FOREWORD

UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS' CONSTRUCTION,
OFFSITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA
VOLUME I

The following participating entities of the Clark County, Nevada area have adopted these standard drawings.

CITY OF LAS VEGAS
Adopted by City Council action ........................................November 4, 1987

CITY OF HENDERSON
Adopted by City Council action ........................................October 20, 1987

CITY OF NORTH LAS VEGAS
Adopted by City Council action ........................................November 4, 1987

CITY OF BOULDER CITY
Adopted by City Council action ..........................................January 26, 1988

CITY OF MESQUITE
Adopted by City Council action ..........................................January 26, 1988

CLARK COUNTY
Adopted by Board action ..................................................April 1998

REGIONAL STREET AND HIGHWAY COMMISSION
Adopted by Commission Action .........................................October 8, 1987

The Uniform Standard Drawings for Public Works Construction may be revised by issuance of revisions or supplements to correct errors and omissions found in these drawings and to reflect advanced thinking and the changing technology of the construction industry. Each revision will supersede any previous pertinent drawing. Upon approval by the RTC, revisions will become effective and be posted on the RTC web-site, www.rtsouthernnevada.com, by the first day of the month of January and July.

To implement this end a Specifications Committee has been established as a permanent organization to continually study and recommend changes to the standard drawings. Interested parties may address suggested changes and questions to the Regional Transportation Commission, 600 South Grand Central Parkway, Suite 350, Las Vegas, Nevada, 89106-4512.
NOTE: FUTURE CONSTRUCTION ITEMS ON PLANS SHALL BE INDICATED BY A DASHED LINE AND APPROPRIATE NOTE.
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**SPECIFICATION REFERENCE**

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**ABBREVIATIONS**

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**NOTES:**
1. THIS CHART WAS CONSTRUCTED USING THE 1993 AASHTO PAVEMENT DESIGN GUIDE, 1996 NDOT MANUAL AND THE 2000 RTC DESIGN CRITERIA, SECTION 401.01.02 OF THE STANDARD SPECIFICATIONS.
2. A TRAFFIC STUDY MAY BE REQUIRED IF T-I > 9.5.
3. AN AVERAGE R-VALUE MAY BE USED IF IT IS REPRESENTATIVE OF ALL PROJECT CONDITIONS.
4. ADDITIONAL DESIGN COMPENSATION IS REQUIRED IF EXPANSIVE SOILS, HYDRO-COLLAPSIBLE SOILS, OR SOLUBLE MATERIALS ARE PRESENT.
5. AC DEPTHS SHOWN ARE MINIMUMS AND 4" MINIMUM TYPE II IS REQUIRED; OTHER COMBINATIONS THAT MEET OR EXCEED THE STRUCTURAL NUMBER REQUIREMENTS ARE ACCEPTABLE.

**SPECIFICATION REFERENCE**
401 PLANTMIX BITUMINOUS PAVEMENTS

**UNIFORM STANDARD DRAWINGS**
CLARK COUNTY AREA

**PAVEMENT STRUCTURE DESIGN GUIDELINE CHART FOR**
MAJOR COLLECTOR AND ARTERIAL ROADWAYS

**DATE** 11-10-04  **DWG. NO.** 200  **PAGE NO.** 6.1
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**NOTES:**
1. THIS CHART WAS CONSTRUCTED USING THE 1993 AASHTO PAVEMENT DESIGN GUIDE, 1996 NDOT MANUAL AND THE 2000 RTC DESIGN CRITERIA, SECTION 401.01.02 OF THE STANDARD SPECIFICATIONS.
2. AN AVERAGE R-VALUE MAY BE USED IF IT IS REPRESENTATIVE OF ALL PROJECT CONDITIONS.
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**SPECIFICATION REFERENCE**
- UNIFORM STANDARD DRAWINGS
- CLARK COUNTY AREA

**PAVEMENT STRUCTURE DESIGN GUIDELINE CHART**
- FOR
- MINOR COLLECTOR AND RESIDENTIAL ROADWAYS

**DATE** 11-10-04  **DWG. NO.** 200A  **PAGE NO.** 6.1A
NOTES

PROPERTY LINES SHALL BE PARALLEL AND RADIAL TO THE BACK OF CURB AT A DISTANCE CONSISTENT WITH THE STANDARD STREET SECTIONS DRAWING NUMBERS.

* PROPERTY LINE RADIUS SHALL BE A MINIMUM OF 54 FEET.

** PROPERTY LINE RADIUS SHALL BE A MINIMUM OF 40 FEET.

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NOTE:

SEE STANDARD DRAWING NO. 245.1 (2 SHEETS) FOR TYPICAL LANE CONFIGURATIONS AND DIMENSIONS

* AT THE INTERSECTIONS OF 80 FT. AND 100 FT. STREETS, ADDITIONAL RIGHT-OF-WAY MAY BE REQUIRED FOR THE 80 FT. STREET. TYPICALLY, THESE 80 FT. STREETS WILL BE IDENTIFIED AS ARTERIALS IN THE REGIONAL TRANSPORTATION PLAN.

RIGHT-OF-WAY (BEYOND STANDARD 100' ACQUISITION) NECESSARY FOR INTERSECTION

ADDITIONAL RIGHT-OF-WAY NECESSARY FOR EXCLUSIVE RIGHT TURN LANE AT INTERSECTION

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DATE 7-10-03  DWG. NO. 201.1  PAGE NO. 7.1
INTERSECTION SIGHT VISIBILITY ZONE

TYPICAL INTERSECTION CORNER

NOTE: FOR SIGHT ZONE DIMENSIONS, SEE SETBACK TABLE ON SHEET 2 OF THIS STANDARD DRAWING.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SIGHT VISIBILITY ZONES
AT INTERSECTIONS

DATE 8-21-97   DWG. NO. 201.2 (1 OF 2)   PAGE 7.2
## GENERAL NOTES

1. EACH CORNER OF EVERY INTERSECTION SHALL HAVE A SIGHT VISIBILITY EASEMENT REGARDLESS OF RIGHT-OF-WAY WIDTH.

2. NO WALLS, FENCES, TREES, SHRUBS, UTILITY APPURtenances OR ANY OTHER OBJECT, OTHER THAN TRAFFIC CONTROL DEVICES AND STREET LIGHT POLES, MAY BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE UNLESS SAID OBJECT IS MAintAINED AT LESS THAN 24 INCHES IN HEIGHT, MEASUREd FROM TOP OF CURB, OR WHERE NO CURB EXISTS, A HEIGHT OF 27 INCHES MEASURED FROM THE TOP OF ADJACENT ASPHALT, GRAVEL OR PAVEMENT STREET SURFACE.


4. CURVING ROADWAYS AND ROADWAYS WITH INTERSECTING ANGLES GREATER THAN 10 DEGREES MUST BE ANALYZED USING D1, D2, THE EYE POSITION, AND THE CAR POSITION AS SHOWN IN THE INFORMATION ABOVE.

5. USE OF A SIGHT VISIBILITY ZONE DIFFERENT THAN THAT SHOWN HEREIN SHALL REQUIRE A SIGHT VISIBILITY ANALYSIS PREPARED AND SUBMITTED FOR APPROVAL TO THE LOCAL ENTITY ENGINEER BY A CIVIL ENGINEER REGISTERED IN THE STATE OF NEVADA.

6. THE AREA WITHIN THE LIMITS OF THE ARC AND THE CHORD AT THE CURB RETURN SHALL BE ADDED TO THE SIGHT VISIBILITY ZONE AT EACH CORNER OF EVERY INTERSECTION, EXCEPT FOR 100' x 100' INTERSECTIONS OR GREATER.

7. ON-STREET PARKING SHALL BE PROHIBITED WITHIN AREAS DESIGNATED BY DIMENSIONS "A" AND "D" ON SHEET 1 OF THIS DRAWING, SUBJECT TO THE APPROVAL OF THE TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE OF THE ENTITY HAVING JURISDICTION.

## BASIS FOR ANALYSIS

THE FOLLOWING CRITERIA WAS AND SHALL BE USED AS THE BASIS FOR DESIGN OF SIGHT VISIBILITY ZONES:

AASHTO PUBLICATION OF "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS", 1990 EDITION, CHAPTER IX, USING THE MOST RESTRICTIVE SIGHT LINE DERIVED FROM EACH OF THE THREE POSSIBLE CROSSING MANEUVERS (STOPPED CONDITION):

- CASE 3A - CROSSING MANEUVER ONTO A MAJOR STREET
- CASE 3B - LEFT TURN MANEUVER ONTO A MAJOR STREET
- CASE 3C - RIGHT TURN MANEUVER ONTO A MAJOR STREET

THE ANALYSIS SHOULD USE THE GREATER OF THE FOLLOWING:

- DESIGN SPEED = POSTED SPEED LIMIT PLUS FIVE
- DESIGN SPEED = POSTED SPEED LIMIT DIVIDED BY 0.85

CAR AND EYE POSITIONS ARE AS SHOWN ON SHEET 1 OF THIS DRAWING.

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### SPECIFICATION REFERENCE

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**DATE** 8-21-97  **DWG. NO.** 201.2 (2 OF 2)  **PAGE** 7.2A
NOTES:

1. Final A.C. pavement surface shall be 1/2" maximum above lip of gutter. Pavement shall be flush with lip at sidewalk ramps.

2. Structural section shall be in accordance with standard specification section 401 and standard drawing 200.

3. A 3/4" open grade is required on Clark County roadways and may be required in other jurisdictions as determined by the entity’s engineer.

4. If open grade is required dense grade shall be flush with lip of gutter and final A.C. pavement surface shall be 3/4" maximum above lip of gutter. Final A.C. pavement surface shall be flush with lip at sidewalk ramps.

5. Fog seal and prime coat required in the cities of Las Vegas and North Las Vegas.
NOTES:

1. FINAL A.C. PAVEMENT SURFACE (INCLUDING OPEN GRADE) SHALL BE 3/4" MAXIMUM ABOVE LIP OF GUTTER. PAVEMENT SHALL BE FLUSH WITH LIP AT SIDEWALK RAMPS.

2. DENSE GRADE SHALL BE FLUSH WITH LIP OF GUTTER.

3. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD DRAWING NO. 200.

4. THIS STANDARD IS AN ALTERNATE STREET SECTION TO BE USED AT LOCATIONS DETERMINED BY EACH LOCAL JURISDICTION. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE 5 FOOT SIDEWALK.

5. UNDERGROUND DRY UTILITIES SHOULD BE PLACED IN A UTILITY CORRIDOR UNDER THE SIDEWALK.

6. INCREASE PAVEMENT WIDTH BY 11 FEET ON EACH SIDE OF ROADWAY FOR AN 8 LANE CROSS SECTION.

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NOTES:

1. A.C. PAVEMENT TO BE 1/2" MAXIMUM ABOVE LIP OF GUTTER AFTER COMPACTION. PAVEMENT SHALL BE FLUSH WITH LIP AT SIDEWALK RAMPS.
2. THE GRADE BREAK OCCURRING IN THE CROSS SECTION SHALL FALL BETWEEN DRIVING LANES.
3. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD DRAWING NOS. 200 AND 200A.
4. PRIME COAT IS NOT REQUIRED IN HENDERSON, MESQUITE OR BOULDER CITY WHEN A.C. THICKNESS >= 5 IN.
5. 4 INCH MINIMUM THICKNESS REQUIRED IN HENDERSON, MESQUITE AND BOULDER CITY.
6. 3/4" OPEN GRADE REQUIRED IN CLARK COUNTY. OPEN GRADE IN OTHER JURISDICTIONS AS REQUIRED BY THE ENGINEER.

<table>
<thead>
<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA</th>
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<tbody>
<tr>
<td>302 AGGREGATE BASE</td>
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<tr>
<td>401 BITUMINOUS PAVEMENT</td>
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<td>406 PRIME COAT</td>
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<td>407 FOG SEAL</td>
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<tr>
<td>501 CONCRETE</td>
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</tbody>
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COLLECTOR
URBAN AREA STREET SECTIONS WITH CURBSIDE SIDEWALK

DATE 11-10-04 DWG. NO. 205 PAGE NO. 11
NOTES:
1. A.C. PAVEMENT TO BE 1 1/2" MAXIMUM ABOVE LIP OF GUTTER AFTER COMPACTION. PAVEMENT SHALL BE FLUSH WITH LIP AT SIDEWALK RAMPS.
2. THE GRADE BREAK OCCURRING IN THE CROSS SECTION SHALL FALL BETWEEN DRIVING LANES.
3. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD DRAWING NO. 200 AND 200A.
4. THIS STANDARD IS AN ALTERNATE STREET SECTION TO BE USED AT LOCATIONS DETERMINED BY EACH LOCAL JURISDICTION. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE 5 FOOT SIDEWALK.
5. UNDERGROUND DRY UTILITIES SHOULD BE PLACED IN A UTILITY CORRIDOR UNDER THE SIDEWALK.
6. 3/4" OPEN GRADE REQUIRED IN CLARK COUNTY. OPEN GRADE IN OTHER JURISDICTIONS AS REQUIRED BY THE ENGINEER.

<table>
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<tbody>
<tr>
<td>302 AGGREGATE BASE</td>
<td>CLARK COUNTY, LAS VEGAS AND NORTH LAS VEGAS</td>
</tr>
<tr>
<td>401 BITUMINOUS PAVEMENT</td>
<td>COLLECTOR</td>
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<tr>
<td>406 PRIME COAT</td>
<td>ALTERNATE URBAN AREA STREET SECTIONS</td>
</tr>
<tr>
<td>407 FOG SEAL</td>
<td>WITH OFFSET SIDEWALK</td>
</tr>
<tr>
<td>501 CONCRETE</td>
<td>DATE 11-10-04  DWG. NO. 205 ALT PAGE NO. 11ALT.</td>
</tr>
</tbody>
</table>
NOTES:
1. FINAL A.C. PAVEMENT SURFACE SHALL BE 1/4" MAXIMUM ABOVE LIP OF GUTTER. PAVEMENT SHALL BE FLUSH WITH LIP AT SIDEWALK RAMPS.
2. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD DRAWING NO. 200A.

SPECIFICATION REFERENCE

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

HENDERSON, BOULDER CITY, MESQUITE

LOCAL RESIDENTIAL
URBAN AREA STREET SECTION

DATE 11-10-04  DWG. NO. 206  PAGE NO. 12
NOTES:

1. A.C. PAVEMENT AND BASE THICKNESS SHALL BE IN ACCORDANCE TO STANDARD DRAWINGS NUMBER 202 THROUGH 207, WHICHEVER IS APPLICABLE.

2. GREATER WIDTHS MAY BE REQUIRED IF TRAFFIC WARRANTS, AS DETERMINED BY THE ENGINEER.

SPECIFICATION REFERENCE

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA
HALF STREET CONSTRUCTION SECTIONS

DATE   DWG. NO.   PAGE
---   ---   ---

Effective 01/01/10 - 06/30/10
NOTES:

1. A.C. PAVEMENT AND BASE THICKNESS SHALL BE IN ACCORDANCE TO STANDARD DRAWINGS NUMBER 202 THROUGH 207, WHICHEVER IS APPLICABLE.

2. GREATER WIDTHS MAY BE REQUIRED IF TRAFFIC WARRANTS, AS DETERMINED BY THE ENGINEER.
NOTES:

1. INTERSECTIONS SHALL HAVE 34 FOOT MINIMUM EDGE OF A.C. RETURN RADI.

2. COMPACTION OF AGGREGATE BASE AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH THE UNIFORM STANDARD SPECIFICATIONS.

3. STRUCTURAL SECTION SHOWN IS BASED ON A SUBGRADE "R" VALUE OF 20. OTHER STRUCTURAL SECTIONS MAY BE APPROVED IF BASED ON ENGINEERING ANALYSIS BASED ON "R" OR "CBR" VALUES DETERMINED BY SOIL TESTING.

4. CULVERTS MAY BE REQUIRED AT DRIVEWAYS.

5. A.C. PAVEMENT SHALL BE IN ACCORDANCE WITH SECTION 401 OF THE UNIFORM STANDARD SPECIFICATIONS. ALTERNATE PAVING MATERIALS MAY BE USED AT THE DISCRETION OF THE ENTITY.

6. PAVEMENT MARKINGS MAY BE REQUIRED AND INCLUDE DOUBLE YELLOW CENTERLINE, RAISED PAVEMENT MARKERS OR YELLOW PAINT, AND 4" OFFSET WHITE PAINTED EDGELINES.

7. PAVEMENT WIDTH AND PAVEMENT THICKNESS MAY BE REDUCED TO 28 FEET (14 FEET EACH DIRECTION) AND 2 INCHES RESPECTIVELY BASED UPON A DETERMINATION BY THE LOCAL ENTITY THAT THE REDUCED WIDTH AND THICKNESS WILL PROVIDE SATISFACTORY LIFE AND A SAFE ROADWAY.
NOTES:
1. INTERSECTIONS SHALL HAVE 25 FOOT MINIMUM EDGE OF OIL RADI.
2. COMPACTION OF AGGREGATE BASE AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS".
3. STRUCTURAL SECTION SHOWN IS BASED ON A SUBGRADE "R" VALUE OF 20. OTHER STRUCTURAL SECTIONS MAY BE APPROVED IF BASED ON ENGINEERING ANALYSIS BASED ON "R" OR "CBR" VALUES DETERMINED BY SOIL TESTING. IN NO CASE SHALL THE A.C. THICKNESS BE LESS THAN THAT SHOWN, NOR SHALL THE BASE BE LESS THAN 4".
4. CULVERTS MAY BE REQUIRED AT DRIVEWAYS.

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<td>401 BITUMINOUS PAVEMENT</td>
<td>ACCESS ROADS</td>
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<tr>
<td>406 PRIME COAT</td>
<td>(FOR USE IN PM-10 COMPLIANT AREAS)</td>
</tr>
<tr>
<td>407 FOG SEAL</td>
<td>DATE 12-14-00 DWG. NO. 209A</td>
</tr>
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<td>PAGE NO. 15A</td>
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GRAVEL

(THIS SECTION NOT FOR USE IN PM-10 NON-ATTAINMENT AREAS)

NOTES:

1. INTERSECTIONS SHALL HAVE 25 FOOT MINIMUM EDGE OF OIL RADIUS OR 20 FOOT MINIMUM BACK OF CURB RADIUS.

2. COMPACTION OF AGGREGATE BASE AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATION".

3. STRUCTURAL SECTION SHOWN IS BASED ON A SUBGRADE "R" VALUE OF 20. OTHER STRUCTURAL SECTIONS MAY BE APPROVED IF BASED ON ENGINEERING ANALYSIS BASED ON "R" OR "CSR" VALUES DETERMINED BY SOIL TESTING. IN NO CASE SHALL THE A.C. THICKNESS BE LESS THAN THAT SHOWN, NOR SHALL THE BASE BE LESS THAN 4" EXCEPT THAT THE BASE SHALL NOT BE LESS THAN 10" IN NORTH LAS VEGAS.

4. ALLOW IN CITY OF NORTH LAS VEGAS ONLY WITH EXPRESS WRITTEN PERMISSION FROM THE CITY ENGINEER.

SPECIFICATION REFERENCE

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<td>FOG SEAL</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

PRIVATE STREET SECTIONS

DATE 12-14-00  DWG. NO. 210  PAGE 16
CURVE DATA
PROPERTY LINE

\[ \Delta_1 > 75^\circ \text{ USE } R = 30' \text{ MIN.} \]
\[ 65^\circ \text{ TO } 75 \text{ USE } R = 35' \text{ MIN.} \]
\[ 55^\circ \text{ TO } 65 \text{ USE } R = 45' \text{ MIN.} \]

NOTES
1. USE NORMAL SECTION FROM INNER CURB TO CENTER LINE.
2. FROM CROWN LINE TO OUTER CURB, THE STANDARD SLOPE IS 2%.
3. SUPERELEVATION PERCENTAGES SHOWN ARE A STRAIGHT GRADE FROM CENTER LINE TO CROWN LINE.
4. ELEVATIONS ARE REQUIRED WHERE CIRCLES ( ) ARE SHOWN.
5. KNUCKLES ARE NOT ALLOWED ON MAJOR COLLECTOR OR ARTERIAL STREETS.
Effective 01/01/10 - 06/30/10

1. **BCR**
   - $\triangle_1 > 75' = 30'$ MINIMUM
   - $65' \text{ TO } 75' = 35'$ MINIMUM
   - $45' \text{ TO } 65' = 45'$ MINIMUM
   - $\triangle_1 < 45' = C_L \text{ RADIUS } = 150'$ MINIMUM

2. **BCR = 50' MINIMUM**

3. **BCR = W + 10' MINIMUM**

   $\triangle_3 = \triangle_1 + 2 \triangle_2$

**NOTES:**

1. USE 2% SLOPE FROM INNER CURB TO CROWN LINE.
2. FROM CROWN LINE TO OUTER CURB, THE STANDARD SLOPE IS 0.90% (MIN).
3. ELEVATIONS REQUIRED ALONG CURBS (3) AND CROWN EVERY 1/4 (MIN).
4. KNUCKLES ARE ALLOWED ON RESIDENTIAL STREETS ONLY.
5. MINIMUM SLOPE ALONG THE BACK OF CURB OF CURVES (2) AND (3) SHALL BE 0.60% (MIN).
6. SPECIAL KNUCKLE DESIGNS INCLUDING LANDSCAPED MEDIAN ISLAND MAY BE PERMITTED, IF APPROVED BY THE COUNTY ENGINEER.

**SPECIFICATION REFERENCE**

<table>
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<tr>
<th>UNIFORM STANDARD DRAWINGS</th>
<th>CLARK COUNTY ONLY</th>
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<tbody>
<tr>
<td></td>
<td><strong>KNUCKLE - TYPE I</strong></td>
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**DATE** 8-12-99  **DWG. NO.** 211.1  **PAGE** 17.1
NOTES:

1. ONLY 51' R/W AND PRIVATE STREET CUL-DE-SACS WILL BE ALLOWED IN THE CITY OF LAS VEGAS.

<table>
<thead>
<tr>
<th>R/W WIDTH</th>
<th>W</th>
<th>A</th>
<th>R</th>
<th>R-1</th>
<th>R-2</th>
<th>R-3</th>
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<tbody>
<tr>
<td>48'</td>
<td>4&quot;</td>
<td>51.23'</td>
<td>49'</td>
<td>45.5'</td>
<td>19.5'</td>
<td>16'</td>
</tr>
<tr>
<td>51'</td>
<td>4&quot;</td>
<td>51.23'</td>
<td>50.5'</td>
<td>45.5'</td>
<td>19.5'</td>
<td>14.5'</td>
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<tr>
<td>60'</td>
<td>50'</td>
<td>47.38'</td>
<td>50.5'</td>
<td>45.5'</td>
<td>19.5'</td>
<td>14.5'</td>
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CITIES OF NORTH LAS VEGAS AND MESQUITE ONLY

<table>
<thead>
<tr>
<th>R/W WIDTH</th>
<th>W</th>
<th>A</th>
<th>R</th>
<th>R-1</th>
<th>R-2</th>
<th>R-3</th>
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<tbody>
<tr>
<td>40'</td>
<td>51.82'</td>
<td>45.5'</td>
<td>45.5'</td>
<td>19.5'</td>
<td>19.5'</td>
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</table>

ALL OTHER ENTITIES (CC, CLV, HEN, BC)

<table>
<thead>
<tr>
<th>R/W WIDTH</th>
<th>W</th>
<th>A</th>
<th>R</th>
<th>R-1</th>
<th>R-2</th>
<th>R-3</th>
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<tr>
<td>48'</td>
<td>4&quot;</td>
<td>44.72'</td>
<td>44'</td>
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<td>16'</td>
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<tr>
<td>51'</td>
<td>4&quot;</td>
<td>44.72'</td>
<td>45.5'</td>
<td>40.5'</td>
<td>19.5'</td>
<td>14.5'</td>
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<tr>
<td>60'</td>
<td>50'</td>
<td>40.25'</td>
<td>45.5'</td>
<td>40.5'</td>
<td>19.5'</td>
<td>14.5'</td>
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PRIVATE STREET

<table>
<thead>
<tr>
<th>R/W WIDTH</th>
<th>W</th>
<th>A</th>
<th>R</th>
<th>R-1</th>
<th>R-2</th>
<th>R-3</th>
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<tbody>
<tr>
<td>40'</td>
<td>45.16'</td>
<td>40.5'</td>
<td>40.5'</td>
<td>19.5'</td>
<td>19.5'</td>
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NOTE:
USE OF THE HAMMERHEAD WILL BE ALLOWED IN SINGLE FAMILY RESIDENTIAL DWELLING AREAS ONLY.

5' BACK OF CURB RADIUS

R = 30' @ BC
\[ \Delta = 30 \text{ } \frac{60°}{360} \]
T = 8.04'
L = 15.71'

NOTE:
IF BLOCK LENGTH IS 150' OR LESS, HAMMERHEAD IS NOT REQUIRED.

INSTALL "NO PARKING BEYOND THIS POINT" SIGN BOTH SIDES OF STREET.

END SIDEWALK ON 48 R/W STREET (OPTIONAL ONE SIDE ONLY)
SPECIFICATION REFERENCE

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<tr>
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<td>REINFORCING STEEL</td>
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<tr>
<td>707</td>
<td>JOINT MATERIAL</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

EXCEPT CLARK COUNTY ALLEY

DATE 12-14-00  DWG. NO. 214  PAGE NO. 20
SECTION B-B

IF NO BUILDING OR CURB EXISTS
THICKEN EDGE TO 8" TOTAL DEPTH

SECTION A-A

1/2" PREMOLD EXPANSION JOINT FILLER, JOINTS EVERY 30'

NO. 4 BARS 12" O.C. BOTH WAYS

1/2" 12" MIN  2" CLEAR

STANDARD 1/2" GALVANIZED PIPE WITH END PLUG. GREASE REINFORCING STEEL PRIOR TO PIPE INSTALLATION.
NOTES:
1. 1" BATTER ON GUTTER FACE OPTIONAL.
2. WHERE LONGITUDINAL SLOPE IS LESS THAN 0.4%, THE FLOW LINE SHALL BE WATER TESTED.

1/2" EXPANSION JOINT AT ALL COLD JOINTS, AT BEGINNING AND END OF RETURN AND AT 300' MAX. INTERVALS FOR EXTRUDED CURB AND 30' MAX. INTERVALS FOR FORMED CURB. FOR JOINT DETAIL SEE STANDARD DRAWING NUMBER 234

SPECIFICATION REFERENCE

| 501 | CONCRETE |
| 502 | CONCRETE STRUCTURES |
| 707 | JOINT MATERIAL |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

"L" TYPE
CURB AND GUTTER

DATE 12-14-00  DWG. NO. 216  PAGE NO. 22
NOTES:

1. USE OF ROLL CURB MAY BE RESTRICTED BY SURFACE DRAINAGE CONSIDERATIONS.

2. SIDEWALK CONSTRUCTED CONTIGUOUS TO ROLL CURB SHALL BE 5 INCHES THICK (MIN).

3. WHERE LONGITUDINAL SLOPE IS LESS THAN 0.4% THE FLOW LINE SHALL BE WATER TESTED.

4. CONSTRUCT 1/2" EXPANSION JOINT AT ALL COLD JOINTS, AT BEGINNING AND END OF CURB RETURNS, AND AT 300 FT. MAX. INTERVALS FOR EXTRUDED CURB AND 30 FT. MAX. INTERVALS FOR FORMED CURB. WEAKENED PLANE JOINTS SHALL BE FORMED AT THE REMAINING 15 FT. INTERVALS. SEE STD. DWG. NO. 234 FOR JOINT DETAILS.

5. ONE INCH BATTER AT CURB FACE IS OPTIONAL.

6. CITY OF LAS VEGAS COUNCIL APPROVAL REQUIRED FOR USE OF 30" ROLL CURB IN THE CITY OF LAS VEGAS.

7. IN NORTH LAS VEGAS, ROLL CURBS ARE PROHIBITED IN AREAS WHERE FLOW LINE GRADIENT IS LESS THAN 0.8% UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

8. ALL UTILITY BOXES AND COVERS ADJACENT TO ROLL CURB SHALL BE HS-20 RATED "TRAFFIC BEARING" TYPE
NOTES:

1. CONSTRUCT WEAKENED PLANE JOINT IN CURB AND SLAB AT SAME LOCATION EVERY 10'; CONSTRUCT EXPANSION JOINTS EVERY 300' FOR CONCRETE SLAB TO MATCH CURB JOINTS. FOR JOINT DETAILS SEE STANDARD DRAWING NUMBER 234.

2. "A" -TYPE CURB AND GUTTER PER STANDARD DRAWING NUMBER 221 IS REQUIRED IN THE CITY OF HENDERSON AND MAY BE REQUIRED FOR DRAINAGE CONSIDERATIONS.

3. WHEN CURB MACHINE IS USED TO PLACE CURB, A 2" MINIMUM LEVELING COURSE OF TYPE II AGGREGATE BASE IS REQUIRED.

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UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

MEDIAN ISLAND

TYPICAL SECTION
"L" CURB SECTION

1/2" R

HOLDING GUTTER WHERE REQUIRED FOR DRAINAGE

6" 1/4"

6"

11"

1/2"

12"

10" (TYP.)

10"

CONCRETE

WEAKENED PLANE JOINTS
SEE STANDARD DRAWING NUMBER 234

NOTES:
1. CONTINUOUS NO. 4 BAR REQUIRED IN NOSE OF MEDIAN ONLY.
2. 1" BATTER ON GUTTER FACE OPTIONAL.

"A" CURB SECTION

1/2" R

SEE NOTE 1

5"

5-1/2"

1/2"

7"

FLOWLINE

6"

11"

1/4"

1/2"

"A" AND "L" TYPE ISLAND CURB

SPECIFICATION REFERENCE

302 AGGREGATE BASE COURSE
501 CONCRETE
707 JOINT MATERIAL

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DATE 12-14-00 | DWG. NO. 219 | PAGE NO. 25
1/2" RADIUS ROUNDED EDGE ON ALL EXPOSED CORNERS

CONCRETE

VARIIES

SURFACE TREATMENT VARIES

EXISTING A.C. PAVEMENT

NO. 4 BARS AT 3'-4" CENTERS 18" LONG

SECTION

EXPANSION JOINT AT ALL COLD JOINTS, AT BEGINNING AND END OF RETURN AND 300' MAX INTERVALS FOR EXTRUDED CURB AND 30' MAX INTERVALS FOR FORMED CURB

WEAKENED PLANE JOINT

10' (TYP)

3'-4" (TYP)

3"

DIRECTION OF TRAFFIC

NO. 4 BARS AT 3'-4" CENTERS 18" LONG

NO. 4 BAR

SIDE VIEW

NOTES:

1. FOR EXPANSION JOINT AND WEAKENED PLANE JOINT DETAIL, SEE STANDARD DRAWING NO. 234.

2. WEAKENED PLANE JOINTS EVERY 10' STAGGER WITH NO. 4 BARS.

3. ALL REINFORCING STEEL SHALL HAVE 2" CLEAR COVER UNLESS OTHERWISE SHOWN.

4. WHEN APPROVED BY THE ENGINEER/ENTITY, STRUCTURAL EPOXY ADHESIVE MAY BE USED IN LIEU OF NUMBER 4 DOWEL BAR EXCEPT AT CURB NOSE AND WITHIN 2 FEET OF ANY POINT OF CURVATURE.

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TACK ON ISLAND CURB

DATE 01-13-05 DWG. NO. 220 PAGE NO. 26
1/2" RADIUS ROUNDED
EDGE ON ALL EXPOSED
CORNERS

CONCRETE

VARIES

1"

6"

NO. 4 BARS AT 3'-4"
CENTERS 18" LONG

EXISTING A.C. PAVEMENT

3" (TYP.)

NO. 4 BAR CONTINUOUS

SECTION

EXPANSION JOINT AT 30' MAX
INTERVALS AND AT BEGINNING
AND END OF RETURN

9" (TYP.)

18" (TYP.)

NO. 4 BAR CONTINUOUS

WEAKENED
PLANE JOINT

DIRECTION
OF TRAFFIC

10'

10'

(TYP.)

(TYP.)

NO. 4 BARS 18" LONG AT 10' CENTERS STAGGER WITH EXPANSION JOINTS

SIDE VIEW

NOTES:
1. FOR EXPANSION JOINT AND WEAKENED PLANE JOINT DETAIL, SEE STANDARD DRAWING NO. 234.
2. WHEN APPROVED BY THE ENGINEER/ENTITY, STRUCTURAL EPOXY ADHESIVE MAY BE USED
   IN LIEU OF NUMBER 4 DOWEL BAR EXCEPT AT CURB NOSE AND WITHIN 2 FEET OF ANY POINT
   OF CURVATURE.

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

EXCEPT CITY OF HENDERSON
TACK ON ISLAND

DATE 01-13-05  DWG. NO.  221  PAGE NO.  27
2' CURB FACE TO CURB FACE (TYP.)

4' PCC MEDIAN STRIP PER STD. DWG. NO. 218 (TYP.)

CURVE DATA

\[ \begin{align*}
\Delta &= 31^\circ 00'10'' \\
R &= 74.00' \\
T &= 20.52' \\
L &= 40.04'
\end{align*} \]

\[ \begin{align*}
\Delta &= 31^\circ 00'10'' \\
R &= 10.00' \\
T &= 2.77' \\
L &= 5.41'
\end{align*} \]

NOTES:

1. INSTALL R5-1
2. INSTALL R3-2
3. STREETLIGHT LOCATION STANDARD FOR THE CITY OF HENDERSON OR IF 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 #218

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

CHANNELIZED MEDIAN DETAIL
FOR COMMERCIAL DRIVEWAYS OR INTERSECTING STREETS

DATE 6-8-06 DWG. NO. 221.1 PAGE 27.1
NOTES:

1. ALL RESIDENTIAL PROPERTIES MAY HAVE ONLY ONE CURB CUT EXCEPT CIRCULAR DRIVEWAYS AS SHOWN.
2. LOCAL ORDINANCES MAY APPLY AND SHALL HAVE PREFERENCE.
3. NO DRIVEWAY SHALL BE LOCATED WHOLLY OR PARTIALLY, ON OR OVER A UTILITY EASEMENT WHICH RUNS PERPENDICULAR TO THE CURB LINE.
4. NO DRIVEWAY SHALL BE LOCATED WITHIN 6 FEET OF A LIGHT POLE (UNLESS ACCEPTED BY THE ENTITY TRAFFIC ENGINEER), FIRE HYDRANT, MAIL BOX, ABOVE-GROUND ELECTRICAL TRANSFER BOX, BLOCK WALL HIGHER THAN 2 FEET, OR THE CURB RETURN AT A STREET INTERSECTION OR ALLEY.
5. COMMON DRIVEWAY CONSTRUCTION MAY BE PERMITTED AT ANY TWO RESIDENTIAL PROPERTIES OF 60 FEET IN WIDTH OR LESS. THE WIDTH OF THE JOINT DRIVEWAY SHALL BE A MAXIMUM OF 24 FEET. A JOINT DRIVEWAY AGREEMENT SHALL BE REQUIRED. (EXCEPT CLARK COUNTY)
6. GEOMETRICS APPLY TO NEW CONSTRUCTION ONLY, AND MAY VARY IN EXISTING SUBDIVISIONS SUBJECT TO APPROVAL OF THE ENGINEER.
7. MULTI-FAMILY RESIDENTIAL AND ALL NON-RESIDENTIAL DRIVEWAYS SHALL CONFORM TO THE COMMERCIAL DRIVEWAY STANDARDS.
8. ALL DRIVEWAY LOCATIONS SHALL BE SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER.
9. FOR CURB DEPRESSION AND DRIVEWAY APRON DETAIL, SEE STD. DWG. NO. 223.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

RESIDENTIAL
DRIVEWAY GEOMETRICS

DATE 8-12-99   DWG. NO. 222   PAGE NO. 28
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.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

COMMERCIAL AND MULTI-FAMILY
DRIVEWAY GEOMETRICS

DATE 02-09-06  DWG. NO. 222A  SHEET 1 OF 2
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
      WIDTH- 4' MINIMUM
G. 15' MINIMUM
E. 48' MINIMUM
H. 8' MINIMUM & 15' MAXIMUM
NOTES:

1. WHEN CONSTRUCTING DRIVEWAY WHERE CURB AND GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB AND GUTTER. DRIVEWAYS MAY BE MONOLITHIC TO A.C. LINE.

2. WEAKENED PLANE JOINTS SHALL BE UNIFORMLY PLACED BETWEEN 5’ AND 7’ INTERVALS, SEE STANDARD DRAWING NO. 234.
NOTES:

1. NO. 4 BARS AT 16" O.C. BOTH WAYS EXTENDING INTO GUTTER. NO. 4 BARS SHALL BE PLACED 3" ABOVE BOTTOM OF CONCRETE SUPPORTED BY NON-FERROUS CHAIRS APPROVED BY THE ENGINEER.

2. WHEN CONSTRUCTING DRIVEWAY WHERE CURB AND GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB AND GUTTER. DRIVEWAY SHALL BE MONOLITHIC TO A.C. LINE.

3. DRIVEWAY THICKNESS FOR INDUSTRIAL USE SHALL BE 8" MIN.

4. WEAKENED PLANE JOINTS SHALL BE EQUALLY SPACED AT 15" MAX. INTERVALS, SEE STANDARD DRAWING NO. 234.
Effective 01/01/10 - 06/30/10

NOTES:
1. SEPARATION OF PEDESTRIAN AND VEHICLE TRAFFIC MUST BE MAINTAINED ON SITE.
2. FOR GRADE CHANGES GREATER THAN 3%, VERTICAL CURVES OF AT LEAST 10 FEET MUST BE USED.
3. WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN THE CURB RETURN IN ACCORDANCE WITH STANDARD DRAWING NO. 235.

TYPICAL CROSS SECTION

PUBLIC STREET

PRIVATE STREET OR DRIVEWAY

FLOW LINE

CROSS GUTTER WHEN REQUIRED FOR DRAINAGE CONSIDERATIONS
FOR DETAIL SEE STANDARD DRAWING NO. 228

"L" TYPE CURB & GUTTER

AREA REQUIRED TO BE DEDICATED AS AN EASEMENT

R = 15' MIN. 35' MAX.

R = 25' MIN. 35' MAX.

FLOW LINE OF CROSS GUTTER

CROWN

NORMAL

8" TYP.

2% TYPICAL

MAXIMUM GRADE BREAK ±3%

STREET CENTERLINE

BACK OF CURB

40' B.C.

TYPICAL

R/W & BACK OF SIDEWALK
1. NO. 4 BARS AT 18" O.C. BOTH WAYS EXTENDING INTO GUTTER. NO. 4 BARS SHALL BE PLACED 3" ABOVE BOTTOM OF CONCRETE SUPPORTED BY NON-FERROUS CHAIRS APPROVED BY THE ENGINEER.

2. WHEN CONSTRUCTING DRIVEWAY WHERE CURB AND GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB AND GUTTER. DRIVEWAY SHALL BE MONOLITHIC TO A.C. LINE.

3. DRIVEWAY THICKNESS FOR INDUSTRIAL USE SHALL BE 8" MIN.

4. WEAKENED PLANE JOINTS SHALL BE EQUALLY SPACED AT 15' MAX. INTERVALS.

5. THIS DRIVEWAY DESIGN SHALL ALSO BE USED FOR ALLEY INTERSECTIONS, 8" MIN. THICKNESS.

6. SPECIAL DESIGNS SUBJECT TO APPROVAL OF THE ENGINEER.
NOTES:
1. FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.
2. ADJACENT SPANDREL SHALL BE 6" THICK P.C.C.

SECTION A-A
NOTES:

1. FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.
2. ADJACENT SPANDREL SHALL BE 9" THICK P.C.C.
NOTES:

1. NO. 4 BARS AT 16" O.C. BOTH WAYS CONTINUOUS THROUGH GUTTER. NO. 4 BARS SHALL BE PLACED 3" ABOVE BOTTOM OF CONCRETE.

2. WHEN CONSTRUCTING DRIVEWAY WHERE CURB AND GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB AND GUTTER. DRIVEWAY SHALL BE MONOLITHIC TO A.C. LINE.

3. DRIVEWAY THICKNESS SHALL BE 8" MIN.
NOTES:
1. FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.
2. CONSTRUCTION OF CROSS GUTTER IS NOT ALLOWED ACROSS MAJOR COLLECTOR OR ARTERIAL STREETS.
3. ADJACENT SPANDREL SHALL BE 9" THICK P.C.C.
FOR DETAIL CONSTRUCTION SEE CROSS GUTTER STANDARD DRAWING NO. 228

PLAN

SECTION A-A

DETAIL FOR FUTURE CONSTRUCTION

SPECIFICATION REFERENCE

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<td>CONCRETE STRUCTURES</td>
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<td>505</td>
<td>REINFORCING STEEL</td>
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<tr>
<td>707</td>
<td>EXPANSION JOINT MATERIAL</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

HALF STREET CROSS GUTTER

DATE | DWG. NO. | PAGE NO. |
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<tbody>
<tr>
<td></td>
<td>229</td>
<td>35</td>
</tr>
</tbody>
</table>
1. Concrete shall be placed monolithically for each four quadrants of the intersection.
2. Longitudinal and transverse weakened plane joints shall be Type "C".
3. Longitudinal and transverse construction joints shall be Type "B".
4. For joint details see Standard Drawing No. 233.
5. All manholes and water valves shall be boxed out. See detail on Standard Drawing No. 232.
6. Longitudinal and transverse joints shall be tied into the corners of all boxouts. This will require the engineer to show all utility boxouts on the plans, and the joint layout patterns that tie into them. Whenever possible, intersection of joints shall be at 90° but not less than 60° or greater than 140°.

NOTES CONTINUED:
7. Concrete pavement placed along existing curb and gutter shall have a thickened edge. See Standard Drawing No. 232.
8. Concrete pavement placed along proposed curb and gutter shall be constructed with Type "B" joint. See detail on Standard Drawing No. 232.
9. Location of joints for proposed curb & gutter shall coincide with joints in concrete pavement.
10. Lane markers shall not be placed on top of any joint.
NOTE:

CONCRETE AND BASE THICKNESS TO BE DETERMINED BY ENGINEERING ANALYSIS BASED ON TRAFFIC CONDITIONS, SUBGRADE STRENGTH, QUALITY OF BASE, AND FLEXURAL STRENGTH OF CONCRETE.
Effective 01/01/10 - 06/30/10

1/2" EXPANSION JOINT AT 30' INTERVALS, AT COLD JOINTS AND AT BEGINNING AND END OF RETURN. EXPANSION JOINTS TO MATCH LOCATION MATCH LOCATION OF CURB AND GUTTER EXPANSION JOINT.

VARIES

1/2" R
SLOPE 1/4" PER FOOT
4" CONCRETE

6" MIN. TYPE I OR TYPE II AGGREGATE BASE

TYPE II AGGREGATE BASE AT 90% COMPACTION SEE NOTE 2

TYPICAL SECTION

1/2"

1/2"

1/2" R

PREMOLD EXPANSION JOINT FILLER

WEAKENED PLANE JOINT

EXPANSION JOINT

NOTES:

1. ON ALL CURB RETURNS A 1/2" EXPANSION JOINT SHALL BE CONSTRUCTED BETWEEN THE BACK OF CURB AND THE SIDEWALK FOR THE ENTIRE LENGTH OF THE RETURN.

2. THE TYPE II AGGREGATE BASE THICKNESS IS SHOWN ON THE TYPICAL SECTION DRAWINGS 202 - 207.

3. LONGITUDINAL WEAKENED PLANE JOINT REQUIRED AT MIDPOINT OF SIDEWALK 10' OR WIDER.

SPECIFICATION REFERENCE

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<td>707</td>
<td>JOINT MATERIAL</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SIDEWALK

DATE 12-14-00  DWG. NO. 234  PAGE NO. 40
Effective 01/01/10 - 06/30/10

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 "BUSES 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. 409.03.08. FLOW LINE SHALL NOT BE TEXTURED, BUT SHALL BE A TROKELED SURFACE.
NOTES:

1. SIDEWALK RAMP MAY BE REQUIRED TO BE CONSTRUCTED IN THOSE LOCATIONS WHERE THE BUS STOP WOULD OTHERWISE BE INACCESSIBLE AS DEFINED BY THE AMERICANS WITH DISABILITIES ACT. SEE DRAWING NO. 235, SHEET 4 OF 4 FOR SIDEWALK RAMP DETAILS.

2. ADDITIONAL RIGHT-OF-WAY OR EASEMENT IS REQUIRED FOR BUS SHELTER PAD AND VARIABLE HEIGHT CURB AT BACK OF SIDEWALK RAMP AND SHALL BE DEDICATED TO THE LOCAL ENTITY.

3. AGGREGATE BASE AND CONCRETE FOR LOADING PAD SHALL BE THE SAME AS REQUIRED FOR SIDEWALK. SEE DRAWING NO. 234.

4. BUS SHELTER PAD CONNECTION TO DETACHED SIDEWALK CONDITION SHALL BE DETERMINED BY THE ENTITIES.

5. "A" = 10', "B" = 15' UNLESS BUS Turnout IS CONSTRUCTED PER STANDARD DRAWINGS 234.1 OR 234.3, THEN "A" = 5', "B" = 10'.

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**SPECIFICATION REFERENCE**

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<tr>
<td>501</td>
<td>TYPICAL BUS STOP PASSENGER</td>
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<tr>
<td>502</td>
<td>LOADING AND SHELTER PADS</td>
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</tbody>
</table>

**DATE** 11-13-08  **DWG. NO.** 234.2
NOTES:

1. SIDEWALK RAMP MAY BE REQUIRED TO BE CONSTRUCTED IN THOSE LOCATIONS WHERE THE BUS STOP WOULD OTHERWISE BE INACCESSIBLE AS DEFINED BY THE AMERICANS WITH DISABILITIES ACT. SEE DRAWING NO. 235, SHEET 4 OF 4 FOR SIDEWALK RAMP DETAILS.

2. ADDITIONAL RIGHT-OF-WAY OR EASEMENT IS REQUIRED FOR BUS SHELTER PAD AND VARIABLE HEIGHT CURB AT BACK OF SIDEWALK RAMP. AND SHALL BE DEDICATED TO THE LOCAL ENTITY.

3. AGGREGATE BASE AND CONCRETE FOR LOADING PAD SHALL BE THE SAME AS REQUIRED FOR SIDEWALK. SEE DRAWING NO. 234.

4. BUS SHELTER PAD CONNECTION TO DETACHED SIDEWALK CONDITION SHALL BE DETERMINED BY THE ENTITIES.

5. "A" = 10', "B" = 15' UNLESS BUS TURNOUT IS CONSTRUCTED PER STANDARD DRAWINGS 234.1 OR 234.3, THEN "A" = 5', "B" = 10'.

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<td>CONCRETE STRUCTURES</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPICAL DOUBLE BUS STOP PASSENGER LOADING AND SHELTER PADS

DATE 11-13-08  DWG. NO. 234.2A
NOTES:

1. IF ARTICULATED BUSES ARE EXPECTED TO SERVICE BUS STOP, DISTANCE FROM END OF ENTRY TAPER TO THE END OF THE BUS STOP LOADING PAD SHALL BE INCREASED TO 70 FT. MIN. AND THE RIGHT TURN STORAGE LANE LENGTH SHALL BE INCREASED TO 120 FT. MIN.

2. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE ENGINEER, INSTALL ARROW AND "ONLY" SYMBOLS PAVEMENT MARKINGS FOR THE LENGTH OF THE STORAGE LINE. SYMBOLS SHALL BE APPROVED TYPE II PAVEMENT MARKING FILM.

3. STORAGE LANE LINE SHALL BE APPROVED TYPE I PAVEMENT MARKING FILM, OR IF APPROVED BY THE ENGINEER, RAISED PAVEMENT MARKERS MAY BE USED.

4. REVERSE CURVE TRANSITION MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.
RAMP IN CURB RETURN

30' OR MORE RADIUS BACK OF CURB

RAMP OUTSIDE CURB RETURN

DESCRIPTION:

"A" AND "B" ARE EQUAL TO 8' WHEN FLOW LINE GRADE IS BETWEEN -2% AND +2%. FOR "A" AND "B" AT OTHER FLOW LINE GRADES, SEE TABLE 1 ON SHEET 4 THIS DRAWING NO.

SECTION C-C

NOTES:

1. SIDEWALK RAMPS OUTSIDE OF THE CURB RETURN SHALL BE LOCATED ADJACENT TO THE RETURN UNLESS OTHERWISE APPROVED.
2. RAMPS SHALL BE CONSTRUCTED WITH A ROUGH BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.
3. WHEN CONSTRUCTING RAMP WHERE CURB & GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB & GUTTER.
4. DETECTABLE WARNING CONSISTING OF RAISED TRUNCATED DOMES WHICH COMPLY WITH DETAILS ON SHEET 4 OF THIS DRAWING NO. AND CONTRASTING VISUALLY WITH ADJOINING SURFACES SHALL BE PLACED ON BOTTOM PORTION OF RAMPS EXTENDING THE FULL WIDTH OF RAMPS AND TO A MINIMUM DEPTH OF 24 INCHES. PAVER BLOCKS PERMITTED ONLY IN THE CITY OF BOULDER CITY FOR DETECTABLE WARNING AREAS.
5. CURB MAY BE PLACED AND IS PREFERRED BEHIND BACK OF WALK IF SUFFICIENT RIGHT-OFF-WAY OR EASEMENTS EXIST AND AS APPROVED BY THE ENGINEER.

PROFILE

FOR TRANSITION LENGTHS, SEE SHEET 4 TABLES 1 & 2

PAIRED RAMP IN CURB RETURN

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

SIDEWALK RAMP
CASE 1

DATE 11-8-07
DWG. NO. 235 (1 OF 4)

302 AGGREGATE BASE
501 CONCRETE
502 CONCRETE STRUCTURES
RAMP IN CURB RETURN
(NO BACK OF WALK DEPRESSION)

SECTION C-C

NOTES:
1. SIDEWALK RAMP WITHIN CURB RETURN SHALL BE LOCATED AT THE MIDPOINT OF CURB RETURN UNLESS OTHERWISE APPROVED.
2. RAMPS SHALL BE CONSTRUCTED WITH A ROUGH BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.
3. WHEN CONSTRUCTING RAMP WHERE CURB & GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB & GUTTER.
4. DETECTABLE WARNING CONSISTING OF RAISED TRUNCATED DOMES WHICH COMPLY WITH DETAILS ON SHEET 4 OF THIS DRAWING NO. AND CONTRASTING VISUALLY WITH ADJOINING SURFACES SHALL BE PLACED ON BOTTOM PORTION OF RAMP EXTENDING THE FULL WIDTH OF THE RAMP AND TO A MINIMUM DEPTH OF 24 INCHES. PAVER BLOCKS PERMITTED ONLY IN THE CITY OF BOULDER CITY FOR DETECTABLE WARNING AREAS.

CASE II SHALL BE USED WHERE RW AND FIELD CONDITIONS PERMIT.

SPECIFICATION REFERENCE

<table>
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<td>502</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SIDEWALK RAMP
CASE II

DATE 11-10-04  DWG. NO. 235  (2 OF 4)  PAGE 41A
RAMP IN CURB RETURN

RAMP OUTSIDE CURB RETURN

SECTION C-C

NOTES:
1. SIDEWALK RAMP WITHIN CURB RETURN SHALL BE LOCATED AT THE MIDPOINT OF CURB RETURN UNLESS OTHERWISE APPROVED.
2. SIDEWALK RAMPS OUTSIDE OF THE CURB RETURN SHALL BE LOCATED ADJACENT TO THE RETURN UNLESS OTHERWISE APPROVED.
3. RAMPS SHALL BE CONSTRUCTED WITH A ROUGH BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.
4. WHEN CONSTRUCTING RAMP WHERE CURB & GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB & GUTTER.
5. DETECTABLE WARNING CONSISTING OF RAISED TRUNCATED DOMES WHICH COMPLY WITH DETAILS ON SHEET 4 OF THIS DRAWING NO. AND CONTRASTING VISUALLY WITH ADJOINING SURFACES SHALL BE PLACED ON BOTTOM PORTION OF RAMP EXTENDING THE FULL WIDTH OF THE RAMP AND TO A MINIMUM DEPTH OF 24 INCHES. PAVER BLOCKS PERMITTED ONLY IN THE CITY OF BOULDER CITY FOR DETECTABLE WARNING AREAS.

PROFILE

CASE III TO BE USED FOR AREAS WHERE OBSTRUCTION (I.E. BLOCK WALL) EXISTS AT BACK OF WALK ONLY WHEN APPROVED BY THE ENGINEER.
DETECTABLE WARNING DETAILS (TRUNCATED DOMES)

**Table 1. Transition Lengths for 1:12 Side Slopes**

<table>
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<th>&quot;A&quot; (FT) MIN.</th>
<th>&quot;B&quot; (FT) MIN.</th>
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<td>4.5</td>
<td>21.5</td>
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<tr>
<td>-5 TO -4.01</td>
<td>4.5</td>
<td>15.0</td>
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<td>12.0</td>
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<td>-3 TO -2.01</td>
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<td>9.5</td>
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<tr>
<td>-2 TO 2</td>
<td>8.0</td>
<td>8.0</td>
</tr>
<tr>
<td>2.01 TO 3</td>
<td>9.5</td>
<td>4.5</td>
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<tr>
<td>3.01 TO 4</td>
<td>12.0</td>
<td>4.5</td>
</tr>
<tr>
<td>4.01 TO 5</td>
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<td>5.01 TO 6</td>
<td>21.5</td>
<td>4.5</td>
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NOTE:
Charts apply to curb with 6" curb face. If curb has greater than a 6" curb face, a special design is required.

**Table 2. Transition Lengths for 1:10 Side Slopes**

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<th>&quot;A&quot; (FT) MIN.</th>
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<td>-6 TO -5.01</td>
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<td>-5 TO -4.01</td>
<td>4.0</td>
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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
OFFSET "T"

ISOLATED "T"

**NOTES:**

1. THE TYPICAL LOCATIONS OF SIDEWALK RAMPS SHOWN ABOVE ARE INTENDED TO MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA). AT LEAST ONE SIDEWALK RAMP SHALL BE CONSTRUCTED OPPOSITE THE INTERSECTING ROADWAY. ADDITIONAL SIDEWALK RAMPS MAY BE REQUIRED BY THE ENGINEER TO PROVIDE A CONTINUOUS UNOBSTRUCTED PEDESTRIAN CIRCULATION PATH AS DEFINED BY THE ADA.

2. SIDEWALK RAMP LOCATIONS SHOWN ARE FOR INTERSECTIONS WITH UNMARKED CROSSWALKS. IF A PEDESTRIAN CROSSING AREA IS MARKED, SIDEWALK RAMPS SHALL BE LOCATED WITHIN THE MARKED CROSSWALKS AS APPROVED BY THE ENGINEER.
NOTES:

1. IF WIDTH OF PLATE IS GREATER THAN 24", A SPECIAL DESIGN IS REQUIRED.

2. ALL EXPOSED METAL PARTS SHALL BE GALVANIZED AND ALL GALVANIZING DAMAGED BY FABRICATION OR INSTALLATION SHALL RECEIVE TWO COATS OF ALUMINUM PAINT (GALVONOX OR EQUAL).
**NOTES:**

1. TRANSVERSE JOINTS WITH 1" PREMOLDED EXPANSION JOINT FILLER OR 1" OPEN TRANSVERSE JOINTS SHALL BE PLACED AT STRUCTURES. JOINTS IN BARRIER RAIL OVER A STRUCTURE SHALL BE AT THE SAME LOCATION AND OF THE SAME DIMENSION AS THOSE IN THE STRUCTURE.

2. BITUMINOUS PAVING REQUIRED: PAVING SHALL BUTT AGAINST THE BARRIER RAIL END ANCHOR SECTION AND SHALL EXTEND FULL WIDTH UNDER THE NORMAL BARRIER RAIL SECTION PLUS 6" MINIMUM 6-INCH DEEP BARRIER, END ANCHORS SHALL BE CONSTRUCTED IN THE FIRST AND LAST 10 LINEAR FEET OF THE FULL HEIGHT BARRIER RAIL RUN. IF TRANSITIONS ARE USED, THE ANCHOR SHALL BE EXTENDED UNDER THE TRANSITION.

**SPECIFICATION REFERENCE**

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<tr>
<td>60</td>
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**UNIFORM STANDARD DRAWINGS**

CLARK COUNTY AREA

CONCRETE BARRIER RAIL

**DATE** 12-14-00 **DWG. NO.** 237 **PAGE NO.** 43
1. Precast bumper block to be used in parking lots only.

2. Grout hole before driving spike. After driving spike, fill hole with concrete mortar and finish flush with top.

NOTES:

STEEL WIRE BRIDGE SPIKE

1/2" deformed bar to stay 1" min. inside concrete

TOP VIEW

HOLE DETAIL

SIDE VIEW

END VIEW

SPECIFICATION REFERENCE

<table>
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<tr>
<th>501</th>
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<tr>
<td>505</td>
<td>REINFORCING STEEL</td>
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</table>

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

PRECAST BUMPER BLOCK

DATE 12-14-00 DWG. NO. 238 PAGE NO. 44
NOTE:
TYPE I MONUMENTS TO BE SET AT ALL SECTION CORNERS AND 1/4 SECTION CORNERS WHICH FALL WITHIN IMPROVED STREET SECTIONS, AND MARKED IN ACCORDANCE WITH THE 1973 B.L.M. MANUAL OF SURVEYING INSTRUCTIONS.

SPECIFICATION REFERENCE

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<thead>
<tr>
<th>501</th>
<th>CONCRETE</th>
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<tr>
<td>621</td>
<td>MONUMENTS</td>
</tr>
<tr>
<td>704</td>
<td>BASE AGGREGATE</td>
</tr>
</tbody>
</table>

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE I MONUMENT

DATE 12-14-00  DWG. NO.  239  PAGE NO.  45
NOTES:

1. TYPE II-A MONUMENTS TO BE SET AT ALL SECTION CORNERS, 1/4 SECTION CORNERS AND 1/16 SECTION CORNERS WHICH FALL WITHIN UNIMPROVED STREET SECTIONS.

2. TYPE II-B MONUMENTS TO BE SET AT ALL 1/16 SECTION CORNERS WHICH FALL WITHIN IMPROVED STREET SECTIONS.

3. ALL TYPE II MONUMENTS ARE TO BE MARKED IN ACCORDANCE WITH THE 1973 B.L.M. MANUAL OF SURVEYING INSTRUCTIONS.

4. 6" x 6" SQUARE MONUMENTS ARE ALSO ACCEPTABLE.

5. IF MONUMENTS ARE TO BE "PRECAST" THEY ARE TO BE EMBEDDED IN FRESH CONCRETE TO PREVENT MOVEMENT.

6. THE COUNTY/CITY SURVEYOR MAY REQUIRE TYPE II MONUMENTS IN ADDITIONAL LOCATIONS.

---

SURFACE OF UNPAVED STREET

PLAN

6" MIN.
18" MAX.

12" MIN.

A.C. PAVEMENT

BRONZE OR BRASS CAP (SEE DETAIL STANDARD DRAWING NO. 242, NOT TO BE MARKED BY CONTRACTOR).

5/8" MIN. DIA. REBAR
SET A MIN. OF 4" BELOW TOP OF CONCRETE AT APPROXIMATE CENTER.

CONCRETE

SECTION A-A
TYPE II-A
UNPAVED STREET

SECTION A-A
TYPE II-B
PAVED STREET

---

SPECIFICATION REFERENCE

<table>
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<tr>
<th>501</th>
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</tr>
</thead>
<tbody>
<tr>
<td>621</td>
<td>MONUMENTS</td>
</tr>
</tbody>
</table>
NOTES:

1. TYPE III MONUMENTS TO BE SET AT ALL CENTERLINE CONTROL POINTS NOT OTHERWISE IDENTIFIED BY A TYPE I OR TYPE II MONUMENT, INCLUDING STREET INTERSECTIONS, POINTS OF CURVATURE, POINTS OF TANGENCY, POINTS OF INTERSECTION AND CENTERS OF HAMMERHEAD TURNAROUNDS OR CIRCULAR CUL-DE-SACS.

2. THE REGISTERED LAND SURVEYOR'S NUMBER, AND A PUNCH MARK ARE TO APPEAR ON THE SURFACE OF THE CAP.

CAP TO BE SECURED WITH PLASTIC INSERT OR EPOXY CONFORMING TO A.S.T.M. C881-78 SPECIFICATIONS.

MIN. DIA.

NOTE:

( MINIMUM 1" DIA. NON-FERROUS CAP TO BE SET BY REGISTERED LAND SURVEYOR )

5/8" MIN. DIA. REBAR OF SUFFICIENT LENGTH TO RESIST REMOVAL

TYPE III MONUMENT

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<th>UNIFORM STANDARD DRAWINGS</th>
<th>CLARK COUNTY AREA</th>
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</thead>
<tbody>
<tr>
<td>621 MONUMENTS</td>
<td>TYPE III MONUMENT</td>
<td></td>
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</tbody>
</table>
NOTES:

1. FOUR (4) TYPE IV REFERENCE MONUMENTS TO BE SET WITHIN A RADIUS OF TWENTY (20) TO ONE HUNDRED (100) FEET FROM ALL TYPE I, II, AND III MONUMENTS.

2. THE TIE DISTANCE AND THE INITIALS R.M. ARE TO BE STAMPED ON THE CAP, FOR TYPE IV MONUMENTS.

3. NON-FERROUS CAP TO BE MADE FROM CAST VIRGIN METAL IN ONE PIECE, FREE FROM CASTING IMPERFECTIONS, WITH CORRUGATED SHAFT.

4. TYPE III AND TYPE IV MONUMENT CAP DIAMETER MAY BE REDUCED TO 1".

DETAIL
STANDARD CAP

NON-FERROUS CAP (SEE DETAIL) INSET IN TOP OF CURB, BONDED SECURELY WITH EPOXY, (A.S.T.M. C881 - 78 SPECS.)

MINIMUM 5/8" DIA. REBAR SET A MINIMUM OF 4" BELOW TOP OF CONCRETE AT APPROX. CENTER.

NON-FERROUS CAP (SEE DETAIL)

TYPE IV-B MONUMENT
NO CURB & GUTTER

TYPE IV-A MONUMENT
EXISTING CURB & GUTTER

SPECIFICATION REFERENCE

| 501 | CONCRETE |
| 621 | MONUMENTS |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE IV MONUMENT

DATE 12-14-00 DWG. NO. 242 PAGE NO. 48
TYPE 4 LANE LINE

(DIVIDED, UNDIVIDED OR ONE-WAY ROADWAY)
120 FT. STREET WITH BIKE LANE (WITHOUT PARKING)

120 FT. STREET WITH BIKE LANE (WITH PARKING/EMERGENCY LANE)

100 FT. STREET WITH BIKE LANE (WITHOUT PARKING)

100 FT. STREET WITH SHARED BIKE/VEHICLE LANE (WITHOUT PARKING)

* THE WIDTH OF TRAVEL LANES ADJACENT TO BIKE LANES MAY VARY FROM 12 FT. TO 16 FT.
  WIDTHS OF INTERIOR TRAVEL LANES MAY VARY FROM 11 FT. TO 13 FT.

NOTES:
1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NOS. 244 & 244A.
2. IN SOME CASES, A MEDIAN WILL EXIST INSTEAD OF TWO-WAY LEFT TURN LANE.
3. BIKE LANE MUST BE A MINIMUM OF 4 FT. AND NO GREATER THAN 8 FT. WIDE;
   HOWEVER, A WIDTH OF 5 FT. IS PREFERRED.
4. WHERE 6 FT. SIDEWALK EXISTS, WIDTH OF MEDIAN MAY BE REDUCED BY 2 FT. OR
   TRAVEL LANES MAY BE REDUCED TO 11 FT.
5. ALL CURB LANES ARE MEASURED TO LIP OF GUTTER OR EDGE OF PAVEMENT
   IF CURB AND GUTTER DO NOT EXIST.

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<tr>
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<th>UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA</th>
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<tbody>
<tr>
<td>628 PAINTING TRAFFIC STRIPING</td>
<td>TYPICAL DELINEATION FOR ROADWAYS 100 FT. OR GREATER RIGHT-OF-WAY WITH CURBIDE SIDEWALK</td>
</tr>
<tr>
<td>633 PAVEMENT MARKERS</td>
<td></td>
</tr>
</tbody>
</table>

DATE 7-10-03  DWG. NO. 244.1  PAGE NO. 50.1
NOTES:
1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NO. 244 & 244A.
2. BIKE LANES TO BE PROVIDED IF SEGMENT CONNECTS TO OTHER BIKE LANES OR IF ROADWAY SEGMENT IS 1 MILE OR GREATER. IF BIKE LANE IS NOT PROVIDED, TRAVEL LANES SHOULD REMAIN AT DIMENSIONS SHOWN SO A BICYCLE LANE COULD BE PROVIDED IN THE FUTURE. SEE DRAWING NUMBER 246.1 FOR BIKE LANE SIGNING AND STRIPING DETAILS.
3. ALL CURB LANES ARE MEASURED TO LIP OF GUTTER OR EDGE OF PAVEMENT IF CURB AND GUTTER DO NOT EXIST.
4. CONTACT THE LOCAL JURISDICTIONAL FOR DEVELOPMENT REQUIREMENTS FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

SPECIFICATION REFERENCE

| 628 | PAINTING TRAFFIC STRIPING |
| 633 | PAVEMENT MARKERS |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPICAL DELINEATION FOR ALTERNATE ROADWAYS WITH OFFSET SIDEWALK

DATE 7-10-03  DWG. NO. 244.1 ALT  PAGE NO. 50.1ALT
NOTES:

1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NOS. 244 & 244A.
2. IN SOME CASES, A MEDIAN WILL EXIT INSTEAD OF TWO-WAY LEFT TURN LANE.
3. BIKE LANE MUST BE A MINIMUM OF 4 FT. AND NO GREATER THAN 8 FT. WIDE; HOWEVER, A WIDTH OF 5 FT. IS PREFERRED.
4. WHERE 6 FT. SIDEWALK EXIST, WIDTH OF MEDIAN MAY BE REDUCED BY 2 FT. OR TRAVEL LANES MAY BE REDUCED TO 11 FT.
5. ALL CURB LANES ARE MEASURED TO LIP OF GUTTER OR EDGE OF PAVEMENT IF CURB AND GUTTER DO NOT EXIST.

* THE WIDTH OF TRAVEL LANES ADJACENT TO BIKE LANES MAY VARY FROM 12 FT. TO 16 FT. WIDTHS OF INTERIOR TRAVEL LANES MAY VARY FROM 11 FT. TO 13 FT.
80 FT. STREET WITH BIKE LANE
(WITHOUT PARKING/EMERGENCY LANE)

80 FT. STREET WITH BIKE LANE
(WITH PARKING ON ONE SIDE)

80 FT. STREET WITH BIKE LANE
(WITH PARKING ON BOTH SIDES)

NOTES:
1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NOS. 244 & 244A.
2. BIKE LANES MUST BE A MINIMUM OF 4 FT. AND NO GREATER THAN 5 FT. WIDE; HOWEVER, A WIDTH OF 5 FT. IS PREFERRED.
3. WHERE 6 FT. SIDEWALK EXISTS, WIDTH OF MEDIAN MAY BE REDUCED BY 2 FT. OR TRAVEL LANES MAY BE REDUCED TO 11 FT.
4. ALL CURB LANES ARE MEASURED TO LIP OF GUTTER OR EDGE OF PAVEMENT IF CURB AND GUTTER DO NOT EXIST.
80 FT. STREET WITH BIKE LANE
(WITH PARKING ON BOTH SIDES)

80 FT. STREET WITH SHARED BIKE/VEHICLE LANE
(WITHOUT PARKING/EMERGENCY LANE)

NOTES:
1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NO. 244 & 244A.
2. BIKE LANES MUST BE A MINIMUM OF 4 FT. AND NO GREATER THAN 8 FT. WIDE; HOWEVER, A WIDTH OF 5 FT. IS PREFERRED.
3. WHERE 6 FT. SIDEWALK EXISTS, WIDTH OF MEDIAN MAY BE REDUCED BY 2 FT. OR TRAVEL LANES MAY BE REDUCED TO 11 FT.
4. ALL CURB LANES ARE MEASURED TO LIP OF GUTTER OR EDGE OF PAVEMENT IF CURB AND GUTTER DO NOT EXIST.

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<th>SPECIFICATION REFERENCE</th>
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<td>628 PAINTING TRAFFIC STRIPING</td>
<td>TYPICAL DELINEATION FOR ROADWAYS 80 FT. RIGHT-OF-WAY WITH CURBSIDE SIDEWALK</td>
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<td>633 PAVEMENT MARKERS</td>
<td>DATE 7-10-03   DWG. NO. 244.2A   PAGE NO. 50.2A</td>
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</table>
NOTES:

1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NO. 244 & 244A.
2. BIKE LANE MUST BE A MINIMUM OF 4 FT. AND NO GREATER THAN 8 FT. WIDE;
   HOWEVER, A WIDTH OF 5 FT. IS PREFERRED.
3. ALL CURB Lanes ARE MeASURED TO LIP OF GUTTER OR EDGE OF PAVEMENT
   IF CURB AND GUTTER DO NOT EXIST.

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<td>628 PAINTING TRAFFIC STRIPING</td>
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<tr>
<td>633 PAVEMENT MARKERS</td>
<td>TYPICAL DELINEATION FOR BIKE FACILITIES</td>
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<td>60 FT. RIGHT-OF-WAY</td>
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<tr>
<td></td>
<td>(PARKING ON BOTH SIDES)</td>
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DATE 6-8-95 DWG. NO. 244.3 PAGE NO. 50.3
Effective 01/01/10 - 06/30/10

ONE-WAY STREET WITH BIKE LANE (WITH PARKING ON RIGHT SIDE)

ONE-WAY STREET WITH BIKE LANE (WITHOUT PARKING ON RIGHT SIDE)

ONE-WAY STREET WITH SHARED BIKE/PARKING LANE

ONE-WAY STREET WITH LEFT-SIDE BIKE LANE (SEE NOTE 4)

NOTES:
1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NO. 244 & 244A.
2. BIKE LAKES MUST BE A MINIMUM OF 5 FEET WHERE ADJACENT TO A PARKING LANE, 4 FEET MINIMUM IN OTHER CASES AND NO GREATER THAN 8 FEET WIDE.
3. ALL CURB LANES ARE MEASURED TO THE EDGE OF PAVEMENT. THE TOP OF PAVEMENT SHALL BE FLUSH WITH GUTTER.
4. BICYCLE LANE SHALL BE ON RIGHT SIDE OF ONE-WAY ROADWAYS, EXCEPT IN LIMITED SITUATIONS, SUCH AS WHEN THERE ARE SIGNIFICANTLY LESS POTENTIAL CONFLICTS ALONG THE LEFT SIDE OF THE ROADWAY OR WHEN SIGNIFICANT BICYCLE TRIP GENERATION ARE ALONG THE LEFT SIDE OF THE ROADWAY.
5. SEE DRAWING NO. 244.5 FOR BIKE LANE SIGNAGE DETAILS.

SPECIFICATION REFERENCE

<table>
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<tr>
<th>628</th>
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<td>PAVEMENT MARKERS</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

BICYCLE LANE DELINEATION ON ONE-WAY STREET

DATE 7-10-03  DWG. NO. 244.4  PAGE NO. 50.4
BIKE LANE DELINEATION AND LEGEND

NOTES:
1. BIKE LANE LEGENDS SHALL BE APPROVED TYPE II 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 LANE 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 PREPARED.
4. BIKE LANE DELINEATION, LEGEND, AND SIGNING SHALL CONFORM TO THE MUTCD LATEST EDITION.
5. PER THE MUTCD LATEST EDITION, BIKE LANE SIGNS SHALL BE USED IN ADVANCE OF THE BEGINNING OF A MARKED BIKE LANE.
6. THE BIKE LANE SIGNAGE SHALL BE CLASS 6 SHEETING.

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<tbody>
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<td>BICYCLE LANE DELINEATION, LEGEND, AND SIGNAGE</td>
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DATE 12-08-08  DWG. NO. 244.5
NOTE:

SEE SHEET 3 THIS DRAWING NUMBER IF PATTERN IS TO BE USED AT A GORE POINT TO DIVIDE TRAFFIC MOVING IN SAME DIRECTION.
Effective 01/01/10 - 06/30/10

NOTE:

PAINT MAY BE USED IN LIEU OF TAPE AND/OR RAISED PAVEMENT MARKERS AT THE DISCRETION OF THE ENGINEER.
NOTES:

1. SIDEWALK SHOULD BE OFFSET THROUGH THE INTERSECTION WITH A CURB RAMP CONNECTING THE SIDEWALK TO THE CROSSWALK. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE SIDEWALK. CONTACT THE LOCAL JURISDICTION FOR DEVELOPMENT REQUIREMENTS FOR THE AREA BETWEEN THE CURB AND SIDEWALK.
1. LENGTH OF STORAGE LINE IS TWO THIRDS OF THE ADDED TURN BAY. (MIN. 100')
2. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE ENGINEER, INSTALL R3-7R SIGN; ARROW SYMBOL AND "ONLY" SYMBOL PAVEMENT MARKINGS FOR THE LENGTH OF THE STORAGE LINE. SYMBOLS SHALL BE APPROVED TYPE I PAVEMENT MARKING FILM.
3. APPROVED TYPE II PAVEMENT MARKING FILM OR RAISED PAVEMENT MARKERS MAY BE USED FOR ADDITIONAL GUIDANCE AT THE DISCRETION OF THE ENGINEER.
4. STORAGE LANE LINE SHALL BE APPROVED TYPE II PAVEMENT MARKING FILM OR IF APPROVED BY THE ENGINEER, RAISED PAVEMENT MARKERS MAY BE USED.
FORCED LEFT TURN LANE

<table>
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<tr>
<td>(MPH)</td>
<td>(FT)</td>
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<tr>
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<td>640</td>
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<td>60</td>
<td>720</td>
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</table>

NOTES:
1. THE MINIMUM LENGTH OF STORAGE LINE IS 280 FT. ON ARTERIALS AND 150 FT. ON OTHERS.
2. A MINIMUM OF 256 R3-7R OR R3-7L SIGNS SHALL BE INSTALLED IN ADVANCE OF THE INTERSECTION AT DISTANCES APPROVED BY THE ENGINEER. RECOMMENDED LOCATIONS ARE SHOWN ABOVE.
3. ONE SET OF PAVEMENT MARKINGS CONTAINING ONE ARROW SYMBOL AND ONE "ONLY" SYMBOL SHALL BE PLACED AT THE BEGINNING OF THE DROP LANE.
4. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE ENGINEER, ADDITIONAL ARROW AND "ONLY" SYMBOL PAVEMENT MARKINGS AND OVERHEAD MOUNTED R3-6 SIGNS MAY BE INSTALLED. SYMBOLS SHALL BE APPROVED TYPE II PAVEMENT MARKING FILM.
5. APPROVED TYPE I PAVEMENT MARKING FILM OR RAISED PAVEMENT MARKERS MAY BE USED FOR ADDITIONAL GUIDANCE AT THE DISCRETION OF THE ENGINEER.
6. STORAGE LANE LINE AND SKIP LINES SHALL BE APPROVED TYPE I PAVEMENT MARKING FILM OR IF APPROVED BY THE ENGINEER, RAISED PAVEMENT MARKERS MAY BE USED.

SPECIFICATION REFERENCE

633 PAVEMENT MARKERS
628 PAINTING TRAFFIC STRIPING,
PAVEMENT MARKINGS...

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

STANDARD PAVEMENT MARKERS
FORCED TURN LANE

DATE 12-06-09 | DWG. NO. 246A
**NOTES:**

1. LENGTH OF STORAGE LANE LINE IS TWO THIRDS OF THE TURN LANE STORAGE LENGTH.
2. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE ENGINEER, INSTALL ARROW AND "ONLY" SYMBOL PAVEMENT MARKINGS FOR THE LENGTH OF THE STORAGE LINE.
3. PAVEMENT MARKINGS SHALL BE TYPE I TAPE OR PAINT AS DIRECTED BY THE ENGINEER.
4. INSTALL "NO PARKING" SIGNS FOR ENTIRE LENGTH OF TURN LANE. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE ENGINEER, INSTALL R3-7R SIGNS.

---

**SPECIFICATION REFERENCE**

633 PAVEMENT MARKERS

---

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**PAVEMENT MARKING AND SIGNAGE**

**RIGHT TURN LANE AT MINOR INTERSECTIONS**

(ARTERIALS WITH EMERGENCY/PARKING LANE)

**DATE 12-06-09**

**DWG. NO.** 248B
NOTES:
1. STORAGE LENGTH TO BE DETERMINED BY TRAFFIC ENGINEER.
2. SEE DRAWING NO. 244.5 FOR BIKE LANE LEGEND AND SIGNAGE.
3. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE TRAFFIC ENGINEER, INSTALL R3-7R SIGN, ARROW SYMBOL AND "ONLY" SYMBOL PAVEMENT MARKINGS FOR THE LENGTH OF THE STORAGE LINE. APPROVED TYPE II PAVEMENT MARKING FILM SHALL BE USED FOR SYMBOL MARKINGS.
4. SEE DRAWING NO. 248 NOTE 1 FOR STANDARD PAVEMENT MARKERS ADDED TURN LANE.

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<td>BICYCLE LANE APPROACH TO INTERSECTION WITH EXCLUSIVE RIGHT TURN LANE</td>
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<td>633 PAVEMENT MARKERS</td>
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DATE 12-08-09 | DWG. NO. 248.1
NOTES:
1. STORAGE LENGTH TO BE DETERMINED BY TRAFFIC ENGINEER.
2. SEE DRAWING NUMBER 244.5 FOR BIKE LANE LEGEND AND SIGNAGE.
3. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE ENGINEER, INSTALL R3-7R SIGN, ARROW SYMBOL AND "ONLY" SYMBOL PAVEMENT MARKINGS FOR THE LENGTH OF THE STORAGE LINE. APPROVED TYPE II PAVEMENT MARKING FILM SHALL BE USED FOR SYMBOL MARKINGS.
4. SEE DWG. 248 NOTE 1 FOR STANDARD PAVEMENT MARKERS ADDED TURN LANE.
5. THE ABOVE DETAIL SHOULD BE FOLLOWED IN SITUATIONS WHERE THERE IS NOT ADEQUATE SPACE TO PROVIDE A SEPARATE BICYCLE LANE.

SPECIFICATION REFERENCE
628 PAINTING TRAFFIC STRIPING
633 PAVEMENT MARKERS

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

BICYCLE LANE TRANSITION TO SHARED LANE AT INTERSECTION

DATE 12-08-08   DWG. NO. 248.2
NOTES:
1. FORCED RIGHT-TURN LANES AND LONG RIGHT TURN POCKETS ARE NOT DESIRABLE FOR BICYCLISTS AND SHOULD BE AVOIDED WHEN POSSIBLE.
2. SEE DRAWING NO. 244.5 FOR BIKE LANE DELINEATION, LEGEND, AND SIGNAGE DETAILS.
3. SEE DRAWING NO. 246A FOR DETAILS ON THE FORCED TURN LANE.

SPECIFICATION REFERENCE

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<tr>
<th>628</th>
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<td>633</td>
<td>PAVEMENT MARKERS</td>
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UNIFORM STANDARD DRAWINGS  
CLARK COUNTY AREA

BICYCLE LANE AT A RIGHT TURN DROP LANE

DATE  7-10-03  DWG. NO. 246.3  PAGE NO. 52.3
NOTES:
1. A SOLID BICYCLE LANE STRIPE SHOULD CONTINUE ACROSS DRIVEWAY ACCESS POINTS.
2. SEE DRAWING NO. 244.5 FOR BIKE LANE LEGEND AND SIGNAGE DETAILS.
### NOTES:

1. SEE DRAWING NUMBER 244.5 FOR BIKE LANE LEGEND AND SIGNAGE DETAILS.

2. USE 2 FOOT LONG SKIP LINE, 8 FEET ON CENTER, FOR LOCATIONS WITH BUS STOPS. FOR TYPICAL BUS STOP, TRANSITION FROM SOLID LINE TO SKIP LINE FOR 150 FEET CENTERED ON BUS STOP.

### SPECIFICATION REFERENCE

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<th>Specification</th>
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<tbody>
<tr>
<td>628</td>
<td>PAINTING TRAFFIC STRIPING</td>
</tr>
<tr>
<td>633</td>
<td>PAVEMENT MARKERS</td>
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</tbody>
</table>

### UNIFORM STANDARD DRAWINGS

**CLARK COUNTY AREA**

**BICYCLE LANE DEPARTURE FROM INTERSECTIONS**

<table>
<thead>
<tr>
<th>DATE</th>
<th>DWG. NO.</th>
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<tbody>
<tr>
<td>7-10-03</td>
<td>246.5</td>
<td>52.5</td>
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</table>
LANE MARKER SCHEDULE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>A</td>
<td>CIRCULAR WHITE CERAMIC MARKER</td>
</tr>
<tr>
<td>B</td>
<td>CIRCULAR YELLOW CERAMIC MARKER</td>
</tr>
<tr>
<td>C</td>
<td>TWO WAY YELLOW REFLECTOR</td>
</tr>
<tr>
<td>D</td>
<td>ONE WAY YELLOW REFLECTOR, YELLOW TOWARD ONCOMING TRAFFIC</td>
</tr>
<tr>
<td>E</td>
<td>ONE WAY WHITE REFLECTOR, WHITE TOWARD ONCOMING TRAFFIC</td>
</tr>
<tr>
<td>F</td>
<td>TWO WAY WHITE AND RED REFLECTOR, WHITE TOWARD ONCOMING TRAFFIC</td>
</tr>
</tbody>
</table>

SPECIFICATION REFERENCE

| 633 | PAVEMENT MARKERS |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

MARKER DETAILS AND LANE MARKER SCHEDULE

DATE 5-13-99 DWG. NO. 247 PAGE NO. 53
### SPACING TABLE

<table>
<thead>
<tr>
<th>&quot;W&quot;</th>
<th>NUMBER OR REFLECTORS PER MEDIAN NOSE *</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0' TO 2.0'</td>
<td>3</td>
</tr>
<tr>
<td>2.0' TO 3.0'</td>
<td>4</td>
</tr>
<tr>
<td>3.0' TO 4.0'</td>
<td>5</td>
</tr>
<tr>
<td>4.0' &amp; GREATER</td>
<td>1 EACH FOR EVERY 1.0' OF CURB LENGTH</td>
</tr>
</tbody>
</table>


### NOTES:

1. ENTIRE MEDIAN SHALL BE PAINTED WITH REFLECTIVE PAINT, OF SAME COLOR AS REFLECTIVE MARKERS, FROM THE MEDIAN NOSE BACK 5 FEET OR TO THE P.C., WHICHER IS GREATER.

2. REFLECTIVE PAVEMENT MARKERS USED ON MEDIAN SHALL CONFORM TO STANDARD DRAWING NO. 247.

3. ORIENTATION OF THE REFLECTIVE MARKERS FACES SHALL BE MADE IN THE FIELD TO ENSURE THAT MARKERS ARE AIMED AT APPROACHING VEHICLES TO BEST ADVANTAGE, ESPECIALLY IN HORIZONTALLY CURVED ROAD SECTIONS.
NOTES:

1. ALL COMPONENTS SHALL BE SQUARE POST, PERFORATED ON ALL FOUR SIDES.

2. ATTACH ANCHOR AND SLEEVE TOGETHER PRIOR TO DRIVING INTO GROUND. LEAVE AT LEAST ONE HOLE, BUT NO MORE THAN TWO, ABOVE GROUND OR ABOVE SIDEWALK.

3. FOR SIDEWALK INSTALLATION, DRILL SIDEWALK WITH A 3" HOLE, THE CENTER TO BE 6" FROM BACK OF SIDEWALK.

4. ATTACH POST TO ANCHORING SYSTEM BY USING AT LEAST TWO 3/8" DIA. DRIVE RIVETS.

5. PROVIDE 4" MINIMUM LAP BETWEEN POST AND THE ANCHOR/SLEEVE ASSEMBLY.

6. ALL STREET NAME SIGNS SHALL BE 9 INCH STANDARD IN THE CITY OF MESQUITE ONLY.
URBAN INSTALLATIONS

SEE NOTE 9

RURAL INSTALLATIONS
(NO LANDSCAPING)

NOTE:
ATTACH SIGNS TO POST WITH 3/8" DIA.
DRIVE RIVETS AND WASHERS
SEE NOTES 6 & 8.

2" SIGN POST
(1-3/4" ACCEPTABLE
FOR SIGNS SMALLER
THAN 30" x 30")

3" MIN
4" MAX

2-1/2"x18" SLEEVE
(2-1/4" FOR 1-3/4" POST)

2-1/2"x30" ANCHOR
(2" FOR 1-3/4" POST)

TOP OF SIDEWALK
OR 24"x24"x4"
CONCRETE PAD

DO NOT SET SIGN ANCHORS
IN CONCRETE - CONCRETE
SIDEWALK/PAD IS TO BE
DRILLED WITH HOLE
REMAINING OPEN AROUND
THE ANCHOR

NOTE:
DO NOT SET ANCHORS IN CONCRETE

3" MIN
4" MAX

GROUND SURFACE

TOP OF ANCHOR
AND SLEEVE

NOTES:
1. ALL COMPONENTS SHALL BE MINIMUM 12 GA. SQUARE POST WITH 7/16" PUNCHED THRU HOLES @ 1" ON CENTER, ON ALL FOUR SIDES. ANCHORS SHALL BE TWO PIECE BREAKAWAY ANCHORS.
2. ATTACH ANCHOR AND SLEEVE TOGETHER PRIOR TO DRIVING INTO GROUND. LEAVE AT LEAST TWO HOLES, BUT NO MORE THAN THREE HOLES ABOVE GROUND OR ABOVE SIDEWALK.
3. FOR SIDEWALK INSTALLATION, DRILL SIDEWALK AND CONCRETE PAD INSTALLATION, DRILL A 3" TO 4" DIA. HOLE (DEPENDENT UPON ANCHOR SIZE), THE CENTER TO BE 6" FROM THE BACK OF SIDEWALK.
4. ATTACH POST TO ANCHORING SYSTEM BY USING AT LEAST TWO 3/8" DIA. DRIVE RIVETS.
5. PROVIDE 4" MINIMUM LAP BETWEEN BOTTOM OF POST AND THE BOTTOM OF THE ANCHOR/SLEEVE ASSEMBLY.
6. SIGNS LARGER THAN 24"x30" REQUIRE 3/8" x 1-1/2" FENDER WASHERS UNDER DRIVE RIVETS.
7. "U-CHANNEL" POSTS ARE NOT ACCEPTABLE.
8. BOLTS IN LIEU OF DRIVE RIVETS ARE NOT ACCEPTABLE.
9. ALL URBAN SIGN INSTALLATIONS ARE TO BE INSTALLED IN A CONCRETE SIDEWALK, OR IN A CONCRETE PAD (24"x24"x4") WHEN NO SIDEWALK EXISTS.
10. INSTALLATION OF SIGNS SHALL MEET LATEST ADA REQUIREMENTS.
11. SIGNS SHALL HAVE A STICKER AT THE BACK WITH THE NAME OF THE CONTRACTOR AND THE DATE OF INSTALLATION.
NOTES:

1. SIGN SHALL BE WHITE LETTERS AND NUMBERS ON GREEN BACKGROUND. (THE CITY OF NORTH LAS VEGAS BACKGROUND IS BLUE.) CUT-OUT 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 8" SERIES "C" UPPERCASE WITH 4 1/2" SERIES "C" LOWERCASE; HOWEVER, WHEN DESCENDERS ARE REQUIRED ON 9" SIGNS, PRIMARY COPY SHALL BE 5 1/2". ORDINAL, 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 12"; SIGNS PLACED ON MINOR STREETS WITH RIGHTS-OF-WAY OF LESS THAN 80' SHALL HAVE A HEIGHT OF 9".

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

7. SIGN BLANKS SHALL HAVE ROUNDED CORNERS.

SPECIFICATION REFERENCE

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<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>631</td>
<td>STREET NAME SIGNS</td>
</tr>
<tr>
<td>716</td>
<td>SIGN MATERIALS</td>
</tr>
</tbody>
</table>

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

STREET NAME SIGNS
FACE COPY

DATE 6-8-06  DWG. NO. 250 (1 OF 2)  PAGE NO. 56
SPACING OF STREET NAME SIGN LEGENDS

SPACING FOR STREET NAME SIGN LEGENDS SHALL BE OBTAINED BY MODIFICATION TO THE REQUIREMENTS OF THE FHWA STANDARD SPACING CHART FOR 6" UPPERCASE LETTERS. THE FOLLOWING STEPS SHALL BE USED TO DETERMINE REQUIRED SPACING:

1. SIGN LAYOUT COMPUTER SOFTWARE SHALL BE EVALUATED TO DETERMINE THE "CORRECTION FACTOR" NECESSARY FOR LAYOUT SOFTWARE LETTER SPACING TO BE APPROXIMATELY EQUAL TO THE FHWA STANDARD SPACING FOR UPPERCASE LETTERS.
2. CORRECTION FACTOR SHALL BE USED TO ADJUST THE SPACING FOR THE LOWERCASE LETTERS.
3. SPACING FOR STREET NAME SIGN LEGENDS SHALL BE EQUAL TO 110% OF THE "CORRECTED" LAYOUT SOFTWARE LETTER SPACING.

(SAME STEPS ARE TO BE FOLLOWED WHEN FONT SIZE OF LEGEND IS REDUCED IN ORDER NOT TO EXCEED THE MAXIMUM LENGTH LIMITATIONS.)

IF LEGEND SPACED ACCORDING TO RECOMMENDED PROCEDURE ABOVE EXCEEDS THE MAXIMUM ALLOWABLE SIGN LENGTH (42" FOR GROUND-MOUNTED), THE FOLLOWING ACTIONS, LISTED IN PRIORITY ORDER, SHALL BE TAKEN TO REDUCE LENGTH OF THE SIGNBLANK.

A. REDUCE THE FONT TO 5 1/2" SERIES "C".
B. REDUCE THE SPACING TO 100% OF THE "FEDERAL STANDARD".
C. REDUCE THE FONT TO 5 1/2" SERIES "B".
D. CONSIDER ABBREVIATING ANY LEGEND WORDS WHICH ARE EXTREMELY COMMON (I.E., "MTN" FOR "MOUNTAIN") SUCH ABBREVIATIONS MUST BE APPROVED BY THE TRAFFIC ENGINEER AND THE FIRE DEPARTMENT.
E. REDUCE THE LEADING AND TRAILING BLANK GREEN SPACE BY 50%.
F. CONSTRUCT THE SIGN ACCORDING TO THE STANDARD SPACING WHICH WILL BE GREATER THAN 42" IN LENGTH, AND MOUNT ON A STREETLIGHT POLE OR OTHER ELEVATED MOUNT AS APPROVED BY THE TRAFFIC ENGINEER WITH APPROPRIATE SIGN BRACING AND MOUNTING HARDWARE.
1. FOR SIGN FACE SPECIFICATIONS SEE STANDARD DRAWING NO. 250.

ALUMINUM BLANK:
5052 H38 OR 6061 T6, HEAT TREATED, HIGH TENSILE, DEGREASED AND ALODINE, Z200 FINISH.
THICKNESS TO BE 0.080" FOR SIGNS LESS THAN 36", 0.100" FOR SIGNS 36" AND LONGER.

NOTE:
L = 30" MIN, (4" MAX, FOR GROUND-MOUNTED SIGNS)
H1 = 9"
H2 = 12"
1/8" HOLE
1/4" HOLE
3/16" HOLE
1-1/2" RADIUS ALL 4 CORNERS
1/2"

SPECIFICATION REFERENCE
631 STREET NAME SIGNS
716 SIGN MATERIALS

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

STREET NAME SIGN BLANKS

DATE 6-8-06 DWG. NO. 251 PAGE 57
NOTES:

1. FENCING SHALL BE CHAIN LINK AND SHALL CONSIST OF GALVANIZED CHAIN LINK FABRIC ON STEEL POSTS.
   (A) ALL POSTS TOPS SHALL BE FITTED WITH SUITABLE FINIALS.
   (B) BRACES SHALL BE SPACED APPROXIMATELY 12" BELOW TOP OF TERMINAL POSTS AND SHALL EXTEND FROM END, GATE, OR CORNER POSTS TO FIRST ADJACENT LINE POST.
   (C) ALL FITTINGS SHALL BE HOT-DIPPED GALVANIZED MALLEABLE, CAST IRON, OR PRESSER STEEL.
   (D) TOP AND BOTTOM SELVAGES OF THE FENCE SHALL HAVE A TWISTED AND BARBED FINISH.

2. BARBED WIRE, EXTENSION ARMS, AND TOP HORIZONTAL RAILS SHALL BE INSTALLED ONLY WHEN SHOWN ON THE PLANS AND/OR CALLED FOR IN THE SPECIAL PROVISIONS.

TABLE I
FOR CHAIN LINK FENCE 72" AND LESS

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>MIN. SIZE</th>
<th>MIN. WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>END, CORNER &amp; PULL</td>
<td>2.351 O.D.</td>
<td>3.10</td>
</tr>
<tr>
<td>LINE</td>
<td>2.00 O.D.</td>
<td>2.72</td>
</tr>
<tr>
<td>BRACES</td>
<td>1.630 O.D.</td>
<td>2.27</td>
</tr>
<tr>
<td>TOP RAIL</td>
<td>1.630 O.D.</td>
<td>2.27</td>
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</table>

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

CHAIN LINK FENCE (72" HIGH OR LESS)

DATE 12-14-00  DWG. NO. 252  PAGE NO. 58
NOTE:
USE MARKING PER OPTIONAL DETAIL IF NECESSARY TO OBTAIN 3' MINIMUM CLEARANCE BETWEEN CROSSWALK AND CURB LINE PROJECTED.

TYPICAL MARKING CURB RAMP IN MIDDLE OF CURB RETURN

TYPICAL MARKING CURB RAMP ADJOINING CURB RETURN
NOTES:
1. 12 FOOT WIDTH IS RECOMMENDED. 10 FOOT WIDTH IS ALLOWABLE ALONG A PATH PARALLEL TO A ROADWAY OR WHERE SPACE IS LIMITED. PAVEMENT AND BASE DEPTH WILL VARY BASED ON SOIL CONDITIONS. PORTLAND CEMENT CONCRETE MAY BE USED INSTEAD OF ASPHALT.
2. SEE DRAWING NUMBER 255.1 FOR SHARED USE PATH ALONG A ROADWAY.
3. SEE THE GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES, AASHTO 1999, AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ADDITIONAL GUIDELINES AND STANDARDS.
4. SEE LOCAL JURISDICTIONS FOR LANDSCAPING REQUIREMENTS.

<table>
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<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA</th>
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<tr>
<td>633</td>
<td>PAVEMENT MARKERS</td>
</tr>
</tbody>
</table>

SHARED USE PATH

DATE 7-10-03 DWG. NO. 255 PAGE NO. 59.2
NOTES:

1. 12 FOOT WIDTH IS RECOMMENDED. 10 FOOT WIDTH IS ALLOWABLE ALONG A PATH PARALLEL TO A ROADWAY OR WHERE SPACE IS LIMITED. PAVEMENT AND BASE DEPTH WILL VARY BASED ON SOIL CONDITIONS. PORTLAND CEMENT CONCRETE (PCC) MAY BE USED INSTEAD OF ASPHALT AND PCC MAY BE REQUIRED BY THE LOCAL JURISDICTION.

2. SEE DRAWING NUMBER 255 FOR SHARED USE PATH NOT ALONG A ROADWAY.

3. SEE THE GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES, ASSHTO 1999, AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ADDITIONAL GUIDELINES AND STANDARDS.

4. SEE LOCAL JURISDICTIONS FOR LANDSCAPING REQUIREMENTS.

5. 3 FOOT LATERAL CLEARANCE RECOMMENDED BETWEEN EDGE OF PATH AND A FIXED OBJECT, 2 FOOT MINIMUM.

6. IF 16 FEET IS NOT AVAILABLE FROM THE BACK OF CURB TO THE RIGHT-OF-WAY LINE, A BICYCLE LANE/ROUTE AND THE SIDEWALK WILL SUBSTITUTE FOR THE PATH. PLACE A PATH ENDS SIGN (W9) 25 FEET IN ADVANCE OF THE PATH ENDING.

| SPECIFICATION REFERENCE | UNIFORM STANDARD DRAWINGS
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<tbody>
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<td>CLARK COUNTY AREA</td>
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<tr>
<td>633 PAVEMENT MARKERS</td>
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</tbody>
</table>

SHARED USE PATH ALONG A ROADWAY

DATE 7-10-03 DWG. NO. 255.1 PAGE NO. 59.3
NOTES:

1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE DRAWING NO. 235, CASE III, FOR SIDEWALK RAMP DETAILS.
## SIGN SIZES FOR SHARED-USE PATHS

<table>
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<tr>
<th>MUTCD CODE</th>
<th>SIGN</th>
<th>MINIMUM SIGN SIZE (IN)</th>
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<tr>
<td>R1-1</td>
<td>STOP</td>
<td>18 X 18</td>
</tr>
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<td>R1-2</td>
<td>YIELD</td>
<td>24 X 24 X 24</td>
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<tr>
<td>R3-16, 16A, 17, 17A</td>
<td>BICYCLE LANE</td>
<td>24 X 30</td>
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<tr>
<td>R4-1, 2, 3, 7</td>
<td>MOVEMENT RESTRICTION</td>
<td>12 X 18</td>
</tr>
<tr>
<td>R4-4</td>
<td>BEGIN RIGHT TURN LANE YIELD TO BIKES</td>
<td>36 X 30</td>
</tr>
<tr>
<td>R5-3</td>
<td>NO MOTOR VEHICLES</td>
<td>24 X 24</td>
</tr>
<tr>
<td>R5-6</td>
<td>BICYCLE PROHIBITION</td>
<td>24 X 24</td>
</tr>
<tr>
<td>R7-9, 9A</td>
<td>NO PARKING BIKE LANE</td>
<td>12 X 18</td>
</tr>
<tr>
<td>R9-3A</td>
<td>PEDESTRIANS PROHIBITED</td>
<td>18 X 18</td>
</tr>
<tr>
<td>R9-5, 6</td>
<td>BICYCLE REGULATORY</td>
<td>12 X 18</td>
</tr>
<tr>
<td>R9-7</td>
<td>SHARED-USE PATH RESTRICTION</td>
<td>12 X 18</td>
</tr>
<tr>
<td>R15-1</td>
<td>RAILROAD CROSSBUCK</td>
<td>24 X 4.5</td>
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<tr>
<td>W1-1, 2, 3, 4, 5</td>
<td>TURN AND CURVE WARNING</td>
<td>18 X 18</td>
</tr>
<tr>
<td>W1-6, 7</td>
<td>ARROW WARNING</td>
<td>24 X 12</td>
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<tr>
<td>W2-1, 2, 3, 4, 5</td>
<td>INTERSECTION WARNING</td>
<td>18 X 18</td>
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<tr>
<td>W3-1A, 2A, 3</td>
<td>STOP, YIELD, SIGNAL AHEAD</td>
<td>18 X 18</td>
</tr>
<tr>
<td>W5-2A</td>
<td>ROAD NARROWS</td>
<td>18 X 18</td>
</tr>
<tr>
<td>W5-4</td>
<td>BIKeway NARROWS</td>
<td>18 X 18</td>
</tr>
<tr>
<td>W7-5</td>
<td>HILL SIGN</td>
<td>18 X 18</td>
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<tr>
<td>W8-1, 2</td>
<td>BUMP OR DIP</td>
<td>18 X 18</td>
</tr>
<tr>
<td>W8-10</td>
<td>BICYCLE SURFACE CONDITION</td>
<td>18 X 18</td>
</tr>
<tr>
<td>W10-1</td>
<td>ADVANCE GRADE CROSSING</td>
<td>18 DIA.</td>
</tr>
<tr>
<td>W11-1</td>
<td>BICYCLE CROSSING</td>
<td>18 X 18</td>
</tr>
<tr>
<td>W12-2</td>
<td>LOW CLEARANCE</td>
<td>18 X 18</td>
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<tr>
<td>W16-1</td>
<td>SHARE THE ROAD PLAQUE</td>
<td>24 X 30</td>
</tr>
<tr>
<td>D1-1</td>
<td>SUPPLEMENTAL BIKE ROUTE PLAQUE</td>
<td>24 X 6</td>
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<tr>
<td>D4-3</td>
<td>BICYCLE PARKING</td>
<td>12 X 18</td>
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<td>D11-1</td>
<td>BIKE ROUTE</td>
<td>24 X 18</td>
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<tr>
<td>M1-8</td>
<td>BIKE ROUTE MARKER</td>
<td>12 X 18</td>
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<td>M1-9</td>
<td>BIKE ROUTE MARKER</td>
<td>18 X 24</td>
</tr>
<tr>
<td>M4-11, 12, 13</td>
<td>SUPPLEMENTAL BICYCLE ROUTE GUIDE</td>
<td>12 X 4</td>
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<tr>
<td>M7-1, 2, 3, 4, 5, 6, 7</td>
<td>ROUTE MARKER SUPPLEMENTAL PLAQUES</td>
<td>12 X 9</td>
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</tbody>
</table>

### NOTES:
1. SIGN TABLE INSERTED FROM MUTCD FOR REFERENCE. SEE CURRENT MUTCD FOR UPDATED INFORMATION.
2. SIGNS R3-16(A), R3-17(A), R4-4, W5-2A, AND W16-1 NOT USED FOR SHARED USE PATHS.
NOTES:

1. USE BOLLARDS ONLY AT LOCATIONS WHERE UNAUTHORIZED ACCESS IS ANTICIPATED. INSTALL EITHER 1 OR 3 (5 FOOT SPACING DESIRABLE) SIX-INCH DIAMETER BY 3 FT. TALL REFLECTORIZED BOLLARDS WHEN NECESSARY. CENTERLINE DELINEATION SHOULD BE PROVIDED AT APPROACH TO INTERSECTION EVEN WHEN BOLLARD IS NOT PROVIDED.

2. ANY OBSTRUCTION IN PATH SHOULD BE REMOVED. IF OBSTRUCTION CANNOT BE REMOVED, OBSTRUCTION MUST BE REFLECTORIZED.

3. USE CENTERLINE DELINEATION AT APPROACHES TO INTERSECTIONS AND AROUND OBSTACLES IN ALL CASES. ONLY USE CENTERLINE DELINEATION IN OTHER CASES WHERE CONFLICTS BETWEEN USERS TRAVELING IN OPPOSITE DIRECTIONS ARE ANTICIPATED.

<table>
<thead>
<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA</th>
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</thead>
<tbody>
<tr>
<td>628 PAINTING TRAFFIC STRIPING</td>
<td>DELINEATION AND BOLLARED USAGE ON SHARED USE PATH</td>
</tr>
<tr>
<td>633 PAVEMENT MARKERS</td>
<td></td>
</tr>
</tbody>
</table>

DATE 7-10-03  DWG. NO. 255.4  PAGE NO. 59.6
NOTES:
1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. CONTACT AGENCY'S TRAFFIC ENGINEER TO VERIFY IF AGENCY PREFERENCES TO USE A W11-1 (BICYCLE) SIGN IN PLACE OF THE W11-2 SIGN.

<table>
<thead>
<tr>
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<td>633 PAVEMENT MARKERS</td>
<td></td>
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</table>

**SHARED USE PATH CROSSING**
**OF FREE RIGHT TURN LANE**

**DATE 7-10-03**
**DWG. NO. 256**
**PAGE NO. 59.7**
NOTES:
1. USE ENGINEERING JUDGMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE MUTCD TABLE 2C-4 FOR ADVANCED WARNING PLACEMENT.
3. INSTALL BOLLARDS ONLY AT LOCATIONS WHERE UNAUTHORIZED ACCESS IS ANTICIPATED. INSTALL EITHER 1 OR 3 SIX INCH DIAMETER BY 3 FEET TALL BOLLARDS WHEN REQUIRED.
4. SEE DRAWING NO. 201.2 FOR SIGHT VISIBILITY ZONES AT INTERSECTIONS.
5. CONTACT AGENCY'S TRAFFIC ENGINEER TO VERIFY IF AGENCY PREFERS TO USE A W11-1 (BICYCLE) SIGN IN PLACE OF THE W11-2 SIGN.

SPECIFICATION REFERENCE

628   PAINTING TRAFFIC STRIPING
633   PAVEMENT MARKERS

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPICAL SIGNAGE
FOR SHARED USE PATH
AT INTERSECTION

DATE  7-10-03  DWG. NO.  256.1  PAGE NO.  59.8
NOTES:
1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE DRAWING NO. 218, 248 FOR MEDIAN ISLAND. A 15 DEGREE SKEW ANGLING IN DIRECTION OF ONCOMING TRAFFIC IS DESIRABLE.
3. SEE DRAWING NO. 255.4 FOR BOLLARDS AND CENTERLINE DELINEATION.
4. SEE DRAWING NO. 235, CASE III, FOR SIDEWALK RAMPS (USE PATH WIDTH FEET INSTEAD 5 FEET).
5. SEE DRAWING NO. 254 AND 254A FOR CROSSWALKS.
6. SEE DRAWING NO. 255.3 FOR SIGN SIZES FOR SHARED USE PATHS.
7. SEE DRAWING NO. 345 (2 OF 3) FOR DELINEATION IN TRANSITION SECTIONS.
8. SEE TABLE 2C-4 IN MUTCD 2000 FOR ADVANCE PLACEMENT OF WARNING SIGNS.
9. SEE PAGE 654 TO 680 IN AASHTO HIGHWAYS AND STREETS 2001 FOR SIGHT VISIBILITY ZONES (SIGHT TRIANGLES).
10. SEE STREET LIGHTING SECTION.
11. CONTACT AGENCY'S TRAFFIC ENGINEER TO VERIFY IF AGENCY PREFERS TO USE A W11-1 (BICYCLE) SIGN IN PLACE OF THE W11-2 SIGN.
NOTES:
1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE DRAWING NO. 218, 248, AND 256.2 FOR MEDIAN ISLAND.
3. SEE DRAWING NO. 255.4 FOR BOLLARDS AND CENTERLINE STRIPING.
4. SEE DRAWING NO. 235, CASE III, FOR SIDEWALK RAMPS (USE 12 FEET INSTEAD OF 5 FEET).
5. SEE DRAWING NO. 254 AND 254A FOR CROSSWALKS.
6. SEE DRAWING NO. 255.3 FOR SIGN SIZES FOR SHARED USE PATHS.
7. SEE DRAWING NO. 345 (2 OF 3) FOR DELINEATION IN TRANSITION SECTIONS.
8. SEE TABLE 2C-4 IN MUTCD 2000 FOR ADVANCE PLACEMENT OF WARNING SIGNS.
9. SEE PAGE 654 TO 680 IN AASHTO HIGHWAYS AND STREETS 2001 FOR SIGHT VISIBILITY ZONES (SIGHT TRIANGLES).
10. SEE STREET LIGHTING SECTION.
11. CONTACT AGENCY'S TRAFFIC ENGINEER TO VERIFY IF AGENCY PREFERENCES TO USE A W11-1 (BICYCLE) SIGN IN PLACE OF THE W11-1 SIGN.

SPECIFICATION REFERENCE

| 628 | PAINTING TRAFFIC STRIPING |
| 633 | PAVEMENT MARKERS |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SHARED USE PATH CROSSING
4 LANE ROADWAY

DATE 7-10-03 DWG. NO. 256.3 PAGE NO. 59.15
NOTES:

1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE DRAWING NO. 255.4 FOR BOLLARDS AND CENTERLINE STRIPING.
3. SEE DRAWING NO. 235, CASE III, FOR SIDEWALK RAMPS (USE 12 FEET INSTEAD 5 FEET OF CENTER SECTION OF SIDEWALK).
4. SEE DRAWING NO. 255.3 FOR SIGN SIZES FOR SHARED USE PATHS.
5. SEE TABLE 2C-4 IN MUTCD FOR ADVANCE PLACEMENT OF WARNING SIGNS.
6. SEE DRAWING NO. 256.4 FOR THE AN MID-BLOCK AT-GRADE CROSSING DESIGN.
7. A MINIMUM 8 FOOT CLEARANCE IS REQUIRED FOR UNDER CROSSING. GRADES GREATER THAN 5 PERCENT ARE UNDESIRABLE. SEE THE 1999, OR CURRENT EDITION, AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES FOR GRADE RESTRICTIONS IF A 5 PERCENT GRADE IS EXCEEDED.
NOTES:
1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE MUTCD 2000 FOR GUIDELINES REFERENCED IN FIGURE.

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<td>628 PAINTING TRAFFIC STRIPING</td>
<td>CLARK COUNTY AREA</td>
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<tr>
<td>633 PAVEMENT MARKERS</td>
<td></td>
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</tbody>
</table>

SHARED USE PATH
CROSSING RAILROAD

DATE 7-10-03  DWG. NO. 256.6  PAGE NO. 59.45
**NOTES:**

1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE DRAWING NO. 1-5 FOR CROSSWALK STRIPEING GUIDELINES.
3. SEE MUTCD 2000 FOR ADVANCED PLACEMENT OF WARNING SIGNS IN TABLE 2C-4.
4. SEE DRAWING NO. 255.5 FOR BOLLARDS AND CENTERLINE STRIPING.
5. SEE DRAWING NO. 256.2 - 256.4 FOR ADDITIONAL CROSSING DETAILS.

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<table>
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<th>CLARK COUNTY AREA</th>
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</thead>
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<tr>
<td>628</td>
<td>PAINTING TRAFFIC STRIPEING</td>
<td></td>
</tr>
<tr>
<td>633</td>
<td>PAVEMENT MARKERS</td>
<td></td>
</tr>
</tbody>
</table>
1. INSTALL STREETLIGHT STANDARDS AT INTERSECTIONS INCLUDING "L" AND "T" TYPES, PER STANDARD DRAWINGS 301 THROUGH 310 IN ACCORDANCE WITH THE APPROPRIATE RIGHT-OF-WAY.

2. STREET CLASSIFICATION AND STREETLIGHT STANDARD APPLICATION SHALL BE AS LISTED IN TABLE 1 BELOW. ACTUAL LUMINAIRE WATTAGE AND/OR STREETLIGHT STANDARD SPACING MAY BE VARIED BY THE ENGINEER, WHEN SUPPORTED BY AN APPROVED LIGHTING STUDY IN ACCORDANCE WITH THE IES RECOMMENDED PRACTICE FOR ROADWAY LIGHTING IN ORDER TO MEET CURRENT AND FUTURE TRAFFIC CONTROL NEEDS AND APPROVED BY THE RESPECTIVE AGENCY. AVERAGE LEVELS ARE MAINTAINED LEVELS AT A 0.8 MAINTENANCE FACTOR (0.82 FOR CLARK COUNTY) IN FOOTCANDLES MEASURED HORIZONTALLY AT THE SURFACE.

<table>
<thead>
<tr>
<th>CLASSIFICATION</th>
<th>R/W</th>
<th>DWG</th>
<th>LUMINAIRE</th>
<th>LEVEL</th>
<th>AVG./MIN</th>
<th>IES UNIFORMITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAJOR ARTERIAL OR MORE</td>
<td>100'</td>
<td>----</td>
<td>250W HPS</td>
<td>1.58 FC</td>
<td></td>
<td>3:1</td>
</tr>
<tr>
<td>INTERMEDIATE COLLECTOR</td>
<td>80'</td>
<td>----</td>
<td>150W HPS</td>
<td>0.84 FC</td>
<td></td>
<td>4:1</td>
</tr>
<tr>
<td>LOCAL</td>
<td>60'</td>
<td>----</td>
<td>150W HPS (CLARK COUNTY &amp; COH ONLY)</td>
<td>0.38 FC</td>
<td></td>
<td>6:1</td>
</tr>
<tr>
<td>RESIDENTIAL OR LESS</td>
<td>51'</td>
<td>----</td>
<td>100W HPS</td>
<td>0.38 FC</td>
<td></td>
<td>6:1</td>
</tr>
</tbody>
</table>

3. NEW STREETLIGHT STANDARDS INSTALLED ADJACENT TO OR OPPOSITE FROM EXISTING STREETLIGHTS SHALL MATCH THE EXISTING LOCATION, SPACING, POLE AND LUMINAIRE TYPES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

4. STREETLIGHT STANDARDS INSTALLED ON 60' OR LESS RIGHT-OF-WAYS MAY BE INSTALLED ON EITHER SIDE OF ROADWAY AS DIRECTED BY THE ENGINEER.

5. TRAFFIC SIGNAL FOUNDATIONS AND ADAPTOR PLATES MAY BE REQUIRED AT INTERSECTIONS AS DIRECTED BY THE ENGINEER.

6. AT LEAST ONE STREETLIGHT SHALL BE REQUIRED IN THE BULB SECTION OF A CUL-DE-SAC OR HAMMERHEAD. LOCATION SHALL BE AS REQUIRED BY THE ENGINEER.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.

| SPECIFICATION REFERENCE | UNIFORM STANDARD DRAWINGS  
|-------------------------| CLARK COUNTY AREA    |
| 623 | TRAFFIC SIGNALS & STREETLIGHTING |

STREETLIGHT LOCATION
GENERAL NOTES

| DATE | 2-08-07 | DWG. NO. | 300 |
NOTES:

1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.
3. CITY OF HENDERSON AND BOULDER CITY REQUIRE STREETLIGHTING IN THE MEDIAN FOR RIGHTS-OF-WAY 100 FEET OR GREATER. SEE STANDARD DRAWING NO. 312. IN THE ABSENCE OF A MEDIAN, STREETLIGHT LOCATION SHALL BE THE SAME AS THE OTHER ENTITIES.

<table>
<thead>
<tr>
<th>POLE LOCATION TABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>KEYED NOTE</td>
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<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

SPECIFICATION REFERENCE

| 623 | TRAFFIC SIGNALS & STREETLIGHTING |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

STREETLIGHT LOCATIONS AT INTERSECTIONS
100' OR GREATER/100' OR GREATER RIGHT-OF-WAY
(EXCEPT CLARK COUNTY)

DATE 8-12-99   DWG. NO. 301   PAGE NO. 61
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.
3. WITH THE ENGINEER'S APPROVAL, A SECOND LUMINAIRE MOUNTING PLATE MAY BE FIELD WELDED BY A CERTIFIED WELDER.
4. ALL LUMINAIRE MAST ARMS FOR 400W FIXTURES SHALL BE 15 FT. LONG AND INSTALLED PER STANDARD DRAWING NO. 404.406 UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

<table>
<thead>
<tr>
<th>POLE LOCATION TABLE</th>
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</thead>
<tbody>
<tr>
<td>KEYED NOTE</td>
</tr>
<tr>
<td>1</td>
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<td>2</td>
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<td>3</td>
</tr>
</tbody>
</table>

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE
NOTES:

1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.

2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.

3. CITY OF HENDERSON AND BOULDER CITY REQUIRE STREETLIGHTING IN THE MEDIAN FOR RIGHTS-OF-WAY 100 FEET OR GREATER. SEE STANDARD DRAWING NO. 312. IN THE ABSENCE OF A MEDIAN, STREETLIGHT LOCATION SHALL BE THE SAME AS THE OTHER ENTITIES.

<table>
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<tr>
<th>KEYED NOTE</th>
<th>ENTITY</th>
<th>CLV</th>
<th>NLV</th>
<th>MES</th>
<th>HND</th>
<th>BC</th>
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<tbody>
<tr>
<td>1</td>
<td>160'</td>
<td></td>
<td></td>
<td></td>
<td>(SEE NOTE 3)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>80'</td>
<td></td>
<td></td>
<td></td>
<td>(SEE NOTE 3)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>(SEE DRAWING NO. 320)</td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>170'</td>
<td></td>
<td></td>
<td>170'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>85'</td>
<td></td>
<td></td>
<td>85'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
NOTES:

1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.

2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.

3. ALL LUMINAIRE MAST ARMS FOR 400W FIXTURES SHALL BE 15 FT. LONG AND INSTALLED PER STANDARD DRAWING NO. 404.406 UNLESS OTHERWISE APPROVED BY THE ENGINEER.

<table>
<thead>
<tr>
<th>POLE LOCATION TABLE</th>
</tr>
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<tbody>
<tr>
<td>KEYED NOTE</td>
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<tr>
<td>1</td>
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<td>3</td>
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<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
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SPECIFICATION REFERENCE

623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS
CLARK COUNTY ONLY

STREETLIGHT LOCATIONS AT INTERSECTIONS
100' OR GREATER/80' RIGHT-OF-WAY

DATE 9-12-02 DWG. NO. 302.1 PAGE NO. 62.1
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.

2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300 IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.

3. CITY OF HENDERSON AND BOULDER CITY REQUIRE STREETLIGHTING IN THE MEDIAN FOR RIGHTS-OF-WAY 100 FEET OR GREATER. SEE STANDARD DRAWING NO. 312. IN THE ABSENCE OF A MEDIAN, STREETLIGHT LOCATION SHALL BE THE SAME AS THE OTHER ENTITIES.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.

POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>ENTRY</th>
<th>CLV</th>
<th>NLV</th>
<th>MES</th>
<th>HND</th>
<th>BC</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>160’</td>
<td></td>
<td></td>
<td></td>
<td>(SEE NOTE 3)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>80’</td>
<td></td>
<td></td>
<td></td>
<td>(SEE NOTE 3)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>12’</td>
<td></td>
<td></td>
<td></td>
<td>(SEE NOTE 3)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>(SEE DRAWING NO. 320)</td>
<td>180’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>180’</td>
<td>180’</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>6</td>
<td>90’</td>
<td>90’</td>
<td></td>
<td></td>
<td></td>
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</table>
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300 IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.
3. IF INTERSECTION IS SIGNALIZED, 400 WATT LUMINAIRES SHALL BE INSTALLED ON ALL CORNERS AND DUAL ARM CONFIGURATION SHALL BE USED FOR 100 FT. RIGHT-OF-WAY SIMILAR TO STANDARD DRAWING NO. 302.1 IN CLARK COUNTY. USE SINGLE ARM CONFIGURATION PER DRAWING 302 IN HENDERSON.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.
NOTES:

1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.

2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300 IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET. ADEQUATE INTERSECTION LIGHTING SHALL ALSO BE ADDRESS IN THE LIGHTING STUDY.

3. CITY OF HENDERSON AND BOULDER CITY REQUIRE STREETLIGHTING IN THE MEDIAN FOR RIGHTS-OF-WAY 100 FEET OR GREATER. SEE STANDARD DRAWING NO. 312. IN THE ABSENCE OF A MEDIAN, STREETLIGHT LOCATION SHALL BE THE SAME AS THE OTHER ENTITIES.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300 IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET. ADEQUATE INTERSECTION LIGHTING SHALL ALSO BE ADDRESSED IN THE LIGHTING STUDY.
3. IF INTERSECTION IS SIGNALIZED, 400 WATT LUMINAIRES SHALL BE INSTALLED ON ALL CORNERS AND DUAL ARM CONFIGURATION SHALL BE USED FOR 100 FT. RIGHT-OF-WAY SIMILAR TO STANDARD DRAWING NO. 302.1 IN CLARK COUNTY. USE SINGLE ARM CONFIGURATION PER DRAWING 302 IN HENDERSON.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.

<table>
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<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA</th>
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<tbody>
<tr>
<td>623 TRAFFIC SIGNALS &amp; STREETLIGHTING</td>
<td>CLARK COUNTY &amp; HENDERSON ONLY</td>
</tr>
<tr>
<td></td>
<td>STREETLIGHT LOCATIONS AT INTERSECTIONS</td>
</tr>
<tr>
<td></td>
<td>100' OR GREATER/51' OR LESS RIGHT-OF-WAY</td>
</tr>
<tr>
<td></td>
<td>DATE 2-08-07 DWG. NO. 304.1</td>
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NOTE:
SEE GENERAL NOTES STANDARD DRAWING NO. 300.

POLE LOCATION TABLE

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<tr>
<th>KEYED NOTE</th>
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<th>ALL ENTITIES (EXCEPT CC)</th>
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<tbody>
<tr>
<td>1</td>
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<td>170'</td>
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<tr>
<td>2</td>
<td></td>
<td>85'</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>(SEE DRAWING NO. 320)</td>
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SPECIFICATION REFERENCE

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<th>TRAFFIC SIGNALS &amp; STREETLIGHTING</th>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

STREETLIGHT LOCATIONS AT INTERSECTIONS
80'/80' RIGHT-OF-WAY
(EXCEPT CLARK COUNTY)

DATE 8-12-99  DWG. NO. 305  PAGE NO. 65
NOTE:
SEE GENERAL NOTES STANDARD DRAWING NO. 300.

POLE LOCATION TABLE

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<td></td>
<td>85'</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>(SEE DRAWING NO. 320)</td>
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</table>

SPECIFICATION REFERENCE

623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

CLARK COUNTY ONLY

STREETLIGHT LOCATIONS AT INTERSECTIONS
80'/80' RIGHT-OF-WAY

DATE 8-12-99  DWG. NO. 305.1  PAGE NO. 65.1
NOTE:
SEE GENERAL NOTES STANDARD DRAWING NO. 300.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.
NOTE:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. IF THE INTERSECTION IS SIGNALIZED, 400 WATT LUMINAIRE SHALL BE INSTALLED ON ALL CORNERS.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.

<table>
<thead>
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<th>POLE LOCATION TABLE</th>
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</thead>
<tbody>
<tr>
<td>KEYED NOTE</td>
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<td>5</td>
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SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

CLARK COUNTY & HENDERSON ONLY

STREETLIGHTLOCATIONS AT INTERSECTIONS
80'/60' RIGHT-OF-WAY

DATE 2-08-07 DWG. NO. 306.1
**NOTE:**

SEE GENERAL NOTES STANDARD DRAWING NO. 300.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.

### POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>ENTITY</th>
<th>ALL ENTITIES (EXCEPT CC)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>170'</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>85'</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>12&quot;</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>(SEE DRAWING NO. 320)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>170'</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>85'</td>
<td></td>
</tr>
</tbody>
</table>

### SPECIFICATION REFERENCE

| 623 | TRAFFIC SIGNALS & STREETLIGHTING |

### UNIFORM STANDARD DRAWINGS

**CLARK COUNTY AREA**

**STREETLIGHT LOCATIONS AT INTERSECTIONS**

80’/51’ OR LESS RIGHT-OF-WAY

(EXCEPT CLARK COUNTY & HENDERSON)

**DATE** 2-08-07  **DWG. NO.** 307

**Effective** 01/01/10 - 06/30/10

80’ R/W

SPACING TYPICAL

51’ R/W OR LESS

BACK OF CURB

CURB RADIUS
Effective 01/01/10 - 06/30/10

Diagram of pole spacing and location.

POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>ENTITY</th>
<th>CLARK COUNTY AND HENDERSON</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>170'</td>
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</tr>
<tr>
<td>2</td>
<td>85'</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>12''</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>(SEE DRAWING NO. 320)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>170'</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>85'</td>
<td></td>
</tr>
</tbody>
</table>

NOTE:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. IF INTERSECTION IS SIGNALIZED, 400 WATT LUMINAIRES SHALL BE INSTALLED ON ALL CORNERS.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.

SPECIFICATION REFERENCE

| 623 | TRAFFIC SIGNALS & STREETLIGHTING |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

CLARK COUNTY & HENDERSON ONLY

STREETLIGHT LOCATIONS AT INTERSECTIONS
80'51' OR LESS RIGHT-OF-WAY

DATE 2-08-07  DWG. NO. 307.1
### POLE LOCATION TABLE

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<th>KEYED NOTE</th>
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<td>2</td>
<td>90'</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>12&quot;</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>(SEE DRAWING NO. 320)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>90'</td>
<td></td>
</tr>
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</table>

**NOTE:**

SEE GENERAL NOTES STANDARD DRAWING NO. 300.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.

---

**SPECIFICATION REFERENCE**

| 623 | TRAFFIC SIGNALS & STREETLIGHTING |

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**STREETLIGHT LOCATIONS AT INTERSECTIONS**

**60'/60' RIGHT-OF-WAY**

(ExCEPT CLARK COUNTY & HENDERSON)

**DATE** 2-08-07  **DWG. NO.** 308
POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>ENTITY</th>
<th>CLARK COUNTY AND HENDERSON</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>170'</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>85'</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>12'</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>(SEE DRAWING NO. 320)</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>85'</td>
</tr>
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</table>

NOTE:
SEE GENERAL NOTES STANDARD DRAWING NO. 300.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.
Effective 01/01/10 - 06/30/10

NOTE:
SEE GENERAL NOTES STANDARD DRAWING NO. 300.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.

POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>ENTITY</th>
<th>ALL ENTITIES (EXCEPT CC &amp; COH)</th>
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<tbody>
<tr>
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<td>180'</td>
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<tr>
<td>2</td>
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<td>90'</td>
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<tr>
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<td></td>
<td>12'</td>
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<td></td>
<td>85'</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>170'</td>
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</table>

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

STREETLIGHT LOCATIONS AT INTERSECTIONS
60'/51' OR LESS RIGHT-OF-WAY
(EXCEPT CLARK COUNTY & HENDERSON)

SPECIFICATION REFERENCE
623 TRAFFIC SIGNALS & STREETLIGHTING

DATE 2-08-07  DWG. NO. 309
NOTE:
SEE GENERAL NOTES STANDARD DRAWING NO. 300.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.
NOTE:
SEE GENERAL NOTES STANDARD DRAWING NO. 300.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.

POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>ENTITY</th>
<th>ALL ENTITIES (EXCEPT CC &amp; COH)</th>
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<tr>
<td>1</td>
<td></td>
<td>180'</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>170'</td>
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* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.

* PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE.

<table>
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<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA</th>
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<tbody>
<tr>
<td>623 TRAFFIC SIGNALS &amp; STREETLIGHTING</td>
<td>CLARK COUNTY &amp; HENDERSON ONLY</td>
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<tr>
<td></td>
<td>STREETLIGHT STANDARDS (60 FT. OR LESS RIGHT-OF-WAY)</td>
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<td></td>
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</table>
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.

* DISTANCE LISTED INDICATES MAXIMUM SPACING. LIGHTING STANDARDS SHALL BE EQUIDISTANT AFTER LOCATING THE END OF ISLAND POLES.

POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>ENTITY</th>
<th>ALL ENTITIES (EXCEPT CC)</th>
<th>CLARK COUNTY</th>
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<tr>
<td>* 1</td>
<td>160'</td>
<td>120'</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>10'</td>
<td>10' (MIN.)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>80'</td>
<td>120'</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td></td>
</tr>
</tbody>
</table>
1. ALL STREETLIGHT STANDARDS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS
OF THE STANDARD SPECIFICATIONS AND AS INDICATED ON THESE DRAWINGS.

2. ALL COMPONENTS OF THE STREETLIGHT STANDARD INCLUDING THE POLE, ARM, HANDHOLE COVER,
BASE COVER AND THE POLE CAP SHALL BE FERROUS METAL AND HOT-DIP GALVANIZED AFTER
CONSTRUCTION IN ACCORDANCE WITH ASTM A123; ALUMINUM OR ALUMINUM ALLOY IS NOT ACCEPTABLE.
FLAWS IN THE APPEARANCE OF THESE GALVANIZED COMPONENTS (i.e. "TIGER-STRIPED," "ZEBRA-STRIPED"),
SHALL BE CAUSE FOR REJECTION. NON-METALLIC TYPE BASE COVERS MAY BE ACCEPTABLE AND SHALL
BE SUBMITTED TO THE ENGINEER FOR APPROVAL. CONCRETE POLES SHALL BE SUBMITTED TO THE
ENGINEER FOR APPROVAL.

3. ALL FASTENING HARDWARE SHALL BE NON-CORROSIVE, CADMIUM-PLATED, OR EQUAL, APPROVED BY
THE ENGINEER. FASTENERS SHALL BE OF THE SIZE AND CONFIGURATION NOTED ON THE DRAWINGS.

4. CONCRETE POLE FOUNDATIONS SHOULD BE POURED AGAINST UNDISTURBED, NATURAL SOIL OR IF FORMING
MATERIAL IS USED IT SHALL BE STRIPPED AWAY FROM THE FOUNDATION AT LEAST ONE (1) FOOT BELOW
FINISHED GRADE.

5. POLES SHALL BE INSTALLED ON CONCRETE FOUNDATIONS WITH ANCHOR BOLTS. EACH BOLT SHALL BE
INSTALLED WITH TWO (2) HEX NUTS AND TWO (2) FLAT WASHERS. EXCEPT FOR "H" AND "L" FOUNDATIONS,
The ANCHOR BOLTS SHALL BE 1 1/8" X 40" X 4" FOR ELEVEN (11) GAGE POLES AND 1 1/8" X 40" X 4" FOR
SEVEN (7) GAGE POLES. THE ANCHOR BOLTS, NUTS AND WASHERS SHALL BE HOT-DIP GALVANIZED.
The POLE SHALL BE PLUMBED PRIOR TO PLACING THE GROUT OR CONCRETE CAP. USE OF GROUT OR
CONCRETE FOR CAP SHALL BE DESIGNATED BY ENTITY ENGINEER. SHIMS OR WEDGES OF ANY KIND
ARE NOT ACCEPTABLE TO PLUMB THE POLE AFTER THE CAP HAS BEEN PLACED.

6. ALL UNDERGROUND CONDUIT INSTALLED SHALL HAVE RED, CONTINUOUS
MARKING TAPE INSTALLED IN THE TRENCH AT 12" BELOW FINISHED
GRADE.

7. WHERE SIGNALS AND STANDARDS ARE INSTALLED UNDER OVERHEAD
POWER LINES, CLEARANCES SHALL BE PER NATIONAL ELECTRICAL
SAFETY CODE SECTION 234 REQUIREMENTS. INSTALL STRAIGHT ARM
STREETLIGHT ASSEMBLIES WHERE ADDITIONAL CLEARANCE IS REQUIRED.

<table>
<thead>
<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS</th>
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</thead>
<tbody>
<tr>
<td>623</td>
<td>CLARK COUNTY AREA</td>
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<table>
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<tr>
<th>STREETLIGHT STANDARD GENERAL NOTES</th>
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<table>
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<tr>
<th>DATE</th>
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<tr>
<td>DWG. NO.</td>
<td>313</td>
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<tr>
<td>PAGE NO.</td>
<td>73</td>
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</table>
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 313.
2. SEE STANDARD DRAWING NO. 319 FOR DETAIL OF POLE BASE.
3. SEE STANDARD DRAWING NO. 318 FOR DETAIL OF POLE CAP.

SPECIFICATION REFERENCE

<table>
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<tr>
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<td>506</td>
<td>CLARK COUNTY AREA</td>
</tr>
<tr>
<td>623</td>
<td>STREETLIGHT STANDARD</td>
</tr>
<tr>
<td>715</td>
<td>WITH 2&quot; PIPE ARM</td>
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</table>

DATE 12-12-96   DWG. NO. 314   PAGE NO. 74
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 313.
2. SEE STANDARD DRAWING NO. 319 FOR DETAIL OF POLE BASE.
3. SEE STANDARD DRAWING NO. 318 FOR DETAIL OF POLE CAP.
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 313.
2. SEE STANDARD DRAWING NO. 319 FOR DETAIL OF POLE BASE.
3. SEE STANDARD DRAWING NO. 318 FOR DETAIL OF POLE CAP.

<table>
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<tr>
<th>SPECIFICATION REFERENCE</th>
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<tbody>
<tr>
<td></td>
<td>CLARK COUNTY AREA</td>
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<tr>
<td>506</td>
<td>STREETLIGHT STANDARD</td>
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<tr>
<td></td>
<td>WITH TAPERED MAST ARM</td>
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<td>623</td>
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DATE 12-12-96 DWG. NO. 316 PAGE NO. 76
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 313.
2. SEE STANDARD DRAWING NO. 319 FOR DETAIL OF POLE BASE.
3. SEE STANDARD DRAWING NO. 318 FOR DETAIL OF POLE CAP.
### NOTES:

1. SEE GENERAL NOTES STANDARD DRAWING NO. 313
2. HANDHOLE SHALL FACE AWAY FROM ONCOMING TRAFFIC.

### SPECIFICATION REFERENCE

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>506</td>
<td>STEEL STRUCTURES</td>
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<td>623</td>
<td>TRAFFIC SIGNALS &amp; STREETLIGHTING</td>
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<tr>
<td>715</td>
<td>GALVANIZING</td>
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### UNIFORM STANDARD DRAWINGS

#### CLARK COUNTY AREA

### LOWER POLE DETAILS

FOR PIPE AND MAST ARM POLES

<table>
<thead>
<tr>
<th>DATE</th>
<th>DWG. NO.</th>
<th>PAGE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-12-96</td>
<td>319</td>
<td>79</td>
</tr>
</tbody>
</table>
BEHIND CURBSIDE SIDEWALK

BACK PORTION OF CURBSIDE SIDEWALK (NOT FOR NEW CONSTRUCTION)

OPEN AREA OR BETWEEN CURB AND SIDEWALK

SPECIFICATION REFERENCE
501 PORTLAND CEMENT CONCRETE
623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

LIGHTING STANDARD SETBACK

DATE 7-8-04  DWG. NO. 320  PAGE NO. 80
Effective 01/01/10 - 06/30/10

NOTE:
POLE BASE COVERS SHALL BE FURNISHED AND INSTALLED FOR ALL POLES
PER THE STANDARD SPECIFICATIONS AND DRAWINGS.

<table>
<thead>
<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>623 TRAFFIC SIGNALS &amp; STREETLIGHTING</td>
<td>CLARK COUNTY AREA</td>
</tr>
</tbody>
</table>

LIGHTING STANDARD SETBACK FROM BLOCK WALL

DATE 5-13-99  DWG. NO. 320A  PAGE NO. 80A
1 3/16" HOLE, 4 REQD.

5 7/8"

3 7/8"

5 3/4"

7 3/4"

4.496 ± 0.003
PIPE O.D.

1/4" X 4" GUSSETS - 4 REQUIRED

1 3/4" HOT-DIP GALV. ANCHOR BOLTS WITH TWO HOT-DIP GALV. HEX. HD. NUTS & WASHERS PER BOLT (4 REQD.).

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

BASE ADAPTOR PLATE
FOR 16-1/2" BOLT CIRCLE FOUNDATION

DATE 12-12-96  DWG. NO. 322  PAGE NO. 82
Effective 01/01/10 - 06/30/10

1-3/16" HOLE, 4 REQD.

4.506" ± .003" HOLE DIA.

90°

45°

2° R

1 1/8" R

3 3/4''

3 1/4''

1 1/2''

2 1/4''

6 3/4''

5 3/4''

7 3/4''

1/4''

1/4''

1/4'' X 4'' GUSSETS
- 4 REQUIRED

2" HOT-DIP GALV. ANCHOR BOLTS WITH TWO HOT-DIP GALV. HEX. HD. NUTS & WASHERS PER BOLT (4 REQD.).

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

BASE ADAPTOR PLATE
FOR 19" BOLT CIRCLE FOUNDATION

DATE 12-12-96  DWG. NO. 322A  PAGE NO. 82A
NOTES:
1. PULL BOX LID SHOULD BE TAPPED WITH A 3/8" X 16 COURSE THREAD TAP.
2. FOR TYPICAL NO. 7 PULL BOX COVER GROUNDING, SEE STANDARD DRAWING NO. 327.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

PULL BOX COVER
BONDING DETAIL

DATE 12-12-96 DWG. NO. 323 PAGE NO. 83
KEYED NOTE:
1 SINGLE POLE, SINGLE THROW ON-OFF, 10 AMP, 125 VAC SWITCH, SEALED, WITH 5 IN. WIRE LEADS

SWITCH BRACKET

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

623 TRAFFIC SIGNALS & STREETLIGHTING

BYPASS SWITCH BRACKET
FOR POLE MOUNTED
STREETLIGHTING SERVICE
(CITY OF MESQUITE ONLY)

DATE 4-13-00  DWG. NO. 324  PAGE NO. 84
1. WHEN NO GROUNDING ELECTRODE EXISTS, 5/8 IN. DIA. SOLID COPPER GROUNDING ROD, 8 FT. IN LENGTH, SHALL BE INSTALLED.
2. ANCHOR BOLTS SHALL BE CONTINUOUS AND HAVE A MINIMUM 1 IN. FREE THREAD.
3. FOUNDATION CAP SHALL BE CONCRETE OR GROUT AS DESIGNATED BY ENTITY ENGINEER.
CAST IRON OR NON-CONDUCTIVE COVER FOR PEDESTRIAN AREAS

BRASS "L" BOLT AND NUT

COVER

BODY

EXTENSION
AS SPECIFIED BY THE ENGINEER

<table>
<thead>
<tr>
<th>SIZE (COMMERCIAL DESIGNATION)</th>
<th>3-1/2</th>
<th>5</th>
<th>7</th>
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<tr>
<td>A</td>
<td>15</td>
<td>21-3/4</td>
<td>30-5/8</td>
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<tr>
<td>B</td>
<td>10</td>
<td>11-3/4</td>
<td>17-5/8</td>
</tr>
<tr>
<td>C</td>
<td>3/4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>19-3/8</td>
<td>25</td>
<td>34-3/4</td>
</tr>
<tr>
<td>E</td>
<td>14-3/8</td>
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<td>21-3/4</td>
</tr>
<tr>
<td>F</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>G</td>
<td>N/A</td>
<td>10-1/4</td>
<td>11-1/2</td>
</tr>
</tbody>
</table>

NOTES:
1. COVERS INSTALLED IN TRAFFIC AND OPEN AREAS ACCESSIBLE TO TRAFFIC SHALL BE PER STANDARD DRAWING NO. 327.
2. SEE STANDARD DRAWING NO. 323 FOR COVER GROUNDING.

SPECIFICATION REFERENCE

503 PRECAST PRESTRESSED CONCRETE
MEMBERS
623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

PRECAST REINFORCED CONCRETE PULL BOX

DATE 12-12-96  DWG. NO. 326  PAGE NO. 86
NOTES:
1. COVER USED IN TRAFFIC AND OPEN AREAS ACCESSIBLE TO TRAFFIC ONLY.
2. TYPICAL NO. 7 PULL BOX COVER SHOWN. SUBMIT OTHERS TO THE ENGINEER FOR APPROVAL.
3. ALL TRAFFIC AND OPEN AREA COVERS SHALL BE H 20 RATED.

SPECIFICATION REFERENCE

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>506</td>
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</tr>
<tr>
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</tbody>
</table>

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

PULL BOX STREET COVER

DATE 12-12-96  DWG. NO. 327  PAGE NO. 87
NOTE:

1. PROVIDE A MINIMUM OF 8" AROUND ALL BOXES. ANY BOX SHALL NOT BE PLACED WITHIN 3'-3" OF FIRE HYDRANTS IN DRIVEWAYS OR DRIVEWAY APRONS. THIS DRAWINGS IS NOT INTENDED TO LIMIT THE NUMBER OF BOXES BETWEEN DRIVEWAYS TO TWO.

2. FOR WATER SERVICE BOXES, REFER TO UDACS PLATE 1A-10.
SERVICE PEDESTAL ENCLOSURE, 12 GA. SHEET METAL BODY AND EQUIPMENT MOUNTING PANEL, 14 GA. FRONT COVER(S) AND 16 GA. MIN. FOR ALL OTHER PANELS. ALL SHEET METAL SHALL BE FINISHED WITH ZINC CHROMATE PRIMER AND GREEN BAKED ENAMEL OR POWDER COAT FINISH. METERING SECTION PER P.U.E.S.E.R. STANDARDS.

UTILITY METER SECTION, 125 OR 200 AMP AS NEEDED, 120/240 VOLT, 1 PHASE, 3 WIRE. THE SECTION SHALL HAVE A HINGED COVER WITH PADLOCK TAB.

CIRCUIT BREAKER DISTRIBUTION SECTION, 125 OR 200 AMP AS NEEDED, 120/240 VOLT, 1 PHASE, 3 WIRE. THE SECTION SHALL BE COMPLETE WITH SEPARATE DEAD FRONT, COPPER BUSING, SPACE FOR A MINIMUM OF TEN FULL SIZE (1") GE TYPE PLUG-IN CIRCUIT BREAKERS (EXCLUDING MAIN BREAKER), COPPER NEUTRAL/GROUNDING BUS AND MAIN BREAKER AS SPECIFIED BY THE ENGINEER. THE SECTION SHALL BE FACTORY WIRED TO THE METER SECTION WITH THE APPROPRIATE SIZE COPPER CONDUCTORS.

EQUIPMENT MOUNTING PANEL, 10" H X 12" W MIN., OPEN OR ENCLOSED, FOR LIGHTING CONTACTORS AS NEEDED.

DISTRIBUTION AND EQUIPMENT SECTION COVER WITH PADLOCK TAB.

BASE AND ENCLOSURE WIDTH (16" TYP.)

BASE DEPTH (16" TYP.)

ENCLOSURE DEPTH (17" TYP.)

TYPICAL MOUNTING BASE DETAIL
(DIMENSIONS MAY VARY DEPENDING ON MANUFACTURER)

SEPARATE PEDESTAL ENCLOSURE MOUNTING BASE (OPTIONAL)
BEHIND SIDEWALK (FOR WIDTHS LESS THAN 5 FT.)

BACK PORTION OF SIDEWALK (FOR WIDTHS OF 5 FT. OR GREATER)

OPEN AREA

<table>
<thead>
<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>501 PORTLAND CEMENT CONCRETE</td>
<td>CLARK COUNTY AREA</td>
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<tr>
<td>623 TRAFFIC SIGNALS &amp; STREETLIGHTING</td>
<td></td>
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</table>

SERVICE PEDESTAL SETBACK

DATE 12-12-96  DWG. NO. 331  PAGE NO. 91
Effective 01/01/10 - 06/30/10

125 AMP SERVICE: 2" CONDUIT, 2 #1/0 THW AND 1 #1/0 WHITE THW
200 AMP SERVICE (CLARK COUNTY): 2" CONDUIT, 2 #4/0 THW AND 1 #4/0 WHITE THW
200 AMP SERVICE (LAS VEGAS): 2" CONDUIT, 2 #3/0 THW AND 1 #3/0 WHITE THW

NOTES:
1. BARE COPPER GROUNDING CONDUCTOR SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.
2. CABINET COVERS SHALL BE PARALLEL WITH CURB.
3. IN AREAS WHERE R/W PERMITS, THE CONCRETE BASE SHALL BE PLACED AT THE BACK EDGE OF THE SIDEWALK.
4. CABINET COVERS SHALL OPEN TOWARDS THE STREET WHEN CABINETS ARE LOCATED AT BACK OF WALK. CABINET COVERS SHALL OPEN PARALLEL TO THE SIDEWALK FACING THE DIRECTION OF TRAFFIC WHEN LOCATED WITHIN THE SIDEWALK.
5. WIRE SIZES ARE BASED ON UNDERGROUND FEED.
6. WIRE SIZES SHALL BE INCREASED FOR VOLTAGE DROP LIMITATION WHEN RUN IS LONG.

SPECIFICATION REFERENCE

<table>
<thead>
<tr>
<th>501</th>
<th>PORTLAND CEMENT CONCRETE</th>
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<tbody>
<tr>
<td>623</td>
<td>TRAFFIC SIGNALS &amp; STREETLIGHTING</td>
</tr>
</tbody>
</table>

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

CLARK COUNTY AND CITY OF LAS VEGAS
SERVICE PEDESTAL FOUNDATION

DATE 2-10-00  DWG. NO. 332.1  PAGE NO. 92.1
125 AMP SERVICE: 2" CONDUIT, 2 #1 THW AND 1 #6 WHITE THW
200 AMP SERVICE: 2" CONDUIT, 2 #3/0 THW AND 1 #2 WHITE THW

NOTES:

1. BARE COPPER GROUNDING CONDUCTOR SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.

2. CABINET COVERS SHALL BE PARALLEL WITH CURB.

3. IN AREAS WHERE R/W PERMITS, THE CONCRETE BASE SHALL BE PLACED AT THE BACK EDGE OF THE SIDEWALK.

4. CABINET COVERS SHALL OPEN TOWARDS THE STREET WHEN CABINETS ARE LOCATED AT BACK OF WALK. CABINET COVERS SHALL OPEN PARALLEL TO THE SIDEWALK FACING THE DIRECTION OF TRAFFIC WHEN LOCATED WITHIN THE SIDEWALK.

5. WIRE SIZES ARE BASED ON UNDERGROUND FEED.

6. WIRE SIZES SHALL BE INCREASED FOR VOLTAGE DROP LIMITATION WHEN RUN IS LONG.
Effective 01/01/10 - 06/30/10

UL LISTED

PHOTO CONTROL

LIGHTING CONTACTOR 60 AMP., 240 VOLT, 2 POLE WITH 120 VOLT CONTROL

"UL LISTED" NIPPLE OR CHASE NIPPLE WITH LOCK RING AND GROUNDING BUSHING

STAINLESS STEEL BANDING AND BUCKLES

NIPPLE

"UL LISTED" NIPPLE OR CHASE NIPPLE WITH LOCK RING AND GROUNDING BUSHING

POLE GROUNDING POINT

FINISHED GRADE

GROUNDING PLATE

REMOVABLE COVER

STAINLESS STEEL BANDING AND BRACKETS, TYP.

METER SOCKET AND LOAD CENTER SHALL BE SECURE AND RIGID ON THE POLE. FASTENERS IF USED SHALL NOT PENETRATE POLE SHAFT, CHASE NIPPLE PLACEMENT SHALL BE AS SHOWN FOR STABILITY

METER SOCKET (PER UTILITY'S REQUIREMENTS) FACE METER AWAY FROM TRAFFIC.

HUB, RAIN TIGHT

SINGLE PHASE, 3 WIRE, 120/240 VAC CIRCUIT BREAKER LOAD CENTER, MAIN LUGS ONLY, NEMA 3R (RAIN-TIGHT) ENCLOSURE WITH PADLOCKING PROVISIONS, AND A MINIMUM OF EIGHT (8) SINGLE SPACES. BUSING SHALL BE COPPER.

FOR LOAD MAINS AMPERE RATING, AND/OR CIRCUIT BREAKER RATINGS, NUMBER OF POLES AND QUANTITY, SEE PLANS.

SEE STANDARD DRAWING NO. 324 FOR BYPASS SWITCH BRACKET INSTALLATION.

HANDBOKE (FACE AWAY FROM ONCOMING TRAFFIC)

SINGLE-STRAND BARE #4 AWG COPPER GROUNDING CONDUCTOR TO LOAD CENTER, CONDUCTOR SHALL BE USED TO GROUND POLE AND MUST BE UNBROKEN.

BRONZE GROUNDING CONNECTOR UL LISTED FOR UNDERGROUND USE

CONCRETE FOUNDATION SEE STANDARD DRAWING NO. 321

NOTE:
RECOMMEND LOCATING SERVICE POINT AS CLOSE TO THE CENTER OF THE STREETLIGHTING CIRCUIT AS POSSIBLE.
TO UTILITY SINGLE PHASE, 3 WIRE, 120/240 VAC SERVICE. LEAVE A MINIMUM OF 10 FEET SLACK IN EACH CONDUCTOR.

SERVICE ENTRANCE WEATHERHEAD

2" RIGID GALVANIZED STEEL CONDUIT

2-HOLE PIPE STRAPS SPACED 5 FEET APART

METER SOCKET (PER UTILITY'S REQUIREMENTS) FACE METER AWAY FROM TRAFFIC.

SINGLE PHASE, 3 WIRE, 120/240 VAC CIRCUIT BREAKER LOAD CENTER, MAIN LUGS ONLY. NEMA 3R (RAIN-TIGHT) ENCLOSURE WITH PADLOCKING PROVISIONS, AND A MINIMUM OF EIGHT (8) SINGLE SPACES. BUSSING SHALL BE COPPER. FOR LOAD MAINS AMPERE RATING, AND/OR CIRCUIT BREAKER RATINGS, NUMBER OF POLES AND QUANTITY, SEE PLANS.

RIGID GALVANIZED STEEL CONDUIT

NO. 4 AWG GROUNDING CONDUCTOR ENCASED IN 1/2" E.M.T.

FINISHED GRADE

PVC COATED OR WRAPPED WITH 10 MIL CORROSION PROTECTIVE TAPE. 1/2 LAPPED, RIGID GALVANIZED STEEL 90° ELBOW, 24" MIN. RADIUS

PVC CONDUIT TO FIRST STREETLIGHT SEE NOTE 1

PVC TO STEEL CONDUIT ADAPTOR

125 AMP SERVICE: 2" CONDUIT, 2 #1/0 THW AND 1 #4 WHITE THW
200 AMP SERVICE: 2" CONDUIT, 2 250 KCMIL THW AND 1 #1/0 WHITE THW
(0.82 DERATE HAS BEEN APPLIED FOR AMBIENT TEMPERATURE)

NOTES:

1. ALL WIRES TO BE COPPER; SEE PLANS FOR QUANTITY AND GAGES.
2. WITH ENGINEER'S APPROVAL, AN 8 FT. BY 5/8 IN. COPPER-CLAD GROUNDING ROD MAY BE USED.
3. ALL CONDUIT FITTINGS TO BE WATER-TIGHT.
Effective 01/01/10 - 06/30/10

- **Effective 01/01/10 - 06/30/10**

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**NOTE:**

SERVICE PEDESTAL ASSEMBLY SHALL BE FACTORY ASSEMBLED OR BUILT BY UL LISTED VENDOR.

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**FOR CONDUIT SIZE AND WIRING REQUIREMENTS FOR STREETLIGHT SERVICE, SEE STANDARD DRAWING NO. 332.1.**

**GROUNDING AND BONDING CONDUCTORS OMITTED FOR CLARITY, SEE STANDARD DRAWING NOS. 336 AND 337.**

**SINGLE POLE, SINGLE THROW, ON-OFF, 15 AMP, 125 VAC SWITCH, SEALED, WITH 5 IN. LEADS**

---

**SPECIFICATION REFERENCE**

| 623 | TRAFFIC SIGNALS & STREETLIGHTING |

---

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**CLARK COUNTY AND CITY OF LAS VEGAS**

**STREETLIGHT CIRCUIT**

**ONE LINE DIAGRAM**

---

**DATE** 2-10-00  
**DWG. NO.** 335.1  
**PAGE NO.** 95.1
FOR CONDUIT SIZE AND WIRING REQUIREMENTS FOR STREET LIGHT SERVICE, SEE STANDARD DRAWING NO. 332.1 FOR LAS VEGAS AND CLARK COUNTY ONLY AND 332 FOR ALL OTHER ENTITIES.
BRONZE SPLIT-BOLT CONNECTOR OR APPROVED EQUAL INSULATED PER STANDARD SPECIFICATIONS

#4 AWG SINGLE-STRAND BARE COPPER GROUNDING CONDUCTOR

HEX HEAD NON-CORROSIVE CAP SCREW WITH FLAT WASHER

POLE GROUNDING POINT

HANDBOARD, PROVIDE SLACK IN WIRES TO EXTRACT FUSE HOLDER AND CONNECTIONS, 18" MIN.

#4 AWG SINGLE-STRAND BARE COPPER GROUNDING CONDUCTOR

BRONZE ANCHOR BOLT GROUNDING CONNECTOR UL LISTED FOR UNDERGROUND USE

10/2 UF WITH GROUND

#10 BARE COPPER

LOAD SIDE

DOUBLE POLE WATERPROOF FUSE HOLDER ASSEMBLY

LINE SIDE

#10 THW STRANDED

2 #4 THW AND 1 #8 GREEN THWN

POLE SHAFT

3"

1-1/4" PVC CONDUIT

SPECIFICATION REFERENCE

623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA

LIGHTING STANDARD WIRING DIAGRAM, 240 VOLT, 2 WIRE

DATE 12-12-96 DWG. NO. 338 PAGE NO. 98
MANHOLE NOTES:

1. MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 609, "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-SIX (36) 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 III

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-478.

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.
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.


3. IF DRIVEWAYS OR UTILITIES EXIST, THE ENTITY ENGINEER SHALL APPROVE THE LOCATION OF THE DROP INLET.
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.

SPECIFICATION REFERENCE

| 501 | CONCRETE & MORTAR |
| 609 | CATCH BASINS, MANHOLES & INLETS |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE I MANHOLE

DATE 11-10-05 DWG. NO. 403 PAGE NO. 103
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 30" TO 48" AND 48" TO 60" CONE MAY BE USED.
5. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

**SPECIFICATION REFERENCE**

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<td>609</td>
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**UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA**

**TYPE I MANHOLE**

30" RING AND COVER

**DATE 11-10-05**

**DWG. NO.** 403A

**PAGE NO. 103A**
NOTE:
1. PIPE SECTION LENGTHS ARRANGED TO FIT DEPTH.

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<th>SYM.</th>
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<td>GRADE ADJUSTING RING</td>
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<td>C</td>
<td>1' SECTION REIN. CONC. PIPE</td>
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<td>2' SECTION REIN. CONC. PIPE</td>
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<td>E</td>
<td>3' SECTION REIN. CONC. PIPE</td>
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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.

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<tr>
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<tr>
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<td>B</td>
<td>GRADE ADJUSTING RING</td>
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SPECIFICATION REFERENCE

501 CONCRETE & MORTAR
609 CATCH BASINS, MANHOLES & INLETS

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 UPSTREAM WALL OF THE MANHOLE.

2. W = I.D. + 12-INCHES MIN. BUT IN NO CASE SHALL W BE LESS THAN 60-INCHES.

SPECIFICATION REFERENCE

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE II MANHOLE

DATE: 01/01/10 - 06/30/10

Effective

DWG. NO.: 405
PAGE NO.: 105
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.
NOTE:
1. STEPS SHALL BE INSTALLED ON THE UPSTREAM WALL OF THE MANHOLE.
NOTE:

1. STEPS 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.

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE III MANHOLE
30" RING AND COVER

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' R/W WIDTH.
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' R/W WIDTH.

3. THE USE OF 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

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<td>CONCRETE COLLAR AROUND MANHOLES 30&quot; RING AND COVER</td>
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<tr>
<td>505 REINFORCING STEEL</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.

**SPECIFICATION REFERENCE**

<table>
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<tr>
<th>712</th>
<th>MISCELLANEOUS METALS</th>
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**UNIFORM STANDARD DRAWINGS**

CLARK COUNTY AREA

**STANDARD MANHOLE**

COVER AND RING

**DATE**

**DWG. NO.** 409

**PAGE NO.** 109
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.
**NOTES:**

1. MANHOLE STEP SHALL CONFORM TO A.S.T.M. C-478 AND C-497.

2. ALUMINUM STEPS SHALL BE SOLID, MADE FROM MATERIAL IN CONFORMANCE WITH A.S.T.M. B221 (ALLOY 6005-TS).

3. REINFORCED PLASTIC STEPS SHALL BE POLYPROPYLENE PLASTIC, WITH NO. 3 (MIN.) DEFORMED STEEL ROD (GRADE 60/A.S.T.M. A-615).

4. STEPS SHALL BE EVENLY SPACED FROM 12” TO 16”.

5. ALL STEPS MUST BE EPOXIED IN PLACE DURING THE INSTALLATION PROCESS.

---

**MANHOLE STEPS**

**SPECIFICATION REFERENCE**

<table>
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<th>Uniform Standard Drawings Clark County Area</th>
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**STANDARD MANHOLE STEPS**

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<td>410</td>
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NOTES:

1. DEPTH "D" TO BE SHOWN ON PLANS.
2. OUTLET PIPE SIZE TO BE SHOWN ON PLANS.
3. OUTLET PIPE SHALL BE TRIMMED FLUSH WITH INSIDE FACE OF INLET.
4. SECTION B-B IS OPTIONAL FOR INLETS WHERE L = 7'-0" OR GREATER, AND D = 5'-0" OR GREATER, SEE STANDARD DRAWING NO. 415.

SECTION A-A

SPECIFICATION REFERENCE

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<td>CONCRETE STRUCTURES</td>
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<td>STEEL</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DROP INLET
TYPE "A"

DATE 4-11-02  DWG. NO. 411  PAGE NO. 111
NOTES:
1. DEPTH "D" TO BE SHOWN ON PLANS.
2. OUTLET PIPE SIZE TO BE SHOWN ON PLANS.
3. CONCRETE SHALL BE CLASS "D" OR "DA".
4. OUTLET PIPE SHALL BE TRIMMED FLUSH WITH INSIDE FACE OF INLET.
5. FOR GRATE DETAIL SEE STANDARD DRAWING NO. 417

<table>
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<td>713 STEEL</td>
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DATE 4-11-02 DWG. NO. 412 PAGE 112
NOTES:
1. DEPTH "D" TO BE SHOWN ON PLANS.
2. OUTLET PIPE SIZE TO BE SHOWN ON PLANS.
3. WHEN LENGTH "L" EXCEEDS 4'-0" SUPPORT BOLTS REQUIRED, SEE STANDARD DRAWING NO. 418.
4. FOR GRATE DETAIL SEE STANDARD DRAWING NO. 417.
5. SECTION B-B IS OPTIONAL FOR INLETS WHERE L > 7'-0" AND D > 5'-0", SEE STANDARD DRAWING NO. 415.

---

**SPECIFICATION REFERENCE**

| 501 | CONCRETE |
| 502 | CONCRETE STRUCTURES |
| 505 | REINFORCING STEEL |
| 713 | STEEL |

---

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**DROP INLET TYPE "C"**

---

**DATE** 4-11-02  **DWG. NO.** 413  **PAGE NO.** 113
NOTES:
1. DROP INLET TYPE "D" TO BE USED WHEN CONFLICTING UTILITIES ARE LOCATED IN THE SIDEWALK AREA.
2. DEPTH "D" AND DISTANCE "Y" TO BE SHOWN ON PLANS.
3. OUTLET PIPE SIZE TO BE SHOWN ON PLANS.
4. WHEN LENGTH "L" EXCEEDS 4'-0" SUPPORT BOLTS REQUIRED, SEE STANDARD DRAWING NO. 418.
5. FOR GRATE DETAIL SEE STANDARD DRAWING NO. 417.
6. SECTION B-B IS OPTIONAL FOR INLETS WHERE L > 7'-0" AND D > 5'-0", SEE STANDARD DRAWING NO. 415.
Effective 01/01/10 - 06/30/10

SECTION B-B

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<td>6&quot;</td>
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<tr>
<td>8'-1&quot; TO 20'-0&quot;</td>
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NOTES:

1. DEPTH "D" TO BE SHOWN ON PLANS.
2. OUTLET PIPE SIZE TO BE SHOWN ON PLANS.
NOTE:

BEEHIVE DROP INLETS SHALL BE USED AT LOCATIONS APPROVED BY THE ENGINEER.
Frame & Grate Installation

NOTE:
All exposed metal parts shall be galvanized and all galvanizing damaged by fabrication or installation shall receive two coats of aluminum paint (Galvonox or equal).
BOLT DETAIL

STEEL PLATE ANCHORAGE
SECTION A-A

1-1/8" DIA, BOLT HOLES

2-1/2" MIN.
4-3/4"

0'-3" @ END TYP.

≥1'-6" O.C.
≤2'-0" O.C.

VARES

1/2" D'STEEL ANCHORS EQUALLY SPACED BETWEEN BOLT HOLES. (ALTERNATE AS SHOWN)

BOLT HOLE AND BAR SPACING DETAIL

NOTE:

FOR STEEL PLATE AND PROTECTION BAR DETAILS, SEE STANDARD DRAWING NO. 419.

SPECIFICATION REFERENCE

| 710 | STRUCTURAL STEEL |
| 713 | REINFORCEMENT STEEL |
| 715 | GALVANIZING |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DROP INLET
STEEL PLATE ANCHORAGE

DATE DWG. NO. PAGE NO.

418 118

Effective 01/01/10 - 06/30/10
1. PROTECTION BAR SHALL BE REQUIRED ON ALL INLETS AND SHALL BE PLACED PARALLEL TO THE STEEL FACE PLATE.

2. SUPPORT BOLTS SHALL BE EQUALLY SPACED AT NOT MORE THAN 2'-0" O.C. AND NOT LESS THAN 1'-6" O.C.

3. ALL EXPOSED METAL PARTS SHALL BE GALVANIZED AND GALVANIZING DAMAGED BY FABRICATION OR INSTALLATION SHALL RECEIVE TWO COATS OF ALUMINUM PAINT (GALVONOX OR EQUAL).

4. FOR STEEL PLATE ANCHORAGE, SEE STANDARD DRAWING NO. 418.

5. #4 BARS x (L+6") SHALL BE IN ADDITION TO REINFORCING STEEL PER APPLICABLE DROP INLET STANDARD PLAN.
1. CONSTRUCT 14-FOOT WIDE CHAIN LINK GATE AT ALL STREET ACCESS POINTS, FOR ACCESS ONTO 12-FOOT ACCESS ROADS.

2. CONSTRUCT 3-FOOT WIDE CHAIN LINK GATE AT ALL STREET ACCESS POINTS FOR ACCESS ON THE 5-FOOT WIDTH ACCESS SIDE.

3. CONSTRUCT SECOND ACCESS ROAD (12-FOOT MINIMUM WIDTH WITH 6-INCH MIN. TYPE II AGGREGATE BASE) IF B EXCEEDS 30'.

4. FOR UNLINED CHANNELS H ≥ 2

5. "V" DITCH SHALL BE CONSTRUCTED TO PREVENT OVERLAND RUNOFF FROM ERODING SIDES OF BANK. AN ADEQUATE NUMBER OF INLETS ALONG THE "V" DITCH SHALL BE DESIGNED WITH A MINIMUM 12-INCH CMP LATERAL DISCHARGING INTO THE CHANNEL. APPROPRIATE BANK PROTECTION FOR LATERAL PIPE DISCHARGE SHALL BE PROVIDED. OTHER METHODS OF OVERLAND RUNOFF CONTROL MAY BE ACCEPTABLE IF APPROVED BY THE ENGINEER.
MILL AND OVERLAY 1" UTACS UNLESS OTHERWISE REQUIRED BY THE ENTITY. REMOVE AND REPLACE ASPHALT PAVEMENT IF EXISTING ASPHALT PAVEMENT IS 2" THICK OR LESS.

ASPHALT PATCH TO MATCH CONTIGUOUS SECTION AND SHALL BE NO LESS THAN 2".

LONGITUDINAL CUT RESTORATION

MIN. RESTORATION LIMITS UNLESS OTHERWISE DETERMINED BY ENTITY PLAN CHECK, WITH FINAL LIMITS SET BY FIELD INSPECTOR.

TRENCH LIMITS

NOTES:

SEE DWG. 500AL SHEET 2 OF 2
NOTES:

1. IF THERE IS A MEDIAN, RESTORATION MAY BE LIMITED TO THE AREA BETWEEN C & G AND THE MEDIAN CURB.
2. WHEN EXISTING PAVEMENT IS 2" THICK OR LESS, PAVEMENT WITHIN THE RESTORATION AREA SHALL BE REMOVED AND REPLACED IN KIND AS REQUIRED BY THE ENTITY.
3. IF SAWCUT LINE IS WITHIN FIVE FEET OF EDGE OF EXISTING ASPHALT CONCRETE SURFACE OR EXISTING SAWCUT LINE, MILL AND OVERLAY OR REPLACE TO THAT EDGE.
4. PAVEMENT RESTORATION AREA SAWCUT LINES SHALL NOT FALL WITHIN STREET INTERSECTION.
5. IF CUT IS WITHIN A LANE, PAVEMENT RESTORATION MUST EXTEND TO THE NEXT LANE LINE.
6. THE ENTITY’S REQUIREMENTS TAKE PRECEDENCE OVER ANY MINIMUM REQUIREMENTS SHOWN HEREON.

<table>
<thead>
<tr>
<th>SPECIFICATION REFERENCE</th>
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<tbody>
<tr>
<td>302 AGGREGATE BASE</td>
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</tr>
<tr>
<td>401 BITUMINOUS PAVEMENT</td>
<td>0 TO 5 YEARS</td>
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<tr>
<td>406 PRIME COAT</td>
<td>PAVEMENT RESTORATION</td>
</tr>
<tr>
<td>407 FOG SEAL</td>
<td>LONGITUDINAL CUT</td>
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<tr>
<td>501 CONCRETE</td>
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</table>

DATE 6-12-08    DWG. NO. 500AL    SHEET 2 OF 2
NOTES:

1. IF THERE IS METERD, RESTORATION MAY BE LIMITED TO THE AREA BETWEEN C & G TO CURB OF METERD.
2. IF SAWCUT LINE IS WITHIN FIVE FEET OF EDGE OF EXISTING ASPHALT CONCRETE SURFACE OR EXISTING SAWCUT LINE, MILL AND OVERLAY OR REPLACE TO THAT EDGE.
3. WHEN EXISTING PAVEMENT IS LESS 2" THICK OR LESS, PAVEMENT WITHIN THE RESTORATION AREA SHALL BE REMOVED AND REPLACED IN KIND AS REQUIRED BY THE ENTITY.
4. PAVEMENT RESTORATION AREA SAWCUT LINES SHALL NOT FALL WITHIN STREET INTERSECTION.
5. IF CUT IS WITHIN A LANE, PAVEMENT RESTORATION MUST EXTEND TO THE NEXT LANE LINE.
6. THE ENTITY'S REQUIREMENTS TAKE PRECEDENCE OVER ANY MINIMUM REQUIREMENTS SHOWN HERON.

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<td>407 FOG SEAL</td>
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<tr>
<td>501 CONCRETE</td>
<td>TRANSVERSE CUT</td>
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</table>

DATE 6-12-08 | DWG. NO. 500 AT
NOTES:
1. IF CUT IS WITHIN A LANE, PAVEMENT RESTORATION MUST EXTEND TO THE NEXT LANE LINE.
2. THE ENTITY'S REQUIREMENTS TAKE PRECEDENCE OVER ANY MINIMUM REQUIREMENTS SHOWN HEREON.
1. IF CUT IS WITHIN A LANE, PAVEMENT RESTORATION MUST EXTEND TO THE NEXT LANE LINE.

2. THE ENTITY’S REQUIREMENTS TAKE PRECEDENCE OVER ANY MINIMUM REQUIREMENTS SHOWN HEREON.

**NOTES:**

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**SPECIFICATION REFERENCE**

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**OVER 5 YEARS**

PAVEMENT RESTORATION
LONGITUDINAL CUT - 60' R/W OR LESS

**DATE 6-12-08**
**DWG. NO. 500BL2**

---
**NOTES:**

1. IF CUT IS WITHIN A LANE, PAVEMENT RESTORATION MUST EXTEND TO THE NEXT LANE LINE.
2. THE ENTITY'S REQUIREMENTS TAKE PREDENCE OVER ANY MINIMUM REQUIREMENTS ShOWN HEREON.

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**UNIFORM STANDARD DRAWINGS**

CLARK COUNTY AREA

OVER 5 YEARS

PAVEMENT RESTORATION

TRANSVERSE CUT

ALL R/W WIDTHS

**DATE 6-12-08**

**DWG. NO. 500BT**
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 5 FEET PER STANDARD DRAWING NO. 320.
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 208.
6. UTILITY LINES SHALL BE RE-ROUTED IF DROP INLET IS IN CONFLICT.
7. WATER TRANSMISSION MAIN SEPARATION SHALL BE REFERRED TO WATER PURVEYOR GUIDELINES.
RESTORATION LIMITS TO BE DETERMINED BY ENTITY PLAN CHECK, WITH FINAL LIMITS SET BY FIELD INSPECTOR.

EXISTING BASE

95% MIN. COMPACTION TYPE II AGGREGATE BASE

MINIMUM TRENCH WIDTH IS RELATED TO DESIGN REQUIREMENTS AND SHALL BE INDICATED ON THE PLAN DRAWINGS. SEE SECTION 208 TRENCH EXCAVATION AND BACKFILL

DEPTH OF COVER IS RELATED TO DESIGN REQUIREMENTS AND SHALL BE INDICATED ON THE PLAN DRAWINGS. SEE SECTION 208 TRENCH EXCAVATION AND BACKFILL

PIPE ZONE

O.D. PIPE

PIPE BEDDING SEE NOTE 3

NOTES:
1. NO STONES OR LUMPS GREATER THAN 3" PERMITTED IN TRENCH 2' OR LESS IN WIDTH.
2. TRENCH WIDTH, BEDDING, SUBGRADE AND PIPE ZONE REQUIREMENTS FOR UTILITY INSTALLATIONS SHALL CONFORM TO THE RESPECTIVE ENTITY REQUIREMENTS.
3. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY. SEE STANDARD DRAWING NO. 505 FOR PIPE BEDDING METHODS.
4. LAS VEGAS VALLEY WATER DISTRICT REQUIRES PIPE BEDDING AND BACKFILL WITHIN THE PIPE ZONE TO BE OF THE SAME MATERIAL.
5. A ONE INCH MAXIMUM LEVELING COURSE IS PERMITTED WHEN APPROVED BY THE ENGINEER.
6. CONTROLLED LOW STRENGTH MATERIALS (CLSM) SHALL BE USED IN THE UPPER 12" WITH RIGHT-OF-WAYS 60' FEET OR GREATER.

SPECIFICATION REFERENCE

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**UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA**

**METHOD A/B FOR RIGID PIPE TRENCH BACKFILL – PAVED AREAS**

DATE 6-12-08 DWG. NO. 503AB
MINIMUM TRENCH WIDTH IS RELATED TO DESIGN REQUIREMENTS AND SHALL BE INDICATED ON THE PLAN DRAWINGS. SEE SECTION 208 - TRENCH EXCAVATION AND BACKFILL

DEPTH OF COVER IS RELATED TO DESIGN REQUIREMENTS AND SHALL BE INDICATED ON THE PLAN DRAWINGS. SEE SECTION 208 - TRENCH EXCAVATION AND BACKFILL

NOTES:
1. NO STONES OR LUMPS GREATER THAN 3" PERMITTED IN TRENCH 2' OR LESS IN WIDTH.
2. TRENCH WIDTH, BEDDING, SUBGRADE AND PIPE ZONE REQUIREMENTS FOR UTILITY INSTALLATIONS SHALL CONFORM TO THE RESPECTIVE ENTITY REQUIREMENTS.
3. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY, SEE STANDARD DRAWING NO. 505 FOR PIPE BEDDING METHODS.
4. LAS VEGAS VALLEY WATER DISTRICT REQUIRES PIPE BEDDING AND BACKFILL WITHIN THE PIPE ZONE TO BE OF THE SAME MATERIAL.

SPECIFICATION REFERENCE

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

METHOD A FOR FLEXIBLE PIPE TRENCH BACKFILL - PAVED AREAS

DATE 06-11-09  DWG. NO. 503AF
MINIMUM TRENCH WIDTH IS RELATED TO DESIGN REQUIREMENTS AND SHALL BE INDICATED ON THE PLAN DRAWINGS. SEE SECTION 208 TRENCH EXCAVATION AND BACKFILL.

DEPTH OF COVER IS RELATED TO DESIGN REQUIREMENTS AND SHALL BE INDICATED ON THE PLAN DRAWINGS. SEE SECTION 208 TRENCH EXCAVATION AND BACKFILL.

PIPE ZONE

PIPE BEDDING SEE NOTE 3

NOTES:

1. NO STONES OR LUMPS GREATER THAN 3" PERMITTED IN TRENCH 2' OR LESS IN WIDTH.
2. TRENCH WIDTH, BEDDING, SUBGRADE AND PIPE ZONE REQUIREMENTS FOR UTILITY INSTALLATIONS SHALL CONFORM TO THE RESPECTIVE ENTITY REQUIREMENTS.
3. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY. SEE STANDARD DRAWING NO. 505 FOR PIPE BEDDING METHODS.
4. LAS VEGAS VALLEY WATER DISTRICT REQUIRES PIPE BEDDING AND BACKFILL WITHIN THE PIPE ZONE TO BE OF THE SAME MATERIAL.

SPECIFICATION REFERENCE

208 TRENCH EXCAVATION & BACKFILL
302 AGGREGATE BASE COURSES

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

METHOD A FOR RIGID PIPE
TRENCH BACKFILL - PAVED AREAS

DATE 06-11-09 DWG. NO. 503AR
MINIMUM TRENCH WIDTH IS RELATED TO DESIGN REQUIREMENTS AND SHALL BE INDICATED ON THE PLAN DRAWINGS. SEE SECTION 208- TRENCH EXCAVATION AND BACKFILL.

DEPTH OF COVER IS RELATED TO DESIGN REQUIREMENTS AND SHALL BE INDICATED ON THE PLAN DRAWINGS. SEE SECTION 208- TRENCH EXCAVATION AND BACKFILL.

1. NO STONES OR LUMPS GREATER THAN 3" PERMITTED IN TRENCH 2' OR LESS IN WIDTH.
2. TRENCH WIDTH, BEDDING, SUBGRADE AND PIPE ZONE REQUIREMENTS FOR UTILITY INSTALLATIONS SHALL CONFORM TO THE RESPECTIVE ENTITY REQUIREMENTS.
3. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY. SEE STANDARD DRAWING NO. 505 FOR PIPE BEDDING METHODS.
4. LAS VEGAS VALLEY WATER DISTRICT REQUIRES PIPE BEDDING AND BACKFILL WITHIN THE PIPE ZONE TO BE OF THE SAME MATERIAL.

NOTES:

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

METHOD B FOR RIGID AND FLEXIBLE PIPE
TRENCH BACKFILL - PAVED AREAS

DATE 06-11-09  DWG. NO. 503B
NOTES:

1. NO STONES OR LUMPS GREATER THAN 3" PERMITTED IN TRENCH 2" OR LESS IN WIDTH.
2. IF SAWCUT IS WITHIN THREE FEET OF EDGE OF EXISTING ASPHALT CONCRETE SURFACE OR OTHER PATCH, REMOVE EXISTING PAVEMENT TO THAT EDGE AND REPLACE ENTIRE SECTION.
3. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING ENTITY. SEE STANDARD DRAWING NO. 505 FOR PIPE BEDDING METHODS.
4. LAS VEGAS VALLEY WATER DISTRICT REQUIRES PIPE BEDDING AND BACKFILL WITHIN THE PIPE ZONE TO BE OF THE SAME MATERIAL.
Effective 01/01/10 - 06/30/10

NORMAL BEDDING

CONCRETE CRADLE
BRICK OR CONCRETE BLOCK
STABLE SUBGRADE
CONCRETE

CONCRETE CAP
AGGREGATE BASE OR BACKFILL
STABLE SUBGRADE

CONCRETE ENCASEMENT
BRICK OR CONCRETE BLOCK
STABLE SUBGRADE

TABLE 1

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>PIPE B</th>
<th>PIPE A</th>
<th>PIPE SIZE</th>
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<tr>
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<td>5&quot;</td>
<td>42&quot;</td>
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D = OUTSIDE DIAMETER OF PIPE
W = OUTSIDE DIAMETER OF PIPE + 24" MAXIMUM

NOTES:
1. PIPE BEDDING TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY. SUBGRADE SHALL CONFORM TO RESPECTIVE ENTITY REQUIREMENTS.
2. INDICATED THICKNESS OF BEDDING MATERIAL TO BE CONSTRUCTED UNDER THE BARREL. SUBGRADE TO BE EXCAVATED TO PROVIDE 2" CLEARANCE UNDER THE BELL.
3. OTHER BEDDING METHODS MAY BE SPECIFIED OR APPROVED.
4. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY.

SPECIFICATION REFERENCE

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<th>DESCRIPTION</th>
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<tr>
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<td>REINFORCEMENT STEEL</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

PIPE TRENCH BEDDING METHODS

DATE 11-9-06  DWG. NO. 505  PAGE NO. 125
Effective 01/01/10 - 06/30/10

LEGEND

1. THREADED COLLAR OR DOUBLE STRAP BRONZE SERVICE SADDLE
2. CORPORATION STOP
3. POLYETHYLENE OR COPPER SERVICE LATERAL (SEE NOTE 4)
4. ANGLE METER STOP (NOTE 1)
5. IDLER
6. 90°TAIL PIECE COUPLING
7. METER BOX
8. CONCRETE SIDEWALK

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<th>METER SIZE</th>
<th>IDLER LENGTH</th>
<th>MINIMUM SERVICE LATERAL SIZE</th>
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<td>1&quot;</td>
<td>10-3/4&quot;</td>
<td>1&quot;</td>
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NOTES:
1. 5/8", 3/4" & 1" REQUIRES BALL ANGLE METER STOP.
2. LOCATOR TAPE REQUIRED ABOVE SERVICE LINE IF OTHER THAN 90° OFF WATER MAIN (HENDERSON AND NORTH LAS VEGAS ONLY).
3. SEE DWG. NO. 336 FOR REINFORCEMENT DETAIL AROUND METER BOX.
4. WHEN COPPER SERVICE LATERALS ARE USED, FLARED COPPER FITTINGS AND CONNECTIONS ARE REQUIRED.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SERVICE INSTALLATION, 5/8", 3/4" 
& 1" METER SIZES - IMPROVED AREA
LEGAL

1. THREADED COLLAR OR DOUBLE STRAP BRONZE SERVICE SADDLE
2. CORPORATION STOP
3. POLYETHYLENE OR COPPER SERVICE LATERAL (SEE NOTE 5)
4. ANGLE METER STOP (NOTE 1)
5. IDLER
6. 90°TAIL PIECE COUPLING
7. METER BOX
8. CONCRETE COLLAR, 2500 PSI COMPRESSIVE STRENGTH

NOTES:

1. 5/8", 3/4" & 1" REQUIRES BALL ANGLE METER STOP.
2. LOCATOR TAPE REQUIRED ABOVE SERVICE LINE IF OTHER THAN 90°OFF WATER MAIN (HENDERSON AND NORTH LAS VEGAS ONLY).
3. TOP OF METER BOX TO BE INSTALLED AS NEAR TO FUTURE FINAL GRADE AS POSSIBLE.
4. SEE DWG. NO. 338 FOR REINFORCEMENT DETAIL AROUND METER BOX.
5. WHEN COPPER SERVICE LATERALS ARE USED, FLARED COPPER FITTINGS AND CONNECTIONS ARE REQUIRED.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SERVICE INSTALLATION, 5/8", 3/4"
& 1" METER SIZES-UNIMPROVED AREA

DATE  DWG. NO.  507  PAGE NO.  127
Effective 01/01/10 - 06/30/10

**LEGEND**

1. THREADED COLLAR OR DOUBLE STRAP BRONZE SERVICE SADDLE
2. CORPORATION STOP
3. CTS YOKE WITH IPS ADAPTER
4. POLYETHYLENE OR COPPER SERVICE LATERAL (SEE NOTE 5)
5. ANGLE METER STOP (NOTE 1)
6. IDLER
7. 90° TAIL PIECE COUPLING
8. METER BOX
9. CONCRETE COLLAR, 2500 PSI COMPRESSIVE STRENGTH

**NOTES:**

1. 5/8", 3/4" & 1" REQUIRE BALL ANGLE METER STOP.
2. LOCATOR TAPE REQUIRED ABOVE SERVICE LINE IF OTHER THAN 90° OFF WATER MAIN (HENDERSON AND NORTH LAS VEGAS ONLY).
3. TOP OF METER BOX TO BE INSTALLED AS NEAR AS POSSIBLE.
4. SEE DWG. 336 FOR REINFORCEMENT DETAIL AROUND METER BOX.
5. WHEN COPPER SERVICE LATERALS ARE USED, FLARED COPPER FITTINGS AND CONNECTIONS ARE REQUIRED.

**SPECIFICATION REFERENCE**

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**SERVICE INSTALLATION, DUAL 5/8", 3/4" & 1" METER SIZES-UNIMPROVED AREA**

**DATE** **DWG. NO.** 509 **PAGE NO.** 129
NOTES:

1. 1-1/2" & 2" REQUIRES 2 BALL ANGLE METER stops (EXCEPT LVWD).
2. LOCATOR TAPE REQUIRED ABOVE SERVICE LINE IF OTHER THAN 90° OFF WATER MAIN (HENDERSON AND NORTH LAS VEGAS ONLY).
3. TOP OF METER BOX TO BE INSTALLED AS NEAR TO FUTURE FINAL GRADE AS POSSIBLE.
4. SEE DWG. NO. 336 FOR REINFORCEMENT DETAIL AROUND METER BOX.
5. WHEN COPPER SERVICE LATERALS ARE USED, FLARED COPPER FITTINGS AND CONNECTIONS ARE REQUIRED.

LEGEND

1. DOUBLE STRAP BRONZE SERVICE SADDLE
2. CORPORATION STOP
3. POLYETHYLENE OR COPPER SERVICE LATERAL (I.P. SIZE) (SEE NOTE 5)
4. ANGLE METER STOP, P.E. PIPE PACK JOINT (I.P. SIZE)
5. NO. 4 REBAR (2 REQUIRED) 2" CONCRETE COVER
6. CONCRETE COLLAR, 2500 PSI COMPRESSIVE STRENGTH
7. METER BOX
8. IDLER LENGTH
9. IDLER (FLANGE x FLANGE)
1. All fittings and exposed rebar to be coated with EC 244 and wrapped with two layers of 6 mil polyethylene.

2. Table below denotes minimum bearing area or volume of thrust block. Special design for each installation is required if allowable soil bearing capacity is less than 3000 p.s.f.

3. Place concrete against undisturbed earth.

4. Vertical surfaces not bearing against undisturbed earth shall be formed.

<table>
<thead>
<tr>
<th>Size of Pipe</th>
<th>Minimum Bearing Area in Square Feet</th>
<th>Cubic Yards of Concrete</th>
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<tr>
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Specifications Reference

Uniform Standard Drawings
Clark County Area

Thrust Block Details

Date 12-14-00  Dwg. No. 512  Page No. 132
ELEVATION - B.F. VALVE

PLAN - RING-TITE B.F. VALVE

PLAN - FLANGE MT. B.F. VALVE

ELEVATION REDUCER OR GATE VALVE

PLAN REDUCER OR GATE VALVE

NOTES:

1. ALL VALVES TO BE PAINTED WITH E.C. 244 AND WRAPPED WITH TWO LAYERS OF 6 MIL POLYETHYLENE.
NOTE:
CONCRETE COLLAR NOT REQUIRED IN UNINCORPORATED CLARK COUNTY RESIDENTIAL STEETS LESS THAN 80' R/W.

<table>
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<td>BLOW-OFF ASSEMBLY LOCATIONS</td>
</tr>
<tr>
<td>505 REINFORCING STEEL</td>
<td></td>
</tr>
<tr>
<td>629 WATER DISTRIBUTION FACILITIES</td>
<td></td>
</tr>
</tbody>
</table>

DATE 12-14-00  DWG. NO.  514  PAGE NO.  134
METHOD "A"

CAST IRON PLUG

HEAVY TAPPED COUPLING (2" TAP) OR DOUBLE STRAP BRONZE SERVICE SADDLE

CORP STOP - J-41

1/4 BEND - J-1536

COUPLING - FORD CO 677

RING-TITLE CAP TAPPED OUTLET

#5 REBAR STRAP TO REMOVE THRUST BLOCK

CONCRETE THRUST BLOCK

#4 BAR ALL AROUND

8" VALVE BOX

PLUG & COUPLING TO BE PROTECTED FROM DIRECT CONTACT WITH CONCRETE

#5 REBAR STRAP TO REMOVE THRUST BLOCK

CONCRETE THRUST BLOCK (2000 PSI)

(SEE NOTE BELOW)

JONES J-1909 OR FORD CO 677 COUPLING

2" P.E. OR COPPER PIPE

PAVED AREA

METHOD "B"

NOTES:
1. FOR CLARITY THE ELBOW AND P.E. PIPE ARE SHOWN ROTATED 90°. ALL FITTINGS SHALL BE 2".
2. CONCRETE COLLAR NOT REQUIRED IN UNINCORPORATED CLARK COUNTY RESIDENTIAL STREETS LESS THAN 80' R/W.
NOTES:
1. NO HYDRANT SHALL BE LOCATED WITHIN 6' OF ANY DRIVEWAY, POWER POLE, LIGHT STANDARD, OR ANY OTHER OBSTRUCTION.
2. IF HYDRANT IS TO BE INSTALLED IN AN EXISTING SIDEWALK, A FULL PANEL OF THE SIDEWALK SHALL BE REMOVED AND REPLACED AFTER INSTALLATION OF THE HYDRANT.
3. WHEN R/W AND FIELD CONDITIONS PERMIT, THE FIRE HYDRANT SHALL BE PLACED BEHIND THE SIDEWALK.

PLAN

FOR FIRE HYDRANT SEE FIRE DEPT. SPECIFICATIONS

ELEVATION

CONCRETE THRUST BLOCK 6 CU. FT. MIN.

UNDISTURBED EARTH

3/4" - 2" SIZE DRAIN BACKFILL

WATER MAIN

6" GATE VALVE WITH FLANGE TO RING-TIGHT JOINTS

6" PIPE

WEAKENED PLANE JOINT SEE STANDARD DRAWING NO. 236

1/2" PREMOLDED EXPANSION JOINT (WHEN USED WITH SIDEWALK)

STD. VALVE BOX

3" MIN. & 7" MAX. 2" MIN.

MACHINE 3/16"-1/4" "V" GROOVE (BREAK RING)

#4 BAR ALL AROUND

BACK OF CURB (EXISTING AND FUTURE)

SCORE LINE

VARIES 18"

BACK OF SIDEWALK OR R/W LINE (SEE NOTE 3)

BACK OF CURB (EXISTING AND FUTURE)

36"

36"
RAISE TOP SECTION AND/OR INSTALL RISERS AS NECESSARY. TYLER OR APPROVED EQUAL.

NOTE:
CONCRETE COLLAR NOT REQUIRED IN UNINCORPORATED CLARK COUNTY RESIDENTIAL STREETS LESS THAN 80' R/W.
# Ounces of Chlorine Compounds Required for Disinfection of 100 Feet of Pipe

<table>
<thead>
<tr>
<th>I.D of Pipe</th>
<th>Volume of Water Gallons per 100 Feet</th>
<th>Quantity Calcium Hypochlorite 70% Available Chlorine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>25 P.P.M.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 P.P.M.</td>
</tr>
<tr>
<td>4&quot;</td>
<td>65.3</td>
<td>0.31 oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.62 oz.</td>
</tr>
<tr>
<td>6&quot;</td>
<td>146.5</td>
<td>0.69 oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.38 oz.</td>
</tr>
<tr>
<td>8&quot;</td>
<td>261.0</td>
<td>1.25 oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.50 oz.</td>
</tr>
<tr>
<td>10&quot;</td>
<td>408.0</td>
<td>1.95 oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.90 oz.</td>
</tr>
<tr>
<td>12&quot;</td>
<td>558.7</td>
<td>2.80 oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.60 oz.</td>
</tr>
<tr>
<td>14&quot;</td>
<td>800.0</td>
<td>3.82 oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.65 oz.</td>
</tr>
<tr>
<td>16&quot;</td>
<td>1047.0</td>
<td>5.00 oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10.00 oz.</td>
</tr>
<tr>
<td>18&quot;</td>
<td>1300.0</td>
<td>6.40 oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12.80 oz.</td>
</tr>
<tr>
<td>20&quot;</td>
<td>1635.7</td>
<td>7.75 oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.50 oz.</td>
</tr>
<tr>
<td>24&quot;</td>
<td>2234.8</td>
<td>11.20 oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22.40 oz.</td>
</tr>
</tbody>
</table>
GENERAL NOTES

1. NO SPECIAL SIGNALS ARE REQUIRED.
2. IF THE WORK OPERATION REQUIRES ANY WORK VEHICLES TO CROSS THE 15 FT. CLEARED ZONE, TRAFFIC CONTROL SHALL CONFORM TO STANDARD DRAWING NO. 0307.
3. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVCATS AT 222-4911 AND LOCAL ENTRY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING WORK.

<table>
<thead>
<tr>
<th>ROADWAY CITY</th>
<th>MOSQUET</th>
<th>CLARK COUNTY</th>
<th>PENDLETON</th>
<th>LAS VEGAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>368-4033</td>
<td>368-5059</td>
<td>368-4123</td>
<td>368-4462</td>
<td>368-3001</td>
</tr>
</tbody>
</table>

4. TYPE 'F' HIGH INTENSITY FLASHING WARNING LIGHTS MAY BE INSTALLED ABOVE EACH WORK ZONE CONSTRUCTION Sign FOR USE DURING HOURS OF DARKNESS.

<table>
<thead>
<tr>
<th>ROADWAY TYPE</th>
<th>URBAN</th>
<th>RURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 LANE WITH 25 MPH</td>
<td>200</td>
<td>350</td>
</tr>
<tr>
<td>2 LANE NO SPEED LIMIT</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>2 LANE</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>URBAN HIGHWAY</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>RURAL HIGHWAY</td>
<td>500</td>
<td>500</td>
</tr>
</tbody>
</table>

SYMBOLS

- Sign on portable or permanent support
- Traffic direction

TYPICAL APPLICATION FOR

2-LANE, 2-WAY, RURAL DAY OR NIGHT OPERATIONS WHERE ACTIVITIES ARE MORE THAN 15 FT. FROM EDGE OF PAVEMENT

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DATE: 1-9-97 | DWG NO: 606 (1 OF 1) | PAGE: 145
1. No special warning is required.
2. If the work operation requires two or more work vehicles to cross the 15 ft clear zone in any one-hour traffic control, it will be in conformance with 3M's standard practice, without the need for a flagger.
3. This case also applies to work performed in the median more than 15 ft from either pavement.
4. If work is being done at a traffic control, contact the appropriate number listed below at least two working days prior to work hours.
   - Boulder City: 900-920-3500
   - Clark County: 400-400-3492
   - North Las Vegas: 400-400-3492
   - Henderson: 400-400-3492
   - Las Vegas: 400-400-3492
5. Type "C" high-intensity flashing warning lights may be installed above each work zone construction sign for use during hours of darkness.

Symbols:
- Skin on portable or permanent support
- Traffic direction

GENERAL NOTES

TYPICAL APPLICATIONS
- Landscape work
- Utility work
- Fencing contracts and maintenance
- Clearing control lights

ROADWAY WIDE WIDTH

EDGE OF PAVEMENT

TOTAL WIDE WIDTH (OPTIONAL)
**GENERAL NOTES**

1. TAPER FORMULA: 
   \[ L = \frac{4}{11} W \times \text{SPEED} \] 
   \[ L = \frac{3}{11} W \times \text{SPEED} \] 
   **WHERE:** 
   - \( L \) = Minimum Length of Taper
   - \( W \) = Ported Speed
   - \( S \) = Percentile Speed Prior to Work
   - \( T \) = Width of Offset

2. The maximum spacing between channelizing devices in a taper shall be as specified in Table 1 in this section.

3. Type of High Intensity Flashing Warning Light may be installed above each work zone construction sign for use during hours of darkness.

4. All channelizing work shall have black background and yellow border on an orange background all signs having an orange color or shall be made of materials compatible with Section 233.27 of the uniform traffic control specifications.

5. * Arrow panels shall be used on high-speed roadways with high-speed lights* 

6. A BUFFER SPACE SHOULD BE REQUIRED AS FOLLOWS:

<table>
<thead>
<tr>
<th>Buffer Space</th>
<th>Speed (MPH)</th>
<th>Buffer (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>30</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>35</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>40</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>45</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>50</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>55</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>60</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>65</td>
<td>27</td>
<td>2</td>
</tr>
<tr>
<td>70</td>
<td>30</td>
<td>2</td>
</tr>
</tbody>
</table>

7. All devices establishing a taper or tangent line shall be of one type devices shall not be mixed by type.

8. * Working at or near a traffic signal contact wachts at 6004811 and local entity at appropriate number listed below at least two working days prior to implementing work.*

9. TABLE FOR SPACING OF ADVANCE WARNING SIGNS

<table>
<thead>
<tr>
<th>Tool for Spacing of Advance Warning Signs</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placement Type (Example)</td>
<td>100</td>
<td>100</td>
<td>50</td>
</tr>
</tbody>
</table>

10. During hours of darkness, steady burning warning lights shall be installed on all channelizing devices.

**SYMBOLS**

- **ARROW PANEL**
- **FLASHING VEHICLE LIGHT**
- **PAVEMENT MARKINGS THAT SHOULD BE APPLIED FOR A LONG-TERM PROJECT**
- **SAFETY CONES**
- **RAPID CURE TYPE PAINT NOT ALLOWED**
- **BLACK OUTLINE OR BACKGROUND OR RED BACKGROUND AS APPROVED BY THE TRAFFIC ENGINEER**
- **TEMPORARY MARKINGS TO BE PLACED AS NECESSARY**
- **BARRIERS: GRAY, VERTICAL PANEL ON CON, BLACK, OR PORTABLE ON CON, OR PERMANENT SUPPORT**
- **TRAFFIC CONTROL AREA**
- **END ROAD WORK**

**TRAFFIC CONTROL PLAN FOR HIGHWAY WORK ZONE**

**SPECIFICATION REFERENCE**

**TYPICAL APPLICATION**

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**DATE** 1-8-97

**DWG NO. 519 (1 OF 1) PAGE 158**
STANDARD PROCEDURE & CONDITIONS WHICH, WHEN MET, ELIMINATE THE NEED FOR INDIVIDUAL TRAFFIC CONTROL PLAN AND/OR PERMIT

<table>
<thead>
<tr>
<th>DEVICE OR PARAMETER</th>
<th>SITUATION/CASE #</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. MINIMUM 60 IN. WIDE FLASHER BAR ATOP VEHICLE, WITH GREATER THAN 4 LIGHT ELEMENTS VISIBLE TO APPROACHING TRAFFIC</strong></td>
<td>1 2 3 4</td>
</tr>
<tr>
<td></td>
<td>✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td><strong>B. CONES SET OUT BEHIND VEHICLE</strong></td>
<td>3, ACROSS BLOCKED LANE 3, ACROSS BLOCKED LANE 5, ACROSS BLOCKED LANE NONE</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C. TURN ON VEHICLE'S EMERGENCY HAZARD FLASHERS</strong></td>
<td>✓ ✓ ✓ NOT REQUIRED</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>D. ALL PERSONNEL WEAR ORANGE VESTS OR SHIRTS WHEN OUTSIDE OF VEHICLE</strong></td>
<td>ALWAYS ALWAYS ALWAYS ALWAYS</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>E. O.K. FOR NIGHTTIME DEPLOYMENT?</strong></td>
<td>NO ONLY WHEN SPEED LIMIT 35 MPH O.K., BUT USE REFLECTIVE VESTS O.K., BUT USE REFLECTIVE VESTS</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F. WATER-FILLED CRASH CUSHION, OR EQUIVALENT: TRUNK OR TRAILER-MOUNTED IMPACT ATTENUATORS</strong></td>
<td>RECOMMENDED, BUT MANDATORY WHEN SPEED LIMIT EXCEEDS 45 MPH NO NO</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G. NO STOPPING UNLESS STOPPED VEHICLE IS VISIBLE TO APPROACHING TRAFFIC GREATER THAN 10 SECONDS AT SPEED LIMIT</strong></td>
<td>YES, APPLY THIS RULE NIA - ON STRAIGHT-AWAY NOT REQUIRED DESIRED, BUT NOT REQUIRED</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>H. O.K., TO SET UP DURING PEAK TRAVEL HOURS: 7-9 AM, 4-6 PM</strong></td>
<td>YES, BUT ONLY FOR EMERGENCY-TYPE REPAIR ACTIVITIES O.K. NOT RECOMMENDED</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** TYPICAL APPLICATION IS FOR LANDSCAPE OR UTILITY ACTIVITIES.
GENERAL NOTES:

1. SPECIAL "NO PARKING" SIGNS SHALL BE PLACED ON FIRST BARRIERS AND ON EVERY OTHER BARRIERS THEREAFTER.

2. BARRIERS SHALL NOT Block DRIVEWAYS OR ACCESSORIES PRIOR TO MAINTENANCE OPERATION.

3. SPECIAL "NO PARKING" SIGNS SHALL BE PLACED ON FIRST BARRIERS FOLLOWING SPACE REQUIRED FOR ACCESS.

4. BARRIERS MAY BE PLACED ON PAVEMENT OR ON SIDEWALK AT THE DISCRETION OF THE CONTRACTOR. NO PARKING SIGNS PLACED ON SIDEWALKS SHALL NOT BE SET AT AN ANGLE NO GREATER THAN 30 DEGREES WITH THE LINE OF TRAFFIC FLOW TO BE VISIBLE TO APPROACHING TRAFFIC. A MINIMUM OF 3" CLEAR SPACE ON SIDEWALK SHALL BE PROVIDED TO ALLOW ACCESS TO THE HANDICAPPED AS PER THE AMERICANS WITH DISABILITIES ACT WHEN BARRIERS ARE PLACED ON SIDEWALKS.

5. "NO PARKING" SIGNS AND BARRIERS SHOULD BE PLACED IN AREA OF WORK FINISH AT LEAST 30 MINUTE IN ADVANCE OF WORK BEGINNING. NOTIFICATION OF PERSONS AFFECTED BY STREET WORK SHALL BE PERFORMED AS REQUIRED BY RESPECTIVE SAFETY AND HANDICAPPED REGULATIONS.

6. ALL BARRIERS AND "NO PARKING" SIGNS SHALL BE REMOVED AS SOON AS IMPROVED SURFACE IS READY FOR TRAFFIC AS DETERMINED BY THE ENGINEER.
BEGIN WORK ZONE

SPEEDING PENALTIES DOUBLED

END WORK ZONE

SIGN AND LETTERING SIZE TABLE

<table>
<thead>
<tr>
<th>SPEED LIMIT</th>
<th>&quot;W&quot; (IN)</th>
<th>&quot;H&quot; (IN)</th>
<th>LETTERING &quot;SPEED LIMIT&quot; SIGN</th>
<th>LETTERING &quot;BEGIN/END&quot; ZONE SIGN</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 MPH OR LESS</td>
<td>16</td>
<td>24</td>
<td>4 INCH SERIES &quot;C&quot;</td>
<td>4 INCH SERIES &quot;C&quot;</td>
</tr>
<tr>
<td>GREATER THAN 35 MPH</td>
<td>24</td>
<td>26</td>
<td>4 INCH SERIES &quot;C&quot;</td>
<td>4 INCH SERIES &quot;C&quot;</td>
</tr>
</tbody>
</table>

GENERAL NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY TO SUBSECTION 7(B)(4)(T), LATEST REVISION OF THE UNIFORM STANDARD SPECIFICATIONS.

2. SIGN LEGENDS AND BORDERS SHALL COMPLY WITH THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

3. SIGNS SHALL BE MOUNTED IN SAME MANNER AS OTHER CONSTRUCTION SIGNS IN THE WORK ZONE.

4. "BEGIN WORK ZONE" AND "SPEEDING PENALTIES DOUBLED" SIGNS SHALL BE MOUNTED TOGETHER ON SAME DEVICE OR POST AND SHALL BE LOCATED AFTER THE FIRST SIGN IN THE CONSTRUCTION SIGN SERIES, TYPICALLY THE "ROAD WORK AHEAD" SIGN, OR AS DIRECTED BY THE TRAFFIC ENGINEER.

5. "END WORK ZONE" SIGN SHALL BE LOCATED AT THE END OF THE WORK ZONE WITH THE "END ROAD WORK" SIGN, IF APPLICABLE, ON THE SAME DEVICE OR POST, OR AS DIRECTED BY THE TRAFFIC ENGINEER.