

# CIVIL DESIGN DRAWINGS

## FOR

# ROCK QUARRY ROAD

# WATER MAIN RELOCATION #2

## STOCKBRIDGE, GEORGIA

LAND LOTS 35 & 62; 12th DISTRICT  
HENRY COUNTY, GEORGIA

**ENGINEER:**  
FALCON DESIGN CONSULTANTS, LLC  
235 CORPORATE CENTER DRIVE  
STOCKBRIDGE, GA 30281  
PH. (770) 389-8666  
FAX (770) 389-8656

**OWNER/DEVELOPER:**  
CITY OF STOCKBRIDGE  
4640 NORTH HENRY BLVD.  
STOCKBRIDGE, GA 30281  
(770) 389-7900

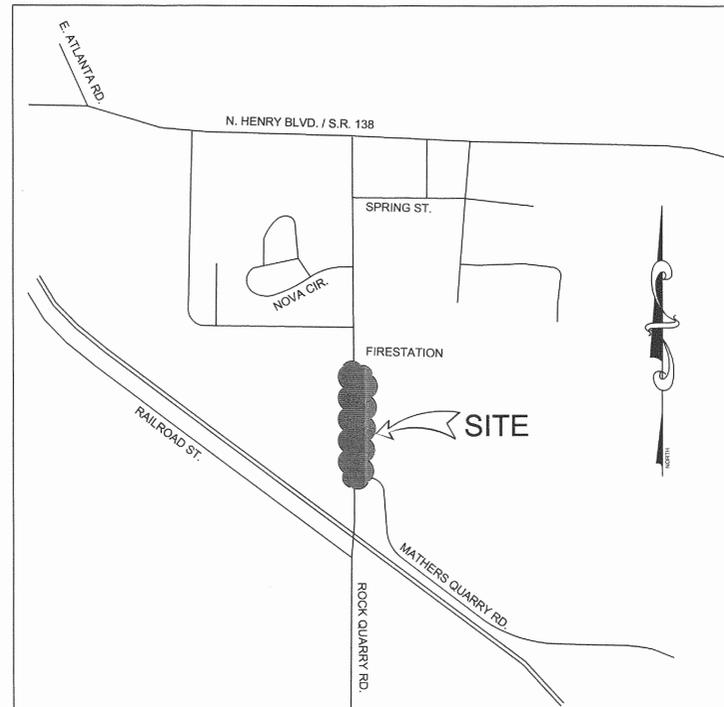
**SURVEYOR:**  
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235 CORPORATE CENTER DRIVE  
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**24 HOUR CONTACT:**  
KEVIN WALTER  
(770) 389-7900

SHEET INDEX	
1.0	COVER SHEET
2.0	EROSION CONTROL PLAN
3.0	WATER RELOCATION PLAN
4.0	WATER DETAIL SHEET

FIRST SUBMITTAL DATE: 9/24/13

REVISIONS	
1.	
2.	
3.	
4.	



LOCATION MAP  
N.T.S.

**HOW TO USE THESE DRAWINGS:**

1. THE PLANS, PROFILES, DETAILS, SPECIFICATIONS AND OTHER DESIGN APPURTENANCES CONTAINED HEREIN ARE FOR INFORMATION, PERMITTING, AND CONSTRUCTION PURPOSES. THESE DOCUMENTS ARE NOT VALID FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY THE ENGINEER OF RECORD AND THE APPROPRIATE PERMITS ARE OBTAINED FROM LOCAL GOVERNING AUTHORITIES.
2. ADDITIONAL PROVISIONS MAY BE REQUIRED DURING CONSTRUCTION DUE TO SITE CONDITIONS, WEATHER, OR REQUESTS BY THE INSPECTOR.
3. THE FEATURES, DISTANCES, AND ANGLES ON THESE DRAWINGS SHALL NOT BE SCALED. IF THE NECESSARY DIMENSIONS ARE NOT PROVIDED, THE CONTRACTOR SHALL NOTIFY THE OWNER OR ENGINEER FOR CLARITY.
4. PIPE LENGTHS ARE MEASURED TO THE CENTER OF THE STRUCTURES IN LINEAR HORIZONTAL FEET AND PIPE SIZES ARE MEASURED BY INSIDE DIAMETER IN INCHES UNLESS OTHERWISE NOTED.
5. THE PROPOSED GRADING SHOWN ON THESE PLANS REPRESENTS THE FINISHED SURFACE ELEVATIONS UNLESS OTHERWISE NOTED.

**OWNER/CONTRACTOR ACKNOWLEDGEMENT:**

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2. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF THE EXISTING CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES AND FEATURES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE OWNER. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED UTILITIES OR STRUCTURES AT HIS OWN EXPENSE AT THE SUPERVISION OF THE APPROPRIATE UTILITY DEPARTMENT.
3. THE REMOVAL OF EXISTING FEATURES ONSITE MAY REQUIRE A SEPARATE DEMOLITION PLAN AND PERMIT. THE CONTRACTOR SHALL OBTAIN THESE DOCUMENTS WHEN REQUIRED PRIOR TO COMMENCING ANY LAND DISTURBANCE ACTIVITY.
4. ALL WORK SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL CODES AS APPLICABLE. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND LICENSES PRIOR TO COMMENCING CONSTRUCTION.

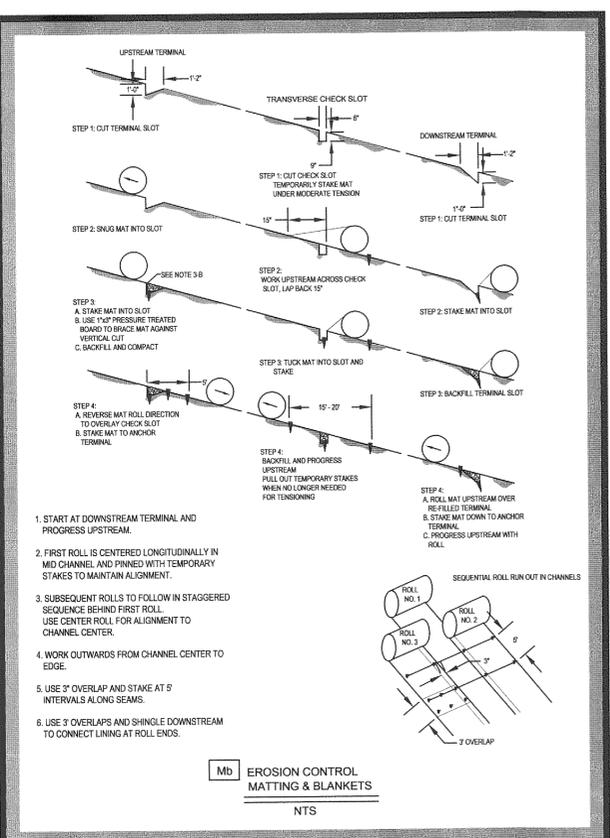


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**Ds1 DISTURBED AREA STABILIZATION (WITH MULCHING ONLY) MATERIALS AND RATES:**

MATERIAL	RATE
STRAW OR HAY	2-4" DEEP
WOOD WASTE, CHIPS, SAW DUST OR BARK	2-3" DEEP (ABOUT 6-8 TONS/ACRE)
MATTING OR NETTING	ACCORDING TO MANUFACTURERS RECOMMENDATIONS
CUTBACK ASPHALT	1200 GALLONS/ACRE (1/4 GAL./SQ YD)
POLYETHYLENE FILM	COMPLETELY COVER ACRE

**Ds2 DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDINGS) SEEDING RATES FOR TEMPORARY SEEDINGS**

SPECIES	RATE PER 1,000 SQ FT	RATE PER ACRE*	PLANTING DATES
RYE (ALONE)	3.9 POUNDS	3 bu.	8/15-1/1
ANNUAL RYEGRASS (IN MIXTURES)	0.6 POUNDS	1/2 bu.	8/1-4/15
ANNUAL RYEGRASS (ALONE)	0.9 POUNDS	40 lbs.	2/15-5/1
LESPEDeza (ALONE)	0.2 POUNDS	10 lbs.	3/15-8/15
WEeping LOVEGRASS (IN MIXTURES)	0.1 POUNDS	4 lbs.	3/15-8/15
LOVEGRASS (ALONE)	0.05 POUNDS	2 lbs.	4/1-9/1
SUDANGRASS (ALONE)	1.4 POUNDS	60 lbs.	4/1-7/15
BROWNTOP MILLET (ALONE)	0.9 POUNDS	40 lbs.	4/1-7/15
MILLET (IN MIXTURES)	0.2 POUNDS	10 lbs.	4/1-7/15
WHEAT (ALONE)	4.1 POUNDS	3 bu.	9/1-1/1
(IN MIXTURES)	0.7 POUNDS	1/2 bu.	

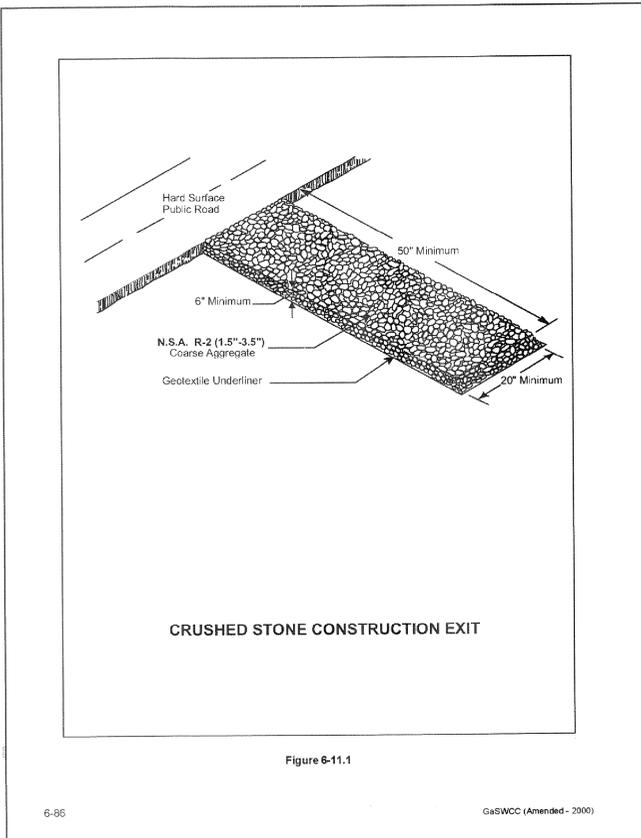
**Ds3 DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)**

SPECIES	RATE PER 1,000 SQ FT	RATE PER ACRE*	PLANTING DATES	YEARS TO APPLY FERTILIZER	FERTILIZER ANALYSIS			N TOP-DRESSING RATE*	
					N	P	K		
WEeping LOVEGRASS AND VIRGATA OR SERICEA LESPEDEZA	0.1 lbs.	4 lbs.	3/1-6/15	FIRST	8	12	12	1500	50
SERICEA LESPEDEZA SEEDBEARING HAY WITH OVERSEEDED WEeping LOVEGRASS	1.4 lbs.	40 lbs.	3/1-6/15	SECOND	0	10	10	1000	-
HULLED COMMON BERMUDAGRASS AND SERICEA LESPEDEZA	138 lbs.	3 tons	10/1-3/1	FIRST	6	12	12	1500	50
OVERSEEDED WEeping LOVEGRASS	0.05 lbs.	2 lbs.	3/1-6/15	SECOND	0	10	10	1000	-
HULLED COMMON BERMUDAGRASS AND SERICEA LESPEDEZA	0.2 lbs.	10 lbs.	2/15-7/1	FIRST	6	12	12	1500	50
UNHULLED COMMON BERMUDAGRASS AND VIRGATA OR SERICEA LESPEDEZA	1.4 lbs.	40 lbs.	3/1-6/15	SECOND	0	10	10	1000	-
SEED HAY	140 lbs.	3 tons	10/1-3/1						
TALL FESCUEGRASS AND CLEAN COMBINE RUN VIRGATA OR SERICEA LESPEDEZA	1.1 lbs.	50 lbs.	8/15-11/1	FIRST	6	12	12	1500	0-50 IN SPRING
CLEAN COMBINE RUN VIRGATA OR SERICEA LESPEDEZA	1.4 lbs.	40 lbs.	3/1-6/15	SECOND	0	10	10	1000	-
HULLED COMMON BERMUDAGRASS	0.2 lbs.	10 lbs.	2/15-7/1	FIRST	6	12	12	1500	50-100
				SECOND	10	10	10	800	50-100

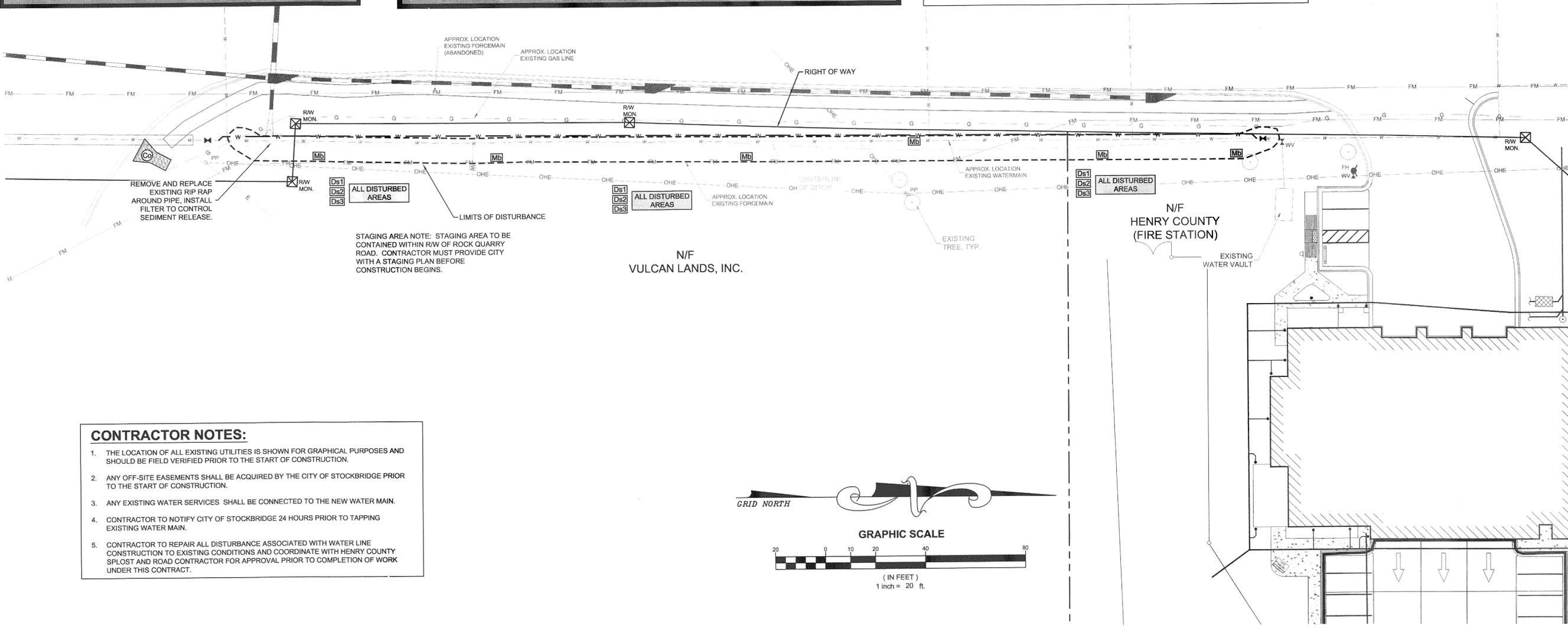
**GENERAL NOTES:**  
1. USE PIEDMONT PLANTING DATES  
2. FROM 8/15 TO 9/1 USE SEEDING RATES FOR TEMPORARY SEEDING AND SEED PERMANENTLY IN THE FALL  
3. AFTER SEEDING, MULCH SHALL BE APPLIED AT A RATE OF 2 1/2 TONS/ACRE  
NOTE: AGRICULTURAL LIME IS REQUIRED FOR ALL GRADED AREAS AT THE RATE OF ONE TO TWO TONS PER ACRE UNLESS SOIL TESTS DETERMINE OTHERWISE.

**1 TEMPORARY COVER CROPS ARE VERY COMPETITIVE AND WILL CROWN OUT PERENNIALS IF SEEDING TOO HEAVILY.**  
**2 REDUCE SEEDING RATES BY 50% WHEN DRILLED.**

\* FERTILIZER N TOP-DRESSING RATES INDICATED ARE IN LBS/ACRE.



- EROSION CONTROL NOTES**
- 24 HR. CONTACT: KEVIN WALTER - (770) 389-7900
  - TOTAL DISTURBED ACREAGE: ±0.10 ac.
  - "THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES."
  - "EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED."
  - "ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."
  - THIS SITE IS NOT WITHIN 1 LINEAR MILE OF AN IMPAIRED STREAM SEGMENT
  - CONTRACTOR WILL USE EXISTING CONSTRUCTION EXITS ON SITE.



**FALCON DESIGN**  
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WWW.FALCONDESIGN.COM

**EROSION CONTROL PLAN FOR ROCK QUARRY ROAD WATER MAIN RELOCATION #2**  
LOCATED IN: Henry County, Georgia

**REVISIONS**

NO.	DATE	DESCRIPTION
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DATE: 9/24/13  
SCALE: 1"=20'  
FILE NUMBER: RCK QRY  
DRAWN BY: ALP

**GEORGIA REGISTERED PROFESSIONAL ENGINEER**  
No. 030440  
L. W. WALTER  
9/24/13

GSWCC# 000009371  
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**SHEET NUMBER 2.0**

**WATER SYSTEM NOTES:**

1. CONTRACTOR SHALL FOLLOW HENRY COUNTY WATER & SEWERAGE AUTHORITY STANDARD WATER SPECIFICATIONS, UNLESS OTHERWISE NOTED.
2. ALL WATER MAINS SHALL BE CLASS 50 DUCTILE IRON (D.I.) PIPE PER CITY OF STOCKBRIDGE WATER DEPARTMENT REQUIREMENTS, UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO VERIFY LOCATION OF ALL BELOW GROUND UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

NOTE: RIGHT-OF-WAY SHOWN PER PLANS BY McGEE PARTNERS FOR HENRY COUNTY SPLOST PROJECT NO. SP 3038 - ROCK QUARRY ROAD AT NORFOLK SOUTHERN RAILROAD, DATED 4/15/11.

**GRADING NOTES:** PLACEMENT AND COMPACTION

1. GROUND SURFACE PREPARATION: REMOVE VEGETATION INCLUDING GRASS, ROOTS, AND SURFICIAL ORGANICS, DEBRIS, UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACEMENT OF FILLS, FLOW STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERT. TO 2 HORIZ. SO THAT FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN EXISTING GROUND SURFACE HAS A DENSITY LESS THAN THAT SPECIFIED UNDER COMPACTION FOR PARTICULAR AREA CLASSIFICATION, BREAK UP GROUND SURFACE, PULVERIZE, MOISTURE CONDITION TO OPTIMUM MOISTURE CONTENT, AND COMPACT TO REQUIRED DEPTH AND PERCENTAGE OF MAXIMUM DENSITY.
2. PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 12 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT AND NOT MORE THAN 6 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
3. BEFORE COMPACTION, MOISTEN AND AERATE EACH LAYER AS NECESSARY TO PROVIDE OPTIMUM MOISTURE CONTENT. COMPACT EACH LAYER TO REQUIRED PERCENTAGE OF MAXIMUM DRY DENSITY OR RELATIVE DRY DENSITY FOR EACH AREA CLASSIFICATION. DO NOT PLACE BACKFILL OR FILL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN OR CONTAIN FROST OR ICE.
4. COMPACT SUBGRADE AND EACH LAYER OF BACKFILL OF FILL MAT'L TO AT LEAST 95 % OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY TO A DEPTH OF 6" BELOW BOTTOM OF FINAL GRADE.
5. MOISTURE CONTROL: WHERE SUBGRADE OR LAYER OF SOIL MATERIAL MUST BE MOISTURE CONDITIONED BEFORE COMPACTION, UNIFORMLY APPLY WATER TO SURFACE OF SUBGRADE OR LAYER OF SOIL MAT'L. APPLY WATER IN MINIMUM QUANTITY AS NECESSARY TO PREVENT FREE WATER FROM APPEARING ON SURFACE DURING OR SUBSEQUENT TO COMPACTION OPERATIONS.
6. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, SOIL MATERIAL THAT IS TOO WET TO PERMIT COMPACTION TO SPECIFIED DENSITY.
7. SPREAD SOIL MATERIAL THAT HAS BEEN REMOVED BECAUSE IT IS TOO WET TO PERMIT COMPACTION. ASSIST DRYING BY DISCING, HARROWING, OR PULVERIZING UNTIL MOISTURE CONTENT IS REDUCED TO A SATISFACTORY VALUE.
8. GEOTECHNICAL SPEC'S DEPICTED HEREON ARE GUIDELINES ONLY AND SHOULD BE VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. RECOMMENDATIONS FROM A REGISTERED GEOTECHNICAL ENGINEER (IF ANY) SHALL SUPERSEDE THE ABOVE REFERENCED SPEC'S.
9. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OF THE DISCOVERY OF ANY GROUNDWATER, SUBSURFACE SEEPAGE OR SPRINGS DURING THE COURSE OF CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO CONSULT WITH A REGISTERED GEOTECHNICAL ENGINEER TO INSPECT THE SITE, AND TO MAKE ANY RECOMMENDATIONS REGARDING EVIDENCE AND REMEDIATION (IF ANY) OF SAID SUBSURFACE WATERS.
10. ALL CUT AND FILL SLOPES (WITH THE EXCEPTION OF DETENTION AND SEDIMENT PONDS) SHALL BE LESS THAN OR EQUAL TO 2:1. POND SLOPES SHALL BE 3:1 UNLESS OTHERWISE NOTED.

**SUMMARY OF QUANTITIES**

**WATER SYSTEM**

ITEM	DESCRIPTION	QTY	UNIT
	8" DIA. DUCTILE IRON WATER PIPE CLASS 50	410	LF
	8" 45° BEND	4	EA
	TIE TO EXISTING WATER MAIN	2	EA
	TRANSFER EXISTING 2" COPPER WATER SERVICE	1	EA
	TRANSFER EXISTING 1" COPPER WATER SERVICE	1	EA
	8" GV & BOX W/CONC. MARKER	2	EA
	2" COPPER BLOW-OFF W/METER BOX	1	EA
	CHLORINATION AND TESTING	410	LF

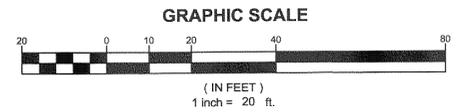
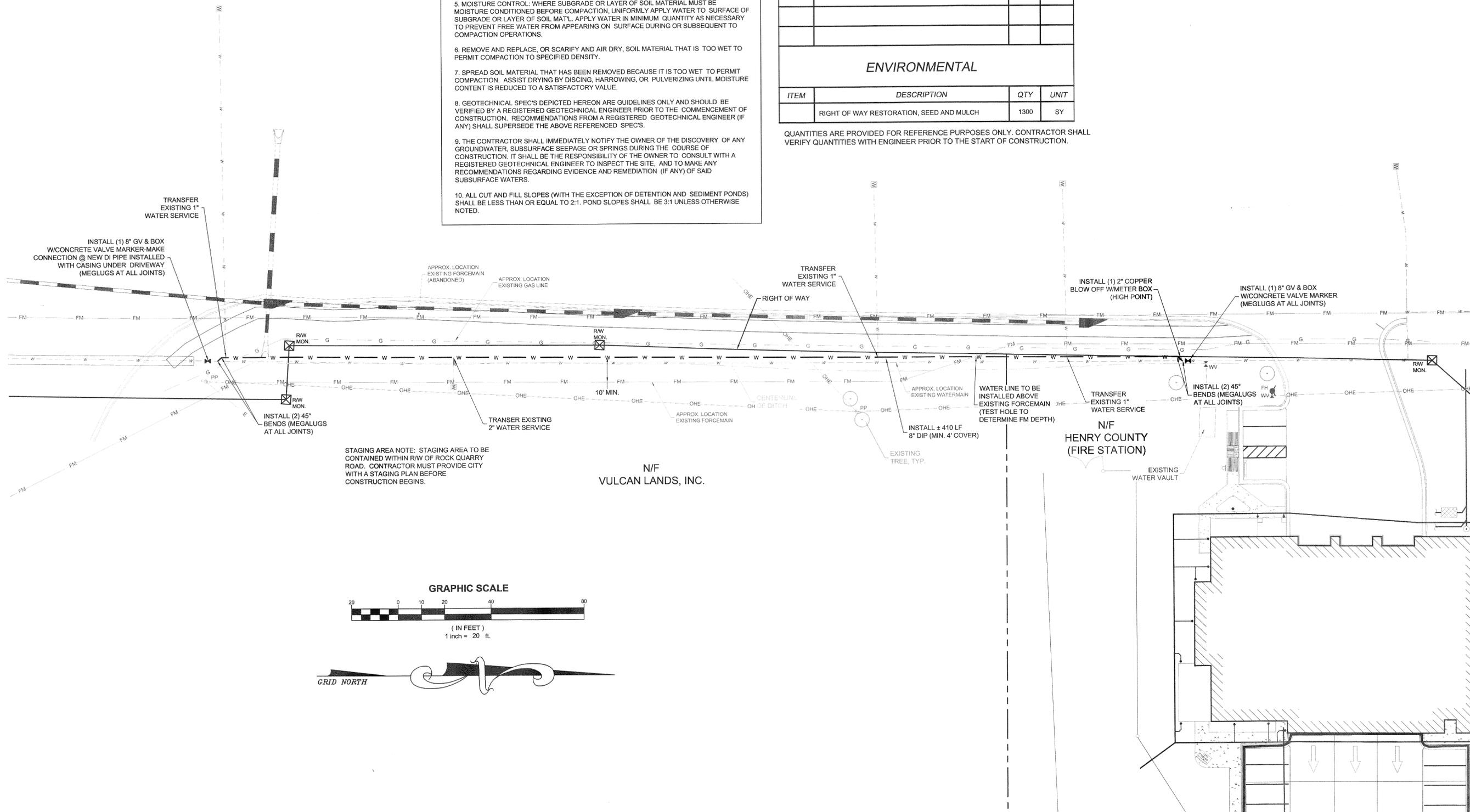
**ENVIRONMENTAL**

ITEM	DESCRIPTION	QTY	UNIT
	RIGHT OF WAY RESTORATION, SEED AND MULCH	1300	SY

QUANTITIES ARE PROVIDED FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL VERIFY QUANTITIES WITH ENGINEER PRIOR TO THE START OF CONSTRUCTION.

**CONTRACTOR NOTES:**

1. THE LOCATION OF ALL EXISTING UTILITIES IS SHOWN FOR GRAPHICAL PURPOSES AND SHOULD BE FIELD VERIFIED PRIOR TO THE START OF CONSTRUCTION.
2. ANY OFF-SITE EASEMENTS SHALL BE ACQUIRED BY THE CITY OF STOCKBRIDGE PRIOR TO THE START OF CONSTRUCTION.
3. ANY EXISTING WATER SERVICES SHALL BE CONNECTED TO THE NEW WATER MAIN.
4. CONTRACTOR TO NOTIFY CITY OF STOCKBRIDGE 24 HOURS PRIOR TO TAPPING EXISTING WATER MAIN.
5. CONTRACTOR TO REPAIR ALL DISTURBANCE ASSOCIATED WITH WATER LINE CONSTRUCTION TO EXISTING CONDITIONS AND COORDINATE WITH HENRY COUNTY SPLOST AND ROAD CONTRACTOR FOR APPROVAL PRIOR TO COMPLETION OF WORK UNDER THIS CONTRACT.



WATER RELOCATION PLAN  
FOR  
**ROCK QUARRY ROAD  
WATER MAIN RELOCATION #2**  
LOCATED IN:  
Henry County, Georgia

**REVISIONS**

NO.	DATE	DESCRIPTION
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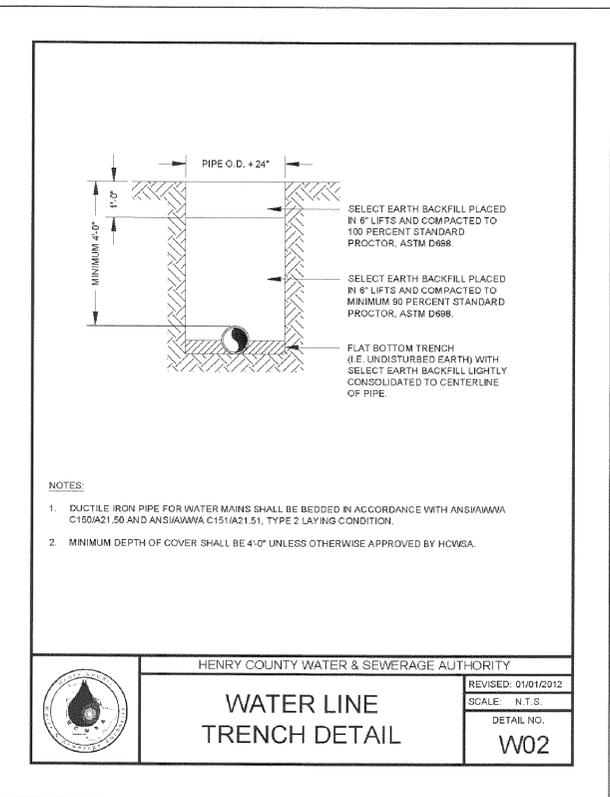
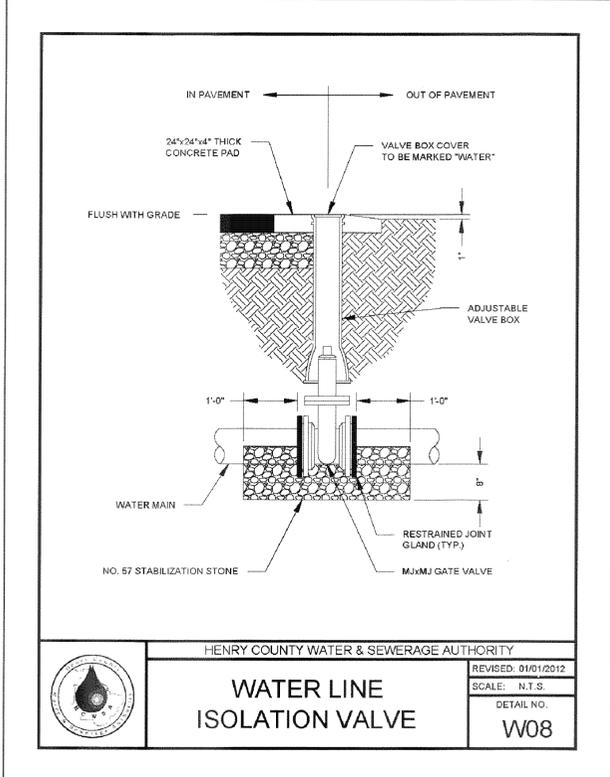
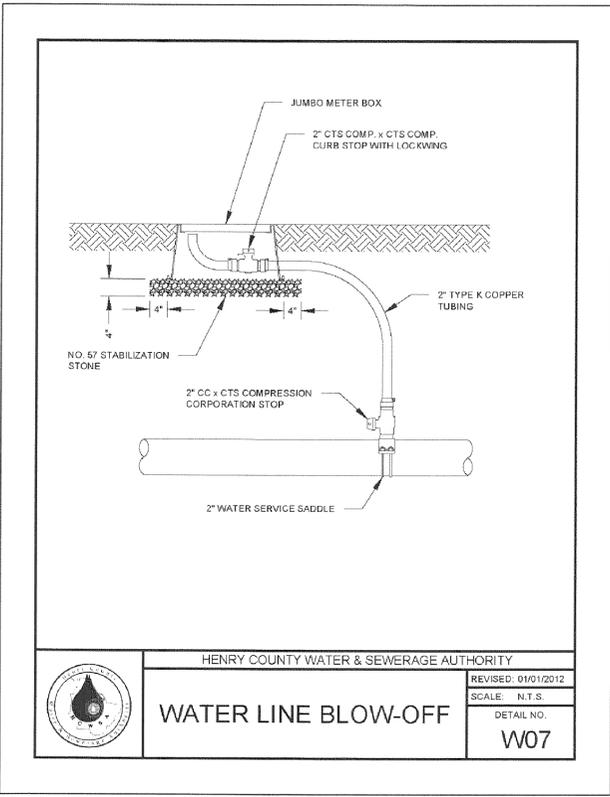
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DRAWN BY:	ALP

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SHEET NUMBER  
**3.0**

WATER DETAIL SHEET  
 FOR  
**ROCK QUARRY ROAD**  
**WATER MAIN RELOCATION #2**  
 LOCATED IN:  
 Henry County, Georgia



- NOTES:
1. DUCTILE IRON PIPE FOR WATER MAINS SHALL BE BEDDED IN ACCORDANCE WITH ANSIAWWA C150/A21.50 AND ANSIAWWA C151/A21.51, TYPE 2 LAYING CONDITION.
  2. MINIMUM DEPTH OF COVER SHALL BE 4'-0" UNLESS OTHERWISE APPROVED BY HCWSA.

REVISIONS

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 OR: 800-4-A-DIG

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SCALE:	NTS
FILE NUMBER:	ROCK QRY
DRAWN BY:	ALP

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 No. 030440  
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