	
FG	Finished Grade	
U.E.	Utility Easement	
D.E.	Drainage Easement	
B.L.	Building Line	
R.O.W.	Right-of-Way	
D.R.	Deed Records	
P.R.	Plat Records	

GENERAL NOTES:

1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.

SITE PLANNING CIVIL ENGINEERING PLANNING
CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE
 111 Lakewood Blvd., Suite 114 • Rowland, TX 75087 • P: 972.488.9715 • F: 972.488.9716
 810 Byron Nelson Blvd., Suite 114 • Rowland, TX 75087 • P: 972.488.9712 • F: 972.488.4043
 TBE#S Firm No. 10047700
 TYPE Firm No. 1798

LEWIS PARK ESTATES
 Lot 1-16, 1-20, Block A B
LEWIS PARK ESTATES
 60.858 Acres
 in the
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

DEMOLITION PLAN

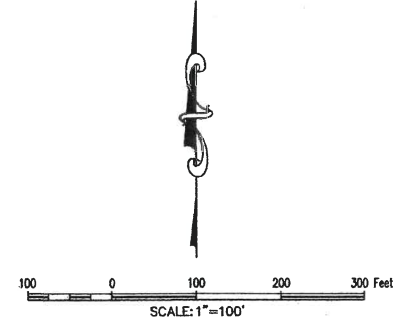
G&A CONSULTANTS, LLC
TYPE F-7988

Drawn By: J.F.
 Date: 11/07/2014
 Scale: 1" = 100'
 Revisions:

14026
 OWNER/DEVELOPER
 CADG LEWIS PARK, LLC
 C/O LENART DEVELOPMENT COMPANY, LLC
 520 CENTRAL PARKWAY E SUITE 104
 PLANO, TX 75074
 Ph: (972) 422-8880
 Contact: Steve Lenart

C4

File: 2:\Projects\2014\14026\14026.dwg, Plot: 14026.dwg, Date: 11/07/2014 10:10:10 AM, User: jf, Plot Date: 11/07/2014 10:10:10 AM, Plot Scale: 1"=100'



BENCHMARKS:

BM#1 - RM133 - 590.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 48085C04556, Dated January 19th, 1998.

BM#2 - Square Cut - 568.45'
~981' Southwest from the Northwest corner of subject property on south edge of Brookhoven Dr.
N=7,079,521.1' E=2,557,109.8'

BM#3 - "X" - 579.95'
~762' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
N=7,080,175.7' E=2,558,148.1'

BM#4 - "PK Nail" - 554.84'
~900' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cir.
N=7,079,803.4' E=2,559,558.0'

BM#5 - "X" - 584.19'
~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Seis Lagos Trail.
N=7,076,568.5' E=2,558,853.8'

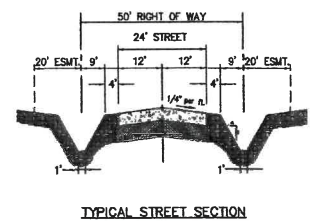
GENERAL NOTES:

1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.
2. ALL SIGNAGE WITHIN TxDOT ROW SHALL MEET TxDOT STANDARDS.

PAVING SPECIFICATIONS:

CONCRETE ROAD:
6" 3,600 PSI CONC. PAVEMENT W/ #3 BARS @ 18" O.C.E.W. ON 6" STABILIZED SUBGRADE OR APPROVED EQUAL

ASPHALT PAVEMENT AREA:
REFER TO TxDOT PLANS.

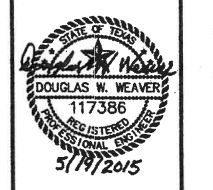


DOUGLAS W. WEAVER
117386
5/19/2015
G&A CONSULTANTS, LLC
TYPE F-098

G&A CONSULTANTS, LLC
SITING CIVIL ENGINEERING PLANNING
LAND SURVEYING LANDSCAPE ARCHITECTURE
111 Hildale Drive - Lewisville, TX 76047 - P: 972-481-8774 - F: 972-498-9715
810 Bryan Hudson Blvd, Ste 114 - Rowan, TX 76082 - P: 817-281-4043
TYPE F Form No. 1007/04

LEWIS PARK ESTATES
Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
60.858 ACRES
In the
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
CITY OF LUCAS
COLLIN COUNTY, TEXAS

PAVING, LIGHTING & SIGNAGE PLAN



Drawn By: T.J.F.
Date: 11/07/2014
Scale: 1" = 100'
Revisions:

14026
C5

OWNER/DEVELOPER
CADG LEWIS PARK LLC
C/O LEMART DEVELOPMENT COMPANY, LLC
520 CENTRAL PARKWAY E SUITE 104
PLANO, TX 76074
Ph: (972) 422-9680
Contact: Steve Lemart

The 1:1000 Scale Survey of the City of Lucas, Texas, was prepared by G&A Consultants, LLC, on 5/19/2015. The City of Lucas, Texas, is the owner of the property shown on this plan.

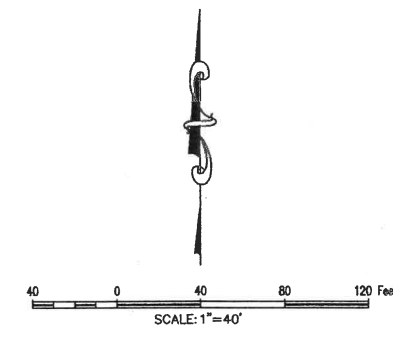
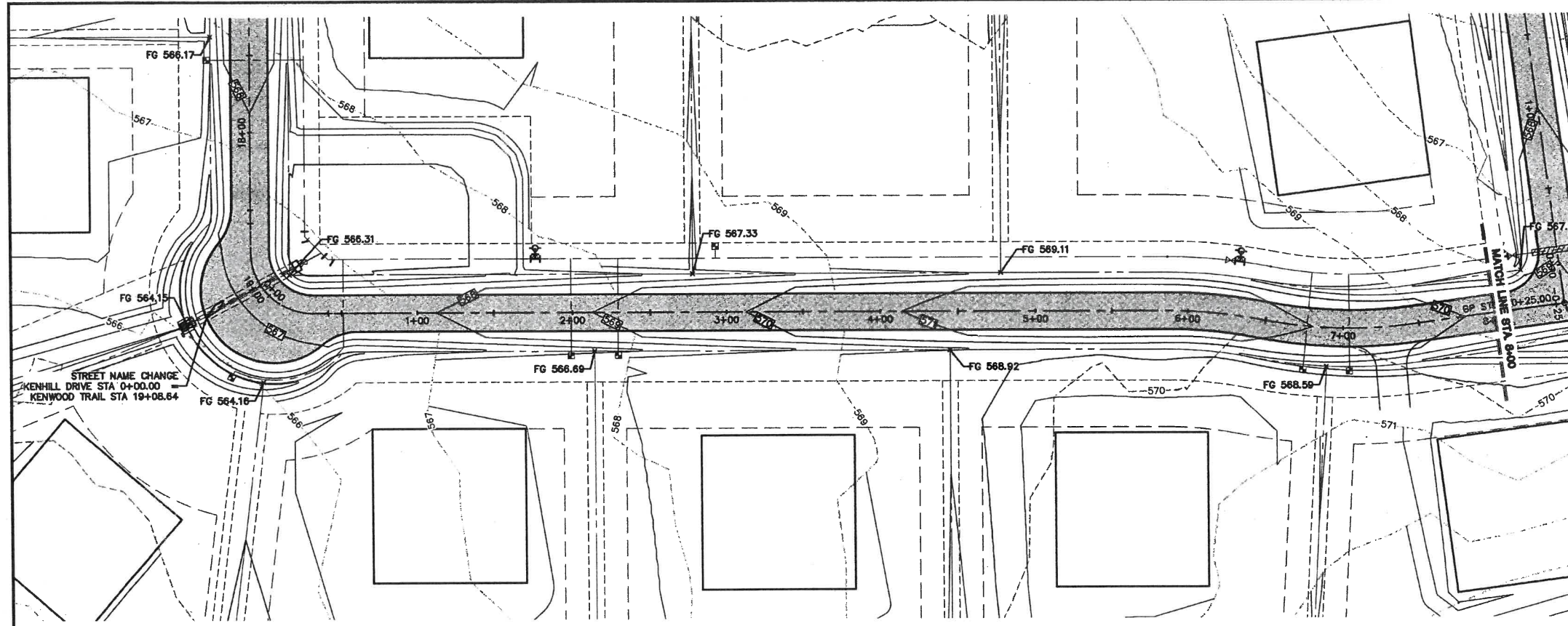
CTMGT Lucas 238 LLC
Called 232.162 Ac.
Doc. No. 20130904001244240

Approximate Location
FEMA Flood Zone "AE" as scaled
from Map #48085C0405J
(Base Flood Elevation 562)

Wylie ISD
Doc. No. 20090625000794570

North Texas Municipal
Water District
Vol. 845, Pg. 774

LEWIS PARK ESTATES



BENCHMARKS:

BM#1 - RM133 - 590.06'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 480850455C, Dated January 19th, 1996.

BM#2 - Square Cut - 569.45'
~881' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,079,521.1' E=2,557,169.8'

BM#3 - "x" - 579.96'
~760' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
N=7,060,175.7' E=2,558,146.1'

BM#4 - PK Nail - 554.84'
~900' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cr.
N=7,078,803.4' E=2,559,556.0'

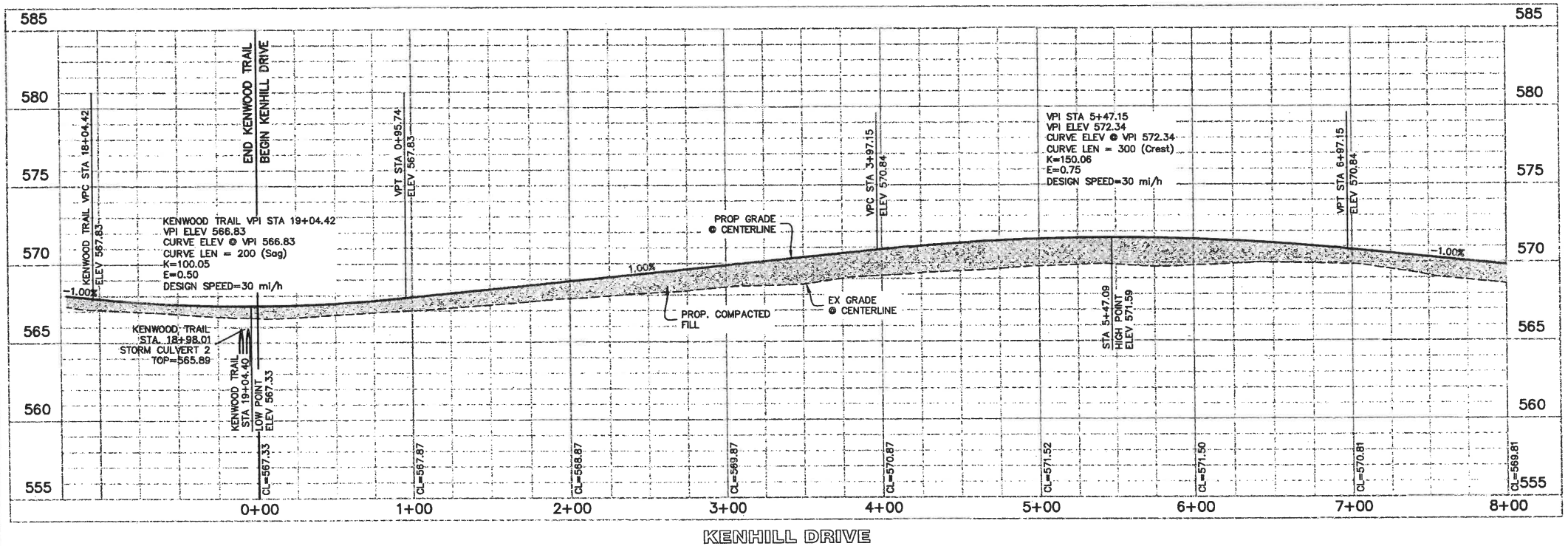
BM#5 - "x" - 584.19'
~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Sels Logos Trail.
N=7,078,568.5' E=2,559,653.8'

LEGEND

C.R.F.	Capped Rebar Found	Overhead Power Lines
C.R.S.	Capped Rebar Set	Down Guy Wire
C.M.	Control Monument	Existing Contours
Mon.	Monument	Proposed Contours
BM	Benchmark	Concrete Pavement
FH	Fire Hydrant	Asphalt Pavement
WM	Water Meter	Wood Fence
WV	Water Valve	Chain Link Fence
W/L	Water Line	Wire Fence
ICV	Irrigation Control Valve	Masonry Wall
SSMH	Sanitary Sewer Manhole	Existing Tree
CO	Sanitary Sewer Cleanout	(FL) Flowline
UP	Utility Pole	Centerline of Creek, Swale, or Waterway
TC	Top of Curb	Creek, Swale, or Waterway Embankment
TP	Top of Pavement	
TW	Top of Wall	
FG	Finished Grade	
U.E.	Utility Easement	
D.E.	Drainage Easement	
B.L.	Building Line	
R.O.W.	Right-of-Way	
D.R.	Deed Records	
P.R.	Plot Records	

GENERAL NOTES

1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.

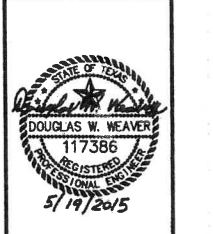


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LEWIS PARK ESTATES
 G&A CONSULTANTS, LLC
 111 Hillside Drive • Lakeland, TX 76057 • P: 872.488.8719 • F: 872.488.8718
 611 Dallas Drive, Suite 114 • Roundrock, TX 78664 • P: 682.831.9712 • F: 682.831.9718
 TBPE Firm No. 1788

LEWIS PARK ESTATES
 Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
 60.858 Acres
 In the
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

KENHILL DRIVE PLAN & PROFILE STA 0+00 TO STA 8+00

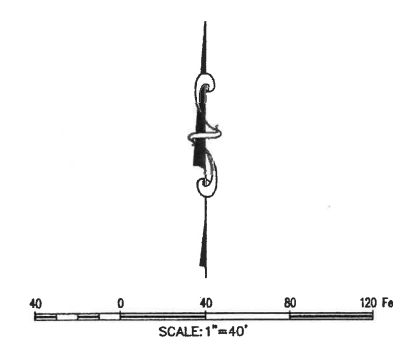
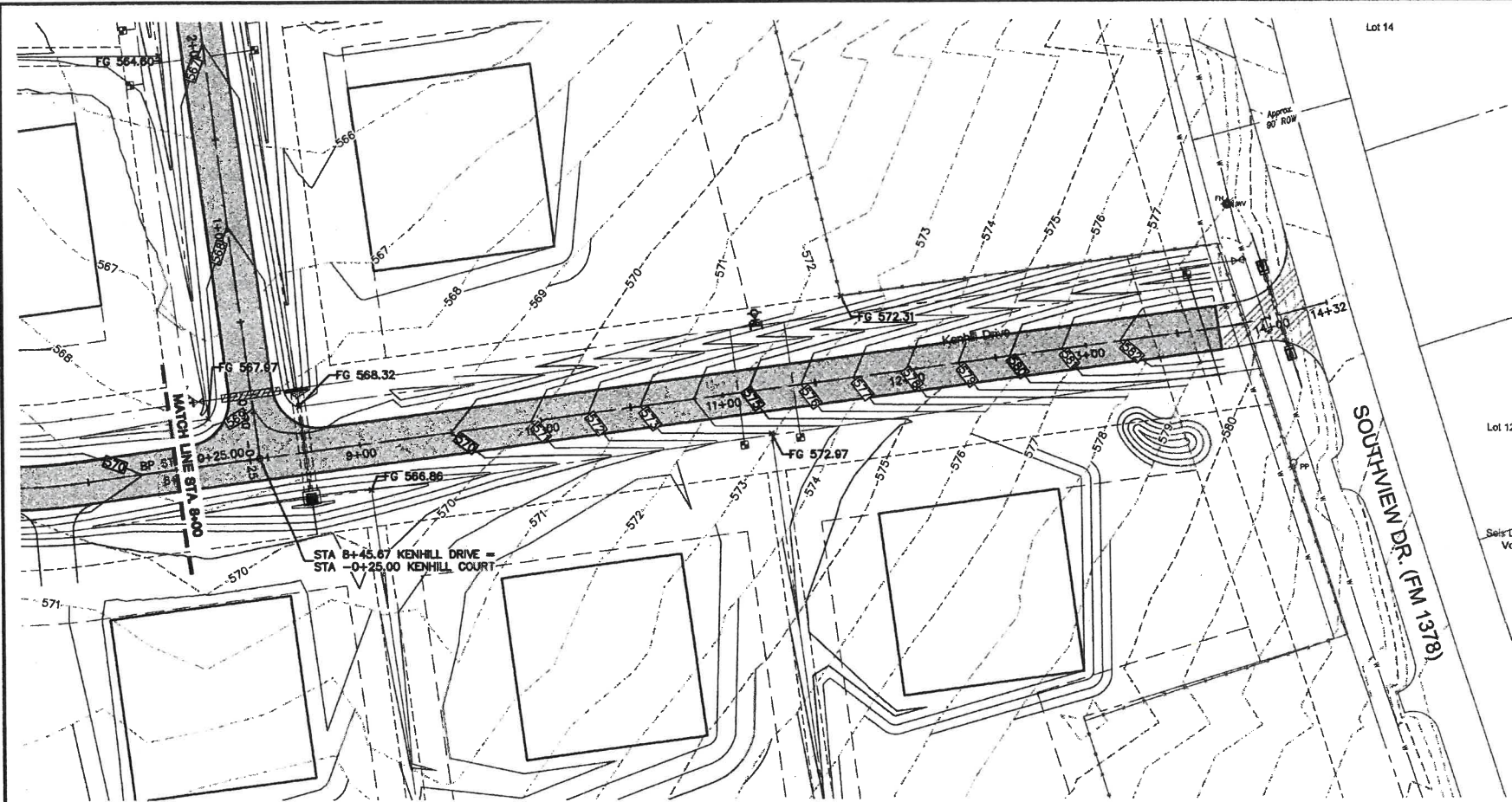


G&A CONSULTANTS, LLC
 TBPE F-1788
 Drawn By: T.F.
 Date: 11/07/2014
 Scale: H 1"=40'; V 1"=4'
 Revisions:

OWNER/DEVELOPER
 CADG LEWIS PARK, LLC
 C/O LEWART DEVELOPMENT COMPANY, LLC
 520 CENTRAL PARKWAY E. SUITE 104
 PLANO, TX 75074
 Ph. (972) 422-8680
 Contact: Steve Lanart

14026

C8



BENCHMARKS:

BM#1 - RM133 - 590.06'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 480850455G, Dated January 19th, 1998.

BM#2 - Square Cut - 568.45'
~981' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,076,521.1' E=2,557,106.8'

BM#3 - "X" - 579.96'
~780' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
N=7,080,175.7' E=2,558,146.1'

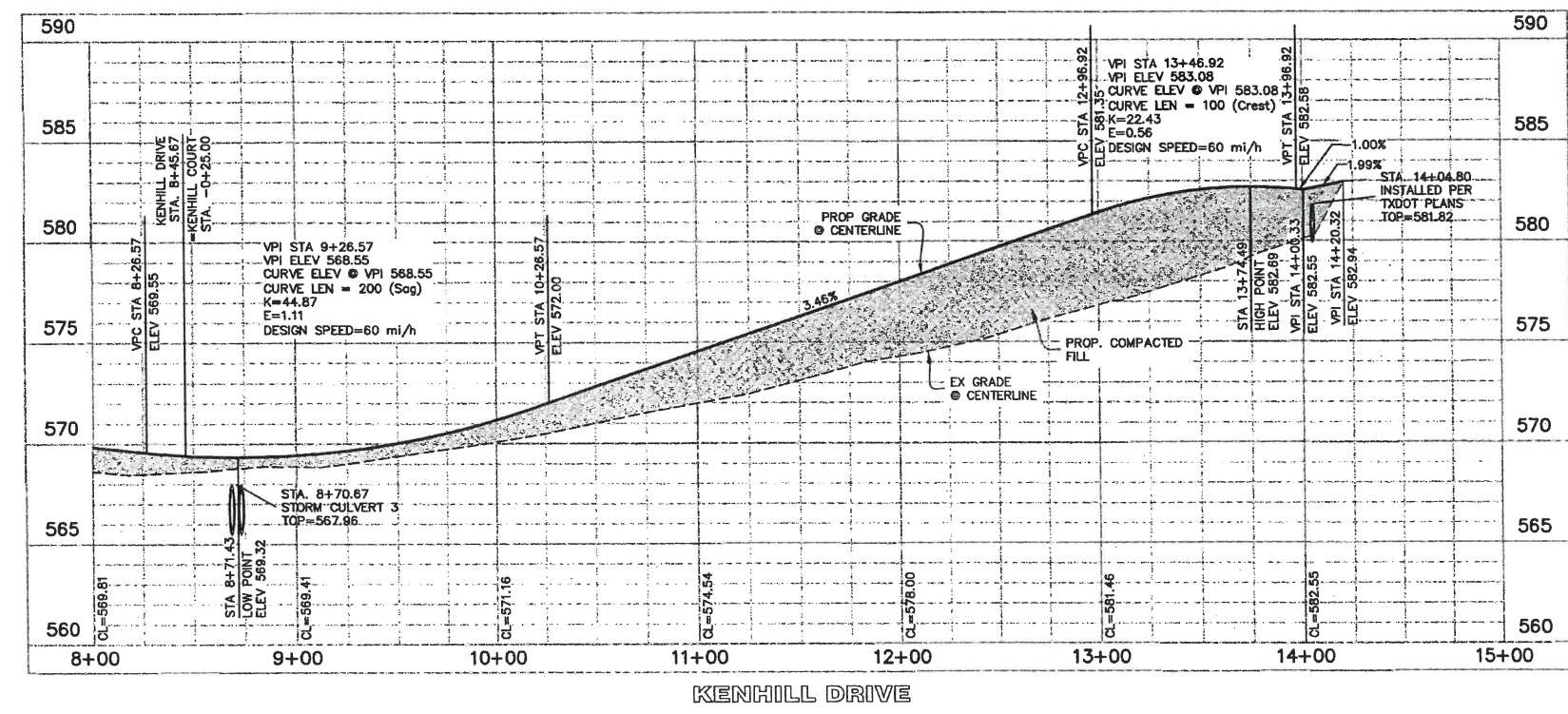
BM#4 - PK Nail - 554.84'
~800' Northeast from the Northeast corner of subject property on the south edge of a cul-de-sac on Alameda Cr.
N=7,079,803.4' E=2,559,558.0'

BM#5 - "X" - 584.19'
~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Sels Logos Trail.
N=7,076,568.5' E=2,559,653.8'

LEGEND			
C.R.F.	Capped Rebar Found	—	Overhead Power Lines
C.R.S.	Capped Rebar Set	—	Down Guy Wire
C.M.	Control Monument	—	Existing Contours
Mon.	Monument	—	Proposed Contours
BM	Benchmark	—	Concrete Pavement
FH	Fire Hydrant	—	Asphalt Pavement
WM	Water Meter	—	Wood Fence
WV	Water Valve	—	Chain Link Fence
W/L	Water Line	—	Wire Fence
ICV	Irrigation Control Valve	—	Masonry Wall
SSMH	Sanitary Sewer Manhole	—	Existing Tree
CO	Sanitary Sewer Cleanout	—	(FL) Flowline
UP	Utility Pole	—	Centerline of Creek, Swale, or Waterway
LP	Light Pole	—	Building Line
TC	Top of Curb	—	Right-of-Way
TP	Top of Pavement	—	Deed Records
TW	Top of Wall	—	Creek, Swale, or Waterway Embankment
FG	Finished Grade	—	
U.E.	Utility Easement	—	
D.E.	Drainage Easement	—	
B.L.	Building Line	—	
R.O.W.	Right-of-Way	—	
D.R.	Deed Records	—	
P.R.	Plot Records	—	

GENERAL NOTES

1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.

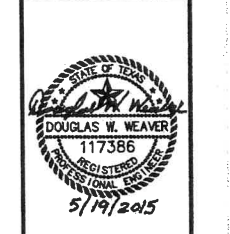


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SITE PLANNING CIVIL ENGINEERING PLANNING
CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE
 1411 Hilltop Drive, Suite 114 - Rowland, TX 78062 - P: 817.458.8715 F: 817.458.8716
 811 Dallas Drive, Suite 114 - Rowland, TX 78062 - P: 817.458.8715 F: 817.458.8716
 TBP# Firm No. 1798

LEWIS PARK ESTATES
 Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
 60.858 Acres
 IN THE
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

KENHILL DRIVE PLAN & PROFILE STA 8+00 TO STA 14+20



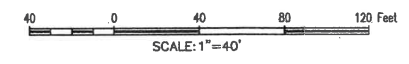
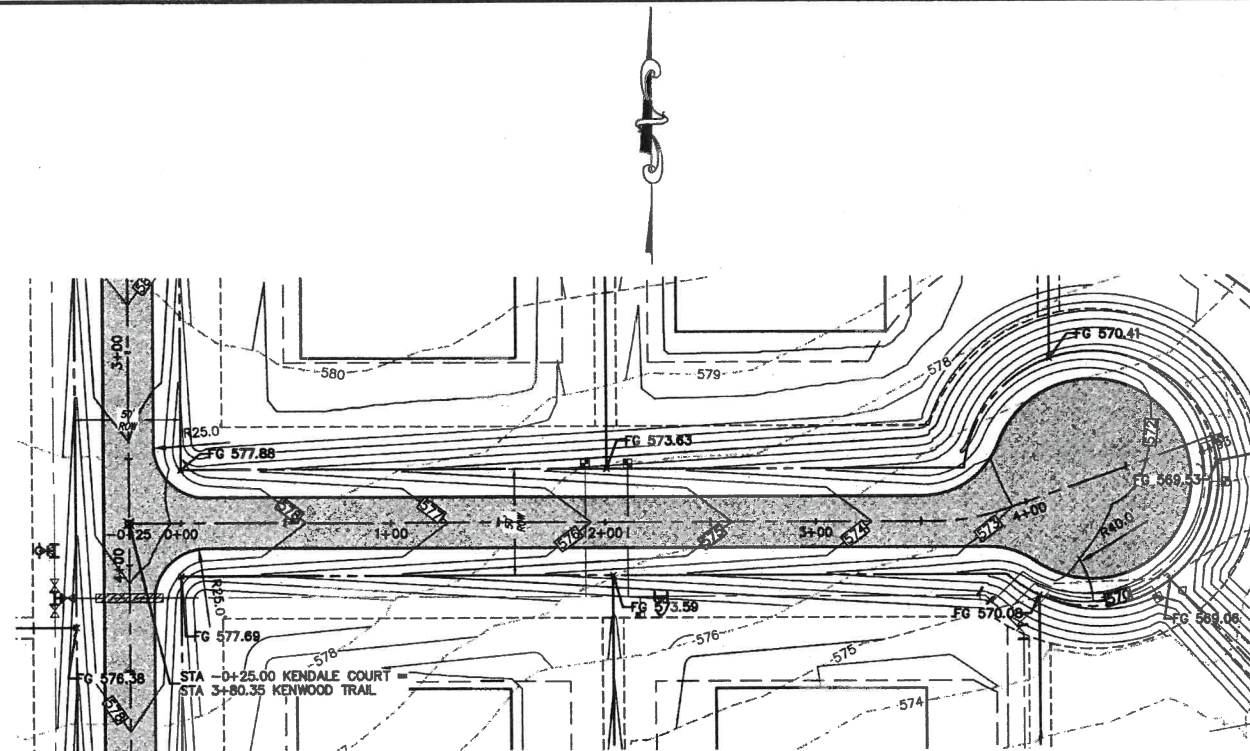
G&A CONSULTANTS, LLC
TBP# F-4798

Drawn By: JLF
Date: 11/07/2014
Scale: H 1"=40'; V 1"=4'
Revisions:

OWNER/DEVELOPER
GADG LEWIS PARK, LLC
C/O LENART DEVELOPMENT COMPANY, LLC
520 CENTRAL PARKWAY E SUITE 104
PLANO, TX 75074
Ph: (972) 422-8680
Contact: Steve Lenart

14026

C9



BENCHMARKS:

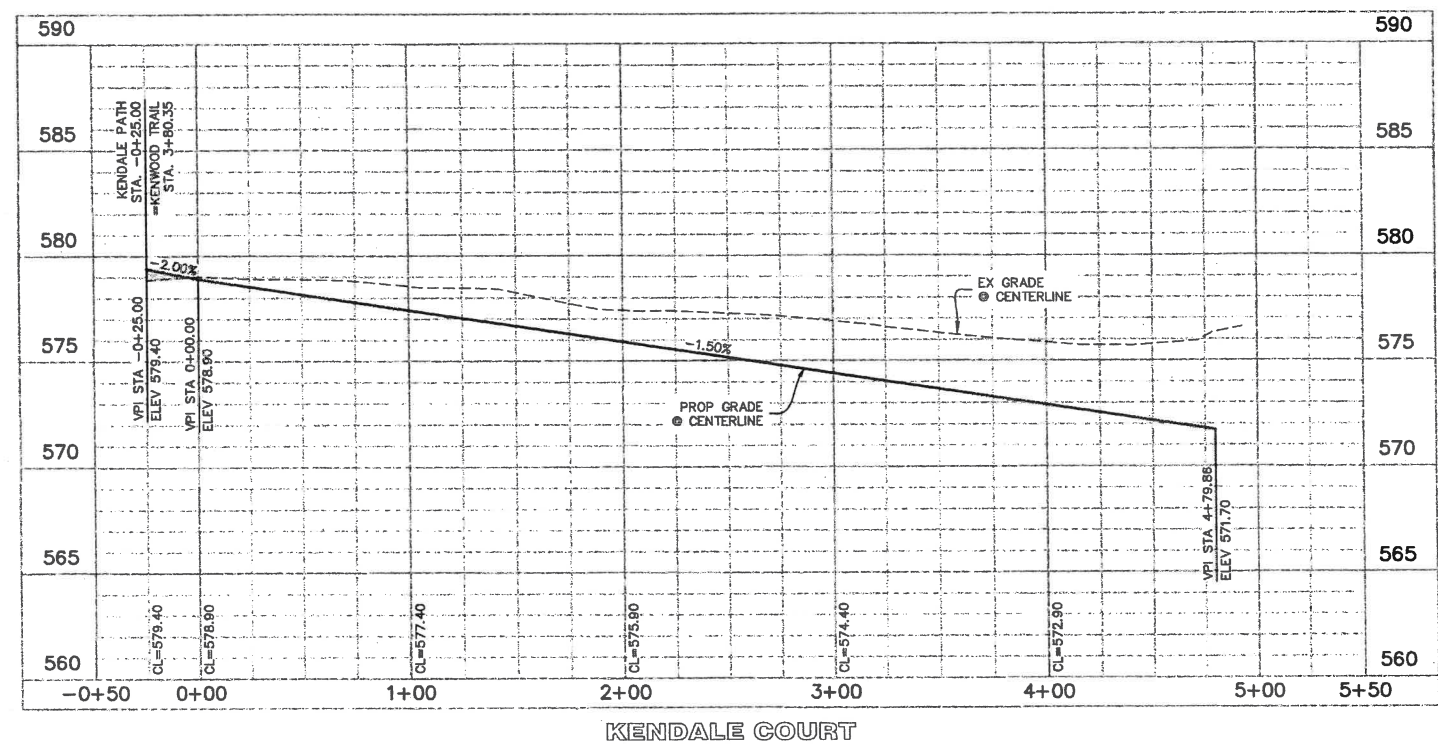
- BM#1 - RM133 - 590.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 48085C04550, Dated January 19th, 1996.
- TBM#2 - Square Cut - 569.45'
~961' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,076,521.1' E=2,557,109.8'
- TBM#3 - "X" - 578.86'
~760' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Cl.
N=7,080,175.7' E=2,558,146.1'
- TBM#4 - PK Nail - 554.84'
~900' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cr.
N=7,076,803.4' E=2,559,558.0'
- TBM#5 - "X" - 594.19'
~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Seta Logos Trail.
N=7,076,568.5' E=2,558,653.8'

LEGEND

C.R.F.	Capped Rebar Found	Overhead Power Lines
C.R.S.	Capped Rebar Set	Down Guy Wire
C.M.	Control Monument	Existing Contours
Mon.	Monument	Proposed Contours
BM	Benchmark	Concrete Pavement
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WM	Water Meter	Wood Fence
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W/L	Water Line	Wire Fence
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SSMH	Sanitary Sewer Manhole	Top of Pavement
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TP	Top of Pavement	D.E.
TW	Top of Wall	B.L.
FG	Finished Grade	R.O.W.
U.E.	Utility Easement	D.R.
D.E.	Drainage Easement	P.R.
B.L.	Building Line	
R.O.W.	Right-of-Way	
D.R.	Deed Records	
P.R.	Plot Records	

GENERAL NOTES

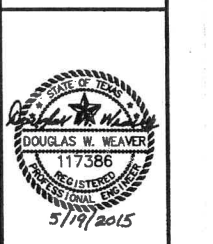
1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.



LEWIS PARK ESTATES
 STEPLANNING CIVIL/ENGINEERING PLANNING
CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE
 111 Hillside Drive • Lewisville, TX 76057 • P: 972.438.9712 • F: 972.438.9716
 811 Dallas Drive, Suite 114 • Rowlett, TX 76088 • P: 972.991.9712 • F: 972.991.9716
 TBPE Firm No. 1798

LEWIS PARK ESTATES
 Lot 1-16, Block A, B
LEWIS PARK ESTATES
 60,858 Acres
 In the
JAMES ANDERSON SURVEY, ABSTRACT NO. 7
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

KENDALE COURT PLAN & PROFILE STA 0+00 TO STA 9+50



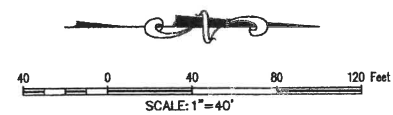
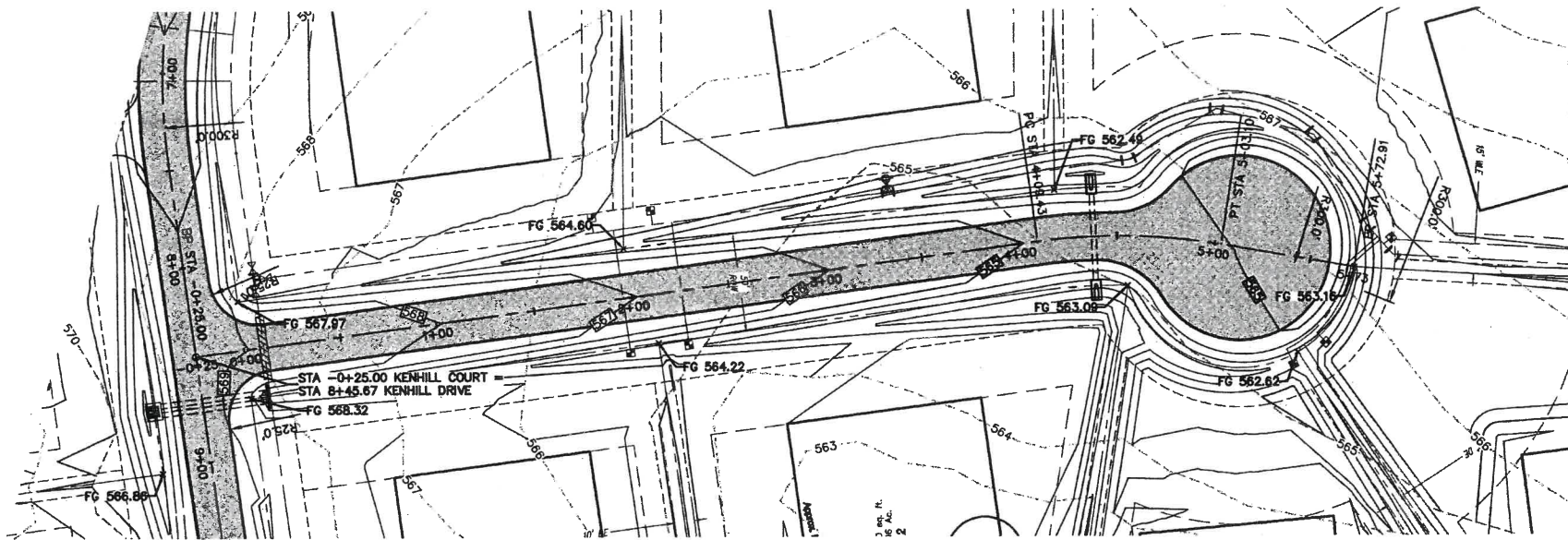
G&A CONSULTANTS, LLC
TBPE F-1798

Drawn By: TJE
Date: 11/07/2014
Scale: H 1"=40'; V 1"=4'
Revisions:

14026
 C10

OWNER/DEVELOPER
 CADG LEWIS PARK LLC
 C/O LENART DEVELOPMENT COMPANY,
 LLC
 520 CENTRAL PARKWAY E. SUITE 104
 PLANO, TX 75074
 Ph. (972) 422-9880
 Contact: Steve Lenart

Fig. 2: KENDALE COURT PLAN & PROFILE STA 0+00 TO STA 9+50
 Project: LEWIS PARK ESTATES, 60,858 ACRES, 111 HILLSIDE DRIVE, LEWISVILLE, TX 76057



BENCHMARKS:

BM#1 - RM133 - 590.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 48085004556, Dated January 19th, 1995.

BM#2 - Square Cut - 568.45'
~981' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,079,521.1' E=2,557,109.8'

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N=7,080,175.7' E=2,556,146.1'

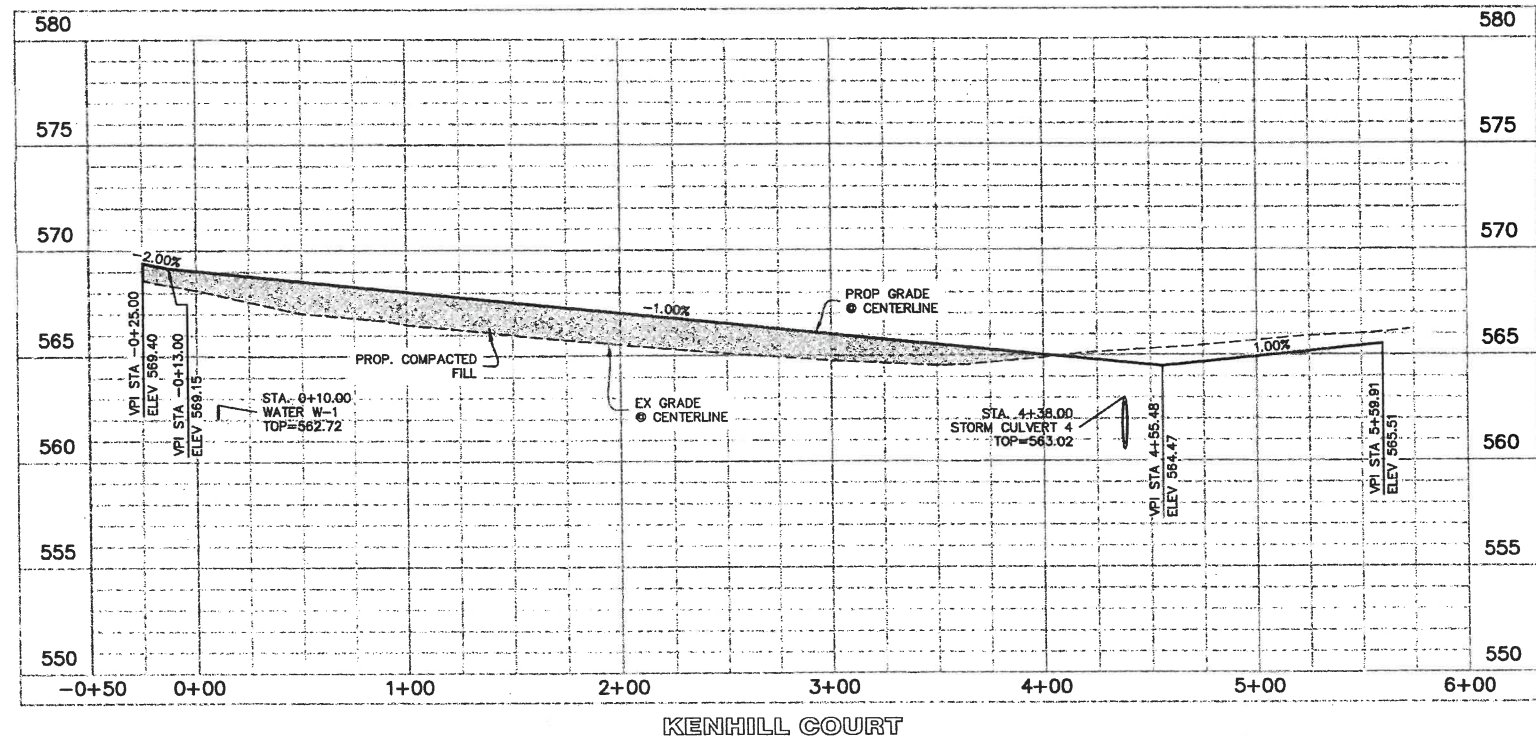
BM#4 - PK Nail - 554.84'
~900' Northeast from the Northwest corner of subject property at the south edge of a cul-de-sac on Alameda Cr.
N=7,079,803.4' E=2,559,558.0'

BM#5 - "X" - 584.19'
~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Sals Logos Trail.
N=7,076,568.5' E=2,559,653.6'

LEGEND		
C.R.F.	Capped Rebar Found	Overhead Power Lines
C.R.S.	Capped Rebar Set	Down Guy Wire
C.M.	Control Monument	Existing Contours
Mon.	Monument	Proposed Contours
BM	Benchmark	Concrete Pavement
FH	Fire Hydrant	Asphalt Pavement
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ICV	Irrigation Control Valve	Masonry Wall
SSMH	Sanitary Sewer Manhole	Existing Tree
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U.E.	Utility Easement	
D.E.	Drainage Easement	
B.L.	Building Line	
R.O.W.	Right-of-Way	
D.R.	Deed Records	
P.R.	Plot Records	

GENERAL NOTES:

1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.

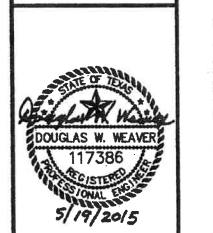


STATE PLANNING ENGINEERING FLATING
CONSULTANTS, LLC
LAND SURVEYING LANDSCAPE ARCHITECTURE

111 Hillside Drive • Lewisville, TX 76047 • P: 972-488-8715 • F: 972-488-8716
611 Dallas Drive, Suite 114 • Rockwall, TX 75087 • P: 972-982-0178 • F: 972-982-0400
TYPE Form No. 1709

LEWIS PARK ESTATES
Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
60.858 Acres
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
CITY OF LUCAS
COLLIN COUNTY, TEXAS

KENHILL COURT PLAN & PROFILE STA 0+00 TO STA 5+60



G&A CONSULTANTS, LLC
TYPE F-1708

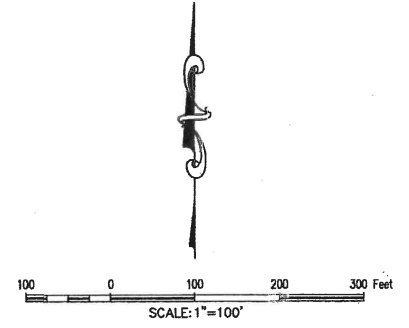
Drawn By: J.F.
Date: 11/07/2014
Scale: H 1"=40' V 1"=4'
Revisions:

14026

C11

OWNER/DEVELOPER
CADG LEWIS PARK LLC
C/O LEMART DEVELOPMENT COMPANY, LLC
520 CENTRAL PARKWAY E. SUITE 104
PLANO, TX 75074
Ph. (972) 422-9880
Contact: Steve Lenart

Doc: J:\2014\14026\14026.dwg Plot: 5/19/2015 10:30 AM by: JFW



BENCHMARKS:

BM#1 - RM133 - 590.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 480850455G, Dated January 19th, 1998.

BM#2 - Square Cut - 568.45'
~981' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,079,521.1' E=2,557,109.8'

BM#3 - "X" - 579.98'
~780' Northeast from the Northwest corner of subject property near the intersection of Cover Ln. & Chapel Ct.
N=7,080,175.7' E=2,556,146.1'

BM#4 - PK Nail - 554.84'
~900' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cir.
N=7,079,803.4' E=2,559,558.0'

BM#5 - "X" - 584.19'
~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Sals Lopez Trail.
N=7,076,568.5' E=2,559,653.8'

EXISTING DRAINAGE CALCULATIONS						
Drainage Area	Area (Ac)	C	Tc (min)	I (in/hr)	Q100 (cfs)	Comments
A	25.7	0.30	20	6.9	53.2	SHEET FLOW TO FLOOD PLAIN
B	35.1	0.30	20	6.9	72.7	SHEET FLOW TO DETENTION POND
OS2	2.0	0.45	10	9.2	8.1	SHEET FLOW TO DETENTION POND
OS3	0.6	0.45	10	9.2	2.6	SHEET FLOW TO LOT 1
TOTAL B	37.7				83.3	
OS1	0.3	0.45	10	9.2	1.2	SHEET FLOW TO SOUTHVIEW DRIVE
OS4	0.7	0.45	10	9.2	2.9	SHEET FLOW TO SOUTHVIEW DRIVE

LEGEND			
C.R.F.	Capped Rebar Found	—	Overhead Power Lines
C.R.S.	Capped Rebar Set	—	Down Guy Wire
C.M.	Control Monument	—	Existing Contours
Mon.	Monument	—	Proposed Contours
BM	Benchmark	—	Concrete Pavement
FH	Fire Hydrant	—	Asphalt Pavement
WM	Water Meter	—	Wood Fence
WV	Water Valve	—	Chain Link Fence
W/L	Water Line	—	Wire Fence
ICV	Irrigation Control Valve	—	Masonry Wall
SSMH	Sanitary Sewer Manhole	—	Existing Tree
CO	Sanitary Sewer Cleanout	—	(FL) Flowline
UP	Utility Pole	—	Centerline of Creek, Swale, or Waterway
LP	Light Pole	—	Creek, Swale, or Waterway Embankment
TC	Top of Curb	—	
TP	Top of Pavement	—	
TW	Top of Wall	—	
FG	Finished Grade	—	
U.E.	Utility Easement	—	
D.E.	Drainage Easement	—	
B.L.	Building Line	—	
R.O.W.	Right-of-Way	—	
D.R.	Deed Records	—	
P.R.	Plot Records	—	

GENERAL NOTES:

1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.

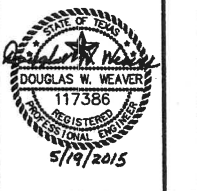
OWNER/DEVELOPER
CADG LEWIS PARK LLC
C/O LEMART DEVELOPMENT COMPANY, LLC
620 CENTRAL PARKWAY E. SUITE 104
PLANO, TX 75074
Ph. (972) 422-8880
Contact: Steve Lemart

SITE PLANNING CIVIL ENGINEERING PLANNING
CONSULTANTS, LLC
LAND SURVEYING LANDSCAPE ARCHITECTURE

111 Hibbard Drive - Lewisville, TX 76047 - P: 972-488-8715 - F: 972-488-8715
610 Bryant Hollow Blvd, Ste 114 - Rowlett, TX 75087 - P: 972-851-8712 - F: 972-850-4000
TBP# F-1798

LEWIS PARK ESTATES
Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
60.958 ACRES
in the
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
CITY OF LUCAS
COLLIN COUNTY, TEXAS

EXISTING DRAINAGE AREA MAP



G&A CONSULTANTS, LLC
TBP# F-1798

Drawn By: TAC
Date: 11/07/2014
Scale: 1" = 100'
Revisions:

14026

C12

File: 3/20/15/1507020.dwg & Core Plot/PROJECT REVIEW/0205.DWG
Plotted: 5/19/2015 1:49 PM by: Dyr Turner, Date: 5/19/2015 1:50 PM, by: Dyr

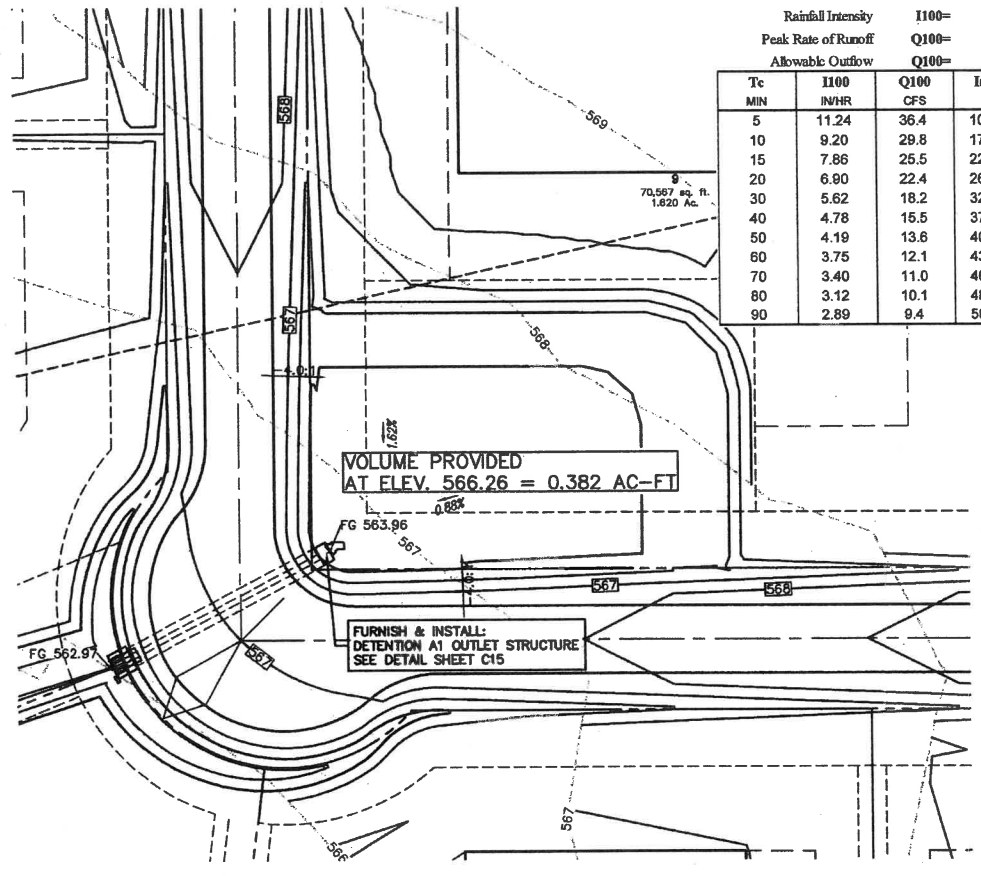
Approximate Location
FEMA Flood Zone "AE" as scaled
from Map #480850405J
(Base Flood Elevation 562)

DETENTION "A1"

Detention Computations for Proposed Development
City of Lucas

	Undeveloped	Developed	Bypass
Area	A= 7.200 AC	7.200 AC	0.000
Runoff Coefficient	C= 0.30	0.45	0.45
Time of Concentration	Tc= 20.0 MIN	10.0 MIN	10.0
Rainfall Intensity	I100= 6.90 IN/HR	9.20 IN/HR	9.20
Peak Rate of Runoff	Q100= 14.9 CFS	29.8 CFS	0.0
Allowable Outflow	Q100= 14.9 CFS	14.9 CFS	

Tc MIN	I100 IN/HR	Q100 CFS	Inflow CF	Outflow CF	Storage		Required AC-FT
					CF	AC-FT	
5	11.24	36.4	10,921	6,707	4,214	0.097	0.341
10	9.20	29.8	17,876	8,942	8,933	0.205	
15	7.86	25.5	22,908	11,178	11,730	0.269	
20	6.90	22.4	26,830	13,414	13,417	0.308	
30	5.62	18.2	32,751	17,885	14,866	0.341	
40	4.78	15.5	37,180	22,356	14,824	0.340	
50	4.19	13.6	40,729	26,827	13,902	0.319	
60	3.75	12.1	43,702	31,298	12,403	0.285	
70	3.40	11.0	46,267	35,770	10,497	0.241	
80	3.12	10.1	48,529	40,241	8,288	0.180	
90	2.89	9.4	50,557	44,712	5,845	0.134	

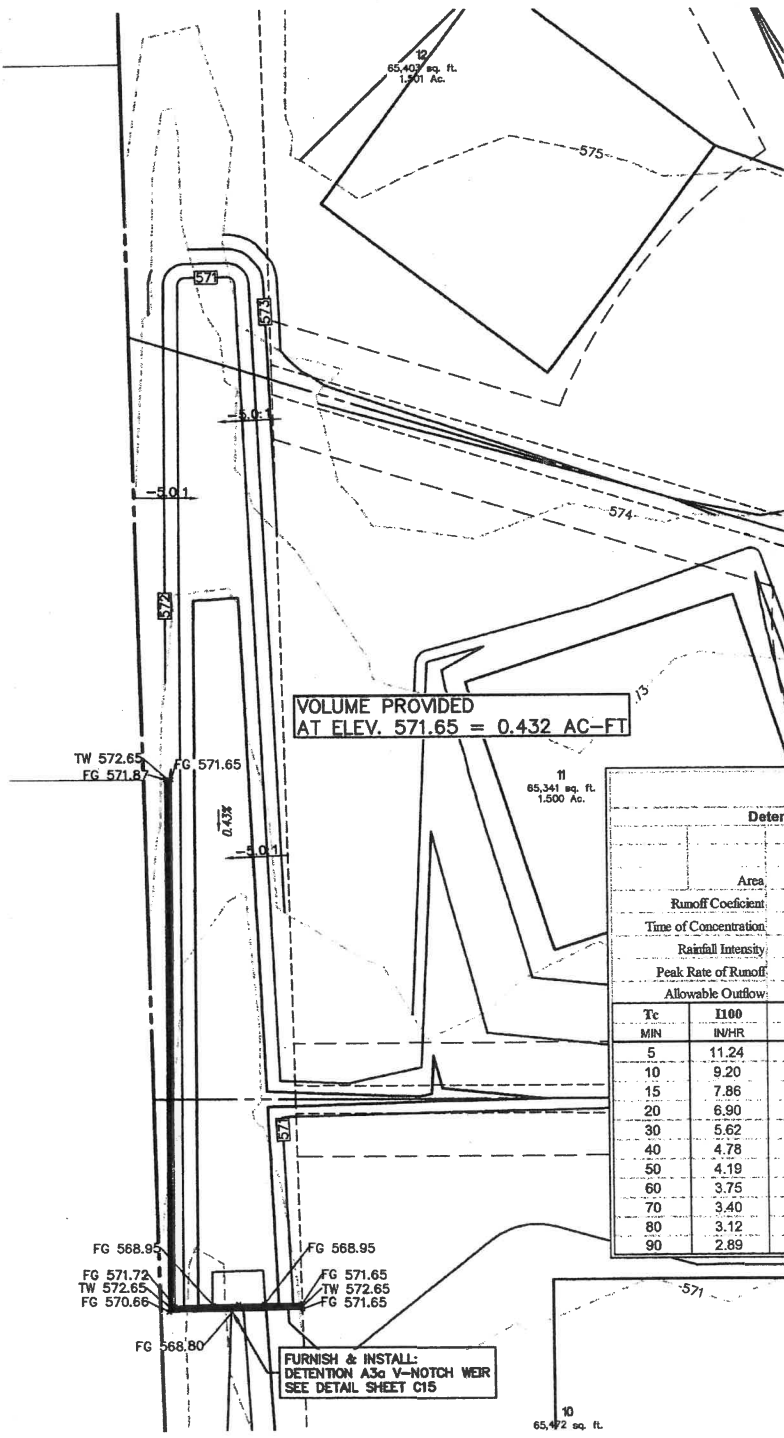
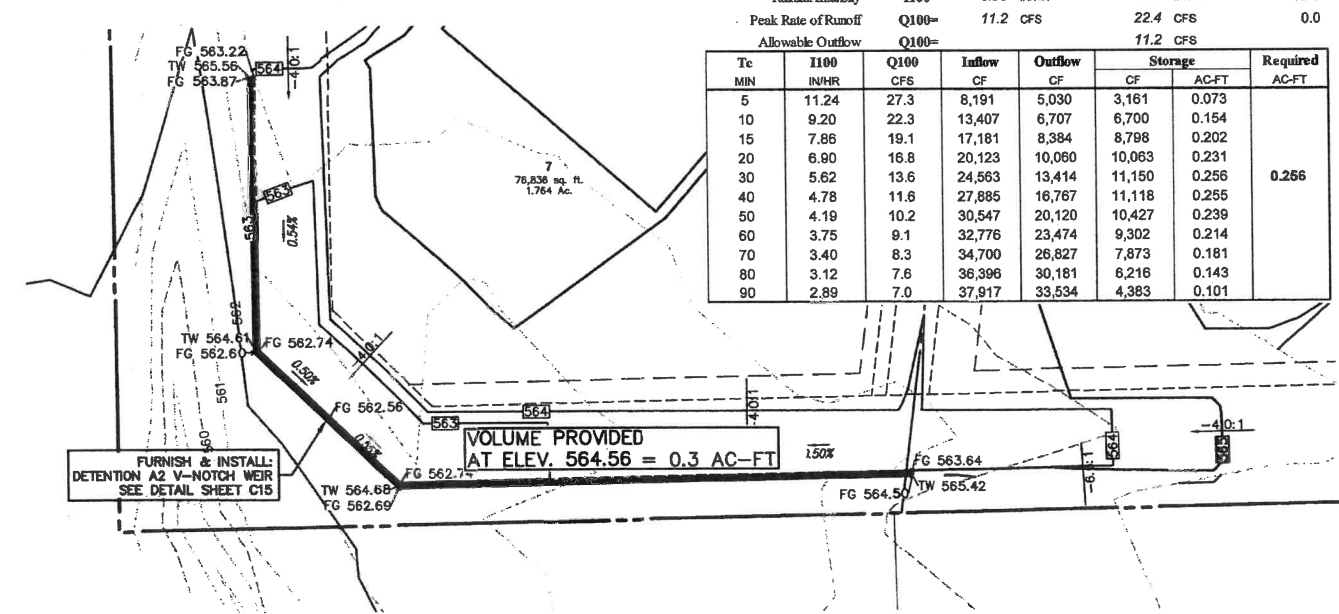


DETENTION "A2"

Detention Computations for Proposed Development
City of Lucas

	Undeveloped	Developed	Bypass
Area	A= 5.400 AC	5.400 AC	0.000
Runoff Coefficient	C= 0.30	0.45	0.45
Time of Concentration	Tc= 20.0 MIN	10.0 MIN	10.0
Rainfall Intensity	I100= 6.90 IN/HR	9.20 IN/HR	9.20
Peak Rate of Runoff	Q100= 11.2 CFS	22.4 CFS	0.0
Allowable Outflow	Q100= 11.2 CFS	11.2 CFS	

Tc MIN	I100 IN/HR	Q100 CFS	Inflow CF	Outflow CF	Storage		Required AC-FT
					CF	AC-FT	
5	11.24	27.3	8,191	5,030	3,161	0.073	0.266
10	9.20	22.3	13,407	6,707	6,700	0.154	
15	7.86	19.1	17,181	8,384	8,798	0.202	
20	6.90	16.8	20,123	10,060	10,063	0.231	
30	5.62	13.6	24,563	13,414	11,150	0.256	
40	4.78	11.6	27,885	16,767	11,118	0.255	
50	4.19	10.2	30,547	20,120	10,427	0.239	
60	3.75	9.1	32,776	23,474	9,302	0.214	
70	3.40	8.3	34,700	26,827	7,873	0.181	
80	3.12	7.6	36,396	30,181	6,216	0.143	
90	2.89	7.0	37,917	33,534	4,383	0.101	



DETENTION "A3a"

Detention Computations for Proposed Development
City of Lucas

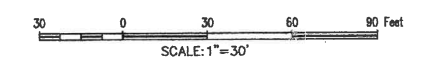
	Undeveloped	Developed	Bypass
Area	A= 9.100 AC	9.100 AC	0.000
Runoff Coefficient	C= 0.30	0.45	0.45
Time of Concentration	Tc= 20.0 MIN	10.0 MIN	10.0
Rainfall Intensity	I100= 6.90 IN/HR	9.20 IN/HR	9.20
Peak Rate of Runoff	Q100= 18.8 CFS	37.7 CFS	0.0
Allowable Outflow	Q100= 18.8 CFS	18.8 CFS	

Tc MIN	I100 IN/HR	Q100 CFS	Inflow CF	Outflow CF	Storage		Required AC-FT
					CF	AC-FT	
5	11.24	46.0	13,803	8,477	5,327	0.122	0.431
10	9.20	37.7	22,593	11,302	11,290	0.259	
15	7.86	32.2	28,953	14,128	14,825	0.340	
20	6.90	28.3	33,911	16,953	16,957	0.389	
30	5.62	23.0	41,394	22,604	18,790	0.431	
40	4.78	19.6	46,991	28,256	18,736	0.430	
50	4.19	17.2	51,477	33,907	17,571	0.403	
60	3.75	15.3	55,234	39,558	15,676	0.360	
70	3.40	13.9	58,476	45,209	13,267	0.305	
80	3.12	12.8	61,335	50,860	10,475	0.240	
90	2.89	11.8	63,898	56,511	7,387	0.170	

LEGEND

C.R.F.	Capped Rebar Found	—	Overhead Power Lines
C.R.S.	Capped Rebar Set	—	Down Guy Wire
C.M.	Control Monument	—	Existing Contours
Mon.	Monument	—	Proposed Contours
BM	Benchmark	—	Concrete Pavement
FH	Fire Hydrant	—	Asphalt Pavement
WM	Water Meter	—	Wood Fence
WV	Water Valve	—	Chain Link Fence
W/L	Water Line	—	Wire Fence
ICV	Irrigation Control Valve	—	Masonry Wall
SSMH	Sanitary Sewer Manhole	—	Existing Tree
CO	Sanitary Sewer Cleanout	—	(FL) Flowline
UP	Utility Pole	—	Centerline of Creek, Swale, or Waterway
LP	Light Pole	—	Creek, Swale, or Waterway Embankment
TC	Top of Curb	—	
TP	Top of Pavement	—	
TW	Top of Wall	—	
FG	Finished Grade	—	
U.E.	Utility Easement	—	
D.E.	Drainage Easement	—	
B.L.	Building Line	—	
R.O.W.	Right-of-Way	—	
D.R.	Deed Records	—	
P.R.	Plat Records	—	

GENERAL NOTES
1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.



BENCHMARKS:
BM#1 - RM133 - 590.05' Square set on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 46083004556, Dated January 19th, 1996.
TBM#2 - Square Cut - 569.45' ~981' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr. N=7,079,521.1' E=2,657,109.8'
TBM#3 - "X" - 579.96' ~760' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct. N=7,080,175.7' E=2,558,146.1'
TBM#4 - PK Nail - 554.84' ~900' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cir. N=7,079,803.4' E=2,559,558.0'
TBM#5 - "X" - 584.19' ~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Side Lanes Trail. N=7,076,568.5' E=2,559,653.8'

SITE PLANNING CIVIL ENGINEERING PLANNING
CONSULTANTS, LLC
LAND SURVEYING LANDSCAPE ARCHITECTURE

111 Hildebrand Drive • Lucas, TX 75857 • P: 972-465-8715 • F: 972-465-8716
810 Bryant Street • Houston, TX 77002 • P: 713-861-8172 • F: 713-861-8173
TYPE Form No. 1700

LEWIS PARK ESTATES
Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
60856 Acres
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
CITY OF LUCAS
COLLIN COUNTY, TEXAS

DETENTION POND DETAILS & CALCULATIONS

G&A CONSULTANTS, LLC
TYPE F-1700
Drawn By: TAC
Date: 11/07/2014
Scale: 1" = 30'
Revisions:

14026
OWNER/DEVELOPER
CADG LEWIS PARK LLC
C/O LENART DEVELOPMENT COMPANY, LLC
520 CENTRAL PARKWAY E SUITE 104
PLANO, TX 75074
Ph. (972) 422-9880
Contact: Steve Lenart

C14



G&A CONSULTANTS, LLC
 TYPE F-1708

Drawn By: T.F.
 Date: 11/07/2014
 Scale: NTS
 Revisions:

OWNER/DEVELOPER
 CADG LEWIS PARK LLC
 C/O LENART DEVELOPMENT COMPANY, LLC
 520 CENTRAL PARKWAY E SUITE 104
 PLANO, TX 75074
 Ph: (972) 422-9880
 Contact: Steve Lenart

DETENTION A1 OUTLET STRUCTURE

Q (cfs)	Cw	L (ft)	H (ft)
13.50	3.33	1.25	2.25

$Q=CwLH^{1.5}$

BENCHMARKS:

BM#1 - RM133 - 590.08'
 Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 48085C04550, Dated January 18th, 1988.

TBM#2 - Square Cut - 568.45'
 ~981' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
 N=7,079,521.1' E=2,557,109.8'

TBM#3 - "X" - 579.86'
 ~760' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
 N=7,080,175.7' E=2,558,146.1'

TBM#4 - PK Nail - 554.84'
 ~800' Northeast from the Northeast corner of subject property of the south edge of a cul-de-sac on Alameda Ct.
 N=7,079,803.4' E=2,559,558.0'

TBM#5 - "X" - 584.19'
 ~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Sais Lagoa Trail.
 N=7,076,568.5' E=2,559,653.6'

LEGEND

C.R.F.	Capped Rebar Found	—	Overhead Power Lines
C.R.S.	Capped Rebar Set	—	Down Guy Wire
C.M.	Control Monument	—	Existing Contours
Mon.	Monument	—	Proposed Contours
BM	Benchmark	—	Concrete Pavement
FH	Fire Hydrant	—	Asphalt Pavement
WM	Water Meter	—	Wood Fence
WV	Water Valve	—	Chain Link Fence
W/L	Water Line	—	Wire Fence
ICV	Irrigation Control Valve	—	Masonry Wall
SSMH	Sanitary Sewer Manhole	—	Existing Tree
CO	Sanitary Sewer Cleanout	—	(FL) Flowline
UP	Utility Pole	—	Centerline of Creek, Swale, or Waterway
LP	Light Pole	—	Creek, Swale, or Waterway Embankment
TC	Top of Curb	—	
TP	Top of Pavement	—	
TW	Top of Wall	—	
FG	Finished Grade	—	
U.E.	Utility Easement	—	
D.E.	Drainage Easement	—	
B.L.	Building Line	—	
R.O.W.	Right-of-Way	—	
D.R.	Deed Records	—	
P.R.	Plat Records	—	

GENERAL NOTES

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- STRUCTURAL DESIGN IS TO BE PROVIDED BY OTHERS IF NEEDED.
- NOT TO SCALE (NTS).

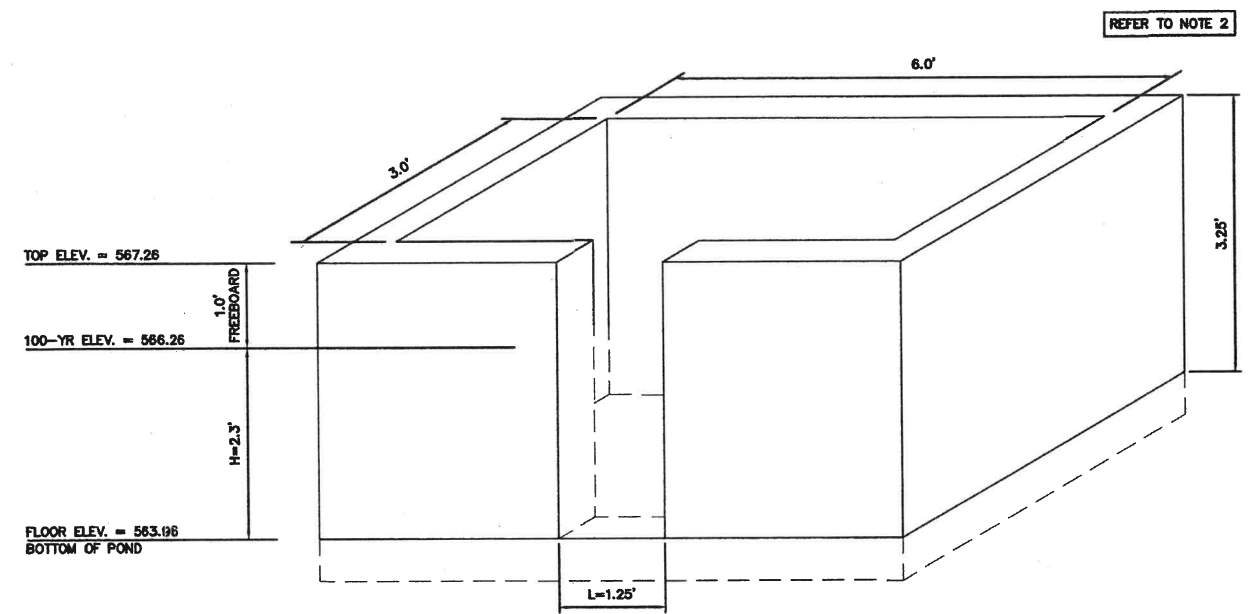
V-NOTCH WEIR

DETENTION AREA	Q (cfs)	Cw	L (ft)	H (ft)	TOP WIDTH (ft)
A2	11.00	2.77	95.00	1.75	3.75
A3a	18.80	1.78	60.00	2.85	3.20

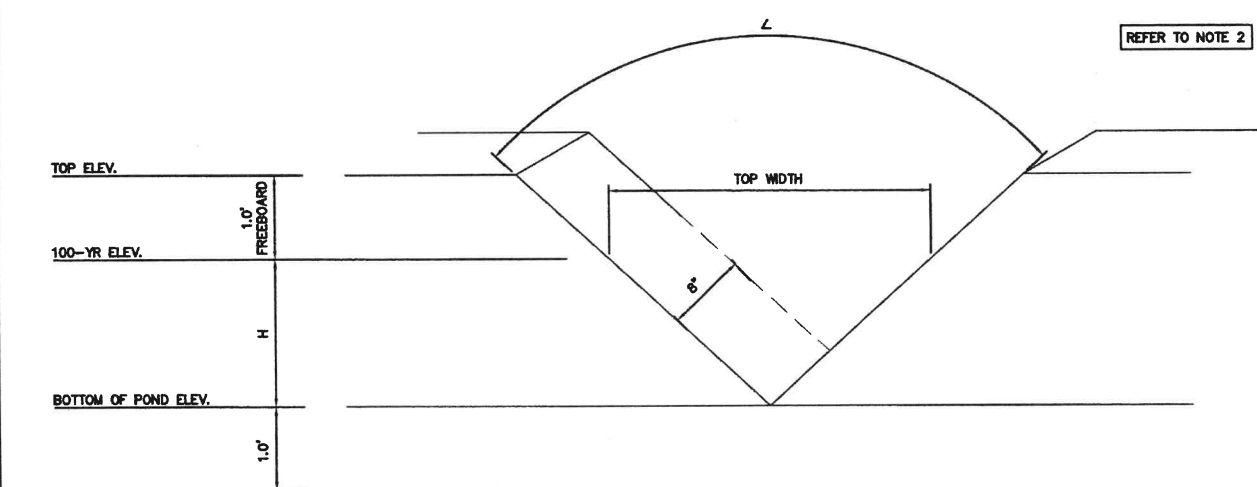
$Q=CwL^{2.5}$ $Cw=2.54Tan(\phi/2)$

V-NOTCH WEIR ELEVATIONS

DETENTION AREA	TOP ELEV.	100-YR ELEV.	BOTTOM OF POND ELEV.
A2	565.56	564.56	562.56
A3a	572.65	571.65	569.40



**DETENTION A1 OUTLET STRUCTURE
 NTS**



**V-NOTCH WEIR
 NTS**

File: 2/15/14/14026/14026.dwg Plot Date: 11/07/2014 1:00 PM, by: T.F.

DETENTION "B"

Detention Computations for Proposed Development
City of Lucas

		Undeveloped	Developed	Bypass
Area	A=	37,700 AC	37,700 AC	0.000
Runoff Coefficient	C=	0.32	0.45	0.00
Time of Concentration	Tc=	20.0 MIN	10.0 MIN	0.0
Rainfall Intensity	I100=	6.90 IN/HR	9.20 IN/HR	0.00
Peak Rate of Runoff	Q100=	83.3 CFS	156.1 CFS	0.0
Allowable Outflow	Q100=	83.3 CFS		

Tc	I100	Q100	Inflow	Outflow	Storage	Required
MIN	IN/HR	CFS	CF	CF	CF	AC-FT
5	11.24	190.6	57,185	37,506	19,679	0.452
10	9.20	156.0	93,598	50,007	43,591	1.001
15	7.86	133.3	119,949	62,509	57,440	1.319
20	6.90	117.1	140,487	75,011	65,476	1.503
30	5.62	95.3	171,489	100,015	71,474	1.641
40	4.78	81.1	194,678	125,018	69,659	1.599
50	4.19	71.1	213,263	150,022	63,241	1.452
60	3.75	63.6	228,826	175,026	53,801	1.235
70	3.40	57.7	242,257	200,030	42,227	0.969
80	3.12	52.9	254,101	225,033	29,068	0.667
90	2.89	49.0	264,720	250,037	14,683	0.337

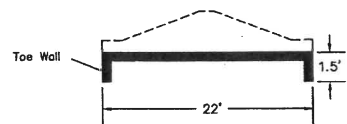
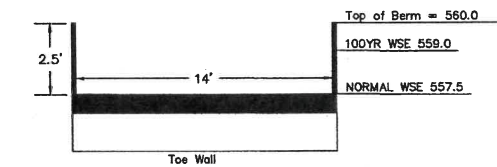
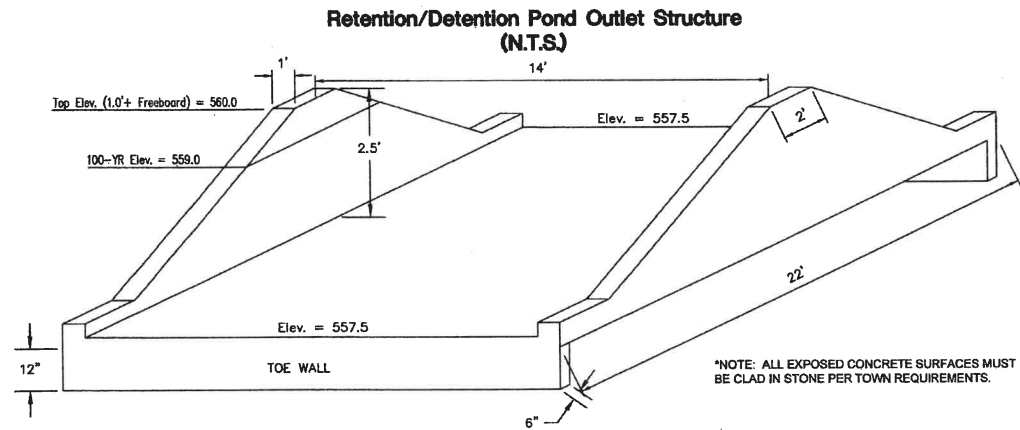
RECTANGULAR WEIR

DETENTION AREA	Q (cfs)	Cw	L (ft)	H (ft)
B	83.30	3.33	14.00	1.50

$Q=CwLH^{1.5}$

RECTANGULAR WEIR ELEVATIONS

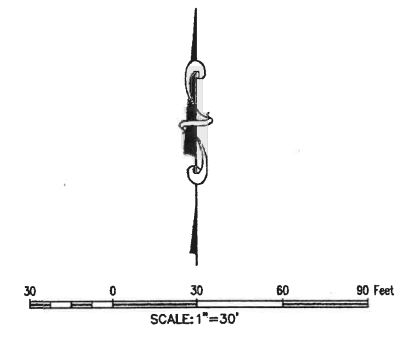
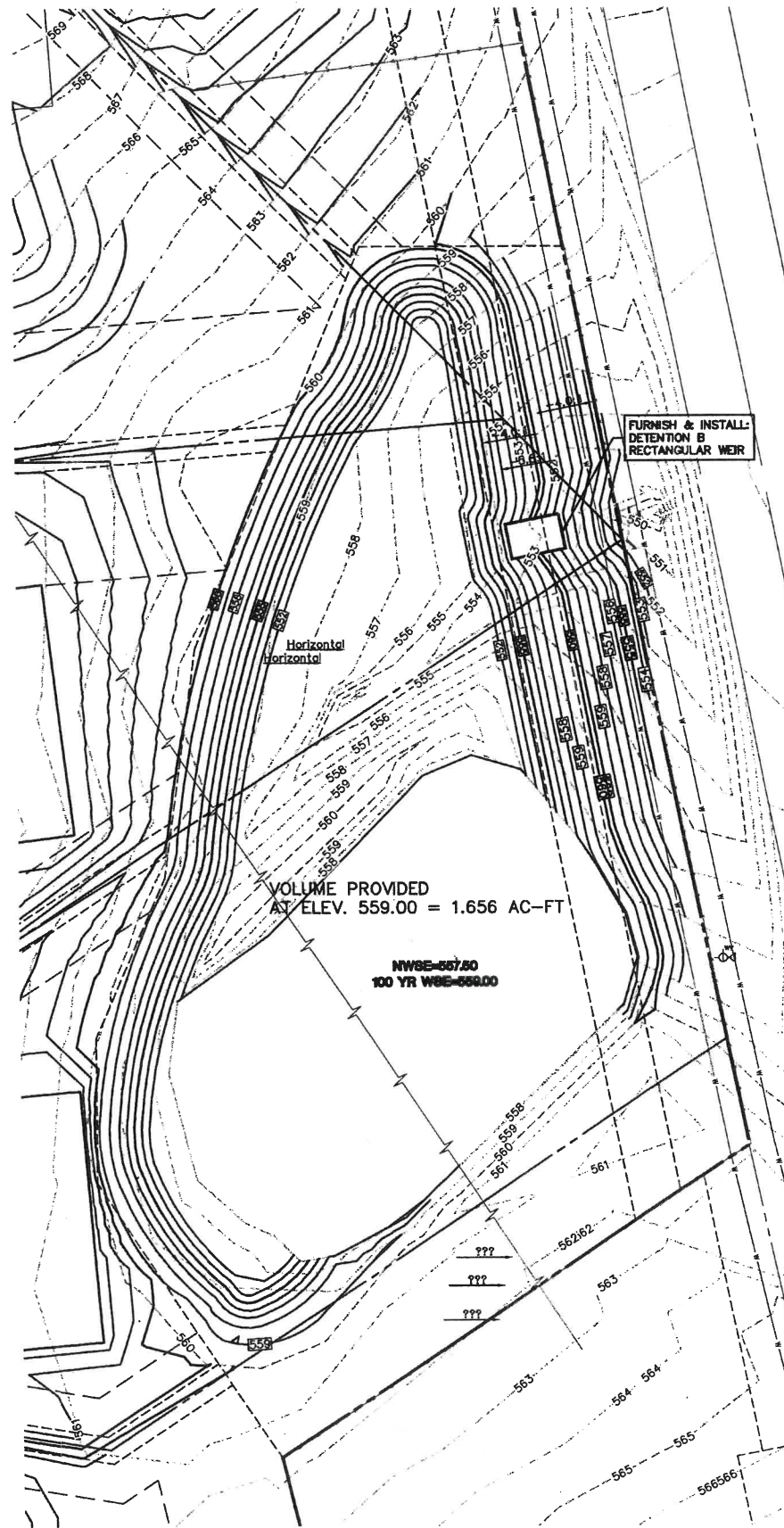
DETENTION AREA	TOP ELEV.	100-YR ELEV.	BOTTOM OF POND ELEV.
B	560.00	559.00	557.50 NORMAL WSE



WEIR CROSS SECTIONS (N.T.S.)

LENGTH = 22 FT
WIDTH = 14 FT
HEIGHT = 2.5 FT

6" 3000 PSI CONCRETE
W/ #3 REBAR 12" O.C.E.W.
& 12" TOE WALLS (INFLOW AND OUTFLOW)



- #### BENCHMARKS:
- BM#1 - RM133 - 590.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 48085C0455, Dated January 19th, 1926.
 - TBM#2 - Square Cut - 569.45'
-98' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,079,521.1' E=2,557,109.8'
 - TBM#3 - "Y" - 579.95'
-760' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
N=7,080,175.7' E=2,558,146.1'
 - TBM#4 - PK Nail - 554.84'
-900' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cr.
N=7,079,803.4' E=2,559,558.0'
 - TBM#5 - "Y" - 584.19'
-1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Seis Lagos Trail.
N=7,076,568.5' E=2,559,853.6'

LEGEND

C.R.F.	Capped Rebar Found	—	Overhead Power Lines
C.R.S.	Capped Rebar Set	—	Down Guy Wire
C.M.	Control Monument	—	Existing Contours
Mon.	Monument	—	Proposed Contours
BM	Benchmark	—	Concrete Pavement
FH	Fire Hydrant	—	Asphalt Pavement
WM	Water Meter	—	Wood Fence
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UP	Utility Pole	—	Centerline of Creek, Swale, or Waterway
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TC	Top of Curb	—	
TP	Top of Pavement	—	
TW	Top of Wall	—	
FG	Finished Grade	—	
U.E.	Utility Easement	—	
D.E.	Drainage Easement	—	
B.L.	Building Line	—	
R.O.W.	Right-of-Way	—	
D.R.	Deed Records	—	
P.R.	Plot Records	—	

- #### GENERAL NOTES
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 - STRUCTURAL DESIGN IS TO BE PROVIDED BY OTHERS IF NEEDED.
 - NOT TO SCALE (NTS).

SITELANNING CIVIL/ENGINEERING PLANNING
CONSULTANTS, LLC
LAND SURVEYING LANDSCAPE ARCHITECTURE

111 Hickside Drive • Lucasville, TX 75857 • P: 972.468.8712 • F: 972.428.7716
910 Bryan Nelson Blvd. Ste. 114 • Houston, TX 77052 • P: 281.551.9712 • F: 817.280.4043
TJPEL Form No. 10/07/00

LEWIS PARK ESTATES
Lot 1-16, Block A, B
LEWIS PARK ESTATES
60.858 Acres
in the
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
CITY OF LUCAS
COLLIN COUNTY, TEXAS

DETENTION POND DETAILS AND CALCULATIONS

DOUGLAS W. WEAVER
117386
PROFESSIONAL ENGINEER
5/19/2015

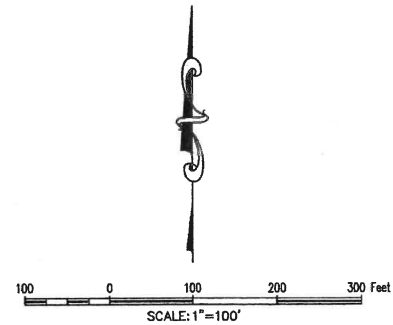
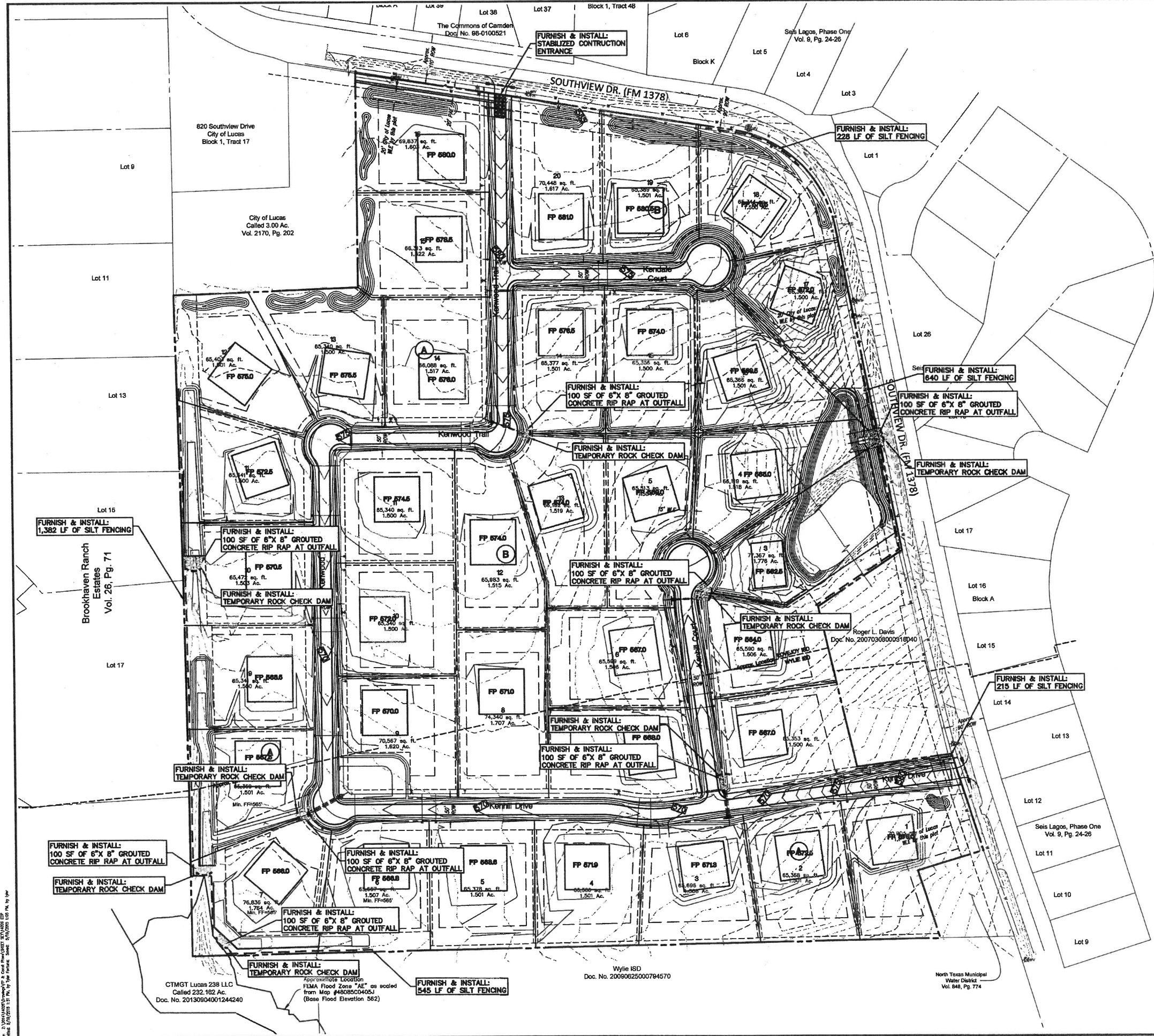
G&A CONSULTANTS, LLC.
TJPE F-0798

Drawn By: T.J.F.
Date: 11/07/2014
Scale: NTS
Revisions:

14026

OWNER/DEVELOPER
CADG LEWIS PARK, LLC
C/O LENART DEVELOPMENT COMPANY, LLC
620 CENTRAL PARKWAY E. SUITE 104
PLANO, TX 75074
PH: (972) 422-8880
Contact: Steve Lenart

C17



BENCHMARKS:

BM#1 - RM133 - 590.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Mop# 48085004550, Dated January 19th, 1998.

BM#2 - Square Cut - 569.45'
~981' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,076,521.1' E=2,557,106.8'

BM#3 - "X" - 579.86'
~760' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
N=7,080,175.7' E=2,558,146.1'

BM#4 - PK Nail - 554.84'
~900' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cr.
N=7,076,803.4' E=2,559,558.0'

BM#5 - "X" - 584.19'
~1040' Southwest from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Seis Lagos Trail.
N=7,076,568.5' E=2,559,653.8'

LEGEND

C.R.F.	Capped Rebar Found	Overhead Power Lines
C.R.S.	Capped Rebar Set	Down Guy Wire
C.M.	Control Monument	Existing Contours
Mon.	Monument	443
BM	Benchmark	445
FH	Fire Hydrant	Proposed Contours
WM	Water Meter	Concrete Pavement
WV	Water Valve	Asphalt Pavement
W/L	Water Line	Wood Fence
ICV	Irrigation Control Valve	Chain Link Fence
SSMH	Sanitary Sewer Manhole	Utility Pole
CO	Sanitary Sewer Cleanout	Wire Fence
UP	Utility Pole	Light Pole
TC	Top of Curb	Masonry Wall
TP	Top of Pavement	Existing Tree
TW	Top of Wall	(FL) Flowline
FG	Finished Grade	Centerline of Creek, Swale, or Waterway Embankment
U.E.	Utility Easement	
D.E.	Drainage Easement	
B.L.	Building Line	
R.O.W.	Right-of-Way	
D.R.	Deed Records	
P.R.	Plot Records	

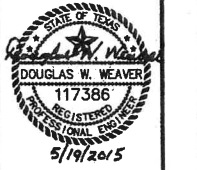
GENERAL NOTES:

1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.
2. STRUCTURAL DESIGN IS TO BE PROVIDED BY OTHERS IF NEEDED.

SITE PLANNING CIVIL ENGINEERING PLANNING
CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE
 111 Hildebrand Drive • Lewisville, TX 75057 • P: 972.438.8712 • F: 972.438.8716
 610 Bryan • Lewisville, TX 75057 • P: 972.438.8712 • F: 972.438.8716
 1895 Elm St. #100 • Dallas, TX 75201 • P: 972.438.8712 • F: 972.438.8716

LEWIS PARK ESTATES
 Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
 60.866 Acres
 JAMES ANDERSON SURVEY, ABSTRACT NO. 17
 IN THE
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

GRADING & EROSION CONTROL PLAN

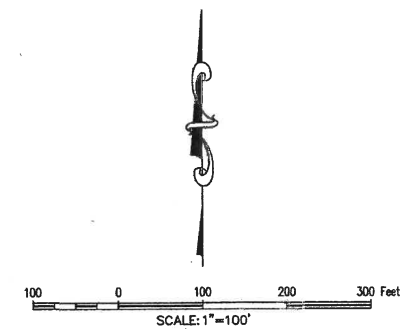


G&A CONSULTANTS, LLC
 TYPE F-1798

Drawn By: T.F.
 Date: 11/07/2014
 Scale: 1" = 100'
 Revisions:

14026
 OWNER/DEVELOPER
 CADG LEWIS PARK LLC
 C/O LENART DEVELOPMENT COMPANY, LLC
 520 CENTRAL PARKWAY E SUITE 104
 PLANO, TX 75074
 Ph. (972) 422-6880
 Contact: Steve Lenart

C18



BENCHMARKS:

BM#1 - RM133 - 590.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 4808500455G, Dated January 19th, 1996.

BM#2 - Square Cut - 569.45'
~981' Southwest from the Northwest corner of subject property on south edge of Broaddown Dr.
N=7,079,521.1' E=2,557,109.8'

BM#3 - "C" - 579.86'
~780' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
N=7,080,175.7' E=2,558,146.1'

BM#4 - "K" Nail - 554.84'
~900' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cr.
N=7,079,803.4' E=2,558,558.0'

BM#5 - "X" - 584.19'
~1040' Southwest from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Sels Lagos Trail.
N=7,076,568.5' E=2,559,653.6'

LEGEND			
C.R.F.	Capped Rebar Found	Overhead Power Lines	
C.R.S.	Capped Rebar Set	Down Guy Wire	
C.M.	Control Monument	443 Existing Contours	
Mon.	Monument	[445] Proposed Contours	
BM	Benchmark	Concrete Pavement	
FH	Fire Hydrant	Asphalt Pavement	
WM	Water Meter	Wood Fence	
WV	Water Valve	Chain Link Fence	
W/L	Water Line	Wire Fence	
ICV	Irrigation Control Valve	Top of Curb	
SSMH	Sanitary Sewer Manhole	TP	Top of Pavement
CO	Sanitary Sewer Cleanout	TW	Top of Wall
UP	Utility Pole	FG	Finished Grade
LP	Light Pole	U.E.	Utility Easement
TC	Top of Curb	D.E.	Drainage Easement
TP	Top of Pavement	B.L.	Building Line
TW	Top of Wall	R.O.W.	Right-of-Way
FG	Finished Grade	D.R.	Deed Records
U.E.	Utility Easement	P.R.	Plot Records
D.E.	Drainage Easement		
B.L.	Building Line		
R.O.W.	Right-of-Way		
D.R.	Deed Records		
P.R.	Plot Records		

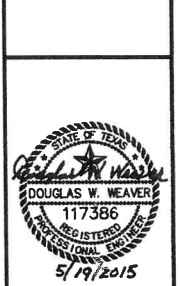
UTILITY NOTES:

1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.

SET PLANNING CIVIL ENGINEERING PLATTING
CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE
 111 Hillside Drive - Lewisville, TX 76046 - P: 972-438-8712 - F: 972-438-0716
 610 Byrum Nelson Blvd, Ste 114 - Houston, TX 77052 - P: 282-831-8711 - F: 817-860-6949
 TDFE Firm No. 1007700

LEWIS PARK ESTATES
 Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
 60.858 Acres
 In the
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

STORM SEWER PLAN



G&A CONSULTANTS, LLC
 TDFE F-1708

Drawn By: TJC
 Date: 11/07/2014
 Scale: 1" = 100'
 Revisions:

14026

C19

OWNER/DEVELOPER
GADG LEWIS PARK LLC
 C/O LENART DEVELOPMENT COMPANY, LLC
 520 CENTRAL PARKWAY E SUITE 104
 PLANO, TX 76074
 Ph. (972) 422-6880
 Contact: Steve Lenart

File: A:\2014\14026\14026.dwg & Data (New) SHEET 232 (1 of 2) 11/07/2014 10:58 AM, by TJC
 Plot Date: 11/07/2014 10:58 AM, by TJC

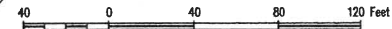
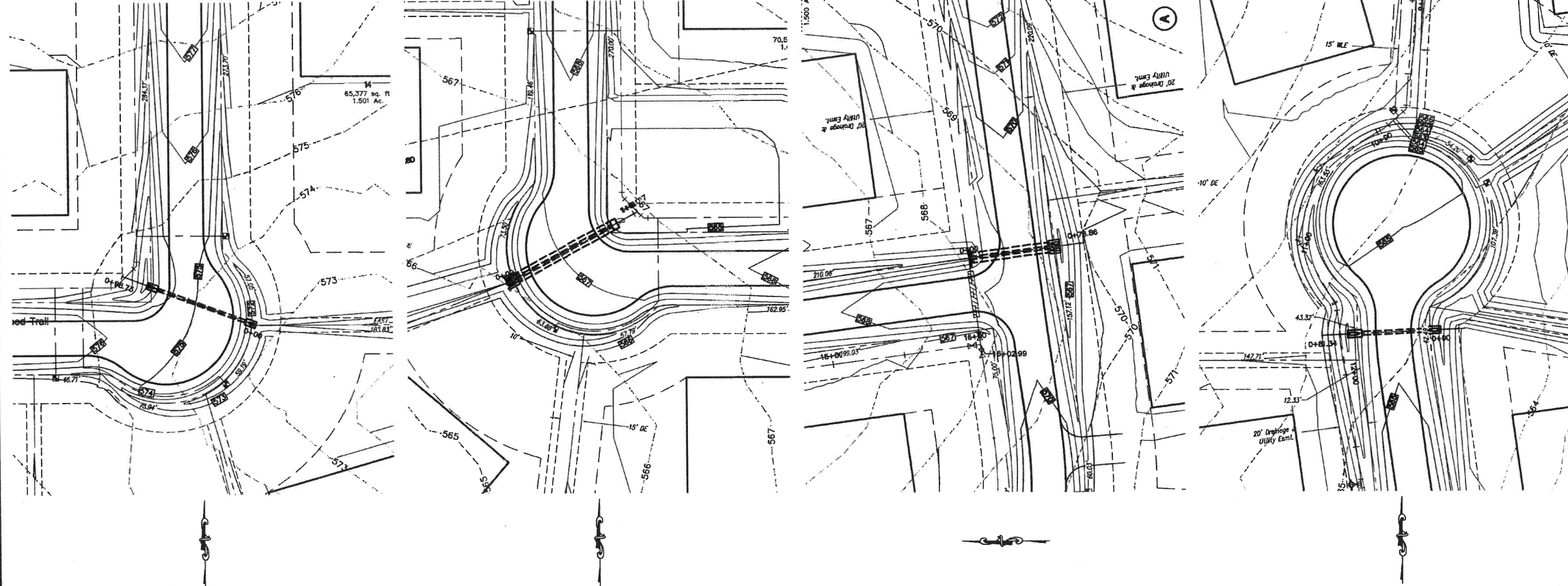
CTMGT Lucas 238 LLC
 Called 232.152 Ac.
 Doc. No. 20130904001244240

Approximate Location
 FEMA Flood Zone "AE" as scaled
 from Map #4908800403J
 (Base Flood Elevation 56.2)

Wylie ISD
 Doc. No. 20060625000794570

North Texas Municipal
 Water District
 Vol. 648, Pg. 774

LEWIS PARK ESTATES

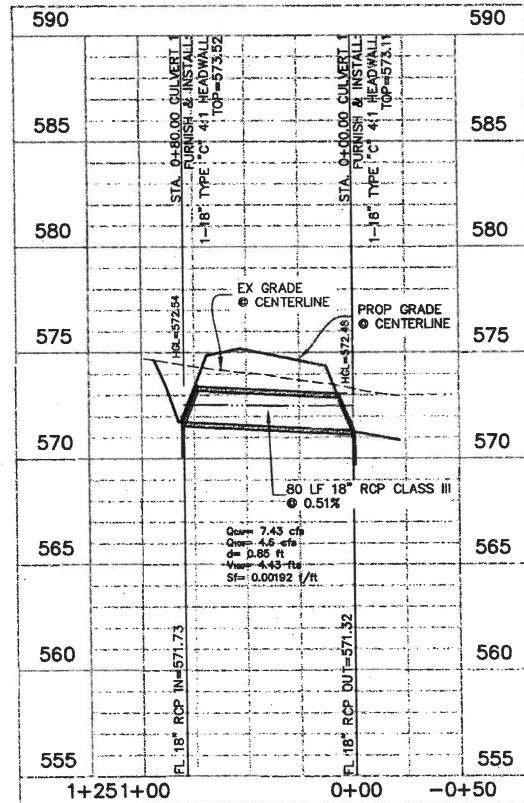


BENCHMARKS:

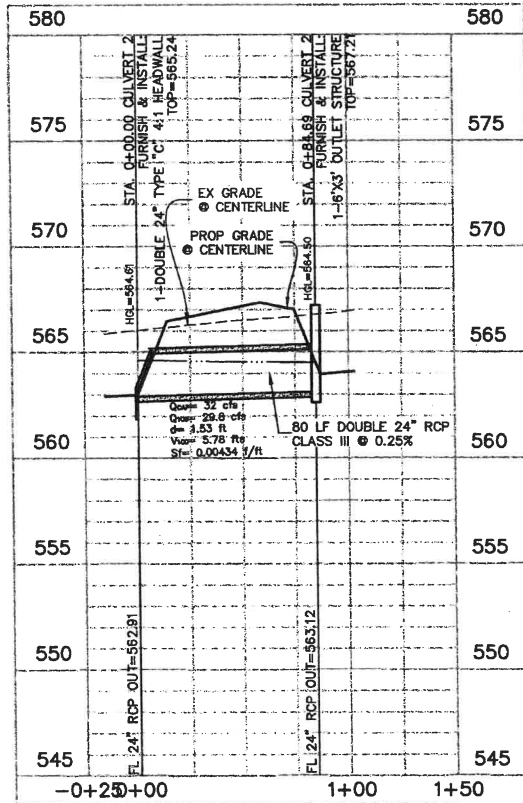
- BM#1 - RM133 - 590.08'
Square cut on east hoodwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 4808504556, Dated January 19th, 1996.
- TBM#2 - Square Cut - 569.45'
-951' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,079,521.1' E=2,557,109.8'
- TBM#3 - "X" - 579.86'
-760' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Cl.
N=7,080,175.7' E=2,558,146.1'
- TBM#4 - PK Nail - 554.84'
-900' Northeast from the Northeast corner of subject property at the south edge of a cut-to-see on Alameda Cr.
N=7,078,803.4' E=2,559,558.0'
- TBM#5 - "X" - 584.15'
-1040' Southeast from the southeast corner of subject property on a hoodwall on the north side of the intersection of FM 1378 & Sola Logos Trail.
N=7,078,568.5' E=2,559,653.8'

UTILITY NOTES

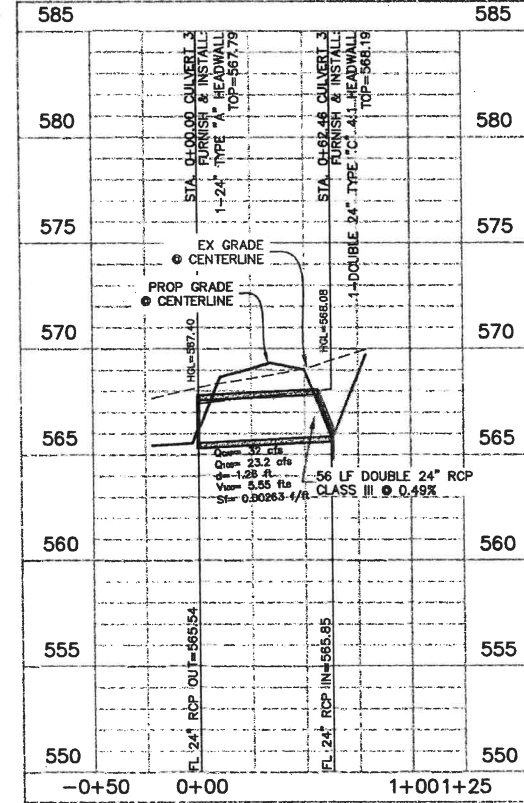
1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.



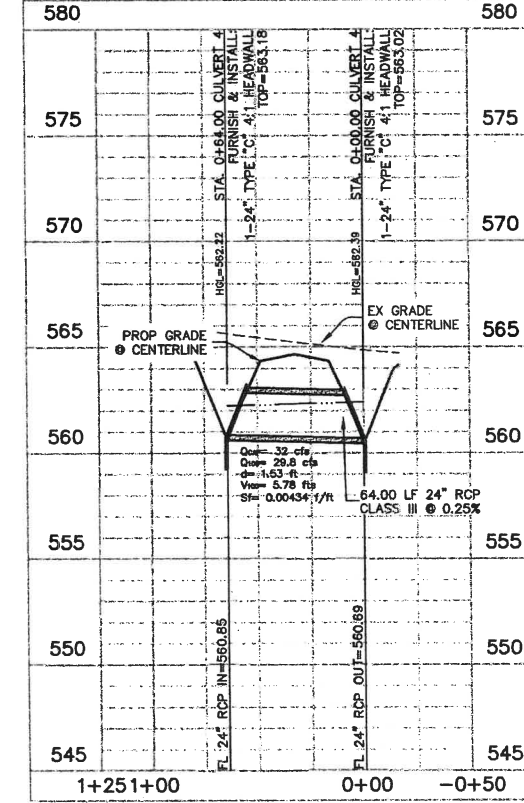
STORM CULVERT 1



STORM SEWER CULVERT 2



STORM SEWER CULVERT 3



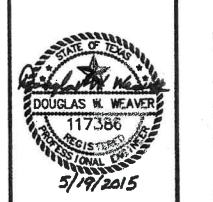
STORM CULVERT 4

The 2" X 11" (ANSI) Drawing is a Civil Plan/Profile Drawing. It was prepared by the Engineer on 5/17/2015. It is the property of G&A Consultants, LLC.

SITE PLANNING CIVIL ENGINEERING PLANNING
CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE
 111 Hildebrand Drive • Lewisville, TX 76047 • P: 972.483.9712 • F: 972.483.9716
 610 Spring Valley Road • Rowlett, TX 75087 • P: 972.483.9712 • F: 972.483.9716
 TOLL FREE: 1-877-456-6244
 TX REG. ENG. NO. 1793 TX REG. LAND SURV. NO. 10007700

LEWIS PARK ESTATES
 Lot 1-16, Block A, B
LEWIS PARK ESTATES
 60.858 Acres
 JAMES ANDERSON SURVEY ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

STORM SEWER PROFILE



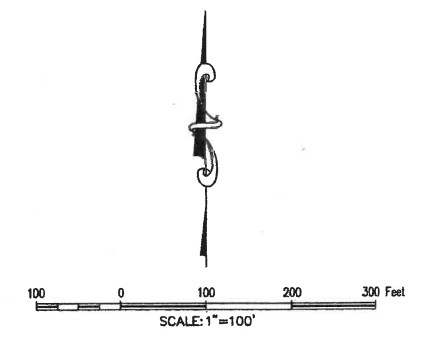
G&A CONSULTANTS, LLC.
 TYPE F-098
 Drawn By: TJE
 Date: 11/07/2014
 Scale: H 1"=40' V 1"=4'
 Revisions:

OWNER/DEVELOPER
 CADG LEWIS PARK LLC
 C/O LENART DEVELOPMENT COMPANY,
 LLC
 520 CENTRAL PARKWAY E SUITE 104
 PLANO, TX 75074
 Ph: (972) 422-9880
 Contact: Steve Lenart

14026

C20

LEWIS PARK ESTATES



BENCHMARKS:

BM#1 - RM133 - 590.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 4808504550, Dated January 19th, 1998.

TBM#2 - Square Cut - 569.45'
~981' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,079,521.1' E=2,557,109.8'

TBM#3 - "X" - 579.96'
~760' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
N=7,080,175.7' E=2,558,146.1'

TBM#4 - "PK" - 554.84'
~900' Northeast from the Northeast corner of subject property at the south edge of a cut-de-wac on Alameda Ct.
N=7,079,803.4' E=2,558,558.0'

TBM#5 - "X" - 584.19'
~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Seis Lagos Trail.
N=7,076,568.5' E=2,559,653.8'

LEGEND

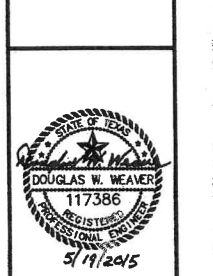
C.R.F.	Capped Rebar Found	—	Overhead Power Lines
C.R.S.	Capped Rebar Set	—	Down Guy Wire
C.M.	Control Monument	—	Existing Contours
Mon	Monument	—	Proposed Contours
BM	Benchmark	—	Concrete Pavement
FH	Fire Hydrant	—	Asphalt Pavement
WM	Water Meter	—	Wood Fence
WV	Water Valve	—	Chain Link Fence
W/L	Water Line	—	Wire Fence
ICV	Irrigation Control Valve	—	Masonry Wall
SSMH	Sanitary Sewer Manhole	—	Existing Tree
CC	Sanitary Sewer Cleanout	—	(FL) Flowline
UP	Utility Pole	—	Centerline of Creek, Swale, or Waterway
LP	Light Pole	—	Creek, Swale, or Waterway Embankment
TC	Top of Curb	—	
TP	Top of Pavement	—	
TW	Top of Wall	—	
FG	Finished Grade	—	
U.E.	Utility Easement	—	
D.E.	Drainage Easement	—	
B.L.	Building Line	—	
R.O.W.	Right-of-Way	—	
D.R.	Deed Records	—	
P.R.	Plot Records	—	

- UTILITY NOTES:**
1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.
 2. ALL FIRE HYDRANTS TO BE WATEROUS FIRE HYDRANTS OR EQUAL, APPROVED BY CITY OF LUCAS PUBLIC WORKS DIRECTOR.
 3. ALL FITTINGS TO BE FORD BRASS OR EQUAL, APPROVED BY CITY OF LUCAS PUBLIC WORKS DIRECTOR.
 4. ALL METERS AND SERVICE TAPS SHALL BE 1" POLY OR LARGER.
 5. ALL UTILITY WORK WITHIN TxDOT ROW REQUIRES SEPARATE PERMIT FROM TxDOT.

STEPANING CIVIL ENGINEERING PLANNING
CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE
 11111 Westside Oaks, Lubbock, TX 79407 • P: 806.488.8778 • F: 806.488.8775
 6900 Bryan Boulevard, Suite 114 • Rowland, TX 76082 • P: 817.681.9715 • F: 817.680.0419
 TPLS, P.E. Firm No. 10407700

LEWIS PARK ESTATES
 Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
 60.856 Acres
 JAMES ANDERSON SURVEY ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

OVERALL WATER PLAN



G&A CONSULTANTS, LLC
 TPLS F-0793

Drawn By:	
Date:	11/07/2014
Scale:	1" = 100'
Revisions:	

14026

OWNER/DEVELOPER
 GADG LEWIS PARK LLC
 C/O LENART DEVELOPMENT COMPANY, LLC
 520 CENTRAL PARKWAY E. SUITE 104
 PLANO, TX 75074
 Ph. (972) 422-9880
 Contact: Steve Lanart

C21

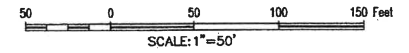
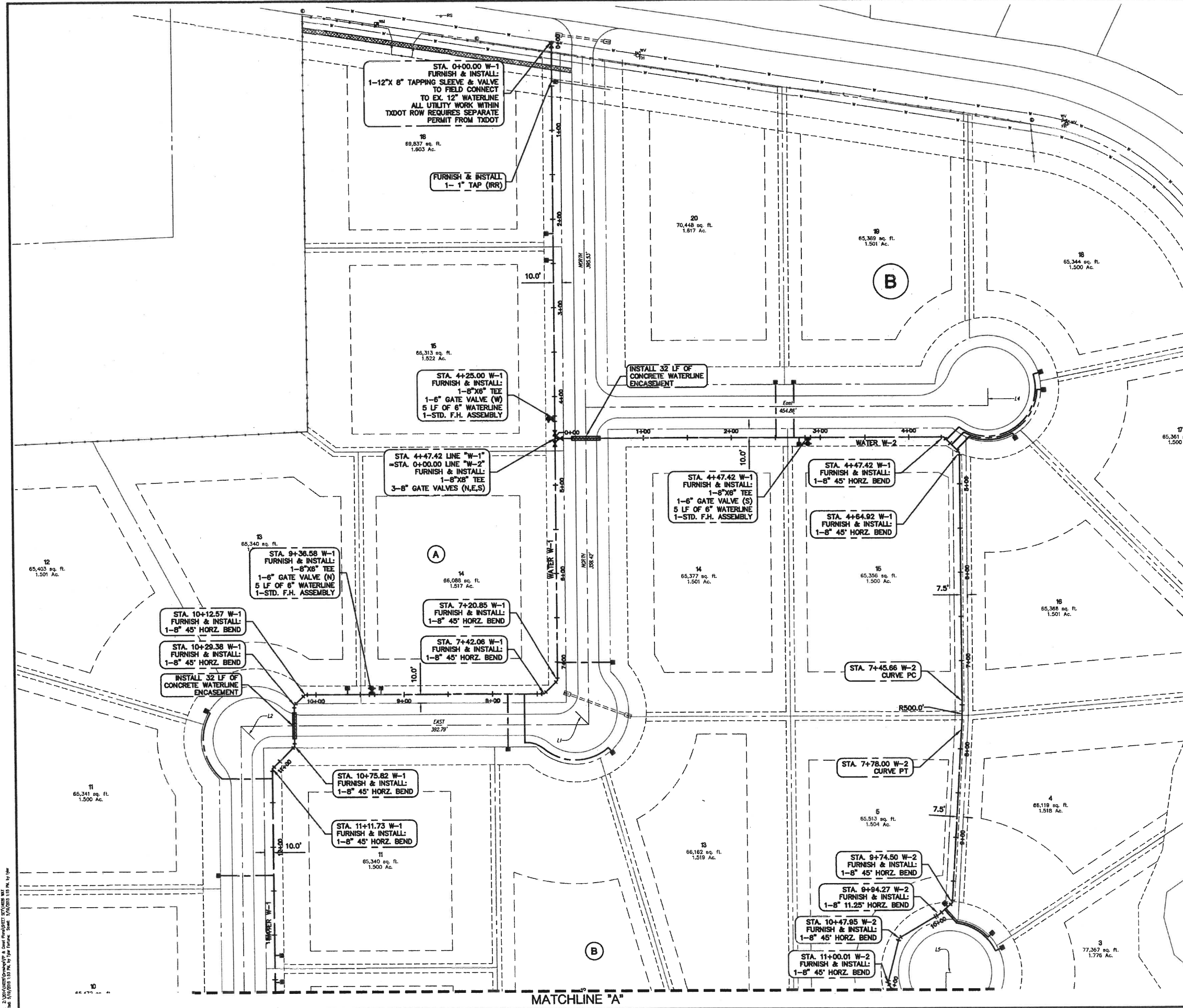
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CTMGT Lucas 238 LLC
 Called 232.162 Ac.
 Doc. No. 20130904001244240

Approximate Location
 FEMA Flood Zone "AE" as scaled
 from Map #480850405J
 (Base Flood Elevation 952)

Wylie ISD
 Doc. No. 20090825000794570

North Texas Municipal
 Water District
 Vol. 846, Pg. 774



BENCHMARKS:

BM#1 - RM133 - 560.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378, Map# 46085C04556, Dated January 19th, 1996.

TBM#2 - Square Cut - 569.45'
-991' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,079,521.1' E=2,557,109.8'

TBM#3 - "X" - 579.96'
-760' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
N=7,080,175.7' E=2,558,146.1'

TBM#4 - PK Nail - 554.84'
-800' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cr.
N=7,079,803.4' E=2,558,558.0'

TBM#5 - "X" - 584.18'
-1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Sale Lagos Trail.
N=7,079,568.5' E=2,559,653.8'

LEGEND

C.R.F.	Capped Rebar Found	Overhead Power Lines
C.R.S.	Capped Rebar Set	Down Guy Wire
C.M.	Control Monument	443 Existing Contours
Mon.	Monument	445 Proposed Contours
BM	Benchmark	Concrete Pavement
FH	Fire Hydrant	Asphalt Pavement
WM	Water Meter	Wood Fence
WV	Water Valve	Chain Link Fence
W/L	Water Line	Wire Fence
ICV	Irrigation Control Valve	Top of Durb
SSMH	Sanitary Sewer Manhole	Top of Pavement
CO	Sanitary Sewer Cleanout	Top of Wall
UP	Utility Pole	Finished Grade
LP	Light Pole	Utility Easement
TO	Top of Durb	D.E. Drainage Easement
TP	Top of Pavement	B.L. Building Line
TW	Top of Wall	R.O.W. Right-of-Way
FG	Finished Grade	D.R. Dead Records
U.E.	Utility Easement	P.R. Plot Records
D.E.	Drainage Easement	
B.L.	Building Line	
R.O.W.	Right-of-Way	
D.R.	Dead Records	
P.R.	Plot Records	

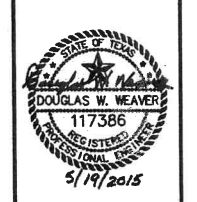
- UTILITY NOTES**
1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.
 2. ALL T.C.E.Q. SEPARATION REQUIREMENTS MUST BE MET.
 3. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
 4. ALL WATER MAINS SHALL HAVE MINIMUM COVER OF 48 INCHES PER TOWN STANDARDS.
 5. ALL UTILITY SLEEVES MUST BE INSTALLED BEFORE PAVING CAN BEGIN.
 6. FIRE HYDRANT ASSEMBLY INCLUDES 6" LEAD WITH 90° BEND PER TOWN STANDARD CONSTRUCTION DETAILS.
 7. CONTRACTOR SHALL INSTALL ALL WATER METERS OUTSIDE OF DITCH GRADING.
 8. ALL FIRE HYDRANTS TO BE WATEROUS FIRE HYDRANTS OR EQUAL, APPROVED BY CITY OF LUCAS PUBLIC WORKS DIRECTOR.
 9. ALL FITTINGS TO BE FORD BRASS OR EQUAL, APPROVED BY CITY OF LUCAS PUBLIC WORKS DIRECTOR.
 10. ALL METERS AND SERVICE TAPS SHALL BE 1" POLY OR LARGER.

LEWIS PARK ESTATES
 CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE

111 Hillside Drive - Lawrenceville, GA 30046
 600 Lynnwood Blvd, Ste 114 - Houston, TX 77066
 11111 Hillside Drive - Lawrenceville, GA 30046
 600 Lynnwood Blvd, Ste 114 - Houston, TX 77066
 11111 Hillside Drive - Lawrenceville, GA 30046
 600 Lynnwood Blvd, Ste 114 - Houston, TX 77066

LEWIS PARK ESTATES
 Lot 1-16, Block A, B
 LEWIS PARK ESTATES
 60859 Acres
 in the
 JAMES ANDERSON SURVEY, ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

WATER PLAN NORTH



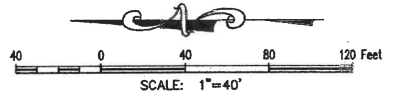
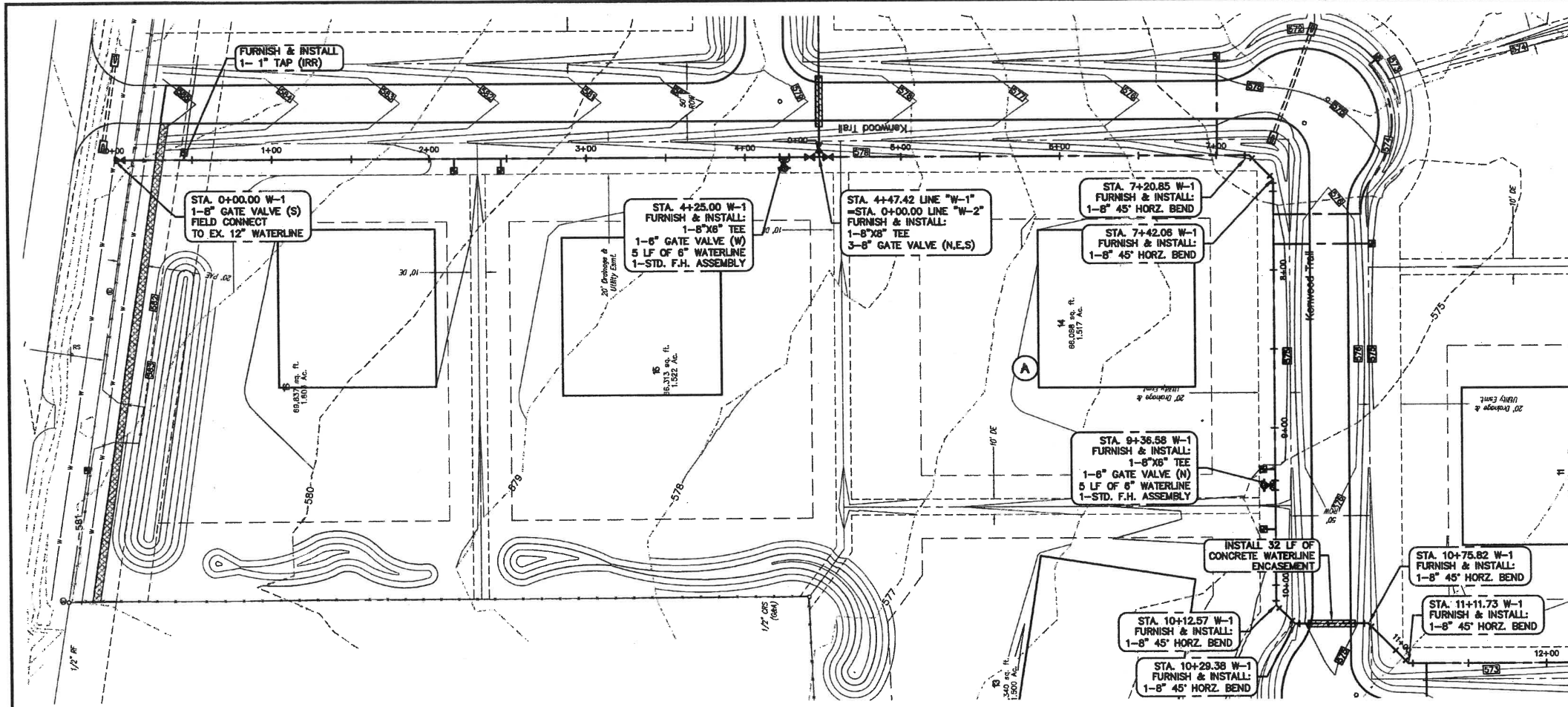
G&A CONSULTANTS, LLC
 TBPE F-0788

Drawn By: AC
 Date: 11/07/2014
 Scale: 1" = 50'
 Revisions:

14026

C22

OWNER/DEVELOPER
 CADG LEWIS PARK LLC
 C/O LEHART DEVELOPMENT COMPANY,
 LLC
 520 CENTRAL PARKWAY E. SUITE 104
 PLANO, TX 75074
 Ph. (972) 422-9880
 Contact: Steve Lenart



- BENCHMARKS:**
- BM#1 - RM133 - 590.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 48085004550, Dated January 19th, 1996.
 - TBM#2 - Square Cut - 569.45'
~961' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,079,521.1' E=2,557,109.6'
 - TBM#3 - "C" - 579.98'
~760' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
N=7,080,175.7' E=2,558,146.1'
 - TBM#4 - PK Nail - 554.84'
~900' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cir.
N=7,079,803.4' E=2,559,568.0'
 - TBM#5 - "X" - 584.19'
~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Seto Lagos Trail.
N=7,076,568.5' E=2,559,853.8'

- UTILITY NOTES:**
1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.
 2. ALL T.C.E.Q. SEPARATION REQUIREMENTS MUST BE MET.
 3. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
 4. ALL WATER MAINS SHALL HAVE MINIMUM COVER OF 48 INCHES PER TOWN STANDARDS.
 5. ALL UTILITY SLEEVES MUST BE INSTALLED BEFORE PAVING CAN BEGIN.
 6. FIRE HYDRANT ASSEMBLY INCLUDES 6" LEAD WITH 90° BEND PER TOWN STANDARD CONSTRUCTION DETAILS.
 7. ALL FIRE HYDRANTS TO BE WATEROUS FIRE HYDRANTS OR EQUAL, APPROVED BY CITY OF LUCAS PUBLIC WORKS DIRECTOR.
 8. ALL FITTINGS TO BE FORD BRASS OR EQUAL, APPROVED BY CITY OF LUCAS PUBLIC WORKS DIRECTOR.
 9. ALL METERS AND SERVICE TAPS SHALL BE 1" POLY OR LARGER.

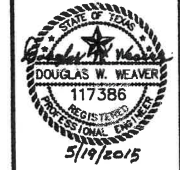
OWNER/DEVELOPER
CADG LEWIS PARK LLC
 C/O LENART DEVELOPMENT COMPANY, LLC
 620 CENTRAL PARKWAY E SUITE 104
 PLANO, TX 75074
 Ph. (972) 422-8880
 Contact: Steve Lenart

SET/PLANNING CIVIL/ENGINEERING PLANNING
CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE

111 Wilshire Drive • Lewisville, TX 75057 • P: 972-489-8719 • F: 972-489-9715
 610 Byron Nelson Blvd, Ste. 114 • Dallas, TX 75202 • P: 972-351-0772 • F: 972-351-0408
 T9991 Plans No. 1807070

LEWIS PARK ESTATES
 Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
 60.866 Acres
 in the
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

WATER PLAN & PROFILE
LINE W-1 STA 0+00 TO STA 11+00

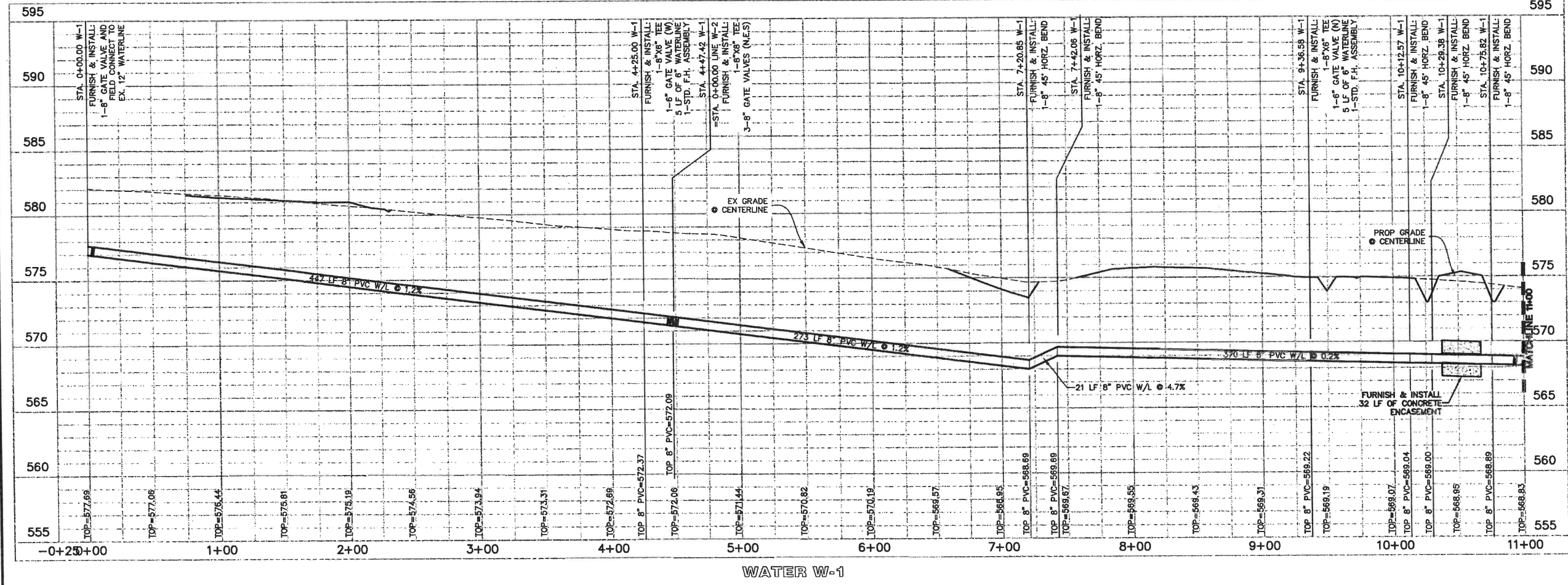


G&A CONSULTANTS, LLC.
 TYPE F-1788

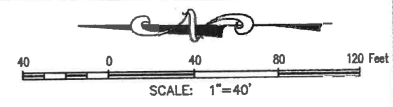
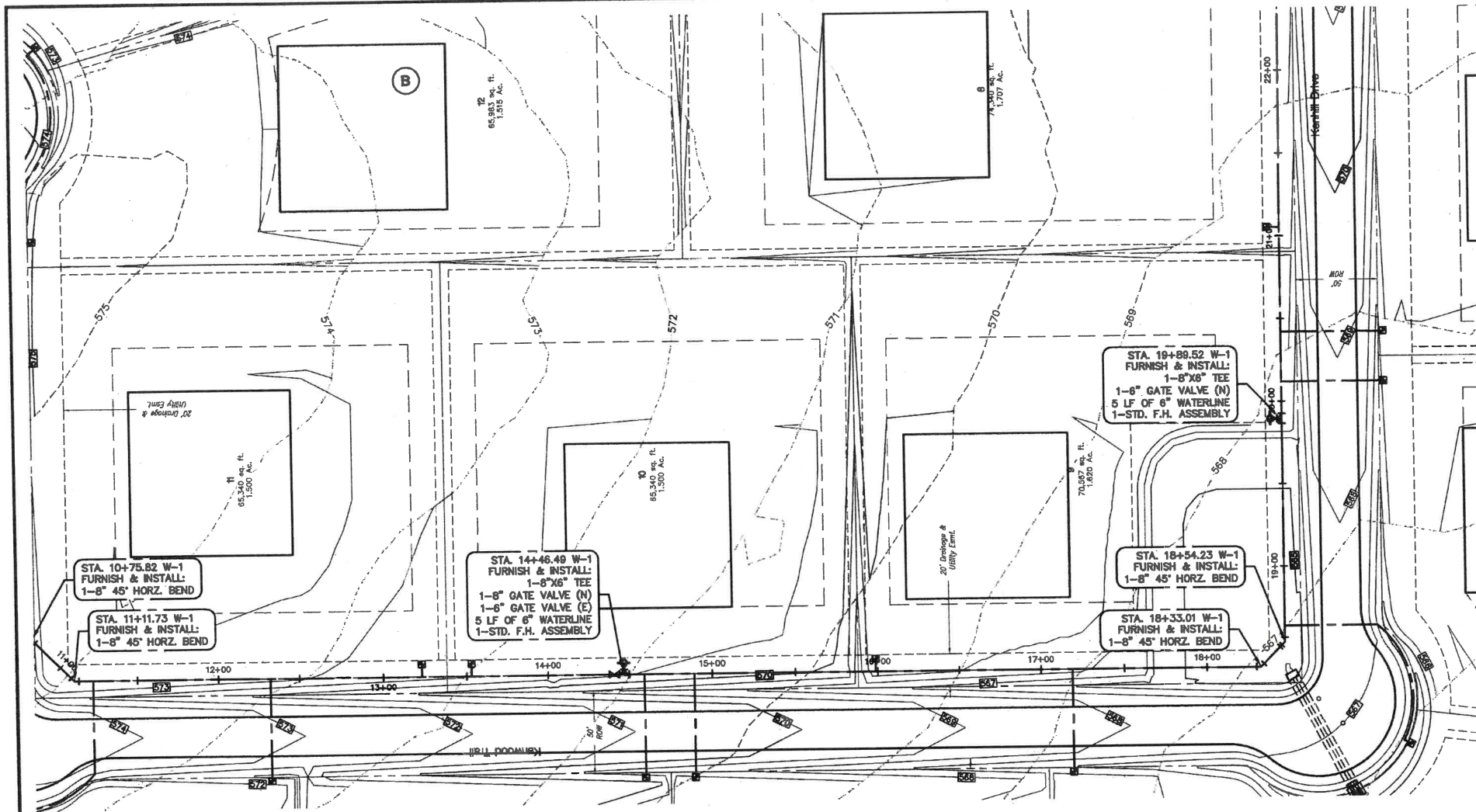
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 Revisions:

14026

C24

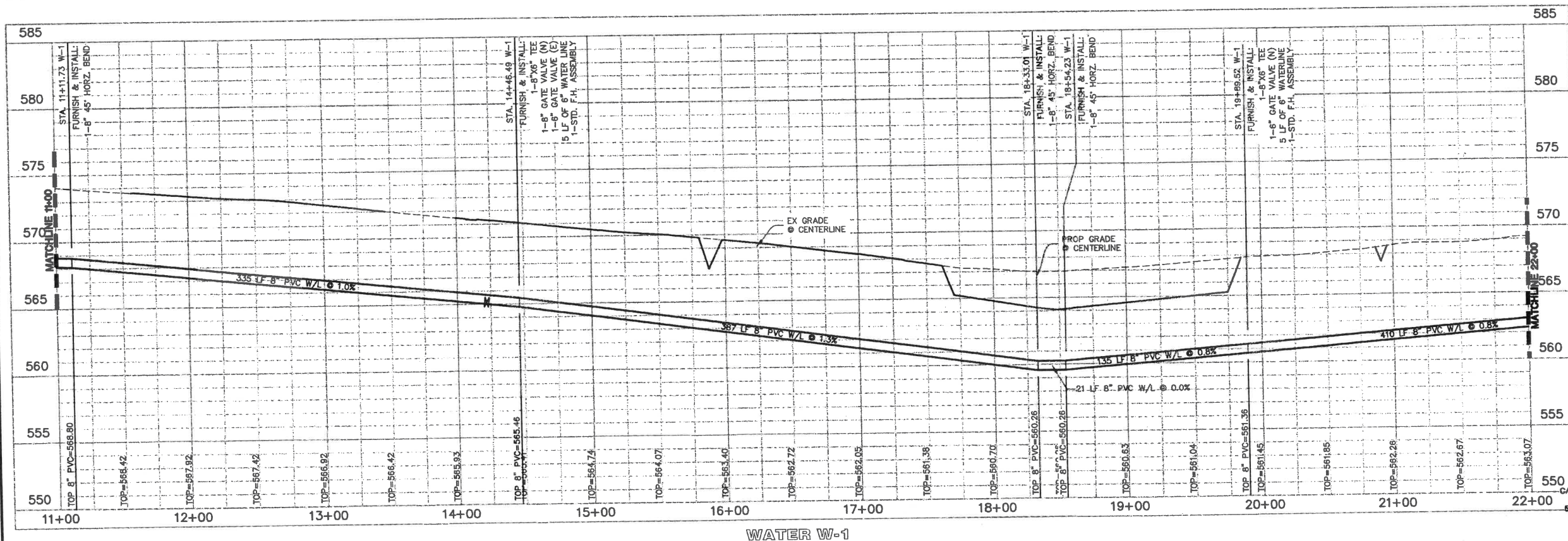


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- BENCHMARKS:**
- BMP#1 - RM133 - 590.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 48085004556, Dated January 19th, 1998.
 - BMP#2 - Square Cut - 569.45'
~881' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,079,521.1' E=2,557,109.8'
 - BMP#3 - "X" - 579.86'
~780' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
N=7,080,175.7' E=2,536,146.1'
 - BMP#4 - PK Nail - 554.84'
~800' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cr.
N=7,079,803.4' E=2,559,558.0'
 - BMP#5 - "X" - 584.19'
~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Sals Logos Trail.
N=7,076,568.5' E=2,559,653.8'

- UTILITY NOTES:**
- THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.
 - ALL T.C.E.Q. SEPARATION REQUIREMENTS MUST BE MET.
 - THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
 - ALL WATER MAINS SHALL HAVE MINIMUM COVER OF 48 INCHES PER TOWN STANDARDS.
 - ALL UTILITY SLEEVES MUST BE INSTALLED BEFORE PAVING CAN BEGIN.
 - FIRE HYDRANT ASSEMBLY INCLUDES 6" LEAD WITH 90° BEND PER TOWN STANDARD CONSTRUCTION DETAILS.
 - ALL FIRE HYDRANTS TO BE WATEROUS FIRE HYDRANTS OR EQUAL, APPROVED BY CITY OF LUCAS PUBLIC WORKS DIRECTOR.
 - ALL FITTINGS TO BE FORD BRASS OR EQUAL, APPROVED BY CITY OF LUCAS PUBLIC WORKS DIRECTOR.
 - ALL METERS AND SERVICE TAPS SHALL BE 1" POLY OR LARGER.



SITE PLANNING CIVIL ENGINEERING PLANNING
CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE
 111 Herald Drive • Lewisville, TX 76077 • P: 972.438.9712 • F: 972.438.9718
 610 Bryan Station Blvd. Ste. 114 • Rowles, TX 76089 • P: 817.283.9712 • F: 817.283.9718
 TOLL FREE: 1-877-456-7700
 TXBPE Firm No. 1716

LEWIS PARK ESTATES
 Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
 60,858 Acres
 In the
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

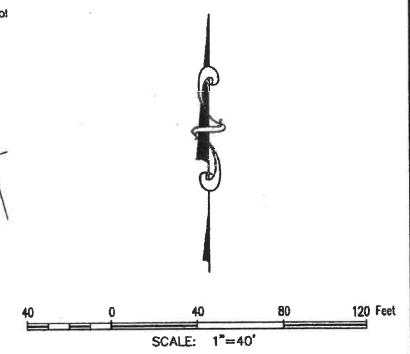
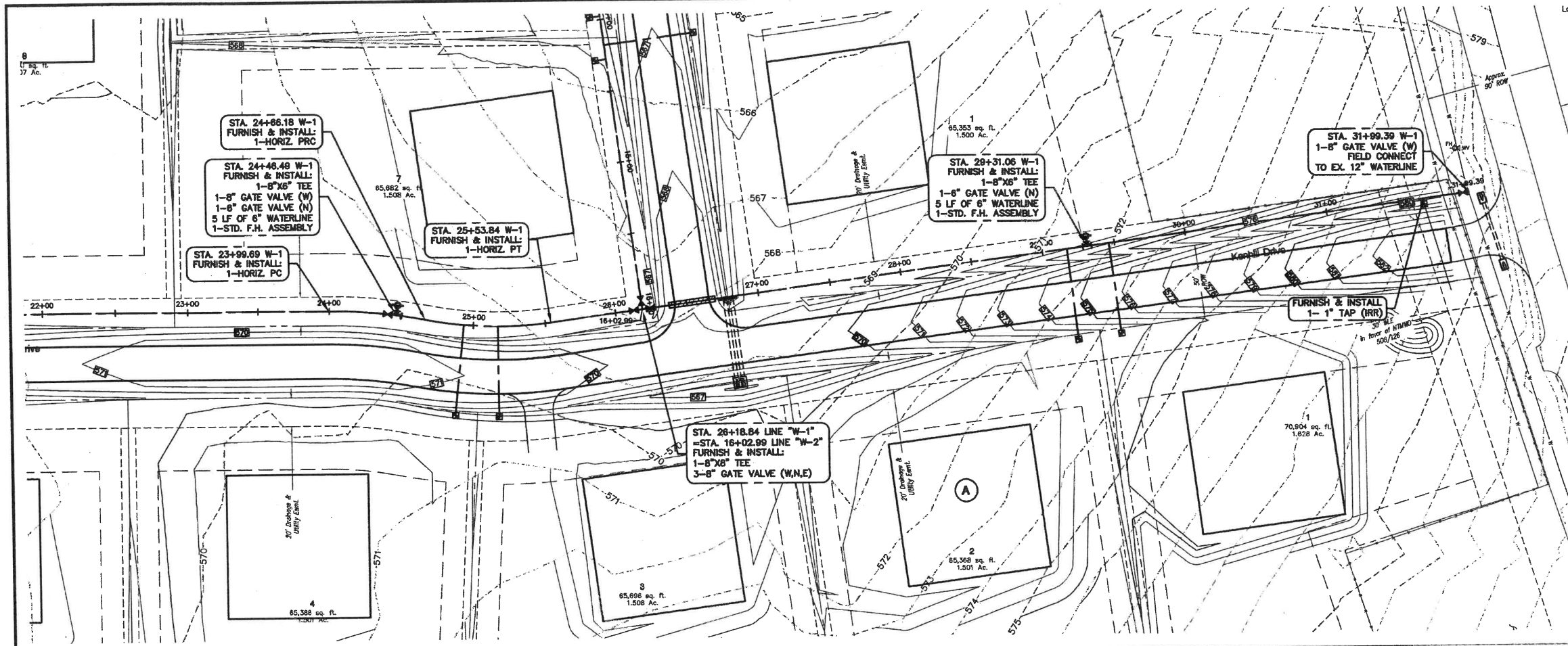
WATER PLAN & PROFILE
LINE W-1 STA 11+00 TO STA 22+00

STATE OF TEXAS
 REGISTERED PROFESSIONAL ENGINEER
DOUGLAS W. WEAVER
 117386
 5/19/2015

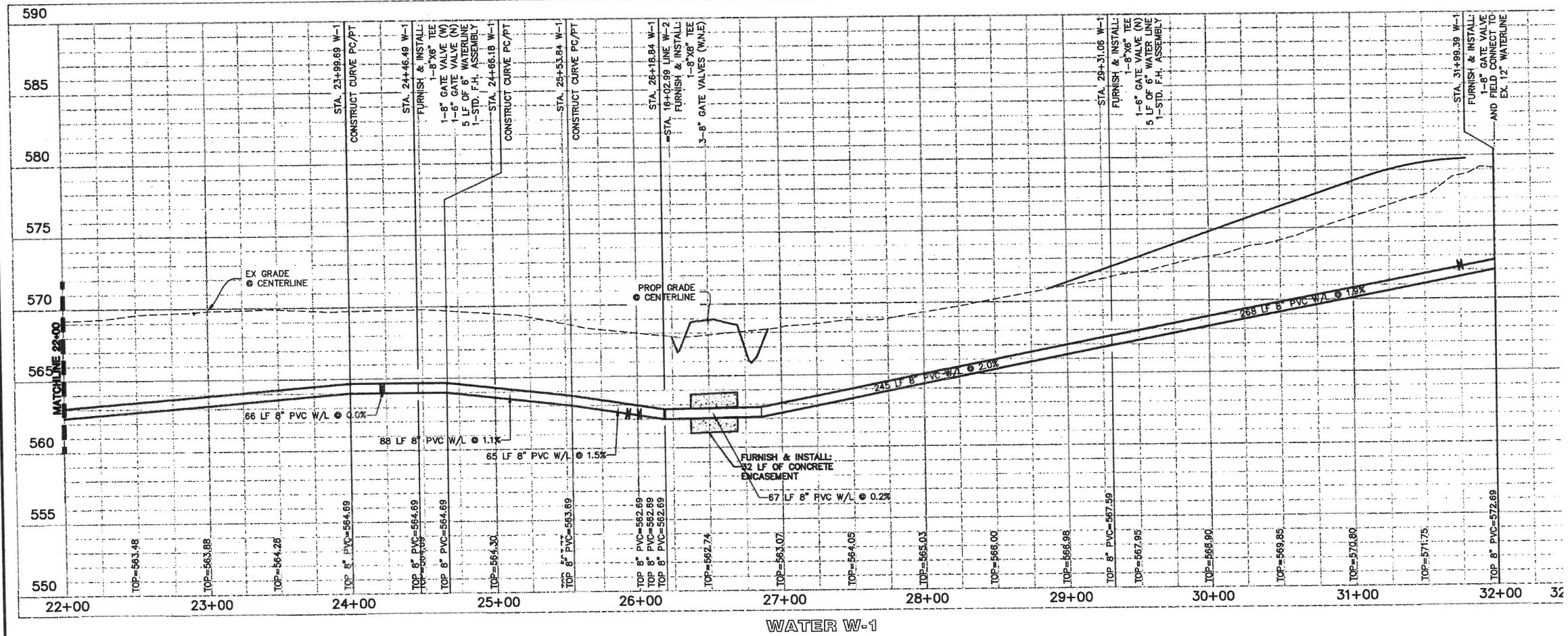
OWNER/DEVELOPER
 CADG LEWIS PARK LLC
 LENOART DEVELOPMENT COMPANY, LLC
 520 CENTRAL PARKWAY E SUITE 104
 PLANO, TX 75074
 Ph: (972) 422-9680
 Contact: Steve Lenart

14026
 C25

File: S:\2014\14026\14026.dwg Plot: 14026.dwg
 Plotted: 5/19/2015 1:58 PM by: [Name]



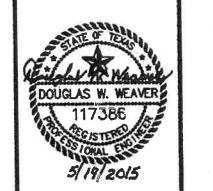
- BENCHMARKS:**
- BM#1 - RM133 - 590.08' Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 4808500455G, Dated January 19th, 1996.
 - TBM#2 - Square Cut - 568.45' ~981' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr. N=7,079,521.1' E=2,557,109.8'
 - TBM#3 - "X" - 579.98' ~760' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct. N=7,080,175.7' E=2,558,146.1
 - TBM#4 - PK Nail - 554.84' ~900' Northeast from the Northeast corner of subject property at the south edge of a call-de-goc on Alameda Cr. N=7,079,803.4' E=2,559,558.0'
 - TBM#5 - "C" - 584.19' ~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Sals Lagoa Trail. N=7,076,568.5' E=2,559,653.8'
- UTILITY NOTES:**
1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.
 2. ALL T.C.E.Q. SEPARATION REQUIREMENTS MUST BE MET.
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SEATTLE CONSULTING ENGINEERING PLANNING
CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE
 11111 Main Street, Suite 114, Round Rock, TX 78681 P: 682.811713 F: 817.480.4043
 610 Bryant Street, Suite 1100, Austin, TX 78701 P: 682.811713 F: 817.480.4043
 TBE#5 Firm No. 10047700

LEWIS PARK ESTATES
 Lot 1-16, Block A, B
LEWIS PARK ESTATES
 60.658 Acres
 JAMES ANDERSON SURVEY, ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

WATER PLAN & PROFILE
LINE W-1 STA 22+00 TO STA 31+77.90

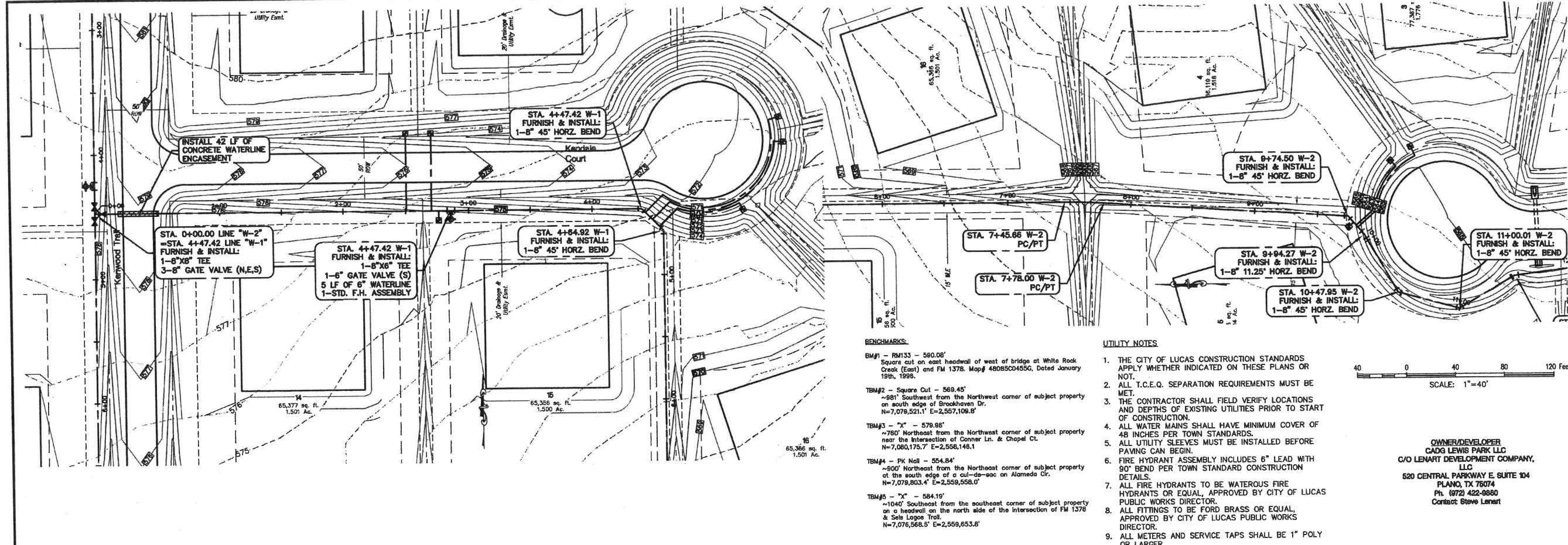


G&A CONSULTANTS, LLC
 TBE# F-0798
 Drawn By: AC
 Date: 11/07/2014
 Scale: H 1"=40' V 1"=4'
 Revisions:

OWNER/DEVELOPER
 CADG LEWIS PARK LLC
 C/O LENART DEVELOPMENT COMPANY, LLC
 520 CENTRAL PARKWAY E SUITE 104
 PLANO, TX 75074
 Ph: (972) 422-9880
 Contact: Steve Lenart

14026

C26



BENCHMARKS:

BM#1 - RM133 - 560.08'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 4808500455C, Dated January 19th, 1995.

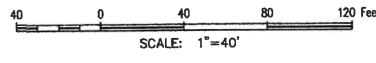
BM#2 - Square Cut - 569.45'
~80' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,079,521.1' E=2,557,109.8'

BM#3 - "X" - 579.98'
~76' Northeast from the Northwest corner of subject property near the intersection of Conner Ln. & Chapel Ct.
N=7,080,175.7' E=2,556,146.1

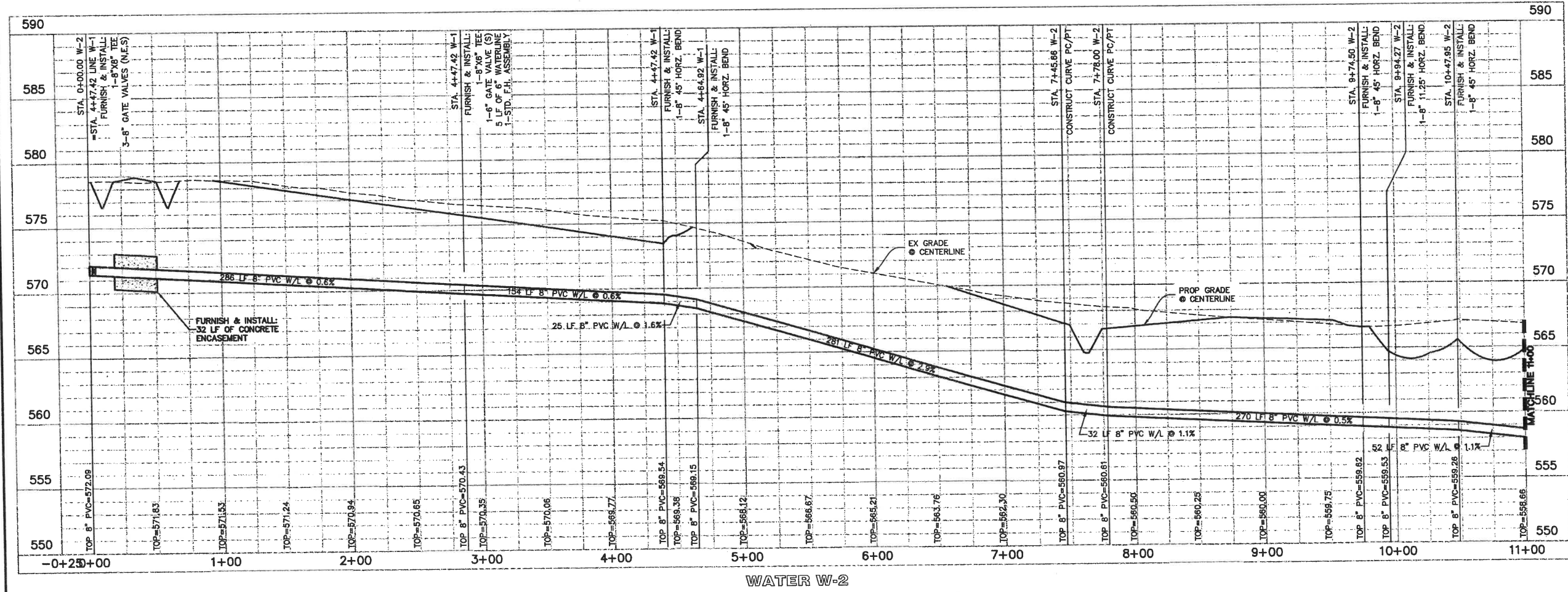
BM#4 - PK Nail - 554.84'
~80' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cir.
N=7,078,803.4' E=2,559,058.0'

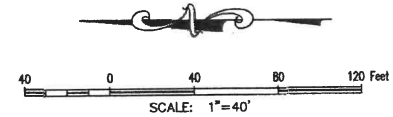
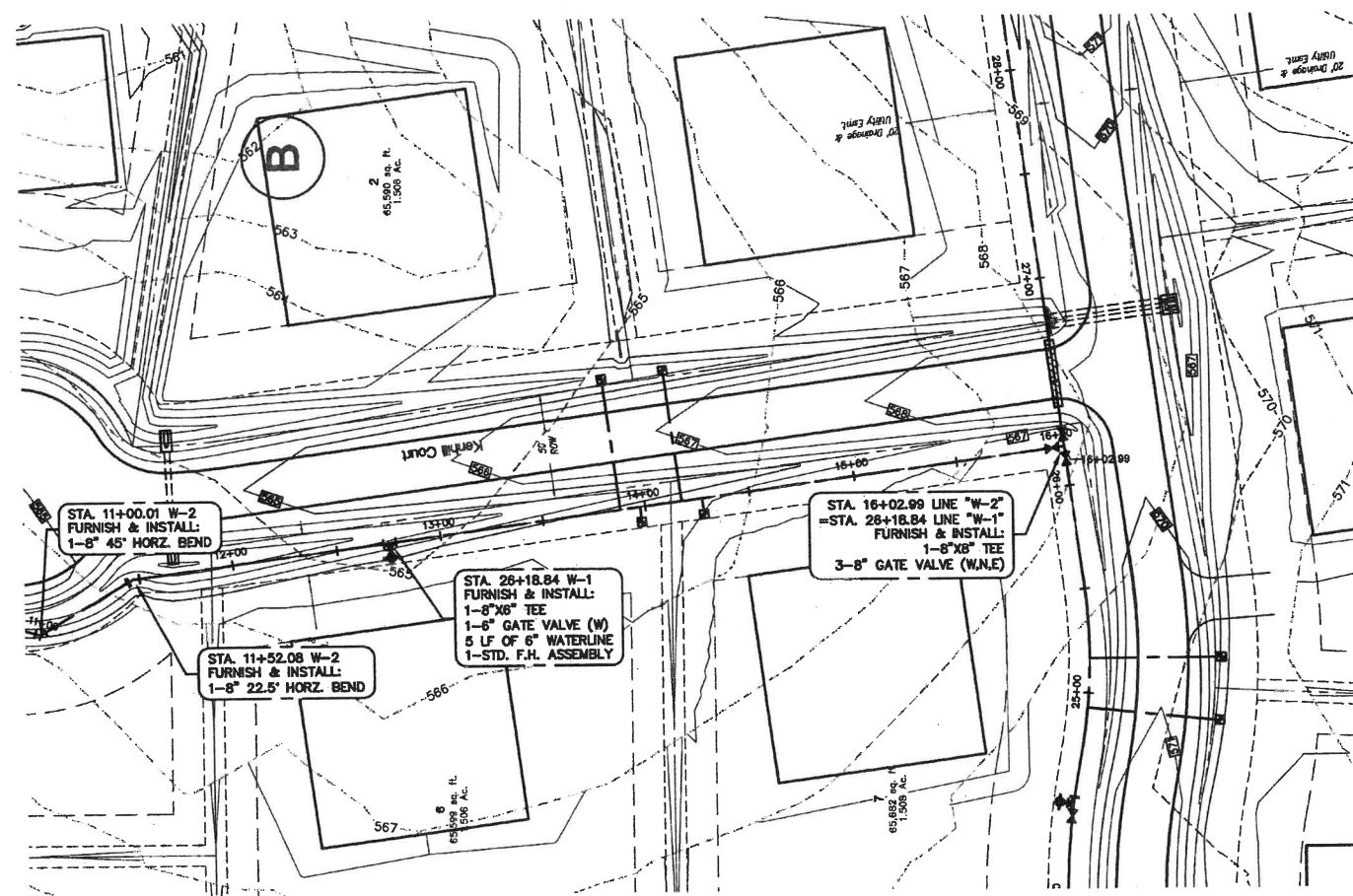
BM#5 - "X" - 584.15'
~104' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Sals Logos Trail.
N=7,076,568.5' E=2,559,653.6'

- UTILITY NOTES:**
1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.
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OWNER/DEVELOPER
CADG LEWIS PARK LLC
C/O LENART DEVELOPMENT COMPANY, LLC
520 CENTRAL PARKWAY E SUITE 104
PLANO, TX 75074
Ph. (972) 422-9880
Contact: Steve Lenart



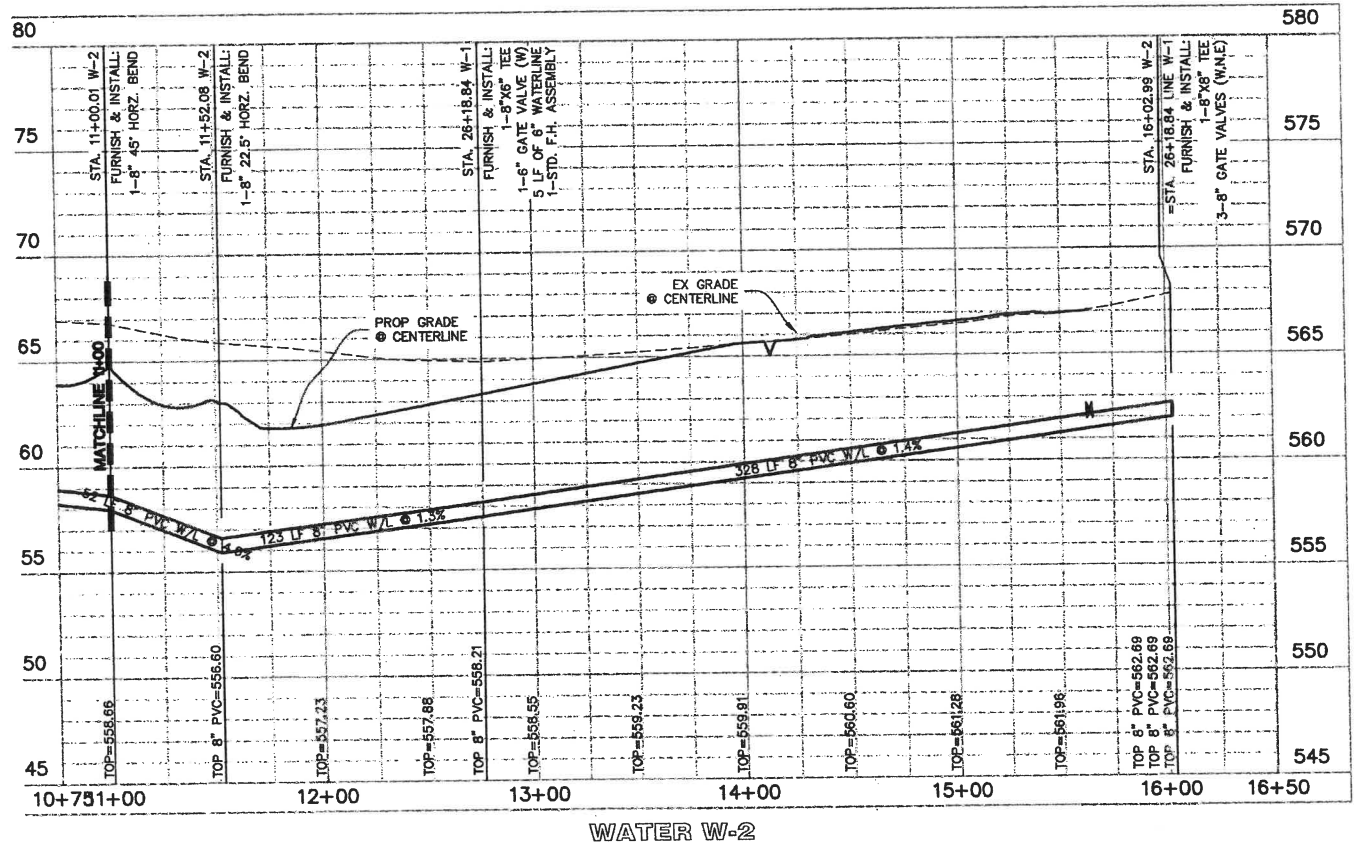


BENCHMARKS:

- BM#1 - RM133 - 590.06'
Square cut on east headwall of west of bridge at White Rock Creek (East) and FM 1378. Map# 4508504555, Dated January 16th, 1996.
- TBM#2 - Square Cut - 568.45'
~881' Southwest from the Northwest corner of subject property on south edge of Brookhaven Dr.
N=7,079,521.1' E=2,557,109.8'
- TBM#3 - "X" - 579.99'
~780' Northeast from the Northeast corner of subject property near the intersection of Corner Ln. & Chapel Ct.
N=7,080,175.7' E=2,558,146.1'
- TBM#4 - PK Nail - 554.84'
~800' Northeast from the Northeast corner of subject property at the south edge of a cul-de-sac on Alameda Cir.
N=7,079,803.4' E=2,559,558.0'
- TBM#5 - "X" - 584.19'
~1040' Southeast from the southeast corner of subject property on a headwall on the north side of the intersection of FM 1378 & Side Lodge Trail.
N=7,078,568.5' E=2,559,653.8'

UTILITY NOTES:

1. THE CITY OF LUCAS CONSTRUCTION STANDARDS APPLY WHETHER INDICATED ON THESE PLANS OR NOT.
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3. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND DEPTHS OF EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
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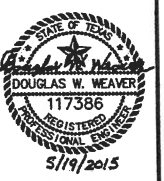
Plan: 2/20/2015 10:57:53 AM
 Project: 14026 - LEWIS PARK ESTATES
 Date: 11/20/2014
 Scale: H 1"=40'; V 1"=4'
 Revisions:

OWNER/DEVELOPER
 GADG LEWIS PARK LLC
 C/O LENART DEVELOPMENT COMPANY, LLC
 520 CENTRAL PARKWAY E SUITE 104
 PLANO, TX 75074
 Ph: (972) 422-9880
 Fax: Value
 Contact: Steve Legart

STRATEGIC CIVIL/ENGINEERING PLANNING CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE
 111 Hibiscus Drive - Lewisville, TX 75077 - P: 972.438.8712 - F: 972.438.8715
 610 Bryan Nelson Blvd, Ste 114 - Rowlett, TX 75088 - P: 980.819.7212 - F: 972.990.0493
 TYPE Firm No. 1792 TABLE Firm No. 10007700

LEWIS PARK ESTATES
 Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
 60.858 Acres
 in the
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

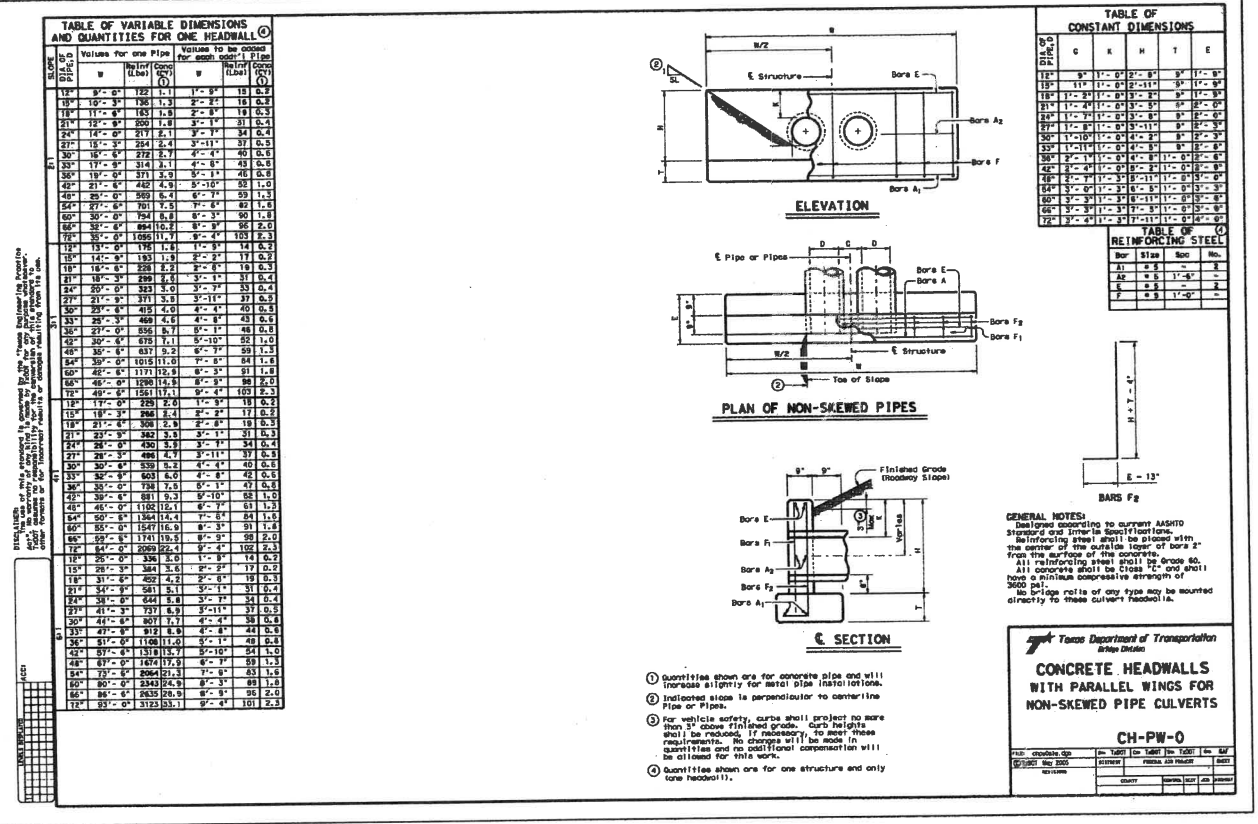
WATER PLAN & PROFILE
LINE W-2 STA 11+00 TO STA 15+69.48

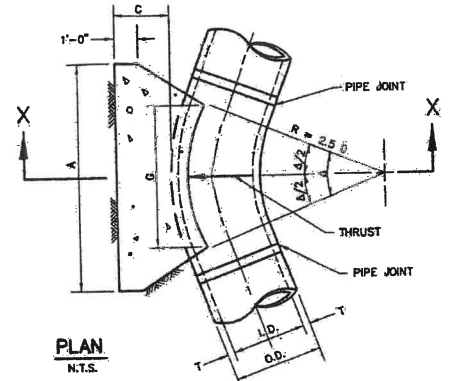


G&A CONSULTANTS, LLC.
 TYPE F-1798
 Drawn By: AC
 Date: 11/20/2014
 Scale: H 1"=40'; V 1"=4'
 Revisions:

14026
 C28

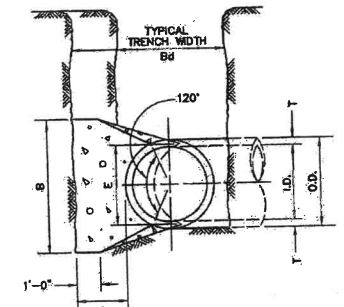
LEWIS PARK ESTATES





PLAN
N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.



SECTION X-X
N.T.S.

**HORIZONTAL THRUST BLOCK
AT PIPE BEND**

North Carol. Inst. Const. of Engrs. & Architects

STANDARD SPECIFICATION REFERENCE: 6.7.

DATE: NOV. '96

STANDARD DRAWING NO.: 4010A

I.D. (IN.)	T (TONS)	Δ = 11.25°		Δ = 22.50°		E (FT.)
		A	B	A	B	
4.6,8	0.4	1.5	1.5	1.5	1.2	0.9
10,12	0.5	1.5	1.5	1.5	1.2	1.2
16,18	0.6	1.5	1.5	1.5	1.6	1.6
20	0.7	1.5	1.5	1.5	1.8	1.8
24	0.9	1.5	1.5	1.5	2.1	2.1
30	2.9	1.5	1.5	1.5	2.6	2.6
36	4.5	1.5	2.3	3.3	3.3	3.3
42	5.0	1.8	2.6	3.8	3.8	3.8
48	5.5	2.0	3.0	4.3	4.3	4.3
54	6.0	2.3	3.4	4.8	4.8	4.8
60	6.5	2.5	3.8	5.3	5.3	5.3
66	6.8	2.8	4.1	5.7	5.7	5.7
72	7.5	3.0	4.5	6.3	6.3	6.3
78	7.5	3.3	4.9	6.7	6.7	6.7
84	8.0	3.5	5.3	7.2	7.2	7.2
90	8.5	3.8	5.8	7.7	7.7	7.7
96	9.0	4.0	6.0	8.2	8.2	8.2

I.D. (IN.)	G (FT.)	Δ = 11.25°						Δ = 22.50°								
		THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)				
4.6,8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4.6,8	0.8	2.0	1.5	0.1	1.0	1.0	0.1
10,12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10,12	1.1	4.4	2.0	2.5	0.3	1.5	0.1
16,18	0.8	6.0	2.0	2.5	0.3	1.5	2.0	0.2	16,18	1.6	9.9	3.0	3.5	0.6	2.0	0.3
20	0.9	8.2	2.0	3.5	0.4	1.5	3.0	0.3	20	1.8	12.3	3.5	3.5	0.7	2.0	0.4
24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.3	24	2.2	17.7	4.0	4.5	1.0	3.0	0.5
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4	30	2.7	20.7	5.0	4.5	1.5	3.0	0.8
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	0.5	36	3.3	28.6	5.5	5.5	2.3	4.0	1.3
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	0.8	42	3.8	40.5	7.0	6.0	3.9	4.5	2.1
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	1.1	48	4.4	52.9	8.0	7.0	5.7	4.5	2.8
54	2.5	33.7	6.0	6.0	3.0	3.0	6.0	1.4	54	4.9	67.0	9.0	8.0	8.0	6.0	4.1
60	2.7	41.6	6.0	7.0	3.8	3.0	7.0	1.8	60	5.5	82.7	9.5	9.0	10.6	6.0	5.3
66	3.0	50.3	6.5	8.0	5.1	3.5	8.0	2.7	66	6.0	100.1	10.5	10.0	14.1	6.5	6.0
72	3.3	59.8	7.5	8.0	6.3	4.0	8.0	3.3	72	6.6	119.1	11.0	11.0	17.6	7.5	8.0
78	3.6	70.2	8.0	9.0	8.1	4.0	9.0	3.9	78	7.1	138.8	12.0	12.0	22.6	8.0	9.0
84	3.8	81.5	8.5	10.0	10.3	4.5	10.0	5.3	84	7.6	162.1	13.0	12.5	27.2	8.5	10.0
90	4.1	93.5	8.5	10.0	12.2	5.0	10.0	6.3	90	8.2	186.1	14.0	13.5	33.7	9.5	10.0
96	4.4	106.4	10.0	11.0	15.0	5.0	11.0	7.4	96	8.7	211.7	15.0	14.5	41.2	10.0	11.0

**HORIZONTAL THRUST BLOCK
AT PIPE BEND**

North Carol. Inst. Const. of Engrs. & Architects

STANDARD SPECIFICATION REFERENCE: 6.7.

DATE: NOV. '96

STANDARD DRAWING NO.: 4010B

I.D. (IN.)	G (FT.)	Δ = 30°						Δ = 45°								
		THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)				
4.6,8	1.0	2.6	2.0	1.5	0.2	1.0	1.5	0.1	4.6,8	1.5	3.9	2.0	2.0	0.2	1.5	0.1
10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2	10,12	2.2	8.7	3.5	2.5	0.5	2.0	0.3
16,18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.4	16,18	3.2	19.5	4.5	4.5	1.2	3.0	0.6
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5	20	3.8	24.1	5.5	4.5	1.5	3.5	0.7
24	2.9	23.4	5.0	4.0	1.4	3.5	3.5	0.7	24	4.3	34.6	6.0	4.5	2.3	4.5	1.1
30	3.6	27.5	6.5	5.0	1.9	3.5	4.0	0.9	30	5.4	40.6	6.5	5.0	3.2	5.5	1.6
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.6	36	6.5	58.5	10.0	6.0	5.3	6.5	2.6
42	5.1	63.8	8.0	7.0	5.1	5.5	5.0	2.5	42	7.5	78.8	11.5	7.0	8.1	8.0	4.2
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7	48	8.8	104.0	13.0	8.0	11.9	9.0	6.3
54	6.5	88.0	10.0	8.0	10.3	7.0	6.5	5.3	54	9.7	131.5	15.0	9.0	17.1	10.5	8.9
60	7.3	110.0	11.0	10.0	13.9	7.5	7.3	6.0	60	10.7	162.4	16.5	10.0	23.1	11.0	7.5
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.6	66	11.8	196.5	18.0	11.0	30.1	12.0	8.5
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3	72	12.9	233.9	19.5	12.0	38.6	14.0	9.5
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	16.8	78	13.9	274.5	21.5	13.0	49.8	14.5	9.5
84	10.3	215.3	15.5	14.0	37.1	10.5	10.5	19.6	84	15.0	318.4	23.0	14.0	61.2	15.5	10.5
90	10.9	247.1	16.5	15.0	45.0	11.5	11.0	23.9	90	16.1	365.5	24.5	15.0	74.5	17.5	10.5
96	11.6	281.2	18.0	16.0	55.5	12.5	11.5	28.9	96	17.1	415.6	26.0	16.0	89.5	18.5	11.5

I.D. (IN.)	G (FT.)	Δ = 67.50°						Δ = 90°								
		THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)				
4.6,8	2.1	5.6	3.0	2.0	0.3	2.0	1.5	0.2	4.6,8	2.7	7.1	5.0	1.5	0.4	2.0	0.2
10,12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10,12	4.0	16.0	6.5	2.5	1.0	3.5	0.5
16,18	4.7	28.3	7.5	4.0	1.9	4.5	3.0	0.9	16,18	6.0	36.0	8.0	4.0	2.4	4.5	1.0
20	5.2	34.9	9.0	4.0	2.3	5.5	3.5	1.2	20	6.8	44.4	10.0	4.5	3.1	6.0	1.5
24	6.2	50.3	11.8	4.5	3.5	6.5	4.0	1.6	24	7.9	64.0	14.5	4.5	5.0	8.0	2.1
30	7.8	58.9	12.0	5.0	4.8	7.5	4.0	2.2	30	9.9	75.0	15.0	5.0	6.7	10.0	3.3
36	9.4	84.9	14.5	6.0	8.2	9.5	4.5	3.8	36	11.9	108.0	18.0	6.0	11.4	12.0	4.5
42	10.9	115.5	17.0	7.0	12.8	11.0	5.5	6.3	42	13.9	147.0	21.0	7.0	17.6	14.0	5.5
48	12.5	159.8	19.0	8.0	18.4	13.0	6.0	9.2	48	15.9	192.0	24.0	8.0	26.2	16.0	6.0
54	14.0	191.0	21.5	9.0	26.0	15.0	6.5	12.9	54	17.9	243.0	27.0	9.0	36.9	18.0	7.0
60	15.6	235.8	24.0	10.0	35.6	16.0	7.5	17.8	60	19.9	299.8	30.0	10.0	50.3	20.0	7.5
66	17.1	285.3	26.0	11.0	46.0	18.0	8.0	23.0	66	21.8	362.8	33.0	11.0	66.2	22.0	8.5
72	18.7	339.5	28.5	12.0	57.8	19.0	9.0	29.4	72	23.8	431.8	36.0	12.0	85.6	24.0	9.0
78	20.2	398.5	31.0	13.0	75.7	21.0	9.5	37.4	78	25.7	506.7	39.0	13.0	108.2	26.0	10.0
84	21.8	462.1	33.5	14.0	94.7	22.0	10.5	46.5	84	27.7	587.7	42.0	14.0	134.4	28.0	10.5
90	23.3	530.5	35.5	15.0	114.4	24.5	11.0	58.2	90	29.0	674.8	45.0	15.0	164.9	30.0	11.5
96	24.9	603.6	38.0	16.0	136.9	25.5	12.0	70.0	96	31.6	767.5	48.0	16.0	199.0	32.0	12.0

**HORIZONTAL THRUST BLOCK
AT PIPE BEND**

North Carol. Inst. Const. of Engrs. & Architects

STANDARD SPECIFICATION REFERENCE: 6.7.

DATE: NOV. '96

STANDARD DRAWING NO.: 4010C

- GENERAL NOTES:
- ALL FIRE HYDRANTS TO BE WATEROUS FIRE HYDRANTS OR EQUAL, APPROVED BY CITY OF LUCAS PUBLIC WORKS DIRECTOR.
 - ALL FITTINGS TO BE FORD BRASS OR EQUAL, APPROVED BY CITY OF LUCAS PUBLIC WORKS DIRECTOR.
 - ALL METERS AND SERVICE TAPS SHALL BE 1" POLY OR LARGER.

STATE PLANNING CIVIL ENGINEERING PLATING

CONSULTANTS, LLC

LAND SURVEYING LANDSCAPE ARCHITECTURE

111 Hillside Drive - Lewisville, TX 76047 - P: 872.438.8712 - F: 872.438.8716
611 Dallas Drive, Suite 114 - Rowlett, TX 76088 - P: 832.551.9712 - F: 817.890.0404
TYPE Firm No. 1708

LEWIS PARK ESTATES
Lot 1-16, Block A, B
LEWIS PARK ESTATES
in the
60.858 ACRES
JAMES ANDERSON SURVEY, ABSTRACT NO. 7
CITY OF LUCAS
COLLIN COUNTY, TEXAS

**STANDARD WATER
DETAILS**

STATE OF TEXAS
DOUGLAS W. WEAVER
117386
REGISTERED PROFESSIONAL ENGINEER
5/19/2015

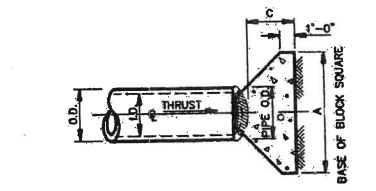
GAA CONSULTANTS, LLC
TYPE F-708

Drawn By: T.J.F.
Date: 11/07/2014
Scale: CUSTOM
Revisions:

14026

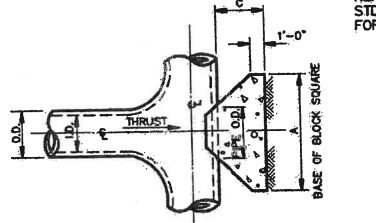
OWNER/DEVELOPER
CADG LEWIS PARK LLC
C/O LENART DEVELOPMENT COMPANY, LLC
620 CENTRAL PARKWAY E SUITE 104
PLANO, TX 75074
Ph: (972) 422-9880
Contact: Steve Lenart

C30



PLAN OF PLUG THRUST BLOCK
N.T.S.

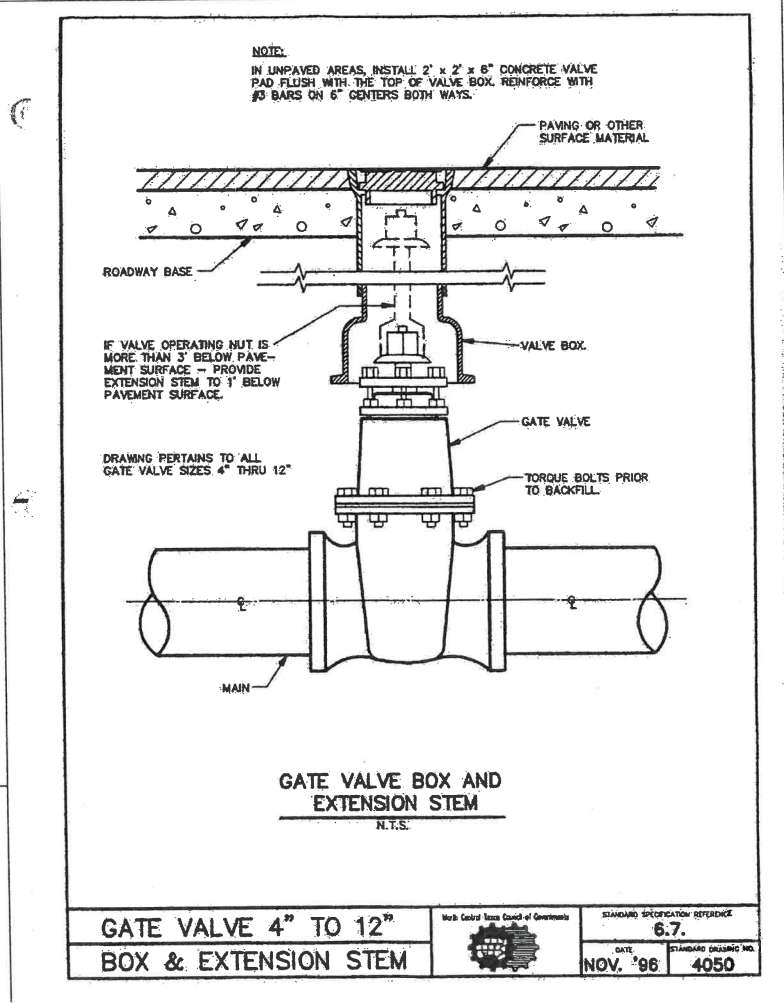
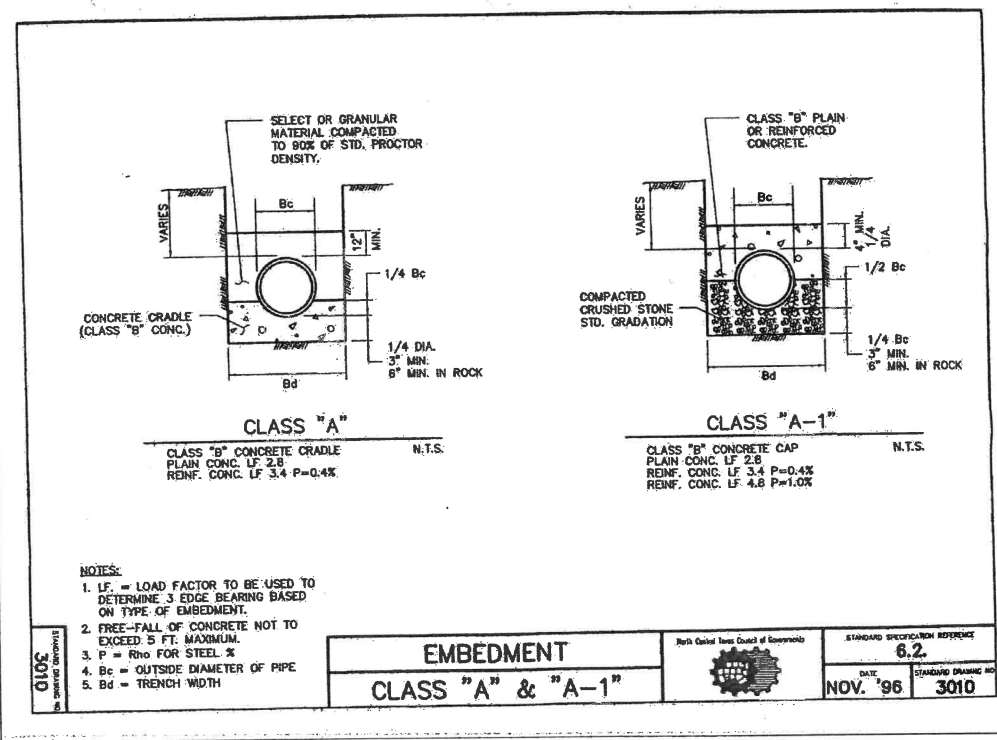
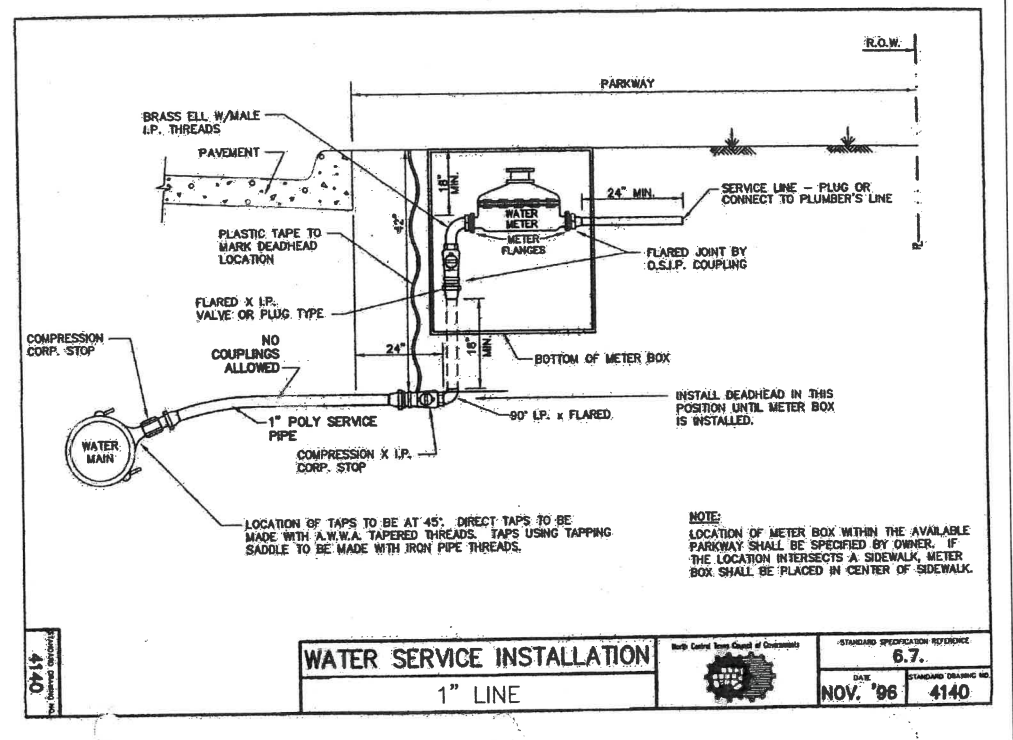
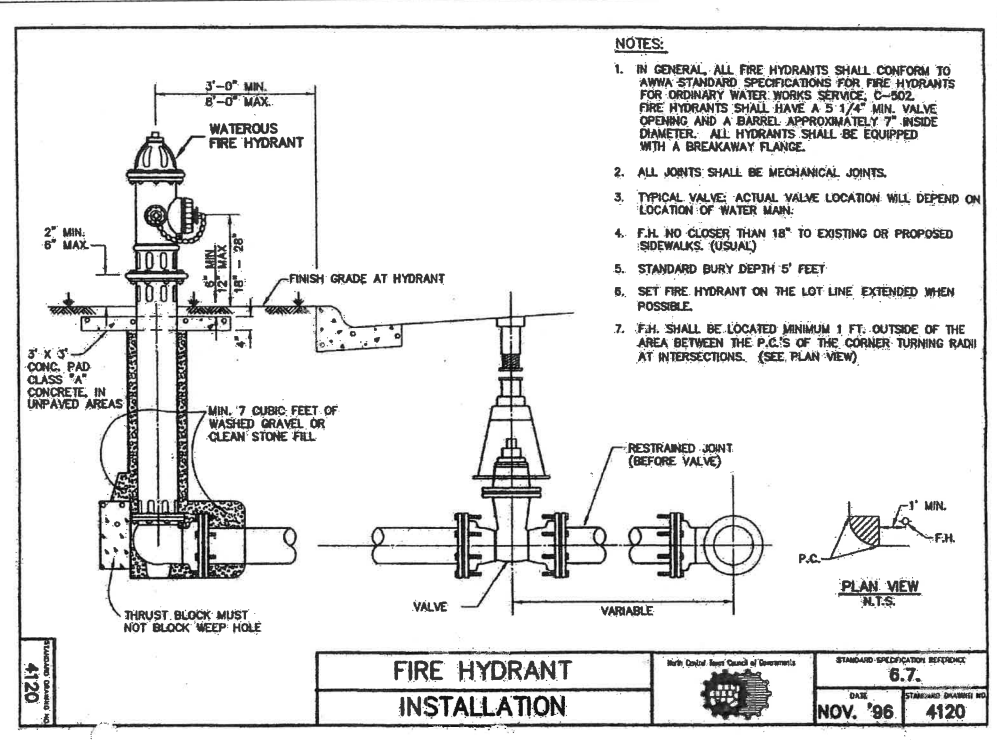
REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.



PLAN OF TEE THRUST BLOCK
N.T.S.

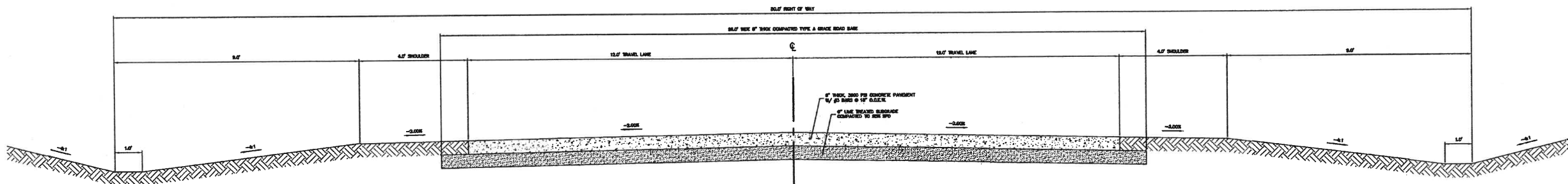
I.D. (IN.)	THRUST (TONS)	EARTH			ROCK			
		G (FT.)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4.6,8	0.4	1.5	1.5	1.5	0.1	1.0	1.0	0.1
10,12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1
16,18	0.8	6.0	2.0	2.5	0.3	1.5	2.0	0.2
20	0.9	8.2	2.0	3.5	0.4	1.5	3.0	0.3
24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.3
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	0.5
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	0.8
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	1.1
54	2.5	33.7	6.0					

GENERAL NOTES:
 1. ALL FIRE HYDRANTS TO BE WATEROUS FIRE HYDRANTS OR EQUAL, APPROVED BY CITY OF LUCAS PUBLIC WORKS DIRECTOR.
 2. ALL FITTINGS TO BE FORD BRASS OR EQUAL, APPROVED BY CITY OF LUCAS PUBLIC WORKS DIRECTOR.
 3. ALL METERS AND SERVICE TAPS SHALL BE 1" POLY OR LARGER.



OWNER/DEVELOPER
 CADG LEWIS PARK LLC
 C/O LENART DEVELOPMENT COMPANY, LLC
 520 CENTRAL PARKWAY E. SUITE 104
 PLANO, TX 75074
 Ph. (972) 422-9880
 Contact: Steve Lenart

File: 21/NOV14/2015/Drawings/1708/F-1708.dwg
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 Plot Path: \\G:\Projects\1708\F-1708.dwg



TYPICAL ROADWAY SECTION
NOT TO SCALE

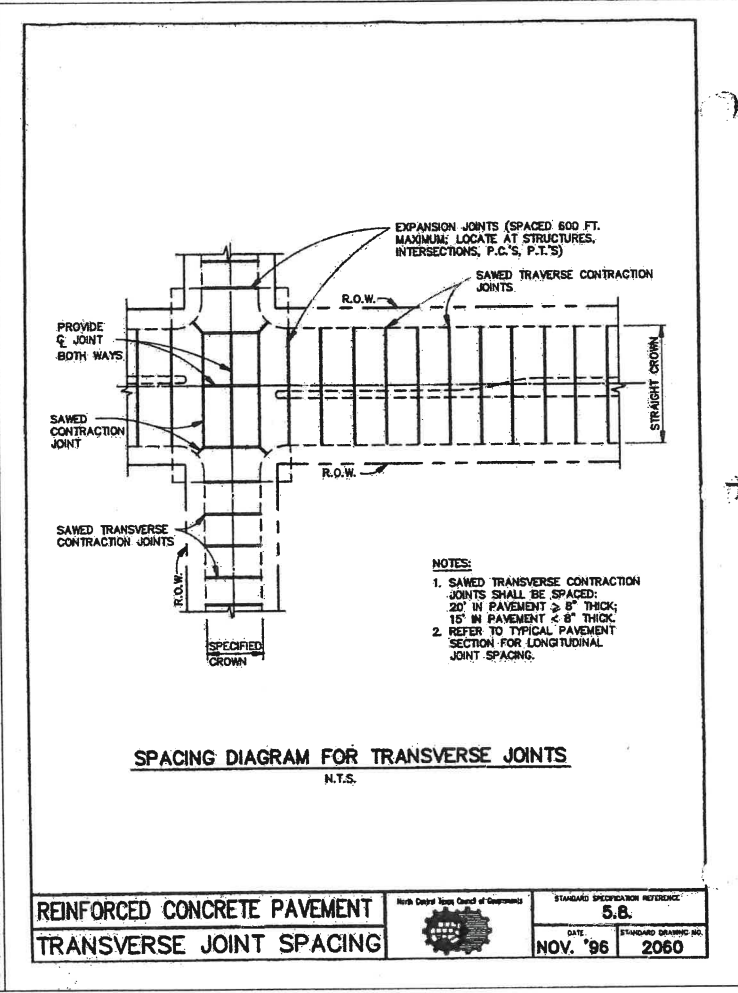
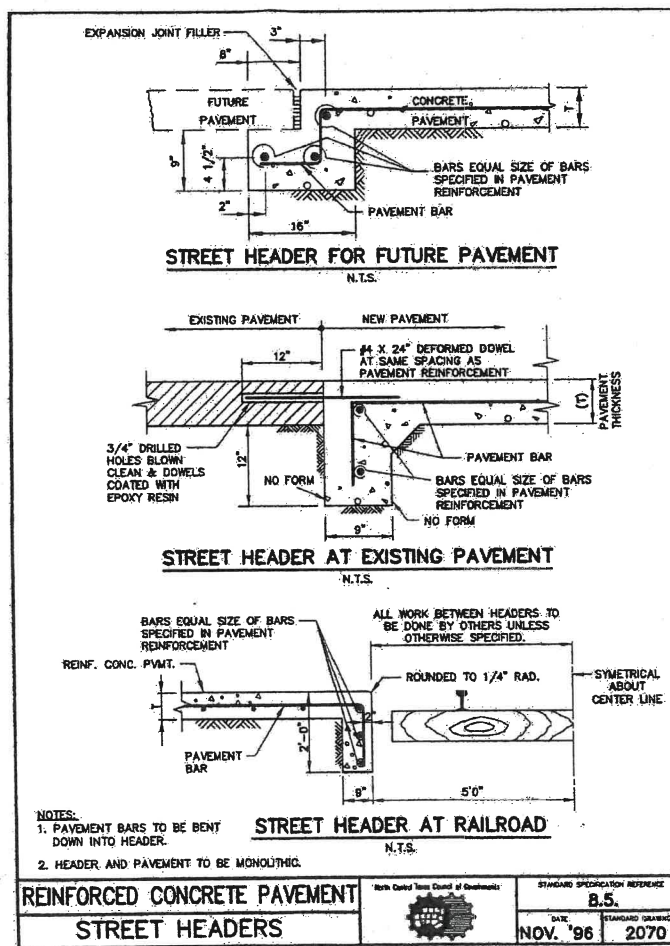
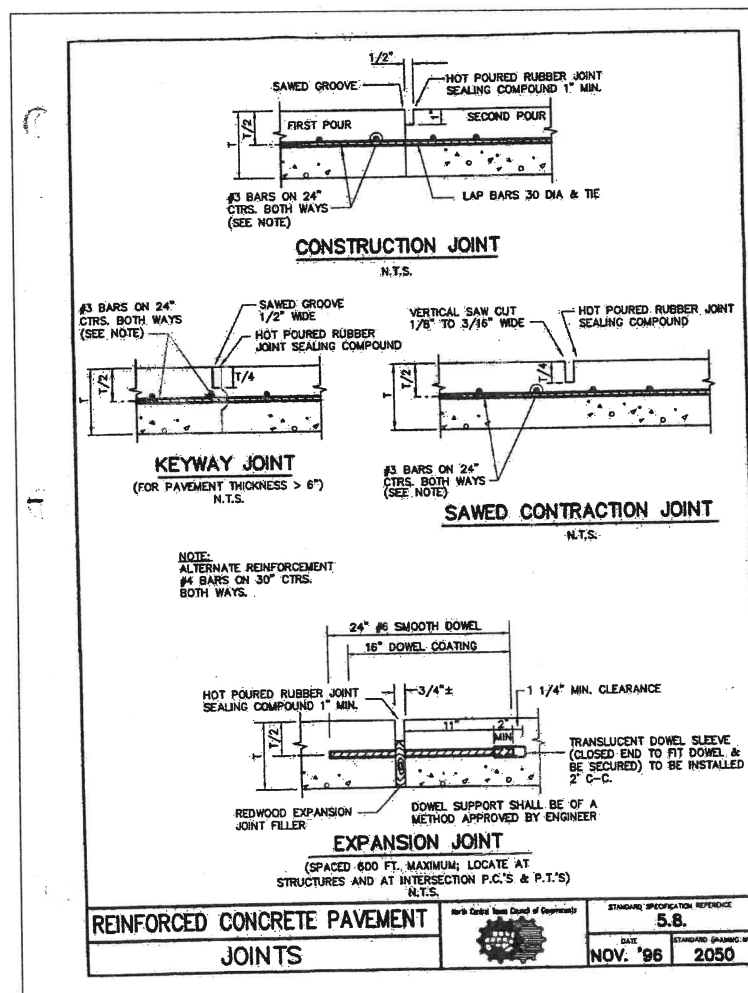


Fig. 2: VERTICAL CURVATURE & CURVE ADJUSTMENTS. SOURCE: ILLINOIS STATE BOARD OF SURVEYING & LAND SURVEYING. DATE: 1/1/1970. FILE NO. 104-10000. DRAWING NO. 104-10000-104.

STRATEGIC CIVIL ENGINEERING PLANNING
CONSULTANTS, LLC
LAND SURVEYING LANDSCAPE ARCHITECTURE

111 Hildebrand Drive • Lewisville, TX 76057 • P: 972.438.8712 • F: 972.438.8715
611 Dallas Drive, Suite 114 • Rowlett, TX 75082 • P: 882.831.8712 • F: 817.890.4048
TYPE Form No. 1798

LEWIS PARK ESTATES
Lot 1-16, 1-20, Block A, B
LEWIS PARK ESTATES
60,858 ACRES
in the
JAMES ANDERSON SURVEY, ABSTRACT NO. 17
CITY OF LUCAS
COLLIN COUNTY, TEXAS

STANDARD PAVING
DETAILS

5/19/2015

G&A CONSULTANTS, LLC
TYPE F-798

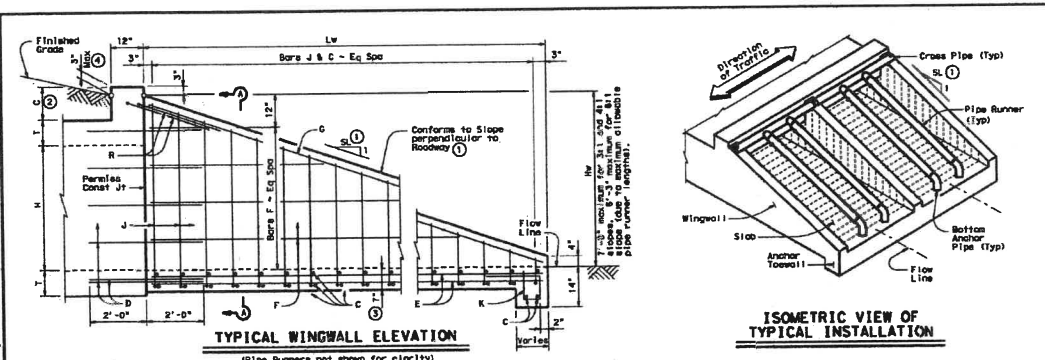
Drawn By: JUF
Date: 11/07/2014
Scale: CUSTOM
Revisions:

14026
C32

OWNER/DEVELOPER
CADG LEWIS PARK, LLC
C/O LENART DEVELOPMENT COMPANY, LLC
520 CENTRAL PARKWAY E. SUITE 104
PLANO, TX 75074
Ph: (972) 422-8880
Contact: Steve Lenart

LEWIS PARK ESTATES

DETAILS, if any, are shown. It is assumed that the Texas Engineering Practice Act, Chapter 489, of the Texas Government Code, and the Texas Board of Professional Engineers, Chapter 489, of the Texas Government Code, are followed. It is the responsibility of the contractor to verify the accuracy of any dimensions shown on this drawing. It is the responsibility of the contractor to verify the accuracy of any dimensions shown on this drawing. It is the responsibility of the contractor to verify the accuracy of any dimensions shown on this drawing.



Formulas: (All values are in Feet)
 $H = H + T + C - 0.250'$
 $L = (H - 0.333') / S$
 For Cast-in-place culverts
 $A = (H + 3) \times (L + 1) / 2$
 For Precast culverts
 $A = (H + 3) \times (L + 1) / 2 + 10.500'$
 Total Wingwall Area (S.F.)
 $W = (H + 3) \times (L + 1) \times (L + 1)$
 Total Concrete Volume (C.Y.)
 $V = (W / 27) \times (L + 1) + (L \times W) \times (L + 1) + (L \times W) \times (L + 1) \times (L + 1)$
 Total Reinforcing (Lbs)
 $R = (1.55) \times (L) \times (A) + (1.55) \times (L) \times (W) + (1.55) \times (L) \times (L + 1) \times (L + 1)$
 $R = (1.55) \times (L) \times (A) + (1.55) \times (L) \times (W) + (1.55) \times (L) \times (L + 1) \times (L + 1)$

GENERAL NOTES:
 Design according to current AASHTO Standard and Interim Specifications.
 The Safety End Treatments shown herein are intended for use in those installations where out-of-control vehicles are likely to traverse the concrete approximately perpendicular to the pipe runner.
 Pipe Runners are designed for a traveling load of 18,000 lbs/ft or as recommended by Research Report 2811, "Safety Treatment of Roadside Concrete Structures", Texas Transportation Institute, March 1981.
 All reinforcing steel shall be Grade 60. All reinforcing shall be adjusted as necessary to provide a minimum clear cover of 1 1/2".
 All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.
 The quantities for Pipe Runners, reinforcing steel, and concrete, resulting from the formulas given herein are for Contractor's information only.
 Pipe Runners, Cross Pipes, and Anchor Pipes shall conform to the requirements of ASTM A307 (Type E or S, Grade B), ASTM A305 (Grade B), or A307.
 All steel components, except the concrete reinforcing, shall be galvanized after fabrication. Galvanizing done during transport or construction shall be reworked in accordance with the specifications.
 See BCS standard sheet for additional dimensions and information.
 After a design drawing bearing the seal of a professional engineer will be acceptable for precast construction of the Safety End Treatments.

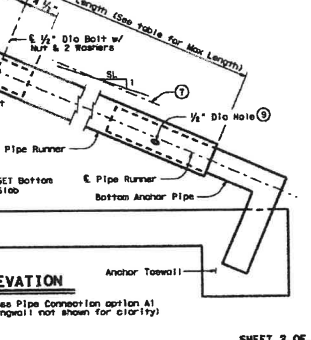
TABLE OF REINFORCING BAR SIZES & SPACING

Bar	Size	Spacing
C	#4	10" Max
D	#4	Bottom S & E
E	#4	1'-0" Max
F	#4	1'-0" Max
G	#5	Shown
H	#4	10" Max
I	#4	1'-0" Max
J	#4	Shown

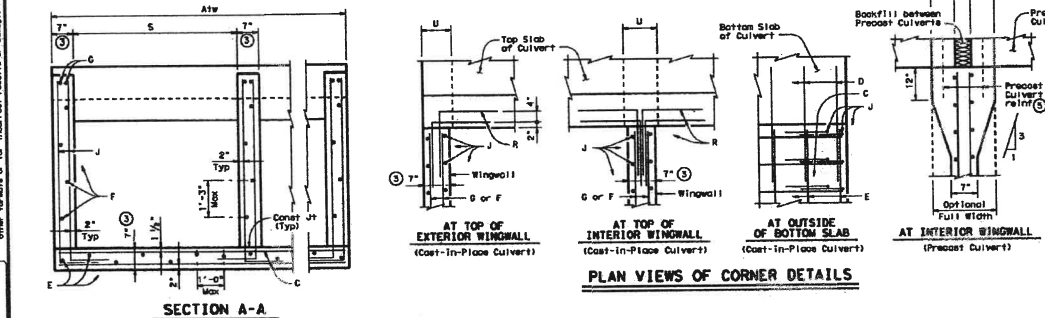
1 Recommended values of slope are 3:1, 4:1, & 6:1. Slope shall be 3:1 or flatter.
 2 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures without rolling and curb taller than 1'-0", refer to SCD standards.
 3 Wingwall and slab thicknesses may be the same as the adjacent culvert wall and slab thicknesses (7" minimum). If thicknesses greater than the minimum (7") are used, no changes will be made in quantities and no additional compensation will be allowed.
 4 For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
 5 For culverts with C = 0', the precast culvert reinforcing shall extend 1'-0" minimum into Wingwall. Wingwall Bars B and I may be omitted. Otherwise, refer to the "Wingwall Connection Detail" on the SCD-SD standard.

MAXIMUM PIPE RUNNER LENGTHS & REQUIRED PIPE RUNNER AND ANCHOR PIPE SIZES

Maximum Pipe Runner Length	Required Pipe Runner Size		Required Anchor Pipe Size	
	Pipe Size	Pipe O.D.	Pipe Size	Pipe O.D.
10'-0"	3" STD	3.500"	2" STD	2.375"
19'-0"	4" STD	4.500"	3" STD	3.000"
34'-2"	5" STD	5.563"	4" STD	4.500"



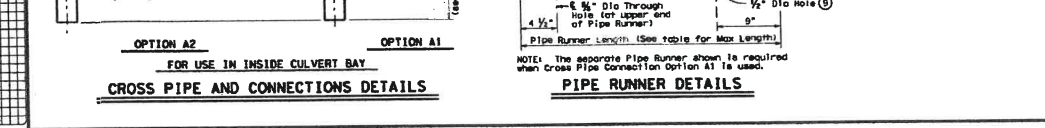
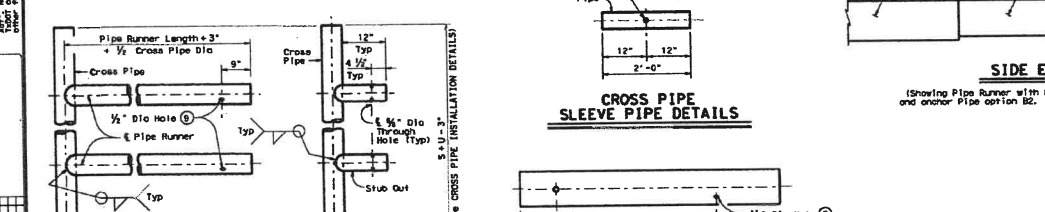
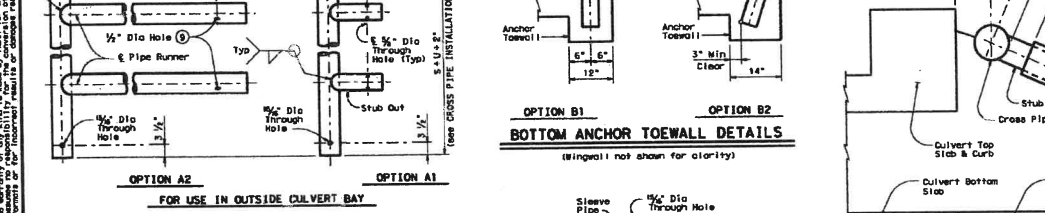
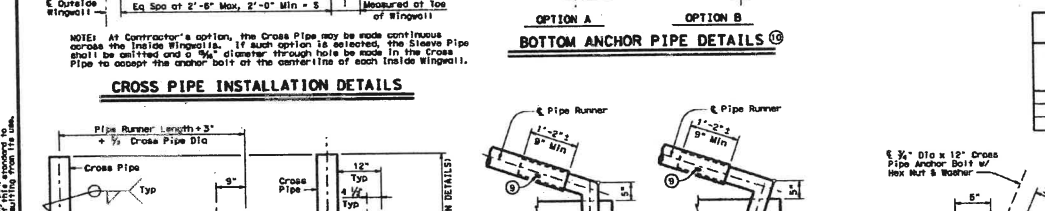
SAFETY END TREATMENT FOR 0° SKEW BOX CULVERTS (MAXIMUM W = 7'-0") TYPE 1 - CROSS DRAINAGE
SETB-CD



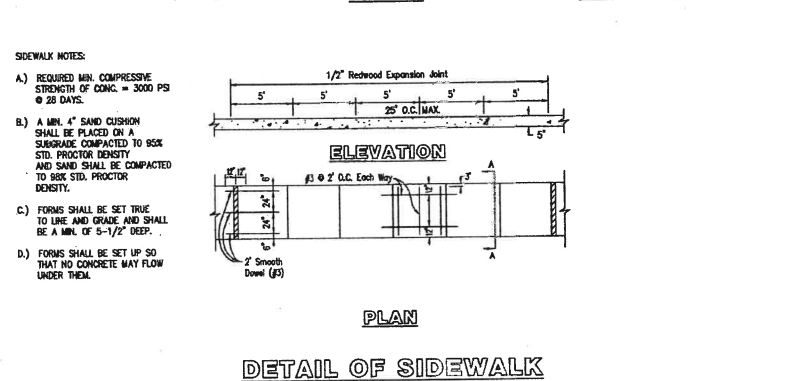
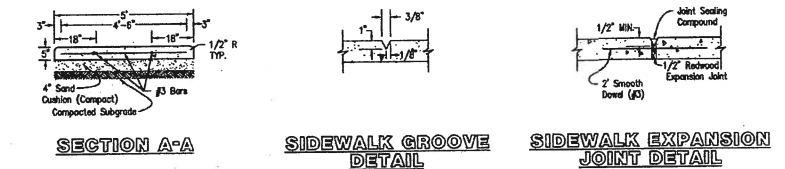
GENERAL NOTES:
 Design according to current AASHTO Standard and Interim Specifications.
 The Safety End Treatments shown herein are intended for use in those installations where out-of-control vehicles are likely to traverse the concrete approximately perpendicular to the pipe runner.
 Pipe Runners are designed for a traveling load of 18,000 lbs/ft or as recommended by Research Report 2811, "Safety Treatment of Roadside Concrete Structures", Texas Transportation Institute, March 1981.
 All reinforcing steel shall be Grade 60. All reinforcing shall be adjusted as necessary to provide a minimum clear cover of 1 1/2".
 All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.
 The quantities for Pipe Runners, reinforcing steel, and concrete, resulting from the formulas given herein are for Contractor's information only.
 Pipe Runners, Cross Pipes, and Anchor Pipes shall conform to the requirements of ASTM A307 (Type E or S, Grade B), ASTM A305 (Grade B), or A307.
 All steel components, except the concrete reinforcing, shall be galvanized after fabrication. Galvanizing done during transport or construction shall be reworked in accordance with the specifications.
 See BCS standard sheet for additional dimensions and information.
 After a design drawing bearing the seal of a professional engineer will be acceptable for precast construction of the Safety End Treatments.

TABLE OF REINFORCING BAR SIZES & SPACING

Bar	Size	Spacing
C	#4	10" Max
D	#4	Bottom S & E
E	#4	1'-0" Max
F	#4	1'-0" Max
G	#5	Shown
H	#4	10" Max
I	#4	1'-0" Max
J	#4	Shown



SAFETY END TREATMENT FOR 0° SKEW BOX CULVERTS (MAXIMUM W = 7'-0") TYPE 1 - CROSS DRAINAGE
SETB-CD



GENERAL NOTES:
 Design according to current AASHTO Standard and Interim Specifications.
 The Safety End Treatments shown herein are intended for use in those installations where out-of-control vehicles are likely to traverse the concrete approximately perpendicular to the pipe runner.
 Pipe Runners are designed for a traveling load of 18,000 lbs/ft or as recommended by Research Report 2811, "Safety Treatment of Roadside Concrete Structures", Texas Transportation Institute, March 1981.
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 Pipe Runners, Cross Pipes, and Anchor Pipes shall conform to the requirements of ASTM A307 (Type E or S, Grade B), ASTM A305 (Grade B), or A307.
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MAXIMUM PIPE RUNNER LENGTHS & REQUIRED PIPE RUNNER AND ANCHOR PIPE SIZES

Maximum Pipe Runner Length	Required Pipe Runner Size		Required Anchor Pipe Size	
	Pipe Size	Pipe O.D.	Pipe Size	Pipe O.D.
10'-0"	3" STD	3.500"	2" STD	2.375"
19'-0"	4" STD	4.500"	3" STD	3.000"
34'-2"	5" STD	5.563"	4" STD	4.500"



SAFETY END TREATMENT FOR 0° SKEW BOX CULVERTS (MAXIMUM W = 7'-0") TYPE 1 - CROSS DRAINAGE
SETB-CD

STEELING CIVIL ENGINEERING PLANNING
CONSULTANTS, LLC
 LAND SURVEYING LANDSCAPE ARCHITECTURE
 111 Hillside Drive - Lewisville, TX 76067 - P: 972-488-9712 - F: 972-438-9715
 611 Dallas Drive, Suite 111 - Rowlett, TX 76088 - P: 972-488-9712 - F: 972-438-9715
 10150 North Loop West, Suite 1000 - Dallas, TX 75243 - P: 972-488-9712 - F: 972-438-9715

LEWIS PARK ESTATES
 Lot 1-B, 1-20, Block A, B
LEWIS PARK ESTATES
 60.868 Acres
 in the
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS
 JAMES ANDERSON SURVEY, ABSTRACT NO. 17

TXDOT CONSTRUCTION DETAILS

STATE OF TEXAS
 REGISTERED PROFESSIONAL ENGINEER
DOUGLAS W. WEAVER
 117386
 5/19/2015

OWNER/DEVELOPER
 CADG LEWIS PARK LLC
 C/O LENART DEVELOPMENT COMPANY, LLC
 520 CENTRAL PARKWAY E. SUITE 104
 PLANO, TX 75074
 Ph. (972) 422-9880
 Contact: Steve Lenart

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