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**CITY OF GROVELAND STANDARD DETAILS: STREET & DRAINAGE**

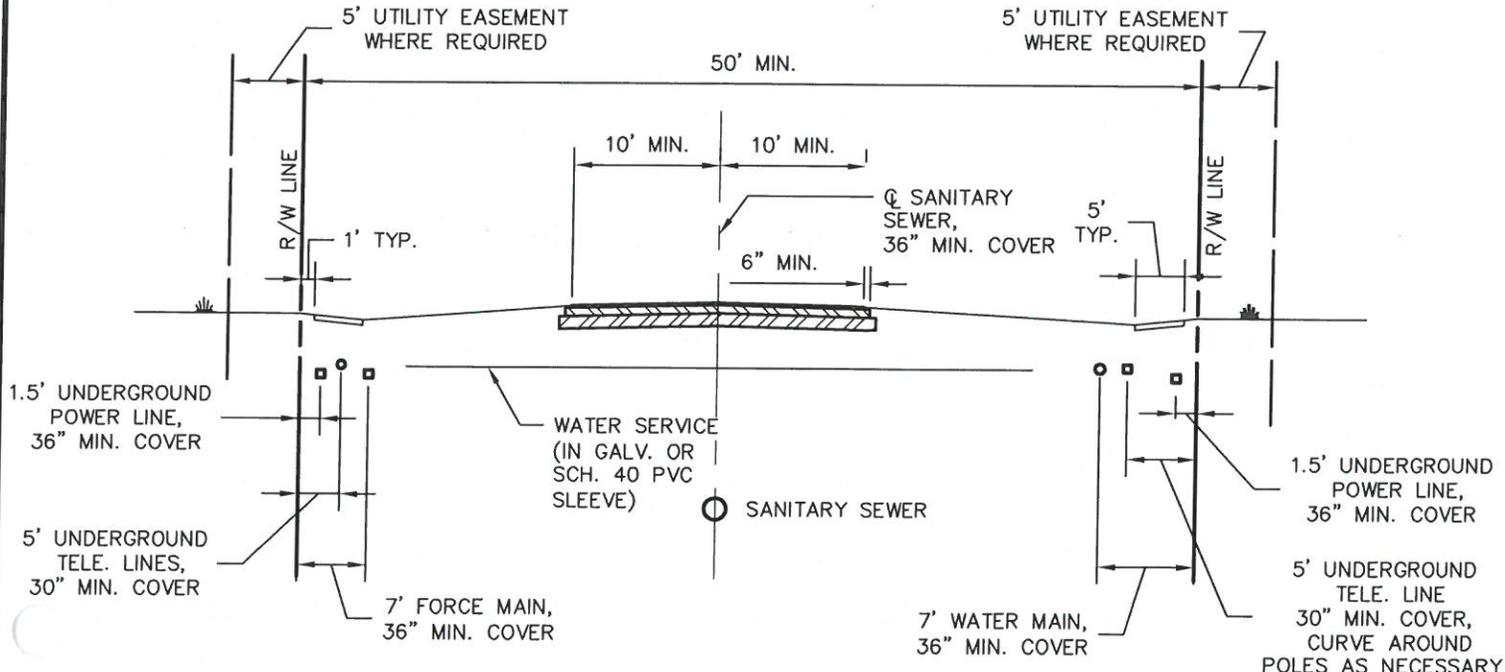


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**LISTING OF STREET &  
 DRAINAGE DETAILS**

DATE: JULY 7, 2008  
 SCALE: N.T.S.

**D-LIST**



**NOTES:**

1. SIDEWALKS SHALL BE A MINIMUM OF 5' WIDE AND 4" THICK, EXCEPT AT DRIVEWAYS WHERE THICKNESS SHALL BE 6".
2. ALL UTILITIES SHALL HAVE MARKER TAPE OR OTHER APPROVED MEANS OF IDENTIFICATION. REFER TO APPROPRIATE SECTION OF "CITY OF GROVELAND MANUAL OF STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE OF WATER AND SEWAGE SYSTEMS".
3. REFER TO APPROPRIATE SECTION OF "CITY OF GROVELAND MANUAL OF STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE OF WATER AND SEWAGE SYSTEMS", FOR SEWER AND WATER TRENCHING AND RESTORATION DETAILS, AND ELSEWHERE IN THESE DETAILS FOR OTHER UTILITIES TRENCHING AND RESTORATION.
4. FIRE HYDRANTS SHALL BE INSTALLED TO MINIMIZE THEIR VULNERABILITY TO TRAFFIC.

**CITY OF GROVELAND STANDARD DETAILS: STREET & DRAINAGE**

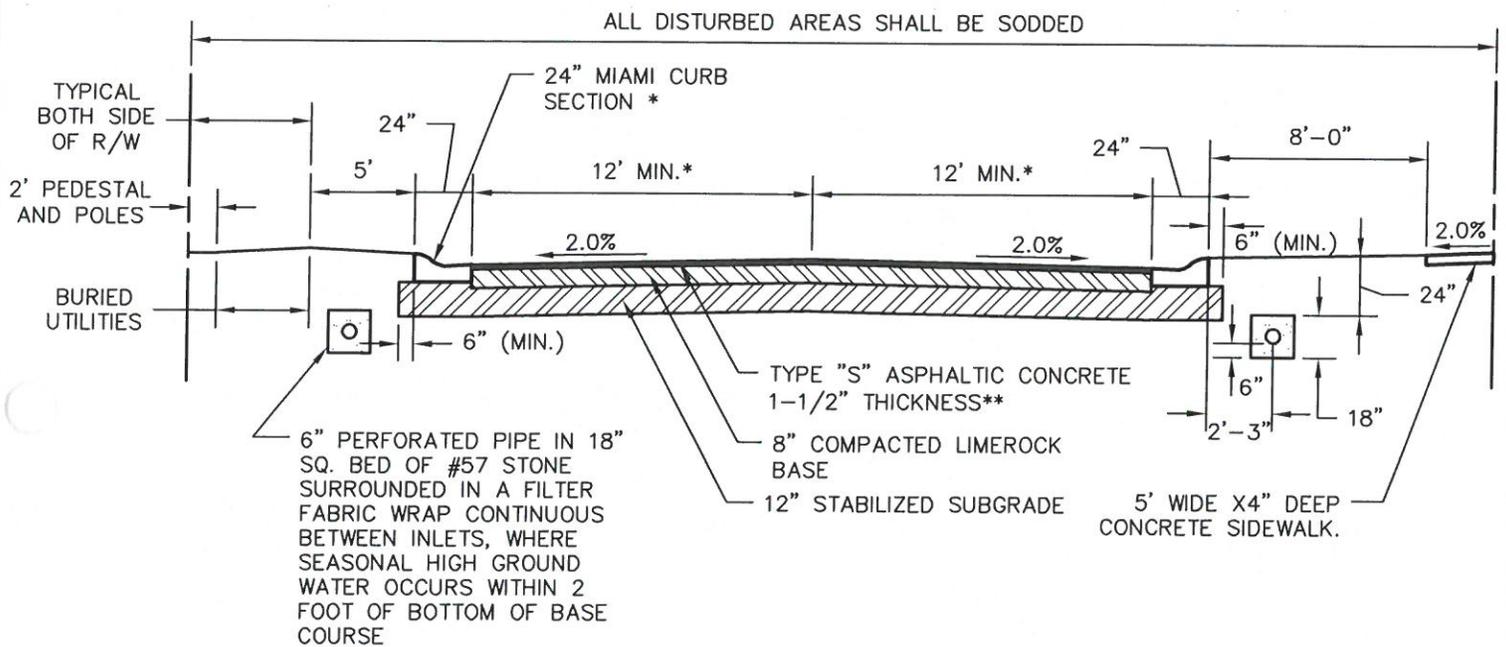


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**RECOMMENDED UTILITIES LOCATIONS**

DATE: JULY 7, 2008  
 SCALE: N.T.S.

D-1



**NOTES:**

- \* UNLESS OTHERWISE APPROVED BY CITY
- \*\* TYPE "S" TO BE MINIMUM OF 2 INCH THICKNESS FOR COLLECTOR STREET
- \*\*\* REFER TO D-1 FOR RECOMENDED UTILITIES LOCATIONS

**CITY OF GROVELAND STANDARD DETAILS: STREET & DRAINAGE**

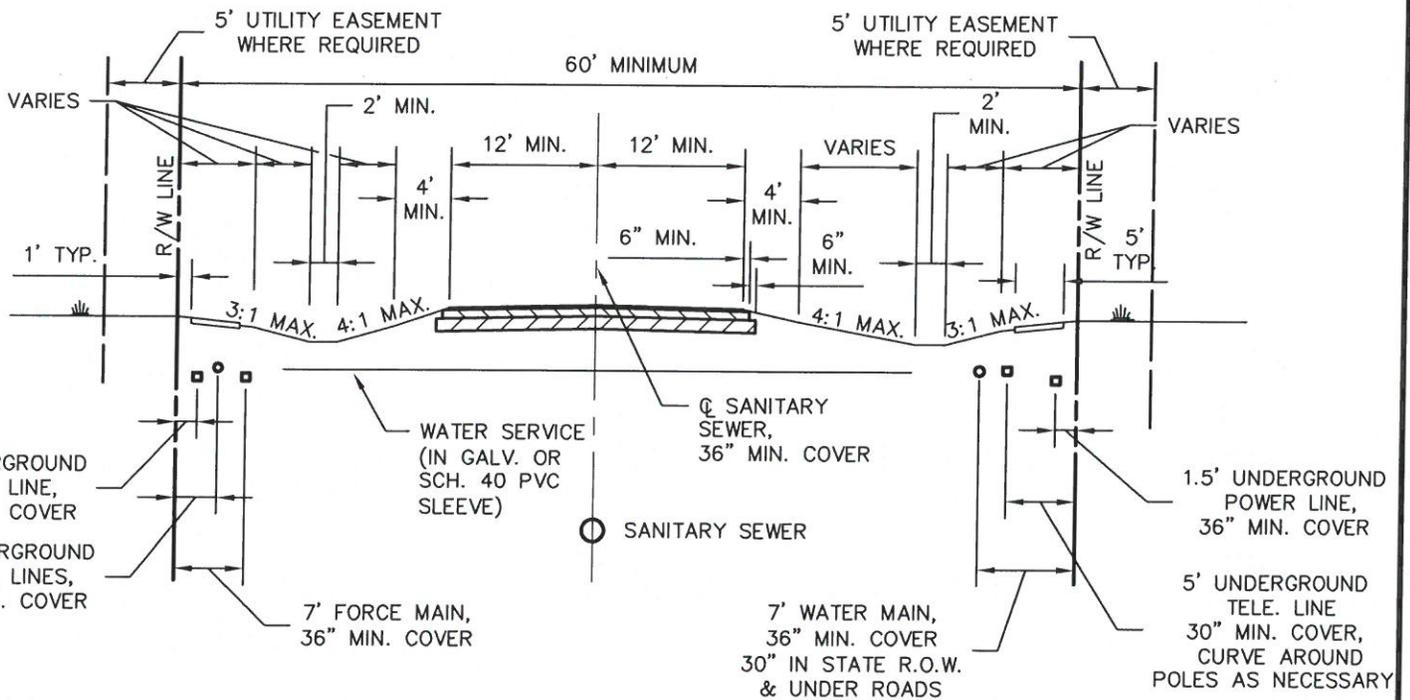


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**TYPICAL STREET SECTION  
 WITH  
 CURB & GUTTER**

DATE: JULY 7, 2008  
 SCALE: N.T.S.

**D-2**



CITY OF GROVELAND STANDARD DETAILS: STREET & DRAINAGE

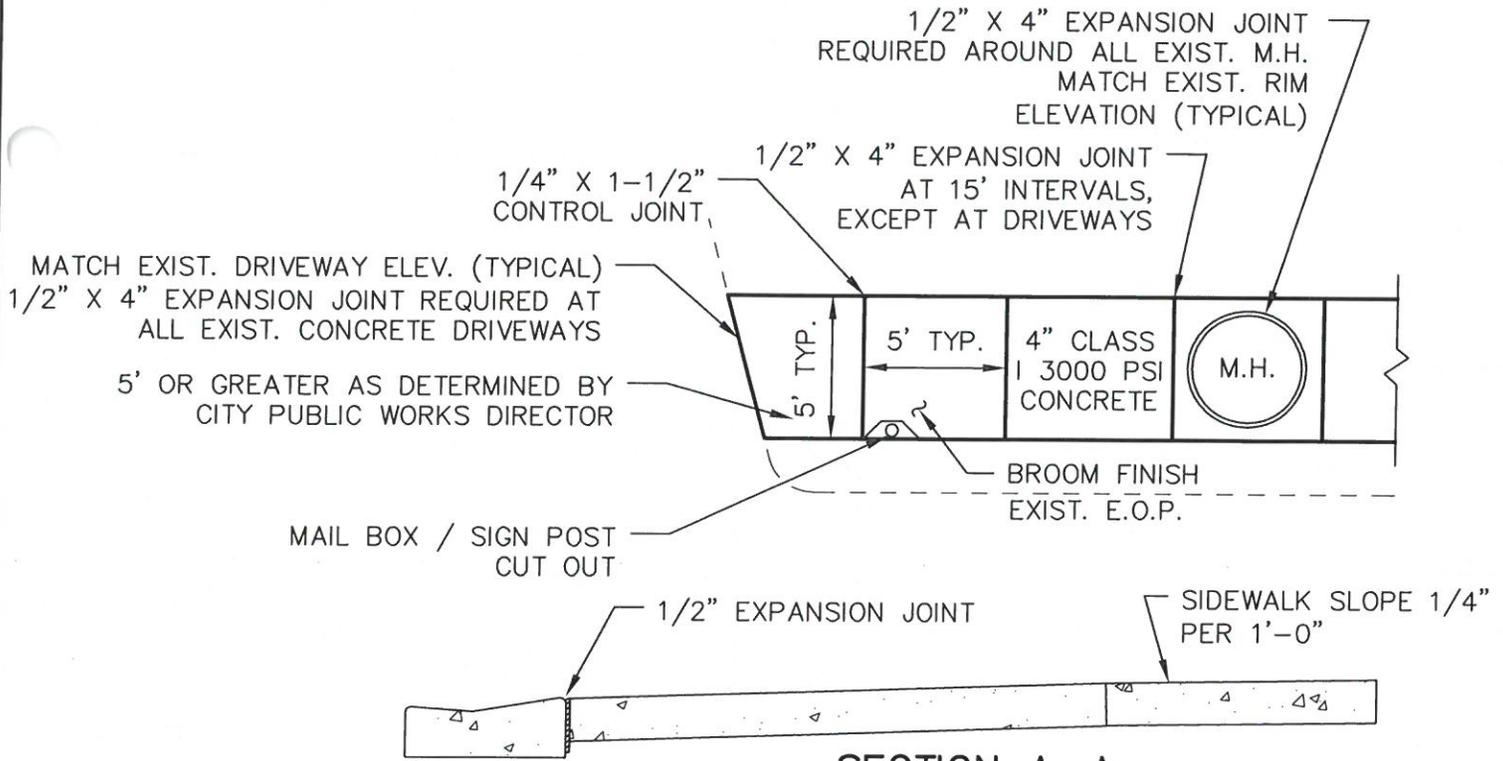


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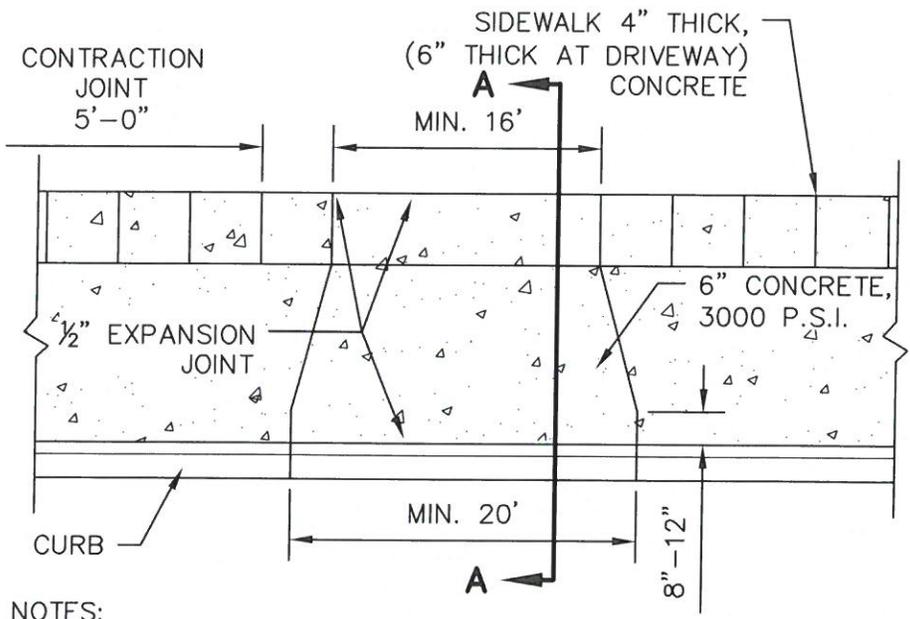
**TYPICAL STREET RURAL SECTION (NON-GUTTERED)**

DATE: JULY 7, 2008  
 SCALE: N.T.S.

D-3



**SECTION A-A**



**NOTES:**

1. SIDEWALKS SHALL BE 4" THICK EXCEPT AT DRIVEWAYS WHERE THICKNESS SHALL BE 6".
2. SIDEWALK WIDTH SHALL BE 5 FEET UNLESS OTHERWISE DIRECTED BY CITY OF GROVELAND.
3. APRON WIDTH AT STREET SHALL BE A MINIMUM OF 2 FEET GREATER THAN DRIVEWAY WIDTH.
4. SIDEWALKS TO MATCH DRIVEWAY ELEVATIONS.

**CITY OF GROVELAND STANDARD DETAILS: STREET & DRAINAGE**

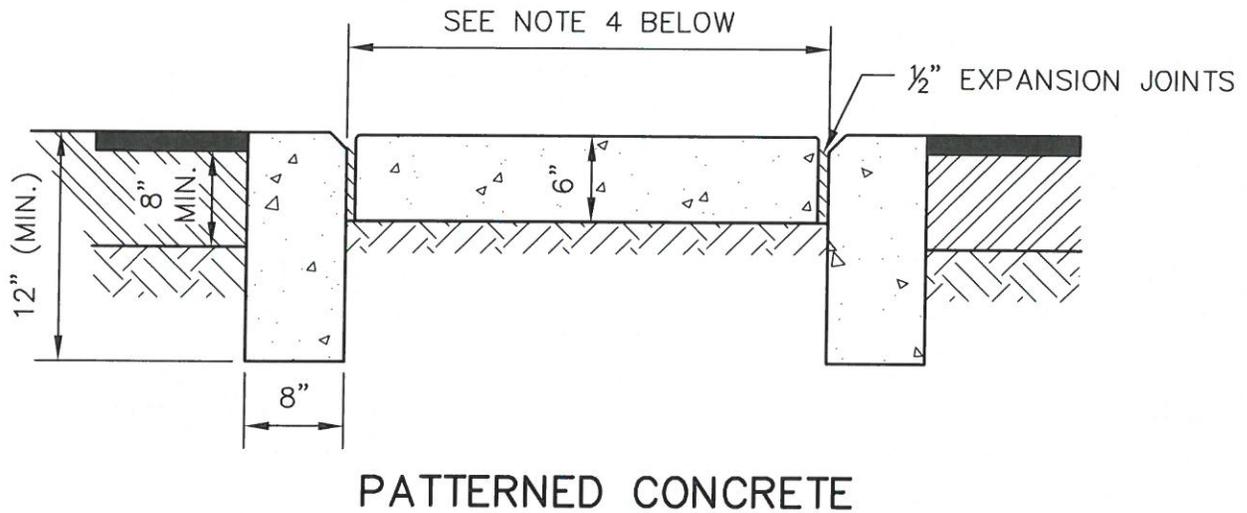
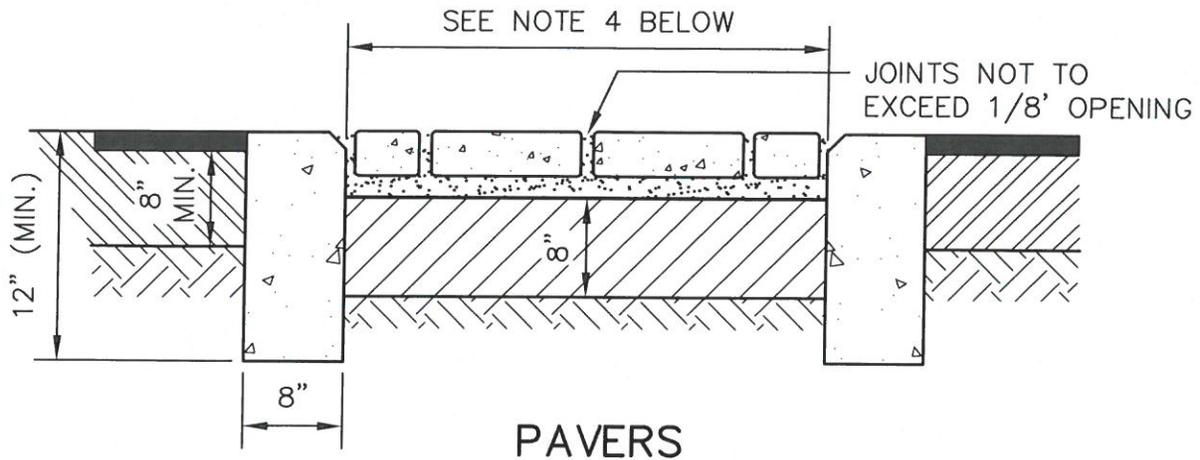


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**RESIDENTIAL SIDEWALK & DRIVEWAY**

DATE: JULY 7, 2008  
 SCALE: N.T.S.

**D-4**



NOTES:

1. WHEEL CHAIR RAMPS SHALL BE PROVIDED WHERE CROSSWALK MEETS SIDEWALKS AND CURBS.
2. PAVERS SHALL BE 3-1/8" MINIMUM THICKNESS BEDDED IN 1-1/2" MINIMUM OF SAND OR CRUSHED STONE SCREENINGS.
3. CONCRETE AND PAVER PATTERN AND COLOR SHALL BE DETERMINED BY CITY OF GROVELAND.
4. MINIMUM WIDTH OF CROSSWALKS SHALL BE 5 FEET.
5. SEE STREET SECTIONS FOR BASE AND SUB-BASE REQUIREMENTS.

**CITY OF GROVELAND STANDARD DETAILS: STREET & DRAINAGE**

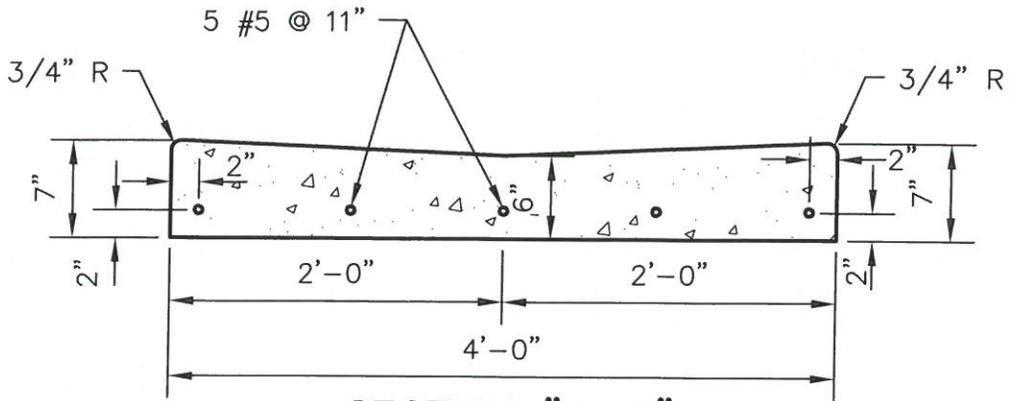


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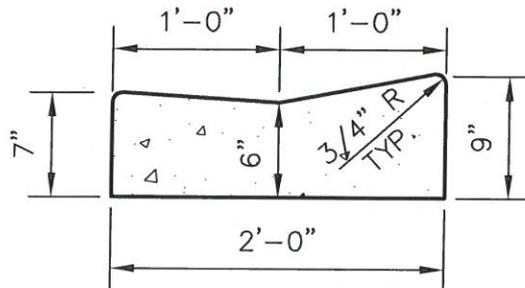
**TYPICAL DETAILS FOR  
 CROSSWALKS AND  
 DECORATIVE PAVEMENT**

DATE: JULY 7, 2008  
 SCALE: N.T.S.

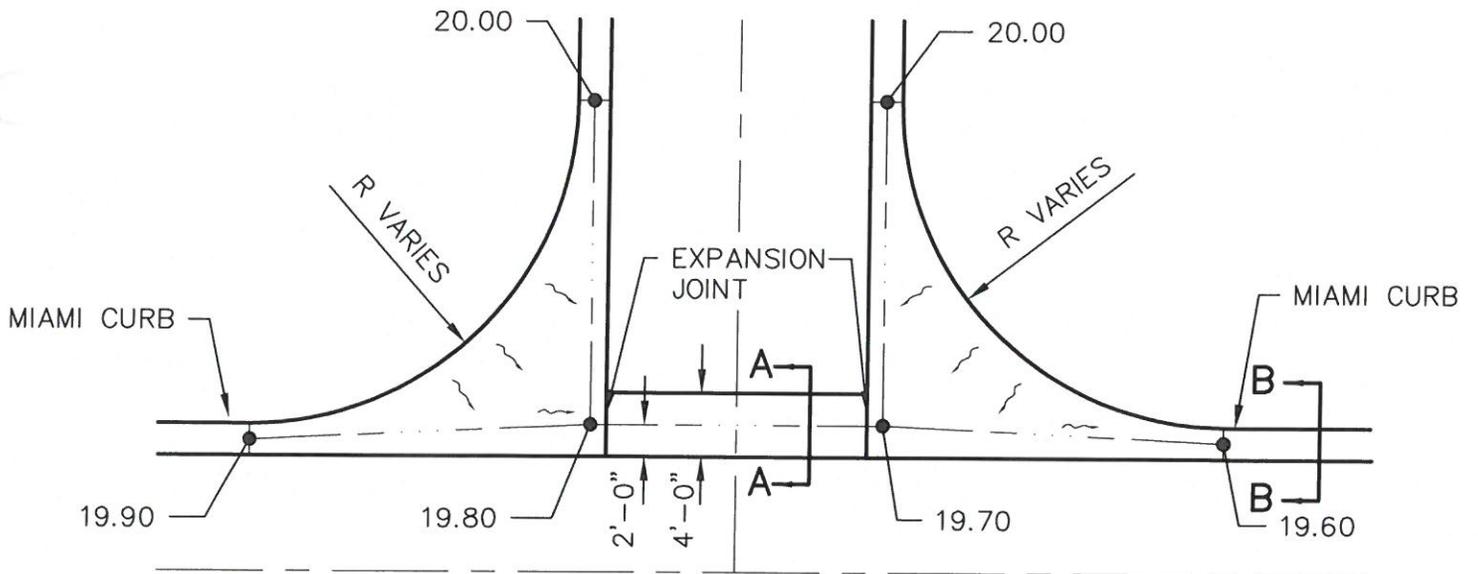
**D-5**



**SECTION "A-A"**  
CONCRETE VALLEY GUTTER



**SECTION "B-B"**  
MIAMI CURB



**PLAN**

**NOTES:**

1. ELEVATIONS SHOWN ARE EXAMPLES.
2. ALTERNATE DESIGN MAY BE PROPOSED BY ENGINEER.

**CITY OF GROVELAND STANDARD DETAILS: STREET & DRAINAGE**

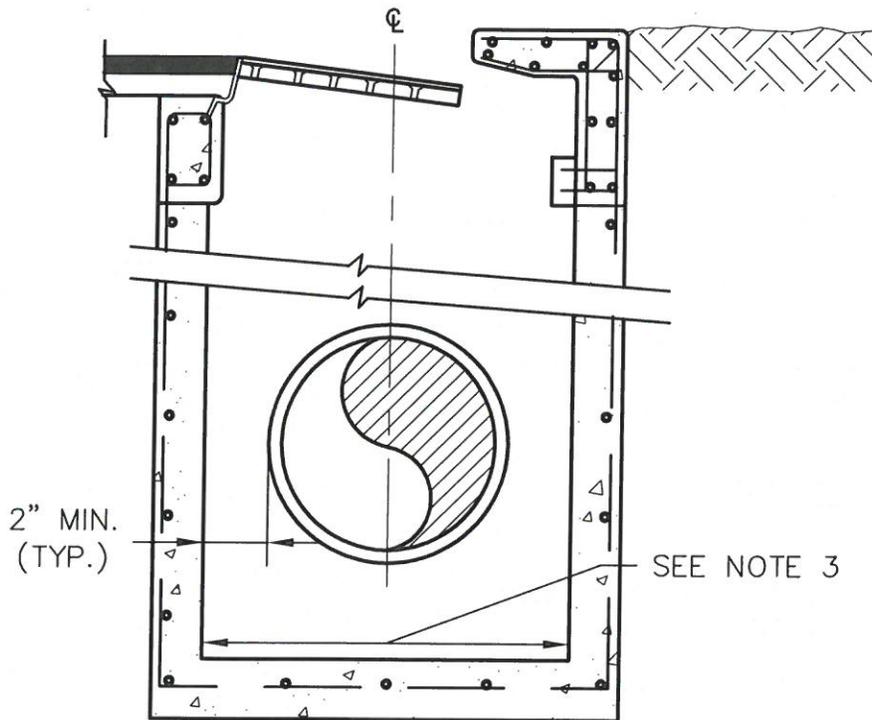
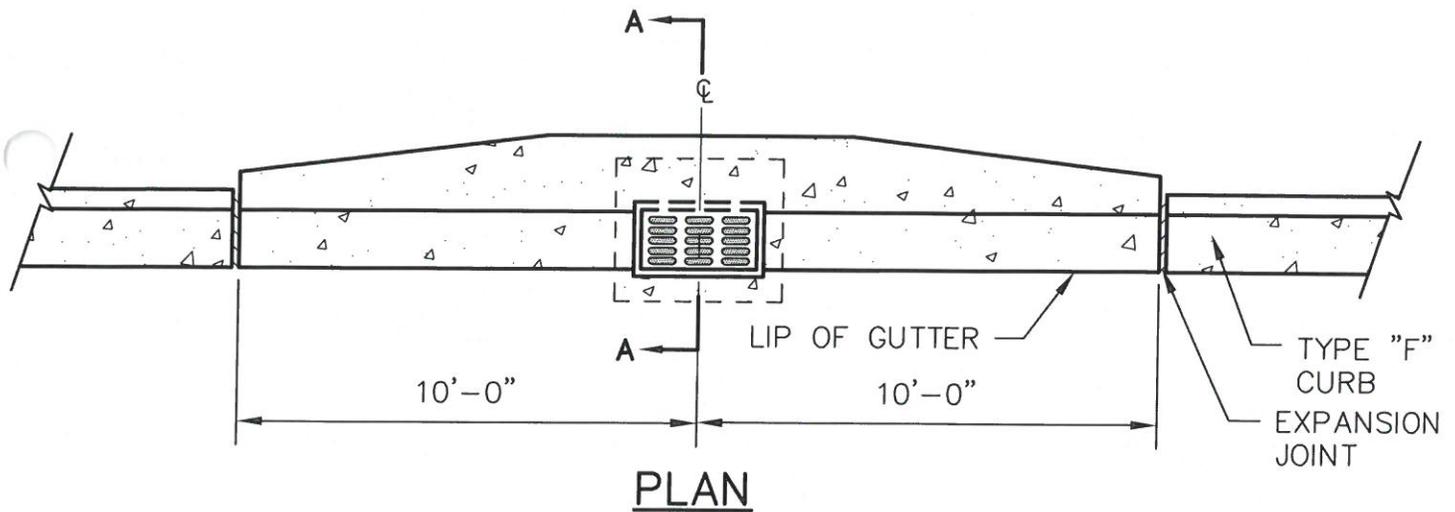


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**INTERSECTION WITH  
VALLEY  
GUTTER**

DATE: JULY 7, 2008  
SCALE: N.T.S.

**D-6**



**NOTES:**

1. CURB INLET TOPS SHALL BE FDOT TYPE 5 OR TYPE 6. (TYPE 6 SHOWN). FRAME AND COVER SHALL BE STEEL MEETING ASTM A-36 OR CAST IRON, CLASS No. 30 IN ACCORDANCE WITH ASTM A-48.
2. PRECAST STRUCTURES SHALL BE FDOT TYPE P OR J AND MAY BE CIRCULAR, SQUARE OR RECTANGULAR, WALL THICKNESS AND REINFORCEMENT SHALL BE IN ACCORDANCE WITH ASTM C-478.
3. MINIMUM INSIDE DIMENSIONS SHALL BE 4' DIAMETER FOR CIRCULAR AND 3'-6" FOR SQUARE OR RECTANGULAR.
4. ALTERNATE DRAINAGE INLET DESIGNS MAY BE PROPOSED BY ENGINEER.

**CITY OF GROVELAND STANDARD DETAILS: STREET & DRAINAGE**

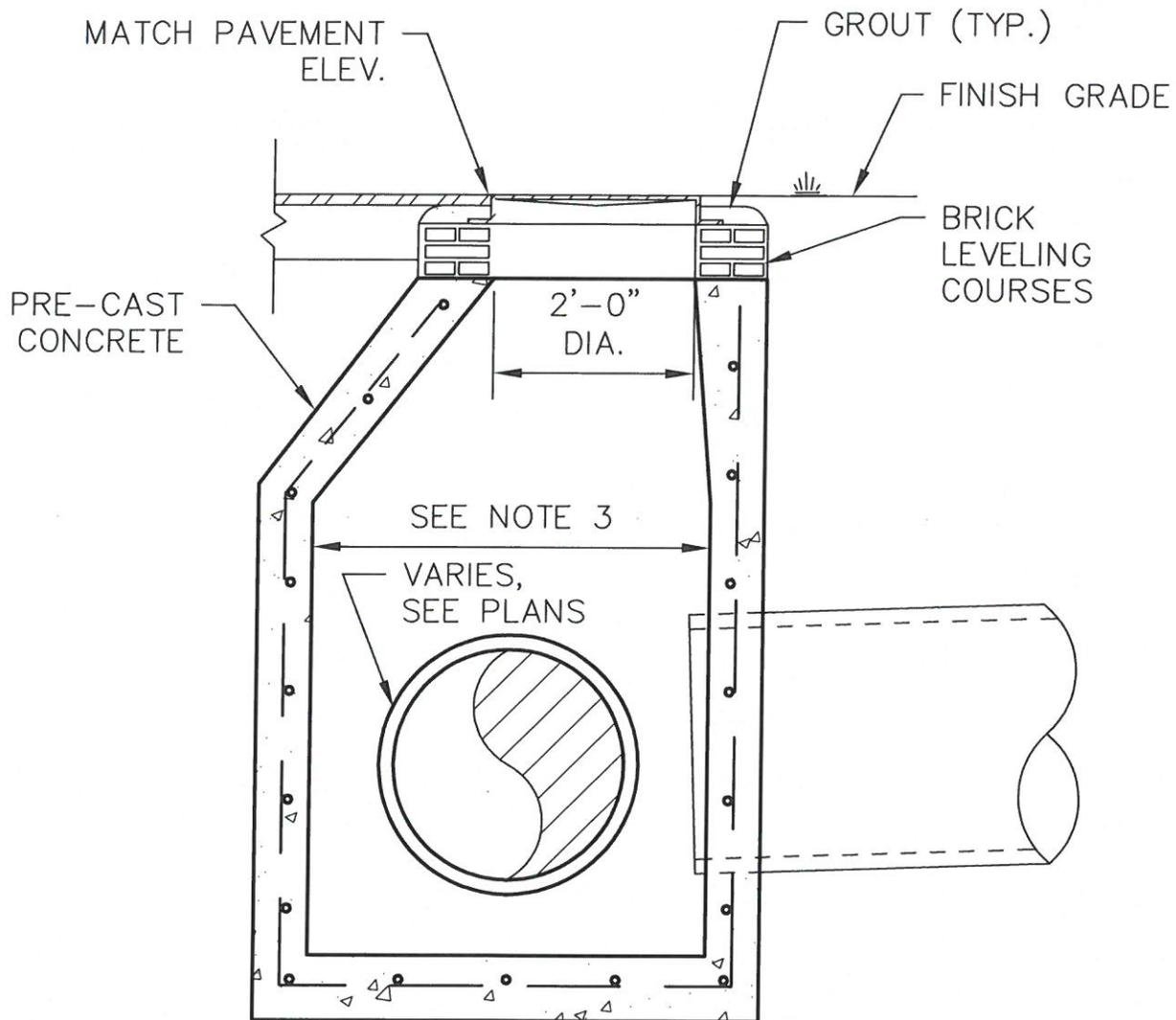


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**CURB DRAINAGE INLET**

DATE: JULY 7, 2008  
 SCALE: N.T.S.

**D-7**



NOTES:

1. PRECAST CONCRETE SHALL COMPLY WITH ASTM C-478.
2. FRAME AND COVER SHALL BE NON-ROCKING, HEAVY DUTY AND SUITABLE FOR HIGHWAY TRAFFIC. COVER SHALL BE IDENTIFIED "STORM SEWER".
3. MINIMUM INSIDE DIMENSIONS SHALL BE 4' DIAMETER FOR CIRCULAR AND 3'-6" FOR SQUARE OR RECTANGULAR.
4. PROPERLY SHAPED SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS TO PROVIDE FOR SMOOTH FLOWS.

**CITY OF GROVELAND STANDARD DETAILS: STREET & DRAINAGE**

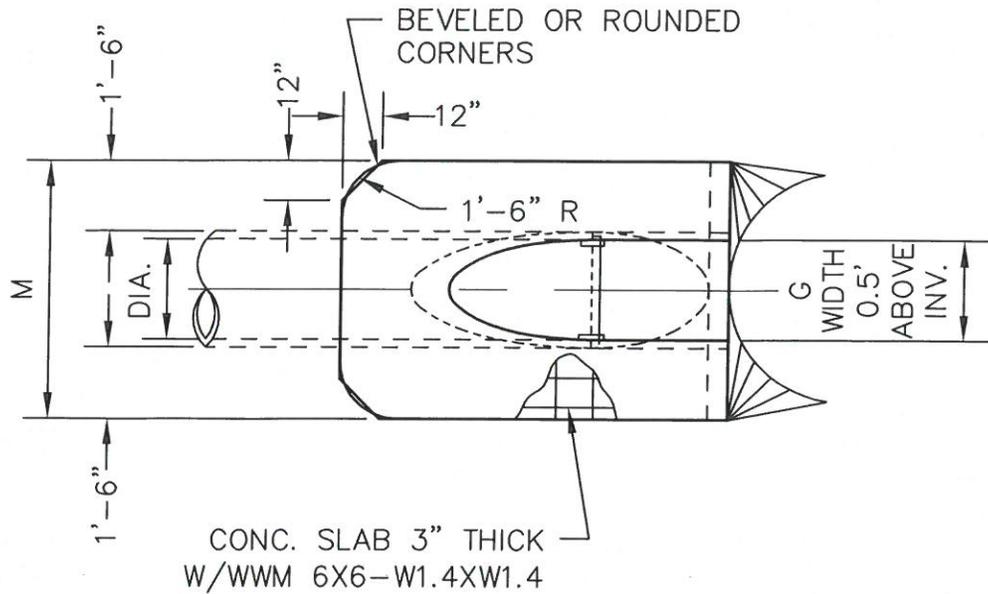


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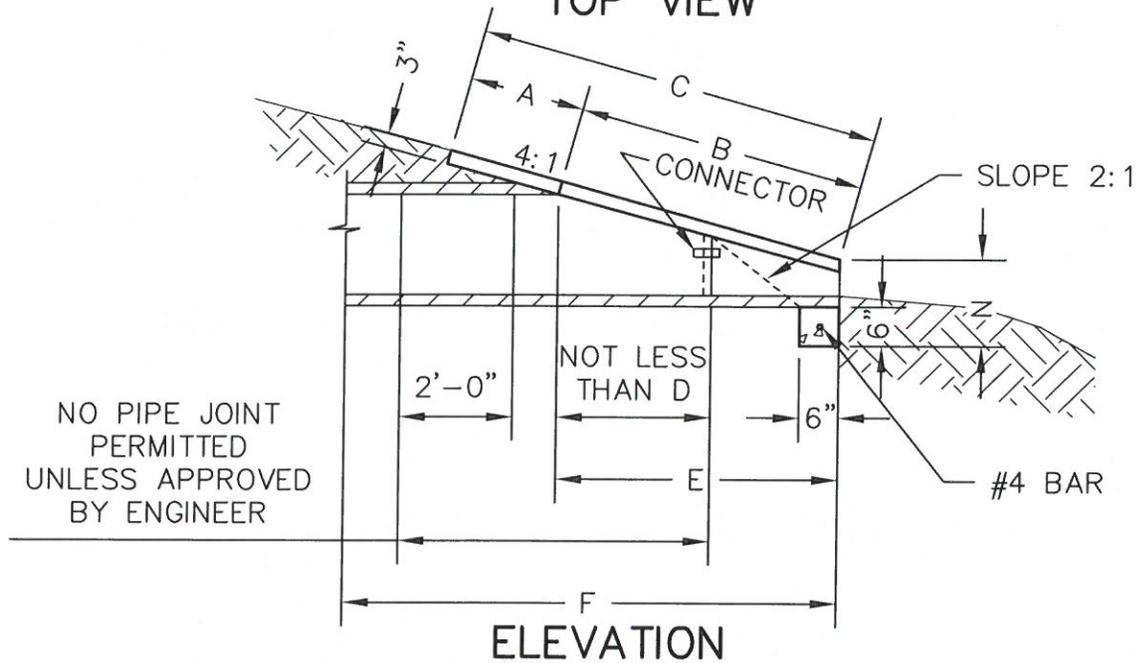
**STORM SEWER MANHOLE**

DATE: JULY 7, 2008  
 SCALE: N.T.S.

**D-8**



TOP VIEW



REF. F.D.O.T. INDEX No. 272, INCLUDING VARIATIONS FOR MULTIPLE PIPES & ELLIPTICAL PIPES.

DIA.	A	B	C	E	F	G	M	N
18"	1.97'	2.74'	4.71'	2.56'	6.00'	1.41'	4.92'	1.21'
24"	2.06'	3.85'	5.91'	3.56'	7.00'	1.73'	5.50'	1.25'
30"	2.15'	4.95'	7.10'	4.56'	8.00'	2.00'	6.08'	1.29'
36"	2.25'	6.08'	8.33'	5.56'	9.00'	2.24'	6.67'	1.33'
42"	2.34'	7.21'	9.55'	6.56'	10.00'	2.45'	7.25'	1.38'

CITY OF GROVELAND STANDARD DETAILS: STREET & DRAINAGE



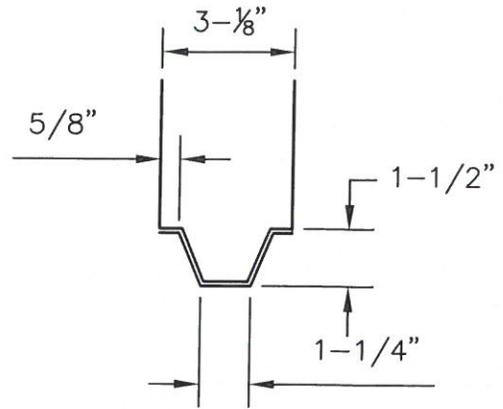
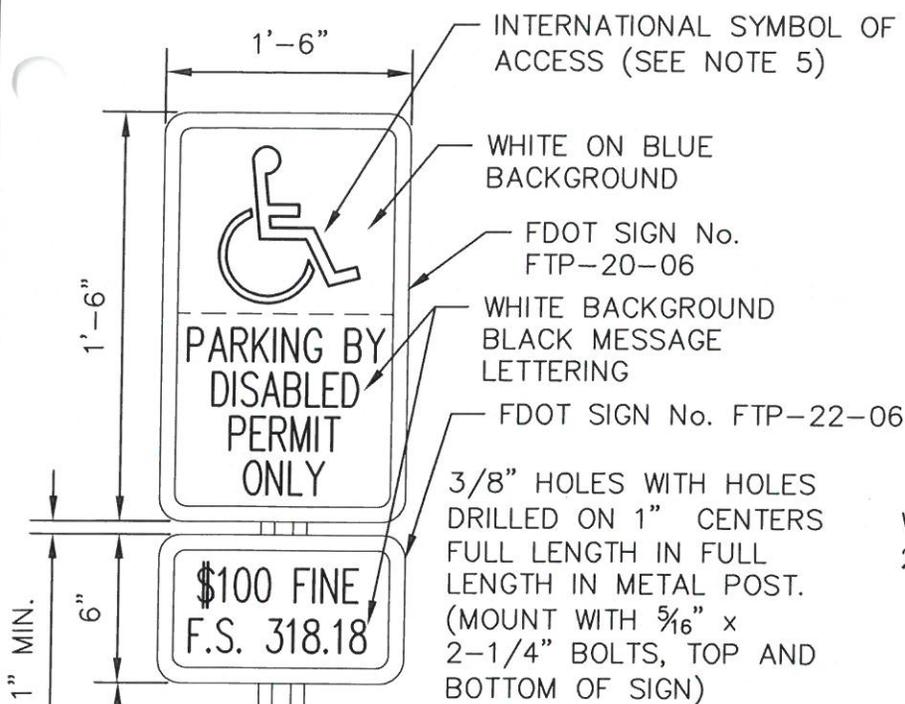
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MITERED END SECTION

DATE: JULY 7, 2008  
SCALE: N.T.S.

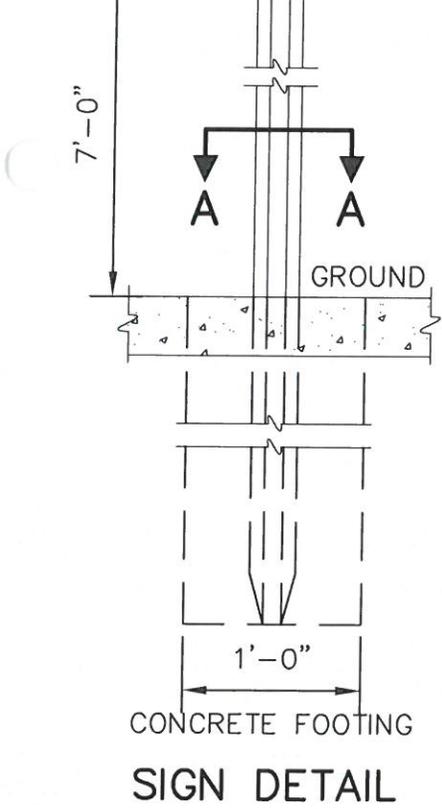
D-9





**SECTION A-A  
METAL POST**

WT. OF BLANK POST SHALL BE 2-2 1/2" #/FT.



NOTES:

1. METAL POST TO BE GALVANIZED. ALL BOLTS, NUTS, WASHERS AND SCREWS MUST BE RUSTPROOF.
2. CONCRETE FOR FOOTING SHALL BE PORTLAND CEMENT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I.
3. SIGNS WILL BE FABRICATED BY USING REFLECTING COATING IN THE SYMBOL, MESSAGE AND BORDER APPLIED TO A SHEET ALUMINUM BACKING (.080) IN THICKNESS.
4. MESSAGE LETTERING SHALL BE UPPER CASE (BLCK) (SERIES C) 1.5" HIGH IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. THE SYMBOL IS COMPOSED OF TWO ELEMENTS, A WHITE WHEELCHAIR FIGURE (WHICH SHOULD ALWAYS FACE RIGHT) ON A SQUARE BACKGROUND, INTERNATIONAL BLUE IN COLOR (FED. STD. 595A, COLOR #15180).
6. SIGN POST SHALL BE MIN. 2'-0" CLEAR FROM BACK OF CURB.
7. THE USE OF PROPERLY LOCATED BOLLARDS IN ACCESSIBLE PARKING SPACES ARE ACCEPTABLE SUBSTITUTES FOR REGULAR BUMPER GUARD.
8. MINIMUM NUMBER OF ACCESSIBLE PARKING SPACES SHALL BE PER FLORIDA ACCESSIBILITY BUILDING CODE, CURRENT EDITION.



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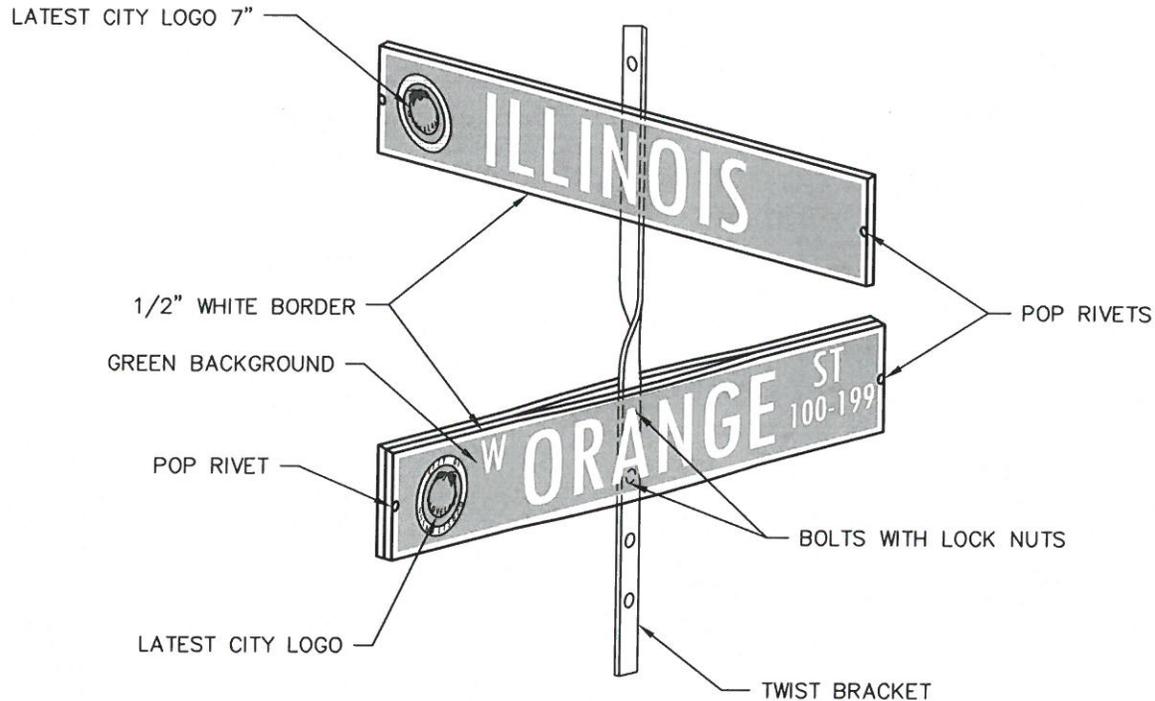
**DISABLED PARKING &  
SIGNING  
TYPICAL DETAILS**

DATE: JULY 7, 2008  
SCALE: N.T.S.

**D-11**

## STREET NAMES SIGNS (SEE ILLUSTRATION BELOW)

1. SIGN BLANKS .063 GAUGE ALUMINUM, CHEMICALLY TREATED TO MEET ATSM B449 STANDARD (PRETREATMENT FOR PAINT OR REFLECTIVE SHEETING) DIMENSIONS ARE TO BE 9"X36" MINIMUM LENGTH. COLOR: COLOR OF THE SIGN FACING SHALL BE "HIGHWAY GREEN" IN NOT LESS THAN ENGINEER GRADE SHEETING.
2. LEGEND/LETTERING: GREEN BACKGROUND WITH 1/2" WHITE BORDER, ENGINEERING GRADE, 5" TEXT, 2.5" SUBTEXT, 1.5" NUMBERS, 7" SEAL.
3. MOUNTING: MOUNTING SHALL BE TWO SINGLE-SIDED SIGNS WITH ATTRIBUTES ABOVE, MOUNTED BACK TO BACK, WITH END POP RIVETED TOGETHER, ON A GALVINIZED 9" TWIST BRACKET. NO EDGE-CLAMPING STYLE MOUNTING BLOCKS ARE TO BE USED.



## REGULATORY AND WARNING SIGNAGE:

1. SIGN BLANKS FOR REGULATORY AND WARNING ARE TO BE .080 GAUGE.
2. MATERIAL/SIGN BLANKS/& FACINGS: WITH THE EXCEPTION OF THE STREET NAME SIGNS (ABOVE) ALL SIGNS SHALL CONFIRM IN COLOR, SIZE, LEGEND AND LOGO WITH SPECIFICATIONS IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). STOP SIGNS SHALL BE 30" HIGH INTENSITY".
3. PLACEMENT SPECIFICATIONS: PLACEMENT SHALL BE ACCORDANCE WITH THE MUTCD (SECTION 2A-21 THROUGH 2A-27), ALLOWING 7 FEET TO BOTTOM OF SIGN FROM THE LEVEL OF THE TRAVELED ROADWAY. POLES ARE NOT TO BE CONCRETED IN PLACE.
4. POLES: SIGN POSTS SHALL BE GALVANIZED STEEL U-CHANNEL POLES, NOT LESS THAN 12 FEET IN LENGTH (14 OR 16' FOR SEVERE SHOULDER DROP-OFFS), WITH MINIMUM WEIGHT OF 3 POUNDS PER FOOT, DRILLED @ 1/2" HOLES ON 1" CENTERS FULL LENGTH.

### CITY OF GROVELAND STANDARD DETAILS: STREET & DRAINAGE



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## SUBDIVISION SIGN DETAILS

DATE: JULY 7, 2008  
 SCALE: N.T.S.

D-12