

Site identification
 Well DES MOINES SAYLORVILLE
 Property Owner WATER WORKS Other ID WELL 2
 Address 2201 GEORGE FLAGG PKWY
 Tenant DES MOINES, IOWA
 Well Depth 47' ft Date completed 11 / 22 / 2010

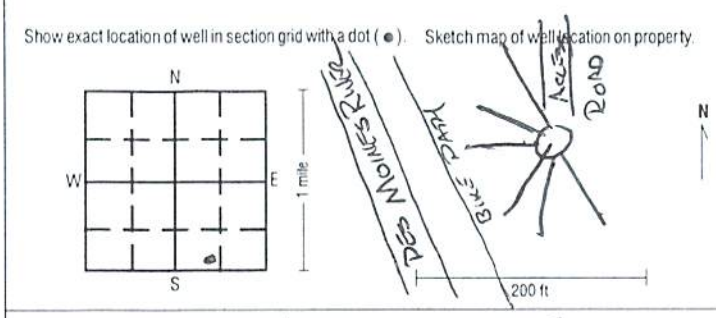
Drill method rotary auger cable other CASSON
Hole size
198 inch from 0 ft to 46.5 ft hole size continued
 _____ inch from _____ ft to _____ ft
 _____ inch from _____ ft to _____ ft

Location County POLK
1/10 mi. ^N and 1/2 mi. ^E of intersection of NW 54th and NW 26th
SE 1/4 of the SW 1/4 of the SE 1/4 of Sec 8 TWP 79 RNG 24

Record all depth measurements from ground level (GL). Use (+) for above GL measurements.
Casing Drive shoe (yes/no) _____ Pitless adapter (yes/no) _____

Size (ID/OD)	Type / Wt	Depth top	Depth bottom	Amount (length)
<u>156/198</u>	<u>CONCRETE</u> <u>12,160</u>	<u>41.5</u>	<u>46.5</u>	<u>5'</u>
<u>156/192</u>	<u>10,250</u>	<u>+12.1</u>	<u>41.5</u>	<u>53.6</u>

GPS Coordinates (NAD83 datum only) decimal degrees:
 _____ N. Latitude _____ W. Longitude.



Perforated or slotted casing? (yes/no) no
 Perforated / slotted from _____ ft to _____ ft
 Perforated / slotted from _____ ft to _____ ft

upland hillside valley level surface Elevation (if known) 800.0

Casing grouted? (yes/no) no Placement method _____

Type	Depth top	Depth bottom	Amount (vol/wt)
<u>CEMENT-GROUT</u>	<u>0</u>	<u>7</u>	
<u>BENTONITE SLURRY</u>	<u>7</u>	<u>41</u>	

Formation log

From	To	Color	Hardness	Formation description
<u>0</u>	<u>9</u>	<u>DBRN BLACK</u>	<u>FIRM</u>	<u>CLAYEY SILT</u>
<u>9</u>	<u>15</u>	<u>REDISH BROWN</u>	<u>V. SOFT</u>	<u>CLAYEY SANDY SILT</u>
<u>15</u>	<u>19</u>			<u>SILTY SAND TO SANDY SILT</u>
<u>19</u>	<u>29</u>	<u>BROWN</u>	<u>LOOSE</u>	<u>SAND & GRAVEL</u>
<u>29</u>	<u>34</u>	<u>GRAY</u>	<u>LOOSE</u>	<u>S & G</u>
<u>34</u>	<u>34</u>	<u>BLACK</u>	<u>SOFT</u>	<u>SILTY CLAY</u>
<u>34</u>	<u>39</u>	<u>GRAY</u>	<u>LOOSE</u>	<u>S & G</u>
<u>39</u>	<u>49</u>	<u>BROWNISH GRAY</u>	<u>LOOSE</u>	<u>S & G</u>
<u>49</u>		<u>GRAY</u>	<u>HARD</u>	<u>SHALE</u>

Well screen? (yes/no) no 6 LATERALS, 1175' TOTAL

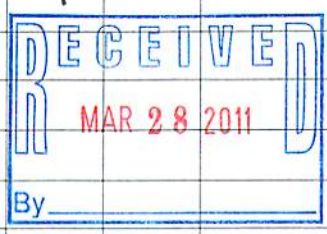
Diameter	Slot size	Depth top	Depth bottom	Length	Material
<u>12.75</u>	<u>0.30</u>	<u>39.3</u>			
	<u>0.150</u>		<u>40.3</u>	<u>1115</u>	<u>304 SS</u>

 ENDS
 Bottom capped (yes/no) no with 304 SS. PLATE
 Seals / Packers (yes/no) _____ kind _____ depth _____ ft
 Gravel packed (yes/no) _____ from _____ ft to _____ ft
 type _____ amount _____

Well developed? (yes/no) no
 Explain JETTED, SURGED, RAWHIDED, FLUSHED
 (pumped, airlifted, bailed) for WEEKS hrs at 1000 GPM

Pump installed? (yes/no) no Date _____ / _____ / _____
 Installer's name CL. CARROLL STARTED NOV 2010
 Type of pump V. TURBINE Depth to intake 55 ft
 Pump diameter 16" Rated capacity 3500 GPM

Water information Aquifer: sand / gravel limestone sandstone
 Main water-supply zone from 9' ft to 49' ft seepage well
 Static water level 3 ft (below/above) GL; tape airline E-line estimate
 Pumping water level 22.9 ft below GL; tape airline E-line estimate
 At yield of 5430 GPM; orifice volumetric estimate for 76 hours
 Measurements taken at 13 : 02 (AM/PM) Date 10 / 30 / 07

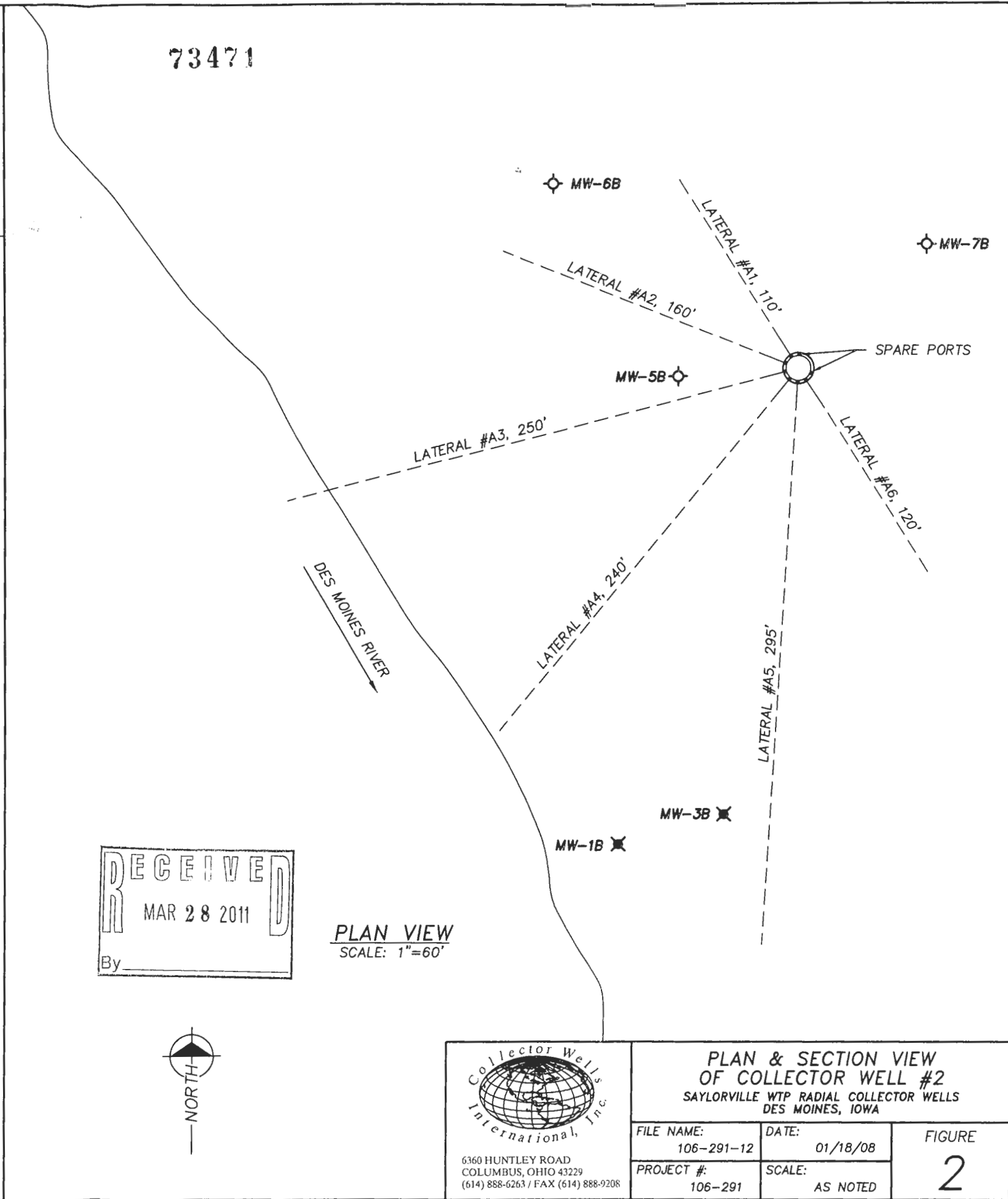
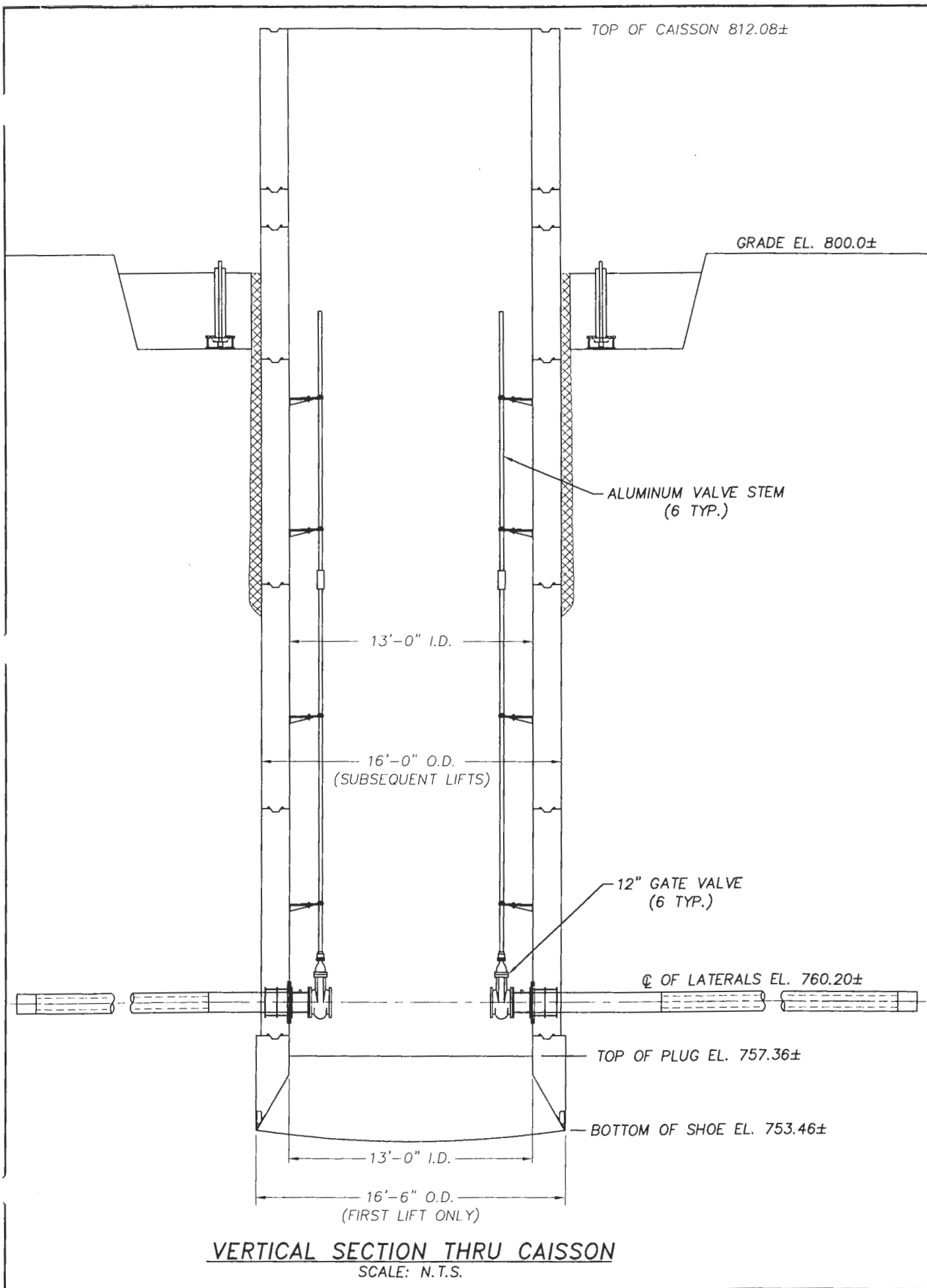


Remarks (including depth of lost drilling fluids, materials, or tools)

Water quality test? (yes/no) no Date tested 10 / 30 / 07
 Tested by KEYSTONE LABS, NEWTON, IOWA

Well use
 Domestic Heat pump Commercial
 Livestock Municipal Monitoring
 Test well Public supply Other
 Irrigation

Contractor RANNEY COLLECTOR WELLS
 Address 6360 HUNTLEY ROAD, COLUMBUS, OH 43229
 Driller [Signature] Certification no. 5171



		PLAN & SECTION VIEW OF COLLECTOR WELL #2 SAYLORVILLE WTP RADIAL COLLECTOR WELLS DES MOINES, IOWA	
		FILE NAME: 106-291-12	DATE: 01/18/08
PROJECT #: 106-291	SCALE: AS NOTED		
6360 HUNTLEY ROAD COLUMBUS, OHIO 43229 (614) 888-6263 / FAX (614) 888-9208			