<table>
<thead>
<tr>
<th>Drawing Number</th>
<th>Title</th>
<th>Nature of Change</th>
<th>Effective Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>221</td>
<td>Channelized Median Detail For Commercial Driveways or</td>
<td>Revised to correct the solid lane lines to dash lane lines.</td>
<td>7/1/2006</td>
</tr>
<tr>
<td></td>
<td>Intersecting Streets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>222A</td>
<td>Commercial And Multi Family Driveway Geometrics</td>
<td>Revised to adjust the minimum allowable distances for driveway locations to improve traffic operations and safety.</td>
<td>7/1/2006</td>
</tr>
<tr>
<td>234.1</td>
<td>Typical Bus Turn-Out</td>
<td>Revised to remove the requirement to install sign R7-107A with the C.A.T. (Citizen Area Transit) Logo.</td>
<td>7/1/2006</td>
</tr>
<tr>
<td>235</td>
<td>Sidewalk Ramps Detail</td>
<td>Revised to conform with the latest Americans With Disabilities Act (ADA) requirements.</td>
<td>7/1/2006</td>
</tr>
<tr>
<td>244.1A</td>
<td>Typical Delineation For Roadway 100 FT. Right-of-Way With</td>
<td>Revised to add an alternative striping configuration for 100 Ft. Right-of-Way to provide 11', 10' 11'; travel lanes and 4' bike lanes.</td>
<td>7/1/2006</td>
</tr>
<tr>
<td></td>
<td>Side Curbs Sidewalk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>244.5</td>
<td>Bicycle Lane Delineation, Legend, And Signage</td>
<td>Revised to conform to the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).</td>
<td>7/1/2006</td>
</tr>
<tr>
<td>250</td>
<td>Street Name Signs Face Copy</td>
<td>Revised to remove the City of Mesquite notations.</td>
<td>7/1/2006</td>
</tr>
<tr>
<td>(Sheet 1 of 2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>251</td>
<td>Street Name Sign Blanks</td>
<td>Revised to remove the City of Mesquite notations.</td>
<td>7/1/2006</td>
</tr>
<tr>
<td>401</td>
<td>Storm Drain Manholes General Notes</td>
<td>Revised to make editorial changes.</td>
<td>7/1/2006</td>
</tr>
<tr>
<td>402</td>
<td>Storm Drain Drop Inlet General Notes</td>
<td>Revised to address the issue of damaged inlets at intersection curb returns and change the title from &quot;Storm Drain Manhole General Notes&quot; to &quot;Storm Drain Drop Inlet General Notes&quot;.</td>
<td>7/1/2006</td>
</tr>
<tr>
<td>403</td>
<td>Type I Manhole</td>
<td>Revised to change the typographical error on the concrete collar drawings reference.</td>
<td>1/1/2006</td>
</tr>
<tr>
<td>403A</td>
<td>Type I Manhole 30&quot; Ring Cover</td>
<td>Addition to allow the use of 30&quot; Ring Cover at the discretion of the entity engineer.</td>
<td>1/1/2006</td>
</tr>
<tr>
<td>404</td>
<td>Type IA Manhole</td>
<td>Revised to change the typographical error on the concrete collar drawings reference.</td>
<td>1/1/2006</td>
</tr>
<tr>
<td>404A</td>
<td>Type IA Manhole 30&quot; Ring Cover</td>
<td>Addition to allow the use of 30&quot; Ring Cover at the discretion of the entity engineer.</td>
<td>1/1/2006</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Details</td>
<td>Date</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>405A</td>
<td>Type II Manhole 30&quot; Ring Cover</td>
<td>Addition to allow the use of 30&quot; Ring Cover at the discretion of the entity engineer.</td>
<td>1/1/2006</td>
</tr>
<tr>
<td>406A</td>
<td>Type I Manhole</td>
<td>Addition to allow the use of 30&quot; Ring Cover at the discretion of the entity engineer.</td>
<td>1/1/2006</td>
</tr>
<tr>
<td>407A</td>
<td>Type III Manhole 30&quot; Ring Cover</td>
<td>Addition to allow the use of 30&quot; Ring Cover at the discretion of the entity engineer.</td>
<td>1/1/2006</td>
</tr>
<tr>
<td>408A</td>
<td>Concrete and Collar around Manhole 30&quot; Ring Cover</td>
<td>Addition to allow the use of 30&quot; Ring Cover at the discretion of the entity engineer.</td>
<td>1/1/2006</td>
</tr>
<tr>
<td>409A</td>
<td>Standard Manhole 30&quot; Ring Cover</td>
<td>Addition to allow the use of 30&quot; Ring Cover at the discretion of the entity engineer.</td>
<td>1/1/2006</td>
</tr>
<tr>
<td>501</td>
<td>Typical Underground Utility Locations In Residential Street With 60 Ft. Or Less Right-of-Way</td>
<td>Revised to address placement of specific dry utilities in a common trench below the sidewalk area for streets with right-of-way 60 Ft. or less.</td>
<td>7/1/2006</td>
</tr>
<tr>
<td>501A</td>
<td>Typical Underground Utility Locations In Residential Street With 60 Ft. Or Greater Right-of-Way</td>
<td>Addition to address placement of specific dry utilities in a common trench below the sidewalk area for streets with right-of-way 60 Ft. or greater.</td>
<td>7/1/2006</td>
</tr>
</tbody>
</table>
### Uniform Standard Drawings
#### Clark County Area
#### Channelized Median Detail

**For Commercial Driveways or Intersecting Streets**

| Specification Reference | | |
|--------------------------|--------------------------|
| | | |

**Date:** 6-8-08  | **Drawing No.:** 2211  | **Page:** 27.1

**Curve Data**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| A | 3100'10"
| R | 74.00' |
| T | 20.32' |
| L | 40.04' |

**Notes:**

1. Install RS-1
2. Install RS-2
3. Streetlight location standard for the city of Henderson or as specified by the engineer.
4. Detail may be used for intersections of streets with R/W 60 feet or less if approved by the entity engineer. Special median design is required for intersecting streets with R/W greater than 60 feet.

14' Median Width, Curb Face to Curb Face (Typ.) Per Std. Dwg. 0218

---

**Specification Reference**

- | | |
- | | |
- | | |
- | | |
- | | |

---

**Uniform Standard Drawings**

**Clark County Area**

**Channelized Median Detail**

**For Commercial Driveways or Intersecting Streets**

**Date:** 6-8-08  | **Drawing No.:** 2211  | **Page:** 27.1
NOTES:

1. COMMERCIAL AND MULTI-FAMILY DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWING NUMBERS 224, 225, 228, 235 AND 235.1.

2. LOCAL ORDINANCES AND POLICIES MAY APPLY AND SHALL HAVE PRECEDENCE. SEE NDOT ACCESS POLICY FOR STATE ROADWAYS.

3. THE TOTAL WIDTH "W" OF DRIVEWAY CURB OPENINGS SHALL NOT EXCEED 65% OF FRONT FOOTAGE.

4. NO DRIVEWAY SHALL BE LOCATED WITHIN 6 FEET OF A LIGHT POLE (UNLESS APPROVED BY THE ENTITY TRAFFIC ENGINEER), FIRE HYDRANT, MAIL BOX, ABOVE-GROUND ELECTRICAL TRANSFER BOX, OR BLOCK WALL HIGHER THAN 2 FEET.

5. THE CENTERLINES OF THE DRIVEWAYS ON OPPOSITE SIDES OF THE STREET AT A MEDIAN OPENING SHOULD BE WITHIN 10' FROM EACH OTHER AT THE MEDIAN OPENING.

6. GEOMETRICS APPLY TO NEW CONSTRUCTION ONLY, AND EXCEPTIONS MAY BE GRANTED BY THE APPROVAL OF THE AGENCY TRAFFIC ENGINEER BASED ON SITE CONSTRAINTS.

7. HANDICAPPED ACCESSIBLE SIDEWALKS SHALL BE PROVIDED ADJACENT TO DRIVEWAYS TO THE P.C. OF THE ONSITE CURB RETURN, MINIMUM, OR AT AN ALTERNATE LOCATION.

8. WHEN A PROPERTY LINE FALLS IN A MEDIAN OPENING A JOINT DRIVEWAY AGREEMENT SHALL BE REQUIRED OR NO DRIVEWAY WILL BE ALLOWED.
J. THROAT DEPTH FOR SECURITY GATE
50' MINIMUM FOR 1 TO 49 HOMES OR APT. UNITS TO VISITOR CALL BOX.
100' MINIMUM FOR 50 TO 100 HOMES OR APT. UNITS TO VISITOR CALL BOX.
GREATER THAN 100 HOMES OR APT. UNITS REQUIRE TRAFFIC STUDY

DIMENSIONS FOR SECURITY GATE
CONTROLLED DRIVEWAY DETAIL

D. ISLAND: LENGTH-20' MINIMUM
W_IDTH- 4' MINIMUM
G. 15' MINIMUM
E. 48' MINIMUM
H. 8' MINIMUM & 15' MAXIMUM

DETAIL FOR SECURITY GATE
CONTROLLED DRIVEWAYS

LOOP DETECTOR
CALL BOX
THROAT DEPTH

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

COMMERCIAL AND MULTI-FAMILY
SECURITY GATE GEOMETRICS

DATE 02-09-06 DWG. NO. 222A SHEET 2 OF 2
SECTION A-A

NOTES:
1. CONCRETE BUS PAD SHALL BE MONOLITHIC. TRANSVERSE WEAKENED PLANE JOINTS SHALL BE INSTALLED AT 10' INTERVALS AND AS DETAILED IN STANDARD DRAWING NO. 233, TYPE "C".
2. BUS ROUTE SIGN SHALL BE INSTALLED AT THE DOWNSTREAM END OF BUS STOP LOADING PAD.
3. A MINIMUM OF ONE SET OF PAVEMENT MARKINGS CONTAINING THE "BUS STOP ONLY" SYMBOL SHALL BE PLACED IN THE TURN-OUT AREA. EXACT LOCATION TO BE DETERMINED BY THE ENGINEER.
4. ADDITIONAL STORAGE AREA WILL BE REQUIRED WHEN MORE THAN ONE BUS IS EXPECTED TO OCCUPY THE TURN-OUT AT THE SAME TIME.
5. ALTERNATE CONCRETE AND BASE THICKNESSES MAY BE SUBSTITUTED, BUT MUST BE SUPPORTED BY ENGINEERING ANALYSIS AND APPROVED BY THE ENGINEER.
6. TURN-OUT SURFACE SHALL BE TEXTURED IN ACCORDANCE WITH UNIFORM STANDARD SPECIFICATION NO. 408.02.08. FLOW LINE SHALL NOT BE TEXTURED, BUT SHALL BE A TROWELED SURFACE.
DETECTABLE WARNING DETAILS (TRUNCATED DOMES)

TABLE 1. TRANSITION LENGTHS FOR 1:12 SIDE SLOPES

<table>
<thead>
<tr>
<th>GRADE (%)</th>
<th>&quot;A&quot; (FT) MIN.</th>
<th>&quot;B&quot; (FT) MIN.</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0 TO -0.01</td>
<td>4.5</td>
<td>21.5</td>
</tr>
<tr>
<td>-0.5 TO -4.01</td>
<td>4.5</td>
<td>15.0</td>
</tr>
<tr>
<td>-1 TO -3.01</td>
<td>4.5</td>
<td>12.0</td>
</tr>
<tr>
<td>-2 TO -2.01</td>
<td>4.5</td>
<td>9.5</td>
</tr>
<tr>
<td>-2 TO 2</td>
<td>8.0</td>
<td>8.0</td>
</tr>
<tr>
<td>2.01 TO 3</td>
<td>8.5</td>
<td>4.5</td>
</tr>
<tr>
<td>3.01 TO 4</td>
<td>12.0</td>
<td>4.5</td>
</tr>
<tr>
<td>4.01 TO 5</td>
<td>15.0</td>
<td>4.5</td>
</tr>
<tr>
<td>5.01 TO 6</td>
<td>21.5</td>
<td>4.5</td>
</tr>
</tbody>
</table>

TABLE 2. TRANSITION LENGTHS FOR 1:10 SIDE SLOPES

<table>
<thead>
<tr>
<th>GRADE (%)</th>
<th>&quot;A&quot; (FT) MIN.</th>
<th>&quot;B&quot; (FT) MIN.</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0 TO -0.01</td>
<td>4.0</td>
<td>12.5</td>
</tr>
<tr>
<td>-0.5 TO -4.01</td>
<td>4.0</td>
<td>10.0</td>
</tr>
<tr>
<td>-1 TO -3.01</td>
<td>4.0</td>
<td>8.5</td>
</tr>
<tr>
<td>-1.5 TO 2</td>
<td>4.0</td>
<td>7.5</td>
</tr>
<tr>
<td>-2 TO -2.01</td>
<td>6.5</td>
<td>6.5</td>
</tr>
<tr>
<td>2.01 TO 3</td>
<td>7.5</td>
<td>4.0</td>
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<tr>
<td>3.01 TO 4</td>
<td>8.5</td>
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</tr>
<tr>
<td>4.01 TO 5</td>
<td>10.0</td>
<td>4.0</td>
</tr>
<tr>
<td>5.01 TO 6</td>
<td>12.5</td>
<td>4.0</td>
</tr>
</tbody>
</table>

NOTE:
CHARTS APPLY TO CURB WITH 6" CURB FACE.
IF CURB HAS GREATER THAN 6" CURB FACE,
A SPECIAL DESIGN IS REQUIRED.

SPECIFICATION REFERENCE

| 302 | AGGREGATE BASE |
| 501 | CONCRETE |
| 502 | CONCRETE STRUCTURES |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SIDEWALK RAMP DETAILS

DATE 6-8-06 | DWG. NO. 235 (4 OF 4) | PAGE 41C
BIKE LANE DELINEATION AND LEGEND

NOTES:
1. BIKE LANE LEGENDS SHALL BE APPROVED TYPE I PAVEMENT MARKING FILM AND SHALL BE SLIP RESISTANT.
2. BIKE LANE LINES SHALL BE APPROVED TYPE II PAVEMENT MARKING FILM AND SHALL BE SLIP RESISTANT.
3. BIKE LANES MUST BE A MINIMUM OF 5 FEET WHEN ADJACENT TO A PARKING LANE, 4 FEET MINIMUM IN OTHER CASES
   AND NO GREATER THAN 8 FT WIDE; HOWEVER A WIDTH OF 6 FEET IS PREFERRED.
4. BICYCLE LANE DELINEATION, LEGEND, AND SIGNING SHALL CONFORM TO THE MUTCD LATEST EDITION.
5. PER THE MUTCD LATEST EDITION, BICYCLE LANE SIGNS SHALL BE USED IN ADVANCE OF THE BEGINNING OF A MARKED
   BICYCLE LANE.
6. THE BIKE LANE SIGNAGE SHALL BE CLASS 3 SHEETING.

<table>
<thead>
<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BICYCLE LANE DELINEATION, LEGEND, AND SIGNAGE</td>
</tr>
</tbody>
</table>

DATE 3-9-08  DWG. NO. 244.5 PAGE NO. 50.5
NOTEs:

1. SIGN SHALL BE WHITE LETTERS AND NUMBERS ON GREEN BACKGROUND. (THE CITY OF NORTH LAS VEGAS BACKGROUND IS BLUE) CUT-CUT LETTERS AND NUMBERS ARE NOT ACCEPTABLE (EXCEPT FOR THE BLOCK NUMBER).

2. REFLECTIVE SHEETING MATERIAL SHALL BE CLASS 6.

3. PRIMARY COPY FOR 9" AND 12" SIGNS SHALL BE 6" SERIES "C" UPPERCASE WITH 4 1/2" SERIES "C" LOWERCASE; HOWEVER, WHEN DESCENDERS ARE REQUIRED ON 9" SIGNS, PRIMARY COPY SHALL BE 6 1/2" ORNDINAL, SUFFIX AND BLOCK NUMBER SHALL BE 3" SERIES "C" UPPERCASE. (ORDINAL MAY BE OMITTED FROM 12" SIGNS, EXCEPT IN CLARK COUNTY) SPACING BETWEEN LETTERS SHALL BE AS ON SHEET 2 OF THIS DRAWING.

4. THE SIGN SHALL HAVE A MINIMUM LENGTH OF 30". WHERE EXTRA LENGTH IS REQUIRED, IT SHALL BE PROVIDED IN 6" INCREMENTS. GROUND MOUNTED SIGNS SHALL HAVE A MAXIMUM LENGTH OF 42".

5. BOTH SIGNS PLACED ON MAJOR STREETS WITH RIGHTS-OF-WAY 80' OR GREATER SHALL HAVE A HEIGHT OF 18" ; SIGNS PLACED ON MINOR STREETS WITH RIGHTS-OF-WAY OF LESS THAN 80' SHALL HAVE A HEIGHT OF 6".

6. 12" SIGNS SHALL HAVE A 1/2" WHITE BORDER AT THE EDGE.

7. SIGN BLANKS SHALL HAVE ROUNDED CORNERS.

<table>
<thead>
<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>831 STREET NAME SIGNS</td>
<td>CLARK COUNTY AREA</td>
</tr>
<tr>
<td>719 SIGN MATERIALS</td>
<td>STREET NAME SIGNS</td>
</tr>
</tbody>
</table>

DATE 6-8-06 DWG. NO. 250 (1 OF 2) PAGE NO. 58
**ALUMINUM BLANK**

5052-H38 or 6061-T6, HEAT-TREATED, HIGH TENSILE, DEGREASED AND ALODINE 1200 FINISH.
THICKNESS TO BE 0.080" FOR SIGNS LESS THAN 36" AND 0.100" FOR SIGNS 36" AND LONGER.

**NOTE:**
1. FOR SIGN FACE SPECIFICATIONS SEE STANDARD DRAWING NO. 280.
MANHOLE NOTES:

1. MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 608, "CATCH BASINS, MANHOLES AND INLETS" OF THE "STANDARD SPECIFICATIONS".

2. REINFORCING STEEL SHALL BE AS SHOWN, WIRED TIGHTLY AT ALL INTERSECTIONS AND EMBEDDED AT LEAST ONE (1) INCH CLEAR UNLESS OTHERWISE NOTED.

3. EXCAVATION SHALL BE AS NEARLY VERTICAL AS POSSIBLE (SHEET AND SHORE, IF SOIL CONDITIONS REQUIRE), IN EXISTING STREET SECTIONS, ALLEY SECTIONS AND CONFINED AREAS SUCH AS LIMITED EASEMENTS OR ADJACENT TO STRUCTURES. NATURAL ANGLE OF REPOSE WILL ALLOW IN ALL OTHER AREAS.

4. MANHOLE DESIGN FOR PIPE LARGER THAN SIXTY (60) INCHES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

5. MANHOLE DESIGN FOR DEPTHS EXCEEDING EIGHTEEN (18) FEET SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

6. TYPE AND SIZE OF MANHOLE TO BE CONSTRUCTED IN A PARTICULAR LOCATION SHALL BE DETERMINED BY THE PIPE SIZE, ALIGNMENT AND GRADE AS FOLLOWS:

   TYPE I

   FORTY-EIGHT (48) INCH SIZE
   A. ALL CASES FOR PIPE EIGHTEEN (18) INCHES AND SMALLER.
   B. TWENTY-FOUR (24) INCHES AND SMALLER PIPE ON TANGENT LINE AND GRADE.

   SIXTY (60) INCH SIZE
   A. TWENTY-SEVEN (27) INCH THROUGH THIRTY-SEVEN (37) INCH PIPE ON TANGENT LINE AND GRADE.
   B. TWENTY-ONE (21) INCH THROUGH TWENTY-SEVEN (27) INCH PIPE AT ANGLE POINTS AND CHANGES IN GRADE OR PIPE SIZE.

   TYPE I-A

   USED IN PLACE OF TYPE I WHEN COVER ABOVE CONDUIT IS LIMITED, AND WHEN APPROVED BY THE ENGINEER.

   TYPE II

   FORTY-EIGHT (48) INCH SIZE
   A. THIRTY (30) INCH THROUGH SIXTY (60) INCH PIPE ON TANGENT LINE WITH A CHANGE IN GRADE OR PIPE SIZE.
MANHOLE NOTES (CONTINUED):

TYPE II

TANGENT
SIXTY (60) INCH SIZE
A. THIRTY-NINE (39) INCH THROUGH SIXTY (60) INCH PIPE ON TANGENT LINE AND
GRADE WITH NO CHANGE IN PIPE SIZE.

ANGLE POINT
SIXTY (60) INCH SIZE
A. THIRTY (30) INCH THROUGH SIXTY (60) INCH PIPE AT THE ANGLE POINT IN LINE.

7. PRECAST MANHOLE COMPONENTS SHALL CONFORM TO ASTM C-476.

8. DISTANCE BETWEEN THE TOP OF MANHOLE AND FIRST STEP SHALL BE A MAXIMUM OF SIXTEEN (16)
INCHES. MANHOLE STEPS SHALL BE GROUTED IN PLACE.

9. (CLARK COUNTY ONLY) DISTANCE BETWEEN MANHOLES SHALL BE A MAXIMUM OF FOUR HUNDRED (400)
FEET.

10. MANHOLE SPACING SHALL BE REFERRED TO THE WASTE WATER COLLECTION STANDARDS.

<table>
<thead>
<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>501 CONCRETE</td>
<td>CLARK COUNTY AREA</td>
</tr>
<tr>
<td>609 CATCH BASINS, MANHOLES &amp;</td>
<td></td>
</tr>
<tr>
<td>INLETS</td>
<td></td>
</tr>
</tbody>
</table>

STORM DRAIN
MANHOLES GENERAL NOTES

DATE 2-9-08  DWG. NO. 401  SHT 2 OF 2
DROP INLET NOTES:

1. All drop inlets, regardless of type, shall be located such that the curb opening (or grate) is a minimum of ten (10) feet from the nearest p.c. or p.t. of the current or future curb return.

2. For curb returns where a low point condition exist or is proposed at the p.c. or p.t., the curb profile shall be designed such that the low point coincides with the curb opening as specified on Note No. 1.

3. If driveways or utilities exist, the entity engineer shall approve the location of the drop inlet.
NOTES:
1. IN UNIMPROVED NON-TRAFFIC AREAS, TOP OF MANHOLE SHALL BE 6" TO 9" ABOVE GRADE.
2. PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE OF MANHOLE SECTION. CONSTRUCT WATER TIGHT CONNECTION TO MANHOLE.
3. PIPE SECTION LENGTHS ARRANGED TO FIT DEPTH.
4. AN OPTIONAL TWO PIECE 24" TO 48" AND 48" TO 60" CONE MAY BE USED.
## Notes:
1. In unimproved non-traffic areas, top of manhole shall be 6" to 8" above grade.
2. Pipes shall not protrude more than 8" inside of manhole section. Construct water tight connection to manhole.
3. Pipe section lengths arranged to fit depth.
4. An optional two piece 30° to 45° and 45° to 60° cone may be used.
5. The use of a 30° ring and cover shall be approved by the entity engineer.

### Specification Reference

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>601</td>
<td>CONCRETE &amp; MORTAR</td>
</tr>
<tr>
<td>609</td>
<td>CATCH BASINS, MANHOLES &amp; INLETS</td>
</tr>
</tbody>
</table>

### Uniform Standard Drawings

**Clark County Area**

**Type I Manhole**

**30° Ring and Cover**

<table>
<thead>
<tr>
<th>Date</th>
<th>DWG. No.</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/10/05</td>
<td>403A</td>
<td>103A</td>
</tr>
</tbody>
</table>
NOTE:
1. PIPE SECTION LENGTHS ARRANGED TO FIT DEPTH.

SYNL | ITEM
-----|--------
A    | RING & COVER
B    | GRADE ADJUSTING RING
C    | 1' SECTION REIN. CONC. PIPE
D    | 2' SECTION REIN. CONC. PIPE
E    | 3' SECTION REIN. CONC. PIPE
F    | BASE

SPECIFICATION REFERENCE

501   CONCRETE & MORTAR
609   CATCH BASINS, MANHOLES & INLETS

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE IA MANHOLE

DATE 11/10/05   DWG. NO. 404   PAGE NO. 104
NOTE:
1. PIPE SECTION LENGTHS ARRANGED TO FIT DEPTH.
2. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

<table>
<thead>
<tr>
<th>SYM.</th>
<th>ITEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>RING &amp; COVER</td>
</tr>
<tr>
<td>B</td>
<td>GRADE ADJUSTING RING</td>
</tr>
<tr>
<td>C</td>
<td>1 SECTION REIN. CONC. PIPE</td>
</tr>
<tr>
<td>D</td>
<td>2' SECTION REIN. CONC. PIPE</td>
</tr>
<tr>
<td>E</td>
<td>8' SECTION REIN. CONC. PIPE</td>
</tr>
<tr>
<td>F</td>
<td>BASE</td>
</tr>
</tbody>
</table>

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE IA MANHOLE
30" RING AND COVER

DATE 11/10/05   DWG. NO. 404A   PAGE NO. 104A
NOTES:
1. STEPS SHALL BE INSTALLED ON THE SIDE WALL OF THE MANHOLE.
2. \( W = I.D. + 12 \)-INCHES MIN, BUT IN NO CASE SHALL \( W \) BE LESS THAN 60-INCHES.
3. THE USE OF A 30° RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

**SPECIFICATION REFERENCE**

| 501 | CONCRETE AND MORTAR |
| 506 | REINFORCING STEEL |
| 609 | CATCH BASINS, MANHOLES & INLETS |

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**TYPE II MANHOLE**

**30° RING AND COVER**

**DATE 11/10/05**  **DWG. NO. 405A**  **PAGE NO. 105A**
**SECTION A-A**

**TANGENT**

**NOTE:**

1. STAIRS SHALL BE INSTALLED ON THE UPSTREAM WALL OF THE MANHOLE.
2. THE USE OF A 30° RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

**SECTION B-B**

**ANGLE POINT**

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**SPECIFICATION REFERENCE**

<table>
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<tbody>
<tr>
<td>501</td>
<td>CONCRETE</td>
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**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**TYPE III MANHOLE**

**30° RING AND COVER**

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**DATE 11/10/05**  **DWG. NO. 406A**  **PAGE NO. 106A**
NOTE:
1. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.
NOTES:
1. CONCRETE COLLAR TO BE CONSTRUCTED 1/8" BELOW SURFACE OF DENSE GRADE WHERE OPEN GRADE IS NOT USED.
2. CONCRETE COLLAR NOT REQUIRED IN UNINCORPORATED CLARK COUNTY RESIDENTIAL STREETS LESS THAN 80' RAW WIDTH.
3. THE USE OF 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

<table>
<thead>
<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA</th>
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<tr>
<td>501 CONCRETE</td>
<td>CONCRETE COLLAR AROUND MANHOLES</td>
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<td>505 REINFORCING STEEL</td>
<td>30&quot; RING AND COVER</td>
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DATE 11/10/05  DWG. NO. 408A  PAGE NO. 108A
NOTES:
1. FRAME AND COVER TO BE ALHAMBRA FOUNDRY COMPANY TYPE A1310 IN ACCORDANCE WITH ASTM A-48, CLASS 30, OR APPROVED EQUAL.
2. CAST IRON SHALL HAVE MINIMUM TENSILE STRENGTH OF 30,000 P.S.I.
3. FRAME AND COVER MACHINED TO FIT.
4. WEIGHT OF FRAME AND COVER 330 LBS. MINIMUM.
5. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

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<td>STANDARD MANHOLE</td>
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<td>30&quot; COVER AND RING</td>
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DATE 11/10/05  DWG. NO. 409A  PAGE NO. 109A
NOTES:

1. SEWER MAY BE LOCATED ON OTHER SIDE OF CENTERLINE AS TERRAIN DICTATES.

2. STREETLIGHT FOUNDATIONS SHALL BE LOCATED BEHIND SIDEWALK FOR SIDEWALK WIDTHS LESS THAN 6 FEET PER STANDARD DRAWING NO. 202.

3. SEPARATION DISTANCE SHALL CONFORM TO UTILITY STANDARDS ADOPTED BY THE GOVERNING AGENCY FOR SEWER AND WATER FACILITIES.

4. STREET CONSTRUCTION SHALL CONFORM TO THE DESIGNED PLANS.

5. UTILITY CONSTRUCTION BACKFILL SHALL CONFORM TO SECTION 206.

6. UTILITY LINES SHALL BE RE-Routed IF DROP INLET IS IN CONFLICT.

7. WATER TRANSMISSION MAIN SEPARATION SHALL BE REFERRED TO WATER SURVEYOR GUIDELINES.
TYPICAL UNDERGROUND UTILITY LOCATIONS IN STREETS WITH GREATER THAN 60 FEET RIGHT-OF-WAY

A. STREETLIGHT CONDUIT
B. POWER COMPANY SECONDARY
C. POWER COMPANY PRIMARY
D. TELEPHONE CONDUITS
E. CABLE T.V. CONDUIT
F. TRAFFIC SIGNAL CONDUIT
G. OTHER COMMUNICATIONS CONDUIT

NOTE:
SEWER MAY BE OTHER SIDE OF CENTERLINE AS TERRAIN DICTATES.

FINISHED GRADE

42" MIN. COVER FOR PIPE 8" DIAM AND SMALLER
48" MIN. COVER FOR PIPE GREATER THAN 8" DIAM,
LESS THAN 24" DIAM.
60" MIN. COVER FOR PIPE 24" AND GREATER.

VARIANCE

12" R/W

SIDEWALK

STREETLIGHT FOUNDATION

12" G E

12" GAS

12" CLR.

3'-0" CLR.

10'-0" CLR.

OR AS APPROVED
BY THE ENGINEER

DRAINAGE

WATER

SEWER