

SMH
IM 1060.01
IN: 1047.41
IN: 1047.51
OUT: 1046.36

CHEDDAR'S AS-BUILT 6.2.10

Scale: 1" = 20'

KEY NOTES

- LIMITS OF CONSTRUCTION
- GC SHALL INSTALL 6" PVC SANITARY SEWER
- GREASE TRAP SEE MEP DWGS
- GAS COMPANY WILL INSTALL METER AND SERVICE LINE. GC SHALL COORDINATE.
- 1 - 4" PVC CONDUITS AND PULL WIRE FOR UG TELEPHONE SERVICE.
- POINT OF CONNECTION FOR TELEPHONE SERVICE.
- PRIMARY FEEDER & PRIMARY CONDUIT
- TRANSFORMER & PAD
- NOT USED
- NOT USED
- 2" DOMESTIC WATER METER DETAIL 1 / C602 RPZ BACKFLOW DETAIL 2 / C602
- GC SHALL INSTALL 2" COPPER DOMESTIC WATER SERVICE
- NEW FIRE HYDRANT BY GC SEE DETAIL 6 / C602
- 8" DDC -- SEE DETAIL 1 / C602
- PDC - SEE MEP / ARCHIT DRAWINGS
- GC SHALL INSTALL CLASS 50 DUCTILE IRON FIRE SERVICE
- 2 EACH 4" PVC IRRIGATION SLEEVES
- 8" TAP & VALVE-POINT OF CONNECTION SEE DETAILS 7 & 9 / C602
- IRRIGATION WATER METER WITH RPZ BACKFLOW DETAIL 2 / C602
- SITE LIGHT -- SEE MEP DRAWINGS
- CLEANOUT SEE DETAIL 4 / C602
- 1" TAP & VALVE POINT OF CONNECTION
- ELECTRIC METER--SECONDARY SERVICE
- 2" PVC SLEEVE--FUTURE CATV SERVICE
- 1" CONDUIT - POWER TO RPZ ENCLOSURE
- 1" CONDUIT - (TAMPER) SWITCH MONITORING
- POST INDICATOR VALVE - DETAIL 8 / C603
- MANHOLE - DETAIL 5 / C603
- DROP MH (RELINER) IN EXISTING MH DETAIL 5/C602

NEW FIRE HYDRANT CALCULATION

8" PIPE	210
8" 45 DEGREE BEND	9
8" TEE (BRANCH)	80
8" GATE VALVE	4
TOTAL EQUIVALENT FEET OF PIPE	263

FRICTION LOSS PER WILLIAM-HAZEN FORMULA
ASSUME C = 140

$$F = 0.2083 (100/140)^{4.73} \times 2000^{1.77} \times 8^{4.73}$$

$$F = 5.77 \text{ PER 100 LF OF 8" PIPE}$$

5.77 X 2.63 = 16 FEET OR	7 POUNDS
8" CHECK VALVE ASSEMBLY =	4 POUNDS
TOTAL ESTIMATE PRESSURE DROP AT 2000 GPM =	11 POUNDS

STATIC PRESSURE =	86 POUNDS
LOSSES =	11 POUNDS
ESTIMATED RESIDUAL	75 POUNDS @ 2000 GPM

APPROXIMATE
LOCATION OF FIRE
HYDRANT PER
FDL& ASSOC., JOB
NO. 0022
HYDRANT # 1152

HYDRANT # 1152
STATIC PRESSURE
RA RESIDUAL PRESSURE
RA PITOT PRESSURE
RA FLOW RATE
RA FLOW RATE @ 20 PSI
RA FLOW RATE @ 0 PSI
RA NFPA CLASS
RA LAST FLOW DATE

-DATA TAKEN FROM WVVVA WEBSITE

SLEEVING NOTES

- CONTRACTOR SHALL LAY SLEEVES AND CONDUITS AT TWENTY-FOUR (24) INCHES BELOW FINISH GRADE OF THE TOP OF PAVEMENT.
- CONTRACTOR SHALL EXTEND SLEEVES TWO (2) FEET BEYOND EDGE OF RAIL PAVEMENT
- CONTRACTOR SHALL CAP PIPE ENDS USING PVC CAPS.
- ALL SLEEVES SHALL BE 4" DIAMETER SCHEDULE 40 PVC PIPE.
- CONTRACTOR SHALL FURNISH OWNER AND IRRIGATION CONTRACTOR WITH AN "AS-BUILT" DRAWING SHOWING ALL SLEEVE LOCATIONS.

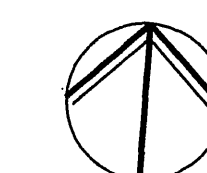
- NOTES:
- THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS SATISFACTION PRIOR TO CONSTRUCTION. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS, AND ANY DAMAGE TO THEM SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT UTILITY EXIT POINTS, EXIT PORCHES, ETC.
 - ALL WATER LINES SHALL BE INSTALLED WITH A MINIMUM OF 36" OF COVER.
 - REFER TO WVVVA STANDARDS FOR SPECIFICATIONS AND ILLUSTRATIONS OF TYPICAL FIRE AND DOMESTIC SERVICE INSTALLATION.
 - THIS SITE INDICATES POTABLE WATER SERVICE LINES AND SANITARY SEWER LATERALS. VIRGINIA STATE LAW REQUIRES THIS WORK TO BE INSTALLED BY A VIRGINIA LICENSED MASTER PLUMBER.
 - ALL SLEEVES FOR IRRIGATION LINES SHALL BE 4" DIAMETER SCHEDULE 40 PVC PIPE.
 - ALL FIRE SERVICE LINES AND APPURTENANCES SHALL CONFORM WITH NFPA STANDARD 24.
 - PRIOR TO START OF WORK, THE CONTRACTOR SHALL CONDUCT A FIRE HYDRANT FLOW TEST OR OBTAIN DATA, PERFORM SPRINKLER HYDRAULIC CALCULATIONS AND VERIFY FIRE SERVICE PIPE SIZE.
 - CONTRACTOR SHALL COORDINATE WATER TAP WITH WVVVA. ALL TAPS SHALL BE MADE BY WVVVA.
 - CONTRACTOR SHALL PROVIDE ALL TAPPING SLEEVES & VALVES.

LEGEND

PROPOSED	DESCRIPTION
—	CONCRETE PARKING BLOCK
—	HANDICAP SYMBOL
—	SIGN
—	STRIPING
—	SITE LIGHTING
—	WATER LINE
—	UNDERGROUND ELECTRIC LINE
—	SANITARY SEWER LINE
—	UNDERGROUND GAS LINE
—	UNDERGROUND TELEPHONE LINE
—	UNDERGROUND CABLE TV LINE

UTILITY PLAN

ROANOKE, VIRGINIA

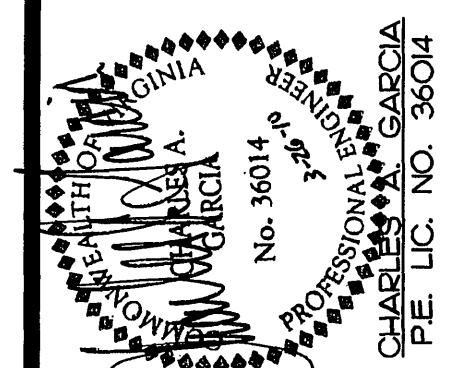


SCALE 1" = 20'

APPROVED
APR 16 2010

REVISIONS	BY
CITY COMMENTS 01-25-2010	JN
CITY COMMENTS 02-22-2010	JN
GENERAL REVISION 03-09-2010	JN
COORDINATION 03-17-2010	JN
CITY COMMENTS 03-26-2010	JN

BIDDERS SHALL NOT CONTACT THE ENGINEER
FREELAND and KAUFFMAN, INC.
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CHEDDAR'S CASUAL CAFE
CHEDDAR'S DEVELOPMENT
2250 JOHN CARPENTER FREEWAY
SUITE 560
IRVING, TEXAS 75063

DRAWN	JTN
CHECKED	JDC
DATE	11/25/09
SCALE	1" = 20'
DRAWING	CIO3

As-Built 6.25.10 K. Winslow