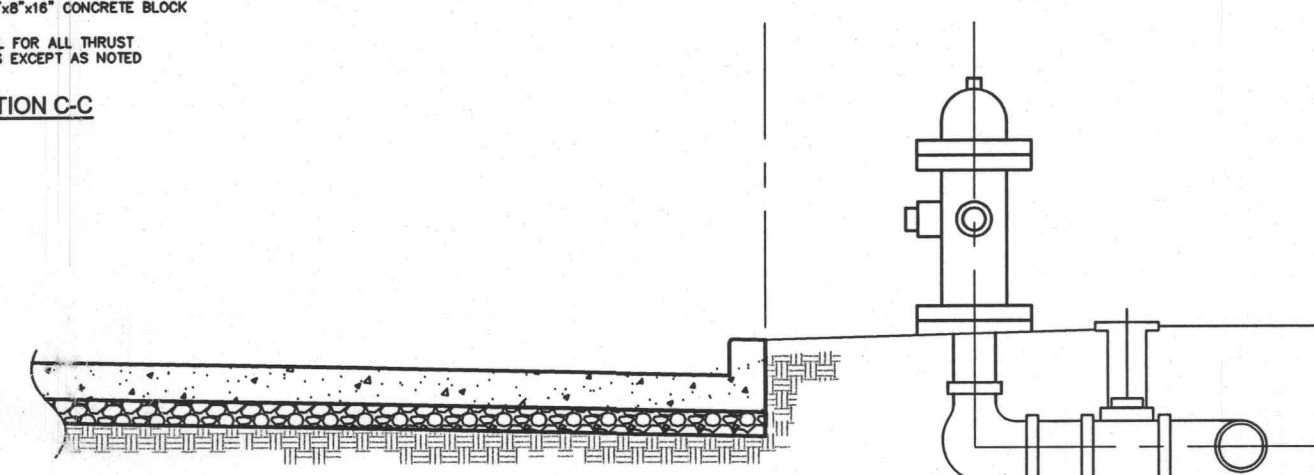


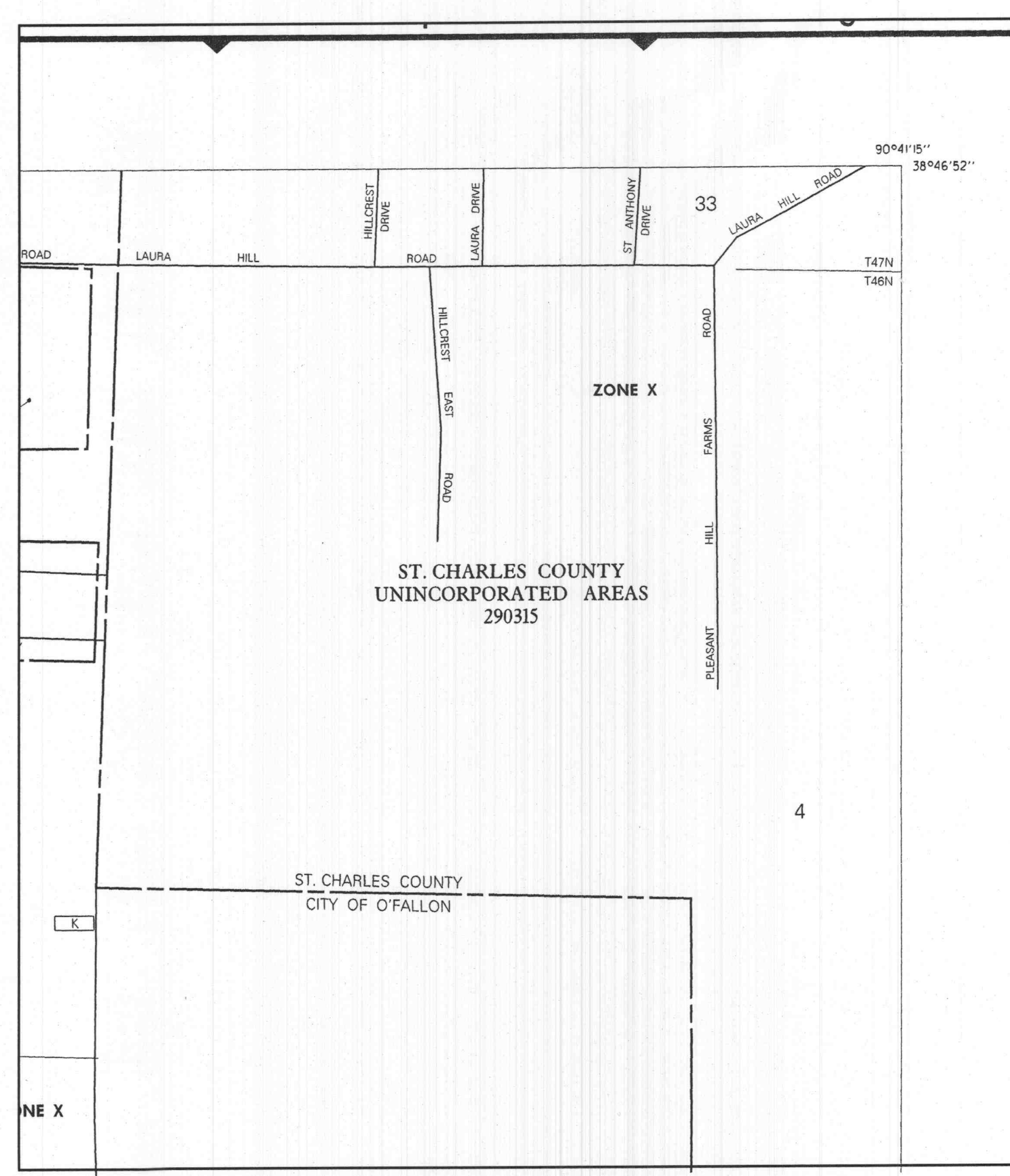
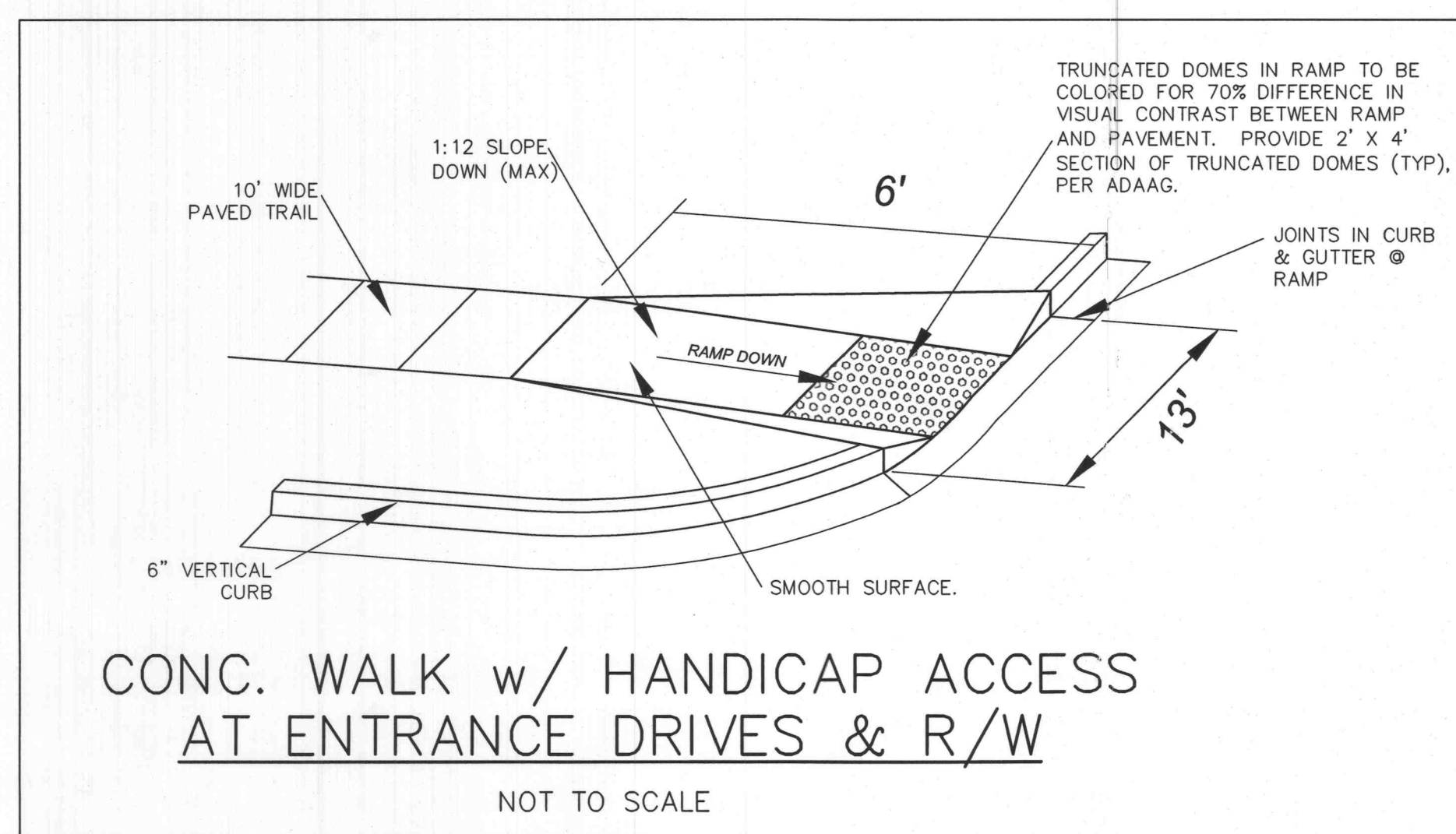
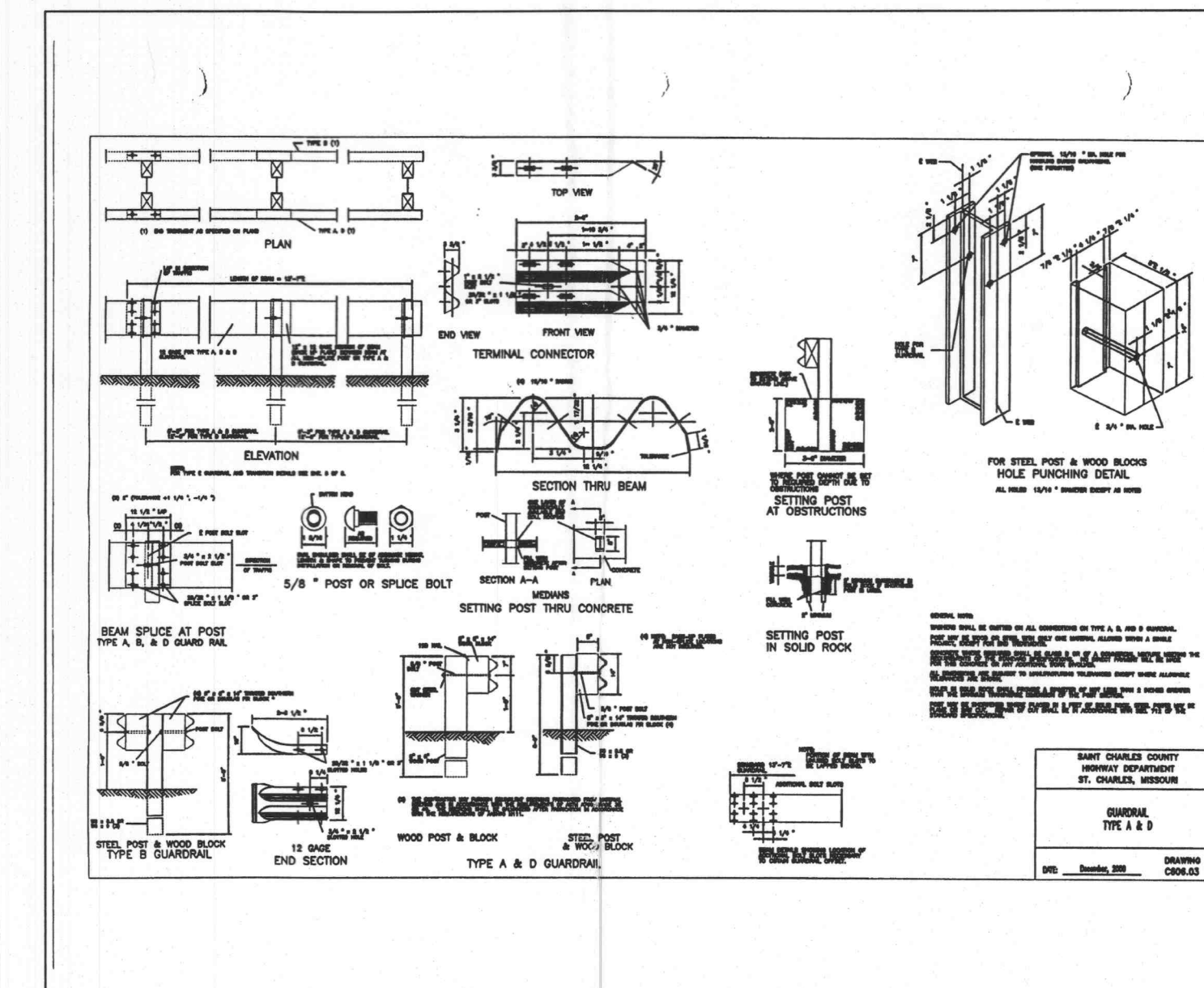
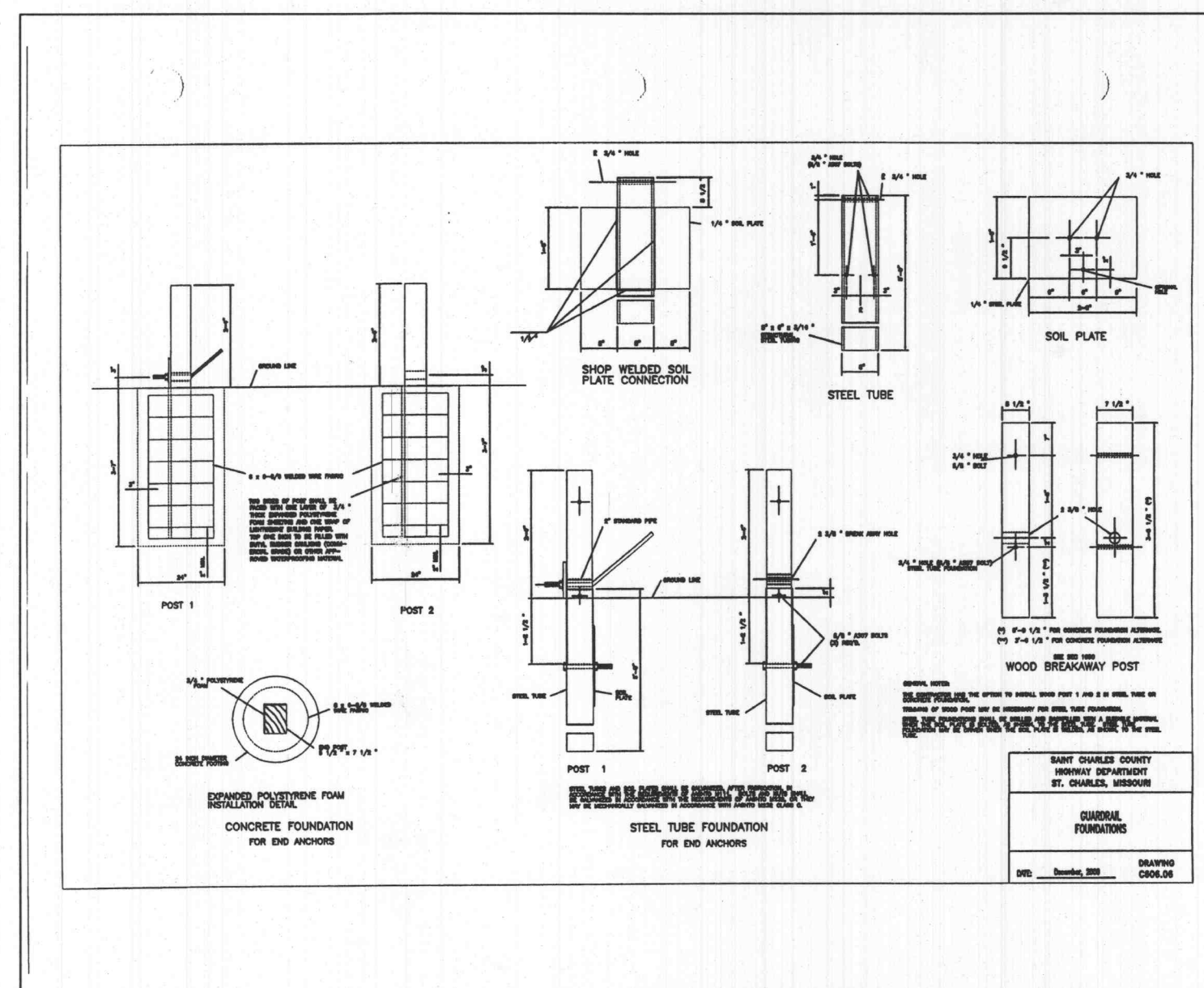
**THRUST BLOCK DETAILS**  
 N.T.S.

PIPE SIZE	THRUST BLOCK DIMENSIONING (INCHES)											
	TEE PLUG WYE BRANCH			90° BEND			45° BEND			22 1/2" BEND		
D	a	b	c	h	c	h	c	h	c	h	c	h
1 1/2"	6	1 1/2	4	4	4	4	3	3	4	2		
2"	8	2	9	3	9	3	5	3	4	2		
3"	10	3	14	5	14	5	7	5	6	3		
4"	11	4	20	10	24	12	17	9	13	6		
6"	17	6	27	15	34	17	24	13	18	9		
8"	22	8	38	19	44	22	34	17	24	12		
10"	27	10	46	23	54	27	40	20	28	14		
12"	32	12	56	28	64	32	48	24	34	17		

- WATER LINE NOTES:**
1. FIRE HYDRANT SHALL HAVE NOT LESS THAN TWO 2 1/2 INCH OUTLETS AND ONE 4 1/2 INCH OUTLET, A 5 1/4 INCH VALVE, A 6 INCH BARREL AND SHALL BE OF THE BREAKAWAY DESIGN, FROST FREE WITH CHAIN, LEFT HAND OPEN DESIGN AND HAVE NATIONAL STANDARD THREADS.
  2. MINIMUM FIRE FLOW FROM A SINGLE FIRE HYDRANT SHALL BE FIFTEEN HUNDRED (1500) GALLONS PER MINUTE AT TWENTY (20) PSI RESIDUAL PRESSURE.
  3. EACH FIRE HYDRANT SHALL BE PROVIDED WITH A CONTROL VALVE IN THE HYDRANT CONNECTION SUCH THAT THE HYDRANT CAN BE REMOVED FROM SERVICE WITHOUT SHUTTING OFF WATER SUPPLY TO OTHER FIRE HYDRANTS.
  4. THE CENTER OF A HOSE NOZZLE OUTLET SHALL NOT BE LESS THAN EIGHTEEN (18) INCHES ABOVE GRADE AND THE OUTLETS MUST FACE THE STREET OR ACROSS DRIVE.
  5. THERE SHALL BE NO OBSTRUCTIONS, I.E., PLANTINGS, BUSHES, TREES, SIGNS, LIGHT STANDARDS, MAILBOXES, ETC. WITHIN SIX (6) FEET OF ANY FIRE HYDRANT, AND/OR FIRE DEPARTMENT CONNECTION TO AN AUTOMATIC SPRINKLER SYSTEM.
  6. PUBLIC FIRE HYDRANTS SHALL HAVE THE BONNETS COLOR CODED IN ACCORDANCE WITH CITY OF FALLON, ST. CHARLES COUNTY, AND/OR ALLIANCE WATER DISTRICT STANDARDS.
  7. PUBLIC WATER DISTRICT #2 (ALLIANCE) AND ALL CITY STANDARDS TO BE FOLLOWED FOR ALL WATERLINE CONSTRUCTION.



**FIRE HYDRANT DETAIL**  
 N.T.S.



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD**

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet usually sheet flow on sloping terrain; average depths determined. For areas of shallow flow flooding, velocities also determined.
- ZONE AO** Flood depths of 1 to 3 feet usually sheet flow on sloping terrain; average depths determined. For areas of shallow flow flooding, velocities also determined.
- ZONE A99** To be protected from 100-year flood by Federal flood protection works under construction; no base elevations determined.
- ZONE V** Coastal flood with velocity hazard (wave action); no base elevations determined.
- ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

**FLOODWAY AREAS IN ZONE AE**

**OTHER FLOOD AREAS**

- ZONE X** Areas of 100-year flood areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile and areas protected by levees from 100-year flood.

**OTHER AREAS**

- ZONE X** Areas determined to be outside 500-year floodplain.
- ZONE D** Areas in which flood hazards are undetermined.

**UNDEVELOPED COASTAL BARRIERS**

- Identified 1993
- Identified 1990
- Other Protected Areas

**LEGEND**

- Flood Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones
- Base Flood Elevation Line: Elevation in Feet. See Map Index for Elevation Datum.
- Cross Section Line
- Base Flood Elevation in Feet (Where Uniform Within Zone. See Map Index for Elevation Datum, Elevation Reference Mark)
- River Mile

**NOTES**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planning features outside Special Flood Hazard Areas.

**NATIONAL FLOOD INSURANCE PROGRAM**

**FIRM FLOOD INSURANCE RATE MAP**

**ST. CHARLES COUNTY, MISSOURI AND INCORPORATED AREAS**

**PANEL 239 OF 525**  
 (SEE MAP INDEX FOR PANELS NOT PRINTED)

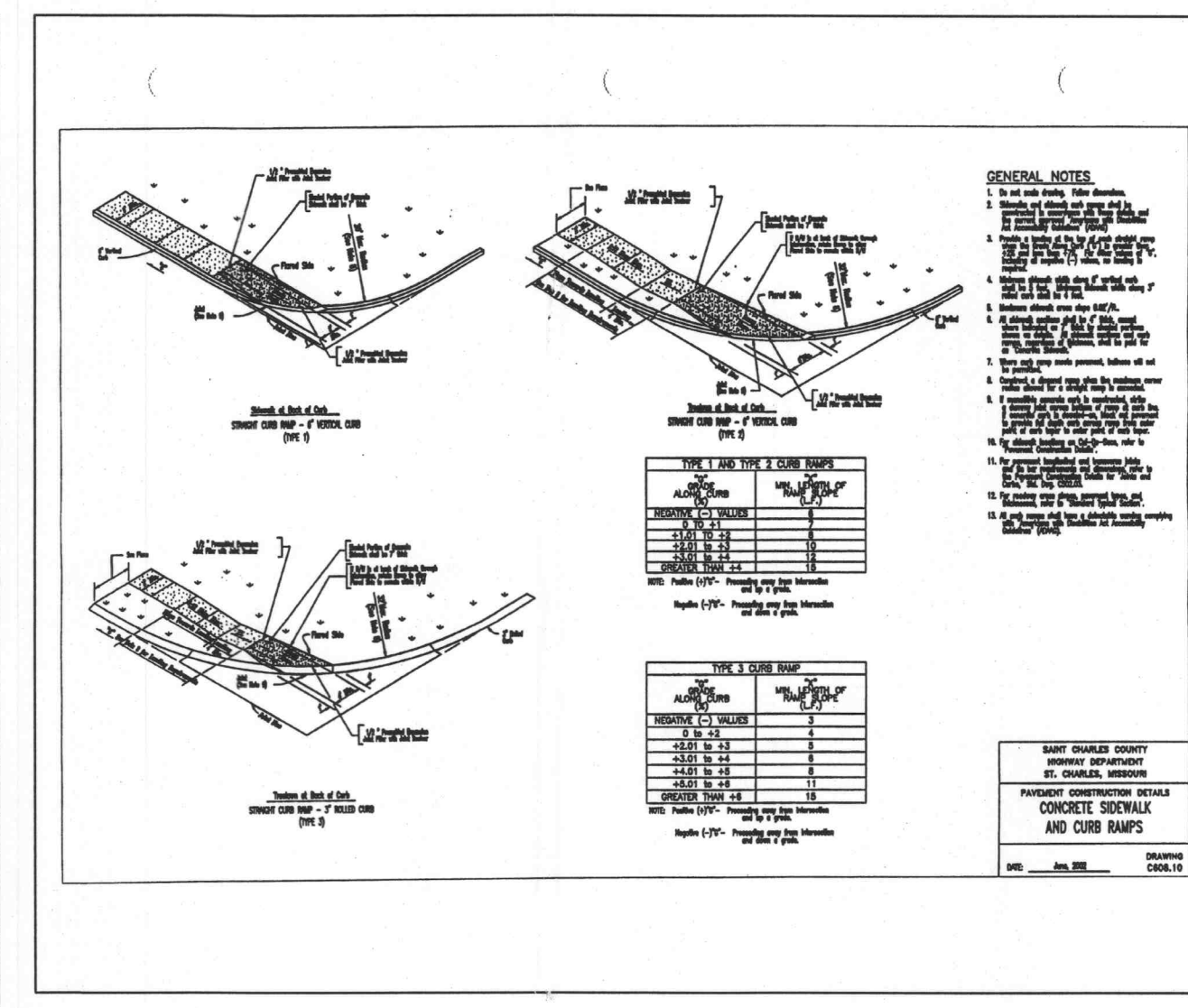
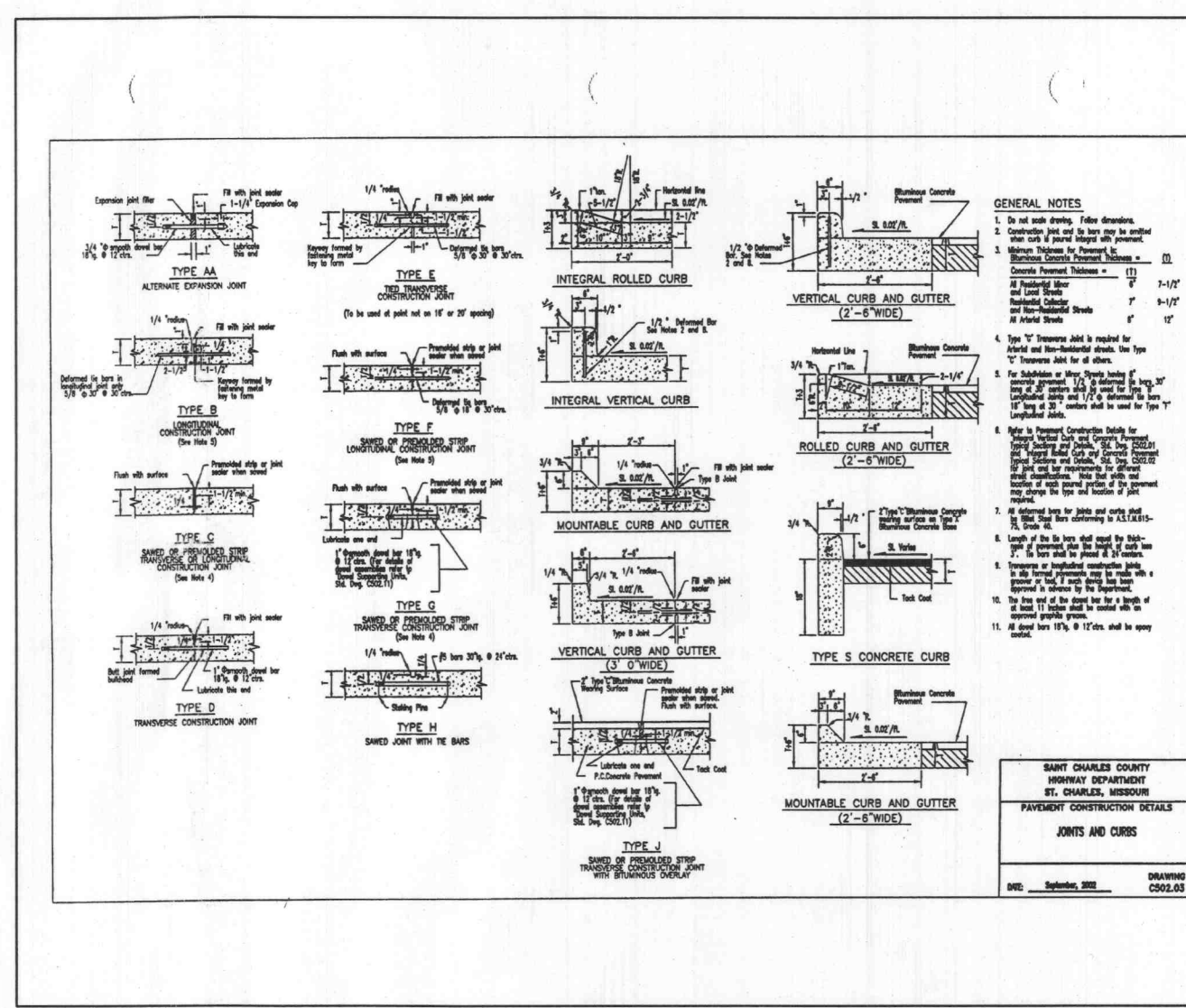
**CONTAINS:**

COUNTY	NUMBER	PANEL	SUFFIX
COPPELLVILLE CITY OF	290308	0239	E
COVINGTON TOWNSHIP OF	290309	0239	E
FALLON CITY OF	290310	0239	E
ST. CHARLES COUNTY UNINCORPORATED AREAS	290316	0239	E

**MAP NUMBER 29183C0239 E**

**MAP REVISED: AUGUST 2, 1996**

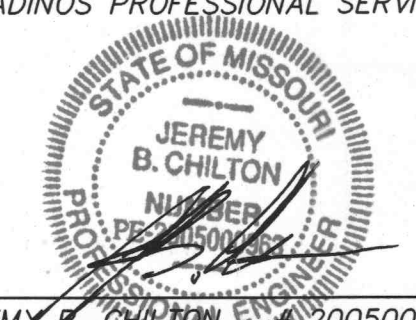
Federal Emergency Management Agency



**ENGINEERS' CERTIFICATION:**

The following applies to ALL sheets and documents involved in the preparation of the plans and documents for this project. The responsibility for Professional Engineering liability on this project is limited to the set of plans displaying the signature and an original stamped seal of the Engineer on each sheet. ALL responsibility is Disclaimed; until ALL review agency approvals are granted; for all other plan sheets issued prior to this plan set date; for this set when another set is issued after this date; if the sheets are used individually instead of a set. This applies for ALL sheets and documents involved in this project whether this statement appears on them or not. Copyright. All Rights Reserved.

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**O'FALLON P&Z # 3903.01**  
**-MISC. IMPROVEMENT DETAILS-**