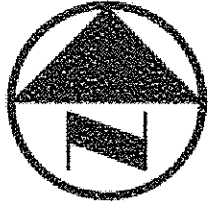
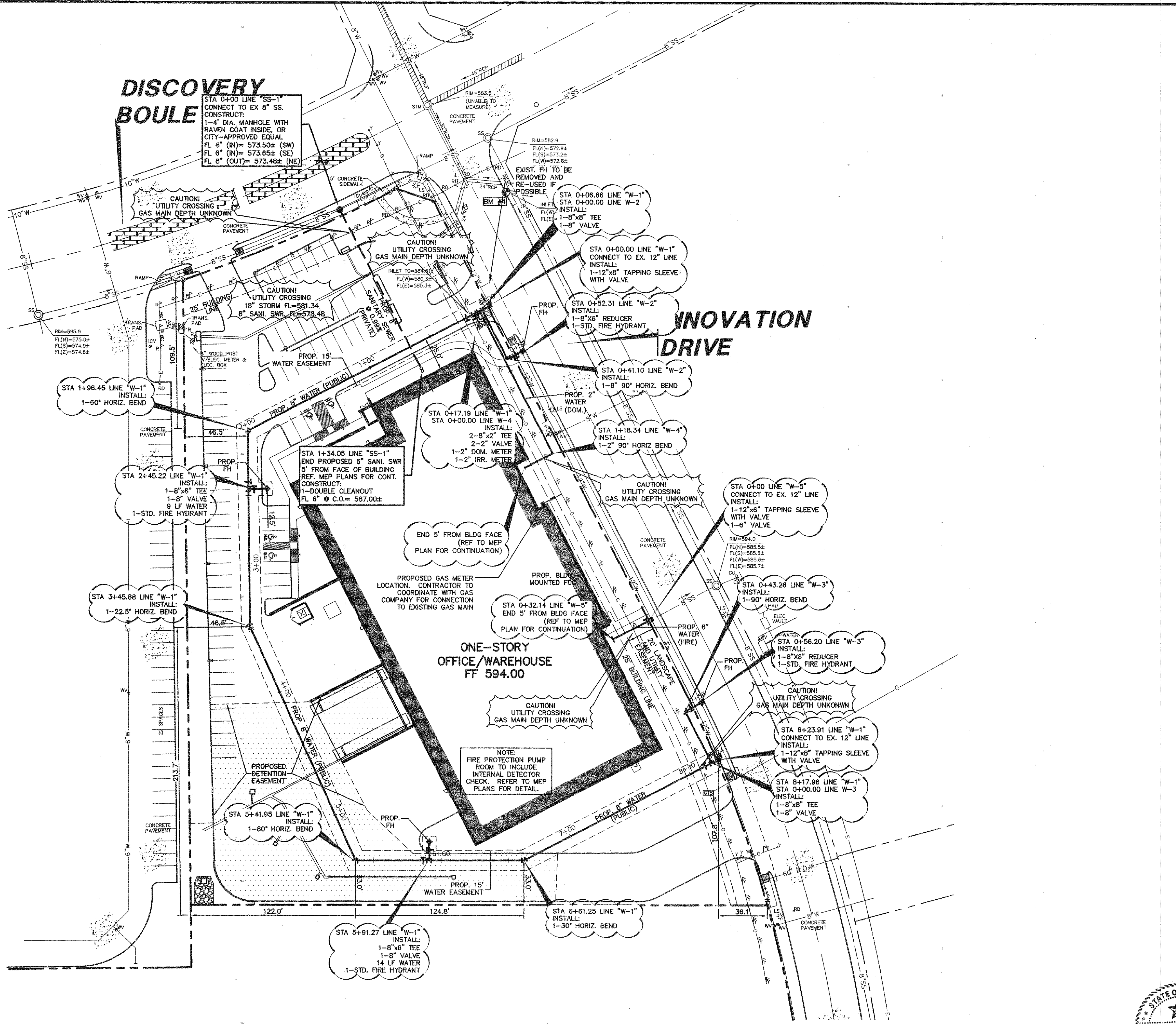


KUNKLER 09/19/2012 - 12:33PM
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 PK FILE: 2058-11-325

LEGEND

B.	BOLLARD
EM	ELECTRIC METER
PP.	POWER POLE
LS.	LIGHT STANDARD
WM.	WATER METER
WV.	WATER VALVE
ICV.	IRRIGATION CONTROL VALVE
FH.	FIRE HYDRANT
CH.	CLEANOUT
MH.	MANHOLE
TSC.	TRAFFIC SIGNAL CONTROL
TSP.	TRAFFIC SIGNAL POLE
TELE.	TELEPHONE BOX
FL.	FLOOD LIGHT
FP.	FLAG POLE
TR.	TRAFFIC SIGN
IRS.	1/2-INCH IRON ROD W/"PACHECO KOCH" CAP SET
(C.M.)	CONTROLLING MONUMENT
---	PROPERTY LINE
-X-	FENCE
---	OVERHEAD UTILITY LINE
-E-	UNDERGROUND ELECTRIC LINE
-T-	UNDERGROUND TELEPHONE LINE
-C-	UNDERGROUND CABLE LINE
-W-	UNDERGROUND WATER LINE
-SS-	UNDERGROUND SANITARY SEWER LINE

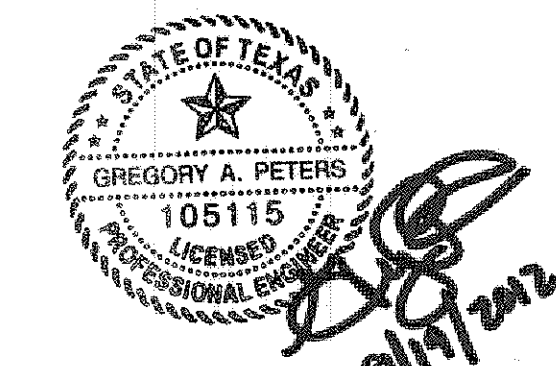

 0 20 40 80 120
 GRAPHIC SCALE IN FEET



- WATER AND SANITARY SEWER GENERAL NOTES**
- UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL BE CLASS "A", (3000 PSI).
 - ALL WATER MAINS SHALL BE PVC C900, DR 18, CLASS 150. FIRE PROTECTION SERVICES SHALL BE PVC C900, DR 14, CLASS 200 AND INSTALLED IN ACCORDANCE WITH THE DESIGN AND SPECIFICATIONS OF THE FIRE PROTECTION PLANS TO BE PREPARED BY A LICENSED FIRE PROTECTION ENGINEER.
 - WATER AND SANITARY SEWER SERVICES SHALL MEET PLUMBING CODE REQUIREMENTS.
 - ALL WATER MAINS UNLESS OTHERWISE NOTED SHALL HAVE A MINIMUM COVER OF 48" BELOW FINISHED GRADE.
 - SANITARY SEWER PIPE SHALL BE PVC SDR-35.
 - WHEN WATER MAINS AND SANITARY SEWERS ARE INSTALLED, THEY SHALL BE INSTALLED NO CLOSER TO EACH OTHER THAN NINE FEET IN ALL DIRECTIONS AND PARALLEL LINES MUST BE INSTALLED IN SEPARATE TRENCHES WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING GUIDELINES SHALL APPLY:
 - WHERE A SANITARY SEWER PARALLELS A WATERLINE, THE SEWER SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING ASTM SPECIFICATIONS WITH A PRESSURE RATING OF AT LEAST 150 PSI. THE SEWER SHALL BE MAINTAINED. THE SEWER SHALL BE LOCATED BELOW THE WATERLINE WHERE POSSIBLE AND ONE LENGTH OF THE SEWER PIPE MUST BE CENTERED ON THE WATERLINE.
 - WHERE A SANITARY SEWER CROSSES A WATERLINE AND THE SEWER IS CONSTRUCTED OF ABS TRUSS PIPE, SIMILAR SEMI-RIGID PLASTIC COMPOSITE PIPE, CLAY PIPE OR CONCRETE PIPE WITH GASKETED JOINTS, A MINIMUM TWO FOOT SEPARATION DISTANCE SHALL BE MAINTAINED. IN ADDITION, THE SEWER SHALL BE LOCATED BELOW THE WATERLINE WHERE POSSIBLE AND ONE LENGTH OF THE SEWER PIPE MUST BE CENTERED ON THE WATERLINE.
 - WHERE A SEWER CROSSES UNDER A WATERLINE AND THE SEWER IS CONSTRUCTED OF ABS TRUSS PIPE, SIMILAR SEMI-RIGID PLASTIC COMPOSITE PIPE, CLAY PIPE OR CONCRETE PIPE WITH GASKETED JOINTS, A MINIMUM TWO FOOT SEPARATION DISTANCE SHALL BE MAINTAINED. IN ADDITION, THE SEWER SHALL BE LOCATED BELOW THE WATERLINE WHERE POSSIBLE AND ONE LENGTH OF THE SEWER PIPE MUST BE CENTERED ON THE WATERLINE.
 - WHERE A SEWER CROSSES OVER A WATERLINE ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATERLINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. IN LIEU OF THIS PROCEDURE, THE NEW CONVEYANCE MAY BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE FEET INTERVALS WITH SPACERS OR BE FILLED TO THE SPRING LINE WITH WASHED SAND. THE ENCASEMENT PIPE SHOULD BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL.
 - THE SEWER NEED NOT BE DISTURBED WHERE A NEW WATERLINE IS TO BE INSTALLED PARALLEL TO AN EXISTING SEWER THAT SHOWS NO EVIDENCE OF LEAKAGE AND THE WATERLINE IS INSTALLED ABOVE THE SEWER A MINIMUM OF TWO FEET VERTICALLY AND FOUR FEET HORIZONTALLY. SHOULD EXCAVATION FOR THE WATERLINE PRODUCE EVIDENCE THAT THE SEWER IS LEAKING, THE SEWER MUST BE REPAIRED OR REPLACED AS DESCRIBED IN SUBPARAGRAPHS (A) OR (D) OF THIS PARAGRAPH.
 - THE SEWER NEED NOT BE DISTURBED WHERE A NEW WATERLINE IS TO CROSS OVER (BY TWO FEET OR MORE) EXISTING SEWER SHOWING NO EVIDENCE OF LEAKAGE. SHOULD EXCAVATION FOR THE WATERLINE PRODUCE EVIDENCE THAT THE SEWER IS LEAKING, THEN THE SEWER MUST BE REPAIRED OR REPLACED AS DESCRIBED IN SUBSECTIONS (C) OR (D).
 - CONTRACTOR TO VERIFY ALL EXISTING SEWER FLOW LINES BEFORE BEGINNING CONSTRUCTION.
 - CONTRACTOR SHALL TIE A 1" WIDE PIECE OF RED PLASTIC FLAGGING TO THE END OF SEWER SERVICE AND SHALL LEAVE A MINIMUM OF 36" OF FLAGGING EXPOSED AFTER BACKFILL. AFTER CURB AND PAVING IS COMPLETED, CONTRACTOR SHALL MARK THE LOCATION OF THE SEWER SERVICE ON THE CURB OF ALLEY IN ACCORDANCE WITH THE STANDARD CITY SPECIFICATIONS.
 - ALL SANITARY SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH THE STANDARD CITY SPECIFICATIONS.
 - THE UTILITY CONTRACTOR SHALL INSTALL THE WATER SERVICES TO A POINT TWO (2') FEET BACK OF THE CURB LINE AT A DEPTH OF 12 INCHES. THE METER BOX SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AFTER THE PAVING CONTRACTOR HAS COMPLETED THE FINE GRADING BEHIND THE BACK OF THE CURB. EACH SERVICE LOCATION WILL BE MARKED ON THE CURB, WITH A BLUE LETTER "W" BY THE UTILITY CONTRACTOR AND TIED TO PROPERTY CORNER ON THE RECORD DRAWINGS.
 - ALL METER BOXES SHALL BE LOCATED IN NON-TRAFFIC AREAS.
 - TRENCH BACKFILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 504.2 AND SHALL BE MECHANICALLY COMPACTED IN 6" LIFTS TO THE TOP OF SUBGRADE TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY IN ACCORDANCE WITH NCTCOG ITEM 504.5 UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
 - EMBEDMENT SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 504.5 UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
 - VALVE BOXES SHALL BE FURNISHED AND SET ON EACH GATE VALVE. AFTER THE FINAL CLEAN-UP AND ALIGNMENT HAS BEEN COMPLETED, THE CONTRACTOR (UTILITY) SHALL POUR A CONCRETE BLOCK 24"x24"x6" AROUND ALL VALVE BOX TOPS WHICH SHALL BE LEVEL WITH THE FINISHED GRADES.
 - IF REQUIRED DUE TO CONSTRUCTION, POWER POLES TO BE BRACED OR RELOCATED AT CONTRACTOR'S EXPENSE.
 - ALL METERS TO HAVE DOUBLE DETECTOR CHECK WITH BACKFLOW DEVICE INSTALLED TO CITY OF ROCKWALL STANDARDS.
 - INSTALL BLUE EMS DISKS ON THE WATER LINE AT EVERY CHANGE IN DIRECTION, SERVICE, AND VALVE TO CITY OF ROCKWALL STANDARDS.
 - MANHOLE LIDS SHALL BE FRAME COVER FRAME TO CITY OF ROCKWALL STANDARDS.
 - MANHOLES SHALL BE RAVEN-LINED TO CITY OF ROCKWALL STANDARDS (OR CITY-APPROVED EQUAL).

BENCH MARK LIST

BM	DESCRIPTION	ELEV.
BM 1	"T" CUT SET IN CENTER OF A 12' HEADWALL 2230± WEST OF C.F.M.549 AND 70± NORTH OF C.S.H. 276	ELEV.=581.84
BM 2	"T" CUT FOUND IN CENTER OF 4' HEADWALL NORTHEAST CORNER OF F.M.549 & S.H.276	ELEV.=592.75
BM 3	"T" CUT FOUND P.O.C. OF B.C. ON THE SOUTH END OF MEDIAN ON INNOVATION DR. AT THE INTERSECTION OF STATE HIGHWAY NO. 276.	ELEV.=599.49
BM 4	"T" CUT FOUND IN CENTER OF INLET ON THE EAST RIGHT OF WAY OF INNOVATION DR. 80± SOUTH OF CENTERLINE OF DISCOVERY BLVD.	ELEV.=584.18
BM 5	"T" CUT FOUND ON THE EAST RIGHT OF WAY OF RESEARCH CIR. AT THE P.C. OF B.C. ON THE NORTH SIDE OF ENTRANCE.	ELEV.=599.84



RECORD DRAWING

THIS DRAWING HAS BEEN REVISED TO REFLECT CONSTRUCTION RECORDS MAINTAINED AND PROVIDED BY THE CONTRACTOR FOR THIS PROJECT.

CONTRACTOR: HILL & WILKINSON
 DATE REVISED: 08/30/2012

NO.	DATE	REVISION
	8/30/2012	RECORD DRAWING

Pacheco Koch 8350 N. CENTRAL EXPWY, SUITE 1000
 DALLAS, TX 75208 972.233.3031
 DALLAS • FORT WORTH • HOUSTON TX REG. SURVEYING FIRM LS-100080-00
 TX REG. ENGINEERING FIRM F-469

WATER AND SANITARY SEWER PLAN
HATFIELD & COMPANY, INC.
DISCOVERY BLVD. & INNOVATION ST.
ROCKWALL
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
GAP	GAP	MARCH 2012	1"=40'			C5.1

PK FILE: 2058-11-325 DWG FILE: 2058-11-325-UT.DWG XREF FILE: 2058-11-325-BA.DWG

HATFIELD & COMPANY, INC.