

DETENTION SYSTEM CALCULATIONS
MODIFIED RATIONAL METHOD

DESIGN FREQUENCY =	100 YEAR STORM					
ALLOWABLE RELEASE RATE (EXISTING CONDITIONS):						
DRAINAGE AREA (A)	8.00 AC					
TIME OF CONC. (T _c)	10 MIN					
RAINFALL INTENSITY (I)	9.27 IN/HR					
RUNOFF COEFFICIENT (C)	0.90					
ALLOW. SITE DISCHARGE	66.74 CFS					
PROPOSED CONDITIONS:						
ON-SITE DETAINED RUNOFF:						
DRAINAGE AREA (A)	8.25 AC					
TIME OF CONC. (T _c)	10 MIN					
RAINFALL INTENSITY (I)	9.27 IN/HR					
RUNOFF COEFFICIENT (C)	0.90					
DETAINED RUNOFF	37.7 CFS					
OFF-SITE PASS THROUGH FLOW:						
DRAINAGE AREA (A)	0.00 AC					
TIME OF CONC. (T _c)	10 MIN					
RAINFALL INTENSITY (I)	9.27 IN/HR					
RUNOFF COEFFICIENT (C)	0.90					
OFF-SITE PASS THROUGH FLOW	0.00 CFS					
ON-SITE UNDETAINED RUNOFF:						
DRAINAGE AREA (A)	0.00 AC					
TIME OF CONC. (T _c)	10 MIN					
RAINFALL INTENSITY (I)	9.27 IN/HR					
RUNOFF COEFFICIENT (C)	0.90					
UNDETAINED RUNOFF	0.0 CFS					
ACTUAL DISCHARGE						
ACTUAL DISCHARGE	21.60 CFS					
STORAGE CALCULATIONS:						
DURATION (MIN)	RAINFALL INTENSITY (IN/HR)	INFLOW RATE (CFS)	INFLOW VOLUME (CF)	OUTFLOW RATE (CFS)	OUTFLOW VOLUME (CF)	REQUIRED STORAGE (INFLW - OUTFLOW) (AC-FT)
5	0.08	11.17	82.9	24.876	21.6	9,720
10	0.17	9.27	68.8	41,309	21.6	12,960
15	0.25	7.99	59.3	53,373	21.6	16,200
20	0.33	7.05	52.4	62,824	21.6	19,440
30	0.50	5.77	42.8	77,090	21.6	25,920
MAXIMUM REQUIRED STORAGE =						51,776
						1.17

UNDERGROUND STORAGE PROVIDED

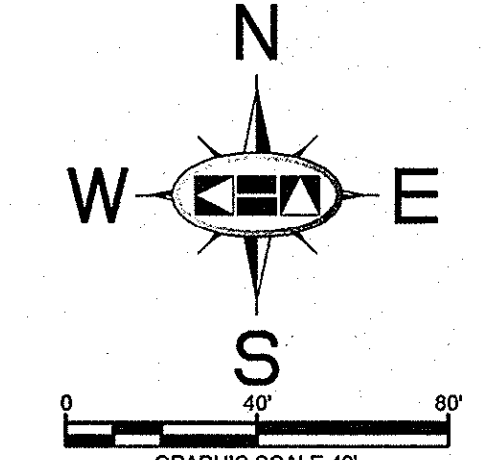
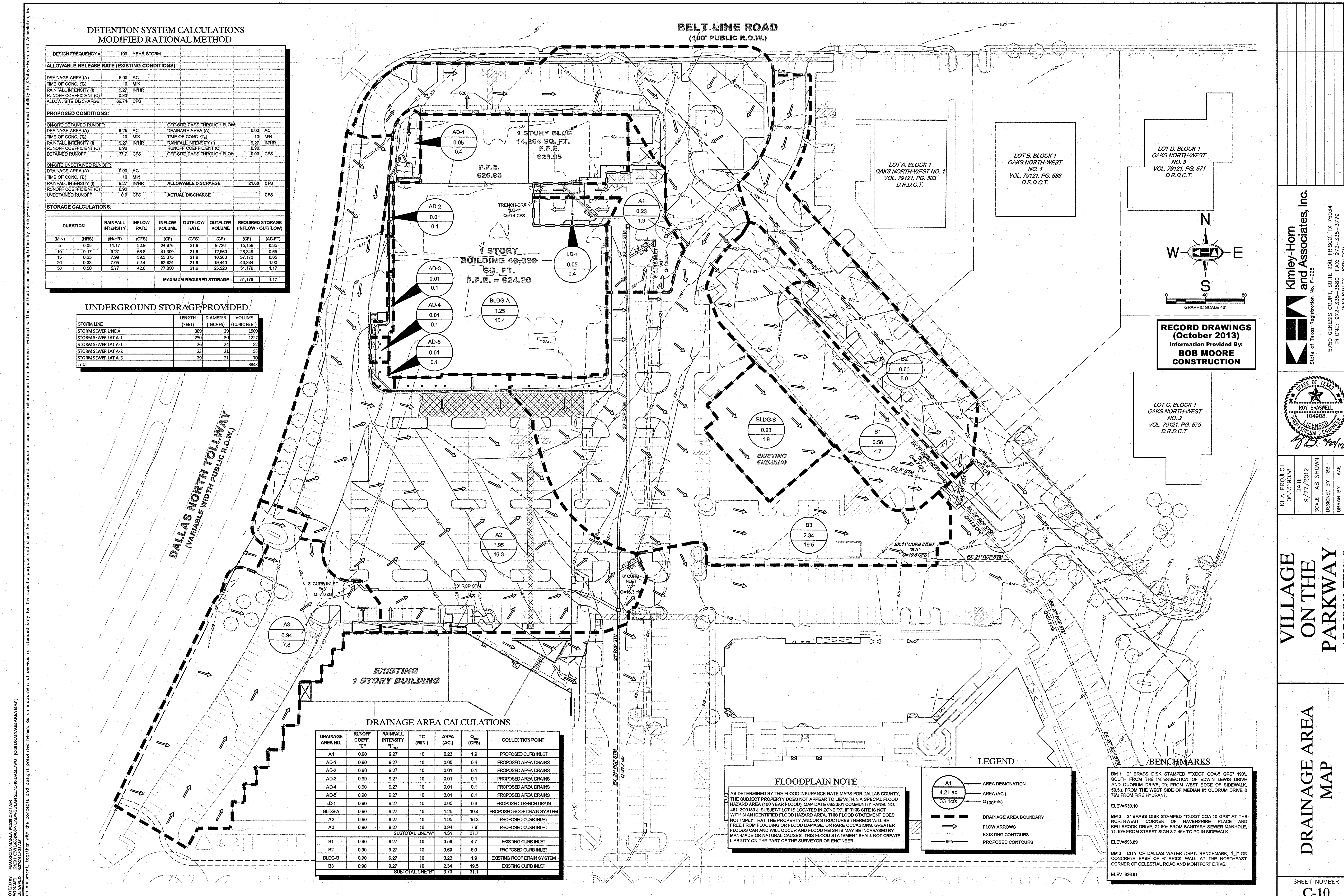
STORM LINE	LENGTH (FEET)	DIAMETER (INCHES)	VOLUME (CUBIC FEET)
STORM SEWER LINE A	388	30	1902
STORM SEWER LATA-1	250	30	1225
STORM SEWER LATA-1	26	24	83
STORM SEWER LATA-2	23	21	55
STORM SEWER LATA-3	29	21	70
Total			3343

DRAINAGE AREA CALCULATIONS

DRAINAGE AREA NO.	RUNOFF COEFF.	RAINFALL INTENSITY (I)	TC (MIN)	AREA (AC)	Q ₁₀₀ (CFS)	COLLECTION POINT
A1	0.90	9.27	10	0.23	1.9	PROPOSED CURB INLET
AD-1	0.90	9.27	10	0.05	0.4	PROPOSED AREA DRAINS
AD-2	0.90	9.27	10	0.01	0.1	PROPOSED AREA DRAINS
AD-3	0.90	9.27	10	0.01	0.1	PROPOSED AREA DRAINS
AD-4	0.90	9.27	10	0.01	0.1	PROPOSED AREA DRAINS
AD-5	0.90	9.27	10	0.01	0.1	PROPOSED AREA DRAINS
LD-1	0.90	9.27	10	0.05	0.4	PROPOSED TRENCH DRAIN
BLDG-A	0.90	9.27	10	1.25	10.4	PROPOSED ROOF DRAIN SYSTEM
A2	0.90	9.27	10	1.95	16.3	PROPOSED CURB INLET
A3	0.90	9.27	10	0.94	7.8	PROPOSED CURB INLET
SUBTOTAL LINE "A"					4.51	37.7
B1	0.90	9.27	10	0.56	4.7	EXISTING CURB INLET
B2	0.90	9.27	10	0.60	5.0	PROPOSED CURB INLET
BLDG-B	0.90	9.27	10	0.23	1.9	EXISTING ROOF DRAIN SYSTEM
B3	0.90	9.27	10	2.34	19.5	EXISTING CURB INLET
SUBTOTAL LINE "B"					3.73	31.1

BELT LINE ROAD
(100' PUBLIC R.O.W.)

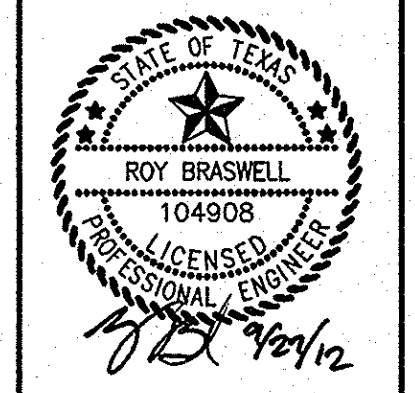
DALLAS NORTH TOLLWAY
(VARIABLE WIDTH PUBLIC R.O.W.)



RECORD DRAWINGS
(October 2013)
Information Provided By:
BOB MOORE CONSTRUCTION

NO.	REVISIONS	DATE	BY

Kimley-Horn and Associates, Inc.
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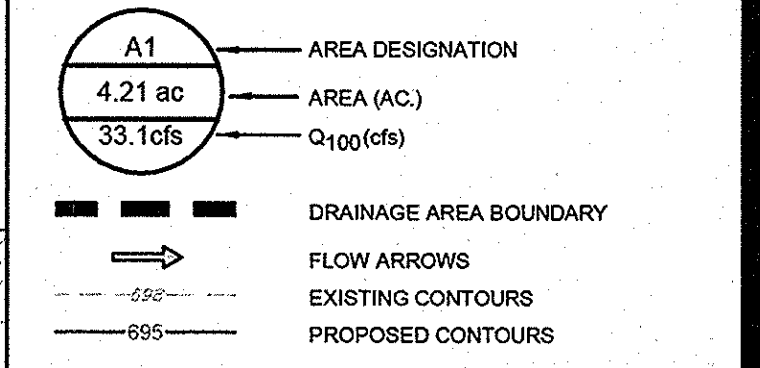
KHA PROJECT	0633190338
DATE	9/27/2012
SCALE	AS SHOWN
DESIGNED BY	TBB
DRAWN BY	AAE
CHECKED BY	TBB

VILLAGE ON THE PARKWAY
ADDISON, TEXAS

DRAINAGE AREA MAP

SHEET NUMBER
C-10

FLOODPLAIN NOTE
AS DETERMINED BY THE FLOOD INSURANCE RATE MAPS FOR DALLAS COUNTY, THE SUBJECT PROPERTY DOES NOT APPEAR TO LIE WITHIN A SPECIAL FLOOD HAZARD AREA (100 YEAR FLOOD), MAP DATE 08/23/01 COMMUNITY PANEL NO. 48110C1010 J. SUBJECT LOT IS LOCATED IN ZONE "X" IF THIS SITE IS NOT WITHIN AN IDENTIFIED FLOOD HAZARD AREA, THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE ON RARE OCCASIONS. GREATER FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR OR ENGINEER.



BENCHMARKS

BM 1 2" BRASS DISK STAMPED "TXDOT COA-5 GPS" 180" SOUTH FROM THE INTERSECTION OF EDWIN LEWIS DRIVE AND QUORUM DRIVE; 2" FROM WEST EDGE OF SIDEWALK, 50.5" FROM THE WEST SIDE OF MEDIAN IN QUORUM DRIVE & 79" FROM FIRE HYDRANT.
ELEV=630.10

BM 2 2" BRASS DISK STAMPED "TXDOT COA-10 GPS" AT THE NORTHWEST CORNER OF HAVENSHIRE PLACE AND BELLBROOK DRIVE; 21.80" FROM SANITARY SEWER MANHOLE, 11.10" FROM STREET SIGN & 2.45" TO PC IN SIDEWALK.
ELEV=593.89

BM 3 CITY OF DALLAS WATER DEPT. BENCHMARK; □ ON CONCRETE BASE OF 6" BRICK WALL AT THE NORTHEAST CORNER OF CELESTIAL ROAD AND MONTFORT DRIVE.
ELEV=626.81