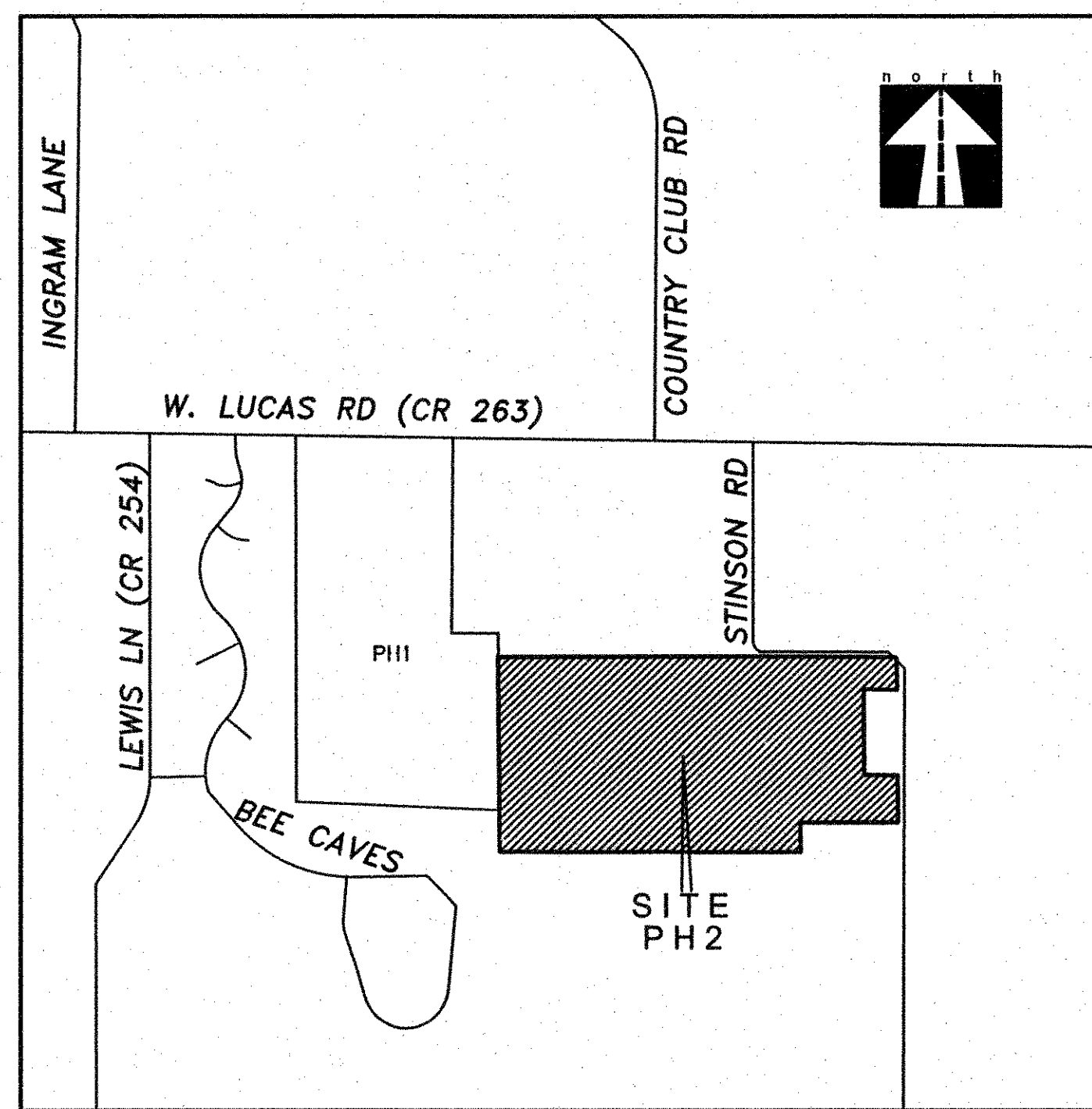
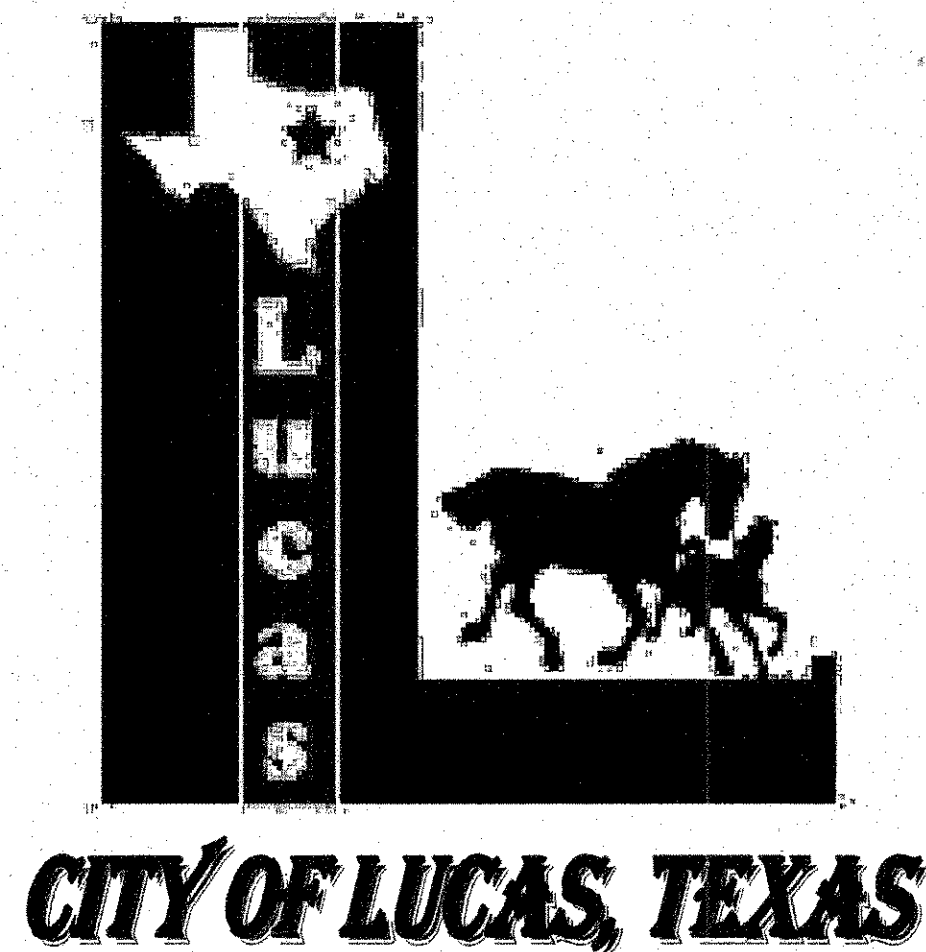


CONSTRUCTION PLANS

for

ROCKLAND FARMS, PH II

City of Lucas, Texas



VICINITY MAP
(NOT TO SCALE)
MAPSCO #562N

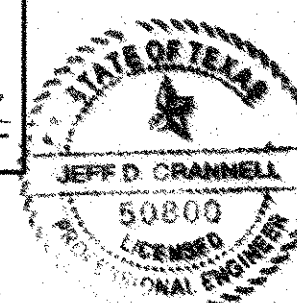
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31. EROSION CONTROL PLAN
32. TRAFFIC CONTROL PLAN

OWNER:
HJ ROCKLAND, LLC
c/o RJ LUCAS, LLC
6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

As-Built
Date 12-29-12



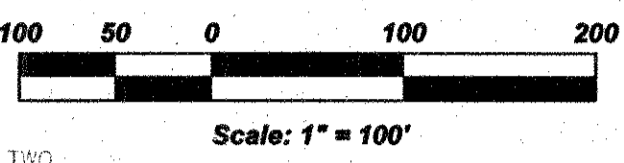
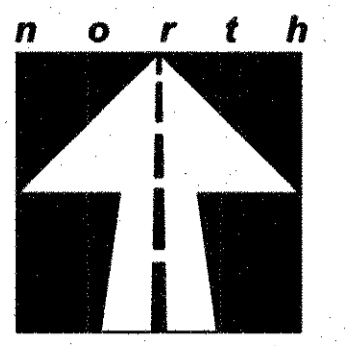
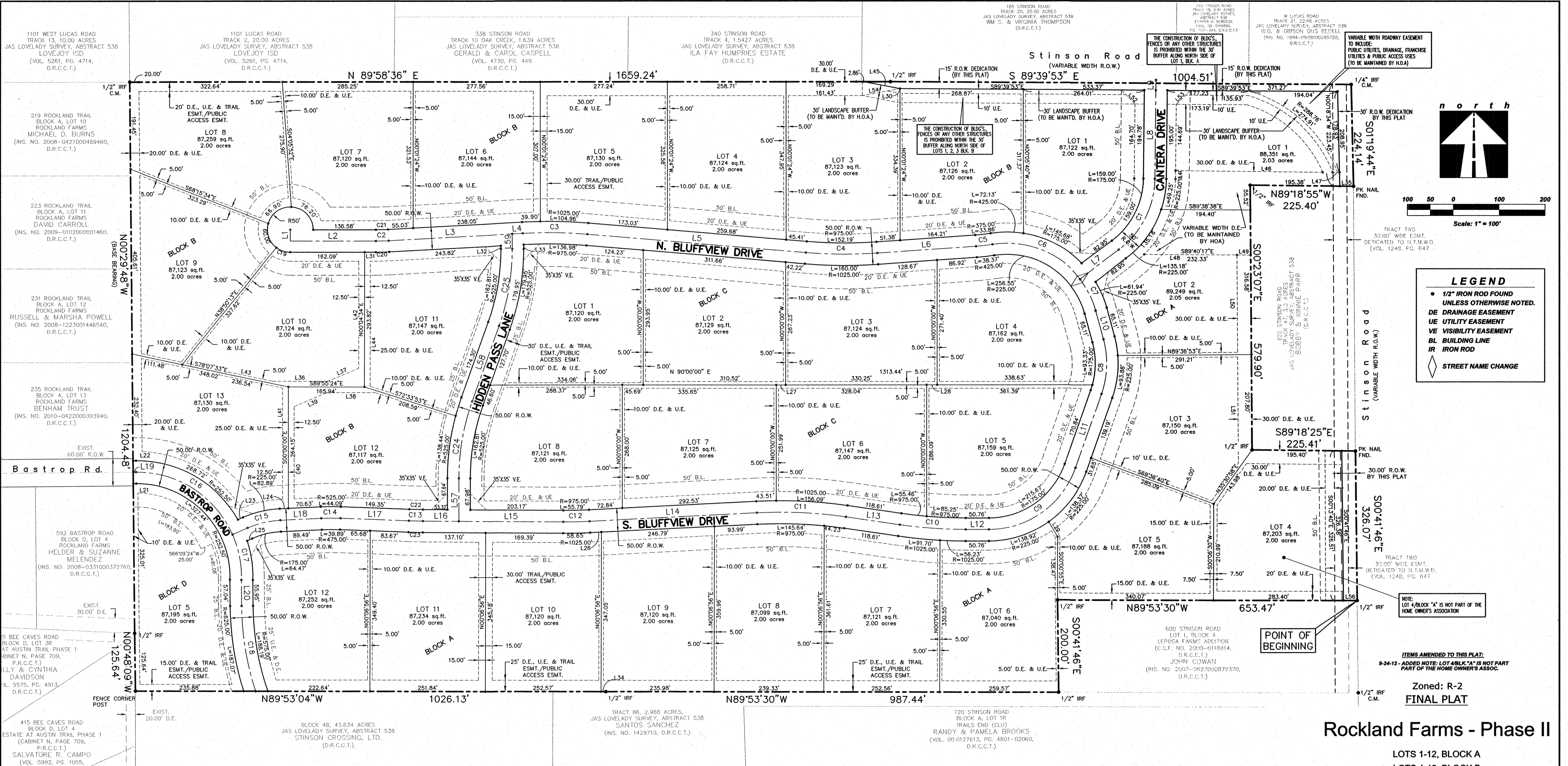
PREPARED BY:
Engineering Corporation
2570 F.M. 407, Suite 209
Highland Village Texas 75077

Ph: 972.691.6633 Fax: 972.691.6628
TBPE FIRM #605

SURVEYED BY:
PEISER SURVEYING
623 E. Dallas Road
Grapevine, Texas 76051
817.481.1806

September, 2012

ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS



LEGEND

- 1/2" IRON ROD FOUND UNLESS OTHERWISE NOTED.
- DE DRAINAGE EASEMENT
- UE UTILITY EASEMENT
- VE VISIBILITY EASEMENT
- BL BUILDING LINE
- IR IRON ROD
- ◊ STREET NAME CHANGE

ITEMS AMENDED TO THIS PLAT:
 9-24-12 - ADDED NOTE: LOT 4/BLOCK "A" IS NOT PART OF THE HOME OWNERS ASSOC.

Zoned: R-2
FINAL PLAT

Rockland Farms - Phase II

LOTS 1-12, BLOCK A
 LOTS 1-13, BLOCK B
 LOTS 1-8, BLOCK C
 LOT 5, BLOCK D
 BEING 34 LOTS OUT OF 75.53 ACRES
 JAMES LOVELADY SURVEY, ABSTRACT NO. 538 IN
 THE CITY OF LUCAS, COLLIN COUNTY, TEXAS

OWNER:
HJ ROCKLAND, LLC

c/o RJ LUCAS, LLC
 750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX (972) 386-6190

PREPARED BY:
CRANNELL, CRANNELL, & MARTIN ENGINEERING
 2570 F.M. 407, SUITE 209, HIGHLAND VILLAGE, TX 75077
 (972) 691-6633 FAX (972) 691-6628

SURVEYED BY:
PEISER & MANKIN SURVEYING, LLC
 623 E. DALLAS ROAD, GRAPEVINE TEXAS 76051
 (817) 481-1806
 P-3657/ROCKLAND/FINAL

LINE TABLE			LINE TABLE			LINE TABLE			LINE TABLE		
LINE	LENGTH	BEARING	LINE	LENGTH	BEARING	LINE	LENGTH	BEARING	LINE	LENGTH	BEARING
L1	25.00	S00°01'06"W	L15	228.00	N89°36'35"W	L29	37.82	S30°31'47"E	L43	191.42	N78°07'28"W
L2	186.58	S89°58'54"E	L16	78.49	N89°36'35"W	L30	0.50	N89°39'53"W	L44	272.42	N00°04'34"E
L3	270.25	N86°49'15"E	L17	149.35	N87°52'11"W	L31	24.49	S89°58'54"E	L45	80.18	S79°08'55"E
L4	22.84	N86°49'15"E	L18	89.49	S87°19'06"W	L32	7.24	S00°00'00"E	L46	320.79	S89°18'55"E
L5	478.11	S85°04'55"E	L19	6.47	N89°30'12"E	L33	10.01	S00°00'00"E	L47	14.86	S89°18'55"E
L6	215.59	N85°58'28"E	L20	56.48	S00°29'48"E	L34	10.47	S89°53'04"E	L48	202.33	S89°40'17"E
L7	106.56	N52°38'48"E	L21	6.47	N89°30'12"E	L35	30.02	S89°18'55"E	L49	30.00	S89°40'17"E
L8	194.89	N00°35'21"E	L22	6.47	N89°30'12"E	L36	121.28	N90°00'00"E	L50	212.22	N00°23'07"W
L9	21.98	N00°35'21"E	L23	12.15	N86°12'41"E	L37	73.00	N67°20'33"E	L51	231.45	S00°23'07"E
L10	65.11	S15°12'07"E	L24	18.86	N87°19'06"E	L38	104.67	N90°00'00"E	L52	42.30	N44°32'27"W
L11	170.84	S19°23'24"W	L25	12.10	N86°12'41"E	L39	77.80	N67°20'33"E	L53	42.51	N45°28'35"E
L12	50.76	S00°00'00"W	L26	24.59	N87°06'42"E	L40	201.07	N00°00'00"W	L54	82.94	N79°38'47"E
L13	118.61	N81°43'50"W	L27	20.56	N90°00'00"E	L41	242.24	N00°00'00"W	L55	30.00	N89°53'30"W
L14	365.37	S87°06'42"W	L28	22.77	N90°00'00"E	L42	232.98	N00°04'34"E	L56	92.81	N00°00'00"W
									L57	174.30	N19°38'19"E
									L58	33.66	N00°00'00"W
									L59	33.66	N00°00'00"W

CURVE TABLE					
CURVE	LENGTH	RADIUS	TANGENT	CHORD LENGTH	CHORD DIRECTION
C1	181.71	200.00	97.67	175.53	N26°37'05"E
C2	27.90	500.00	13.96	27.90	N88°25'10"E
C3	141.32	1000.00	70.78	141.21	N89°07'50"W
C4	156.10	1000.00	78.21	155.94	S89°33'14"E
C5	36.12	400.00	18.07	36.10	N83°23'16"E
C6	215.88	200.00	119.81	205.55	N68°16'34"W
C7	77.32	200.00	39.15	76.84	N02°06'38"E
C8	120.75	200.00	62.28	118.92	S85°51'55"E
C9	246.48	200.00	141.63	231.17	N54°41'42"E
C10	144.33	1000.00	72.29	144.20	S85°51'55"E
C11	194.74	1000.00	97.68	194.43	N87°18'34"W
C12	57.22	1000.00	28.62	57.21	N88°45'04"E
C13	30.37	1000.00	15.19	30.37	S88°44'23"E
C14	41.99	500.00	21.01	41.98	S89°43'28"W
C15	73.68	200.00	37.26	73.26	S76°45'54"W
C16	264.68	227.50	149.59	249.98	N57°10'12"W
C17	102.61	227.50	52.20	101.75	N105°51'8"W
C18	187.61	600.00	94.58	186.85	S09°27'16"E
C19	32.52	50.00	16.86	31.95	S71°21'06"E
C20	29.30	525.00	14.65	29.30	N88°25'10"E
C21	26.51	475.00	13.26	26.51	N88°25'10"E
C22	29.61	975.00	14.81	29.61	S88°44'23"E
C23	31.13	1025.00	15.57	31.13	S88°44'23"E
C24	171.38	500.00	86.11	170.54	S 9°49'10" W
C25	171.38	500.00	86.11	170.54	N 9°49'10" E

FLOOD CERTIFICATE:

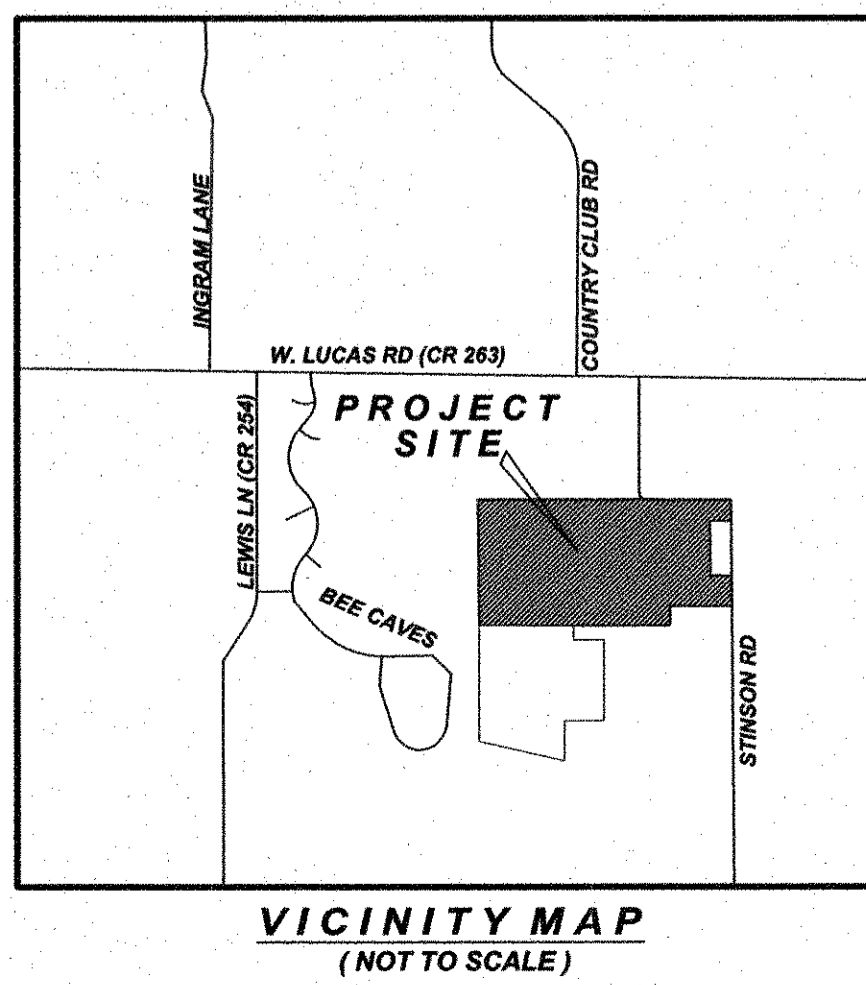
As determined by the FLOOD INSURANCE RATE MAPS for Denton County, Texas a portion of this property DOES NOT lie within the Special Flood Hazard Area (100-year flood plain), Map Panel Number: 48085C0405 J, Dated: June 2, 2009 and is located in Zone "X".

GENERAL NOTES:

Basis of Bearing is NORTH 00°29'48" WEST, being the WEST line of that tract of land conveyed to ROCKLAND FARMS, LTD. as described by deed recorded in Document Number 2007-0531000733320 of the deed records of Collin County, Texas.

BENCHMARK:

1. CONCRETE MONUMENTS BASED ON CITY OF ALLEN GEODETIC MONUMENT NO.1 3/8" ALUMINUM DISK SET IN CONCRETE, LOCATED 460± WEST OF THE INTERSECTION OF WHITMAN DRIVE AND BETHANY ROAD AT THE EAST END OF A BRIDGE, IN THE GRASS MEDIUM
 N-7082921.000'
 E-2532657.2940'
 ELEV=597.82'



LEGAL DESCRIPTION:

STATE OF TEXAS §
COUNTY OF COLLIN §

Being a tract of land situated in the JAMES LOVELADY SURVEY, ABSTRACT NO. 538, being all that certain tract of land conveyed to Rockland Farms, LTD., as recorded by Instrument No. 2007-0531000733320, of the Deed Records of Collin County, Texas and be more particularly described as follows:

BEGINNING at a 1/2 inch iron found in the asphalt pavement at the easterly southeast corner of said Rockland Farms, LTD. tract, same being the in the approximate centerline of Stinson Road;

THENCE North 89°53'30" West, along the south line of said Rockland Farms, LTD. tract, and passing the northeast corner of Lot 1, Block A, Lerosa Farms Addition, an addition to the City of Lucas, according to the plat thereof recorded in County Clerk's File No. 2000-0118814, of the Map Records of Collin County, Texas, at a distance of 45.00 feet, and continuing a total distance of 653.47 feet to a 1/2 inch iron rod found for an internal corner of said Rockland Farms, LTD. tract, same being the northwest corner of said Lot 1, Block A;

THENCE South 00°41'46" East, along the common of said Rockland Farms, LTD. tract, and said Lot 1, Block A, a distance of 200.00 feet to a 1/2 inch iron rod found for corner, said point being the southerly southeast corner of said Rockland Farms, LTD. tract, same being the southwest corner of said Lot 1, Block A, said point also being in the north line of a tract of land, as conveyed to Santos Sanchez, as recorded for record by Instrument No. 1429710 of the Deed Records of Collin County, Texas;

THENCE North 89°53'30" West, along the common line of said Rockland Farms, LTD. tract, and said Sanchez tract, a distance of 987.44 feet to a 1/2 inch iron found for an angle point;

THENCE North 89°53'04" West, continuing along the common line of said Rockland Farms, LTD. tract, and said Sanchez tract, and the common line of a tract of land conveyed to Stinson Crossing, LTD., as recorded in the Deed Records of Collin County, Texas, a total distance of 1026.13 feet to a fence corner post found for corner, said point being the southwest corner of said Rockland Farms, LTD. tract, and being in the east line of Estates at Austin Trail Phase I, an addition to the City of Lucas, according to the plat thereof recorded in Cabinet N, Page 709, of the Map Records of Collin County, Texas;

THENCE North 00°48'09" West, along the common line of said Rockland Farms, LTD. tract, and said Estates at Austin Trail, Phase I, a distance of 125.64 feet to a 1/2 inch iron rod found for corner, said point being the northeast corner of said Estates at Austin Trail, Phase I, and being in the east line of Rockland Farms, an addition to the City of Lucas, according to the plat thereof recorded by Instrument No. 2006-0908010003810, of the Map Records of Collin County, Texas;

THENCE North 00°29'48" West, along the common line of said Rockland Farms, LTD. tract, and said Rockland Farms (Plat), a distance of 1204.45 feet to a 1/2 inch iron rod found for corner, said point being the northwest corner of said Rockland Farms, LTD. tract, same point being the southwest corner of a tract of land conveyed to Lovejoy I.S.D., Tract 2, by deed recorded in Volume 5261, Page 4714, of the Deed Records of Collin County, Texas, and being the southeast corner of a tract of land conveyed to Lovejoy I.S.D., Tract 13, by deed recorded in Volume 5261, Page 4714, of the Deed Records of Collin County, Texas;

THENCE North 89°58'36" East, along the common line of said Rockland Farms, LTD. tract, and said Lovejoy I.S.D. Tract 2, and the south line of a called 1.639 acre tract of land conveyed to Gerald E. Caspell and Carol J. Caspell, by deed recorded in Volume 4730, Page 449, of the Deed Records of Collin County, Texas, a distance of 1659.24 feet to a 1/2 inch iron rod found for corner;

THENCE South 89°39'53" East, continuing along the north line of said Rockland Farms, LTD. tract, a distance of 1004.51 feet to a 1/4 inch iron rod found in asphalt for corner in a southeasterly bend of aforesaid Stinson Road, said point being the northeast corner of said Rockland Farms, LTD. tract, said point being in the centerline more or less of aforesaid Stinson Road;

THENCE South 01°19'44" East, along the east line of said Rockland Farms, LTD. tract, and along the approximate centerline of said Stinson Road, a distance of 224.14 feet to a PK nail found in asphalt for corner, said point being the northeast corner of a called 3.00 acre tract of land conveyed as Tract 47 to Bobby & Winnie Parr, in the Deed Records of Collin County, Texas;

THENCE North 89°18'55" West, along the common line of said Rockland Farms, LTD. tract, and said called 3.00 acre tract, a distance of 225.40 feet to a 1/2 inch iron rod found for corner, said point being the northwest corner of said called 3.00 acre tract;

THENCE South 00°23'07" East, continuing along the common line of said Rockland Farms, LTD. tract, and said Bobby & Winnie Parr, a distance of 579.90 feet to a 1/2 inch iron rod found for corner, said point being the southwest corner of said Bobby & Winnie Parr tract;

THENCE South 89°18'25" East, continuing along the common line of said Rockland Farms, LTD. tract, and said Bobby & Winnie Parr, a distance of 225.41 feet to a PK nail found in asphalt for corner, said point being the southeast corner of said Bobby & Winnie Parr, and being in the approximate centerline of aforesaid Stinson Road;

THENCE South 00°41'46" East, along the east line of said Rockland Farms, LTD. tract, and along the approximate centerline of said Stinson Road, a distance of 326.07 feet to the POINT OF BEGINNING and containing 3,290,263 square feet or 75.53 acres of computed land.

SURVEYOR'S CERTIFICATE

I, TIMOTHY MANKIN, Registered Professional Land Surveyor, hereby certify that this survey of the property and legally described hereon was made on the ground by me or under my supervision and correctly shows the boundary lines, dimensions, and area of the land, and all alleys, streets, rights-of-way, easements, and other matters of record which, to my knowledge, affect the property. The undersigned further certifies that there are no visible discrepancies, conflicts, shortages in area, boundary line conflicts, encroachments, protrusions, overlapping of improvements, easements, or rights-of-way except as shown hereon.

TIMOTHY MANKIN, R.P.L.S.
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 6122

STATE OF TEXAS §
COUNTY OF TARRANT §

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

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 4th day of September, 2012.

Notary Public in and for
State of Texas
My Commission Expires: _____

OWNER'S DEDICATION

NOW THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

THAT HJ ROCKLAND, LLC, do hereby adopt this plat, designating the herein above described property as **ROCKLAND FARMS, PHASE II** an addition to the City of Lucas, Collin County, Texas and do hereby dedicate, in fee simple, to the public use forever the streets and alleys shown thereon. The easements shown thereon are hereby reserved for the purpose indicated. The utility and fire lane easements shall be open to the public, fire and police units, garbage and rubbish collection agencies, and all public and private utilities for each particular use. The maintenance of paving on the utility and fire lane easements is the responsibility of the property owner. No buildings, fences, trees, shrubs or other improvements or growths shall be constructed reconstructed or placed upon, over or across the easements as shown. Said easements being hereby reserved for the mutual use and accommodation of all public utilities using or desiring to use same. All, and any public utility shall have the right to remove and keep removed all or part of any buildings, fences, trees, shrubs, or other improvements or growths which in any way may endanger or interfere with the construction, maintenance or efficiency of its respective system on the easements, and all public utilities shall at all times have the full right of ingress and egress to or from and upon the said easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining an adding to or removing all or parts of its respective systems without the necessity at any time of procuring the permission of anyone. (Any public utility shall have the right of ingress and egress to private property for the purpose of reading meters and any maintenance of service required or ordinarily performed by that utility).

Water main and wastewater easements shall also include additional area of working space for construction and maintenance of the systems. Additional easement area is also conveyed for installation and maintenance of manholes, cleanouts, fire hydrants, water services and wastewater services from the main to the curb or pavement line, and description of such additional easements herein granted shall be determined by their location as installed.

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

WITNESS, my hand at _____, Texas, this the ____ day of _____, 2012.

Signature _____

HJ ROCKLAND, LLC
A Texas Limited Liability Corporation,

Printed Name _____

Title _____

STATE OF TEXAS §
COUNTY OF DALLAS §

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

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this ____ day of _____, 2012.

Notary Public in and for
State of Texas
My Commission Expires: _____

CITY APPROVAL CERTIFICATE

This plat is hereby approved by the Planning and Zoning Commission of the City of Lucas, Texas

Chairman, Planning and Zoning Commission _____ Date _____

ATTEST: _____ Date _____

Signature _____ Date _____

Name & Title _____

The Director of Public Works of the City of Lucas, Texas hereby certifies that to the best of his/her knowledge or belief, this subdivision plat conforms to all requirements of the Code of Ordinances and with engineering construction standards and processes adopted by the City of Lucas, Texas as to which his/her approval is required.

Director of Public Works _____ Date _____

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

Director of Planning and Community Development _____ Date _____

RECOMMENDED FOR APPROVAL

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

APPROVED FOR CONSTRUCTION

Mayor, City of Lucas, Texas _____ Date _____

The undersigned, the City Secretary of the City of Lucas, Texas, hereby certifies that the foregoing final plat of the _____ Subdivision or Addition to the City of Lucas was submitted to the City Council on the ____ day of _____, 20____, and the Council, by formal action, then and there accepted the dedication of streets, alleys, parks, easements, public places, and water and sewer lines, as shown and set forth in and upon said plat, and said Council further authorized the Mayor to note the acceptance thereof for construction by signing his/her name as hereinabove subscribed.

Witness my hand this ____ day of _____ A.D., 2012.

City Secretary
City of Lucas, Texas

ON-SITE SEWAGE FACILITY NOTES:

- (Due to the site evaluator's determination that all lots are predominately class IV soils) All lots must utilize alternative type On-Site Sewage Facilities.
- Must maintain state-mandated setback of all On-Site Sewage Facility components from any/all easements and drainage areas, sharp breaks and/or creeks/rivers/ponds/etc. No On-Site Sewage Facility components may be placed within, cross an easement or use an easement for septage disposal (per and in violation of Title 30, Chapter 285 of the Texas Administrative Code).
 - Due to the presence of large easements on Lot1/Block A, no surface improvements, impervious cover, outbuildings, swimming pools, etc. on lot without pre-construction planning meeting with Registered Sanitarian/Professional Engineer and Collin County Development Services/NOTE: LACK OF USABLE LOT AREA MAY PRECLUDE LOT 1/BLOCK A FROM HAVING SWIMMING POOLS AND/OR OUTBUILDINGS NEAR THE HOUSE OR CONNECTED IN ANY WAY TO THE OSSF.
 - Additionally, dwelling size on Lot 1/Block A may be limited by amount of drainfield present.
- Tree removal and lot grading may be required on individual lots for On-Site Sewage Facility installation and/or operation.
- Individual site evaluations and OSSF design plans (meeting all State and County requirements) must be submitted to and approved by Collin County for each lot prior to construction of any OSSF system.

Health Department Certificate:

I hereby certify that the on-site sewage facilities described on this plat conform to applicable health laws of the State of Texas, that site evaluations have been submitted representing the site conditions in the areas in which on-site sewage facilities are planned to be used.

Registered Sanitarian/Designed Representative
Collin County Development Services

NOTICE: SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF CITY ORDINANCE AND STATE LAW AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.

NOTES:

- DRAINAGE EASEMENTS (DITCHES & CULVERTS) TO BE MAINTAINED BY INDIVIDUAL LOTS OWNERS
- NO FEMA DESIGNATED FLOODPLAIN ON THE SITE
- SINGLE-FAMILY R-2 STANDARDS APPLY TO THE SUBDIVISION.
- NO FENCING, BUILDINGS OR LANDSCAPING, ETC. SHALL INTERFERE WITH THE P & O SPACE MASTER TRAIL PLAN.
- THE AREA OF ROAD RIGHT-OF-WAY AND OTHER TYPES OF EASEMENT DEDICATIONS BY THIS PLAT, WHICH COINCIDE WITH THE NORTH TEXAS MUNICIPAL WATER DISTRICT'S EASEMENT, SHALL BE USED ONLY FOR ROAD CONSTRUCTION PURPOSES AND NTMWD USE. ROADWAYS AND UTILITIES, BOTH PUBLIC AND PRIVATE, ARE RESTRICTED TO CROSSINGS OF THE NTMWD EASEMENT OF 45 DEGREES OR GREATER. NO PARALLEL LAYOUT OF PUBLIC UTILITIES ARE PERMITTED WITHIN THE NTMWD EASEMENT.
- WROUGHT IRON FENCES OR OTHER APPROVED FENCE THAT DOES NOT IMPEDE WATER FLOW, ARE PERMITTED IN DRAINAGE EASEMENTS.

Zoned: R-2
FINAL PLAT

Rockland Farms - Phase II

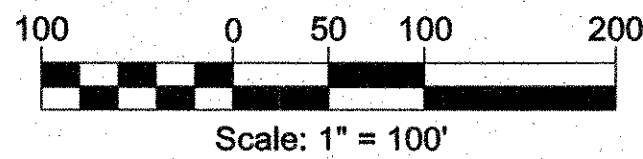
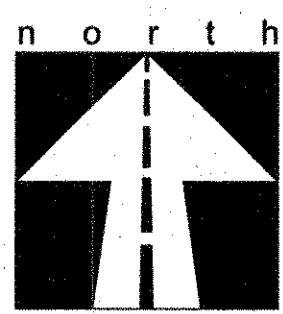
LOTS 1-12, BLOCK A
LOTS 1-13, BLOCK B
LOTS 1-8, BLOCK C
LOT 5, BLOCK D
BEING 34 LOTS OUT OF 75.53 ACRES
JAMES LOVELADY SURVEY, ABSTRACT NO. 538 IN
THE CITY OF LUCAS, COLLIN COUNTY, TEXAS

OWNER:
HJ ROCKLAND, LLC

c/o RJ LUCAS, LLC
750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

PREPARED BY:
CRANNELL, CRANNELL, & MARTIN ENGINEERING
2570 F.M. 407, SUITE 209, HIGHLAND VILLAGE, TX 75077
(972) 691-6633 FAX (972) 691-6628

SURVEYED BY:
PEISER & MANKIN SURVEYING, LLC
623 E. DALLAS ROAD, GRAPEVINE TEXAS 76051
(817) 481-1806
P-3657/ROCKLAND/FINAL



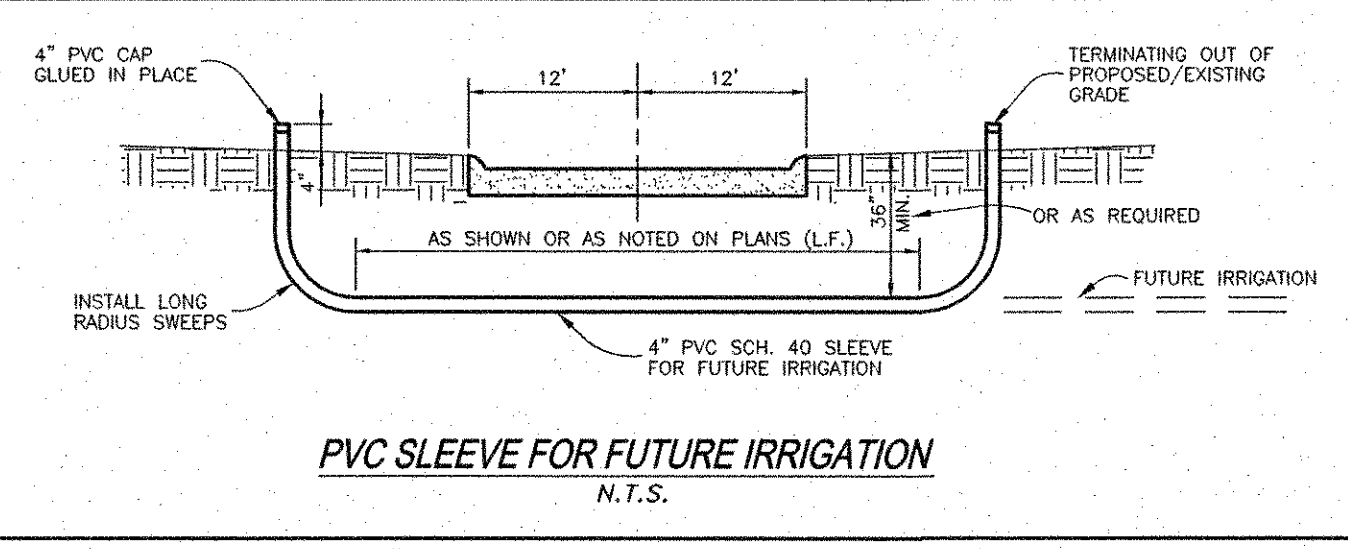
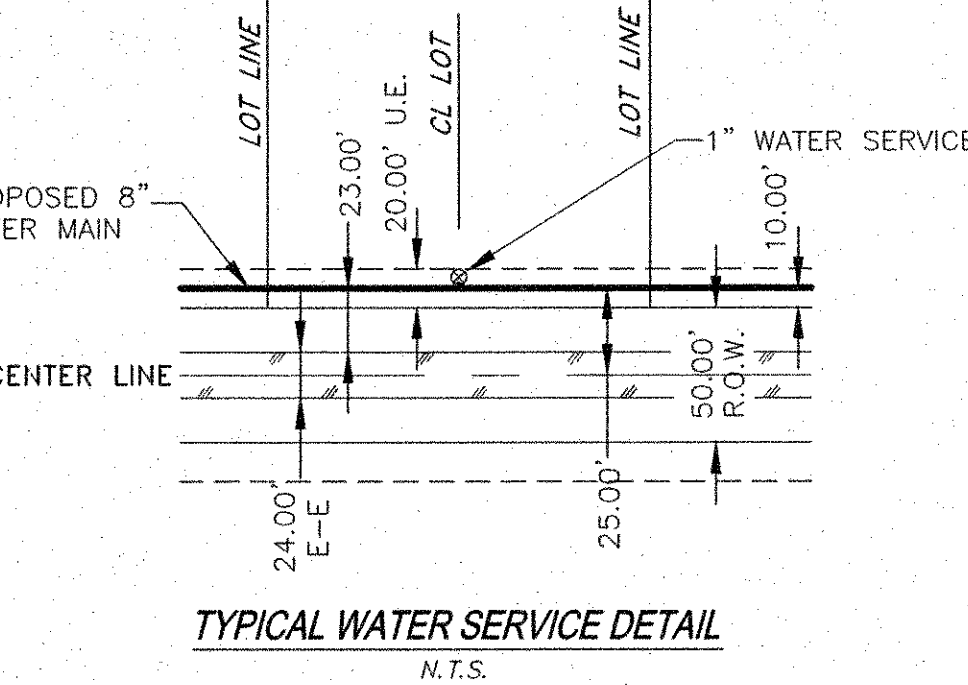
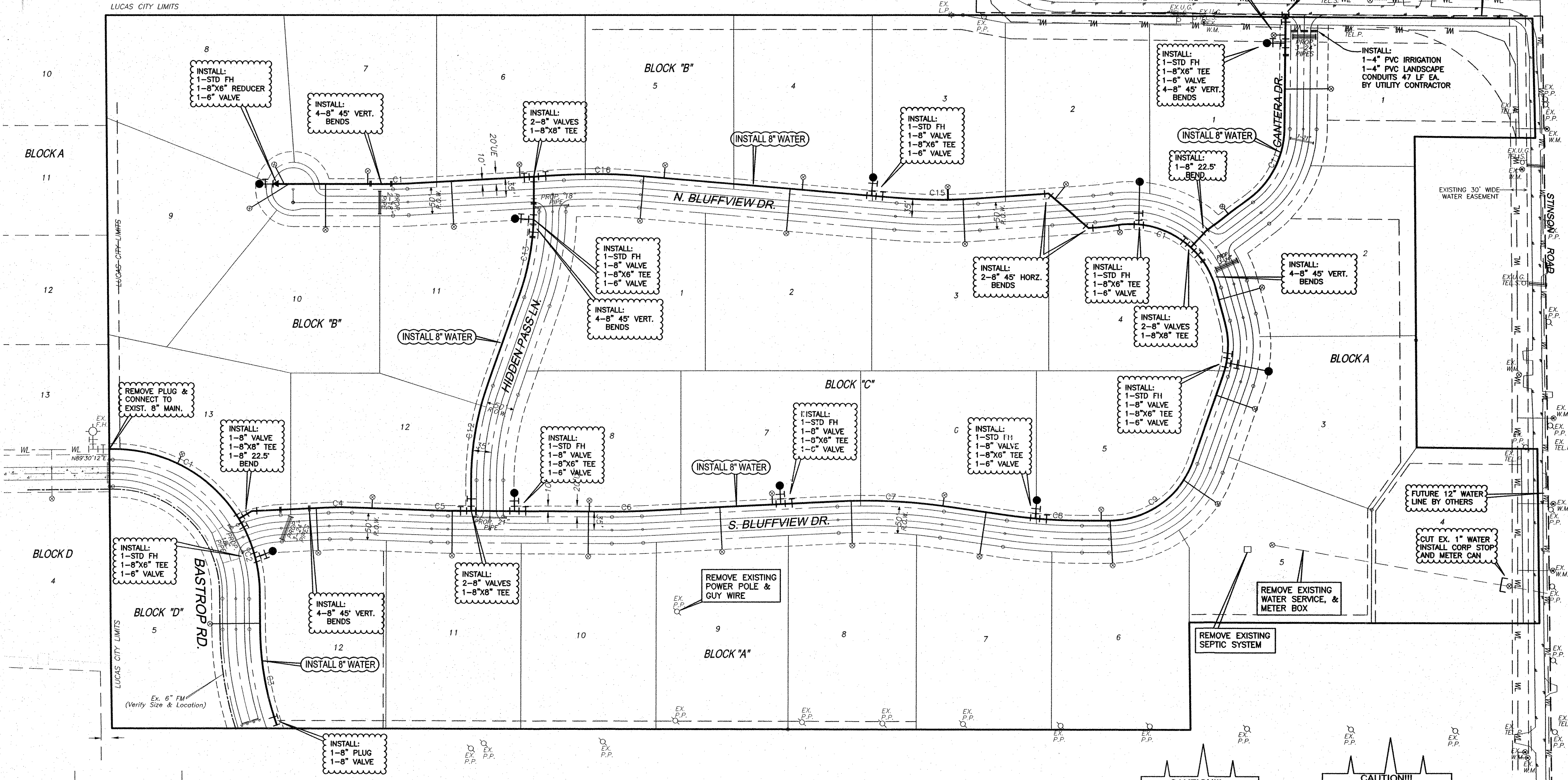
CL WATERLINE CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	BEARING
C1	282.27	272.50	59°20'58"	155.27	269.81	N60°49'20"W
C2	145.78	272.50	30°39'04"	74.68	144.04	N15°49'20"W
C3	181.64	535.00	18°45'08"	91.64	180.84	S09°52'22"E
C4	44.93	535.00	4°48'43"	22.48	44.92	S89°44'23"E
C5	29.31	651.06	2°34'45"	14.66	29.30	S88°44'23"E
C6	55.22	965.00	3°16'43"	27.62	55.21	N88°45'04"E
C7	201.55	1035.00	11°09'27"	101.10	201.23	N87°18'34"W
C8	139.28	965.00	8°16'10"	69.76	139.15	S85°51'55"E
C9	203.34	165.00	70°36'36"	116.85	190.72	N54°41'42"E
C10	235.99	265.00	51°01'22"	126.46	228.27	N06°07'17"W
C11	128.08	235.00	31°13'43"	65.68	126.51	S16°01'06"E
C12	183.38	535.00	19°38'19"	92.60	182.48	S09°49'10"W
C13	159.38	465.00	19°38'19"	80.48	158.60	N09°49'10"E
C14	35.66	200.00	10°13'02"	17.88	35.62	N80°51'57"E
C15	150.63	965.00	8°56'37"	75.47	150.48	S89°33'14"E
C16	146.27	1035.00	8°05'50"	73.26	146.15	N89°07'50"W
C17	25.95	465.00	3°11'52"	12.98	25.95	N88°25'10"E

NOTES:
 1. FIRE HYDRANTS TO BE MUELLER OR APPROVED EQUAL.
 2. MEGA LUGS TO BE USED ON ALL BENDS, VALVES AND OTHER MECHANICAL JOINTS.
 3. BLUE RPM'S (REFLECTIVE PAVEMENT MARKERS) TO BE PROVIDED AT ALL FIRE HYDRANT LOCATIONS.

CAUTION!!!
 Existing underground utilities.
 Contractor to call for locations and field verify the locations of all existing utilities prior to excavation.

- LEGEND**
- LIMITS OF PROPOSED CONCRETE PAVEMENT
 - POWER POLE
 - TELEPHONE BOX
 - PROPOSED FIRE HYDRANT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER SERVICE TO BE ABANDONED & REMOVED
 - EXISTING WASTEWATER & MANHOLE
 - PROPOSED WASTEWATER & MANHOLE
 - PROPOSED WATER LINE
 - PROPOSED IRRIGATION SLEEVES
 - PROPOSED BARRICADE

NOTE:
 CONNECTION TO PROP. 12" WATER BY OTHERS TO BE COORDINATED WITH THE CITY OF LUCAS DURING TIME OF CONSTRUCTION.



CAUTION!!!
UNDERGROUND UTILITIES
 EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION SUPPLIED BY VARIOUS OWNERS OF THE FACILITIES. THE ENGINEER DOES NOT ACCEPT THE RESPONSIBILITY FOR THE UTILITY LOCATIONS SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED, AND TO NOTIFY THE ENGINEER PROMPTLY OF ALL CONFLICTS OF THE WORK WITH EXISTING FACILITIES. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE BY THE CONTRACTOR TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

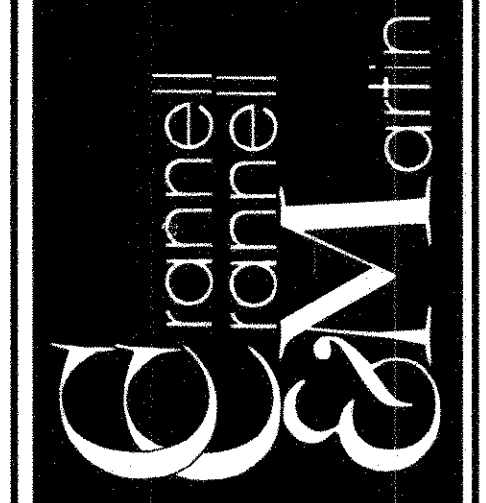
CAUTION!!!
 Existing overhead utilities.
 Contractor to field verify the locations of all existing utilities and to field verify the locations of all existing utilities prior to excavation.

CAUTION!!!
 Existing 42" Water Line.
 Contractor to call PAUL LYDAY at (972) 442-5425 48 hours before digging for locations and to field verify the locations of all existing utilities prior to excavation.

As-Built
slk 12-29-12
 Date

BENCHMARKS:
 1. FEMA BENCHMARK #RM 136, RR SPIKE IN POWER POLE ON WEST SIDE OF FM 2551, ± 2,800' SOUTH OF CR 262 (INGRAM ROAD) ELEV.=637.32'
 2. TOP OF 1/2" IR WEST SIDE OF CR 262 (INGRAM RD) ±1025' NORTH OF NORTH EDGE OF PAVEMENT CR 263 (W.LUCAS ROAD), ±7' EAST OF BARBED WIRE FENCE ELEV.=637.08'

Engineering Corporation
 2570 FM 407, Suite 209
 Highland Village, Texas 75077
 PH: 972.691.6633
 Fax: 972.691.6628
 TBPE FIRM #605

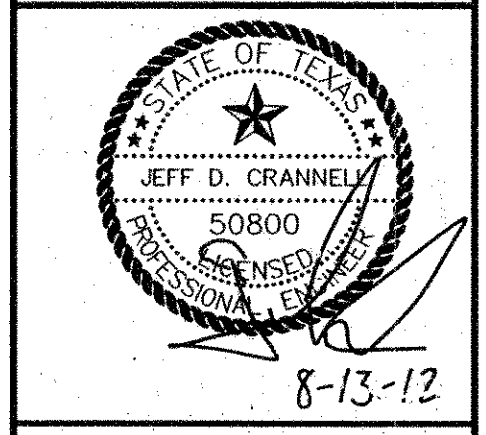


OWNER:
 HJ ROCKLAND, LLC
 6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX (972) 386-6190

DEVELOPER:
 SPRING HAVEN INVESTMENTS, INC.
 6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX (972) 386-6190

WATER PLAN

ROCKLAND FARMS, PH II
 City of Lucas, Texas

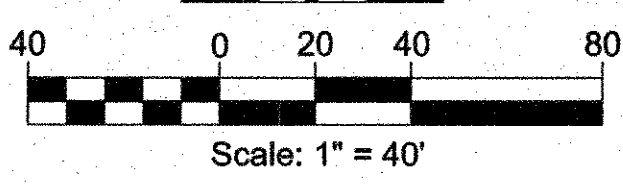
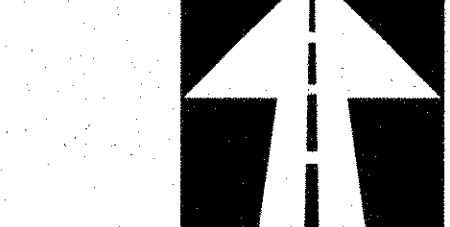


REVISIONS	

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 NOTES:
 FILE:

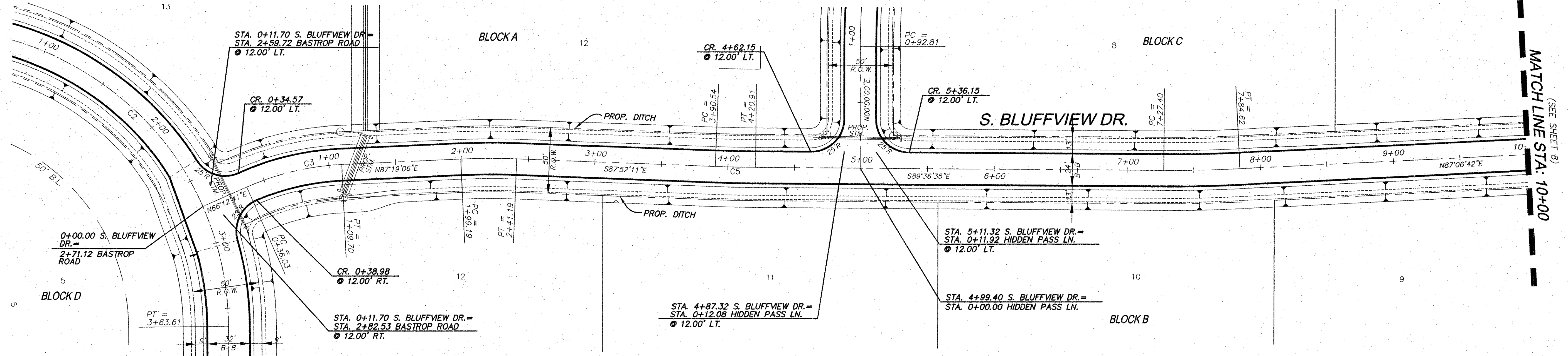
Sheet 4 of 32

n o r t h



- NOTES:**
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 4. CONTRACTOR SHALL COORDINATE DISTURBANCE OR REMOVAL OF EXISTING FENCES & TREES WITH OWNERS 48 HOURS PRIOR TO CONSTRUCTION.
 5. PROVIDE 1" DEEP SAW JOINTS AT 20' MAXIMUM SPACING ON ALL STREET PAVEMENT. FILL IN SAW JOINTS WITH APPROVED ASPHALT SEALER.

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	BEARING
C3	73.68	200.00	21°06'25"	37.26	73.26	S76°45'54"W
C4	41.99	500.00	4°48'43"	21.01	41.98	S89°43'28"W
C5	30.37	1000.00	1°44'24"	15.19	30.37	S88°44'23"E
C6	57.22	1000.00	3°16'43"	28.62	57.21	N88°45'04"E
C7	194.74	1000.00	11°09'27"	97.68	194.43	N87°18'34"W
C8	144.33	1000.00	8°16'10"	72.29	144.20	S85°51'55"E
C9	246.48	200.00	70°36'36"	141.63	231.17	N54°41'42"E
C10	267.15	300.00	51°01'22"	143.17	258.41	N06°07'17"W
C11	109.01	200.00	31°13'43"	55.89	107.66	S16°01'06"E



- NOTE:**
1. ALL INTERSECTIONS RADII ARE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
 2. ALL DIMENSIONS TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

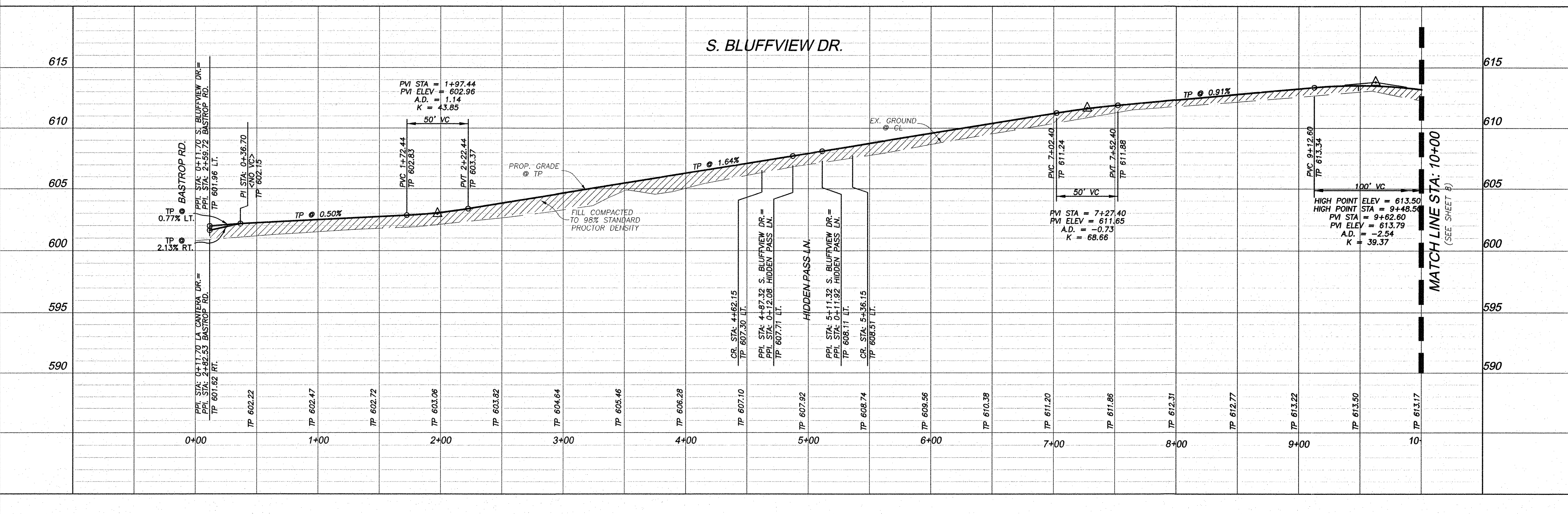
CAUTION!!!
Existing overhead utilities.
Contractor to field verify the locations of all existing utilities and call (48 hours) prior to excavation.

CAUTION!!!
Existing underground utilities.
Contractor to call for locations and field verify the locations of all existing utilities prior to excavation.

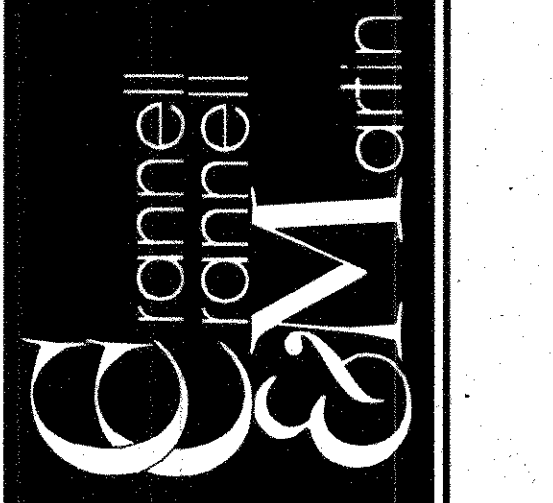
BENCHMARKS:

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2. TOP OF 1/2" IR WEST SIDE OF CR 262 (INGRAM RD) ±1025' NORTH OF NORTH EDGE OF PAVEMENT CR 263 (W.LUCAS ROAD), ±7' EAST OF BARBED WIRE FENCE ELEV.=637.08'

As-Built
[Signature]
Date



Engineering Corporation
2570 FM 407, Suite 209
Highland Village, Texas 75077
Ph: 972.691.6633
Fax: 972.691.6628
TBPE FIRM #605



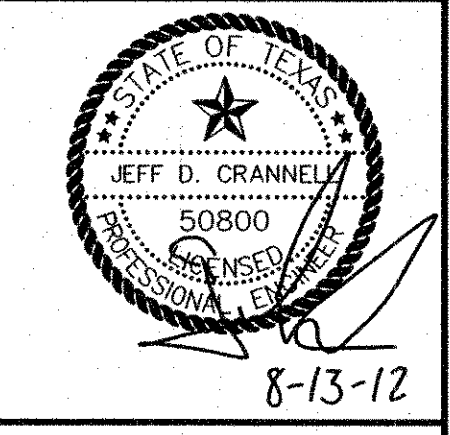
OWNER:
HJ ROCKLAND LLC
6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

PAVING PLAN & PROFILE
S. BLUFFVIEW DR.
0+00 TO 10+00

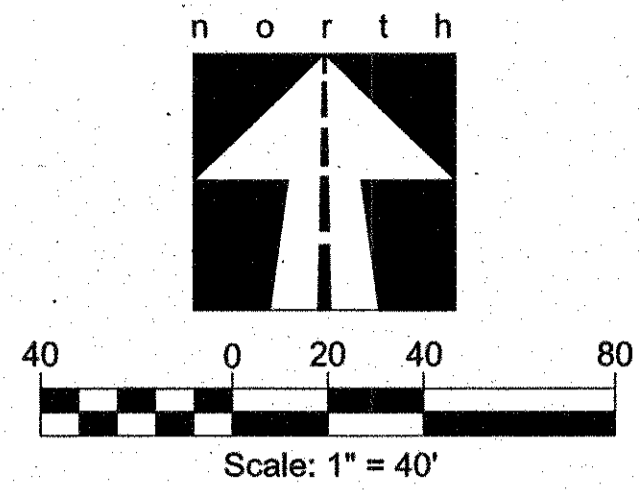
ROCKLAND FARMS, P H II
City of Lucas, Texas

ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS



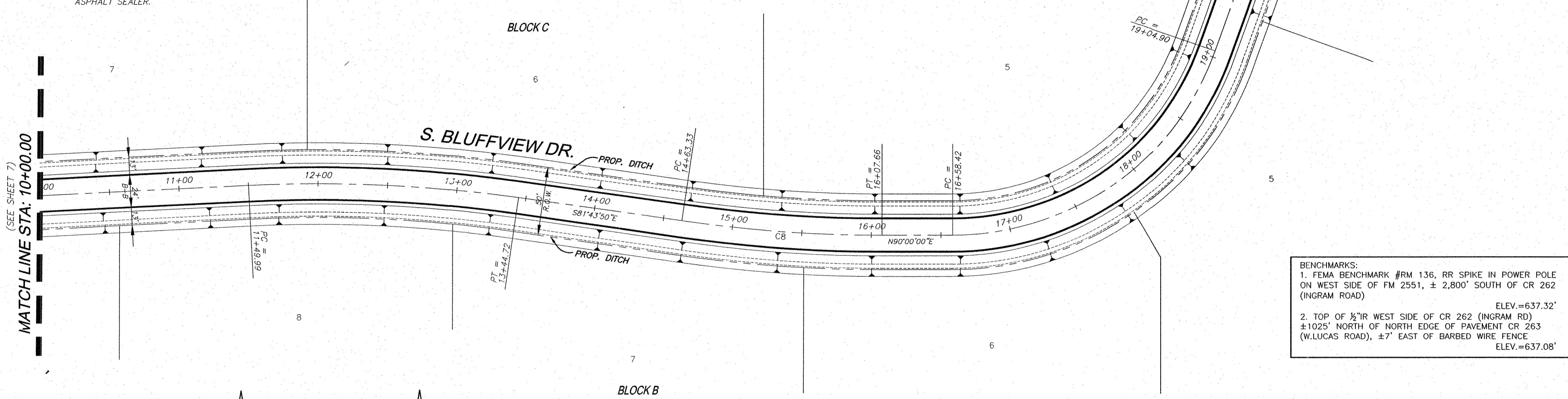
REVISIONS

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DRAWN: CCM
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SCALE: 1"=40'H, 1"=4'V
NOTES:
FILE:



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C6	57.22	1000.00	3°16'43"	28.62	57.21	N88°45'04"E
C7	194.74	1000.00	11°09'27"	97.68	194.43	N87°18'34"W
C8	144.33	1000.00	8°16'10"	72.29	144.20	S85°51'55"E
C9	246.48	200.00	70°36'36"	141.63	231.17	N54°41'42"E
C10	267.15	300.00	51°01'22"	143.17	258.41	N06°07'17"W
C11	109.01	200.00	31°13'43"	55.89	107.66	S16°01'06"E



CAUTION!!!
Existing overhead utilities.
Contractor to field verify the locations of all existing utilities and call (48 hours) prior to excavation.

CAUTION!!!
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Contractor to call for locations and field verify the locations of all existing utilities prior to excavation.

NOTE:

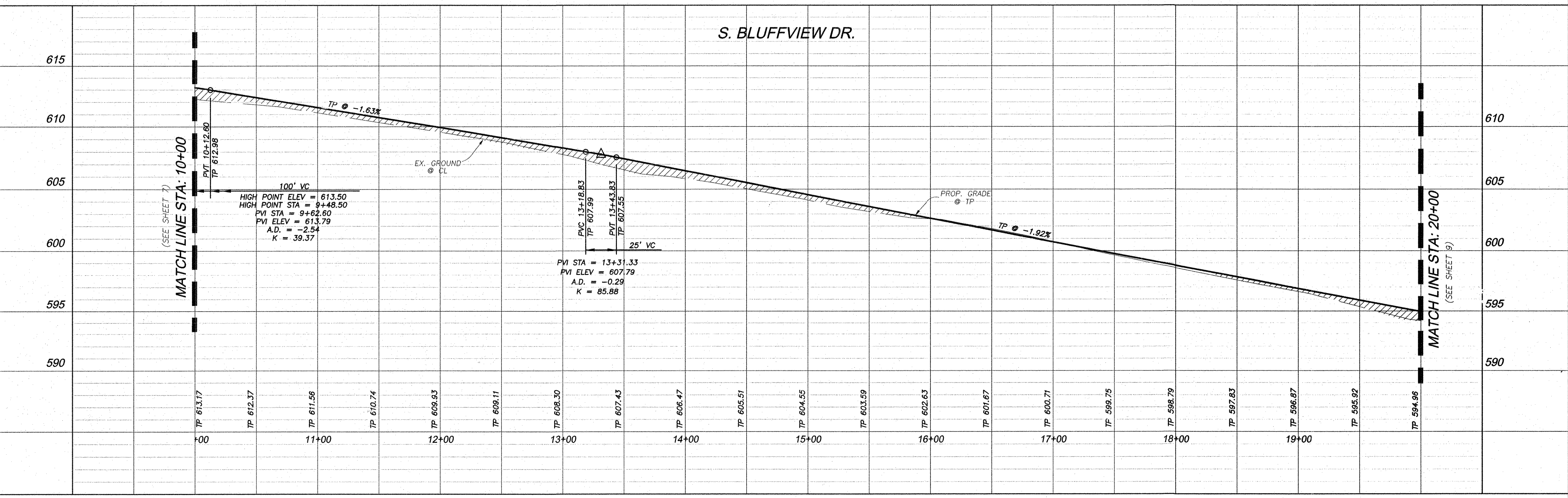
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- ALL DIMENSIONS TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

BENCHMARKS:

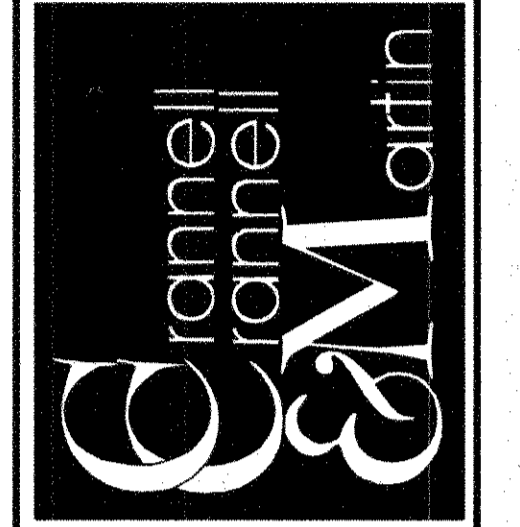
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As-Built

[Signature] 12-29-12
Date



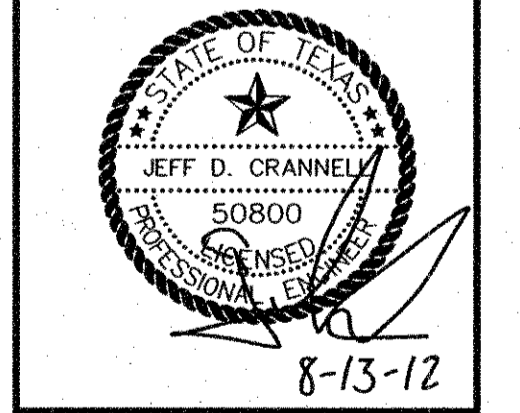
Engineering Corporation
2570 FM 407, Suite 209
Highland Village, Texas 75077
Ph: 972.691.6633
Fax: 972.691.6628
TBPE FIRM #605



OWNER:
HJ ROCKLAND, LLC
6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

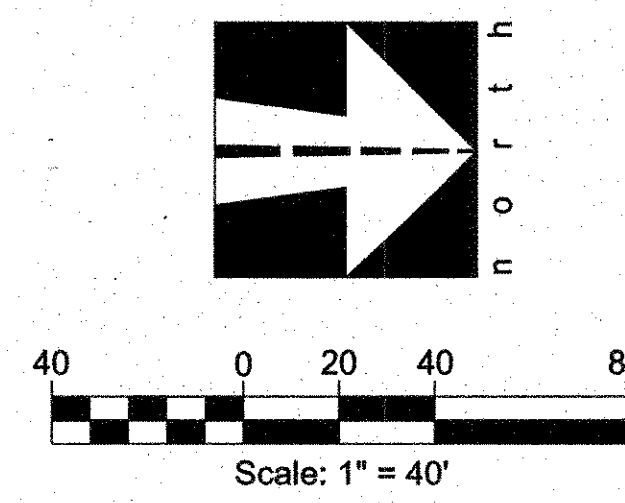
PAVING PLAN & PROFILE
S. BLUFFVIEW DR.
STA. 10+00 TO 20+00
ROCKLAND FARMS, PH II
City of Lucas, Texas



REVISIONS

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DRAWN: CCM
DATE: 7/20/2012
SCALE: 1"=40'H, 1"=4'V
NOTES:
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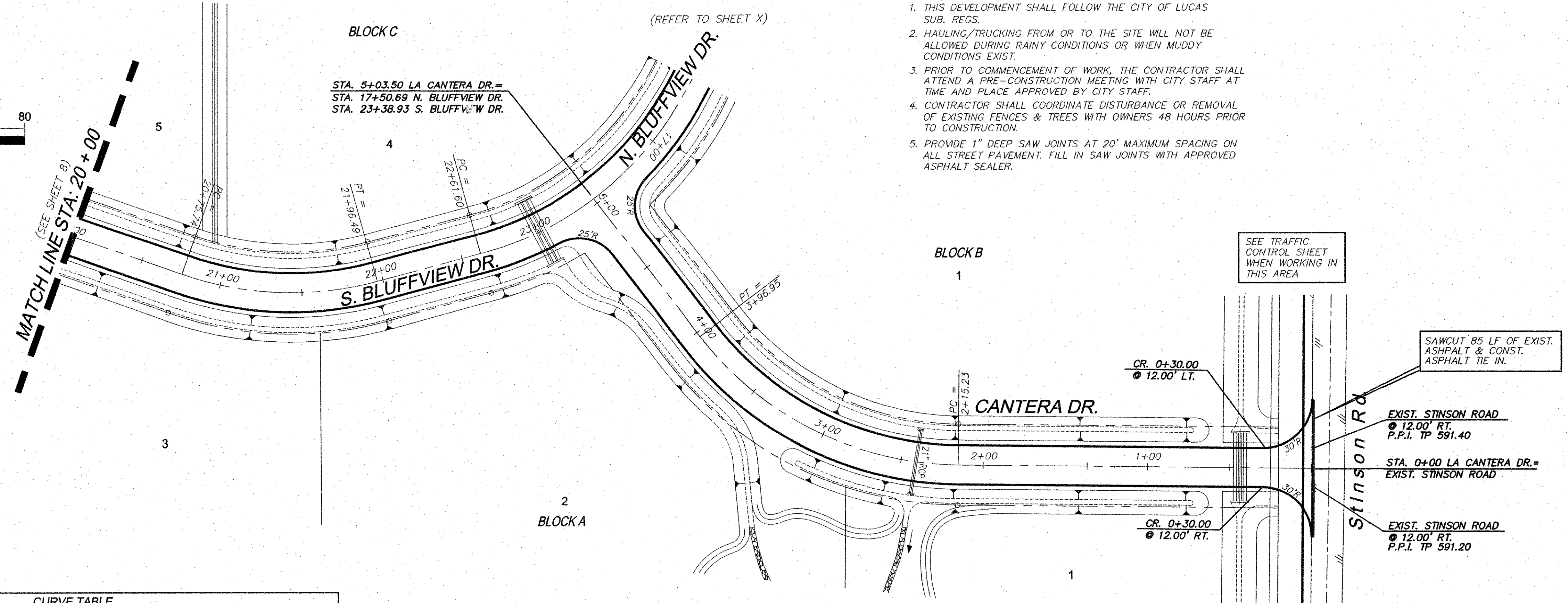
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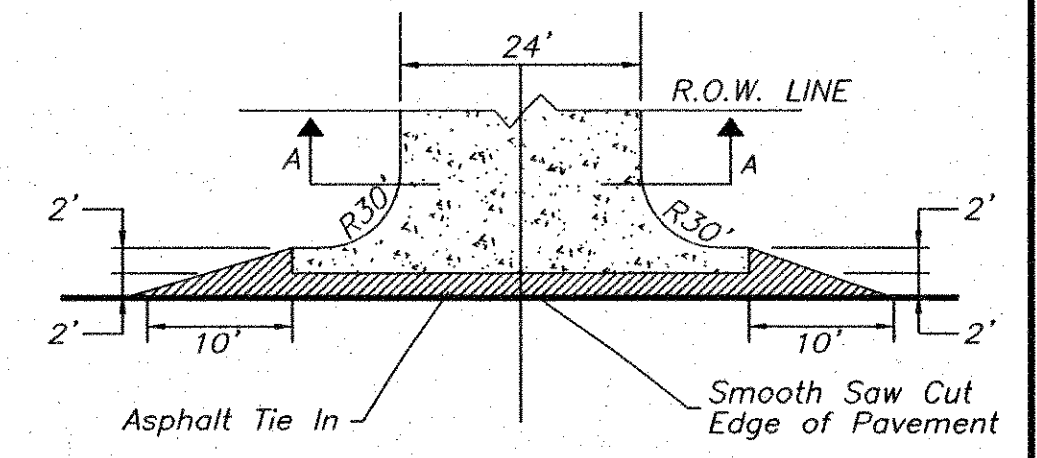
BLOCK C

(REFER TO SHEET X)

STA. 5+03.50 LA CANTERA DR.=
 STA. 17+50.69 N. BLUFFVIEW DR.
 STA. 23+36.93 S. BLUFFVIEW DR.



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TYPICAL PAVEMENT TIE-IN

CAUTION!!!
 Existing overhead utilities.
 Contractor to field verify the locations of all existing utilities and call (48 hours) prior to excavation.

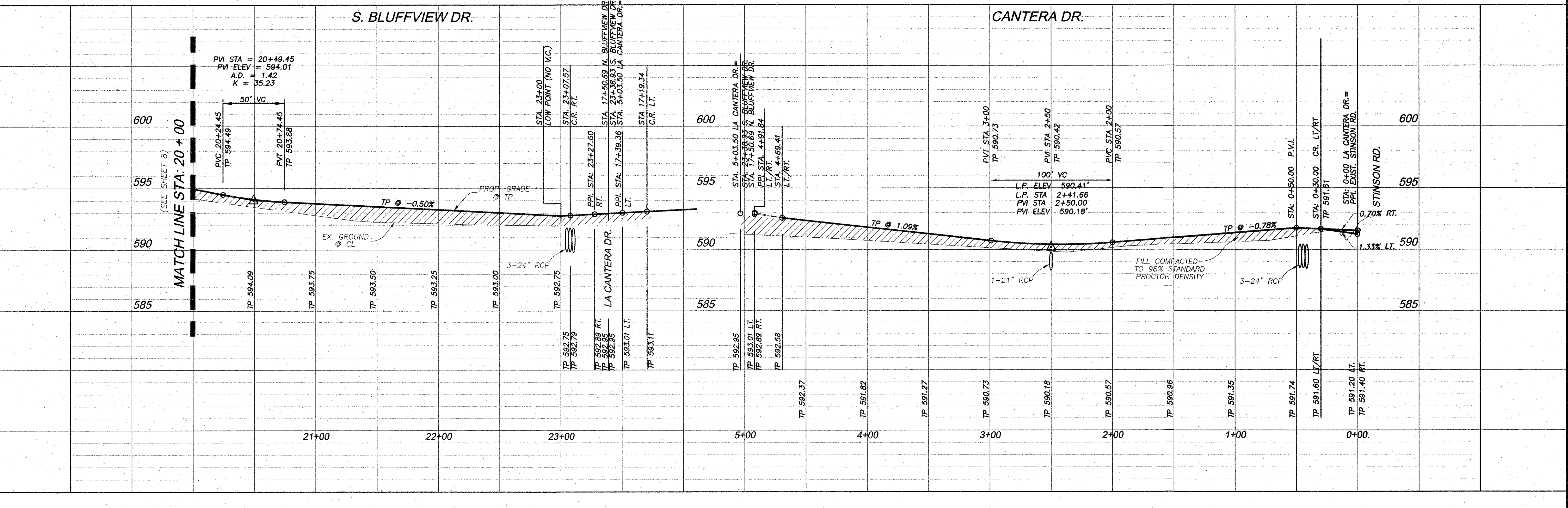
CAUTION!!!
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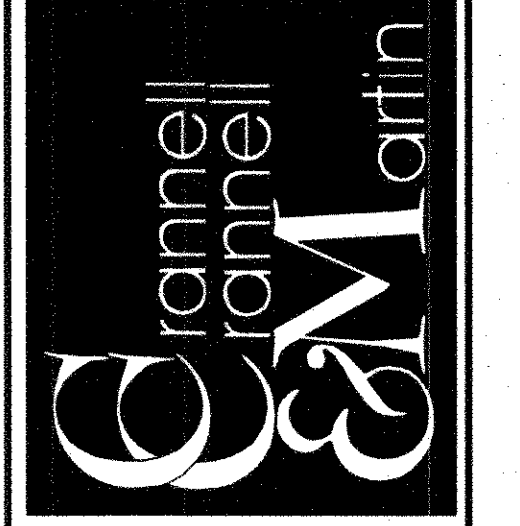
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As-Built
[Signature] 12-09-12
 Date

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	BEARING
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C7	194.74	1000.00	11°09'27"	97.68	194.43	N87°18'34"W
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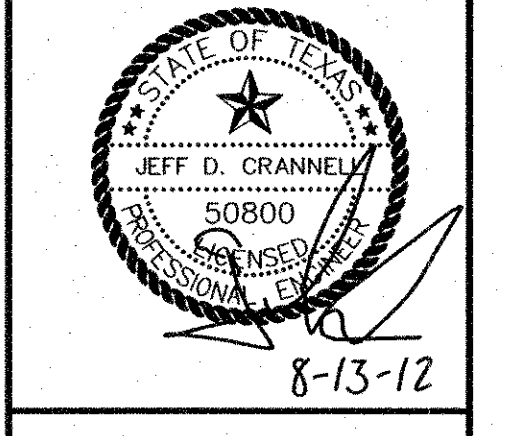
Engineering Corporation
 2570 FM 407, Suite 209
 Highland Village, Texas 75077
 Ph: 972.691.6633
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OWNER:
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DEVELOPER:
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 (972) 386-3333 FAX (972) 386-6190

PAVING PLAN & PROFILE
N. BLUFFVIEW & CANTERA DRIVE
 ROCKLAND FARMS, PH II
 City of Lucas, Texas

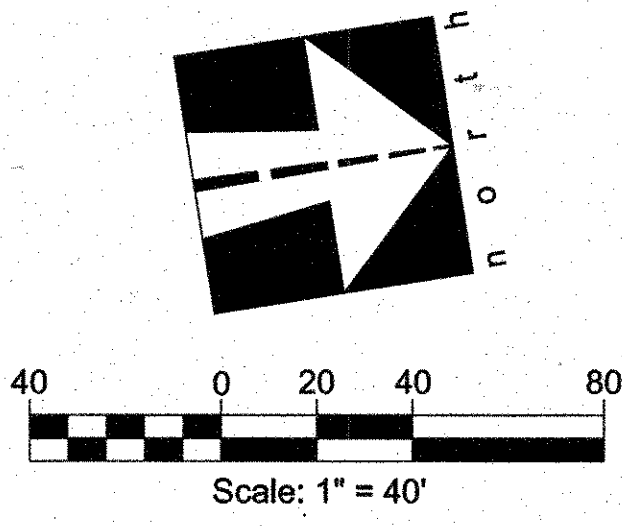


REVISIONS	

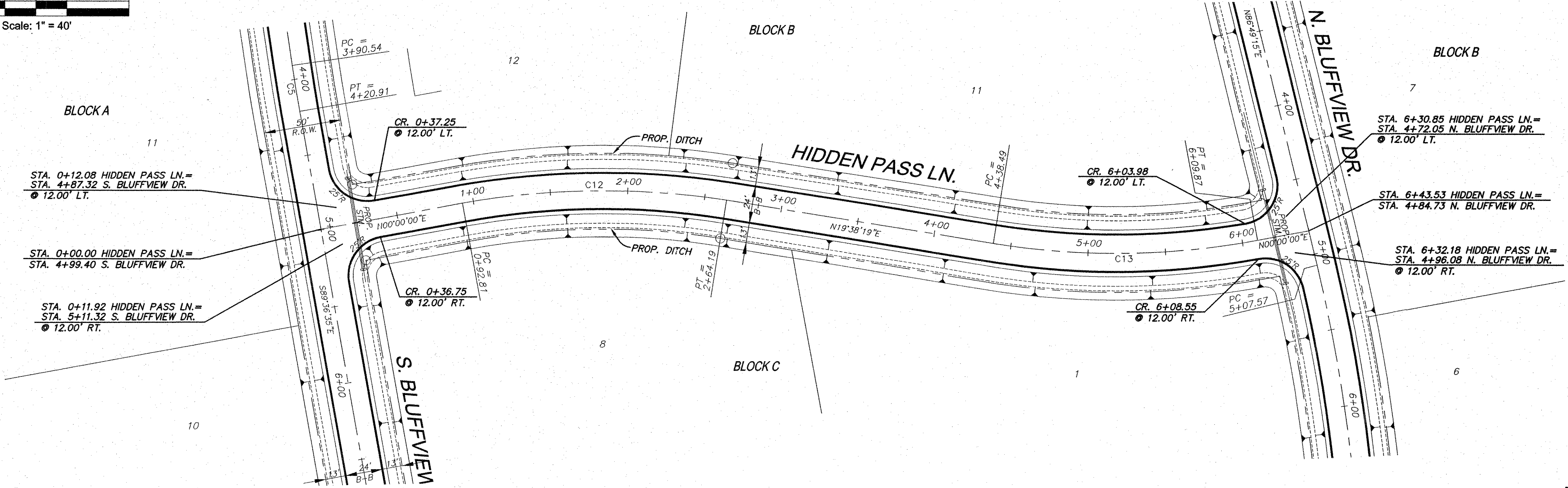
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 NOTES:
 FILE:
Sheet 9 of 32

ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	BEARING
C12	171.38	500.00	19°38'19"	86.54	170.54	S09°49'10"W
C13	171.38	500.00	19°38'19"	86.54	170.54	N09°49'10"E



- NOTES:**
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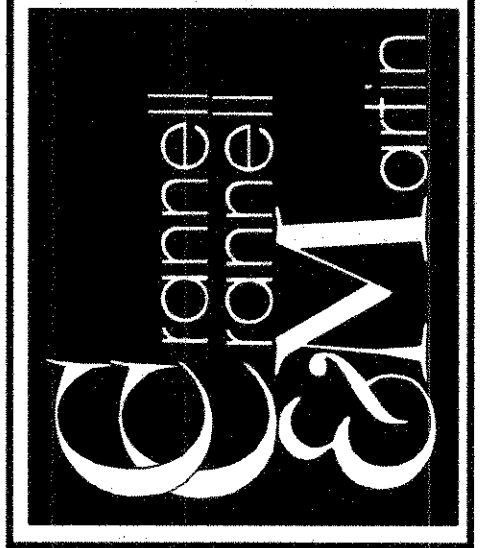


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 2. ALL DIMENSIONS TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

- BENCHMARKS:**
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As-Built
[Signature]
 Date: 12-29-12

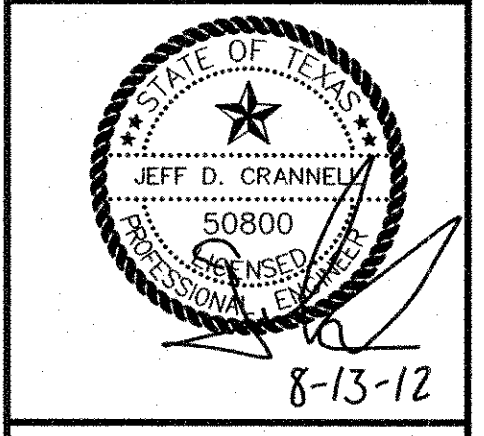
Engineering Corporation
 2570 FM 407, Suite 209
 Highland Village, Texas 75077
 Ph: 972.691.6633
 Fax: 972.691.6628
 TBPE FIRM #605



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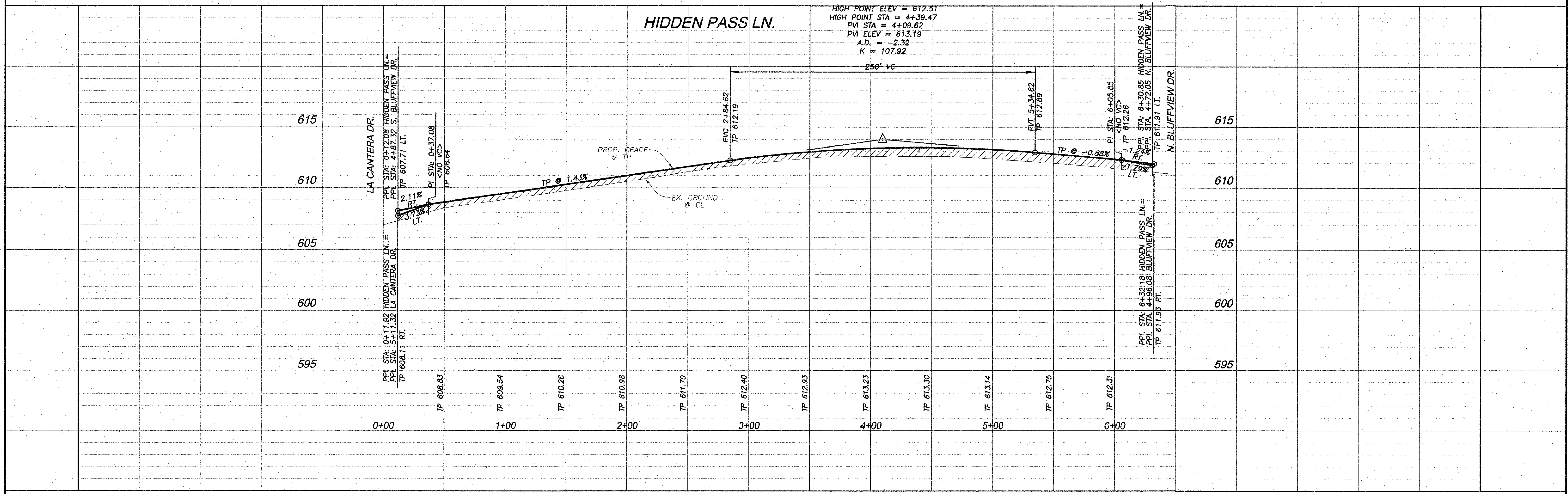
DEVELOPER:
 SPRING HAVEN INVESTMENTS, INC.
 6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX (972) 386-6190

PAVING PLAN & PROFILE
HIDDEN PASS LANE
 ROCKLAND FARMS, PH II
 City of Lucas, Texas



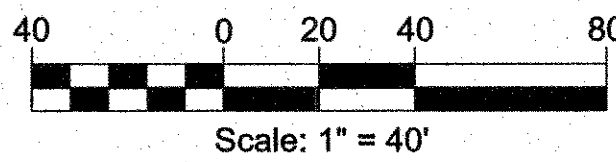
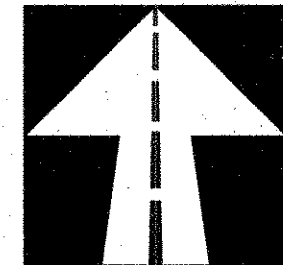
REVISIONS

DESIGN: CCM
 DRAWN: CCM
 DATE: 7/20/2012
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 NOTES:
 FILE:



ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS

n o r t h



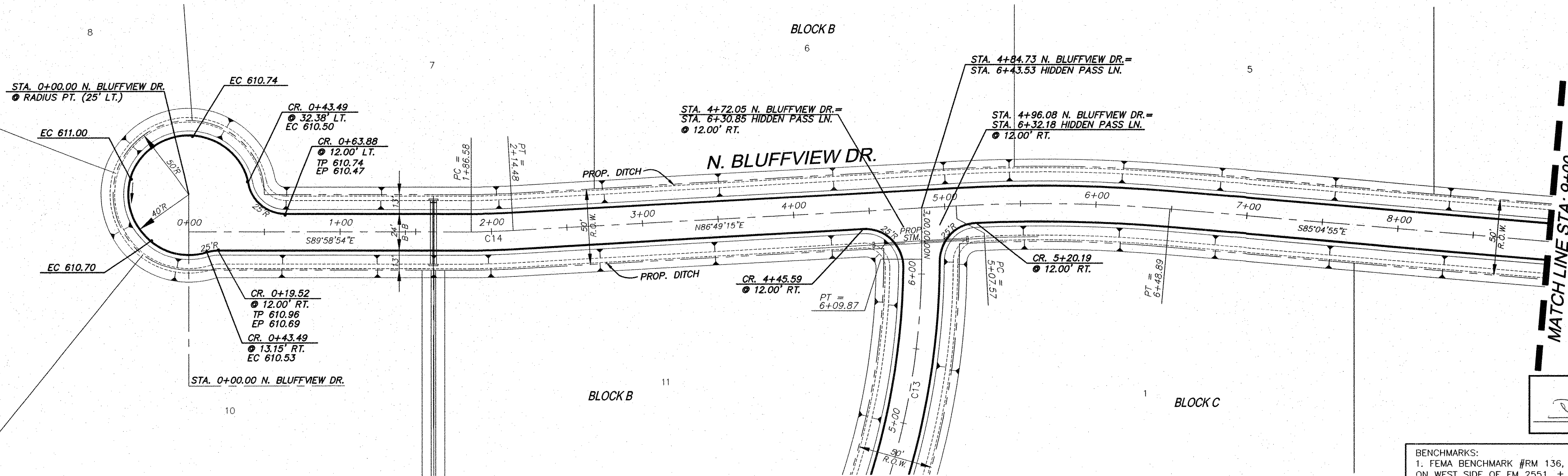
Scale: 1" = 40'

CUL-DE-SAC DELTA TABLE				
Δ#	DELTA	RADIUS	LENGTH	TANGENT
Δ1	15°26'24"	50.00'	13.47'	6.78'
Δ2	45°00'00"	50.00'	39.27'	20.71'
Δ3	15°26'24"	50.00'	13.47'	6.78'

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	BEARING
C14	27.90	500.00	3°11'52"	13.96	27.90	N88°25'10"E
C15	141.32	1000.00	8°05'50"	70.78	141.21	N89°07'50"W
C16	156.10	1000.00	8°56'37"	78.21	155.94	S89°33'14"E
C17	117.14	400.00	16°46'47"	58.99	116.73	N77°35'04"E

NOTES:

- THIS DEVELOPMENT SHALL FOLLOW THE CITY OF LUCAS SUB. RESS.
- HAULING/TRUCKING FROM OR TO THE SITE WILL NOT BE ALLOWED DURING RAINY CONDITIONS OR WHEN MUDDY CONDITIONS EXIST.
- PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH CITY STAFF AT TIME AND PLACE APPROVED BY CITY STAFF.
- CONTRACTOR SHALL COORDINATE DISTURBANCE OR REMOVAL OF EXISTING FENCES & TREES WITH OWNERS 48 HOURS PRIOR TO CONSTRUCTION.
- PROVIDE 1" DEEP SAW JOINTS AT 20' MAXIMUM SPACING ON ALL STREET PAVEMENT. FILL IN SAW JOINTS WITH APPROVED ASPHALT SEALER.

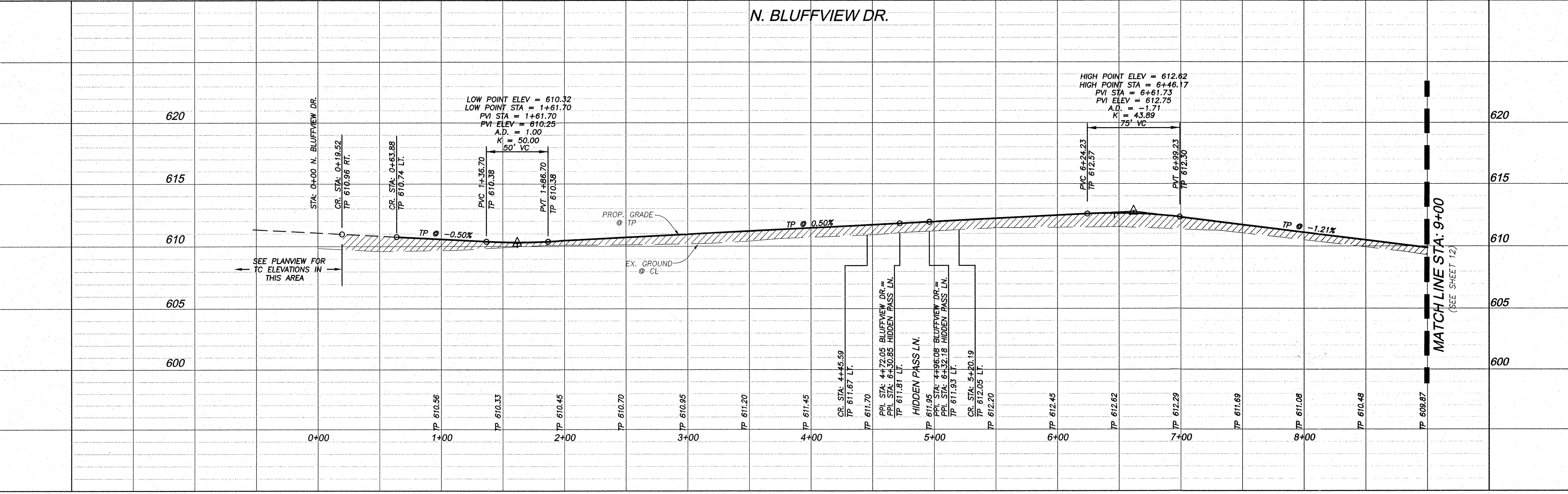


As-Built
[Signature] 12-29-12
 Date

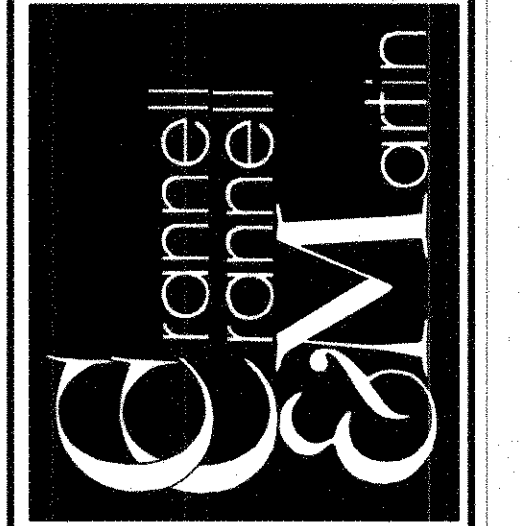
NOTE:
 1. ALL INTERSECTIONS RADII ARE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
 2. ALL DIMENSIONS TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

BENCHMARKS:
 1. FEMA BENCHMARK #RM 136, RR SPIKE IN POWER POLE ON WEST SIDE OF FM 2551, ± 2,800' SOUTH OF CR 262 (INGRAM ROAD) ELEV.=637.32'
 2. TOP OF 1/2" IR WEST SIDE OF CR 262 (INGRAM RD) ±1025' NORTH OF NORTH EDGE OF PAVEMENT CR 263 (W.LUCAS ROAD), ±7' EAST OF BARBED WIRE FENCE ELEV.=637.08'

N. BLUFFVIEW DR.



Engineering Corporation
 2570 FM 407, Suite 209
 Highland Village, Texas 75077
 Ph: 972.691.6633
 Fax: 972.691.6628
 TBPE FIRM #605

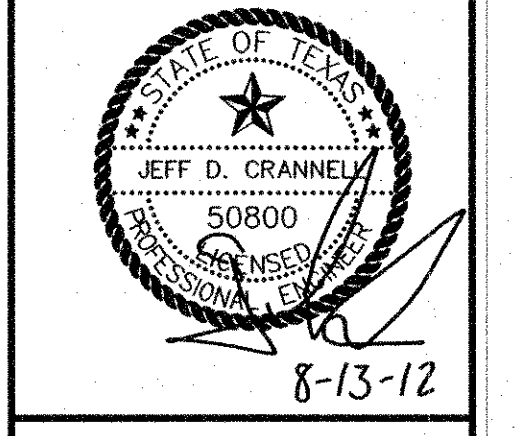


OWNER:
HJ ROCKLAND, LLC
 6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
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DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
 6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
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PAVING PLAN & PROFILE
N. BLUFFVIEW DRIVE
STA. 0+00 TO 9+00

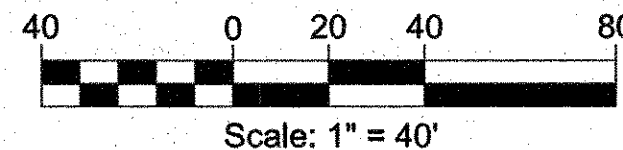
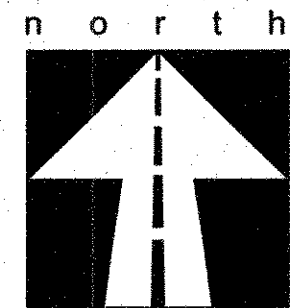
ROCKLAND FARMS, PH II
 City of Lucas, Texas



REVISIONS

DESIGN: CCM
 DRAWN: CCM
 DATE: 7/20/2012
 SCALE: 1"=40'H, 1"=4'V
 NOTES:
 FILE:

ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS



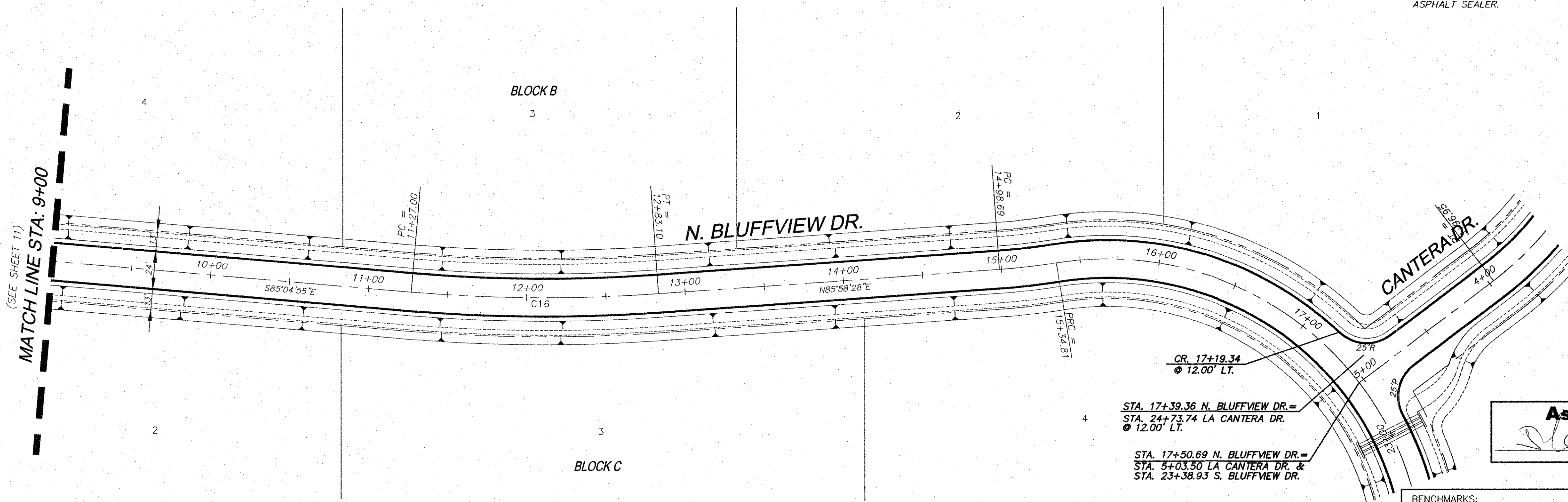
CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	BEARING
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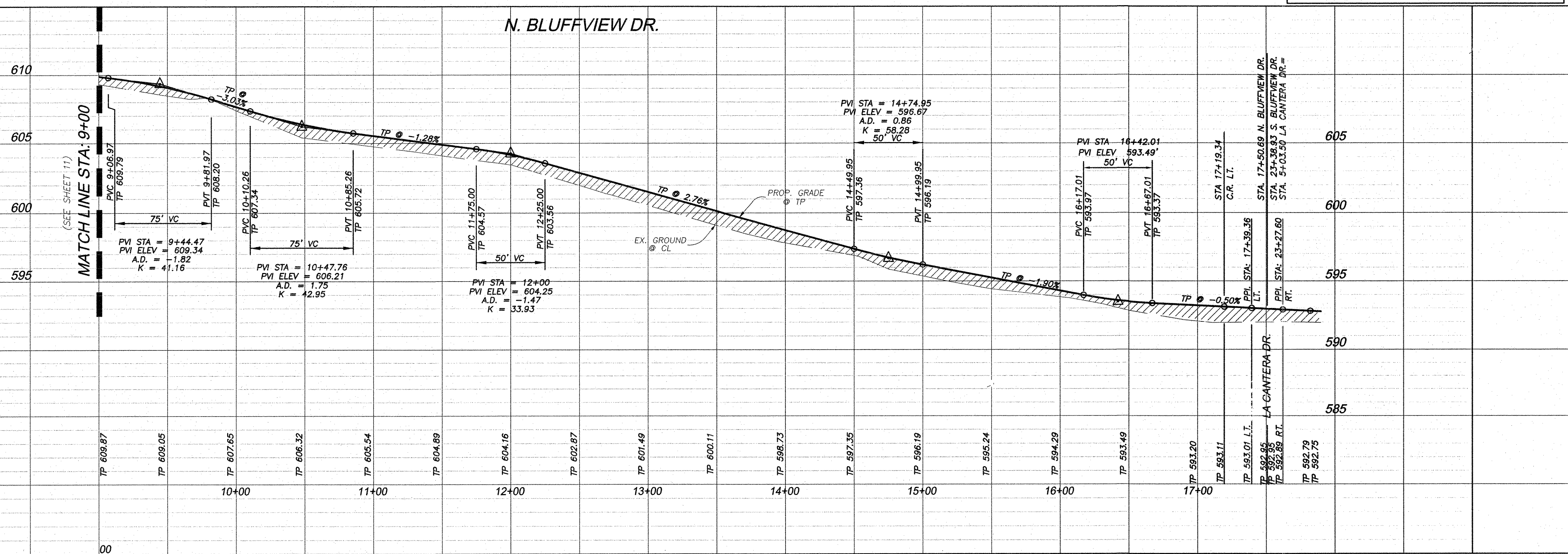
CAUTION!!!
 Existing overhead utilities. Contractor to field verify the locations of all existing utilities and call (48 hours) prior to excavation.

CAUTION!!!
 Existing underground utilities. Contractor to call for locations and field verify the locations of all existing utilities prior to excavation.



As-Built
 [Signature]
 Date: 12-24-12

- BENCHMARKS:**
1. FEMA BENCHMARK #RM 136, RR SPIKE IN POWER POLE ON WEST SIDE OF FM 2551, ± 2,800' SOUTH OF CR 262 (INGRAM ROAD)
ELEV.=637.32'
 2. TOP OF 1/2" IR WEST SIDE OF CR 262 (INGRAM RD) ±1025' NORTH OF NORTH EDGE OF PAVEMENT CR 263 (W.LUCAS ROAD), ±7' EAST OF BARBED WIRE FENCE
ELEV.=637.08'



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Crannell & Martin

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DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
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 (972) 386-3333 FAX (972) 386-6190

PAVING PLAN & PROFILE
N. BLUFFVIEW DRIVE
STA. 9+00 TO END

ROCKLAND FARMS, PH II
 City of Lucas, Texas

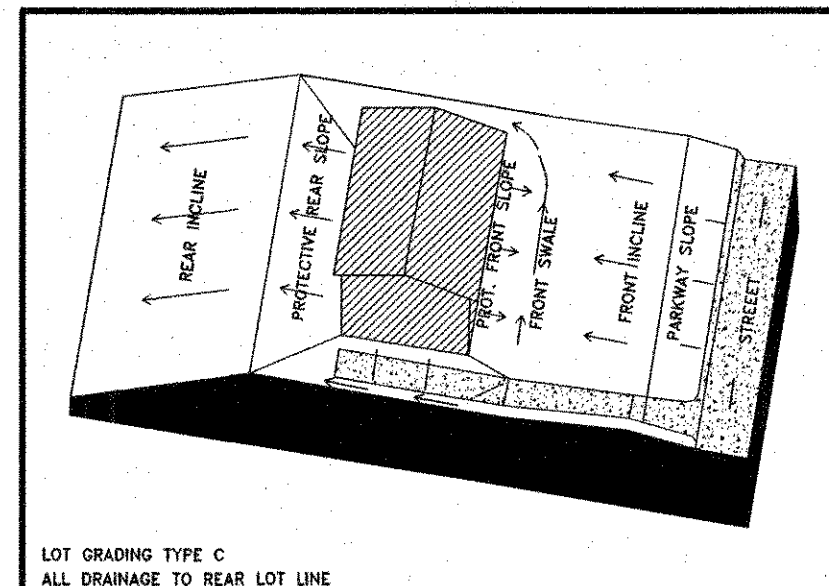
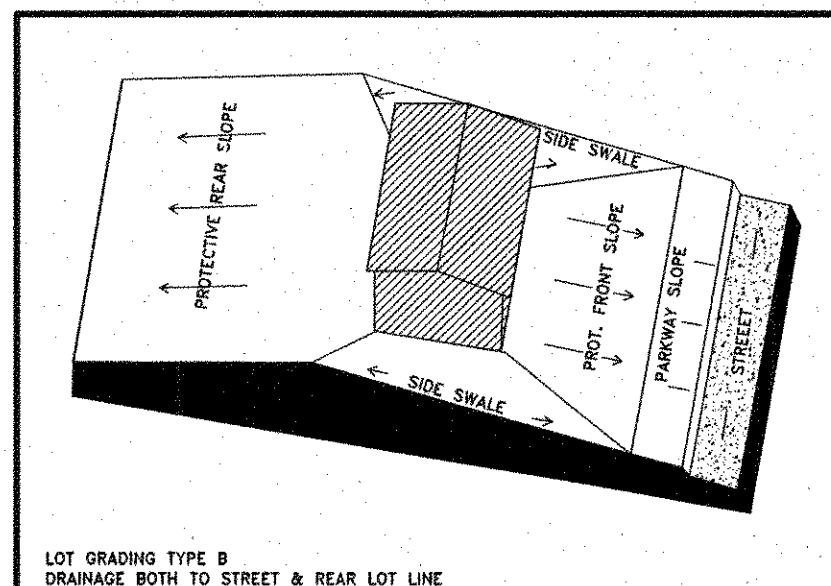
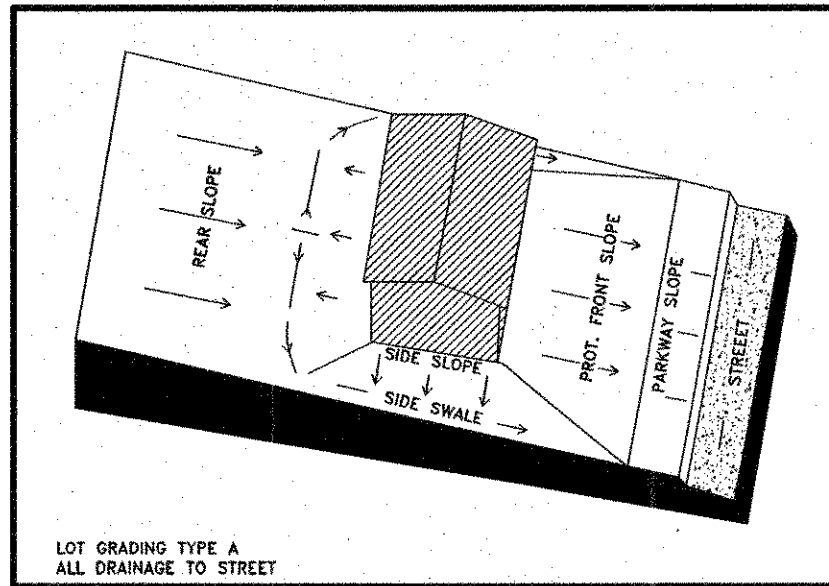
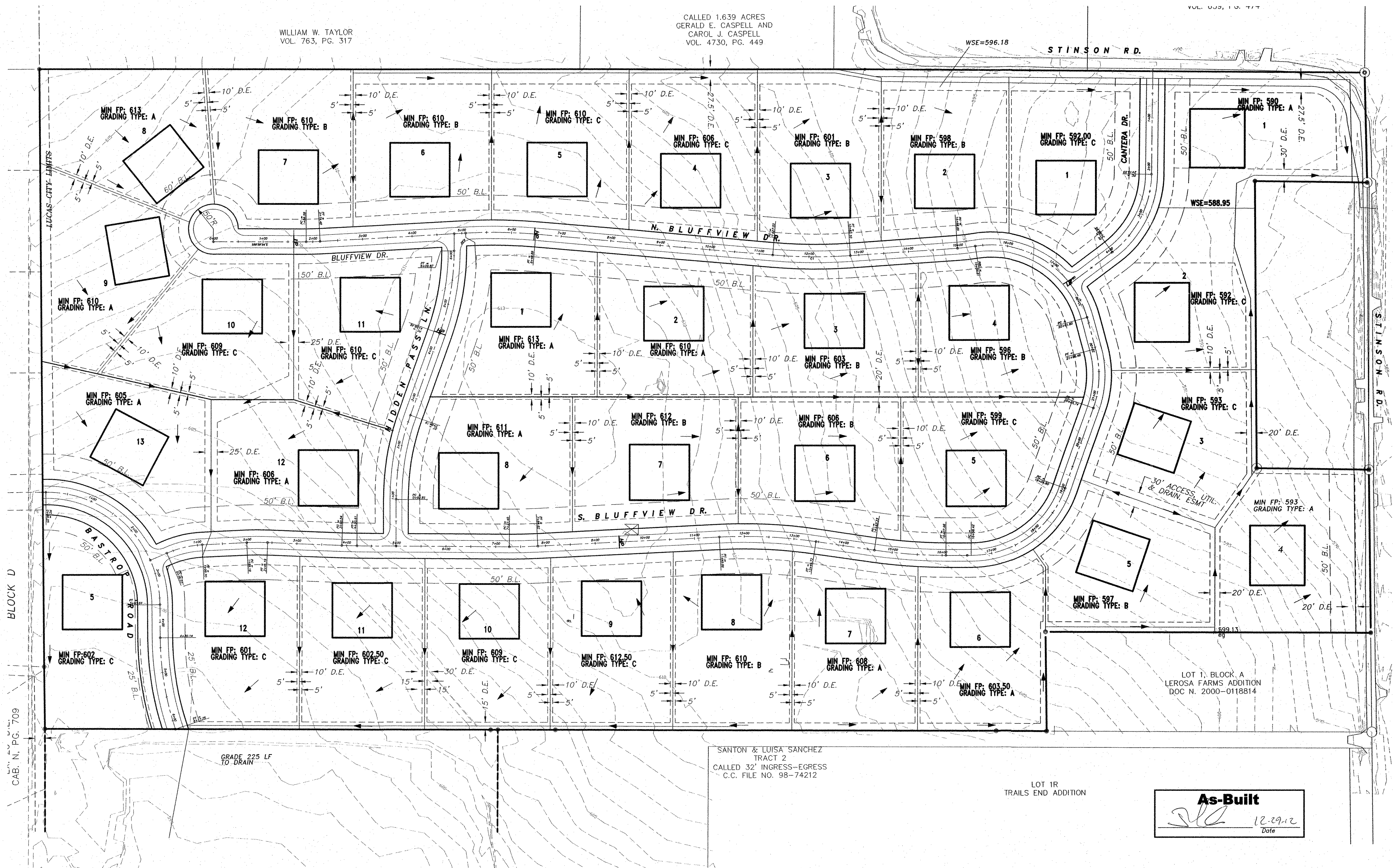
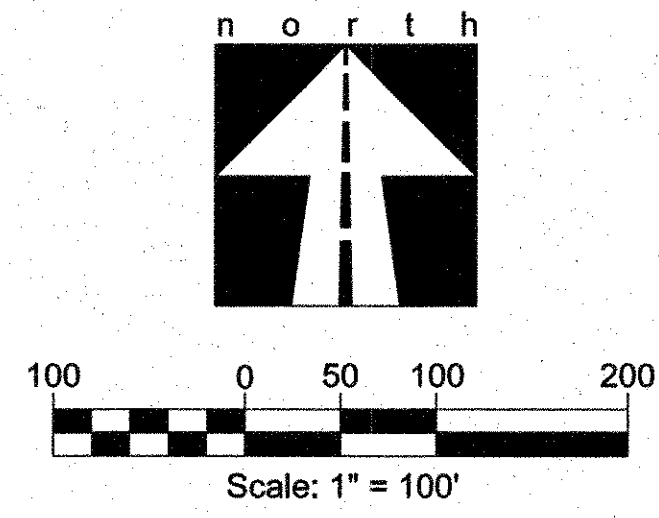
ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS

8-13-12

REVISIONS

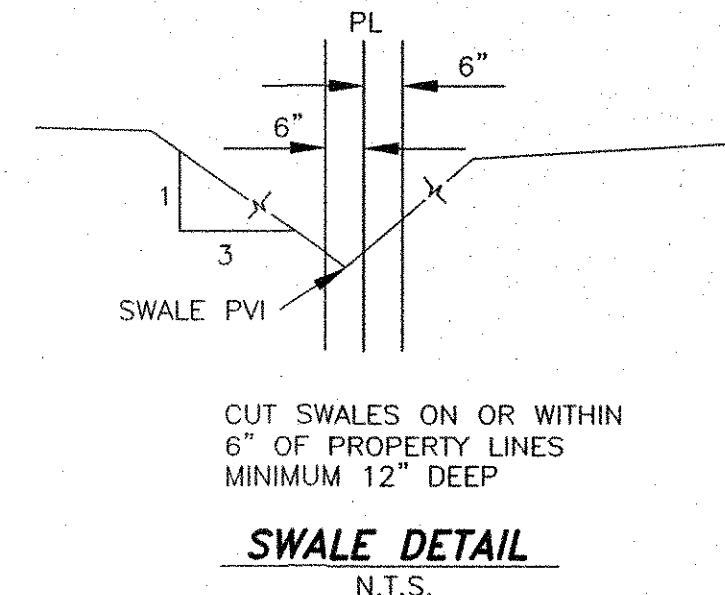
DESIGN: CCM
 DRAWN: CCM
 DATE: 7/20/2012
 SCALE: 1"=40'H, 1"=4'V
 NOTES:
 FILE:

Sheet 12 of 32



GENERAL NOTES:

1. THE PROCESS SHALL BE TESTED FOR COMPACTION IN EACH 8" LIFTS AND APPROVED BY AN APPROVED TESTING LABORATORY.
2. ALL SELECT BACKFILL SHALL NOT HAVE ROCK OR STONE (DEBRIS) LARGER THAN SIX(6") INCHES IN ALL DIRECTIONS.
3. ALL FILL MUST BE COMPACTED TO 95% STANDARD PROCTOR DENSITY AT OPTIMAL MOISTURE OR PER GEO TECH SPECIFICATIONS.
4. AREAS WHICH FAIL THE COMPACTION TEST SHALL BE EXCAVATED, THE MATERIAL REPLACED (OR NEW MATERIAL IMPORTED, DEPENDING ON MOISTURE CONTENT) RECOMPACTED AND RETESTED.
5. ELEVATIONS SHOWN ARE FINISHED PAD ELEVATIONS.
6. EXCESS EXCAVATION SHALL BE DISTRIBUTED AS DIRECTED BY THE DEVELOPER'S ENGINEER.
7. ANY WALL OVER 4' MUST BE ENGINEERED



As-Built
[Signature] 12.29.12
Date

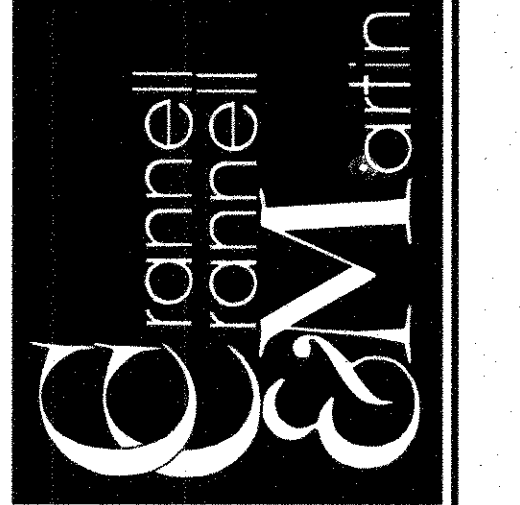
LEGEND

- ec - edge of concrete
- sw - swale
- fl - flowline
- gb - gradebreak
- eg - existing grade
- - proposed pad

BENCHMARKS:

1. FEMA BENCHMARK #RM 136, RR SPIKE IN POWER POLE ON WEST SIDE OF FM 2551, ± 2,800' SOUTH OF CR 262 (INGRAM ROAD) ELEV.=637.32'
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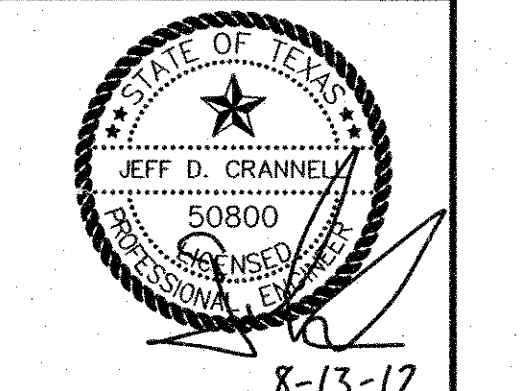
OWNER:
HJ ROCKLAND, LLC
6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
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DEVELOPER:
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GRADING PLAN

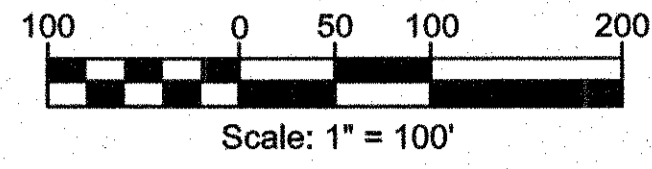
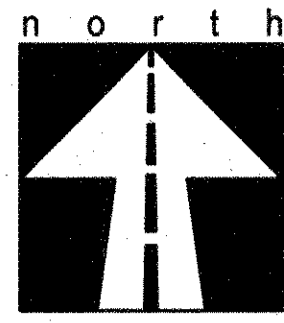
ROCKLAND FARMS, PH II
City of Lucas, Texas

ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS



REVISIONS	

DESIGN: CCM
DRAWN: CCM
DATE: 7/20/2012
SCALE: 1"=100'
NOTES:
FILE:
Sheet 13 of 32



Q100 AT CONCENTRATION POINT		
CONC. FT.	Q100	DISCHARGE TO
A	107.64	PRO DITCH TO SOUTH PROP.
B	38.25	CULVERT @ STINSON ROAD
C	34.15	CULVERT @ STINSON ROAD

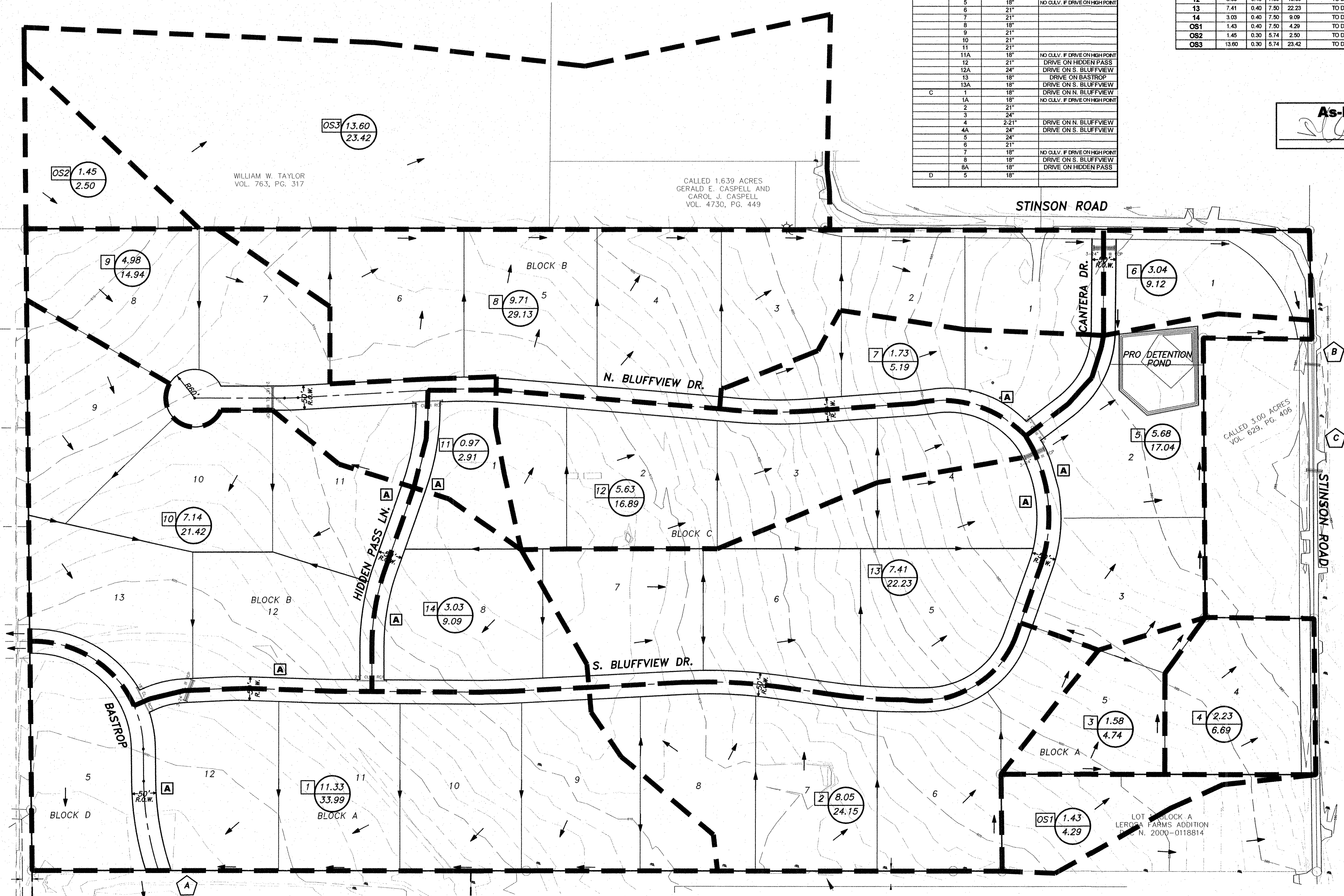
LEGEND	
---	DRAINAGE DIVIDE
No. [Circled No.] AREA Q100	DRAINAGE INFO.
B	CONCENTRATION POINT

DRIVEWAY CULVERTS			
ROCKLAND FARMS, PH II			
BLOCK	LOT NO.	CULVERT SIZE (in)	NOTES
A	1	18"	
A	2	4-24"	DRIVE ON CANTERA
A	2A	2-24"	DRIVE ON S. BLUFFVIEW
A	3	2-24"	
A	4	24"	DRIVE ON STINSON
A	5	2-24"	
A	6	2-21"	
A	7	24"	
A	8	18"	
A	9	18"	NO CULV. IF DRIVE ON HIGH POINT
A	10	18"	
A	11	18"	
A	12	21"	DRIVE ON S. BLUFFVIEW
A	12A	4-24"	DRIVE ON BASTROP
B	1	24"	DRIVE ON CANTERA
B	1A	21"	DRIVE ON N. BLUFFVIEW
B	2	21"	
B	3	21"	
B	4	18"	
B	5	18"	NO CULV. IF DRIVE ON HIGH POINT
B	6	21"	
B	7	21"	
B	8	18"	
B	9	21"	
B	10	21"	
B	11	18"	
B	11A	18"	NO CULV. IF DRIVE ON HIGH POINT
B	12	21"	DRIVE ON HIDDEN PASS
B	12A	24"	DRIVE ON S. BLUFFVIEW
B	13	18"	DRIVE ON BASTROP
B	13A	18"	DRIVE ON S. BLUFFVIEW
C	1	18"	DRIVE ON N. BLUFFVIEW
C	1A	18"	NO CULV. IF DRIVE ON HIGH POINT
C	2	21"	
C	3	24"	
C	4	2-21"	DRIVE ON N. BLUFFVIEW
C	4A	24"	DRIVE ON S. BLUFFVIEW
C	5	24"	
C	6	21"	
C	7	18"	NO CULV. IF DRIVE ON HIGH POINT
C	8	18"	DRIVE ON S. BLUFFVIEW
C	8A	18"	DRIVE ON HIDDEN PASS
D	5	18"	

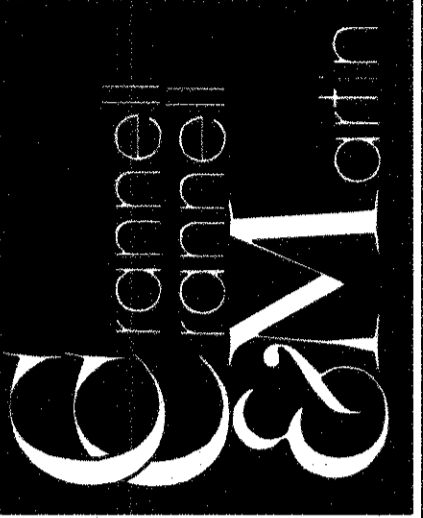
DRAINAGE CALCULATIONS					
100 YEAR					
C	0.40				
Cs	1				
T=18min/100	7.50				
No.	AREA (AC)	C	I100	Q100	COMMENTS
1	11.33	0.40	7.50	33.99	TO DITCH
2	8.05	0.40	7.50	24.15	TO DITCH
3	1.58	0.40	7.50	4.74	TO DITCH
4	2.23	0.40	7.50	6.69	TO DITCH
5	5.68	0.40	7.50	17.04	TO DITCH
6	3.04	0.40	7.50	9.12	TO DITCH
7	1.73	0.40	7.50	5.19	TO DITCH
8	9.71	0.40	7.50	29.13	TO DITCH
9	4.98	0.40	7.50	14.94	TO DITCH
10	7.14	0.40	7.50	21.42	TO DITCH
11	0.97	0.40	7.50	2.91	TO DITCH
12	5.63	0.40	7.50	16.89	TO DITCH
13	7.41	0.40	7.50	22.23	TO DITCH
14	3.03	0.40	7.50	9.09	TO DITCH
OS1	1.43	0.40	7.50	4.29	TO DITCH
OS2	1.45	0.30	5.74	2.50	TO DITCH
OS3	13.60	0.30	5.74	23.42	TO DITCH

As-Built

 Date: 12-29-12



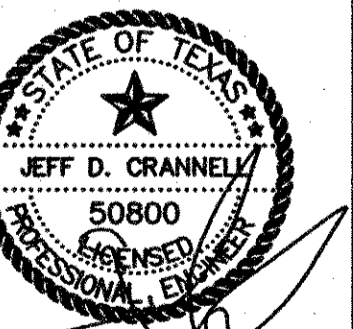
Engineering Corporation
 2570 FM 407, Suite 209
 Highland Village, Texas 75077
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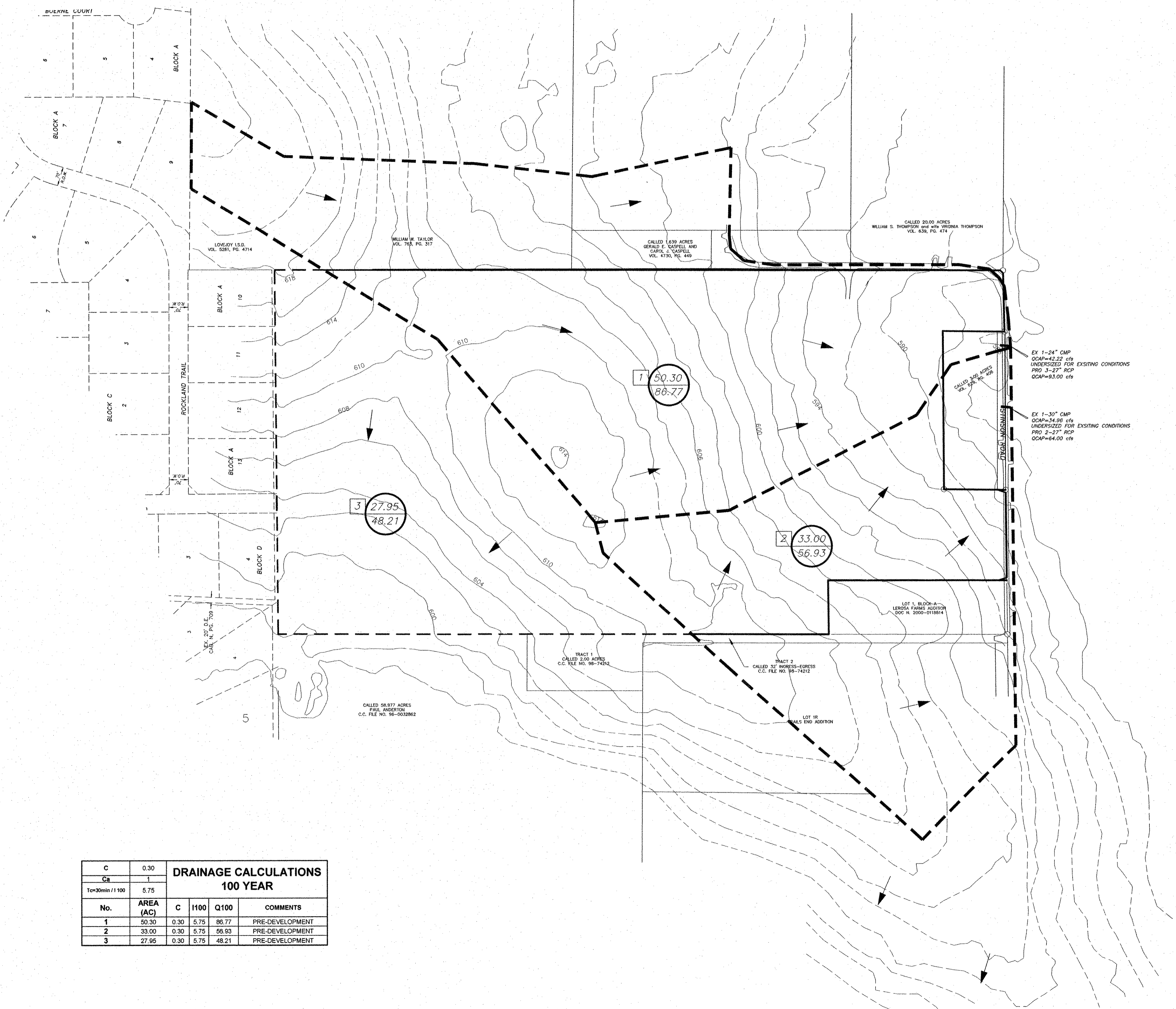
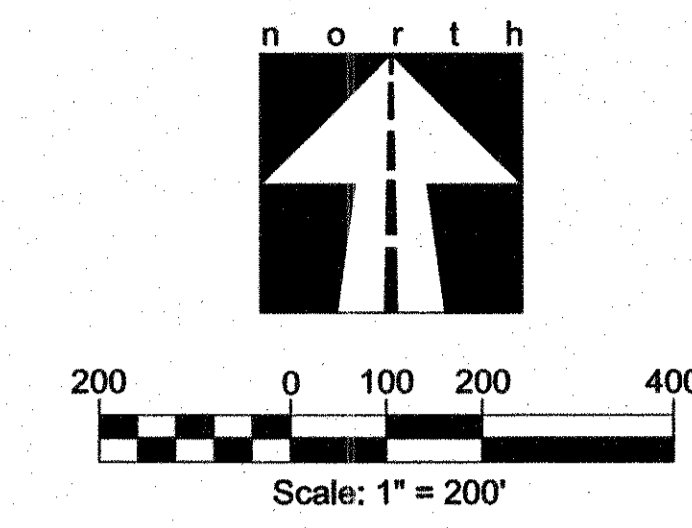
DEVELOPER:
 SPRING HAVEN INVESTMENTS, INC.
 6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
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DRAINAGE AREA MAP
ROCKLAND FARMS, PH II
 City of Lucas, Texas
 ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS



8-13-12

REVISIONS	
A	
DESIGN:	CCM
DRAWN:	CCM
DATE:	7/20/2012
SCALE:	1"=100'
NOTES:	
FILE:	

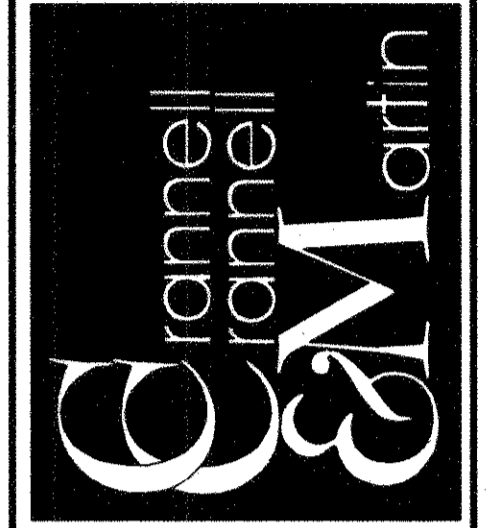


**DRAINAGE CALCULATIONS
100 YEAR**

C	0.30				
Ca	1				
Tc=30min / 1.100	5.75				
No.	AREA (AC)	C	I100	Q100	COMMENTS
1	50.30	0.30	5.75	86.77	PRE-DEVELOPMENT
2	33.00	0.30	5.75	56.93	PRE-DEVELOPMENT
3	27.95	0.30	5.75	48.21	PRE-DEVELOPMENT

As-Built
[Signature] 12-19-12
 Date

Engineering Corporation
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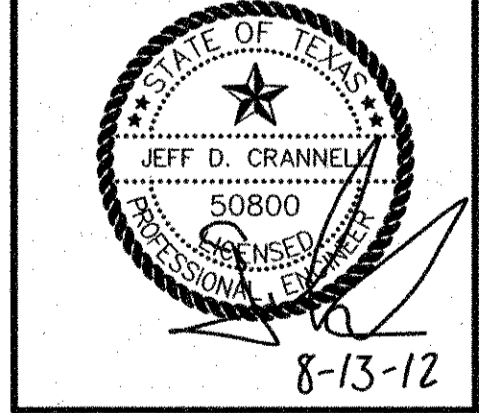
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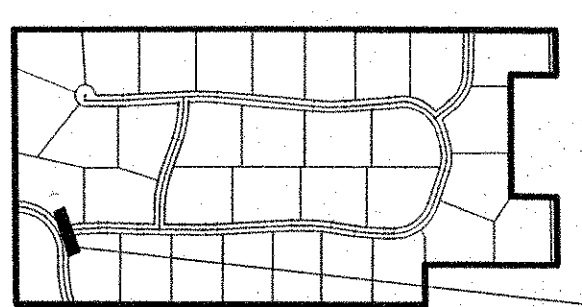
**UNDEVELOPED
DRAINAGE AREA MAP**

ROCKLAND FARMS, PH II
 City of Lucas, Texas

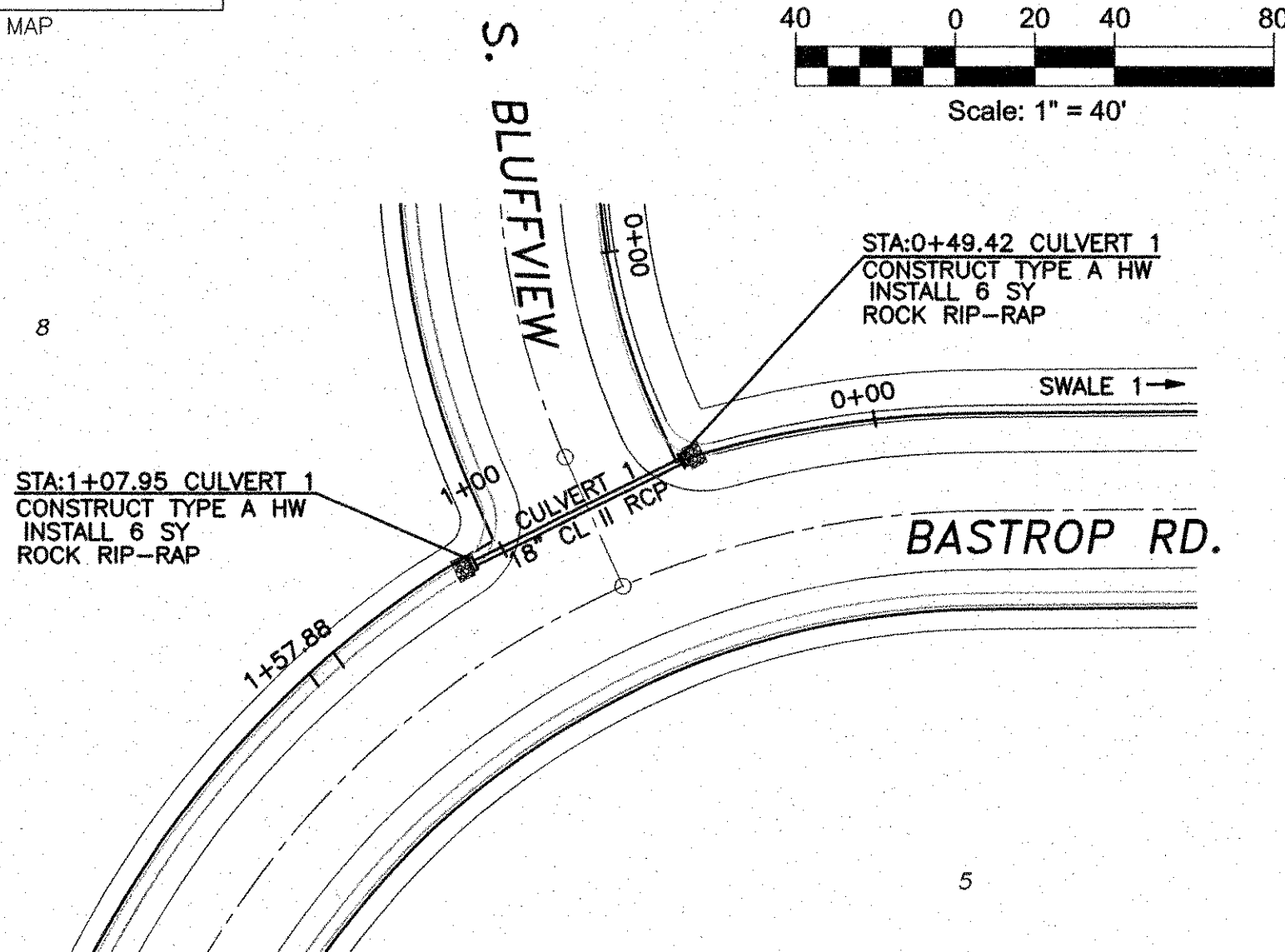
ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS



REVISIONS
DESIGN: CCM
DRAWN: CCM
DATE: 7/20/2012
SCALE: 1"=200'
NOTES:
FILE:
Sheet 15 of 32



LOCATION MAP



CULVERT 1

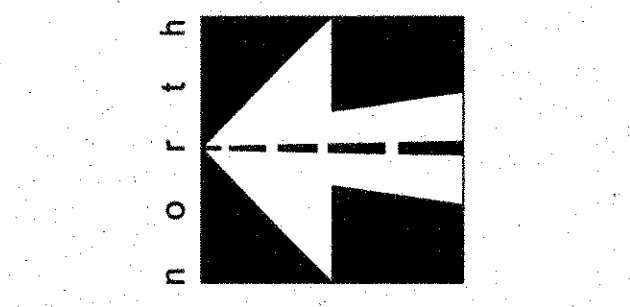
Culvert Calculator

Entered Data:

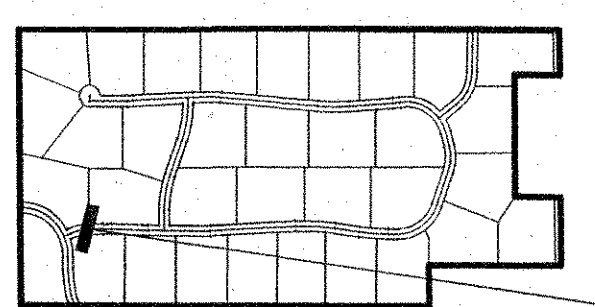
Shape Circular
 Number of Barrels 1
 Solving for Headwater
 Chart Number 1
 Scale Number 1
 Chart Description CONCRETE PIPE CULVERT; NO BEVELED RING ENTRANCE
 Scale Description SQUARE EDGE ENTRANCE WITH HEADWALL
 Overlapping Off
 Flowrate 6.2200 cfs
 Manning's n 0.0130
 Roadway Elevation 601.2800 ft
 Inlet Elevation 599.1100 ft
 Outlet Elevation 597.8200 ft
 Diameter 1.5000 ft
 Length 57.9500 ft
 Entrance Loss 0.0000
 Tailwater 0.6000 ft

Computed Results:
 Headwater 600.5961 ft Inlet Control
 Slope 0.0223 ft/ft
 Velocity 3.5200 fps

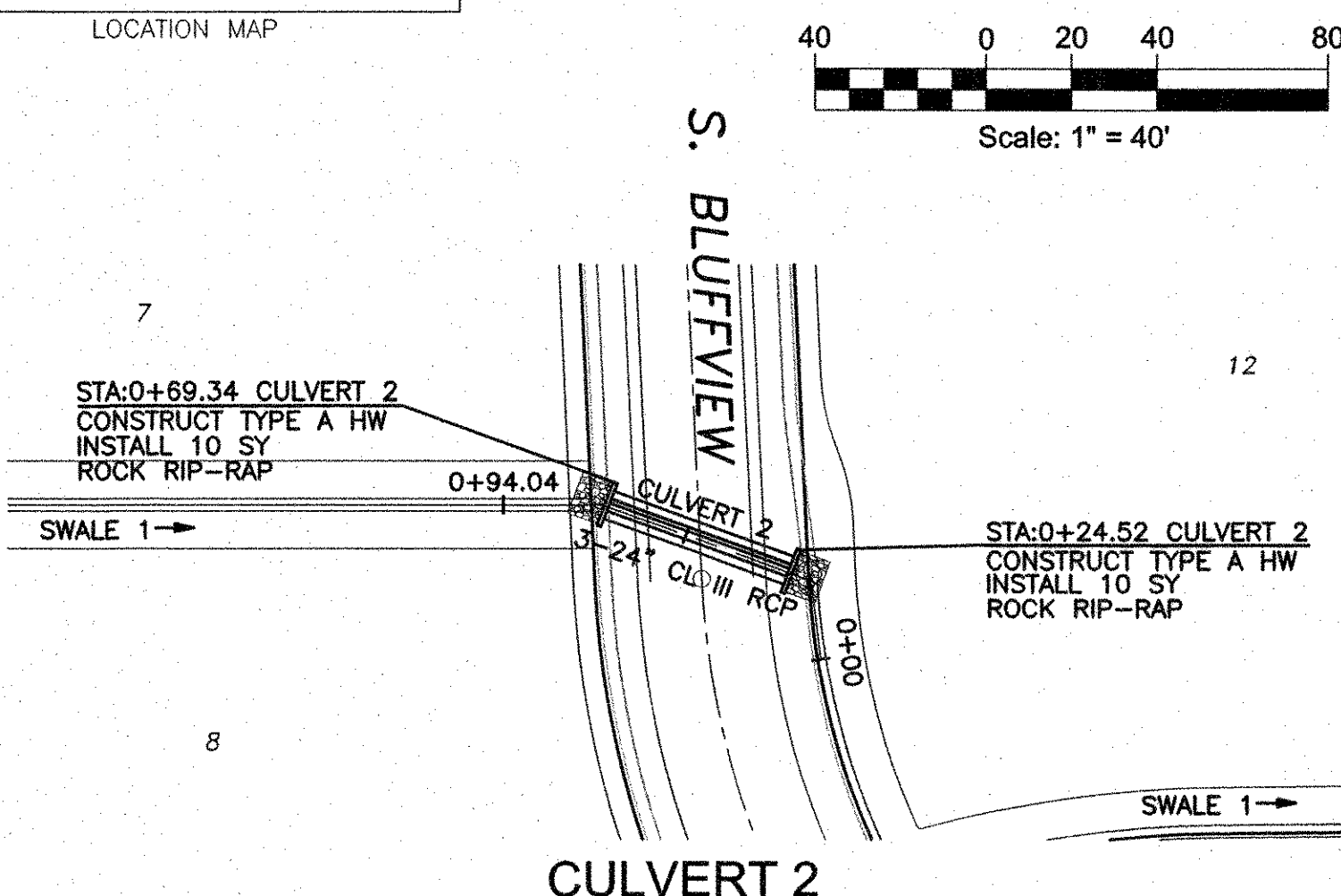
Messages:
 Inlet head > Outlet head.
 Computing Inlet Control headwater.
 Solving Inlet Equation 26.
 Solving Inlet Equation 28.
 Headwater: 600.5961 ft



Scale: 1" = 40'



LOCATION MAP



CULVERT 2

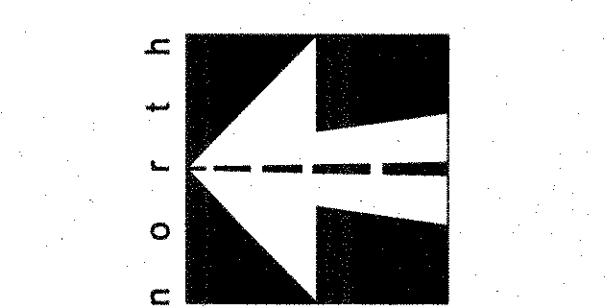
Culvert Calculator

Entered Data:

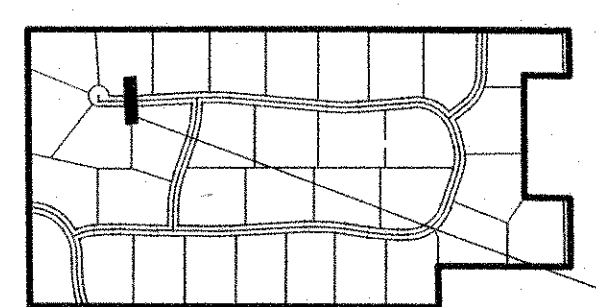
Shape Circular
 Number of Barrels 3
 Solving for Headwater
 Chart Number 1
 Scale Number 1
 Chart Description CONCRETE PIPE CULVERT; NO BEVELED RING ENTRANCE
 Scale Description SQUARE EDGE ENTRANCE WITH HEADWALL
 Overlapping Off
 Flowrate 42.2500 cfs
 Manning's n 0.0130
 Roadway Elevation 601.7600 ft
 Inlet Elevation 598.6200 ft
 Outlet Elevation 598.4200 ft
 Diameter 2.0000 ft
 Length 44.8200 ft
 Entrance Loss 0.0000
 Tailwater 1.5700 ft

Computed Results:
 Headwater 600.7675 ft Inlet Control
 Slope 0.0049 ft/ft
 Velocity 5.6990 fps

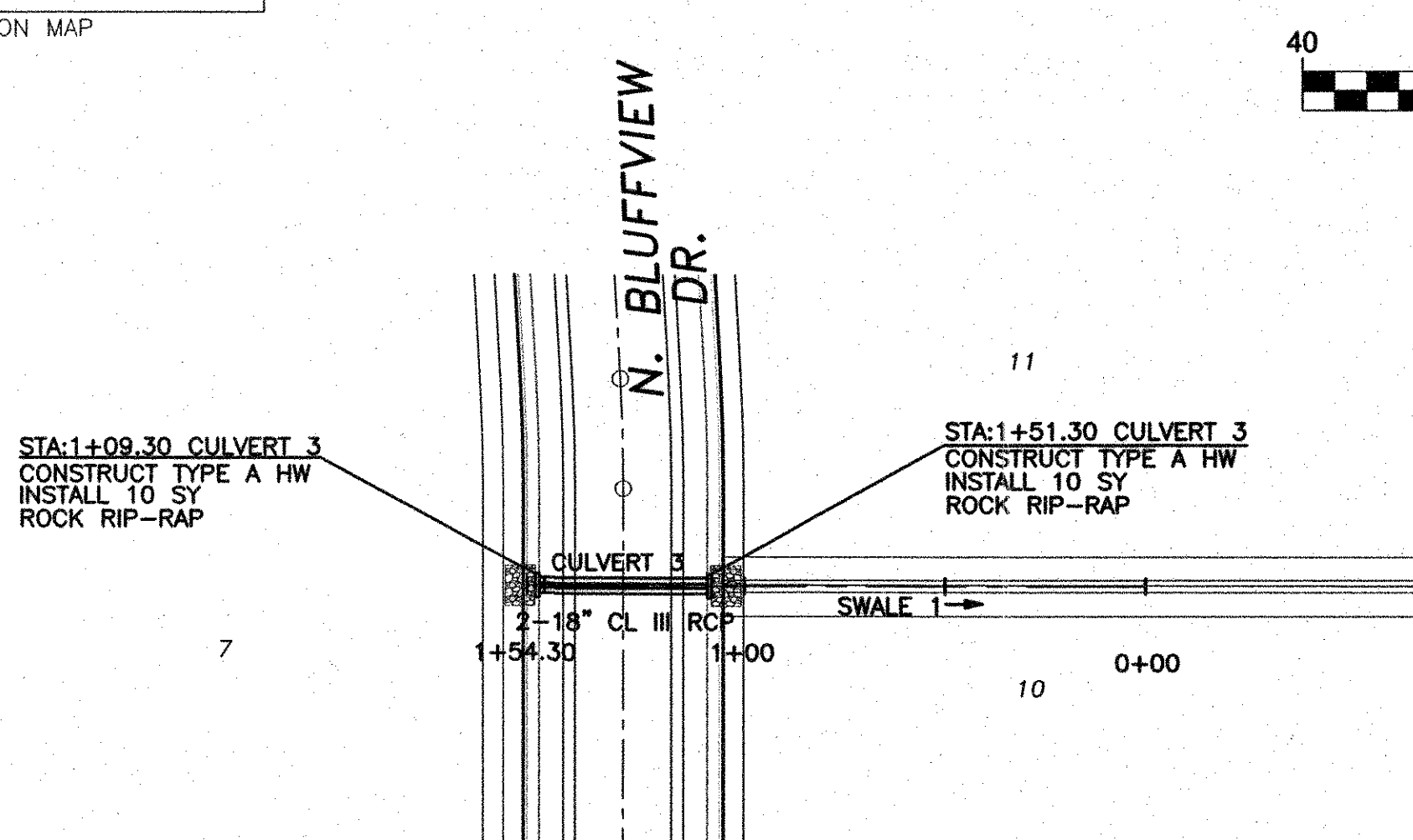
Messages:
 Inlet head > Outlet head.
 Computing Inlet Control headwater.
 Solving Inlet Equation 26.
 Solving Inlet Equation 28.
 Headwater: 600.7675 ft



Scale: 1" = 40'



LOCATION MAP



CULVERT 3

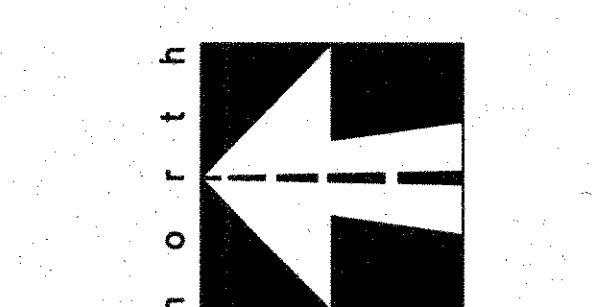
Culvert Calculator

Entered Data:

Shape Circular
 Number of Barrels 2
 Solving for Headwater
 Chart Number 1
 Scale Number 1
 Chart Description CONCRETE PIPE CULVERT; NO BEVELED RING ENTRANCE
 Scale Description SQUARE EDGE ENTRANCE WITH HEADWALL
 Overlapping Off
 Flowrate 14.5900 cfs
 Manning's n 0.0130
 Roadway Elevation 609.5200 ft
 Inlet Elevation 606.9200 ft
 Outlet Elevation 606.7100 ft
 Diameter 1.5000 ft
 Length 42.0100 ft
 Entrance Loss 0.0000
 Tailwater 1.2400 ft

Computed Results:
 Headwater 608.6070 ft Inlet Control
 Slope 0.0050 ft/ft
 Velocity 4.7943 fps

Messages:
 Inlet head > Outlet head.
 Computing Inlet Control headwater.
 Solving Inlet Equation 26.
 Solving Inlet Equation 28.
 Headwater: 608.6070 ft



Scale: 1" = 40'

As-Built

 Date: 12-29-10

- BENCHMARKS:**
- FEMA BENCHMARK #RM 136, RR SPIKE IN POWER POLE ON WEST SIDE OF FM 2551, ± 2,800' SOUTH OF CR 262 (INGRAM ROAD)
ELEV.=637.32'
 - TOP OF 1/2" IR WEST SIDE OF CR 262 (INGRAM RD) ±1025' NORTH OF NORTH EDGE OF PAVEMENT CR 263 (W.LUCAS ROAD), ±7' EAST OF BARBED WIRE FENCE
ELEV.=637.08'

Station	Profile Description	Station	Profile Description	Station	Profile Description	
610	CULVERT 1 Q100=6.22cfs Cap=15.54cfs V=3.52 fps V ² /2G=0.19 ft S=0.0085 ft/ft HW=601.40 EX GRADE PRO GRADE 18" CL III RCP @ 2.19% FL 18" = 599.96 FL 18" = 598.62	610	CULVERT 2 EACH PIPE Q100=13.91cfs Cap=15.98cfs V=5.70 fps V ² /2G=0.50 ft S=0.0062 ft/ft HW=602.51 EX GRADE PRO GRADE 3-24" CL III RCP @ 0.50% FL 24" = 599.42 FL 24" = 599.20	620	CULVERT 3 Q100=14.59cfs Cap=14.85cfs V=4.79 fps V ² /2G=0.36 ft S=0.0064 ft/ft HW=609.41 EX GRADE PRO GRADE 2-18" CL III RCP @ 0.50% FL 18" = 605.72 FL 18" = 607.51	620
605		605		615		
600		600		610		
595		595		605		
590		590		600		
580		580		595		

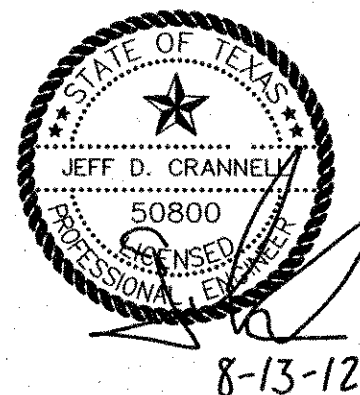
Engineering Corporation
 2570 FM 407, Suite 209
 Highland Village, Texas 75077
 Ph: 972.691.6633
 Fax: 972.691.6628
 TBPE FIRM #605



OWNER:
HJ ROCKLAND, LLC
 6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX: (972) 386-6190

DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
 6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX: (972) 386-6190

CULVERTS 1-3
PLAN & PROFILE
ROCKLAND FARMS, PH II
 City of Lucas, Texas

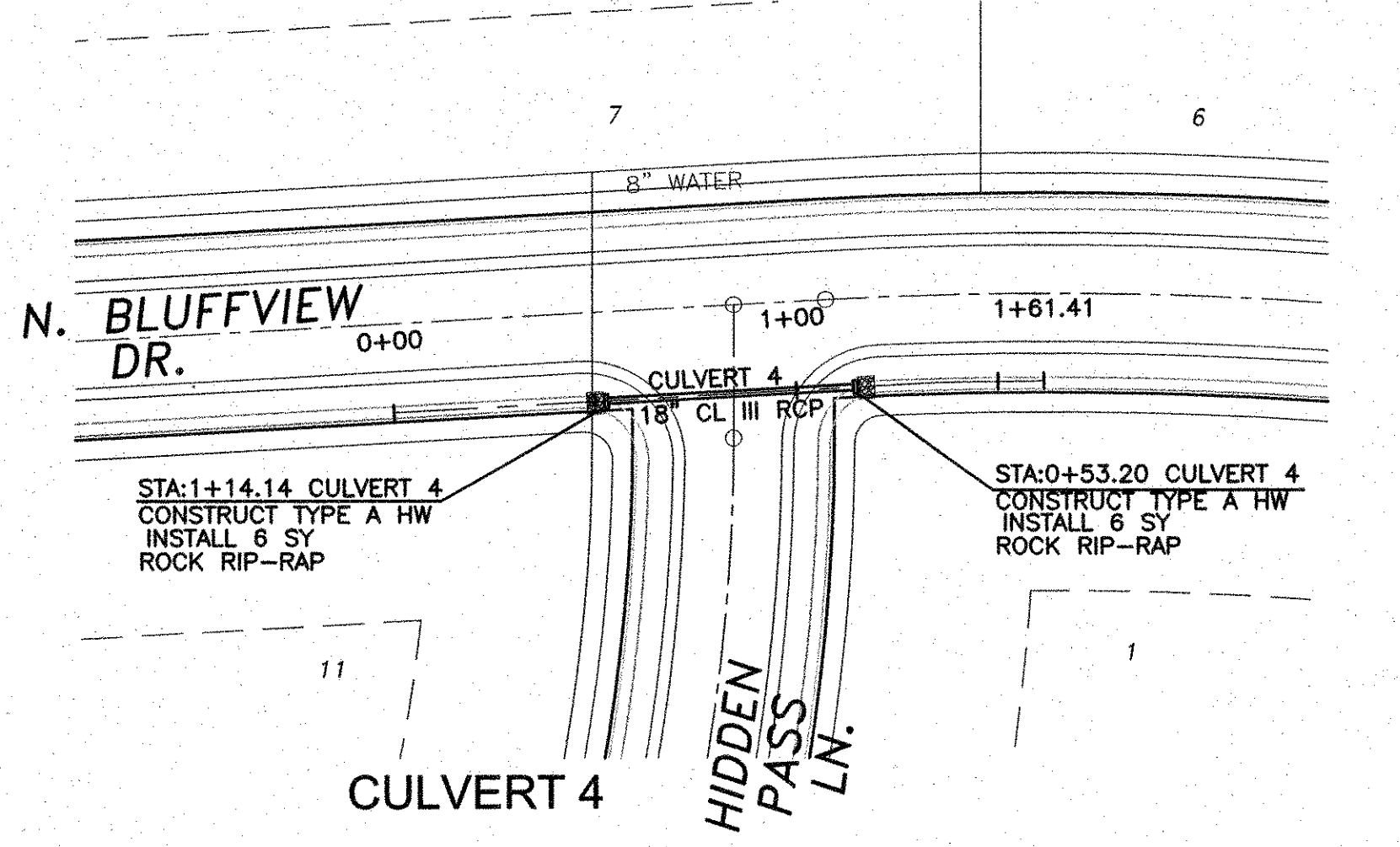
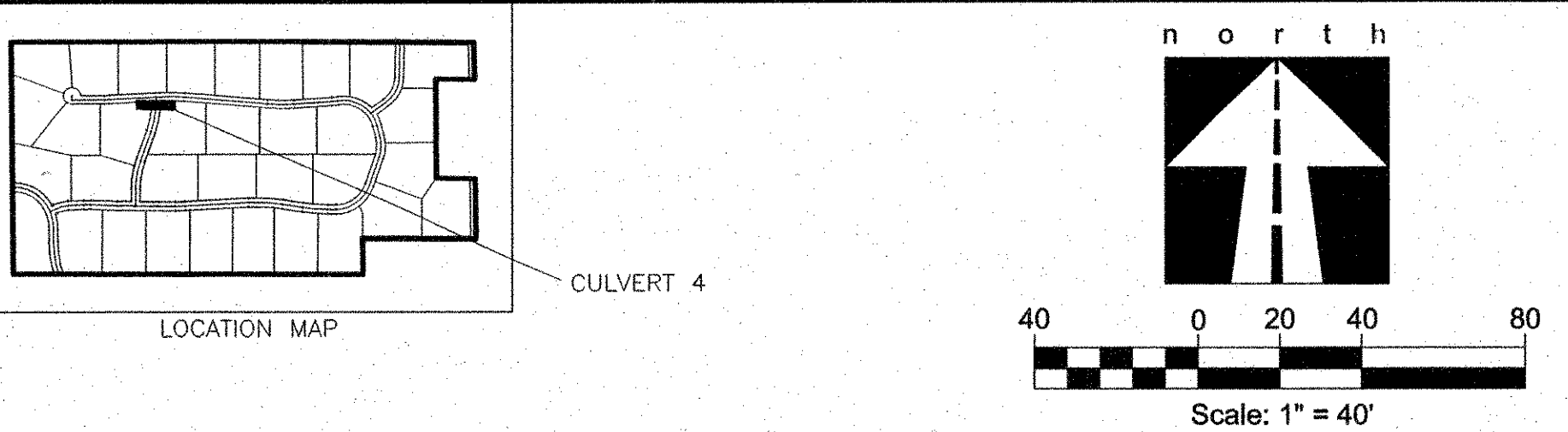


REVISIONS

NO.	DESCRIPTION

DESIGN: CCM
 DRAWN: CCM
 DATE: 7/20/2012
 SCALE: H:1"=40' V:1"=4'
 NOTES:
 FILE:
 Sheet 16 of 32

ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS



Entered Data:

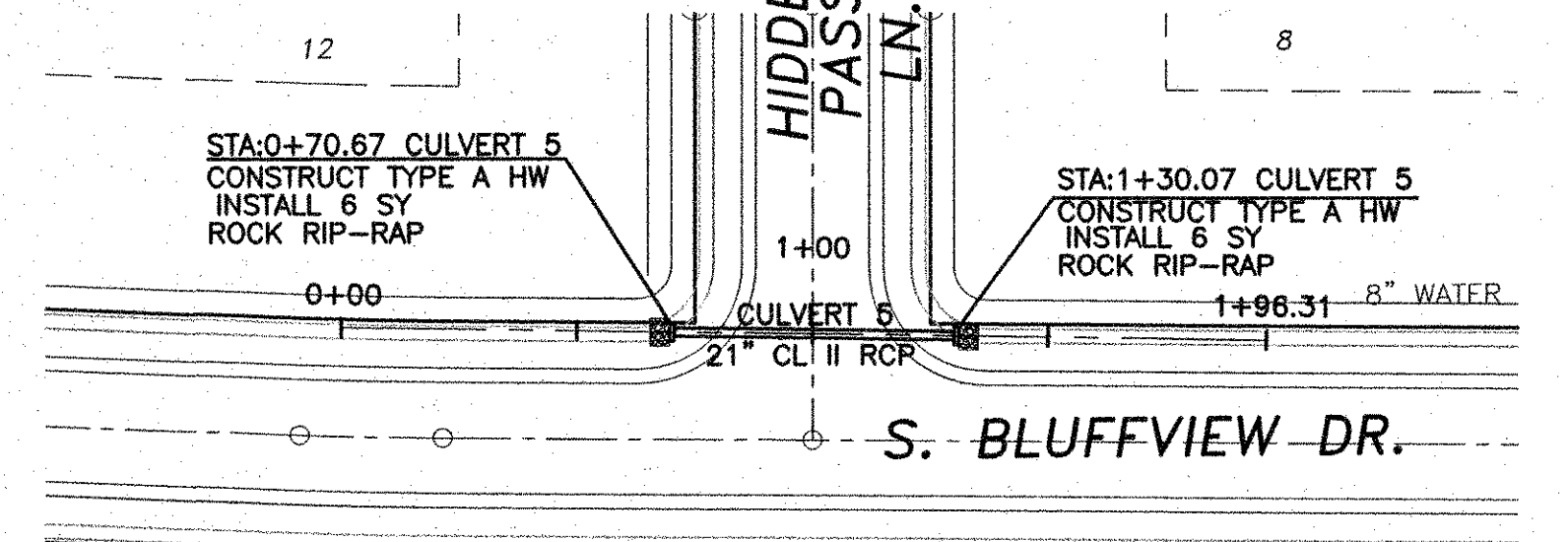
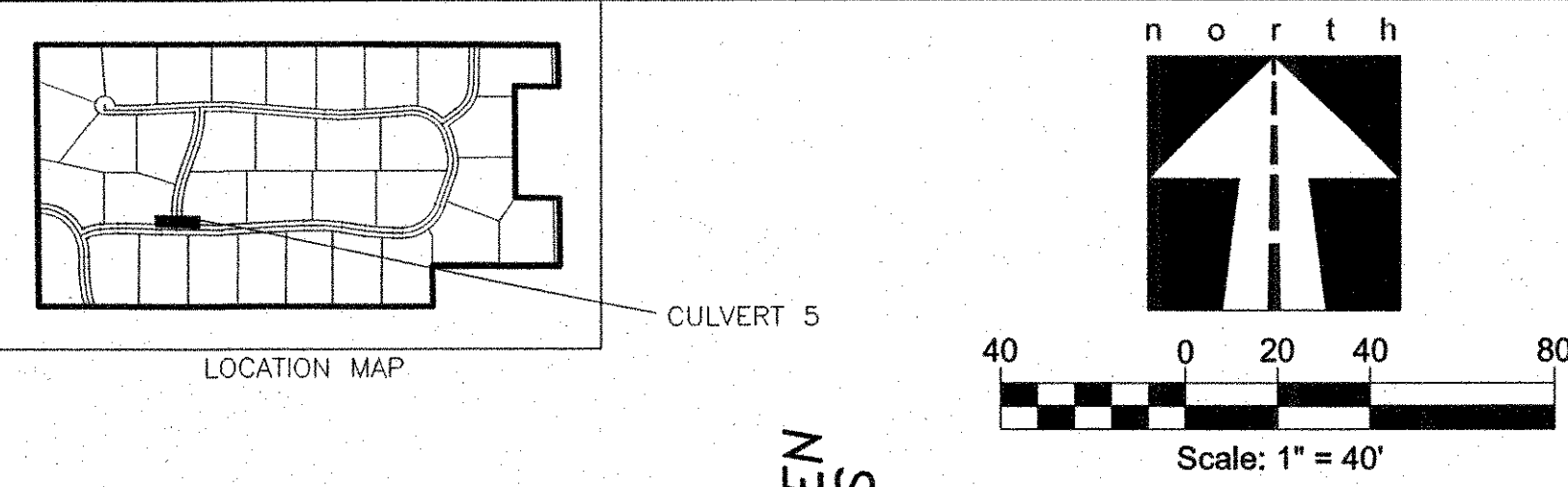
Shape	Circular
Number of Barrels	1
Solving for	Headwater
Chart Number	1
Scale Description	CONCRETE PIPE CULVERT; NO BEVELED RING ENTRANCE
Scale Description	SQUARE EDGE ENTRANCE WITH HEADWALL
Overlapping	Off
Flowrate	2.9100 cfs
Manning's n	0.0130
Roadway Elevation	611.2800 ft
Inlet Elevation	608.8900 ft
Outlet Elevation	608.5700 ft
Diameter	1.5000 ft
Length	60.9400 ft
Entrance Loss	0.0000
Tailwater	0.5500 ft

Computed Results:

Headwater	610.6259 ft Outlet Control
Slope	0.0051 ft/ft
Velocity	3.9791 fps

Messages:

Headwater: 610.6259 ft



Entered Data:

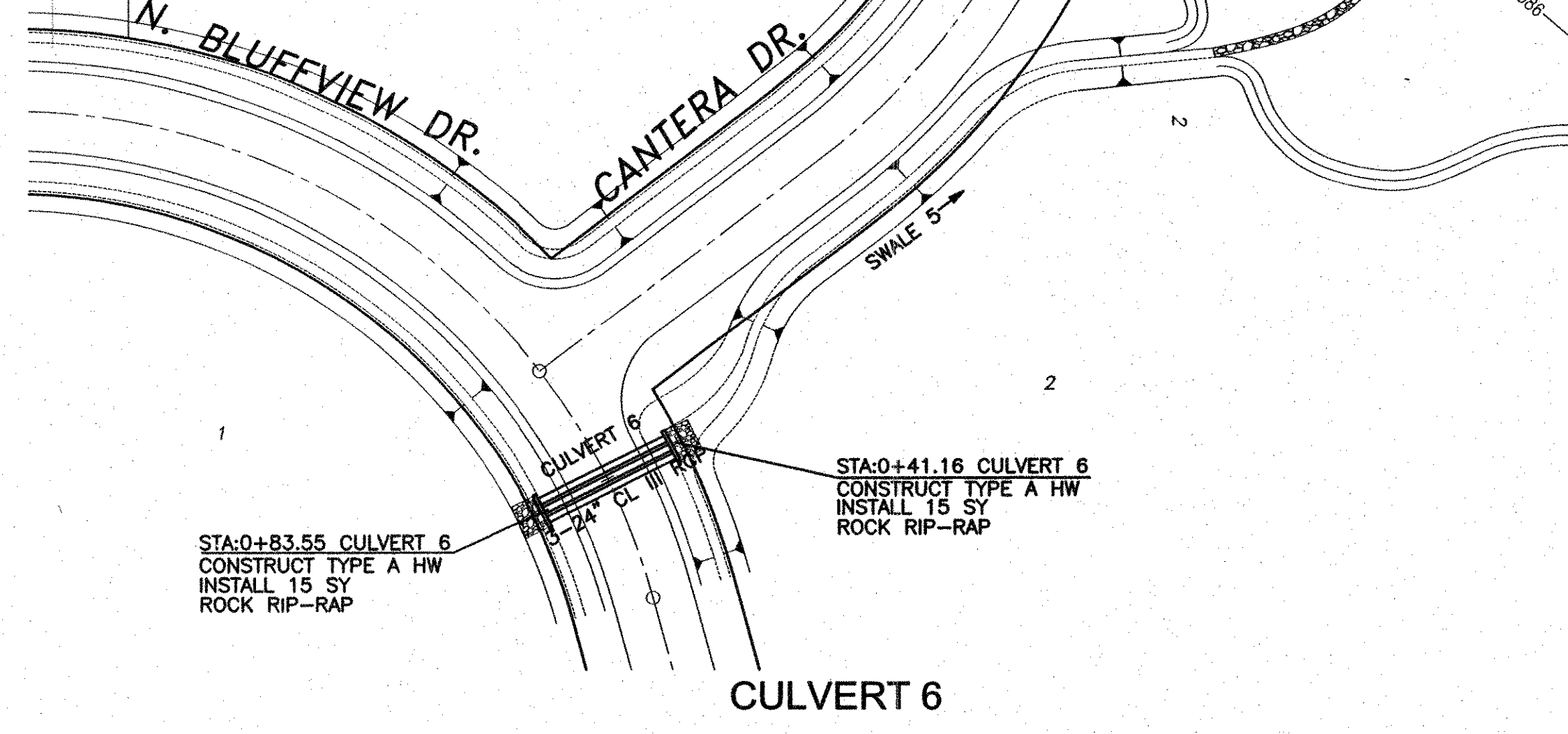
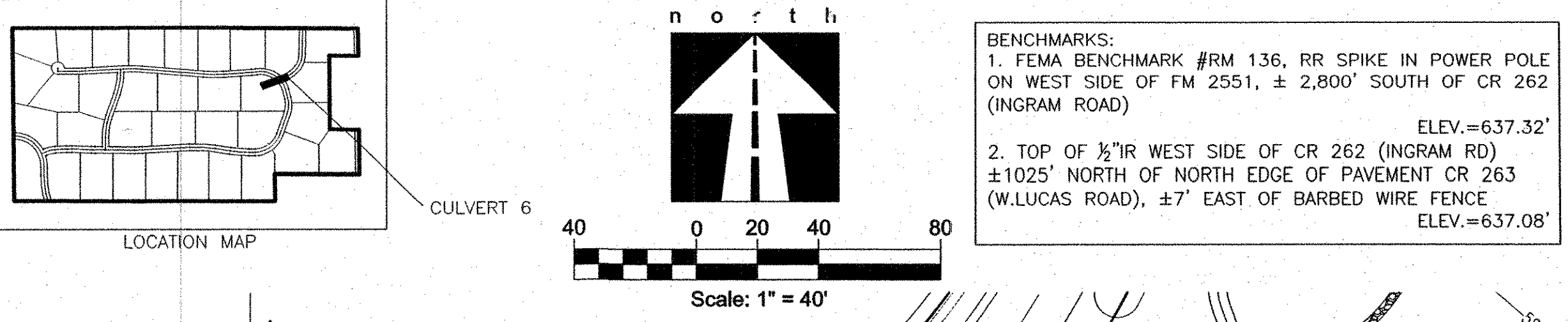
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Number of Barrels	1
Solving for	Headwater
Chart Number	1
Scale Description	CONCRETE PIPE CULVERT; NO BEVELED RING
Scale Description	SQUARE EDGE ENTRANCE WITH HEADWALL
Overlapping	Off
Flowrate	9.0900 cfs
Manning's n	0.0130
Roadway Elevation	607.6400 ft
Inlet Elevation	604.8900 ft
Outlet Elevation	604.2400 ft
Diameter	1.7500 ft
Length	59.4000 ft
Entrance Loss	0.0000
Tailwater	0.7300 ft

Computed Results:

Headwater	606.6263 ft Inlet Control
Slope	0.0109 ft/ft
Velocity	3.7796 fps

Messages:

Inlet head > Outlet head.
Computing Inlet Control headwater.
Solving Inlet Equation 26.
Solving Inlet Equation 28.
Headwater: 606.6263 ft



Entered Data:

Shape	Circular
Number of Barrels	3
Solving for	Headwater
Chart Number	1
Scale Description	CONCRETE PIPE CULVERT; NO BEVELED RING
Scale Description	SQUARE EDGE ENTRANCE WITH HEADWALL
Overlapping	Off
Flowrate	47.3400 cfs
Manning's n	0.0130
Roadway Elevation	591.8400 ft
Inlet Elevation	589.0800 ft
Outlet Elevation	588.2300 ft
Diameter	2.0000 ft
Length	42.3900 ft
Entrance Loss	0.0000
Tailwater	1.8100 ft

Computed Results:

Headwater	591.4282 ft Inlet Control
Slope	0.0201 ft/ft
Velocity	5.0222 fps

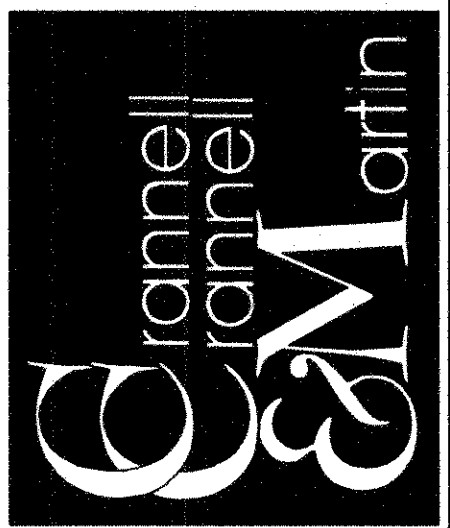
Messages:

Inlet head > Outlet head.
Computing Inlet Control headwater.
Solving Inlet Equation 26.
Solving Inlet Equation 28.
Headwater: 591.4282 ft

As-Built
[Signature]
Date

Station	Elevation	Profile	Station	Elevation	Profile	Station	Elevation	Profile
2+00	620		0+00	620		2+00	605	
1+00	615		1+00	615		1+00	600	
0+00	610		0+00	610		0+00	595	
	605		605		605		605	
	600		600		600		600	
	595		595		595		595	

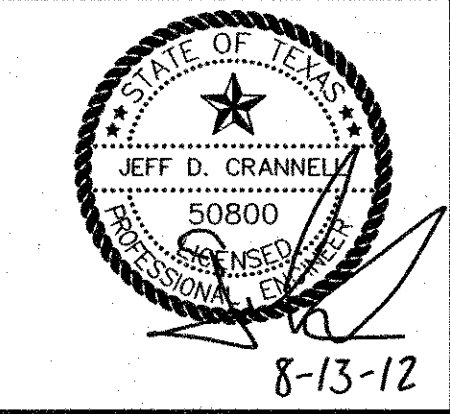
Engineering Corporation
2570 FM 407, Suite 209
Highland Village, Texas 75077
Ph: 972.691.6633
Fax: 972.691.6628
TBPE FIRM #605



OWNER:
HJ ROCKLAND, LLC
6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

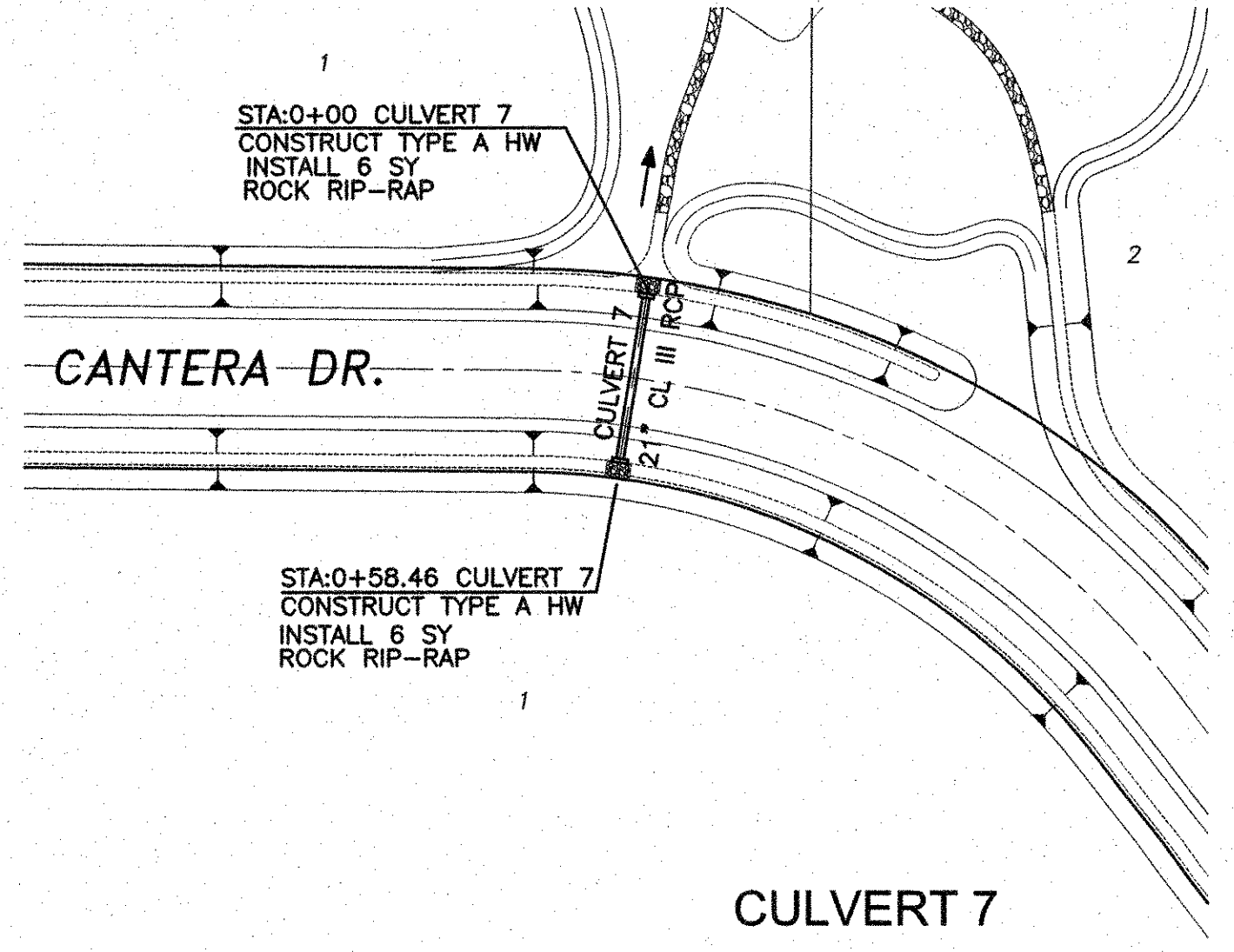
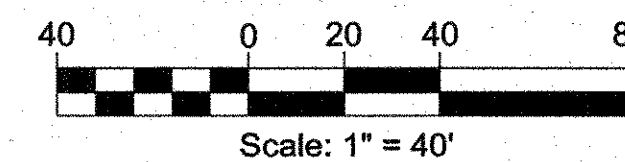
**CULVERTS 4-6
PLAN & PROFILE**
ROCKLAND FARMS, PH II
City of Lucas, Texas



REVISIONS

DESIGN: CCM
DRAWN: CCM
DATE: 7/20/2012
SCALE: H:1"=40' V:1"=4'
NOTES:
FILE:
Sheet 17 of 32

ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS



CULVERT 7

Entered Data:

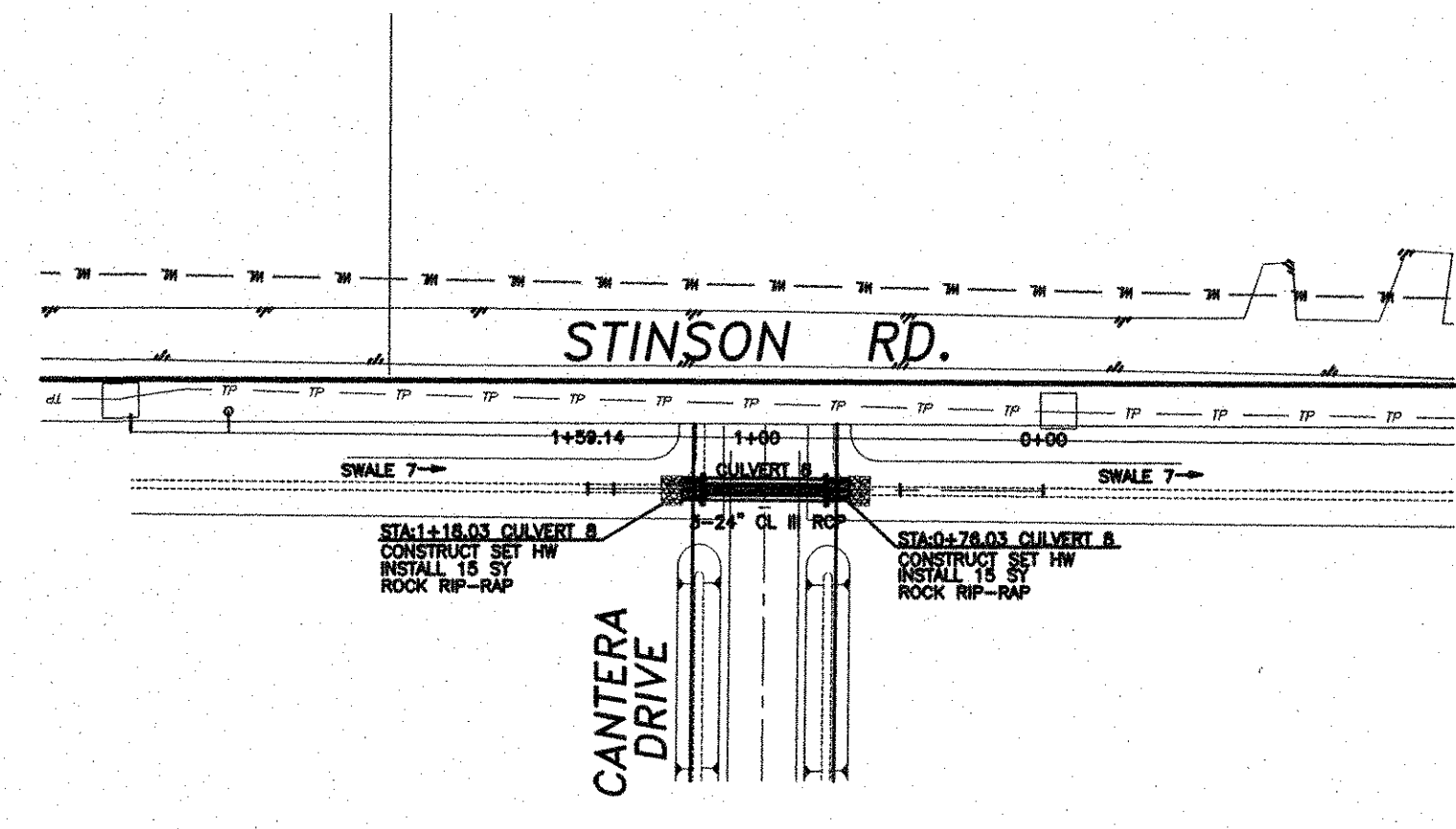
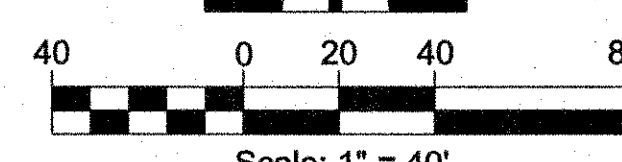
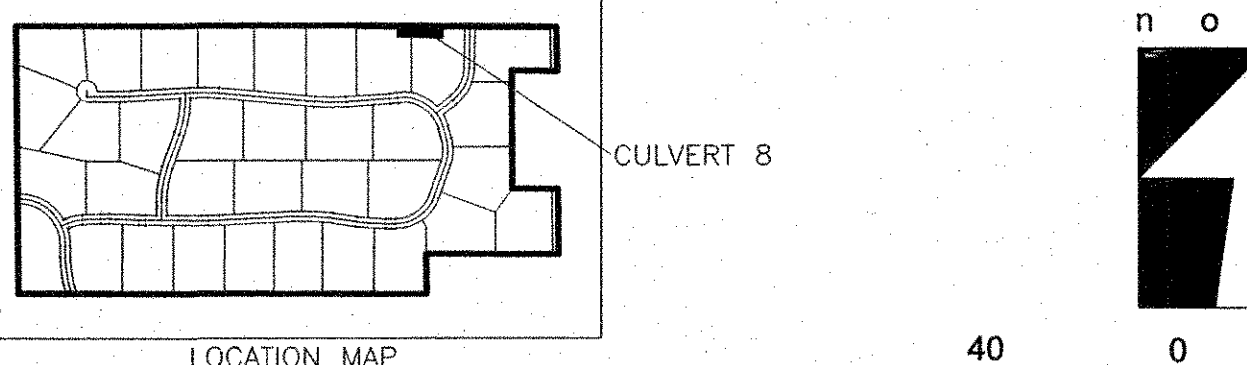
Shape	Circular
Number of Barrels	3
Solving for	Headwater
Chart Number	1
Scale Number	1
Chart Description	CONCRETE PIPE CULVERT; NO BEVELED RING EN
Scale Description	SQUARE EDGE ENTRANCE WITH HEADWALL
Overlapping	0%
Flowrate	47.3400 cfs
Manning's n	0.0130
Roadway Elevation	591.8400 ft
Inlet Elevation	589.0800 ft
Outlet Elevation	588.2300 ft
Diameter	2.0000 ft
Length	42.3900 ft
Entrance Loss	0.0000
Tailwater	1.8100 ft

Computed Results:

Headwater	591.4282 ft Inlet Control
Slope	0.0201 ft/ft
Velocity	5.0222 fps

Messages:

Inlet head > Outlet head.
Computing Inlet Control headwater.
Solving Inlet Equation 26.
Solving Inlet Equation 28.
Headwater: 591.4282 ft



CULVERT 8

Entered Data:

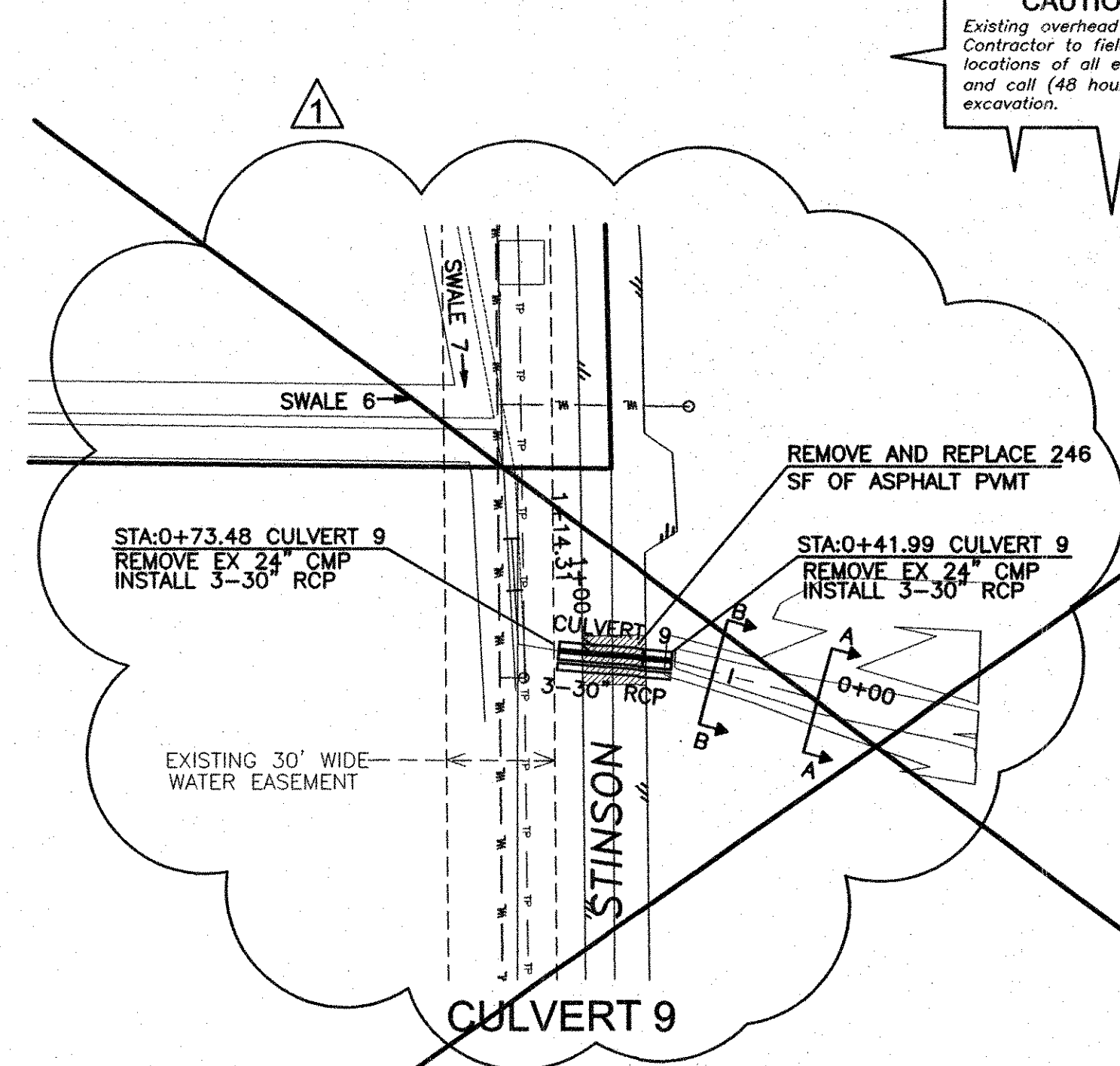
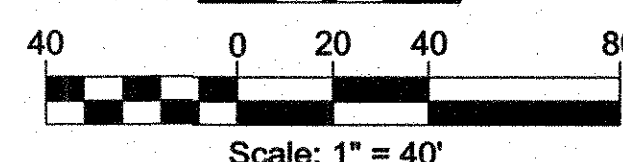
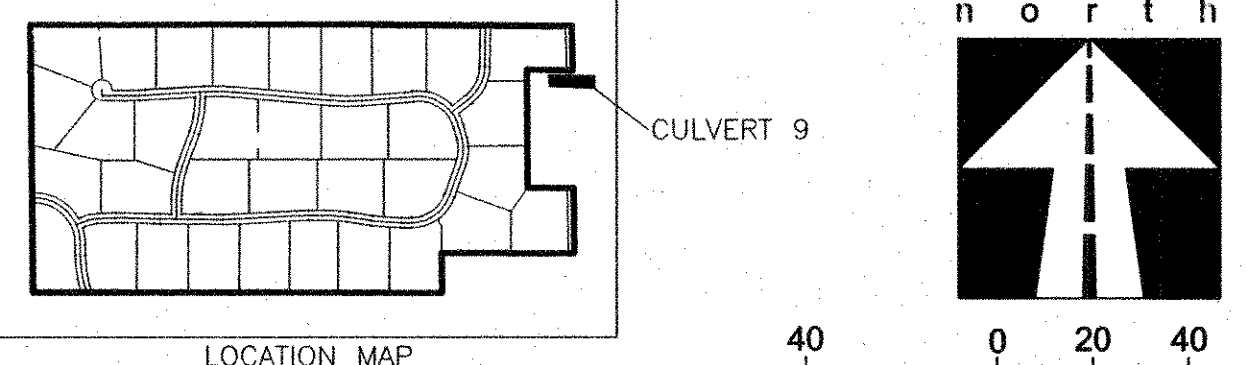
Shape	Circular
Number of Barrels	3
Solving for	Headwater
Chart Number	1
Scale Number	1
Chart Description	CONCRETE PIPE CULVERT; NO BEVELED RING EN
Scale Description	SQUARE EDGE ENTRANCE WITH HEADWALL
Overlapping	0%
Flowrate	52.3300 cfs
Manning's n	0.0130
Roadway Elevation	591.1400 ft
Inlet Elevation	594.2500 ft
Outlet Elevation	591.1400 ft
Diameter	2.0000 ft
Length	42.0000 ft
Entrance Loss	0.0000
Tailwater	1.2900 ft

Computed Results:

Headwater	593.8813 ft Outlet Control
Slope	0.0069 ft/ft
Velocity	6.8766 fps

Messages:

Headwater: 593.8813 ft



CULVERT 9

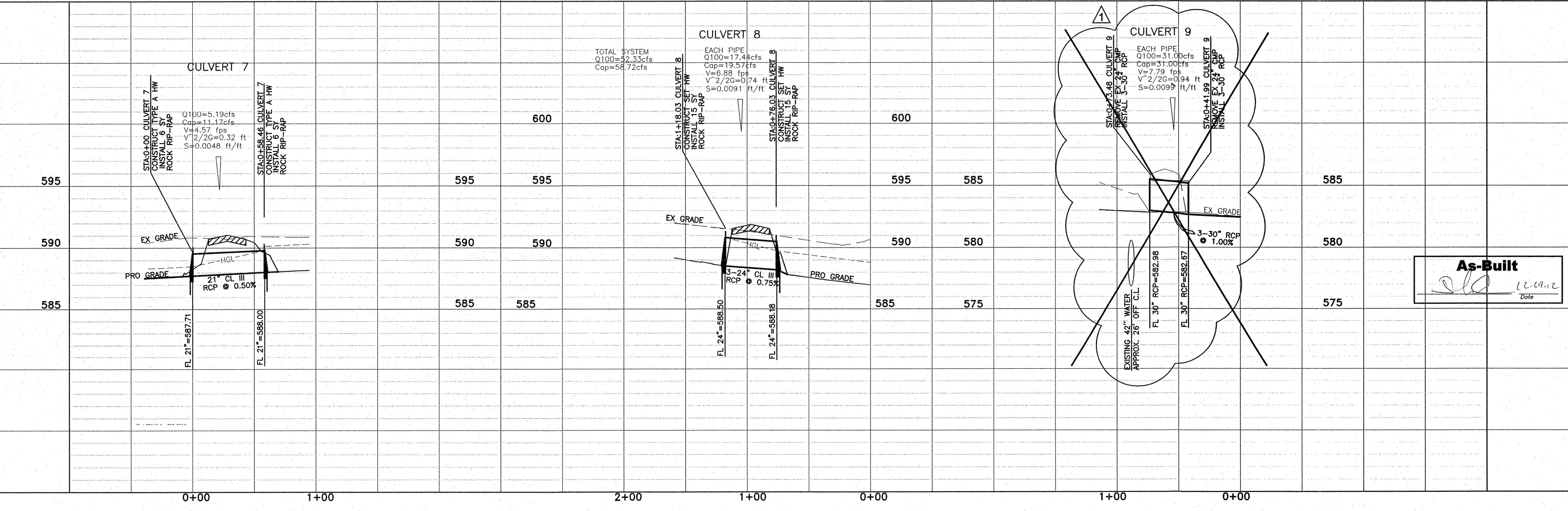
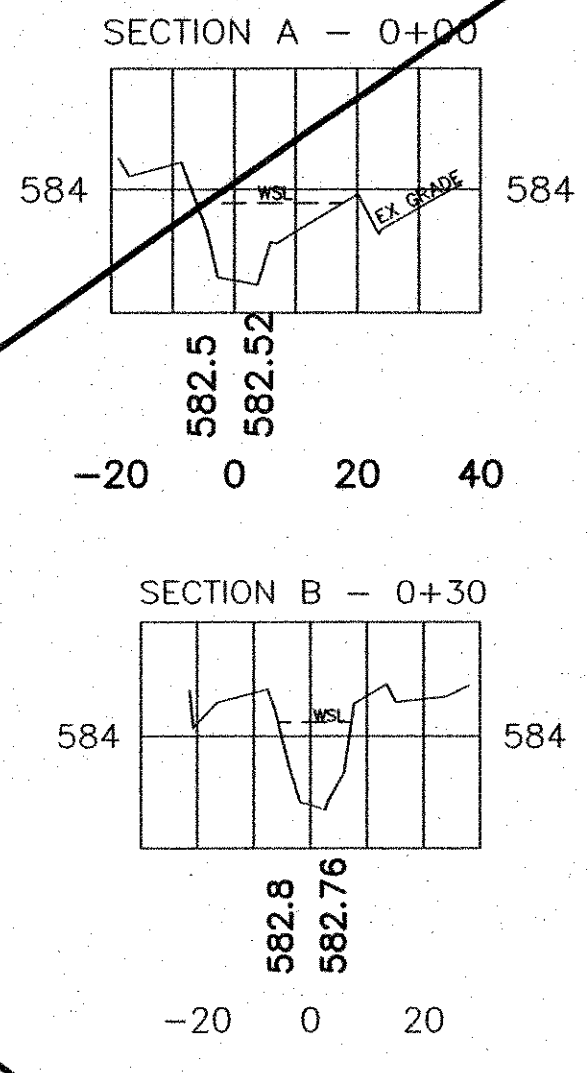
EXISTING SWALE CALCULATIONS

Station	Area (ft ²)	n	Wp	R=AWp	Slope (ft/ft)	Q _{cap} (cfs)	Q ₁₀₀ (cfs)	Depth (ft)
0+00	49.73	0.04	55.26	0.90	0.0050	122.74	31	1.32
0+30	57.73	0.04	43.27	1.33	0.0050	184.28	31	1.58

- NOTES:
- TRAFFIC CONTROL SHALL CONFORM TO TMDOT WHEN WORKING WITHIN RIGHT OF WAY.
 - CONTRACTOR TO PLATE OVER OR BACKFILL TRENCH AT THE END OF DAY.
 - CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION AND CONTACT DIGG-TESS.
 - CONTRACTOR TO CONTACT NORTH TEXAS MUNICIPAL WATER DISTRICT, PAUL LYDAY (972) 442-5405 AT LEAST 48 HOURS BEFORE DIGGING.

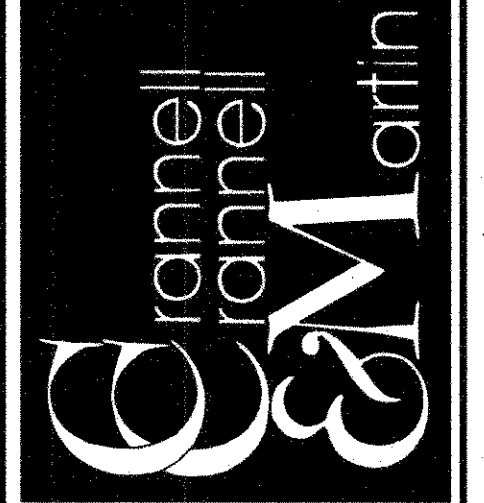
CAUTION!!!
Existing overhead utilities.
Contractor to field verify the locations of all existing utilities and call (48 hours) prior to excavation.

CAUTION!!!
Existing underground utilities.
Contractor to call for locations and field verify the locations of all existing utilities prior to excavation.



As-Built
[Signature]
Date: 8-13-12

Engineering Corporation
2570 FM 407, Suite 209
Highland Village, Texas 75077
Ph: 972.691.6633
Fax: 972.691.6628
TBPE FIRM #605

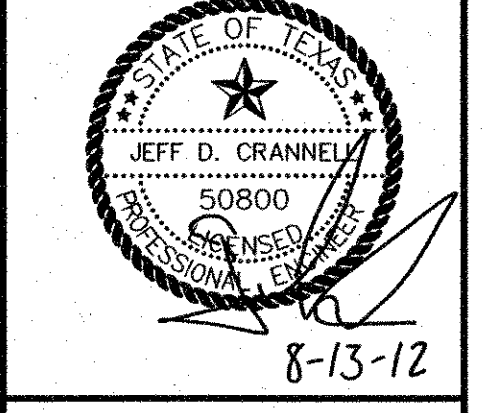


OWNER:
HJ ROCKLAND, LLC
6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

CULVERTS 7-9
PLAN & PROFILE

ROCKLAND FARMS, PH II
City of Lucas, Texas

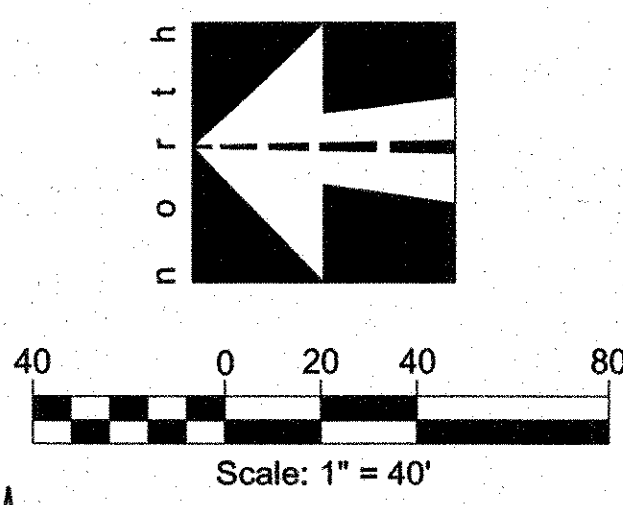
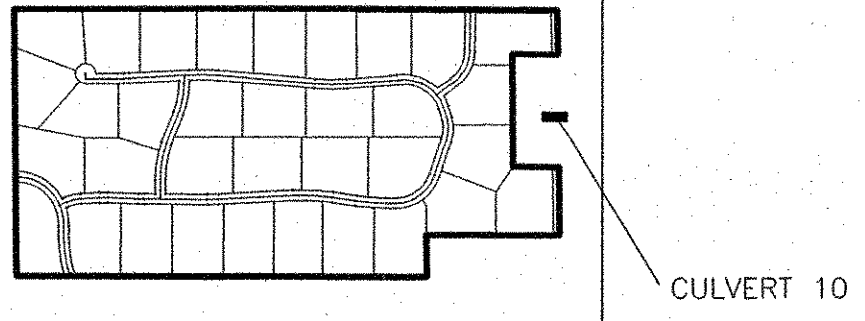


REVISIONS

1	7-20-12	DELETED CULVERT 9
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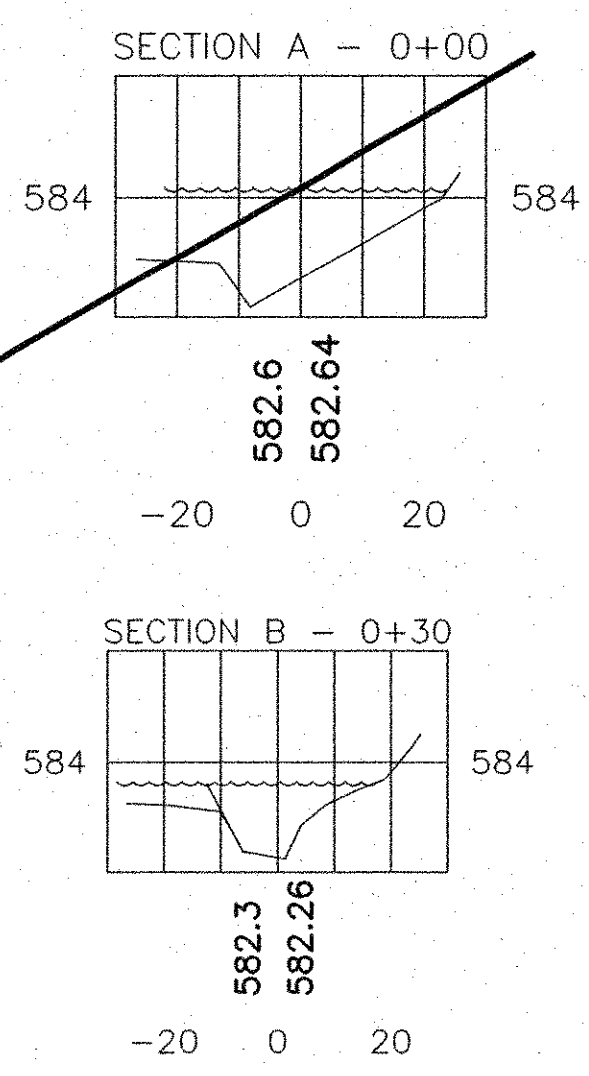
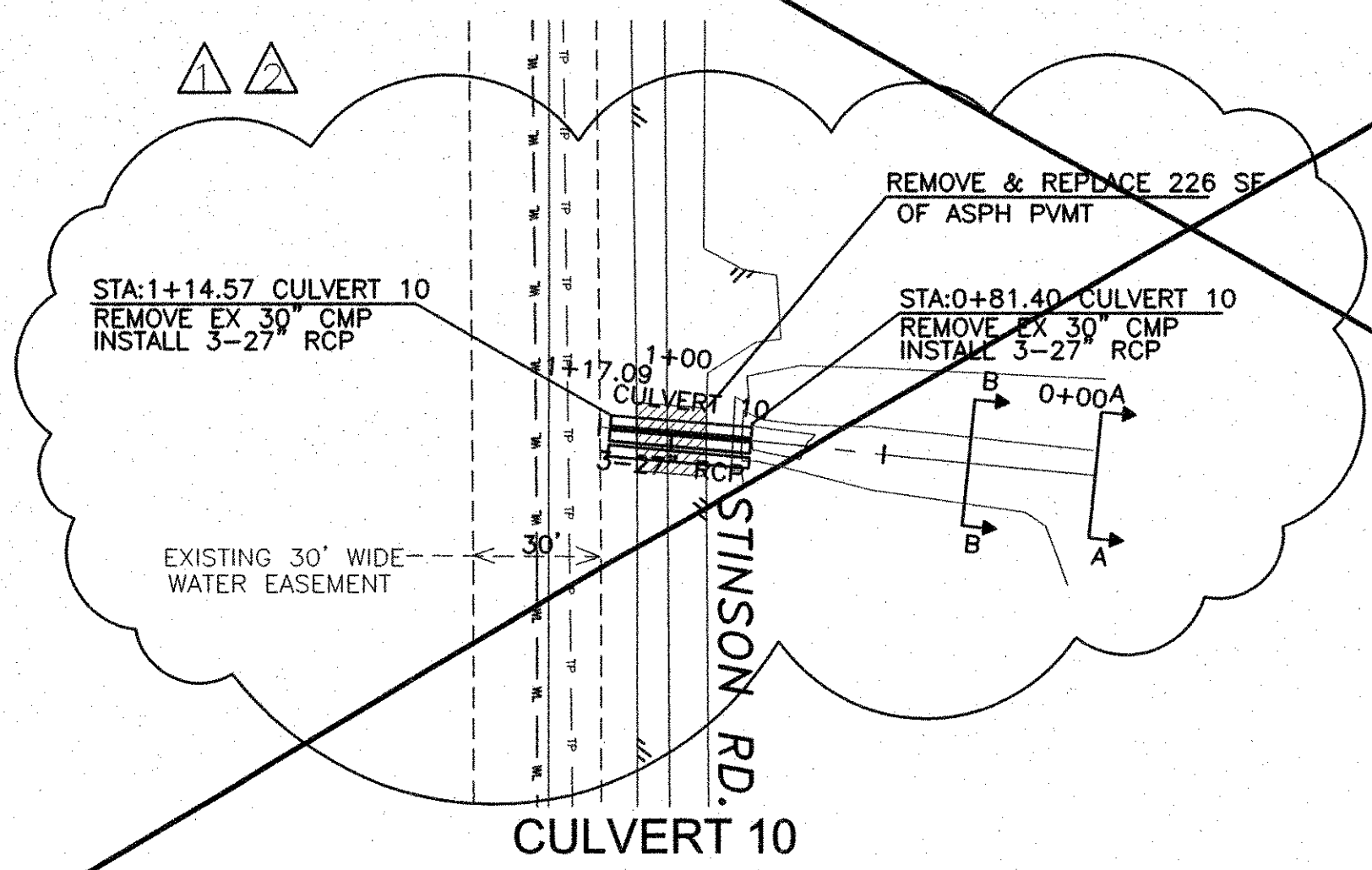
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DRAWN: CCM
DATE: 7/20/2012
SCALE: H:1"=40' V:1"=4'
NOTES:
FILE:
Sheet 18 of 32

ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS



CAUTION!!!
Existing overhead utilities. Contractor to field verify the locations of all existing utilities and call (48 hours) prior to excavation.

CAUTION!!!
Existing underground utilities. Contractor to call for locations and field verify the locations of all existing utilities prior to excavation.



EXISTING SWALE CALCULATIONS

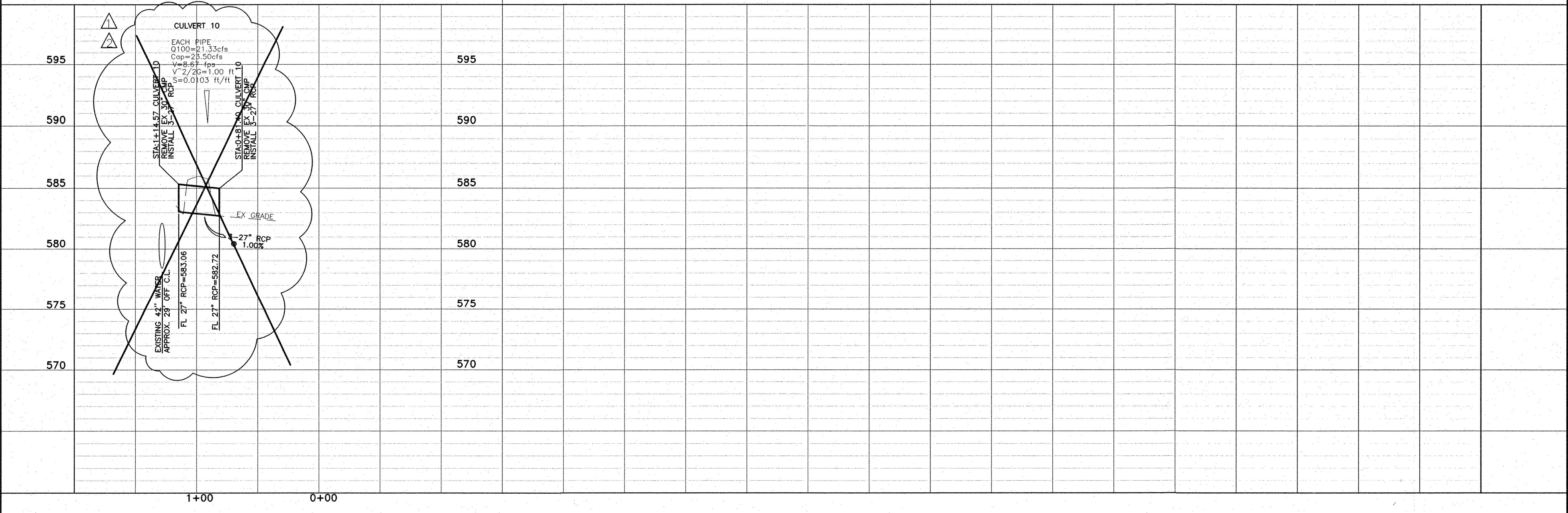
Station	Area (ft ²)	W _p (ft)	R=A/W _p (ft)	Slope (ft/ft)	Q _{cap} (cfs)	Q ₁₀₀ (cfs)	Depth (ft)
0+00	19.25	0.04	35.61	0.50	0.0100	44.93	32
0+30	23.11	0.04	35.47	0.65	0.0100	64.70	32

- NOTES:**
1. TRAFFIC CONTROL SHALL CONFORM TO TMUTCD WHEN WORKING WITHIN RIGHT OF WAY.
 2. CONTRACTOR TO FLEAVE OVER OR BACKFILL TRENCH AT THE END OF DAY.
 3. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION AND CONTACT DIG-TESS.
 4. CONTRACTOR TO CONTACT NORTH TEXAS MUNICIPAL WATER DISTRICT, PAUL LYDAY (972) 442-5405 AT LEAST 48 HOURS BEFORE DIGGING.

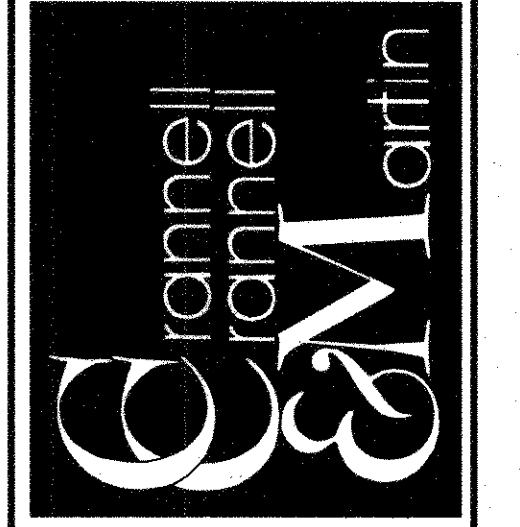
As-Built

[Signature] *[Date]*

- BENCHMARKS:**
1. FEMA BENCHMARK #RM 136, RR SPIKE IN POWER POLE ON WEST SIDE OF FM 2551, ± 2,800' SOUTH OF CR 262 (INGRAM ROAD) ELEV.=637.32'
 2. TOP OF 1/2" IR WEST SIDE OF CR 262 (INGRAM RD) ±1025' NORTH OF NORTH EDGE OF PAVEMENT CR 263 (W.LUCAS ROAD), ±7' EAST OF BARBED WIRE FENCE ELEV.=637.08'



Engineering Corporation
2570 FM 407, Suite 209
Highland Village, Texas 75077
Ph: 972.691.6633
Fax: 972.691.6628
TBPE FIRM #605



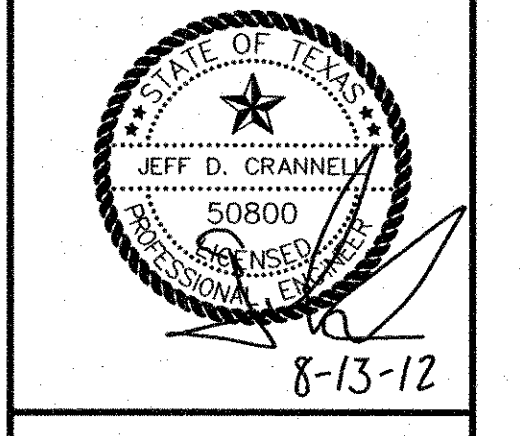
OWNER:
HJ ROCKLAND, LLC
6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

**CULVERT 10
PLAN & PROFILE**

ROCKLAND FARMS, PH II
City of Lucas, Texas

ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS

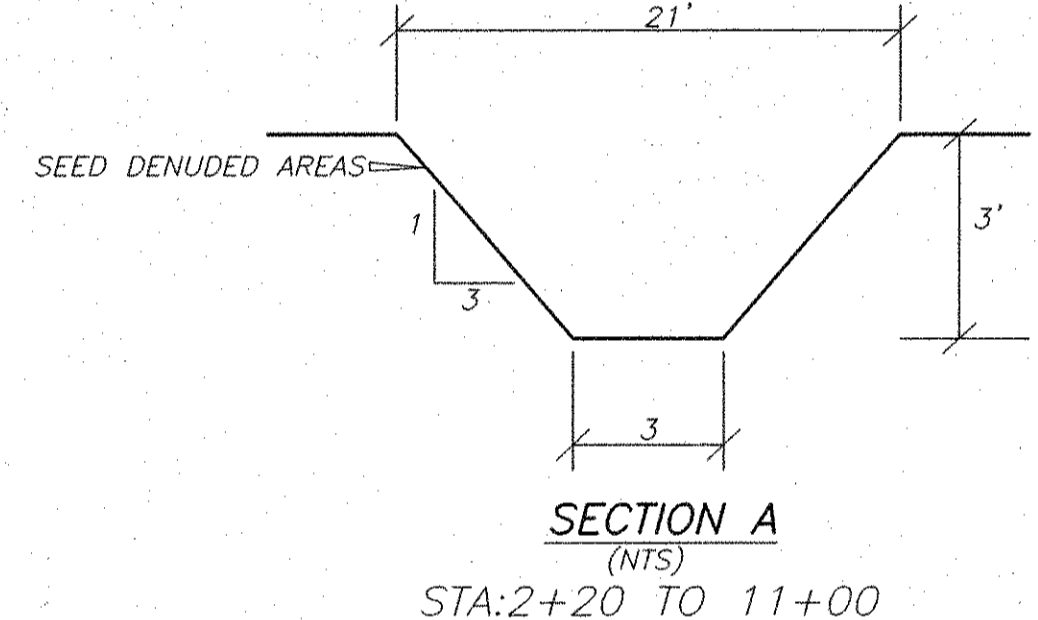
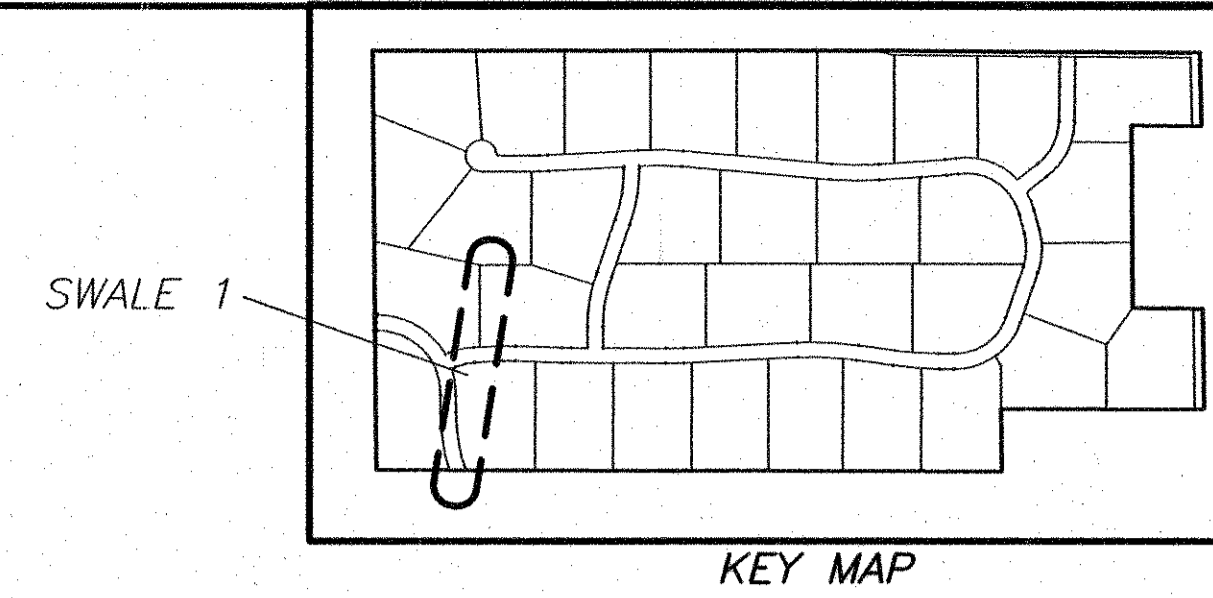
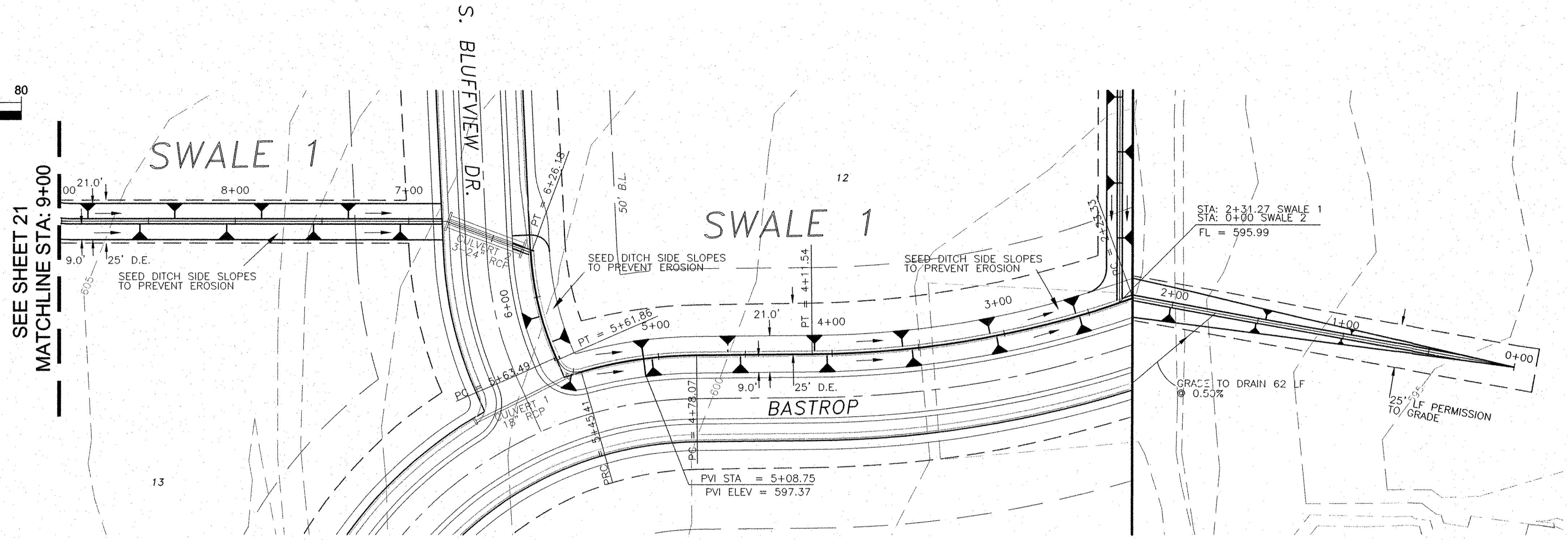
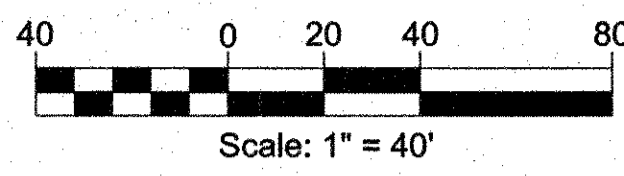
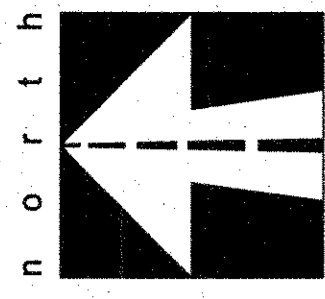


REVISIONS

5-9-12	- CHANGE PIPE SIZE TO 3-27"
7-20-12	DELETE CULVERT 10

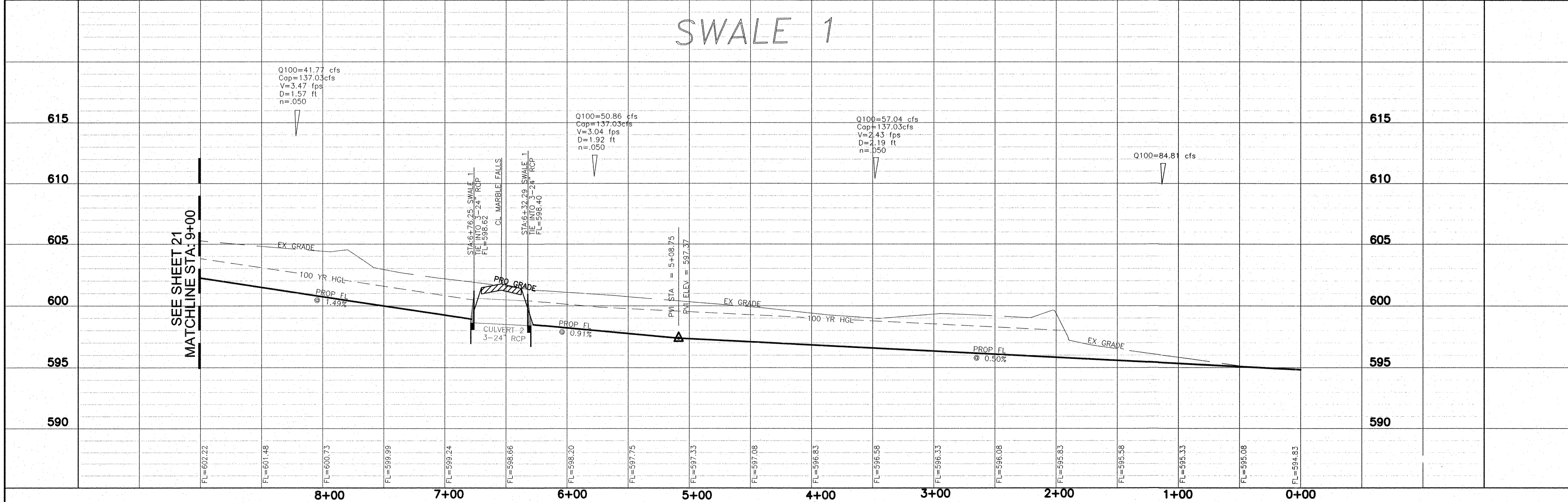
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DRAWN: CCM
DATE: 7/20/2012
SCALE: H:1"=40' V:1"=4'
NOTES:
FILE:

Sheet 19 of 32

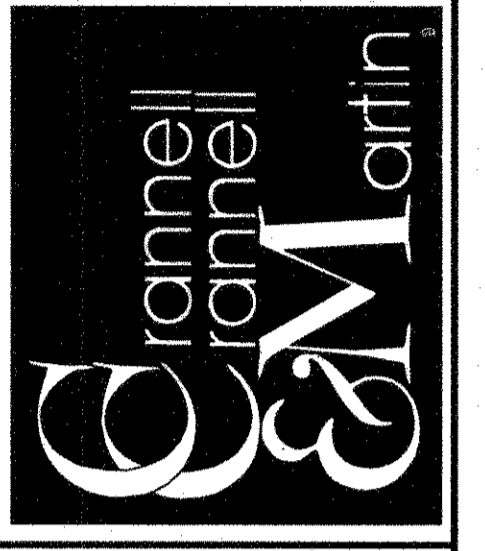


As-Built
[Signature] 12.12.12
 Date

BENCHMARKS:
 1. FEMA BENCHMARK #RM 136, RR SPIKE IN POWER POLE ON WEST SIDE OF FM 2551, ± 2,800' SOUTH OF CR 262 (INGRAM ROAD)
 ELEV.=637.32'
 2. TOP OF 1/2" IR WEST SIDE OF CR 262 (INGRAM RD) ±1025' NORTH OF NORTH EDGE OF PAVEMENT CR 263 (W.LUCAS ROAD), ±7' EAST OF BARBED WIRE FENCE
 ELEV.=637.08'



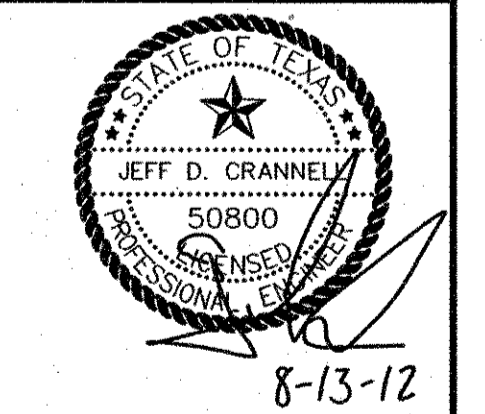
Engineering Corporation
 2570 FM 407, Suite 209
 Highland Village, Texas 75077
 Ph: 972. 691.6633
 Fax: 972.691.6628
 TBPE FIRM #605



OWNER:
 HJ ROCKLAND, LLC
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DEVELOPER:
 SPRING HAVEN INVESTMENTS, INC.
 6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX (972) 386-6190

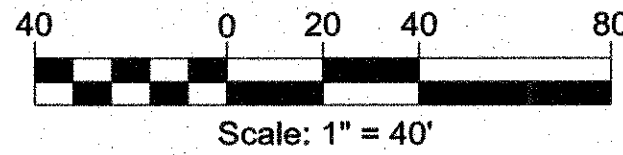
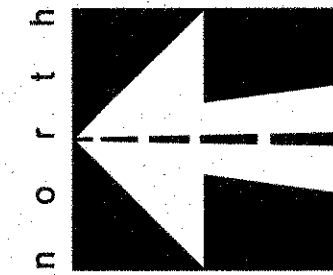
SWALE 1 PLAN & PROFILE
0+00 TO 9+00
ROCKLAND FARMS, PH II
 City of Lucas, Texas



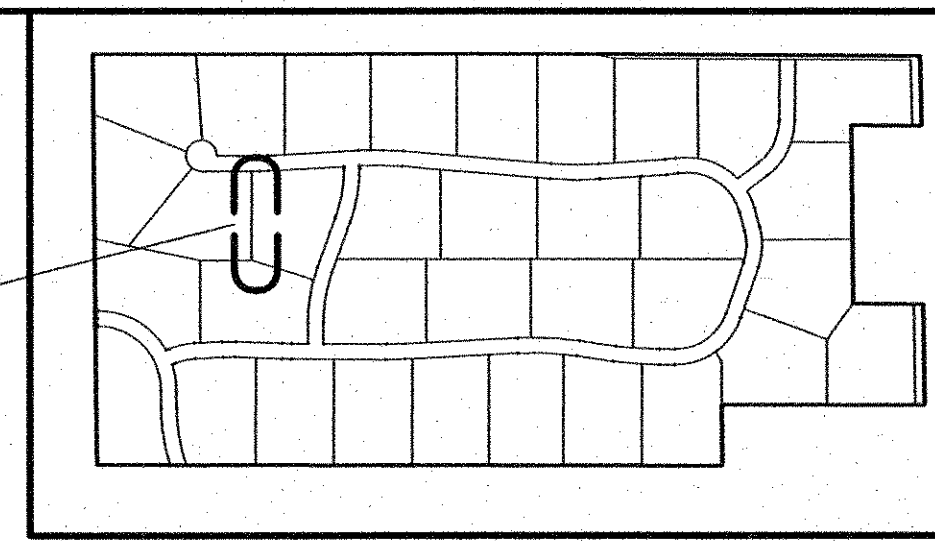
REVISIONS	

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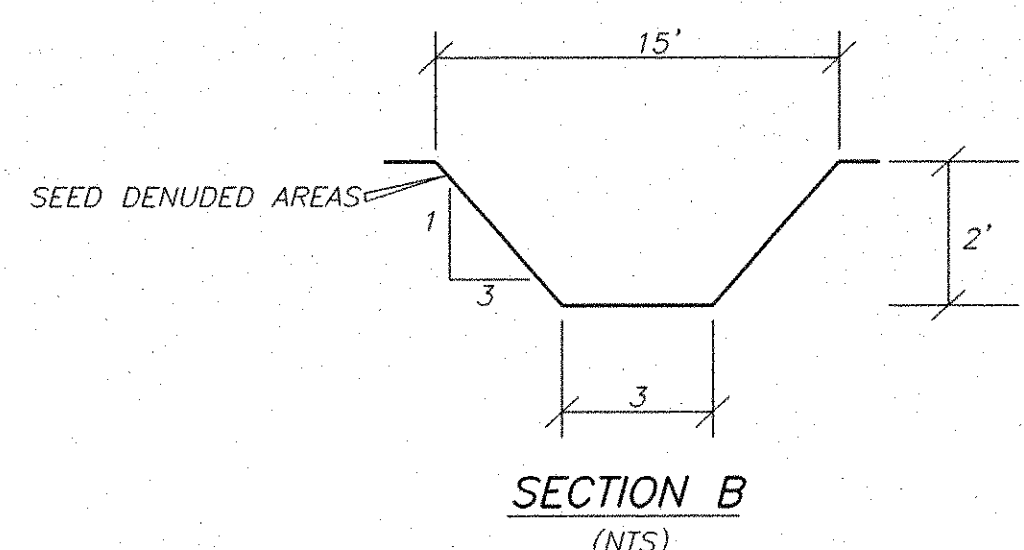
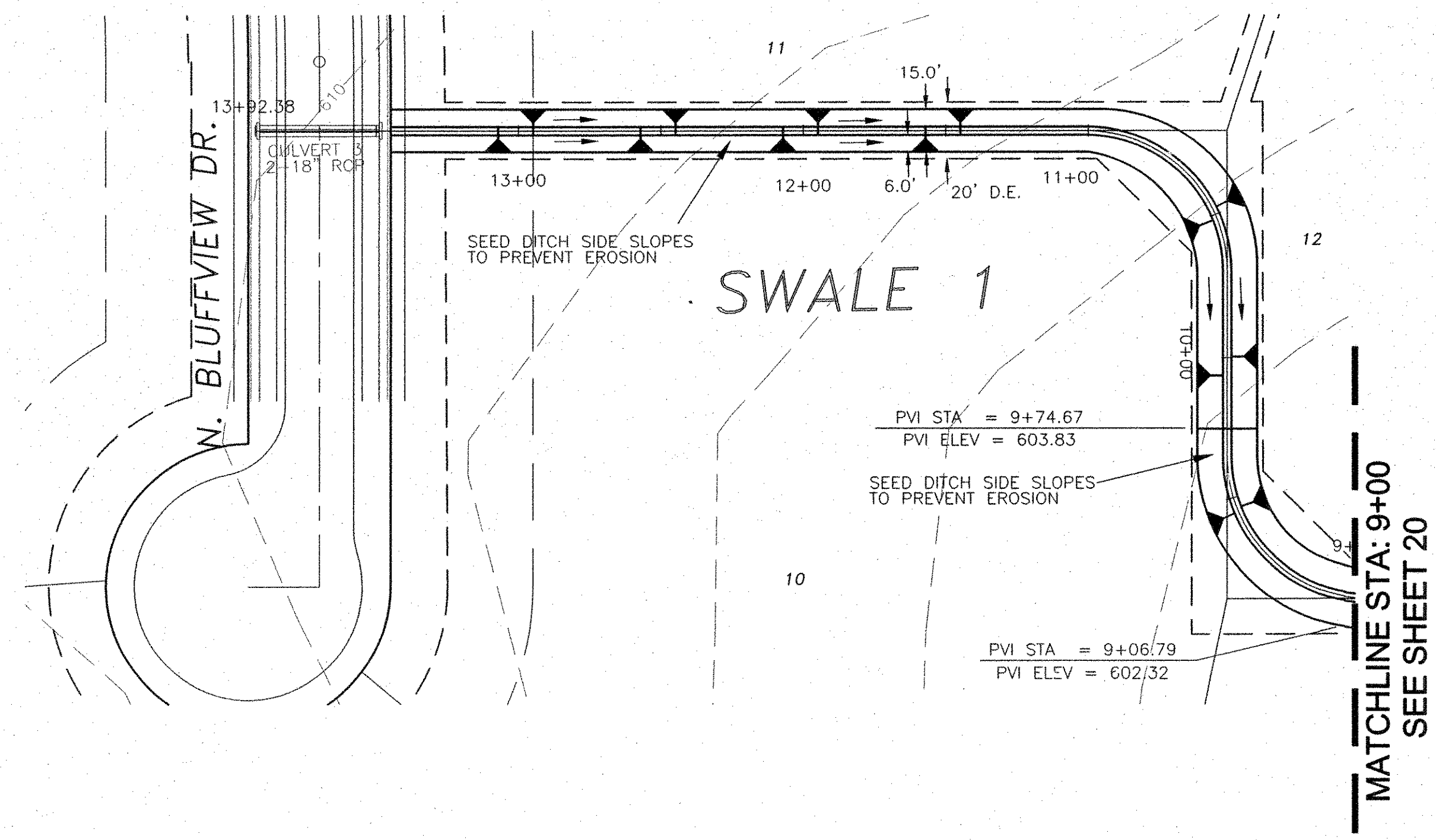
Sheet 20 of 32



SWALE 1



KEY MAP

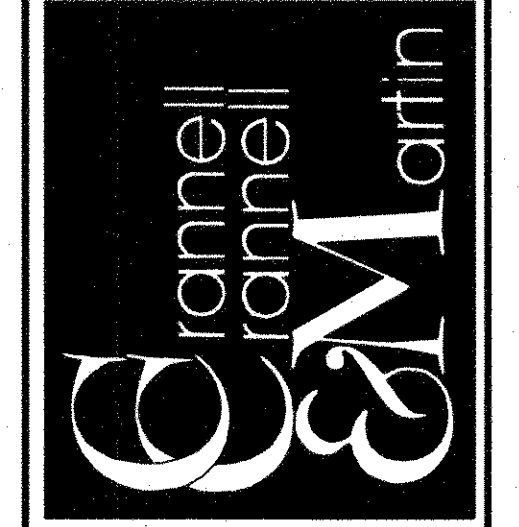


SECTION B
(NTS)

As-Built
[Signature] 12.29.12
Date

BENCHMARKS:
1. FEMA BENCHMARK #R 136, RR SPIKE IN POWER POLE ON WEST SIDE OF FM 2551, ± 2,800' SOUTH OF CR 262 (INGRAM ROAD) ELEV.=637.32'
2. TOP OF 1/2" IR WEST SIDE OF CR 262 (INGRAM RD) ±1025' NORTH OF NORTH EDGE OF PAVEMENT CR 263 (W.LUCAS ROAD), ±7' EAST OF BARBED WIRE FENCE ELEV.=637.08'

Engineering Corporation
2570 FM 407, Suite 209
Highland Village, Texas 75077
Ph: 972.691.6633
Fax: 972.691.6628
TBPE FIRM #605



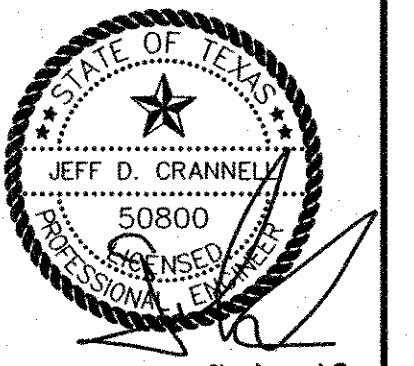
OWNER:
HJ ROCKLAND, LLC
6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

SWALE 1 PLAN & PROFILE
9+00 TO 13+92.38

ROCKLAND FARMS, P H II
City of Lucas, Texas

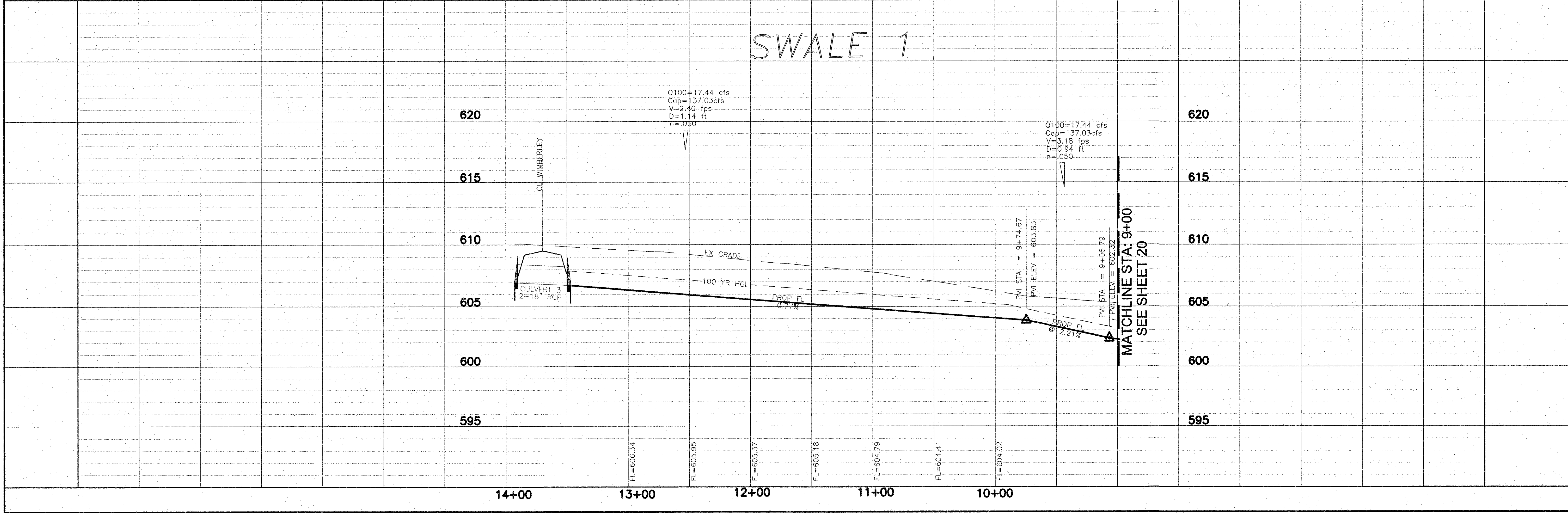
ROCKLAND FARMS P H II

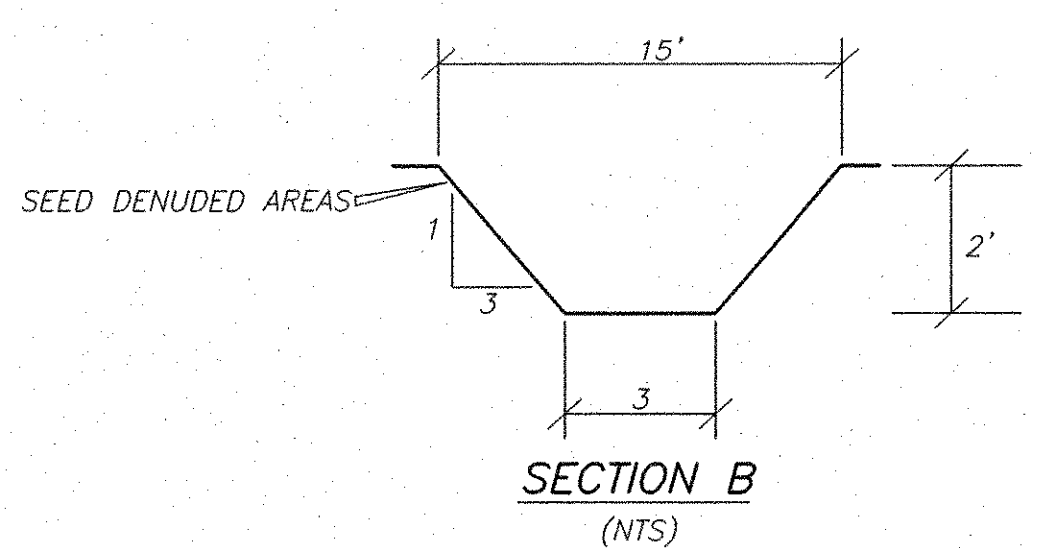
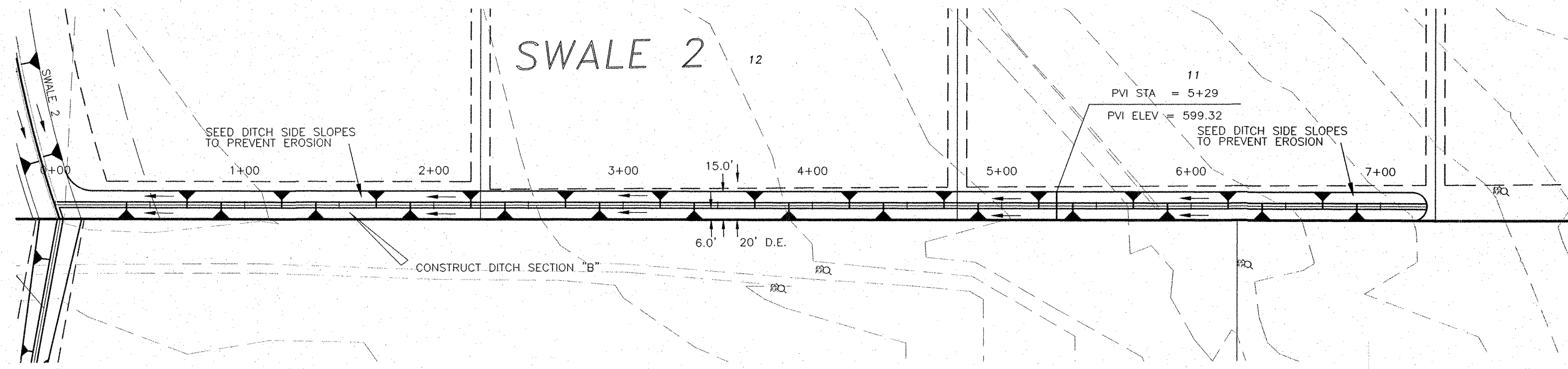
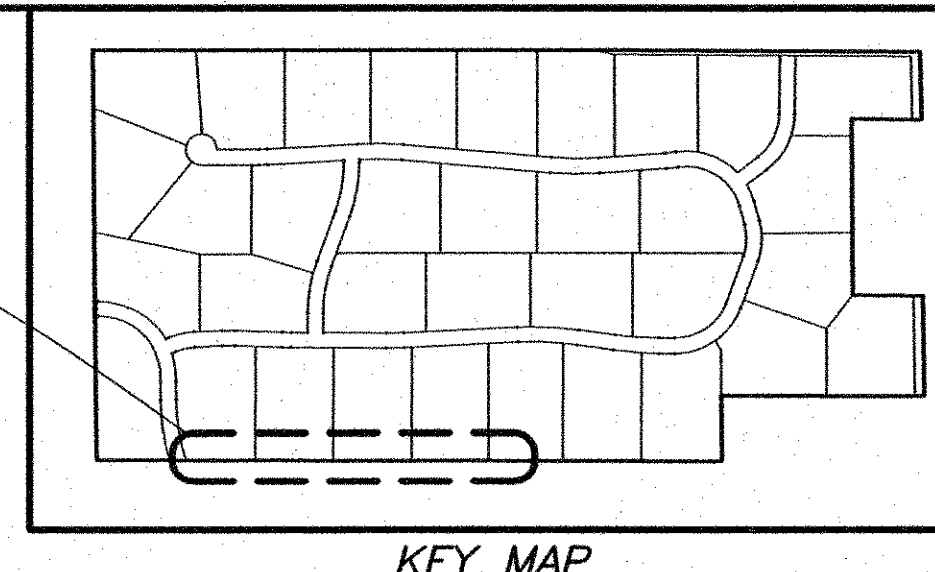
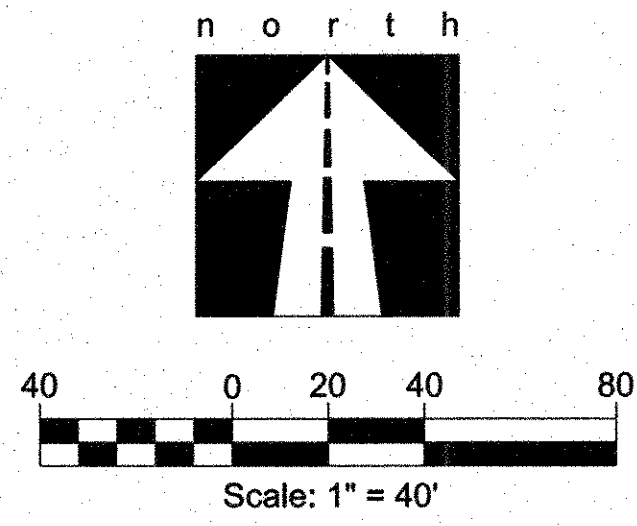


REVISIONS

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DRAWN: CCM
DATE: 7/20/2012
SCALE: H:1"=40' V:1"=5'
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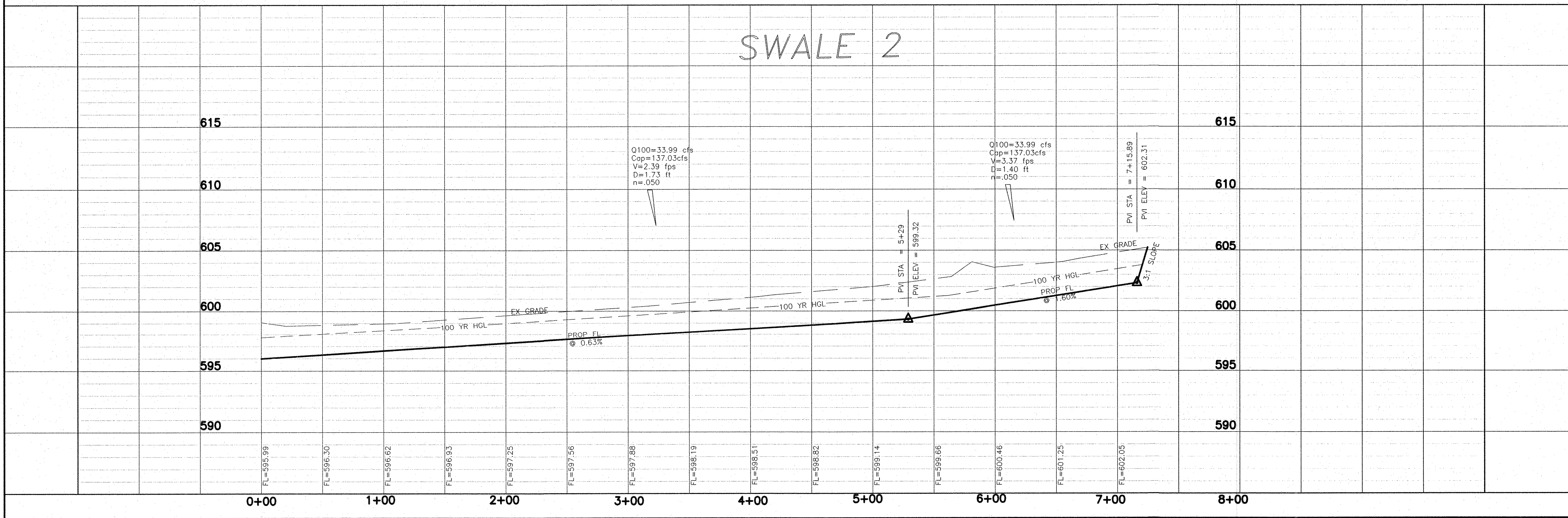
Sheet 21 of 32



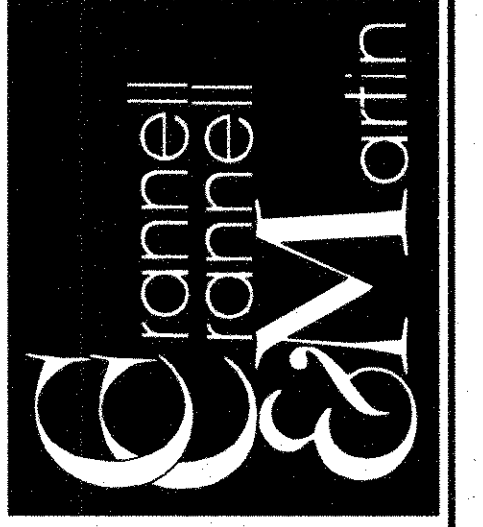


As-Built
[Signature] 12/9/12
 Date

BENCHMARKS:
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Engineering Corporation
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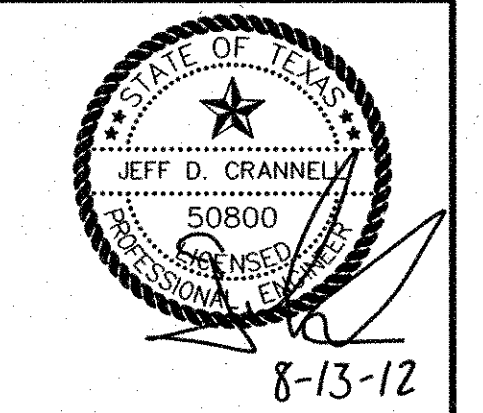
OWNER:
 HJ ROCKLAND, LLC
 6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX (972) 386-6190

DEVELOPER:
 SPRING HAVEN INVESTMENTS, INC.
 6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX (972) 386-6190

SWALE 2 PLAN & PROFILE
 0+00 TO 7+24.67

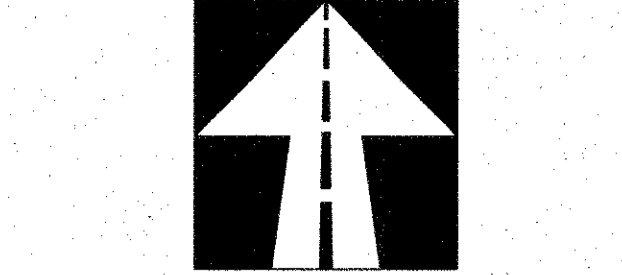
ROCKLAND FARMS, P H II
 City of Lucas, Texas

ROCKLAND FARMS P H II

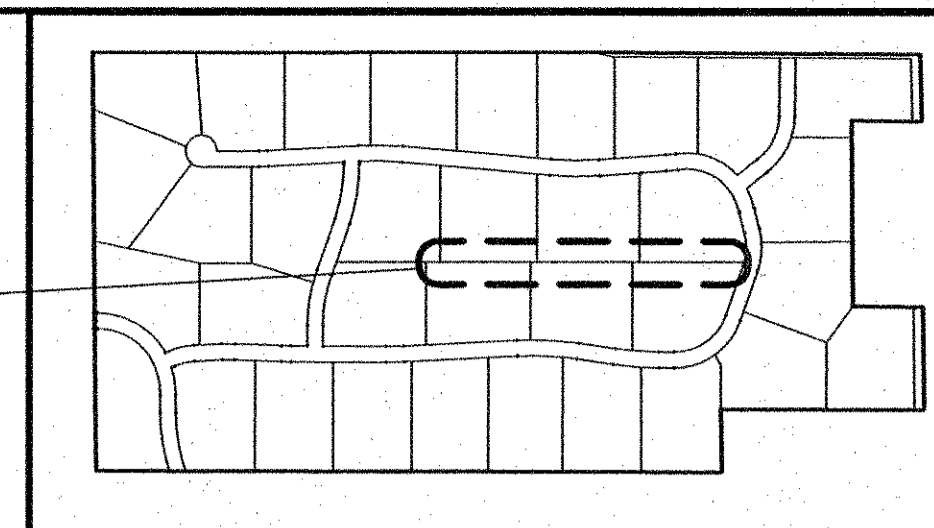


REVISIONS	
△	
△	
DESIGN: CCM	
DRAWN: CCM	
DATE: 7/20/2012	
SCALE: H:1"=40' V:1"=5'	
NOTES:	
FILE:	
Sheet 22 of 32	

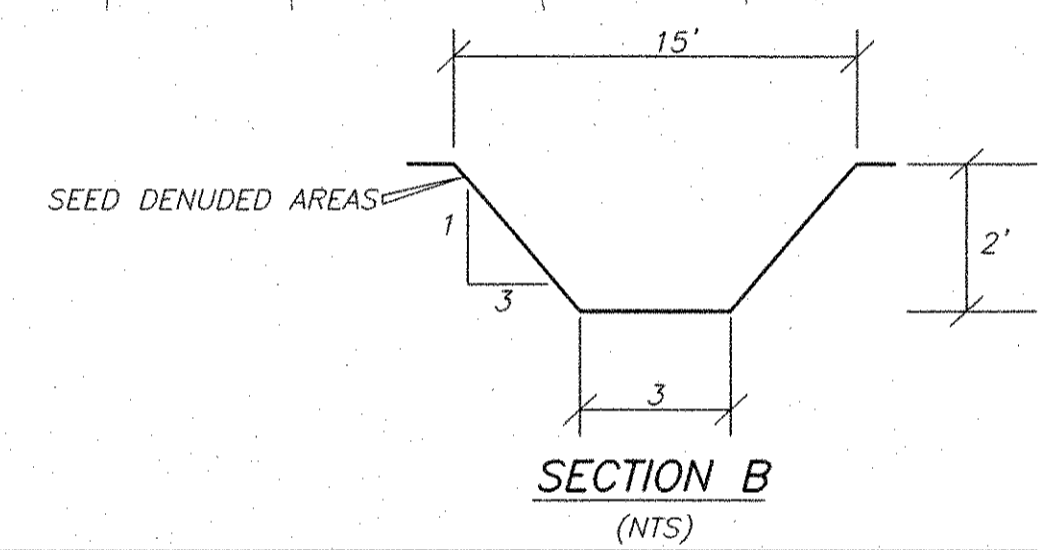
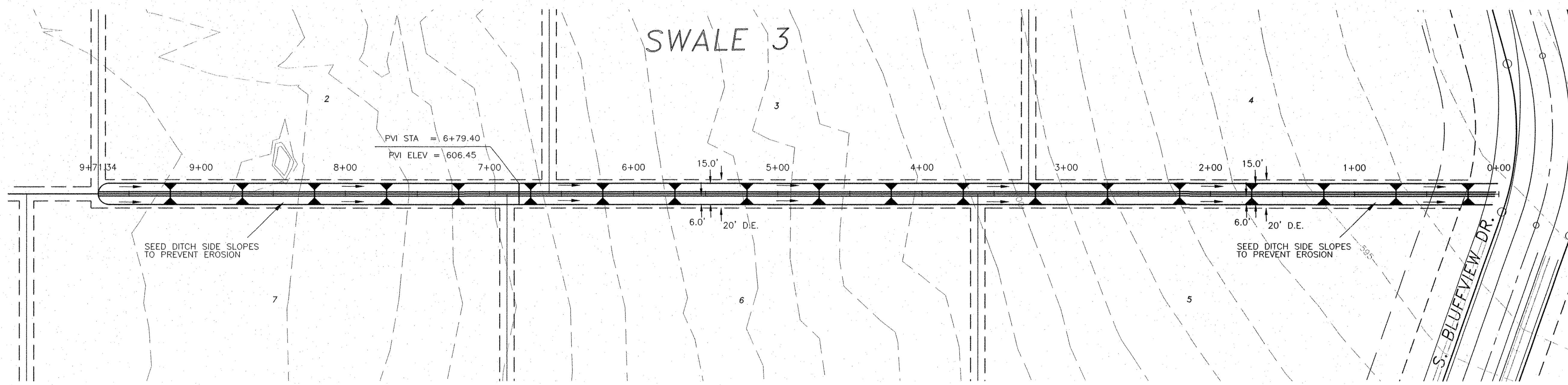
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40 0 20 40 80
Scale: 1" = 40'

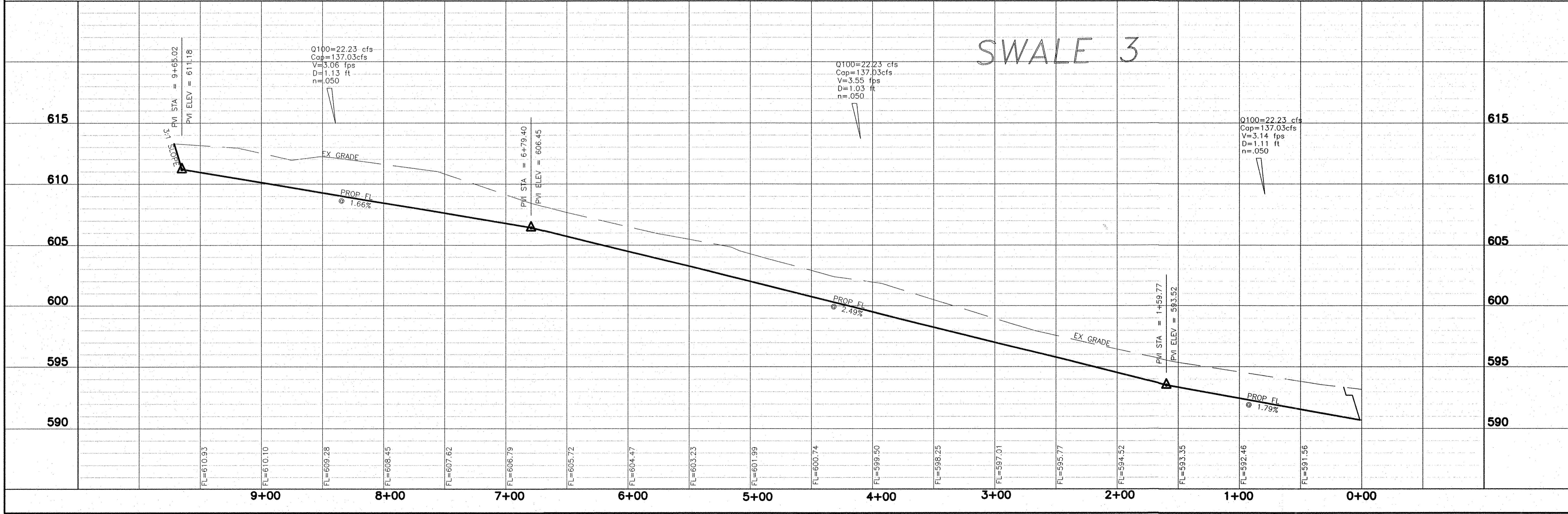


KEY MAP

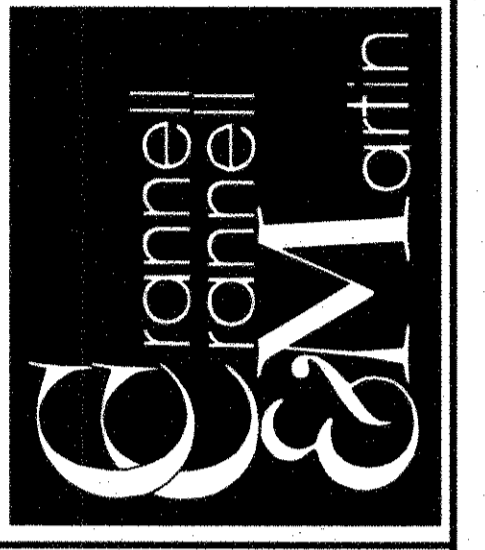


BENCHMARKS:
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As-Built
[Signature] 12-29-12
Date



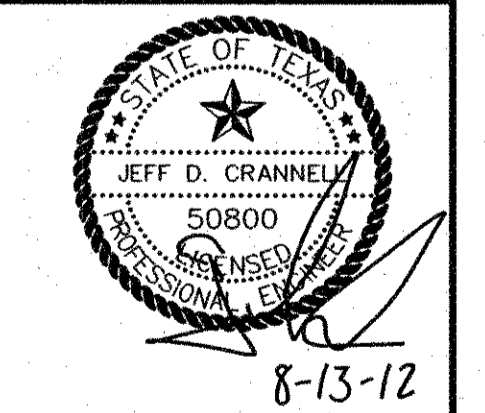
Engineering Corporation
2570 FM 407, Suite 209
Highland Village, Texas 75077
Ph: 972.691.6633
Fax: 972.691.6628
TBPE FIRM #605



OWNER:
HJ ROCKLAND, LLC
6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

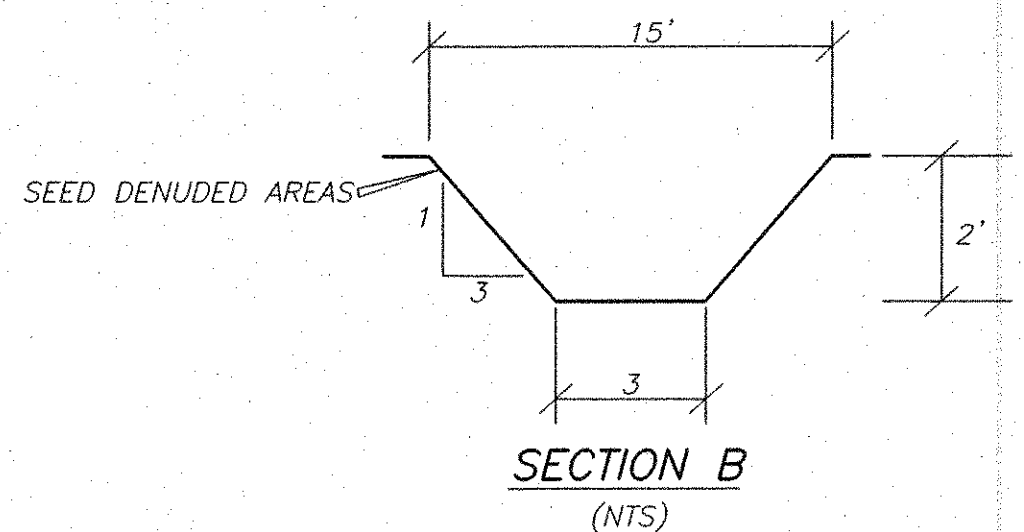
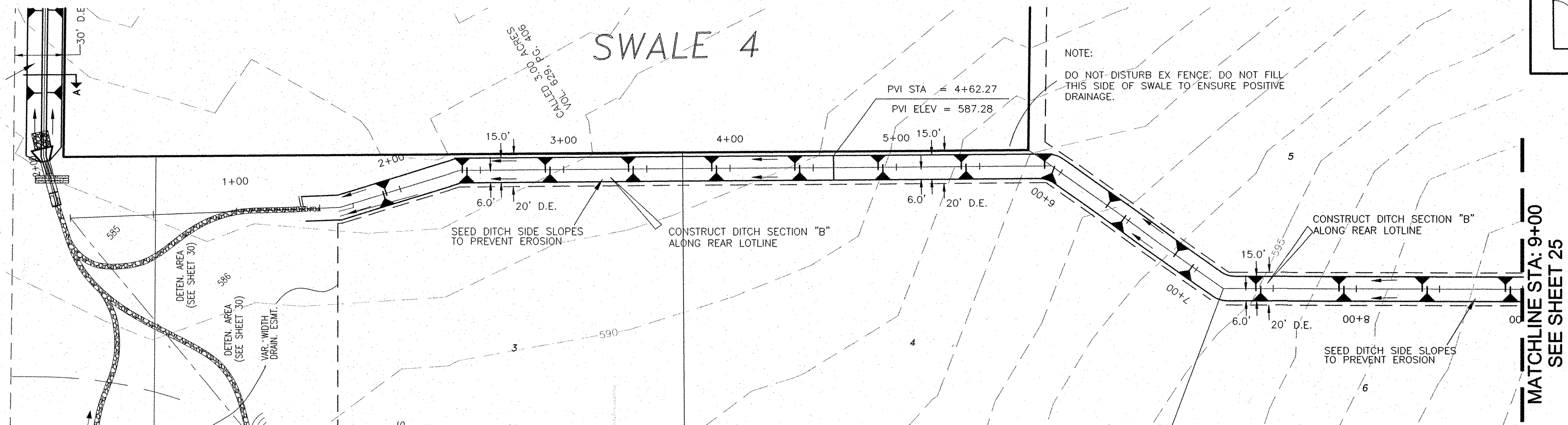
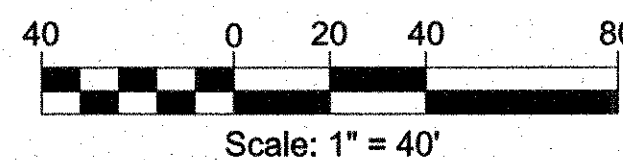
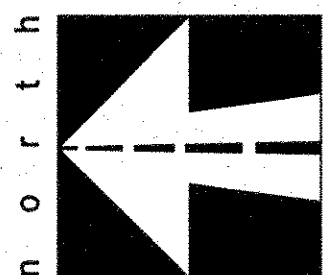
DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

SWALE 3 PLAN & PROFILE
0+00 TO 9+71.34
ROCKLAND FARMS, PH II
City of Lucas, Texas



REVISIONS

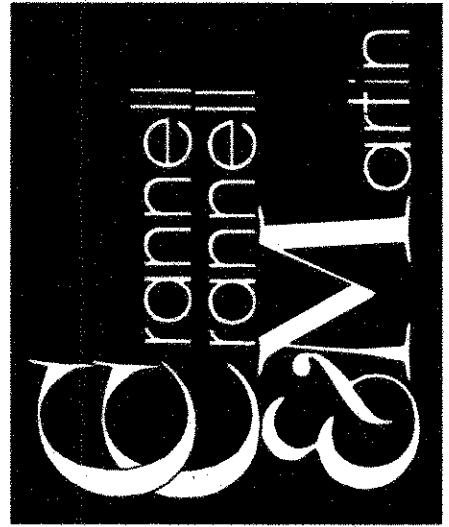
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DATE: 7/20/2012
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NOTES:
FILE:
Sheet 23 of 32



As-Built
[Signature] 8/13/12
Date

- BENCHMARKS:**
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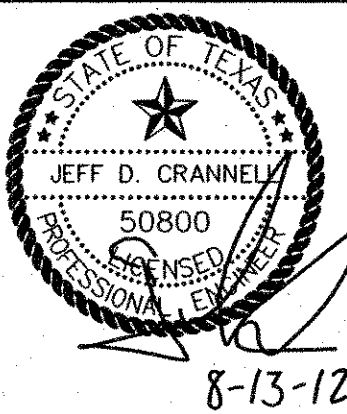
Engineering Corporation
2570 FM 407, Suite 209
Highland Village, Texas 75077
Ph: 972.691.6633
Fax: 972.691.6628
TBPE FIRM #605



OWNER:
HJ ROCKLAND, LLC
6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

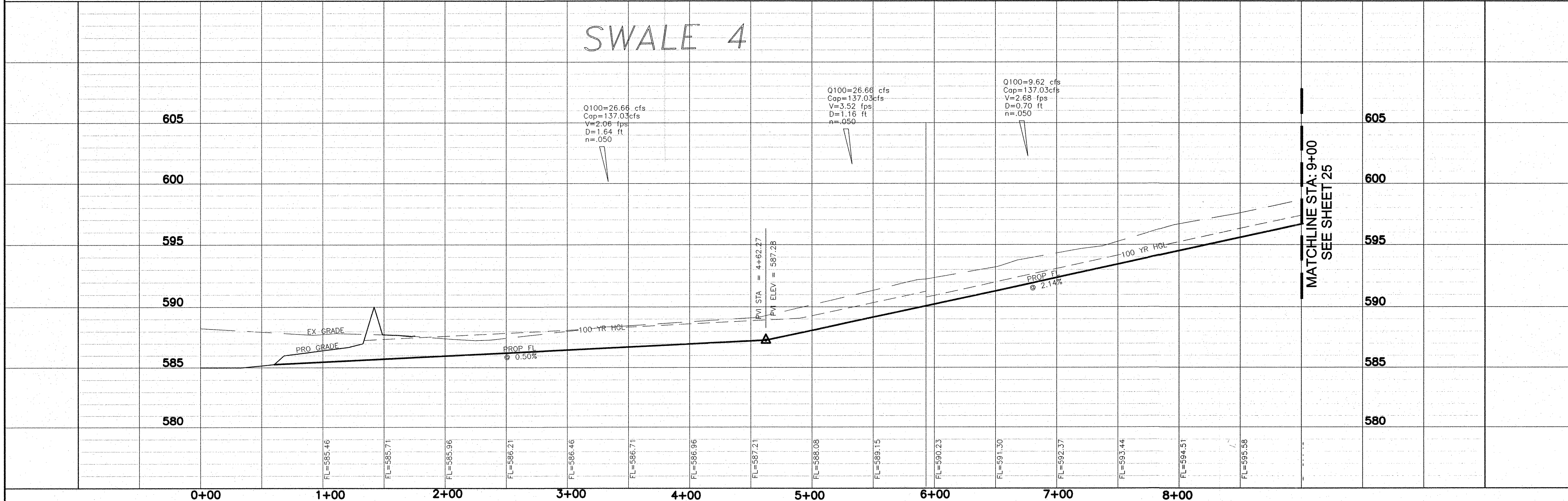
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ROCKLAND FARMS, PH II
City of Lucas, Texas

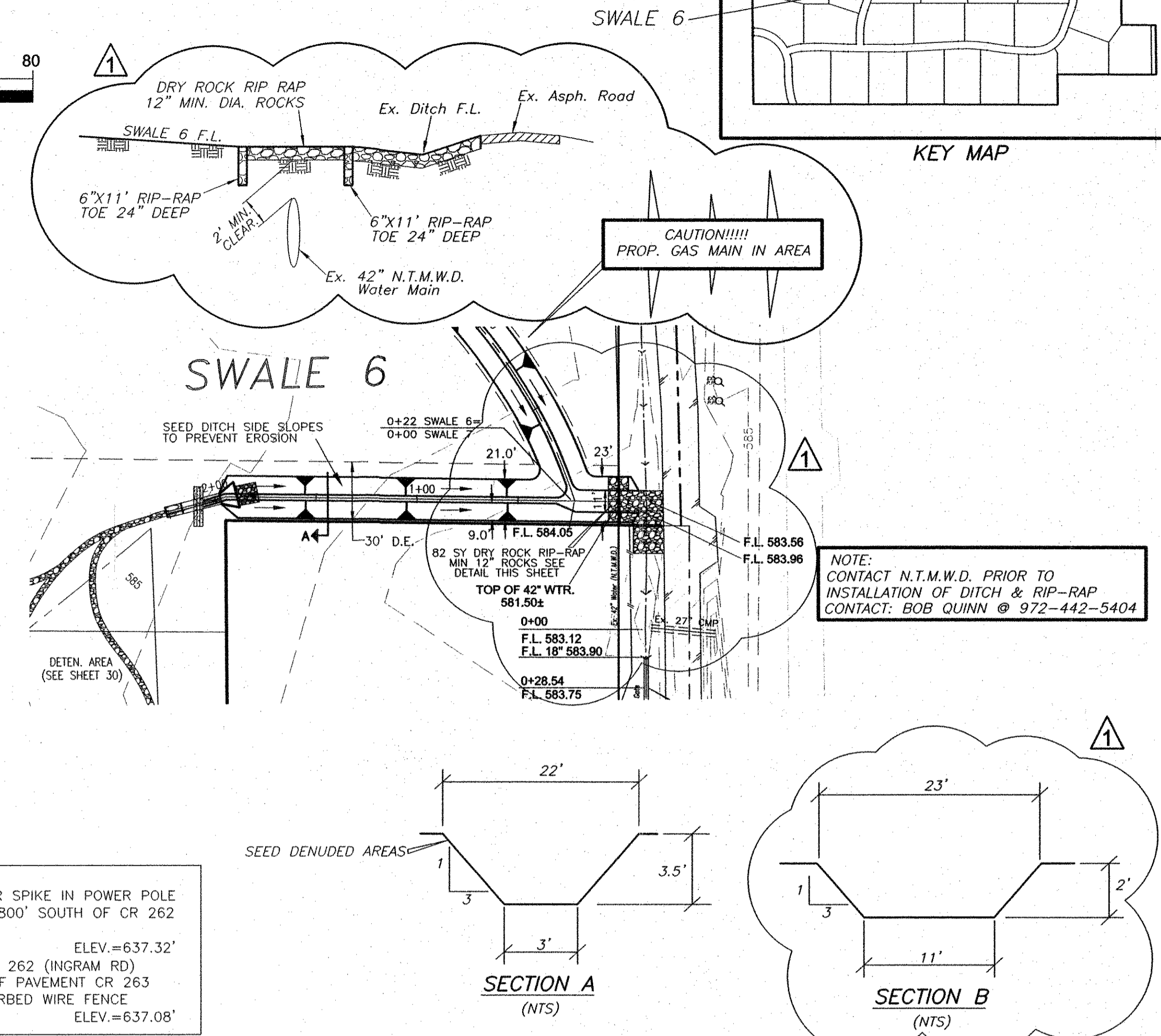
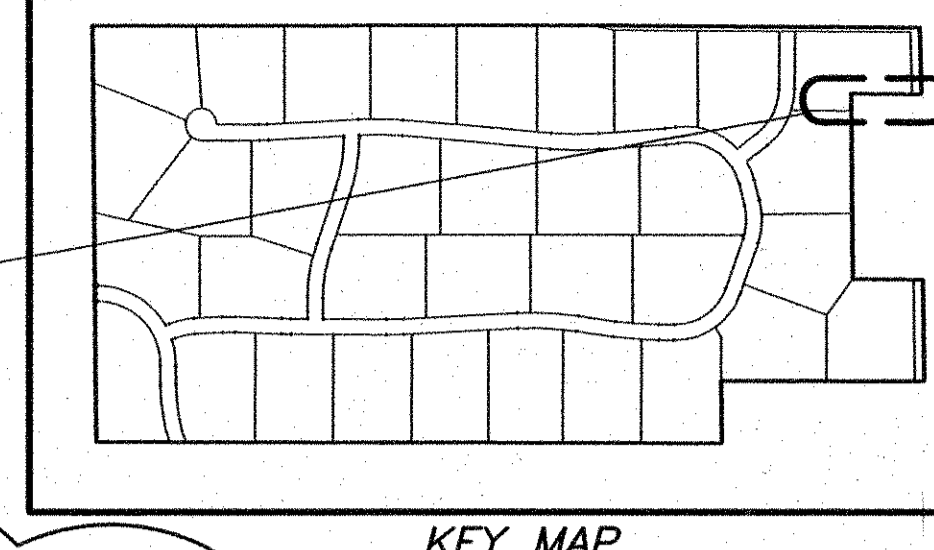
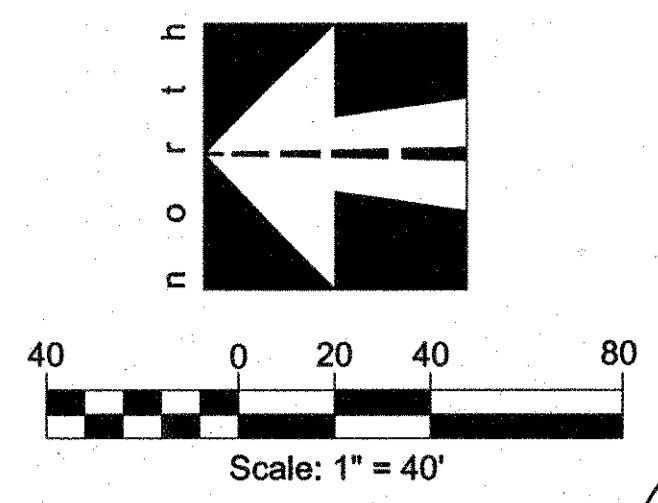
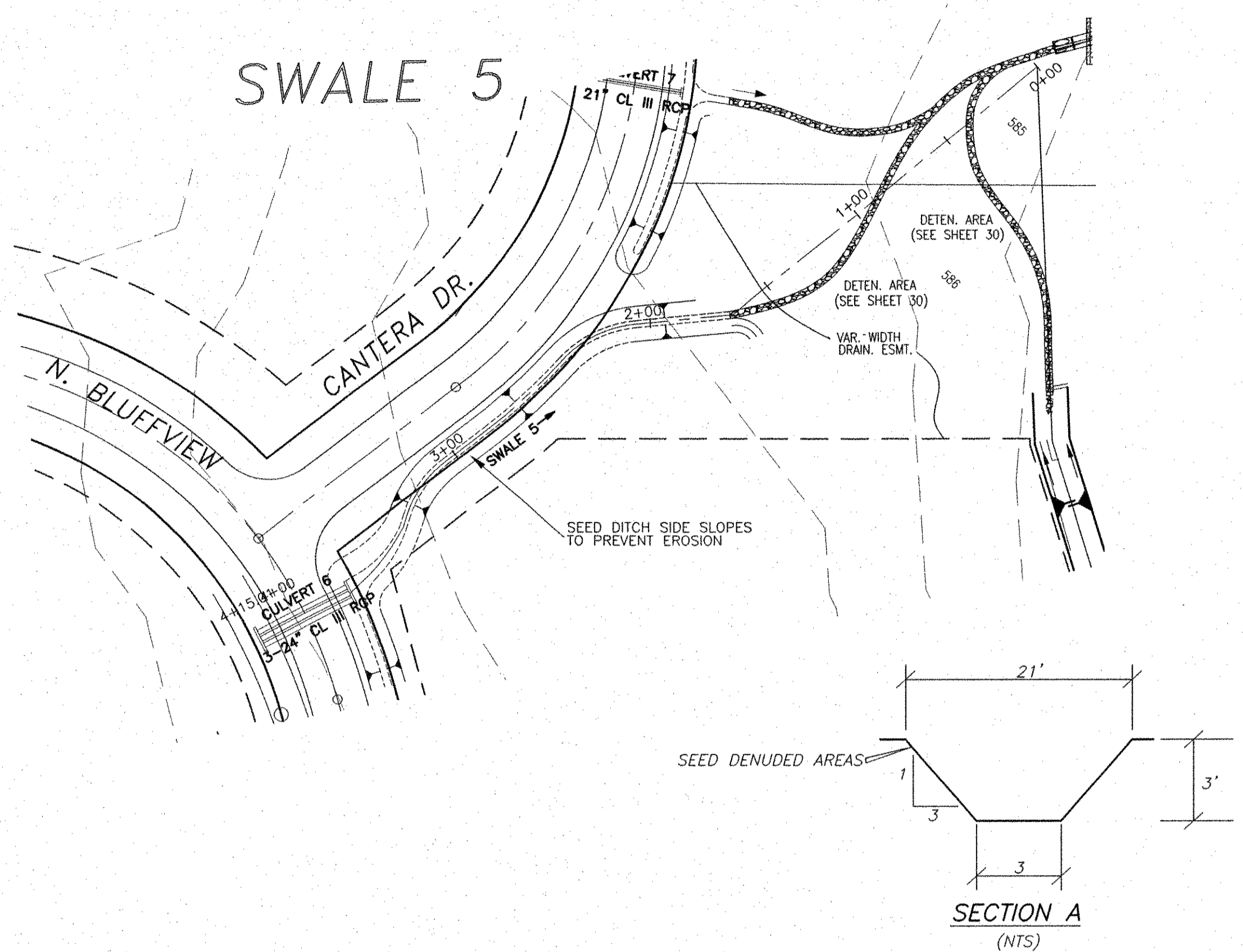
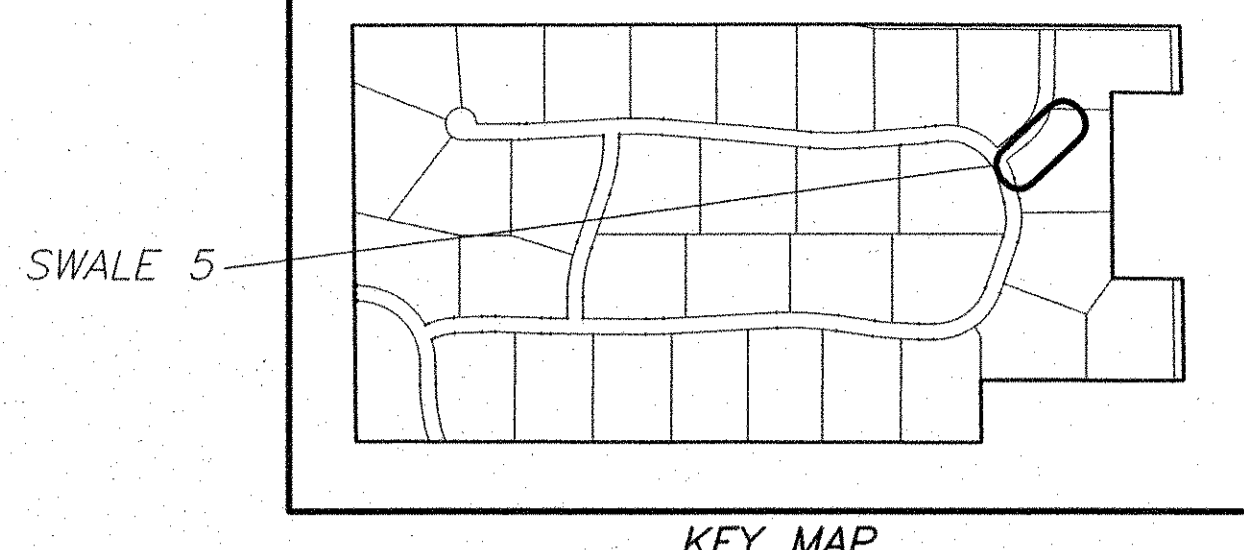
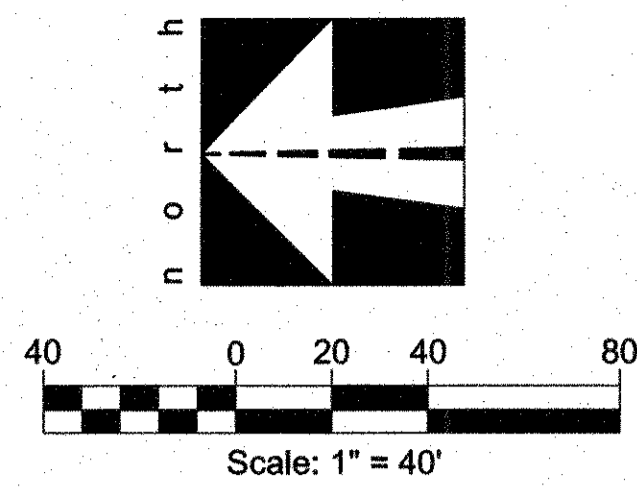


REVISIONS

No.	Description

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DRAWN: CCM
DATE: 7/20/2012
SCALE: H:1"=40' V:1"=5'
NOTES:
FILE:



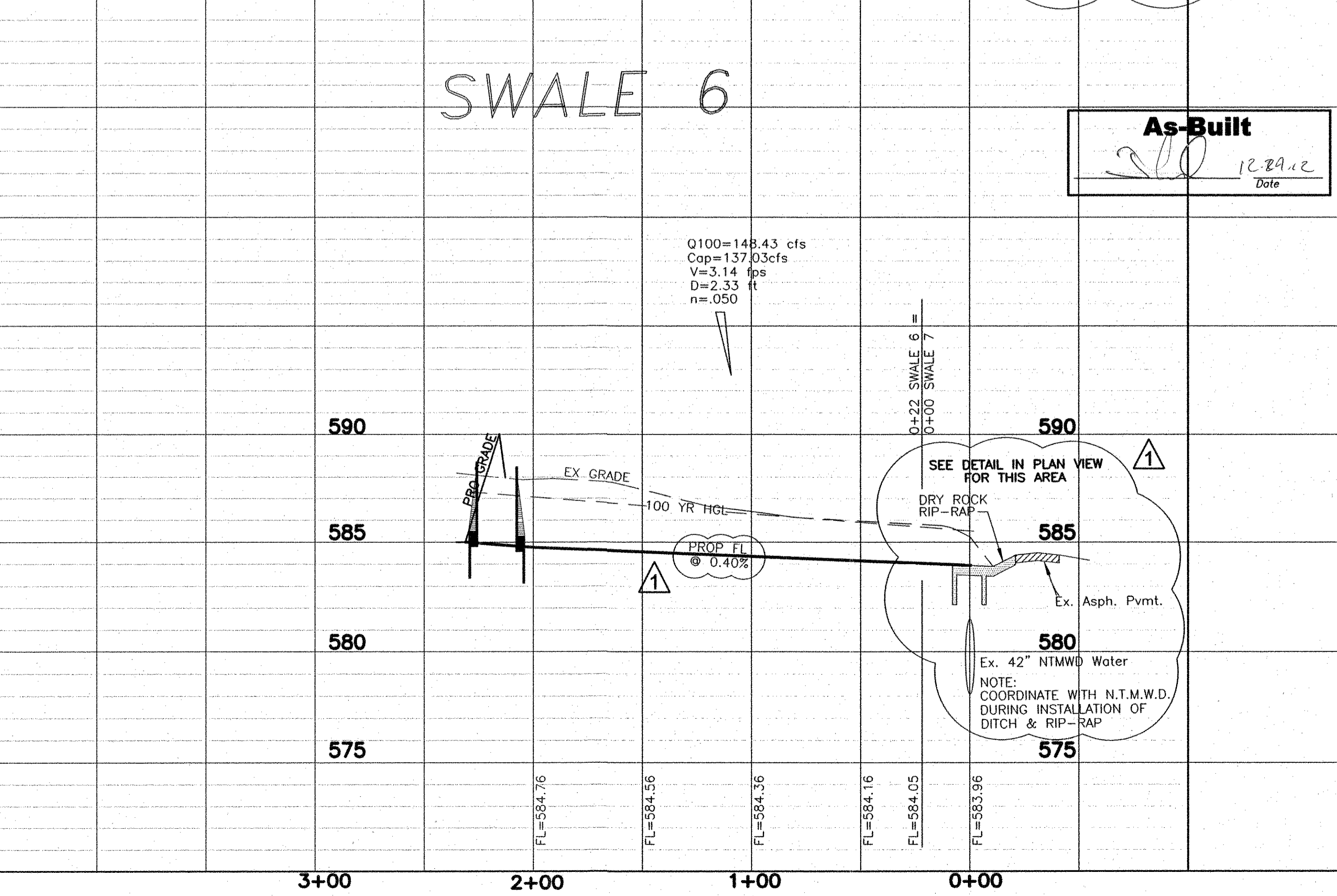
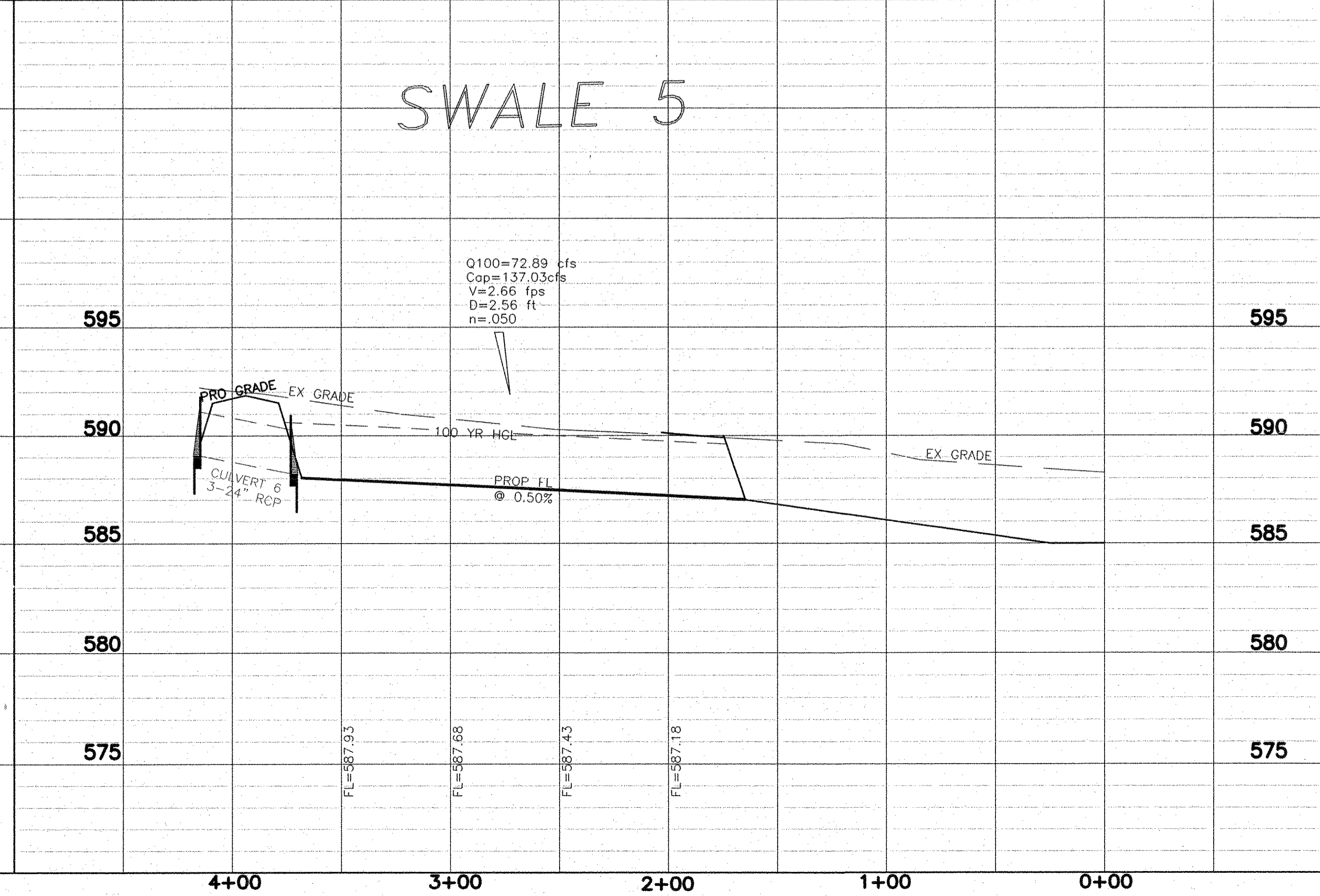


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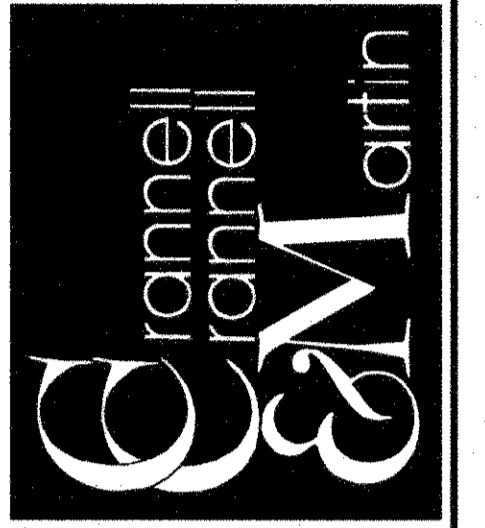
SWALE 5

SWALE 6

As-Built
 [Signature] 12/29/12
 Date



Engineering Corporation
 2570 FM 407, Suite 209
 Highland Village, Texas 75077
 Ph: 972.691.6633
 Fax: 972.691.6628
 TBPE FIRM #605

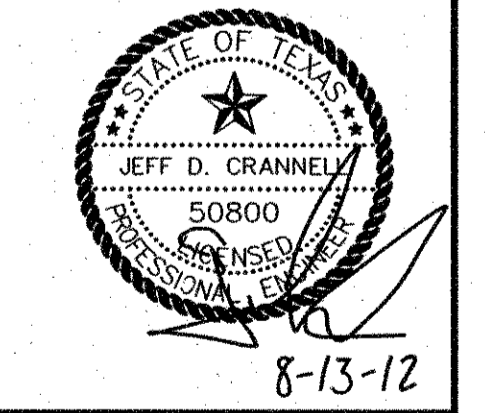


OWNER:
HJ ROCKLAND, LLC
 6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX (972) 386-6190

DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
 6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX (972) 386-6190

SWALE 5 & 6
PLAN & PROFILE

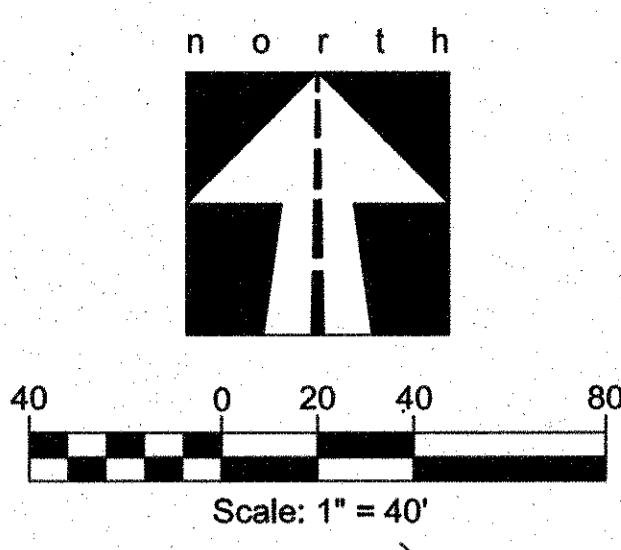
ROCKLAND FARMS, PH II
 City of Lucas, Texas



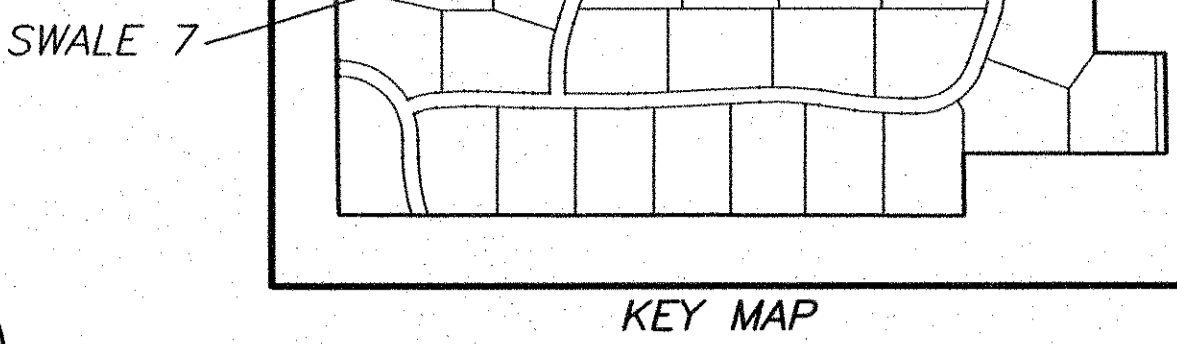
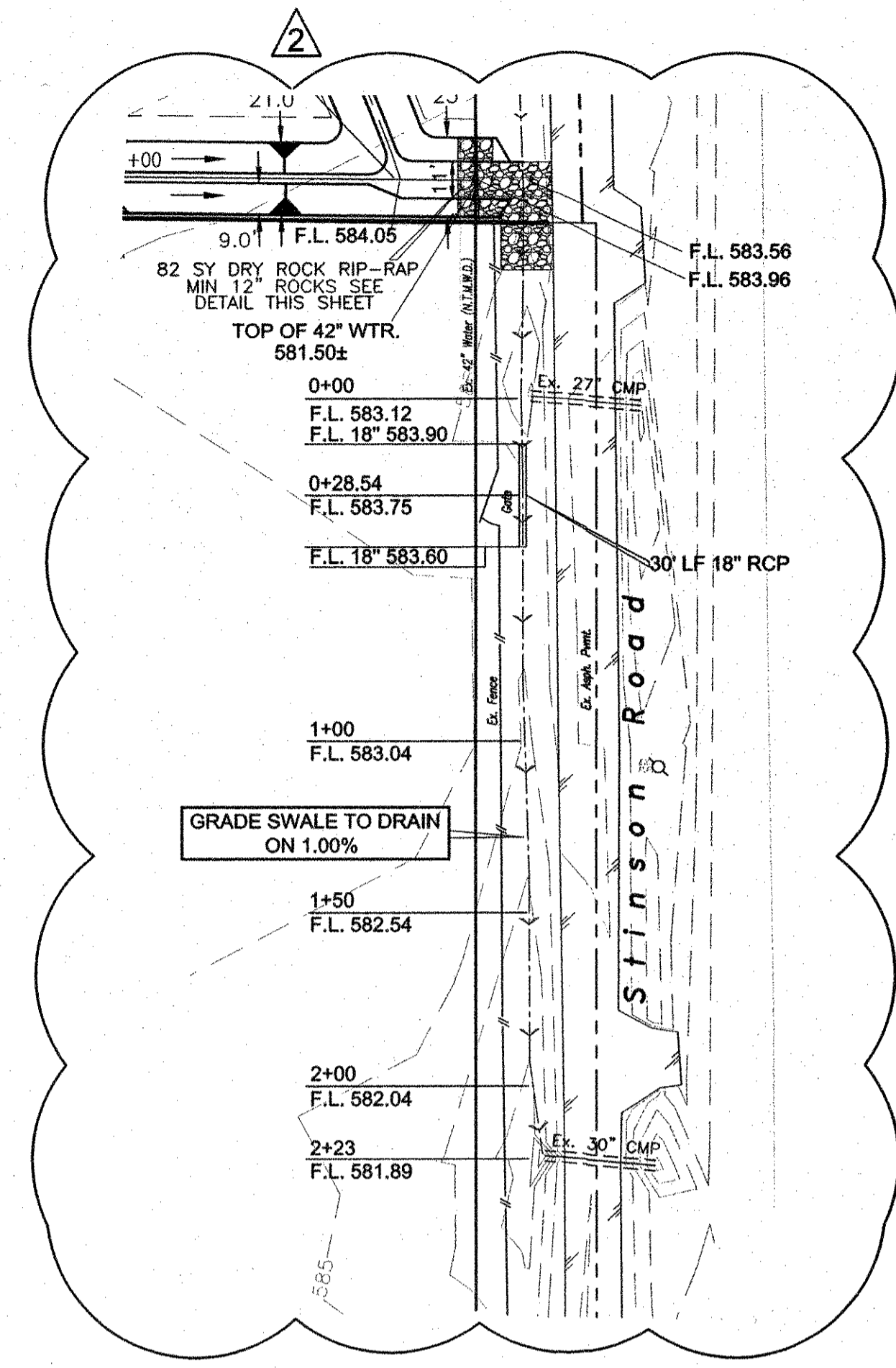
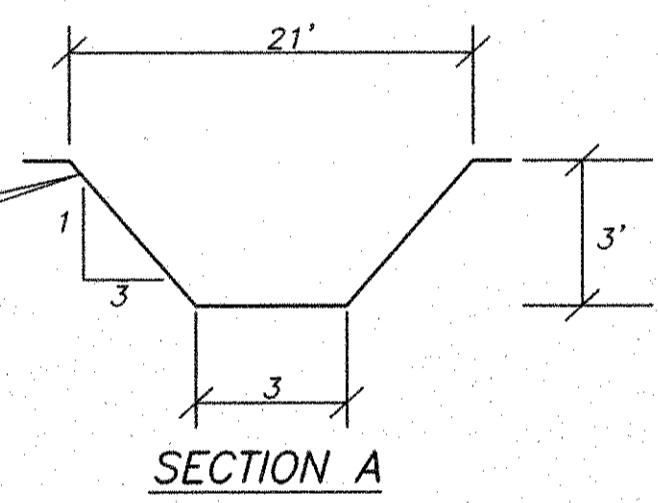
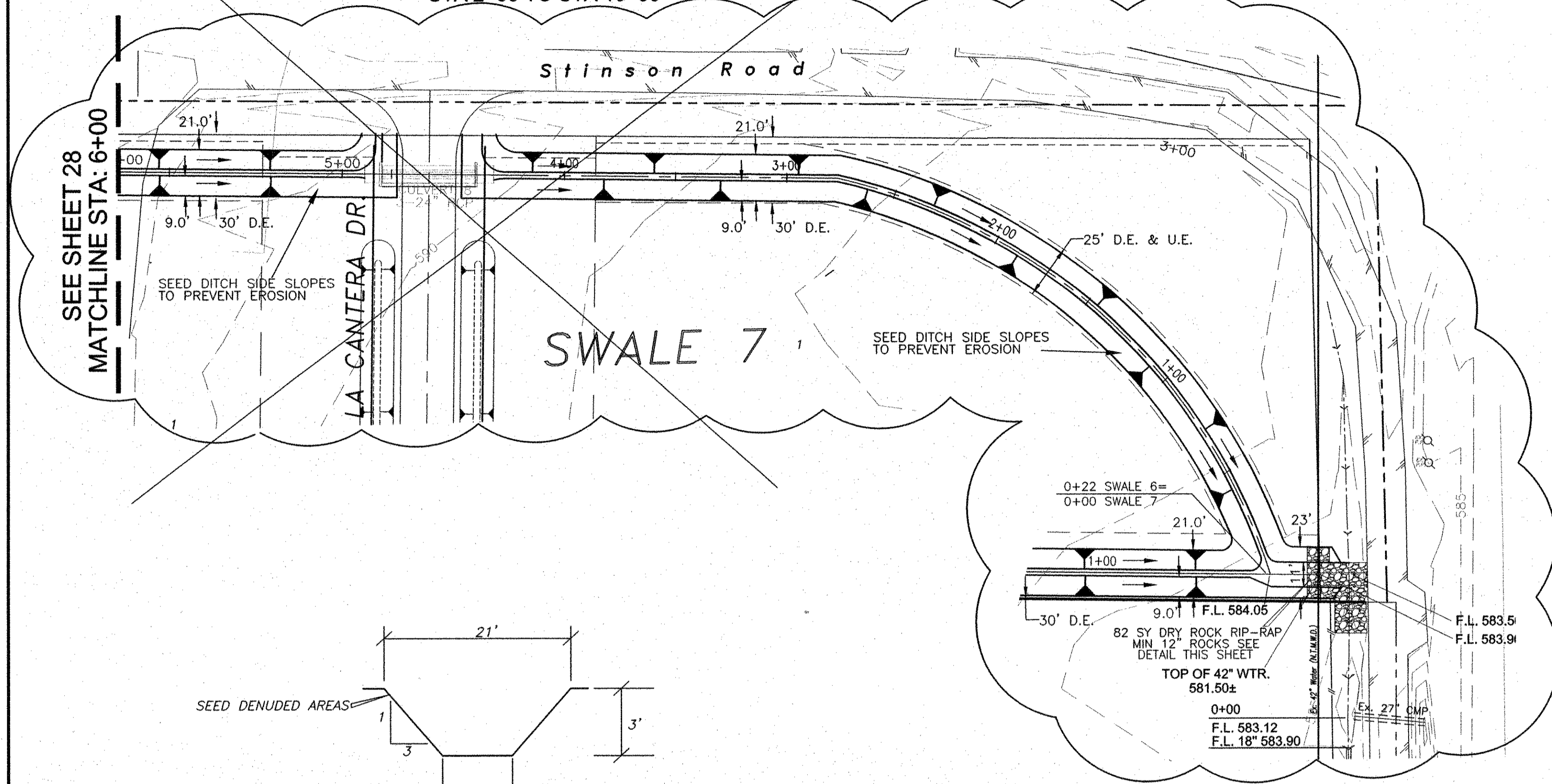
REVISIONS
7-20-12 REVISED DITCH 6 & 7

DESIGN: CCM
 DRAWN: CCM
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 SCALE: 11:1"=40' V.: 1"=5'
 NOTES:
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Sheet 26 of 32

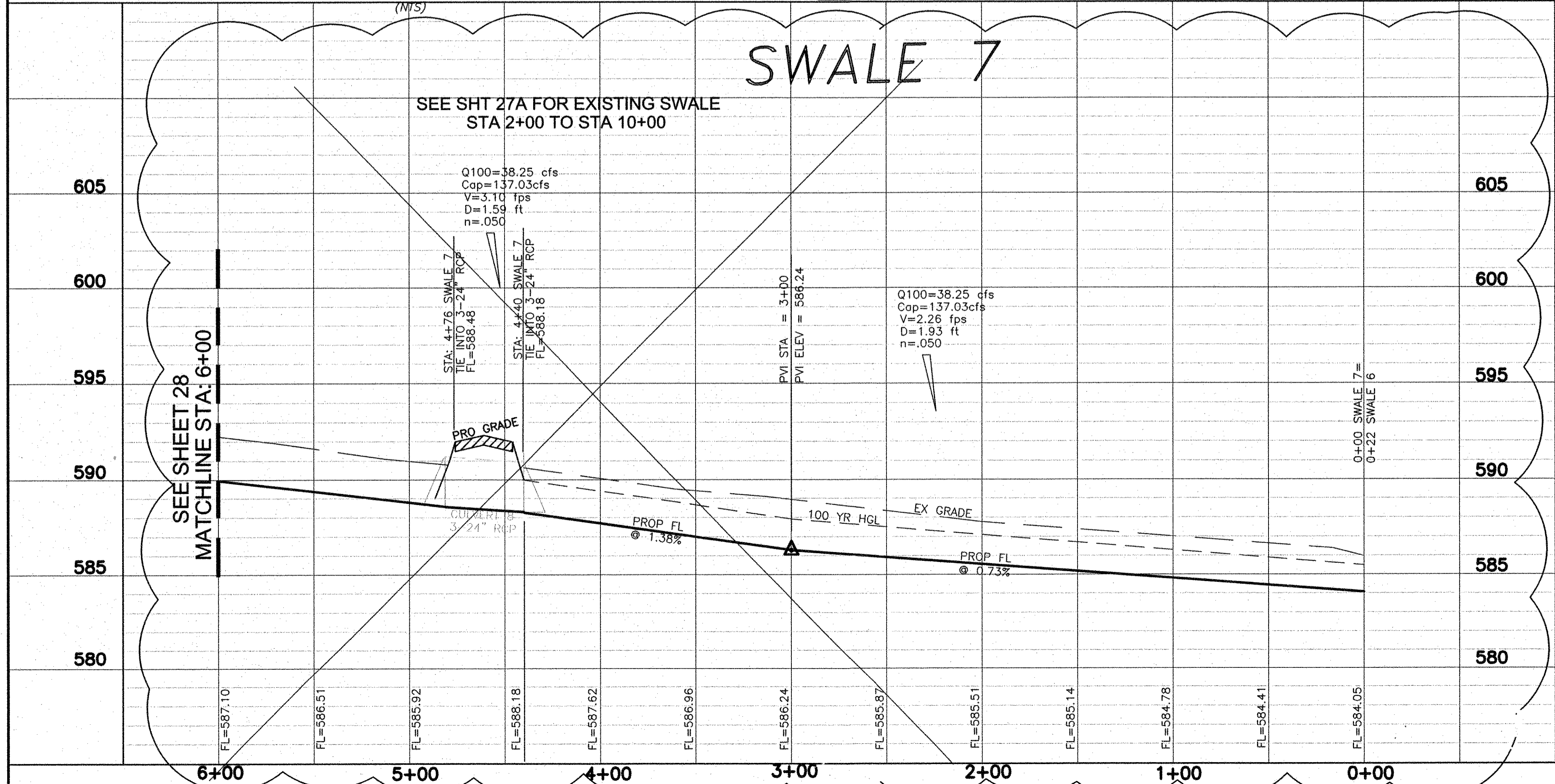


SEE SHT 27A FOR EXISTING SWALE STA 2+00 TO STA 10+00

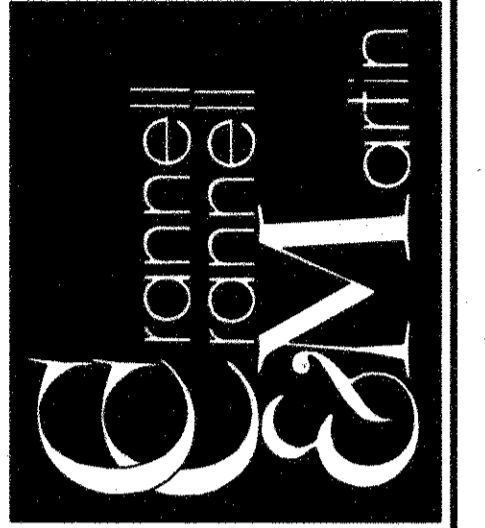


As-Built
[Signature] 8-29-12
 Date

BENCHMARKS:
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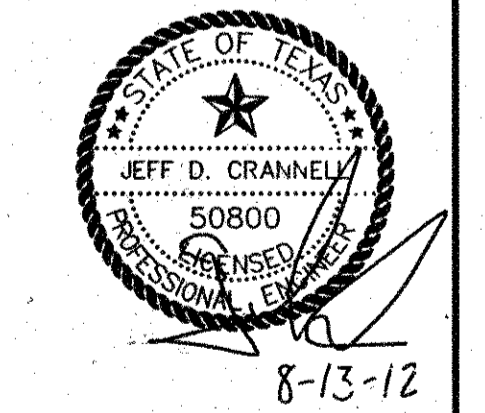
Engineering Corporation
 2570 FM 407, Suite 209
 Highland Village, Texas 75077
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 6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX (972) 386-6190

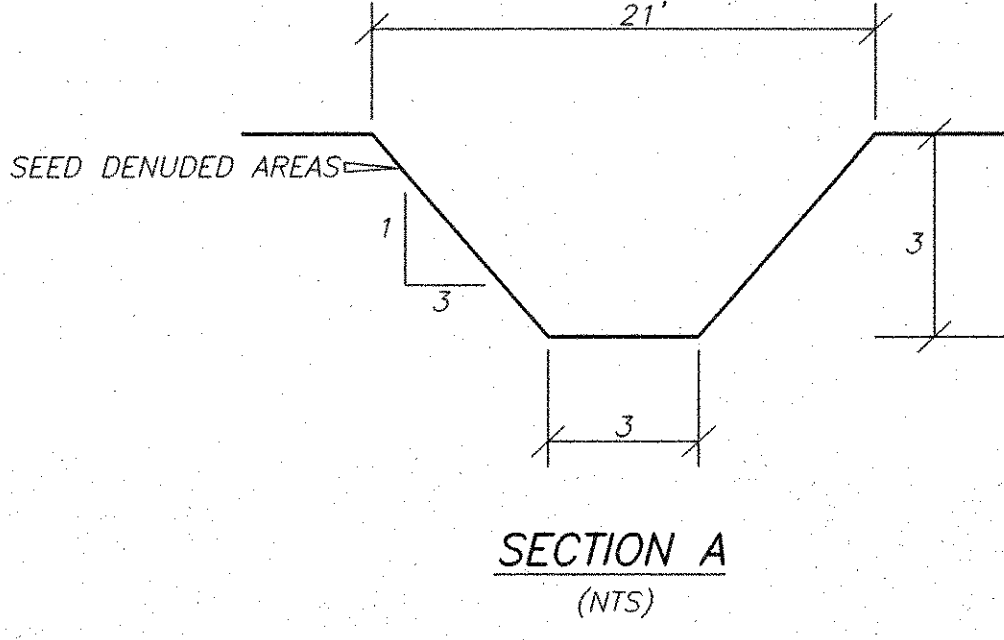
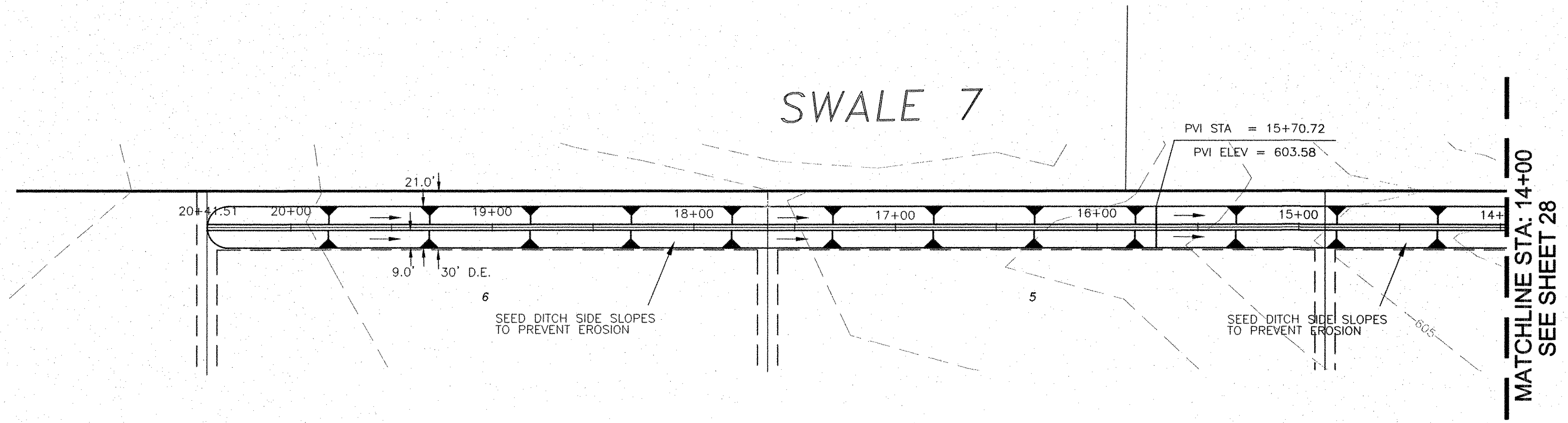
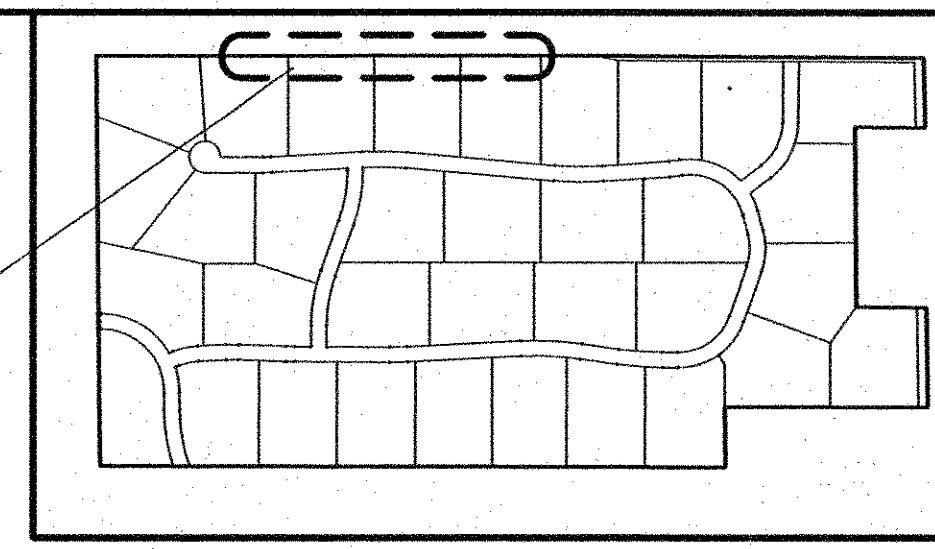
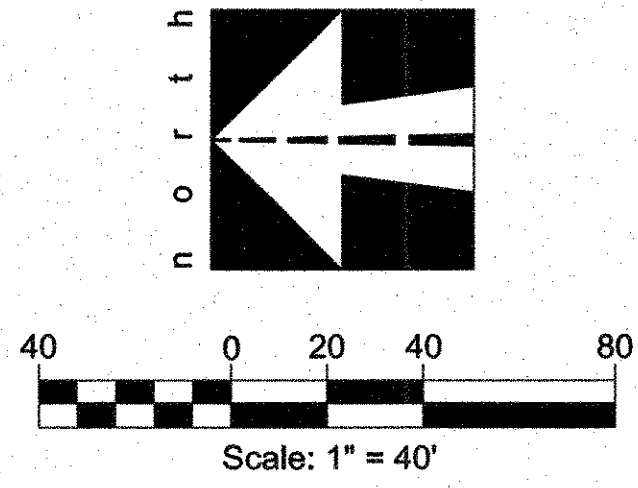
SWALE 7 PLAN & PROFILE 0+00 TO 6+00
ROCKLAND FARMS, PH II
 City of Lucas, Texas



REVISIONS

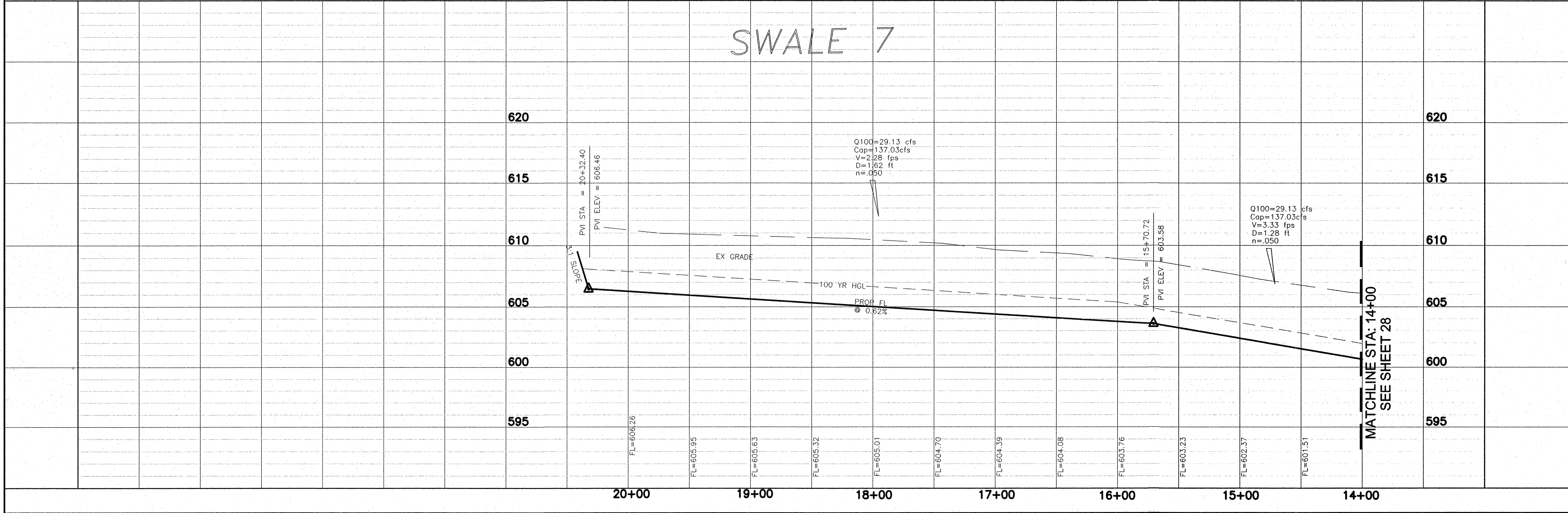
7-20-12	REVISED DITCH 7
8-8-12	EXTENDED DETAIL SOUTH

DESIGN: CCM
DRAWN: CCM
DATE: 7/20/2012
SCALE: H:1"=40' V:1"=5'
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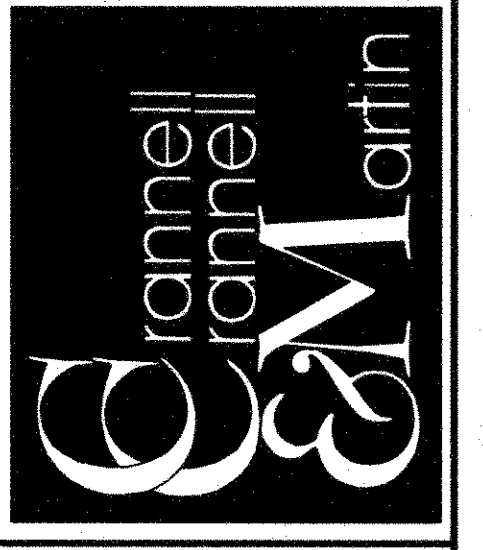


As-Built
[Signature] 8-13-12
 Date

BENCHMARKS:
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Engineering Corporation
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 Highland Village, Texas 75077
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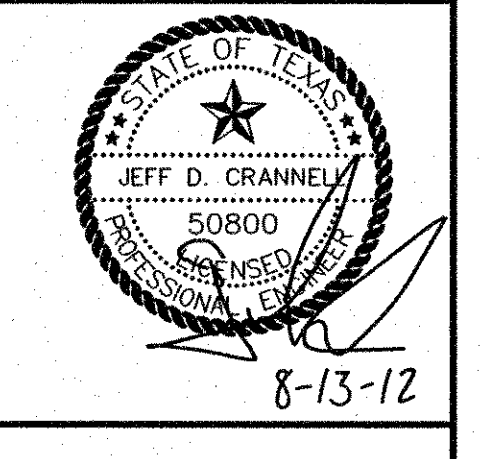
OWNER:
 HJ ROCKLAND, LLC
 6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX (972) 386-6190

DEVELOPER:
 SPRING HAVEN INVESTMENTS, INC.
 6750 HILLCREST PLAZA SUITE 325 DALLAS, TEXAS 75230
 (972) 386-3333 FAX (972) 386-6190

SWALE 7 PLAN & PROFILE
14+00 TO END

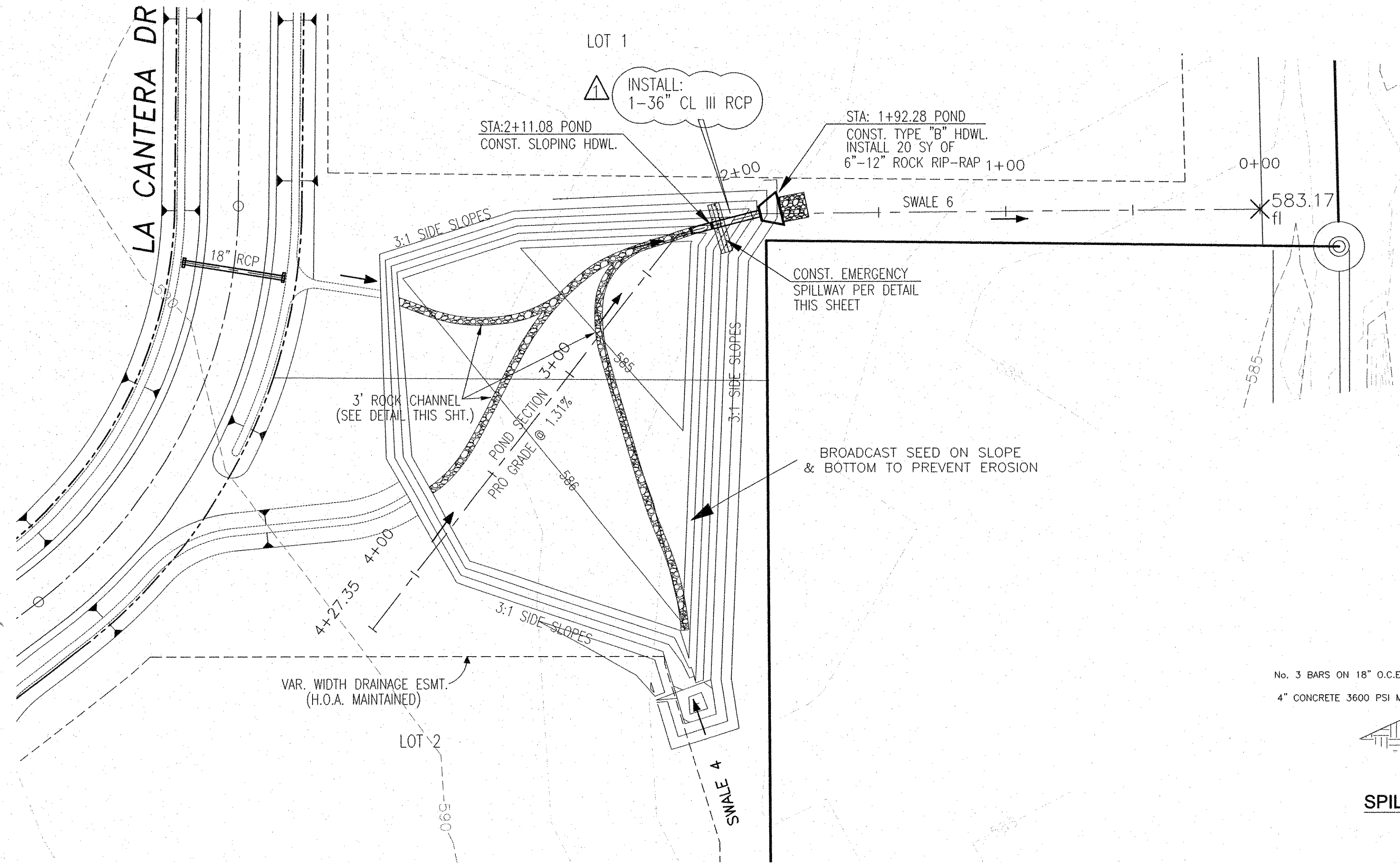
ROCKLAND FARMS, PH II
 City of Lucas, Texas

PROVI AND EADMC ECTATED DU IT IUCAS TEVAS

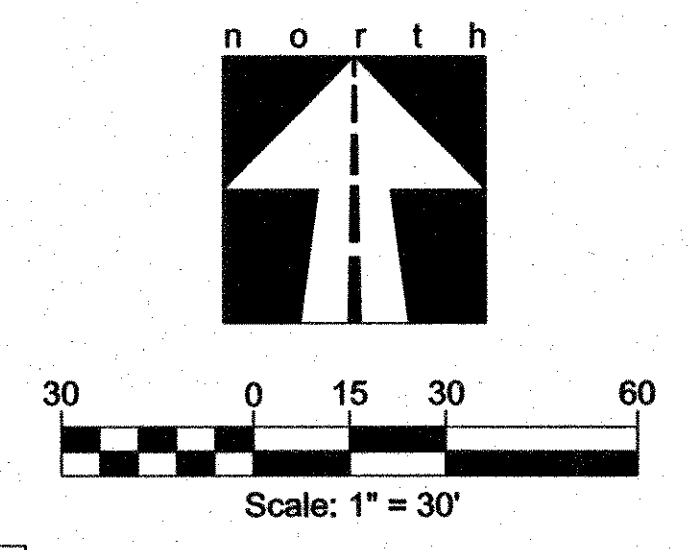


REVISIONS

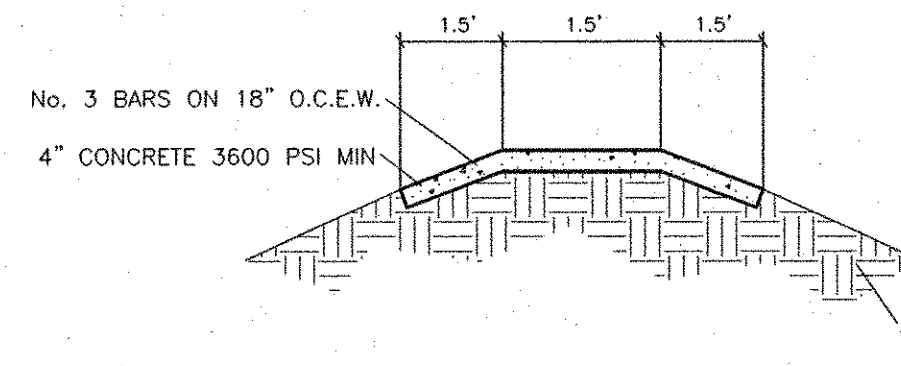
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 DRAWN: CCM
 DATE: 7/20/2012
 SCALE: H:1"=40' V:1"=5'
 NOTES:
 FILE:



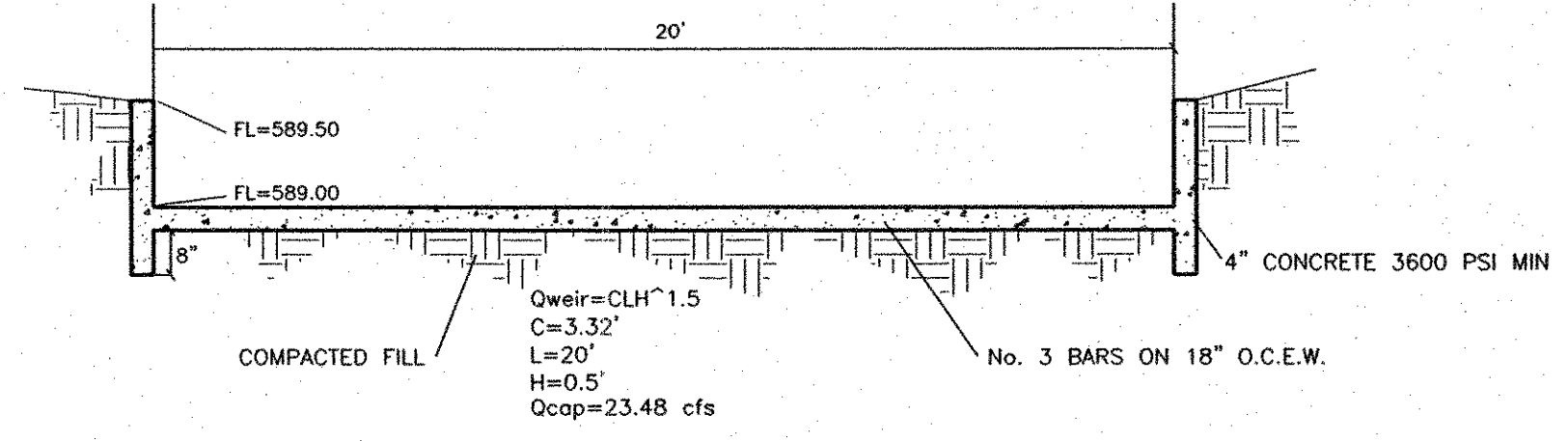
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Elev ft	Area mi2	Cumml Avg ft3	Cumml Conic ft3
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589.0000	0.0007	53046.7159	52536.8572
588.0000	0.0006	34900.8608	34398.2298
587.0000	0.0006	18471.9348	17976.2988
586.0000	0.0003	5965.1229	5598.8991
585.0000	0.0001	0.0000	0.0000



OUTLET STRUCTURE	
Culvert Calculator	
Entered Data:	
Shape	Circular
Number of Barrels	1
Solving for	Headwater
Chart Number	1
Scale Number	1
Chart Description	CONCRETE PIPE CULVERT; NO BEVELED RING ENTRANCE
Scale Description	SQUARE EDGE ENTRANCE WITH HEADWALL
Overtopping	Off
Flowrate	52.2500 cfs
Manning's n	0.0130
Roadway Elevation	589.1100 ft
Inlet Elevation	584.9300 ft
Outlet Elevation	584.7700 ft
Diameter	36.0000 in
Length	19.0000 ft
Entrance Loss	0.0000
Tailwater	2.0000 ft
Computed Results:	
Headwater	589.1021 ft Inlet Control
Slope	0.0084 ft/ft
Velocity	9.7215 fps



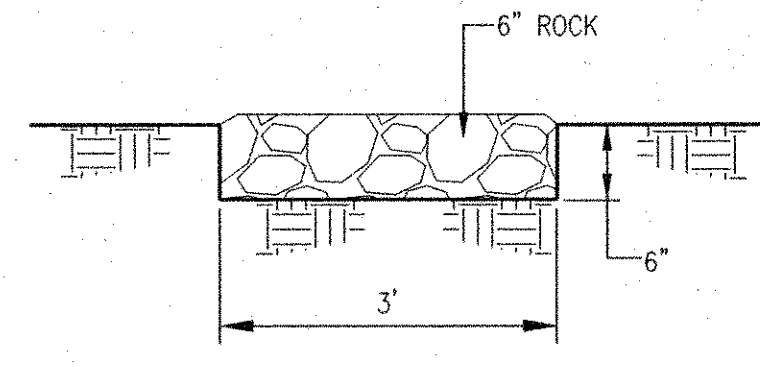
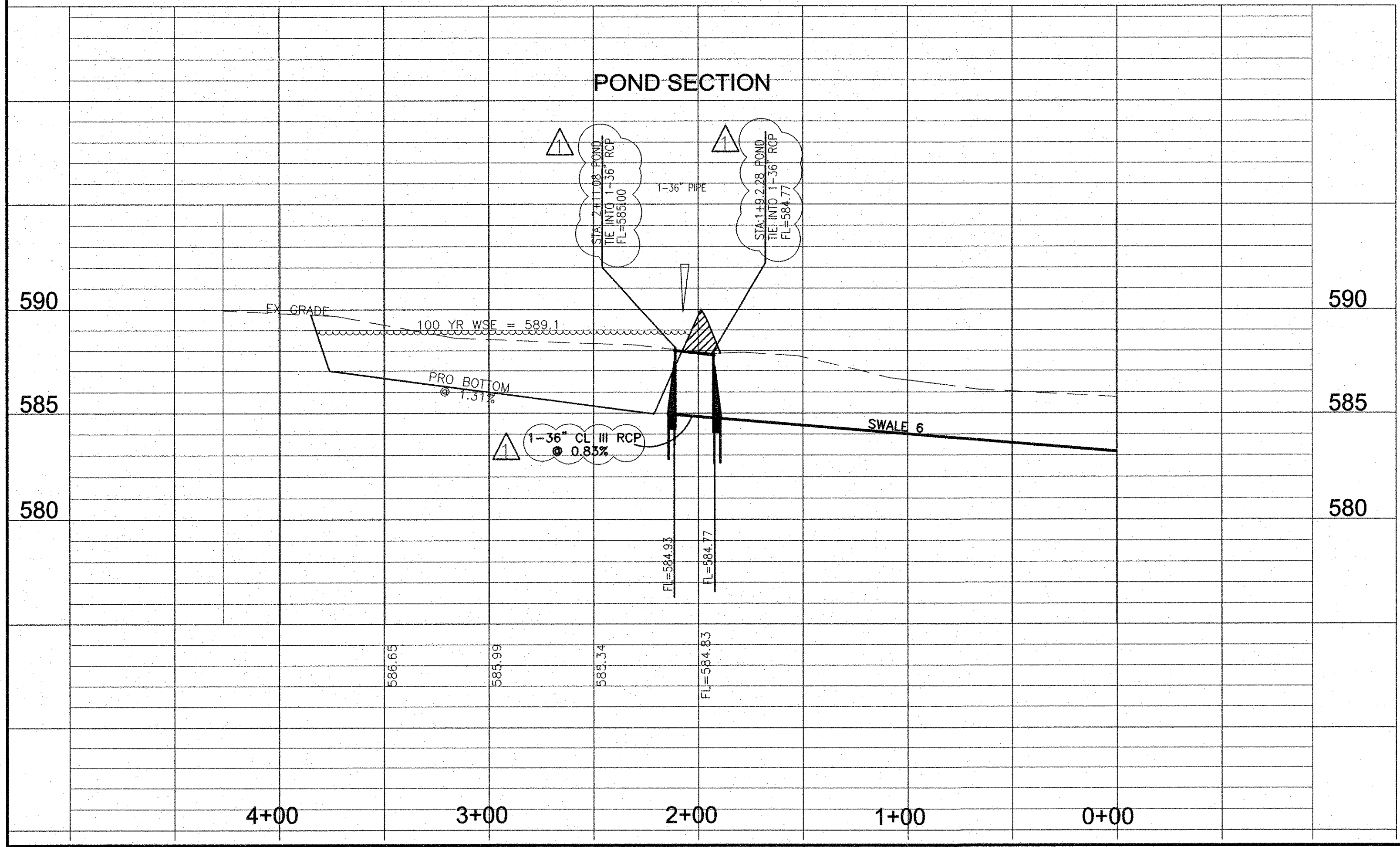
SPILLWAY CROSS SECTION
N.T.S.



SPILLWAY SECTION
N.T.S.

UNDEVELOPED	DEVELOPED
48.72 AC x 0.3 x 0.75 = 109.62 cfs	FREE DISCHARGE = 44.94 cfs
	POND DISCHARGE = 52.25 cfs
	TOTAL = 97.19 cfs

As-Built
slc 12-29-12
Date

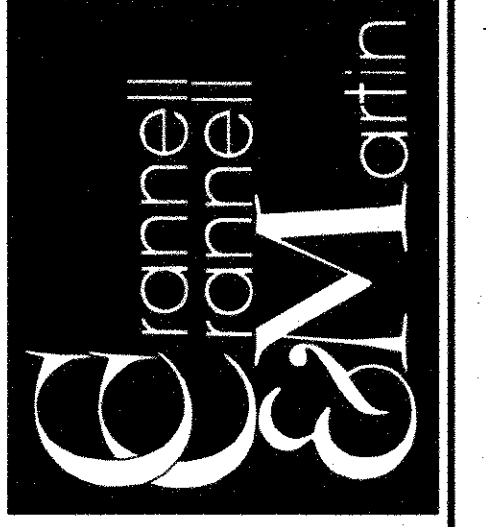


ROCK CHANNEL DETAIL
N.T.S.

ROCKLAND FARMS, PH II DETENTION POND - DESIGN (100yr.Storm)			
PRESENT CONDITIONS			
C	0.30		
C1/A	1.00		
L100	7.50		
Tc	15.00		
Area (ac)	28.74		
C100	52.25		
FUTURE CONDITIONS			
C	0.40		
C1/A	1.00		
L100	7.50		
Tc	15.00		
Area (ac)	28.74		
C100	88.22		
STORM DURATIONS			
Minutes	I100	Q100(cfs)	
20	6.80	70.32	
30	5.80	66.68	
40	5.00	57.48	
50	4.40	50.58	
60	3.90	45.50	
70	3.60	41.39	
80	3.30	37.94	
90	3.10	35.64	
MAXIMUM STORAGE			
	15	88.22	60 = 77,598.00
	0.5	30	52.25 = 47,025.00
			= 30,573.00
15 min. Storm	Inflow	20	76.32
	Storage	60	= 85,186.88
	Outflow	0.5	35
	Storage	52.25	60 = 54,862.50
			= 46,324.38
20 min. Storm	Inflow	30	66.68
	Storage	60	= 120,018.24
	Outflow	0.5	45
	Storage	52.25	60 = 70,537.50
			= 48,480.74
30 min. Storm	Inflow	40	57.48
	Storage	60	= 137,862.00
	Outflow	0.5	55
	Storage	52.25	60 = 86,212.50
			= 11,738.50 MAX REQ
40 min. Storm	Inflow	50	50.58
	Storage	60	= 151,747.20
	Outflow	0.5	65
	Storage	52.25	60 = 101,887.50
			= 49,899.70
50 min. Storm	Inflow	60	45.52
	Storage	60	= 163,886.98
	Outflow	0.5	78
	Storage	52.25	60 = 117,562.50
			= 46,324.48
60 min. Storm	Inflow	70	41.39
	Storage	60	= 173,918.52
	Outflow	0.5	85
	Storage	52.25	60 = 133,237.50
			= 40,882.02
70 min. Storm	Inflow	80	37.94
	Storage	60	= 182,096.64
	Outflow	0.5	95
	Storage	52.25	60 = 148,912.50
			= 33,194.14
80 min. Storm	Inflow	90	35.84
	Storage	60	= 192,443.04
	Outflow	0.5	105
	Storage	52.25	60 = 164,587.50
			= 27,858.54

NOTE: PRESENT CONDITIONS LIMITED TO ACCOUNT FOR UNDETAINED FLOW

Engineering Corporation
2570 FM 407, Suite 209
Highland Village, Texas 75077
Ph: 972.691.6633
Fax: 972.691.6628
TBPE FIRM #605



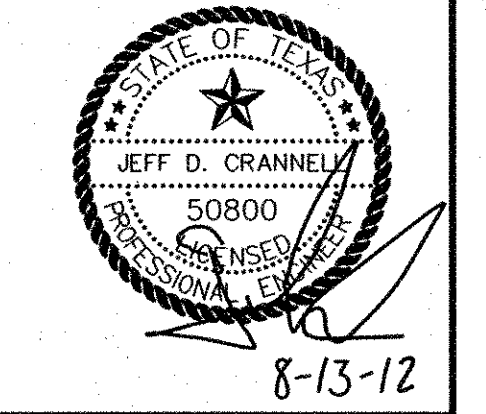
OWNER:
HJ ROCKLAND, LLC
6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

DEVELOPER:
SPRING HAVEN INVESTMENTS, INC.
6750 HILLCREST PLAZA, SUITE 325 DALLAS, TEXAS 75230
(972) 386-3333 FAX (972) 386-6190

**DETENTION AREA
PLAN & PROFILE**

ROCKLAND FARMS, PH II
City of Lucas, Texas

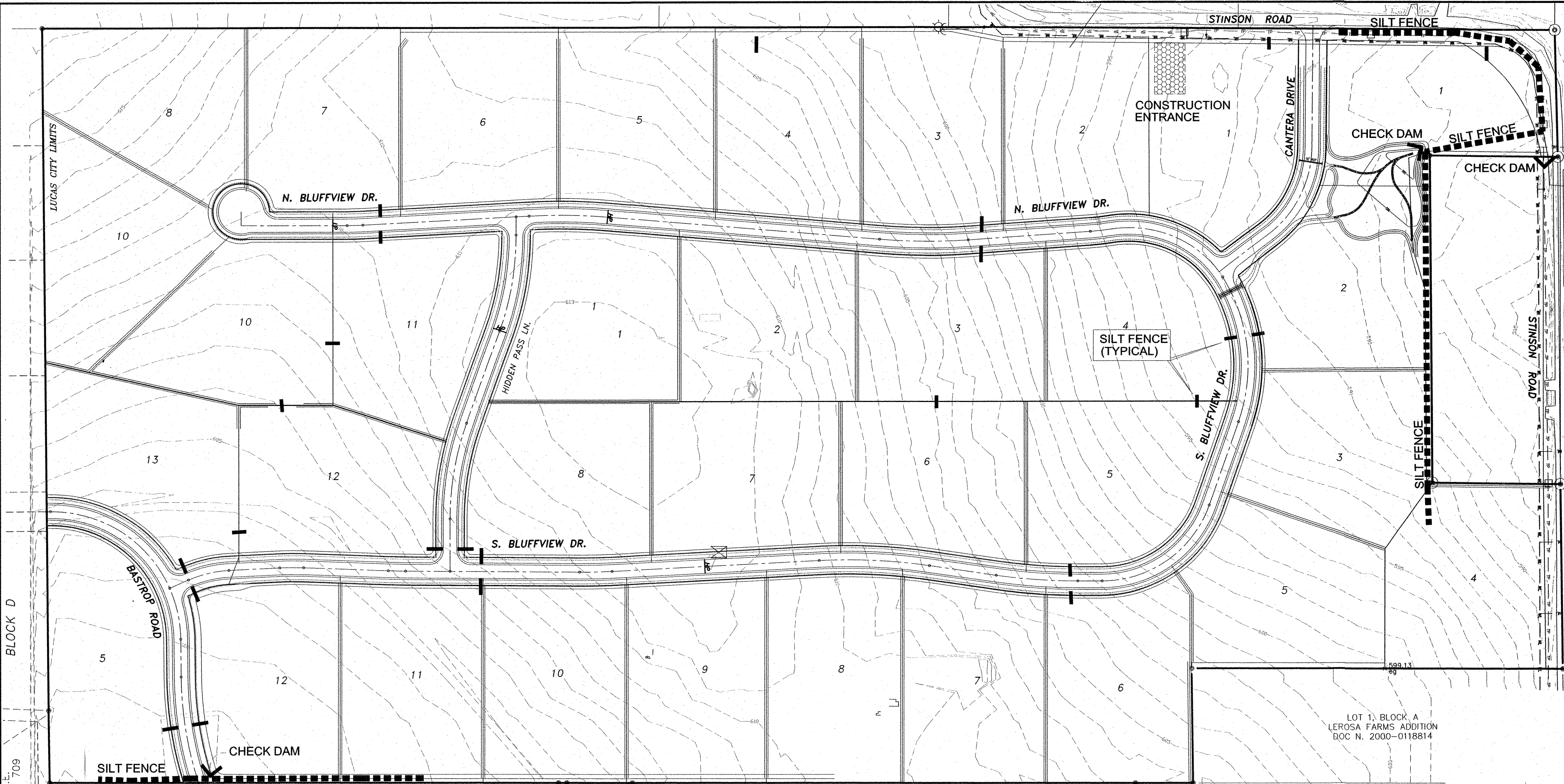
ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS



REVISIONS
4-23-12 - CHANGE OUTLET STRUCT. PIPE SIZE TO 2'-36"

DESIGN: CCM
DRAWN: CCM
DATE: 7/20/2012
SCALE: H:1"=30' V:1"=4'
NOTES:
FILE:

Sheet 30 of 32



EROSION CONTROL NOTES:

A. The specific plant materials proposed to protect fill and excavated slopes shall be as indicated on the plans. Plant materials must be suitable for use under local climate and soil conditions. In general, hydroseeding or sodding Bermuda grass is acceptable during the summer months (May to August 30). Winter rye or fescue grass may be planted during times other than the summer months as a temporary measure until such time as the permanent planting can be made.

B. Prior to commencing any construction, a construction entrance and perimeter silt fence shall be installed at the locations shown.

C. At the completion of the paving and final grading, the disturbed area(s) shall be revegetated in accordance with the plans.

D. Silt fence and inlet sediment barriers shall remain in place until revegetation has been completed.

E. Disturbed areas that are seeded of sodded shall be checked periodically to see that grass coverage is properly maintained. Disturbed areas shall be watered, fertilized, and reseeded or resodded, if necessary.

F. Contractor to be responsible for obtaining all state, federal and local permits for the operation of any temporary batch plant. Location shall be coordinated with Project Manager prior to plant build-up.

G. Contractor to coordinate with Project Manager for a temporary concrete washout location. Washout location to be in place before any concrete operations begin (water, sanitary sewer, storm sewer, etc.). Location to be labeled with signage and cleaned regularly by contractor (at contractor's expense).

H. Contractor to minimize offsite vehicle tracking of sediments. Accumulation of sediments on public streets will be removed at a frequency (at contractor's expense) to prevent impact to the storm sewer before a rain event or pose a safety hazard for users of public streets.

I. During construction, water trucks and/or dust suppression chemicals should be used, as needed, by contractors or subcontractors to reduce dust.

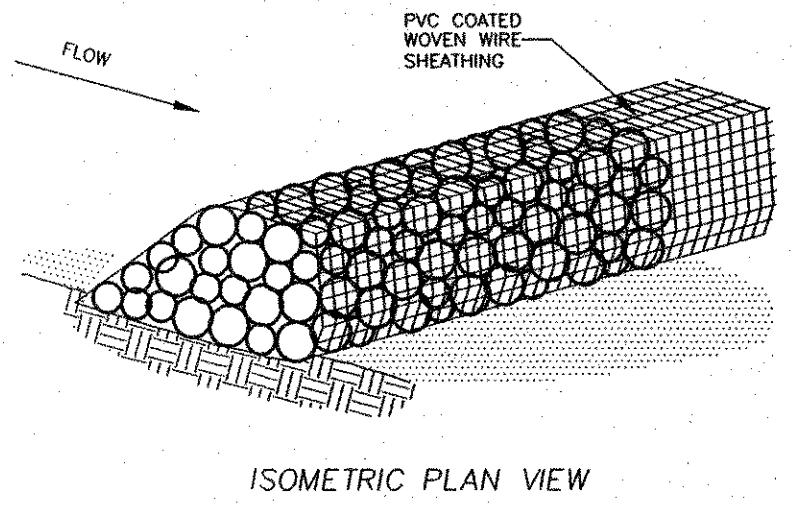
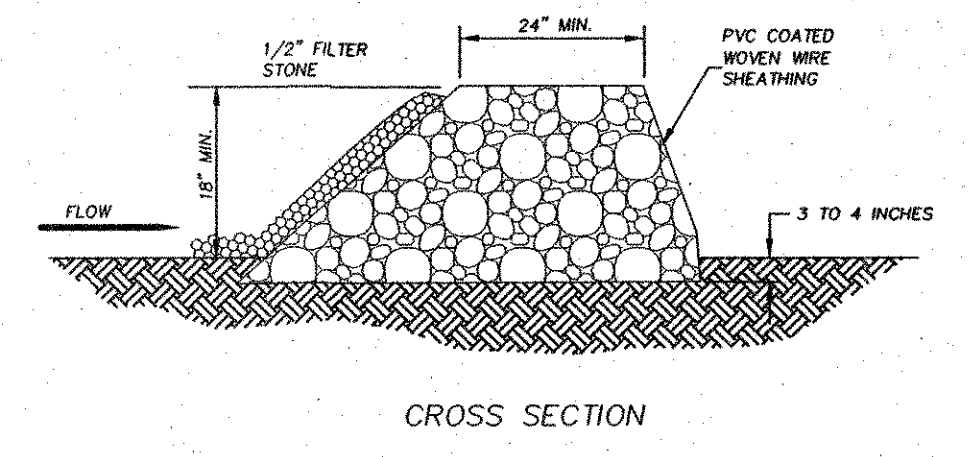
J. Wind blown construction debris will be placed in debris collection structures or other enclosed containers and haul off site for disposal in accordance with federal, state, and local waste disposal regulations.

K. Stating that areas in the right-of-way that are disturbed as part of this project must be stabilized by reseeded sodding or hydromulching before acceptance.

L. Install straw mat, curlex blanket, or some other erosion control method along the edge of all street and alleys. Provide a note stating that the maintenance of the curlex mats the responsibility of the developer until the lot is being built, at which time the builder will be responsible for the maintenance.

ACREAGE
SITE: 75 Ac.

Post-Construction Erosion Control
1. Seed Parkways



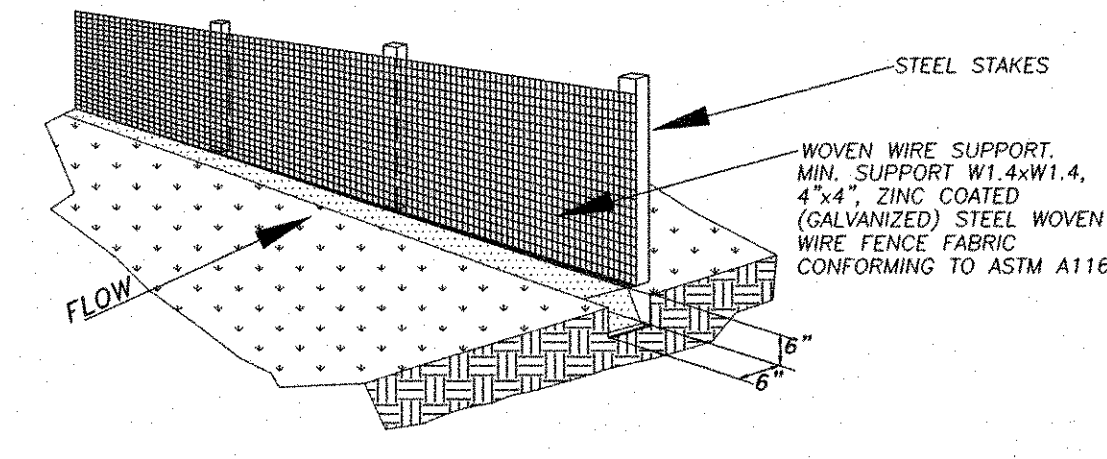
ROCK BERM/CHECK DAM
N.T.S.

- ROCK BERM GENERAL NOTES**
1. USE ONLY OPEN GRADED ROCK 4-8 INCHES IN DIAMETER FOR STREAM FLOW CONDITION. USE OPEN GRADED ROCK 3-5 INCHES IN DIAMETER FOR OTHER CONDITIONS.
 2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING A MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE SIZE OF 20 GAUGE AND SHALL BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP.
 3. THE ROCK BERM SHALL BE INSPECTED EVERY WEEK OR AFTER EACH 1/2" RAIN EVENT AND SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT CONSTRUCTION DAMAGE, ETC.
 4. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD OF THE HEIGHT OF THE BERM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF PROPERLY.
 5. ROCK BERM SHOULD BE USED AS CHECK DAMS FOR CONCENTRATED FLOW AND ARE NOT INTENDED FOR USE IN PERIMETER PROTECTION.

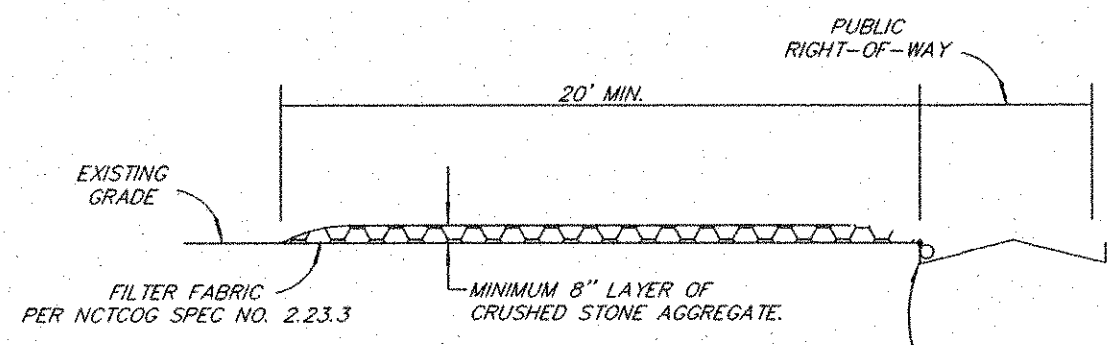
SANTON & LUISA SANCHEZ
TRACT 2
CALLED 32' INGRESS-EGRESS
C.C. FILE NO. 98-74212

LOT 1R
TRAILS END ADDITION

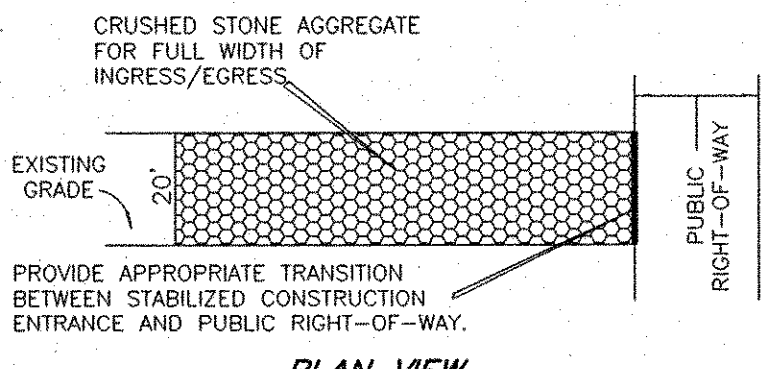
1. SET THE STAKES.
2. EXCAVATE A 6" X 6" TRENCH UPSLOPE OF THE STAKES
3. FASTEN FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



SILT FENCE FILTER BARRIER
N.T.S.



CONSTRUCTION ENTRANCE
N.T.S.



STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

LEGEND

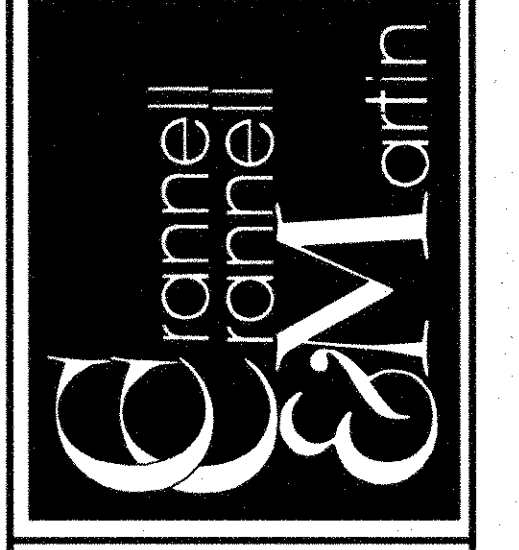
SILT FENCE ———

ROCK CHECK DAM ———

HAY BALE DAM (OR SILT FENCE W/WIRE) ———

As-Built
SPO [Signature]
Date

Engineering Corporation
2570 FM 407, Suite 209
Highland Village, Texas 75077
Ph: 972.691.6633
Fax: 972.691.6628
TBPE FIRM #605



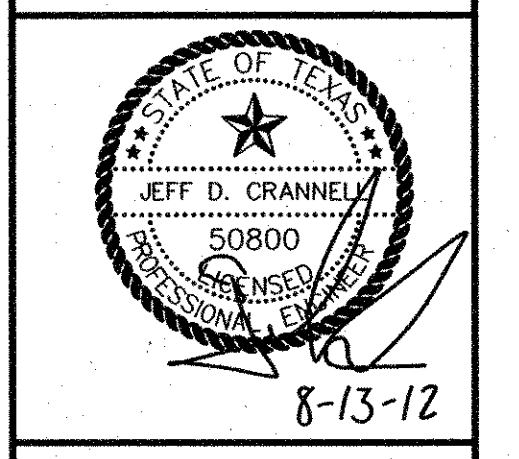
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EROSION CONTROL PLAN

ROCKLAND FARMS, PH II
City of Lucas, Texas

ROCKLAND FARMS ESTATES, PH II - LUCAS, TEXAS



REVISIONS

DESIGN: CCM
DRAWN: CCM
DATE: 7/20/2012
SCALE: 3/8"=1'-0"
NOTES:
FILE:
Sheet 31 of 32

