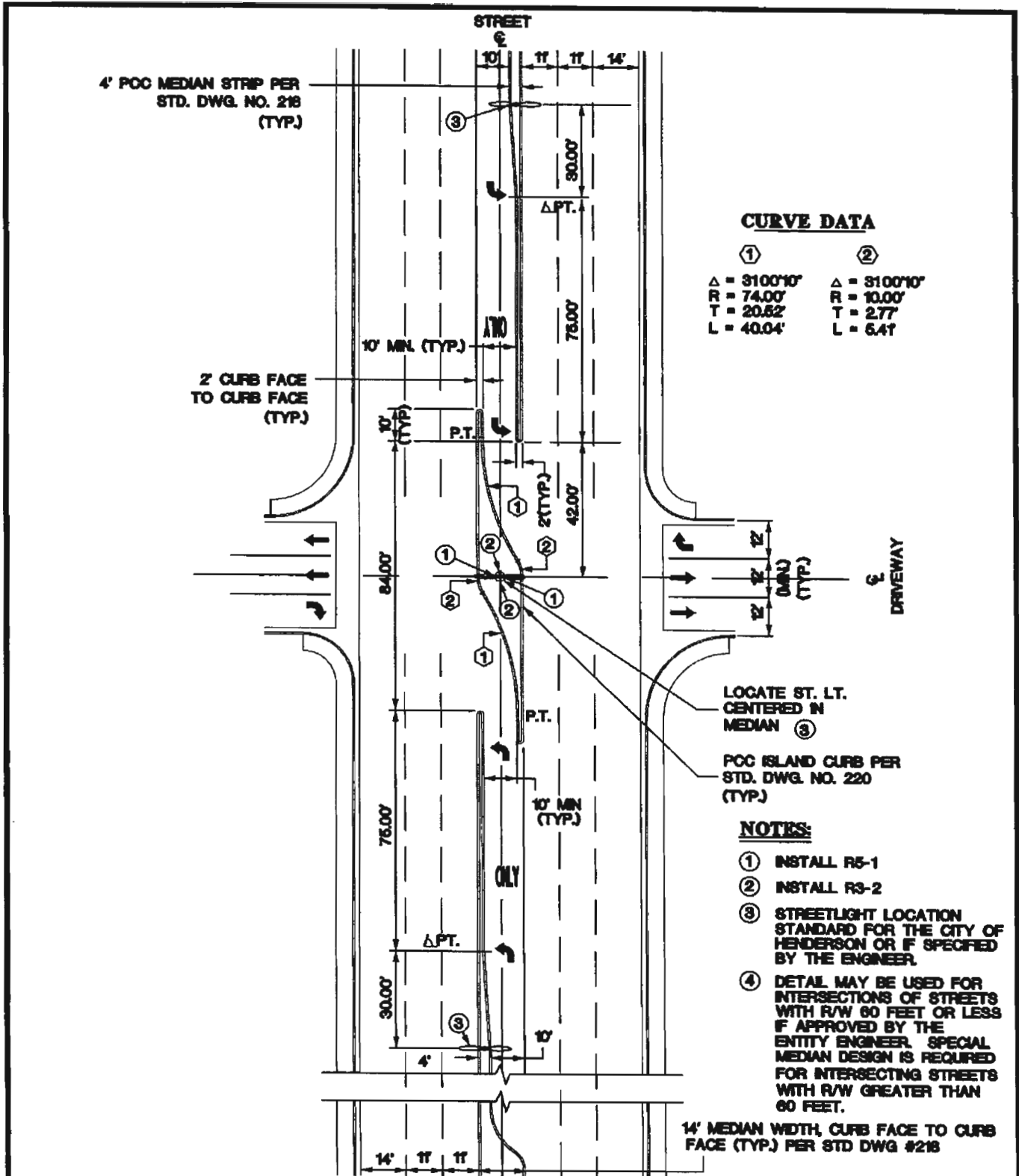


**UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA**

VOLUME I - YEAR 2006 REVISIONS

| Drawing Number | Title | Nature of Change | Effective Date |
|-----------------------|---|--|-----------------------|
| 221 | Channelized Median Detail For Commercial Driveways or Intersecting Streets | Revised to correct the solid lane lines to dash lane lines. | 7/1/2006 |
| 222A | Commercial And Multi Family Driveway Geometrics | Revised to adjust the minimum allowable distances for driveway locations to improve traffic operations and safety. | 7/1/2006 |
| 234.1 | Typical Bus Turn-Out | Revised to remove the requirement to install sign R7-107A with the C.A.T. (Citizen Area Transit) Logo. | 7/1/2006 |
| 235 | Sidewalk Ramps Detail | Revised to conform with the latest Americans With Disabilities Act (ADA) requirements. | 7/1/2006 |
| 244.1A | Typical Delineation For Roadway 100 FT. Right-of-Way With Side Curbs Sidewalk | Revised to add an alternative striping configuration for 100 Ft. Right-of-Way to provide 11', 10' 11"; travel lanes and 4' bike lanes. | 7/1/2006 |
| 244.5 | Bicycle Lane Delineation, Legend, And Signage | Revised to conform to the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). | 7/1/2006 |
| 250 (Sheet 1 of 2) | Street Name Signs Face Copy | Revised to remove the City of Mesquite notations. | 7/1/2006 |
| 251 | Street Name Sign Blanks | Revised to remove the City of Mesquite notations. | 7/1/2006 |
| 401 | Storm Drain Manholes General Notes | Revised to make editorial changes. | 7/1/2006 |
| 402 | Storm Drain Drop Inlet General Notes | Revised to address the issue of damaged inlets at intersection curb returns and change the title from "Storm Drain Manhole General Notes" to "Storm Drain Drop Inlet General Notes". | 7/1/2006 |
| 403 | Type I Manhole | Revised to change the typographical error on the concrete collar drawings reference. | 1/1/2006 |
| 403A | Type I Manhole 30" Ring Cover | Addition to allow the use of 30" Ring Cover at the discretion of the entity engineer. | 1/1/2006 |
| 404 | Type IA Manhole | Revised to change the typographical error on the concrete collar drawings reference. | 1/1/2006 |
| 404A | Type IA Manhole 30" Ring Cover | Addition to allow the use of 30" Ring Cover at the discretion of the entity engineer. | 1/1/2006 |

| | | | |
|------|---|---|----------|
| 405A | Type II Manhole 30" Ring Cover | Addition to allow the use of 30" Ring Cover at the discretion of the entity engineer. | 1/1/2006 |
| 406A | Type I Manhole | Addition to allow the use of 30" Ring Cover at the discretion of the entity engineer. | 1/1/2006 |
| 407A | Type III Manhole 30" Ring Cover | Addition to allow the use of 30" Ring Cover at the discretion of the entity engineer. | 1/1/2006 |
| 408A | Concrete and Collar around Manhole 30" Ring Cover | Addition to allow the use of 30" Ring Cover at the discretion of the entity engineer. | 1/1/2006 |
| 409A | Standard Manhole 30" Ring Cover | Addition to allow the use of 30" Ring Cover at the discretion of the entity engineer. | 1/1/2006 |
| 501 | Typical Underground Utility Locations In Residential Street With 60 Ft. Or Less Right-of-Way | Revised to address placement of specific dry utilities in a common trench below the sidewalk area for streets with right-of-way 60 Ft. or less. | 7/1/2006 |
| 501A | Typical Underground Utility Locations In Residential Street With 60 Ft. Or Greater Right-of-Way | Addition to address placement of specific dry utilities in a common trench below the sidewalk area for streets with right-of-way 60 Ft. or greater. | 7/1/2006 |

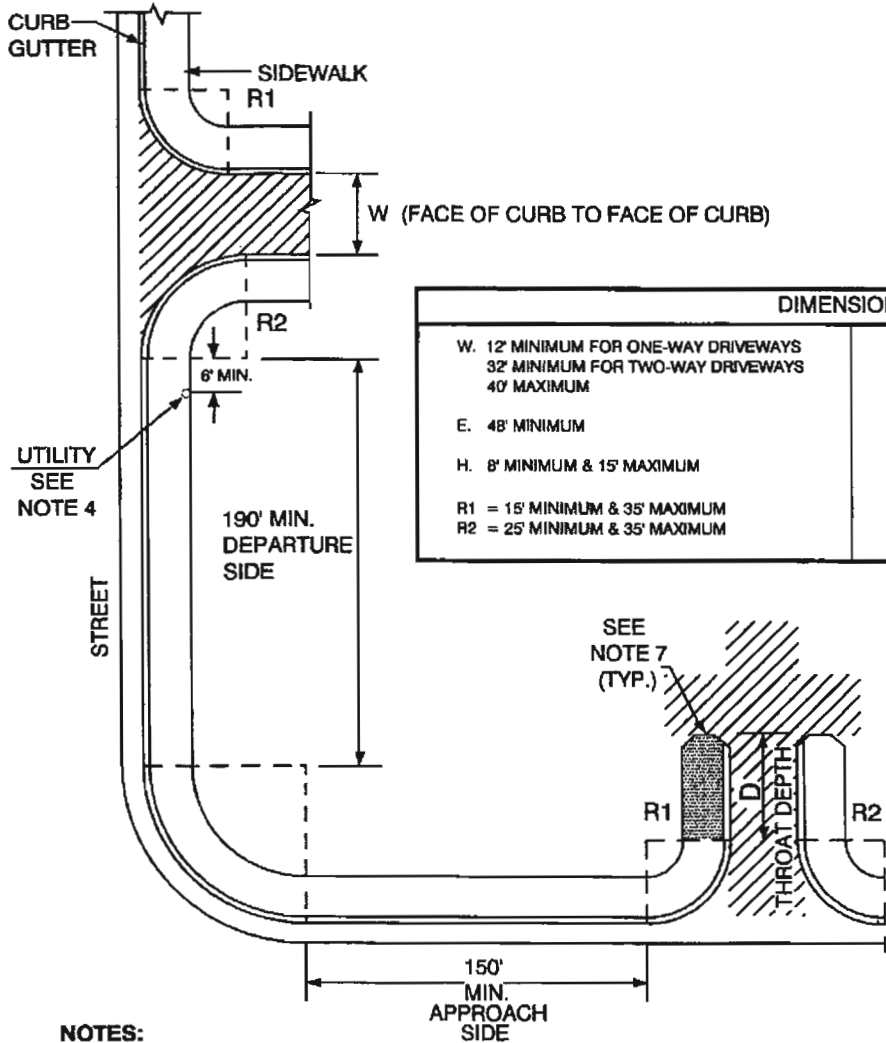


| SPECIFICATION REFERENCE | |
|-------------------------|--|
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| | |

**UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA**

**CHANNELIZED MEDIAN DETAIL
FOR COMMERCIAL DRIVEWAYS OR
INTERSECTING STREETS**

DATE 6-8-06 DWG. NO. 2211 PAGE 27.1



| DIMENSIONS | |
|--|--|
| W. 12' MINIMUM FOR ONE-WAY DRIVEWAYS 32' MINIMUM FOR TWO-WAY DRIVEWAYS 40' MAXIMUM | D. THROAT DEPTH 25' MINIMUM 50' MINIMUM FOR PARKING LOTS > 50 PARKING SPACES 75' MINIMUM FOR PARKING LOTS 51 TO 100 PARKING SPACES 100' MINIMUM FOR PARKING LOTS 101 TO 200 PARKING SPACES 150' MINIMUM FOR PARKING LOTS > 201 PARKING SPACES |
| E. 48" MINIMUM | |
| H. 8" MINIMUM & 15" MAXIMUM | |
| R1 = 15' MINIMUM & 35' MAXIMUM R2 = 25' MINIMUM & 35' MAXIMUM | |

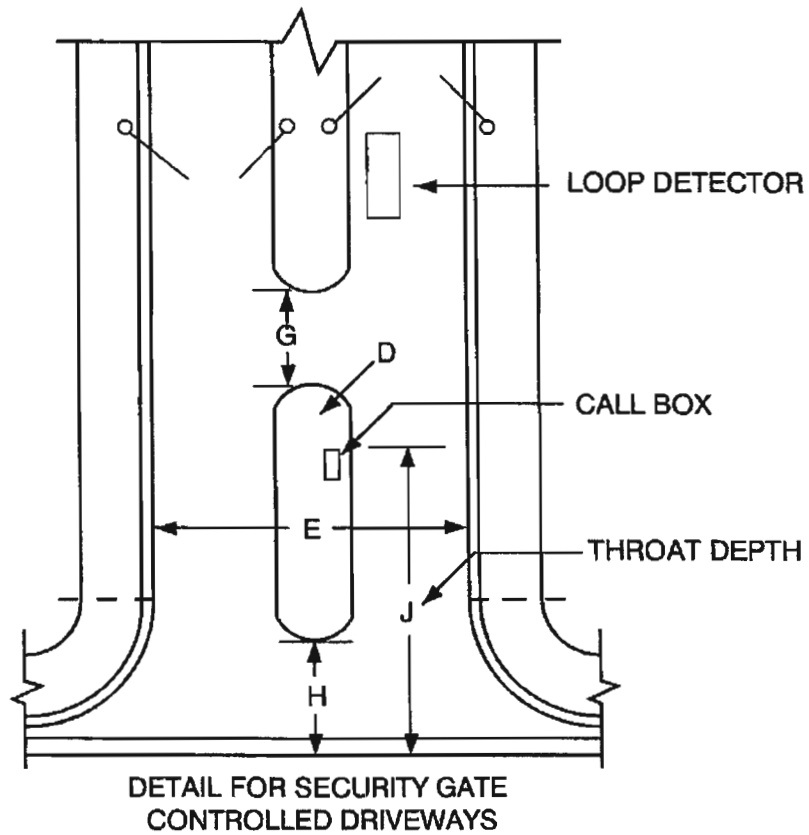
NOTES:

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.

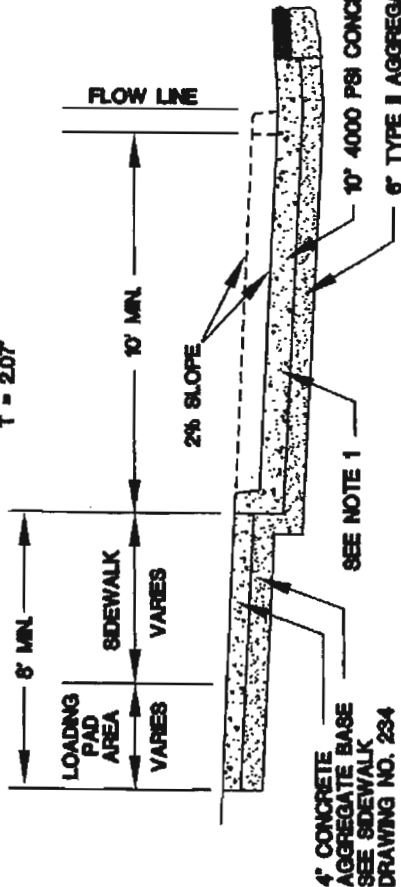
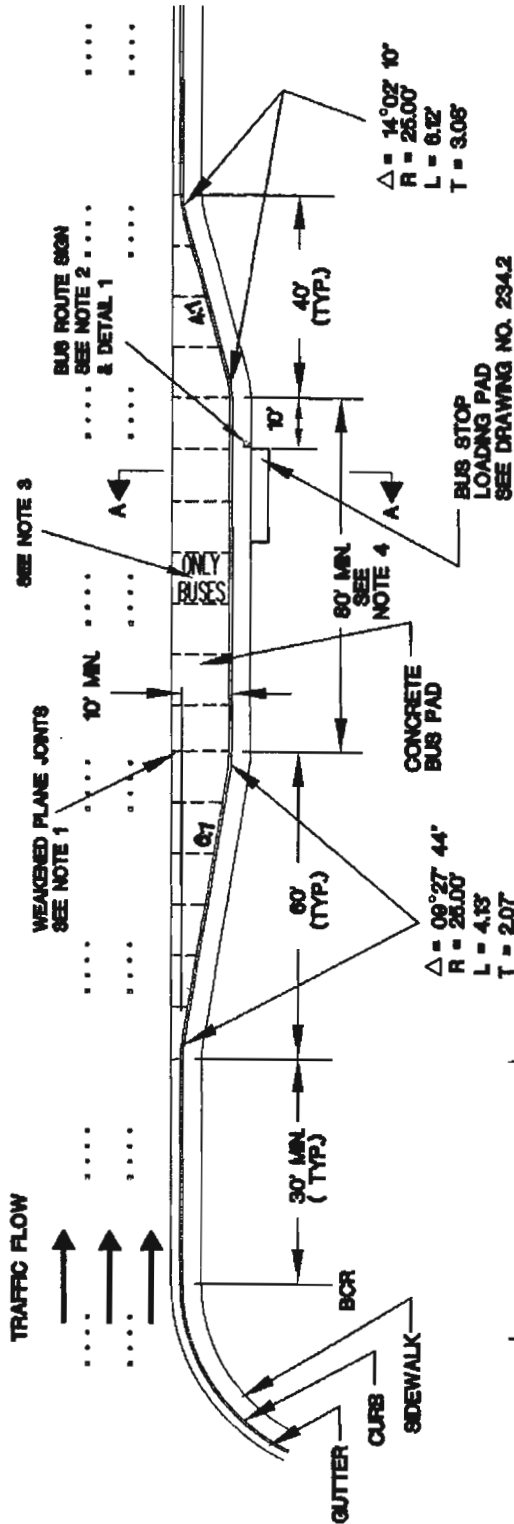
| | | | |
|-------------------------|--|---------------|--------------|
| SPECIFICATION REFERENCE | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | |
| | COMMERCIAL AND MULTI-FAMILY DRIVEWAY GEOMETRICS | | |
| | DATE 02-09-06 | DWG. NO. 222A | SHEET 1 OF 2 |

| DIMENSIONS | |
|-----------------------------------|---|
| 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 | |



| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | | |
|-------------------------|--|---|---------------|-------|--------|
| | | COMMERCIAL AND MULTI-FAMILY SECURITY GATE GEOMETRICS | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | DATE 02-09-06 | DWG. NO. 222A | SHEET | 2 OF 2 |



DETAIL 1
BUS ROUTE SIGN

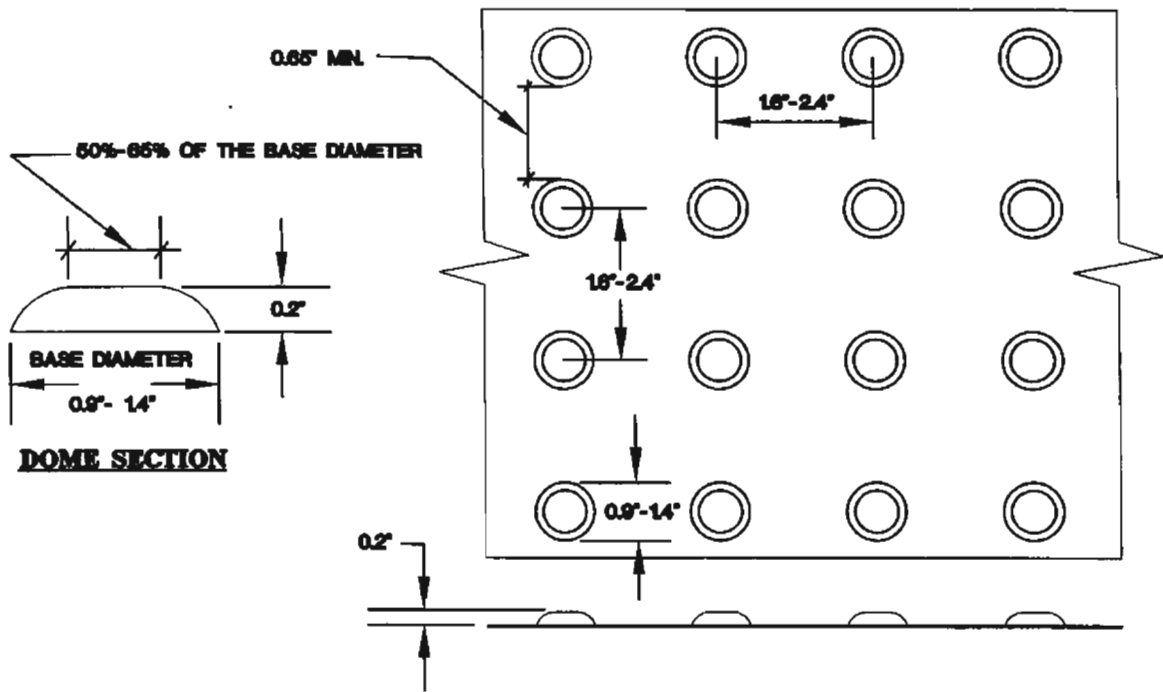
- NOTES:**
1. CONCRETE BUS PAD SHALL BE MONOLITHIC. TRANSVERSE WEAKENED PLANE JOINTS SHALL BE INSTALLED AT 10' INTERVALS AND AS DETAILED IN STANDARD DRAWING NO. 233, TYPE 'C'.
 2. BUS ROUTE SIGN SHALL BE INSTALLED AT THE DOWNSTREAM END OF BUS STOP LOADING PAD.
 3. A MINIMUM OF ONE SET OF PAVEMENT MARKINGS 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 TROWELED SURFACE.

| SPECIFICATION REFERENCE | |
|-------------------------|---------------------|
| 302 | AGGREGATE BASE |
| 501 | CONCRETE |
| 502 | CONCRETE STRUCTURES |
| | |
| | |

**UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA**

TYPICAL BUS TURN-OUT

| | | |
|-------------|----------------|-----------|
| DATE 6-8-06 | DWG. NO. 234.1 | PAGE 40.1 |
|-------------|----------------|-----------|



DETECTABLE WARNING DETAILS (TRUNCATED DOMES)

| GRADE (%) "B" TO "A" | "A" (FT) MIN. | "B" (FT) MIN. |
|-------------------------|------------------|------------------|
| -6 TO -5.01 | 4.5 | 21.5 |
| -5 TO -4.01 | 4.5 | 15.0 |
| -4 TO -3.01 | 4.5 | 12.0 |
| -3 TO -2.01 | 4.5 | 9.5 |
| -2 TO 2 | 8.0 | 8.0 |
| 2.01 TO 3 | 9.5 | 4.5 |
| 3.01 TO 4 | 12.0 | 4.5 |
| 4.01 TO 5 | 15.0 | 4.5 |
| 5.01 TO 6 | 21.5 | 4.5 |

TABLE 1. TRANSITION LENGTHS FOR 1:12 SIDE SLOPES

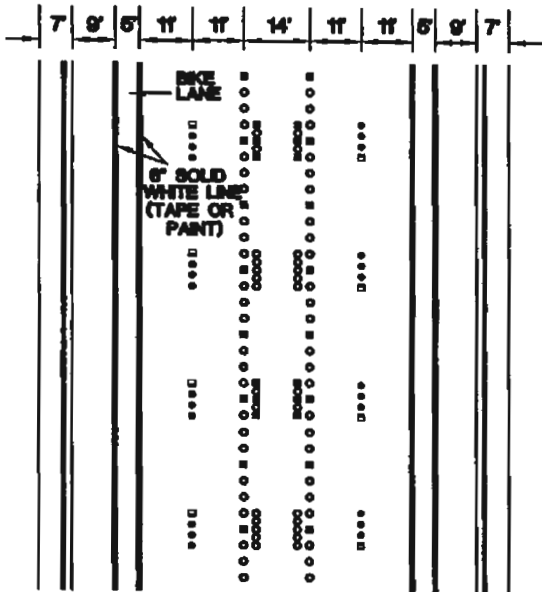
| GRADE (%) "B" TO "A" | "A" (FT) MIN. | "B" (FT) MIN. |
|-------------------------|------------------|------------------|
| -6 TO -5.01 | 4.0 | 12.5 |
| -5 TO -4.01 | 4.0 | 10.0 |
| -4 TO -3.01 | 4.0 | 8.5 |
| -3 TO -2.01 | 4.0 | 7.5 |
| -2 TO 2 | 6.5 | 6.5 |
| 2.01 TO 3 | 7.5 | 4.0 |
| 3.01 TO 4 | 8.5 | 4.0 |
| 4.01 TO 5 | 10.0 | 4.0 |
| 5.01 TO 6 | 12.5 | 4.0 |

TABLE 2. TRANSITION LENGTHS FOR 1:10 SIDE SLOPES

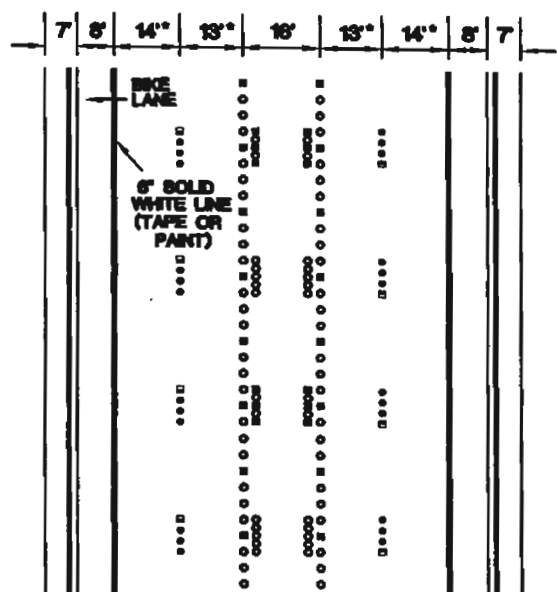
NOTE:

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

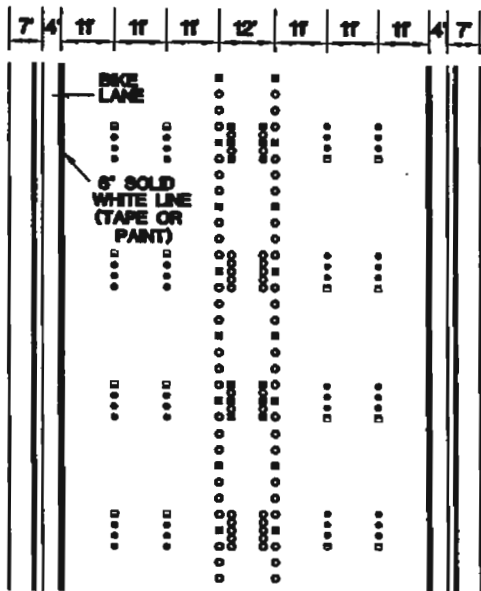
| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | |
|-------------------------|---------------------|--|--------------------------------|
| 302 | AGGREGATE BASE | SIDEWALK RAMP DETAILS | |
| 501 | CONCRETE | | |
| 502 | CONCRETE STRUCTURES | | |
| | | DATE 6-8-08 | DWG. NO. 235 (4 OF 4) PAGE 41C |



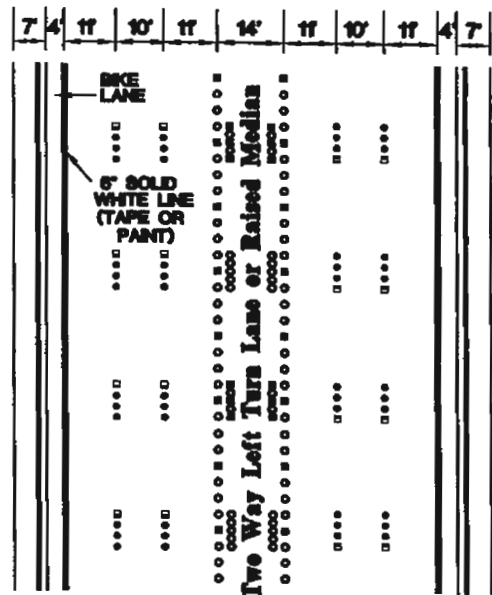
**100 FT. STREET WITH BIKE LANE
(WITH PARKING/EMERGENCY LANE)**



**100 FT. STREET WITH BIKE LANE
(WITHOUT PARKING/EMERGENCY LANE)**



**100 FT. STREET WITH BIKE LANE
(WITHOUT PARKING/EMERGENCY LANE)**

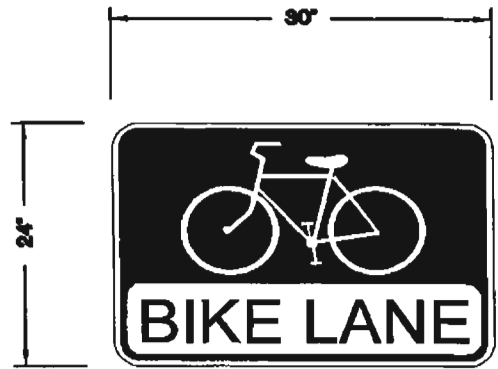
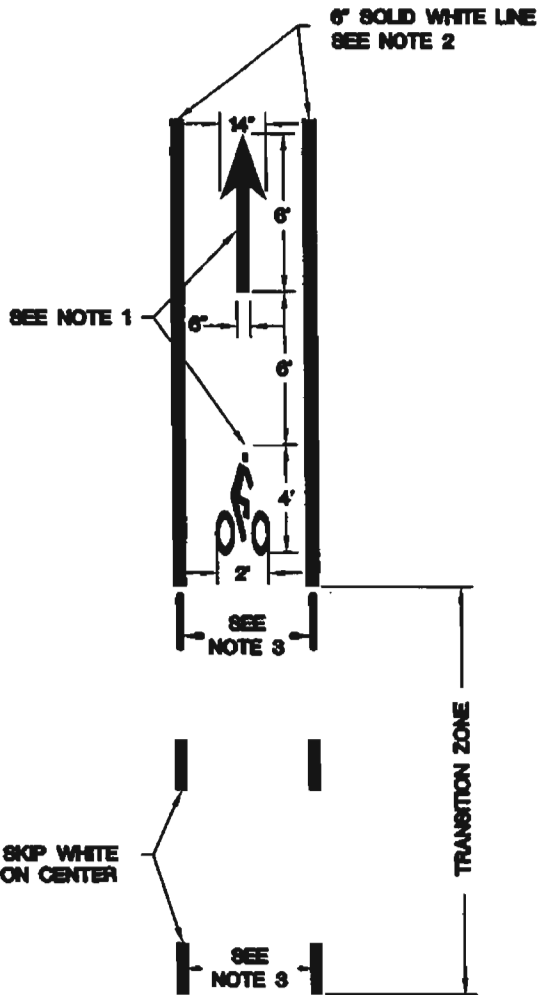


**100 FT. STREET WITH BIKE LANE
(WITHOUT PARKING/EMERGENCY LANE)**

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 LANES MUST BE A MINIMUM OF 4 FT. AND NO GREATER THAN 8 FT. WIDE; HOWEVER, A WIDTH OF 6 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 LP OF GUTTER OR EDGE OF PAVEMENT IF CURB AND GUTTER DO NOT EXST.
- THE WIDTH OF TRAVEL LANES ADJACENT TO BIKE LANES MAY VARY FROM 12 FT. TO 18 FT. WIDTHS OF INTERIOR TRAVEL LANES MAY VARY FROM 11 FT. TO 13 FT.

| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | |
|-------------------------|--------------------------|--|-----------------|----------------|
| 628 | PAINING TRAFFIC STRIPING | TYPICAL DELINEATION FOR ROADWAYS 100 FT. RIGHT-OF-WAY WITH CURBSIDE SIDEWALK | | |
| 401 | PAVEMENT MARKERS | | | |
| | | | | |
| | | | | |
| | | DATE 3-9-08 | DWG. NO. 244.1A | PAGE NO. 50.1A |



R3-17

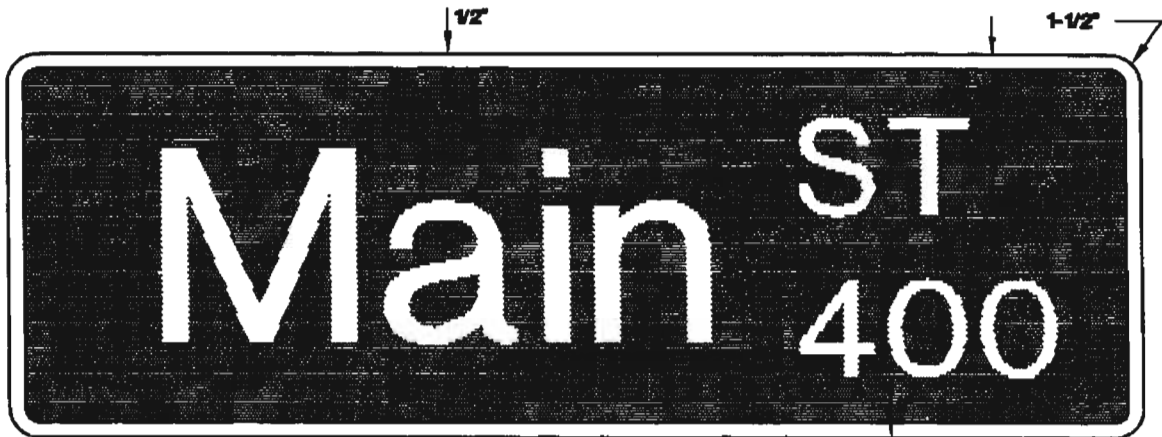
BIKE LANE SIGNAGE

BIKE LANE DELINEATION AND LEGEND

NOTES

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

| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | |
|-------------------------|--|--|----------------|---------------|
| | | BICYCLE LANE DELINEATION, LEGEND, AND SIGNAGE | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | DATE 3-9-06 | DWG. NO. 244.5 | PAGE NO. 50.5 |



12" (MAJOR STREETS)

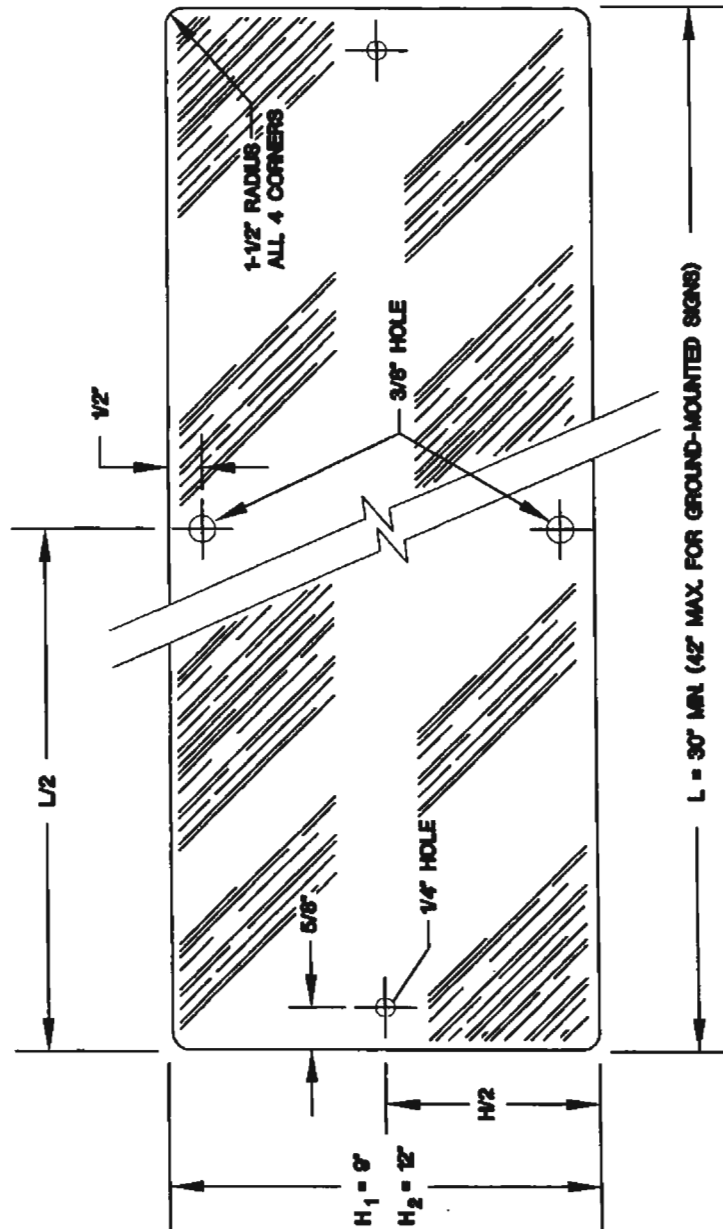


9" (MINOR STREETS)

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 6" 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 | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | |
|-------------------------|-------------------|--|-----------------------|-------------|
| 631 | STREET NAME SIGNS | STREET NAME SIGNS FACE COPY | | |
| 716 | SIGN MATERIALS | | | |
| | | | | |
| | | | | |
| | | | | |
| | | DATE 6-8-06 | DWG. NO. 250 (1 OF 2) | PAGE NO. 58 |



ALUMINUM BLANK

6062-T88 OR 6061-T6, HEAT-TREATED, HIGH TENSILE, DECREASED AND ALCOONE 1200 FINISH. THICKNESS TO BE 0.060" FOR SIGNS LESS THAN 36" AND 0.100" FOR SIGNS 36" AND LONGER.

NOTE

1. FOR SIGN FACE SPECIFICATIONS SEE STANDARD DRAWING NO. 250.

| | | | |
|--------------------------------|-------------------|--|---------|
| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | |
| 631 | STREET NAME SIGNS | | |
| 716 | SIGN MATERIALS | STREET NAME SIGN BLANKS | |
| | | | |
| | | | |
| | | | |
| DATE 6-8-06 | | DWG. NO. 251 | PAGE 57 |

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.

| | | | | |
|--------------------------------|------------------------------------|--|--------------|------------|
| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | |
| 501 | CONCRETE | | | |
| 609 | CATCH BASINS, MANHOLES & INLETS | STORM DRAIN MANHOLES GENERAL NOTES | | |
| | | | | |
| | | | | |
| | | DATE 2-9-08 | DWG. NO. 401 | SHT 1 OF 2 |

MANHOLE NOTES (CONTINUED):

TYPE II

TANGENT

SIXTY (60) INCH SIZE

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

ANGLE POINT

SIXTY (60) INCH SIZE

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

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

| | | | | |
|--------------------------------|------------------------------------|--|--------------|------------|
| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | |
| 501 | CONCRETE | | | |
| 609 | CATCH BASINS, MANHOLES & INLETS | STORM DRAIN MANHOLES GENERAL NOTES | | |
| | | | | |
| | | | | |
| | | DATE 2-9-06 | DWG. NO. 401 | SHT 2 OF 2 |

DROP INLET NOTES:

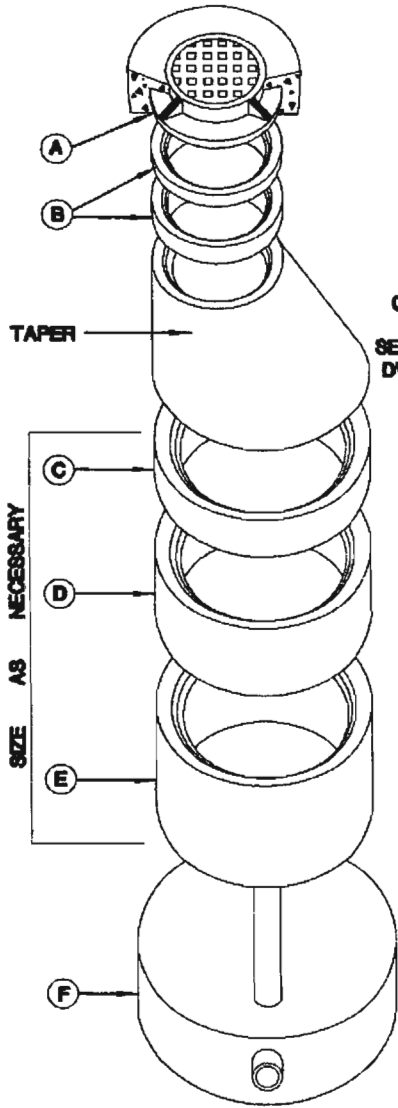
1. ALL DROP INLETS, REGARDLESS OF TYPE, SHALL BE LOCATED SUCH THAT THE CURB OPENING (OR GRATE) IS A MINIMUM OF TEN (10) FEET FROM THE NEAREST P.C. OR P.T. OF THE CURRENT OR FUTURE CURB RETURN.

2. FOR CURB RETURNS WHERE A LOW POINT CONDITION EXIST OR IS PROPOSED AT THE P.C. OR P.T., THE CURB PROFILE SHALL BE DESIGNED SUCH THAT THE LOW POINT COINCIDES WITH THE CURB OPENING AS SPECIFIED ON NOTE NO. 1.

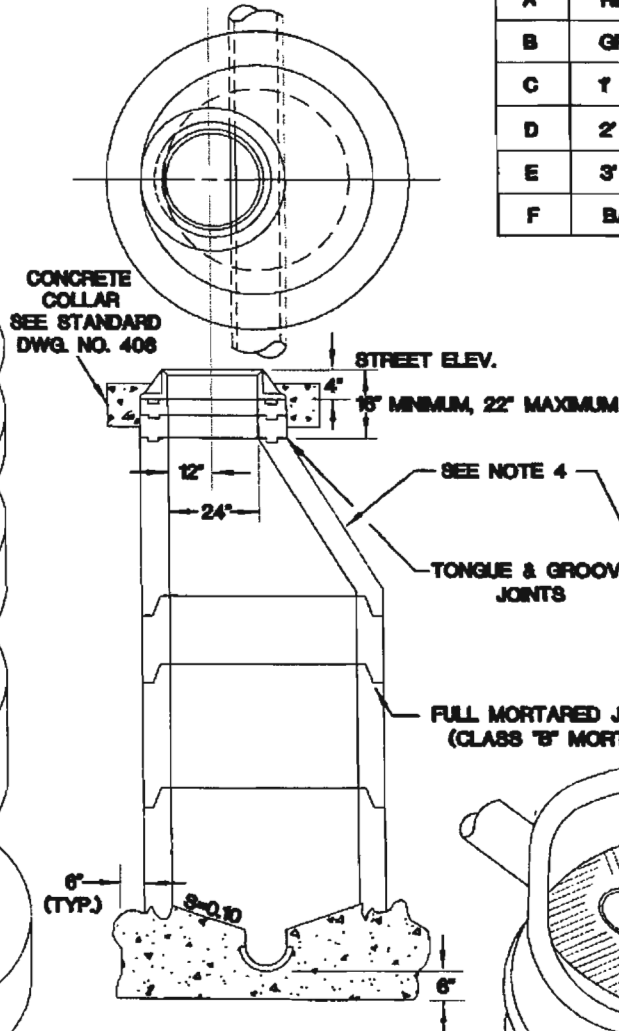
3. IF DRIVEWAYS OR UTILITIES EXIST, THE ENTITY ENGINEER SHALL APPROVE THE LOCATION OF THE DROP INLET.

| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | |
|-------------------------|------------------------------------|--|--------------|----------|
| 501 | CONCRETE | STORM DRAIN DROP INLET GENERAL NOTES | | |
| 609 | CATCH BASINS, MANHOLES & INLETS | | | |
| | | | | |
| | | | | |
| | | DATE 2-9-06 | DWG. NO. 402 | PAGE 102 |

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



EXPLODED VIEW



| TAPER | | HEIGHT |
|------------|-----|--------|
| DIA. | H | |
| 48" | 36" | |
| 60" | 55" | |
| 24" TO 48" | 36" | |
| 48" TO 60" | 24" | |

ISOMETRIC VIEW

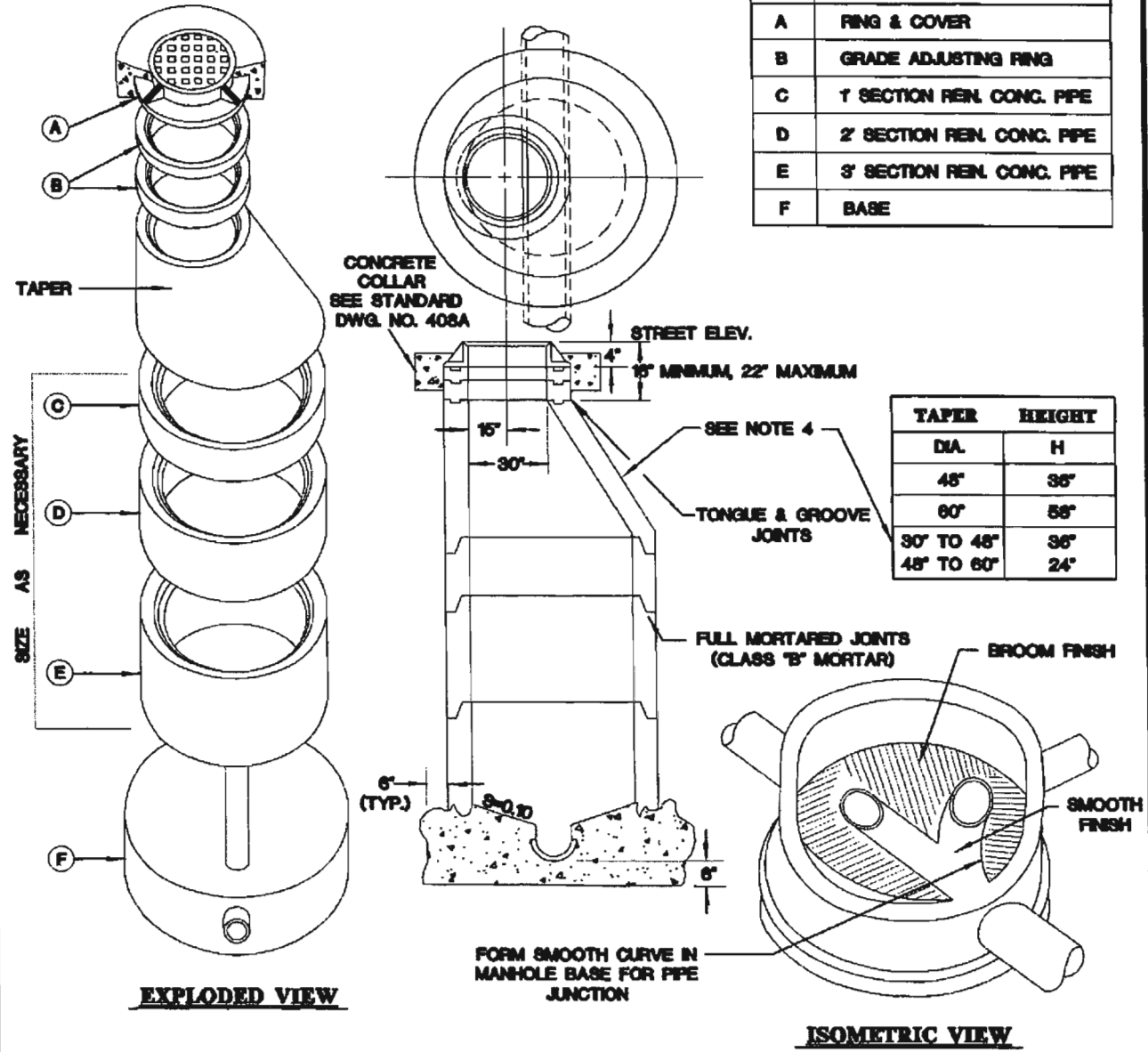
NOTES:

1. IN UNIMPROVED NON-TRAFFIC AREAS, TOP OF MANHOLE SHALL BE 6" TO 9" ABOVE GRADE.
2. PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE OF MANHOLE SECTION. CONSTRUCT WATER TIGHT CONNECTION TO MANHOLE.
3. PIPE SECTION LENGTHS ARRANGED TO FIT DEPTH.
4. AN OPTIONAL TWO PIECE 24" TO 48" AND 48" TO 60" CONE MAY BE USED.

| SPECIFICATION REFERENCE | |
|-------------------------|---------------------------------|
| 501 | CONCRETE & MORTAR |
| 609 | CATCH BASINS, MANHOLES & INLETS |
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| UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | |
|--|--------------|--------------|
| TYPE I MANHOLE | | |
| DATE 11/10/05 | DWG. NO. 403 | PAGE NO. 103 |

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

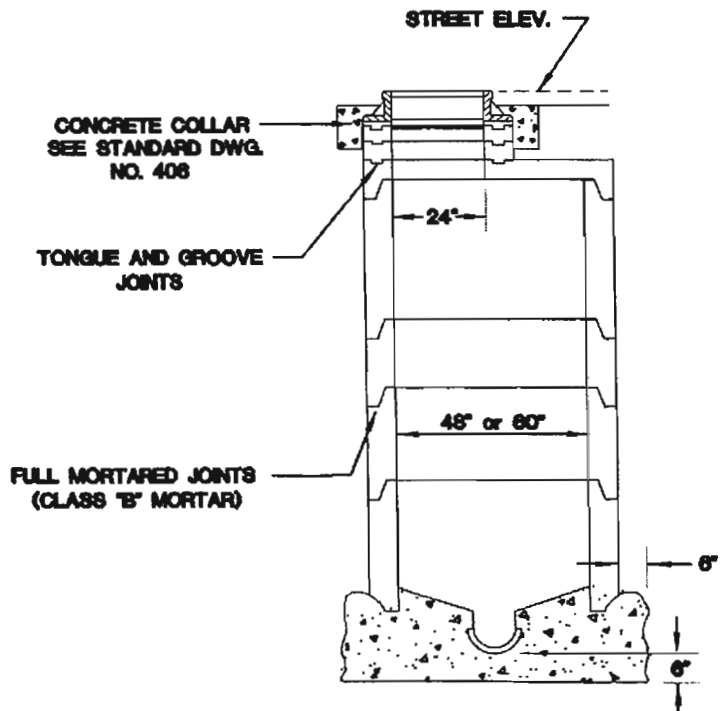
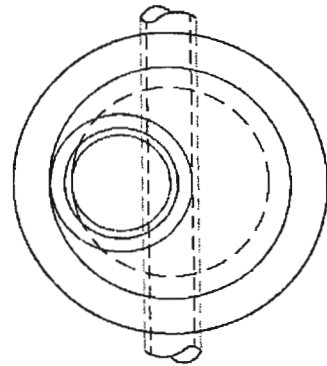
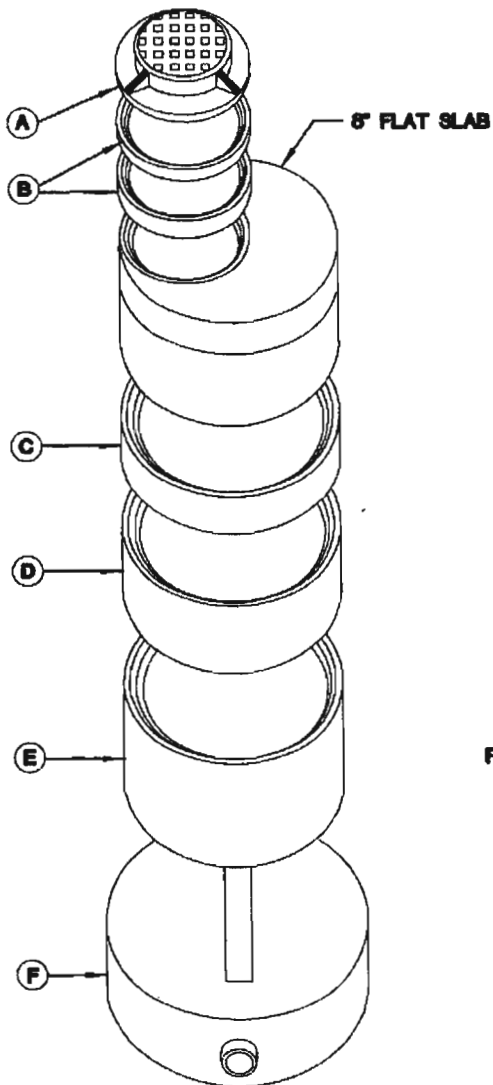


| SPECIFICATION REFERENCE | |
|-------------------------|---------------------------------|
| 501 | CONCRETE & MORTAR |
| 609 | CATCH BASINS, MANHOLES & INLETS |
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**UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA**

**TYPE I MANHOLE
30" RING AND COVER**

| | | |
|---------------|---------------|---------------|
| DATE 11/10/05 | DWG. NO. 403A | PAGE NO. 103A |
|---------------|---------------|---------------|

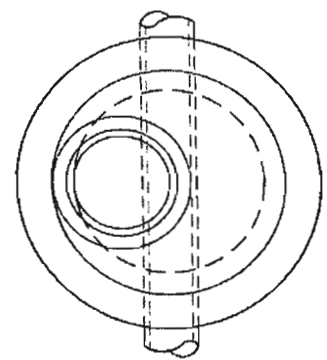
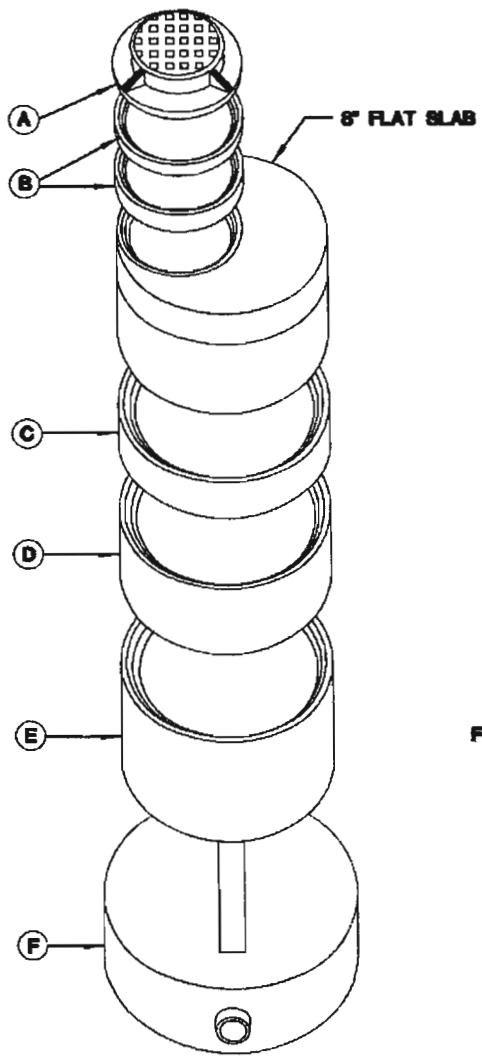


NOTE:

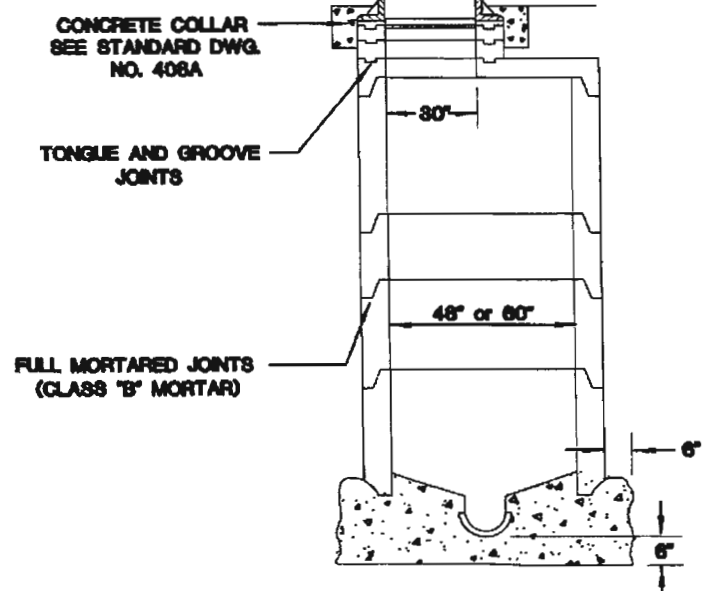
1. PIPE SECTION LENGTHS ARRANGED TO FIT DEPTH.

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

| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | |
|-------------------------|---------------------------------|--|--------------|--------------|
| 501 | CONCRETE & MORTAR | TYPE IA MANHOLE | | |
| 609 | CATCH BASINS, MANHOLES & INLETS | | | |
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| | | | | |
| | | DATE 11/10/06 | DWG. NO. 404 | PAGE NO. 104 |



STREET ELEV.



CONCRETE COLLAR
SEE STANDARD DWG.
NO. 408A

TONGUE AND GROOVE
JOINTS

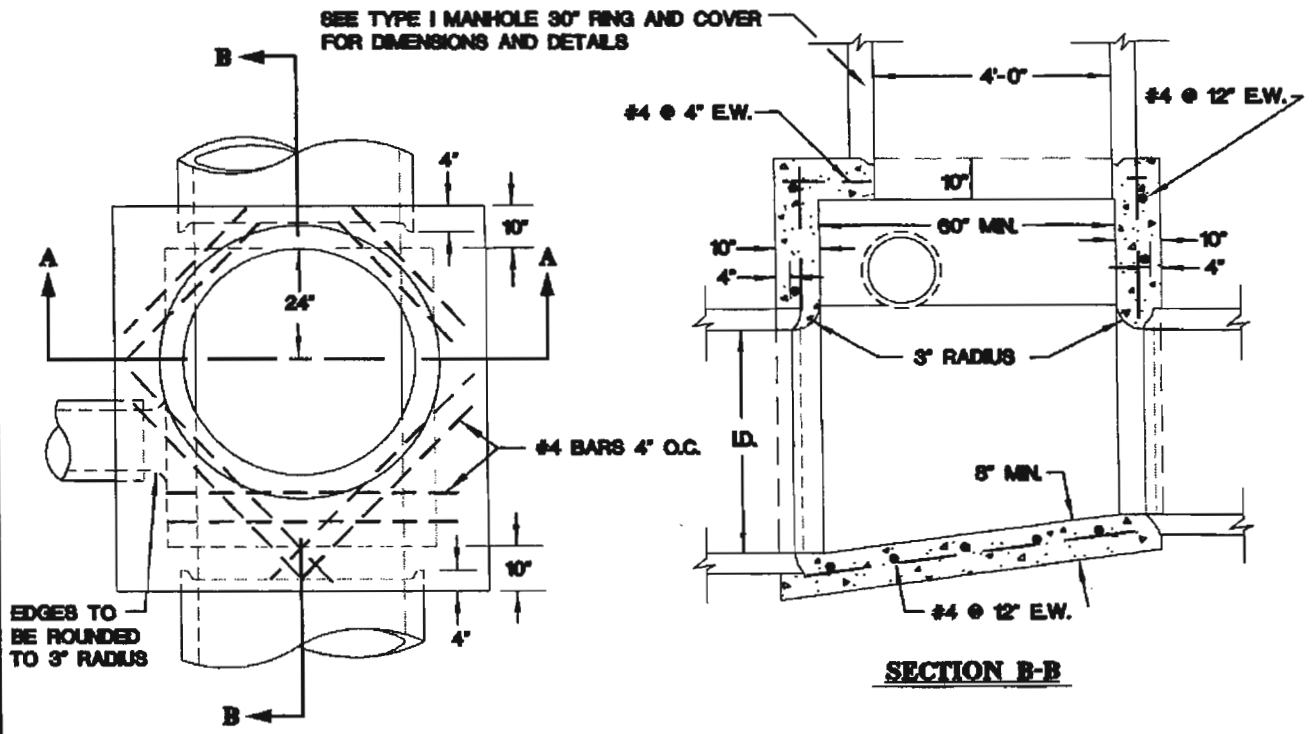
FULL MORTARED JOINTS
(CLASS 'B' MORTAR)

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

NOTE:

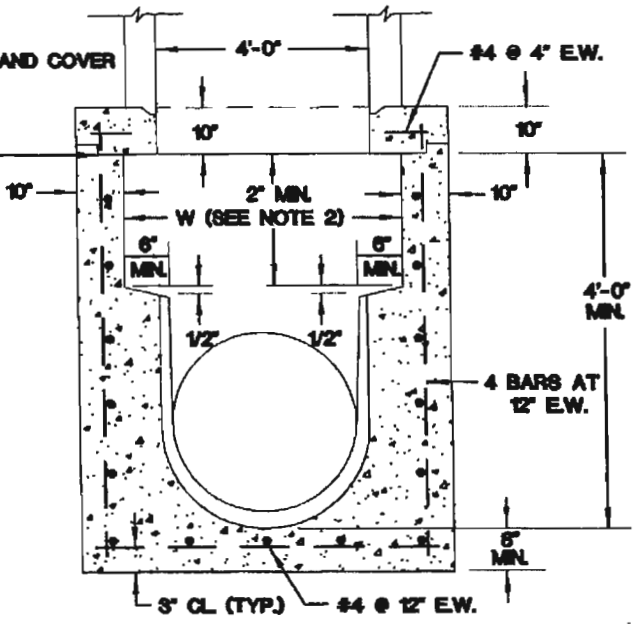
1. PIPE SECTION LENGTHS ARRANGED TO FIT DEPTH.
2. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | |
|-------------------------|---------------------------------|--|---------------|---------------|
| 501 | CONCRETE & MORTAR | TYPE IA MANHOLE 30" RING AND COVER | | |
| 609 | CATCH BASINS, MANHOLES & INLETS | | | |
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| | | DATE 11/10/05 | DWG. NO. 404A | PAGE NO. 104A |



SEE TYPE I MANHOLE 30" RING AND COVER FOR DIMENSIONS AND DETAILS

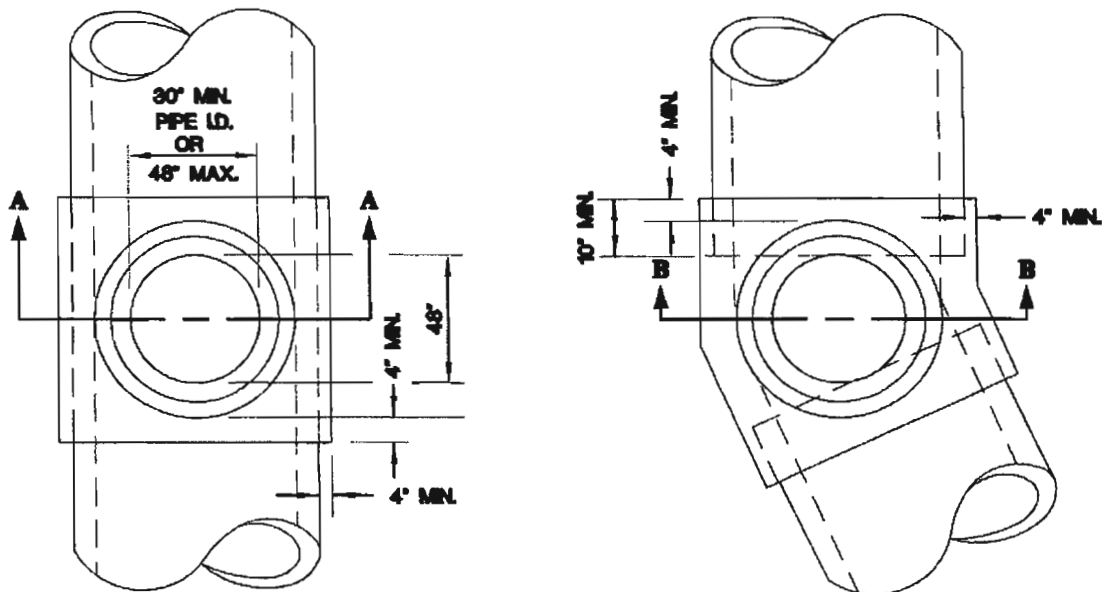
OPTIONAL CONSTRUCTION JOINT



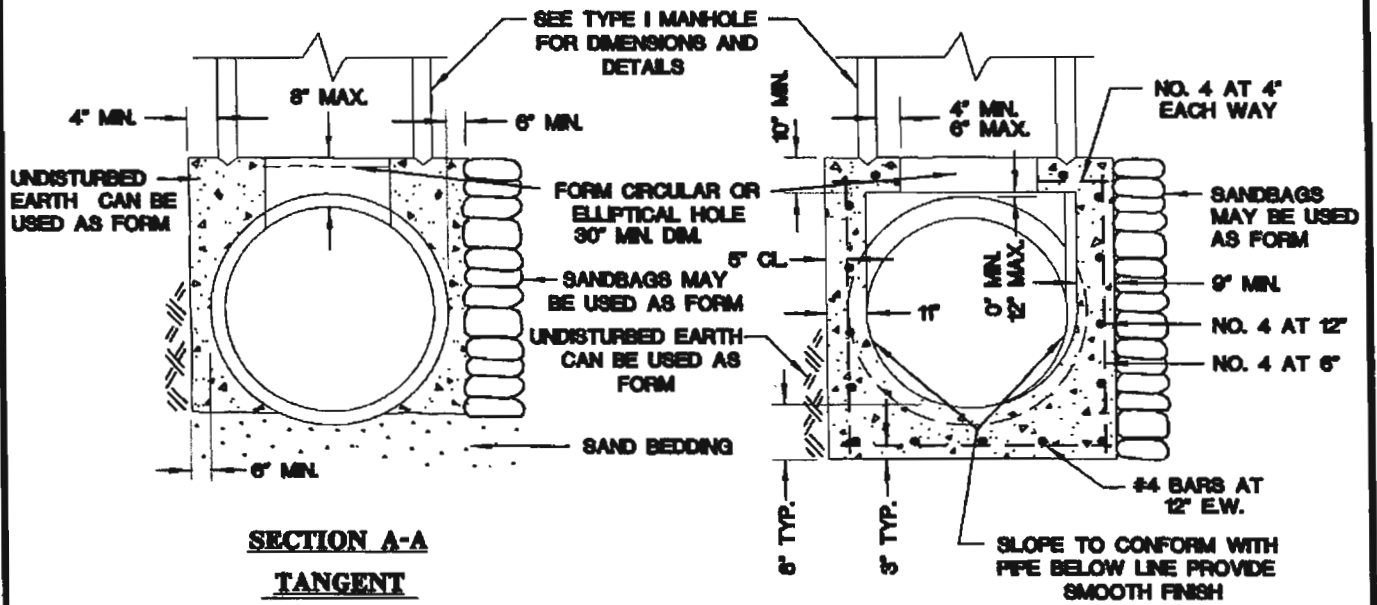
NOTES:

1. STEPS SHALL BE INSTALLED ON THE SIDE WALL OF THE MANHOLE
2. W = LD. + 12-INCHES MIN. BUT IN NO CASE SHALL W BE LESS THAN 60-INCHES.
3. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

| | | | |
|--------------------------------|---------------------------------|--|---------------|
| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | |
| 501 | CONCRETE AND MORTAR | TYPE II MANHOLE 30" RING AND COVER | |
| 605 | REINFORCING STEEL | | |
| 609 | CATCH BASINS, MANHOLES & INLETS | | |
| | | DATE 11/10/05 | DWG. NO. 405A |
| | | PAGE NO. 105A | |



PLAN



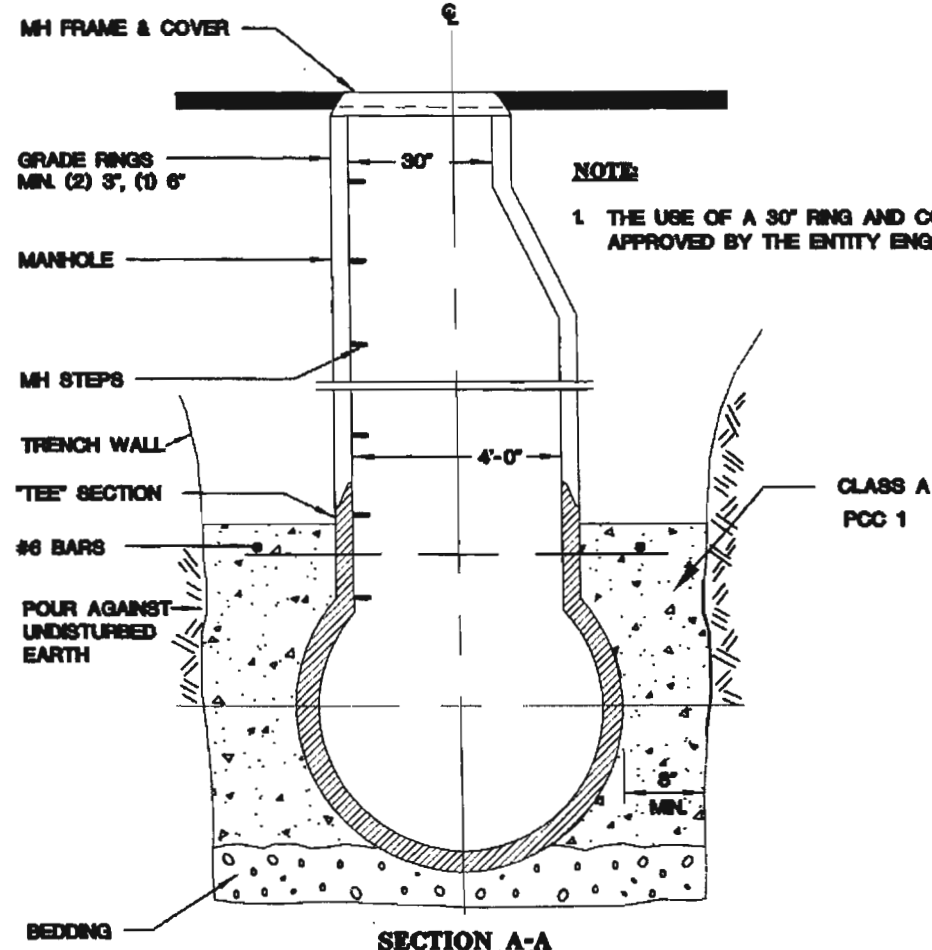
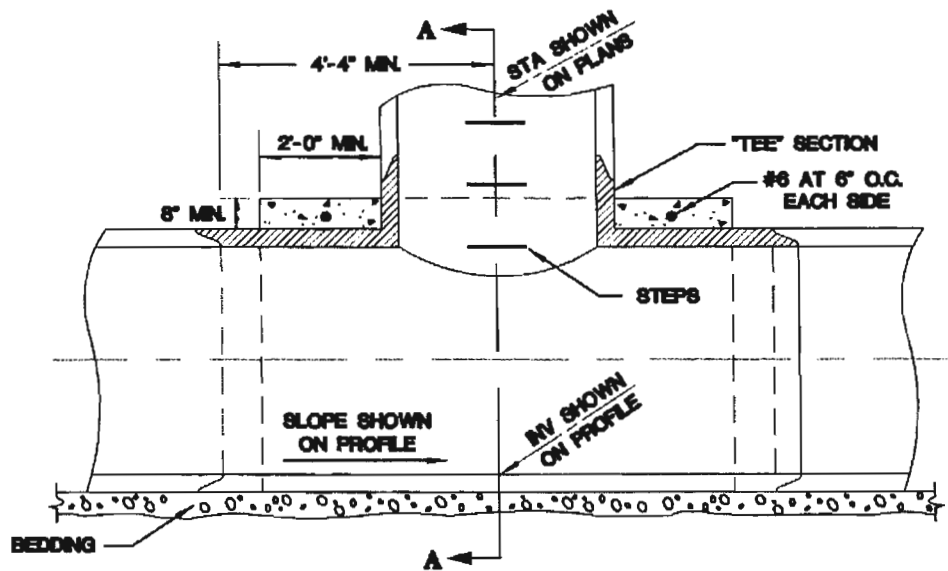
**SECTION A-A
TANGENT**

**SECTION B-B
ANGLE POINT**

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.

| | | | | |
|--------------------------------|---------------------------------|--|---------------|---------------|
| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | |
| 501 | CONCRETE | | | |
| 505 | REINFORCING STEEL | TYPE III MANHOLE 30" RING AND COVER | | |
| 609 | CATCH BASINS, MANHOLES & INLETS | | | |
| | | | | |
| | | DATE 11/10/05 | DWG. NO. 406A | PAGE NO. 106A |



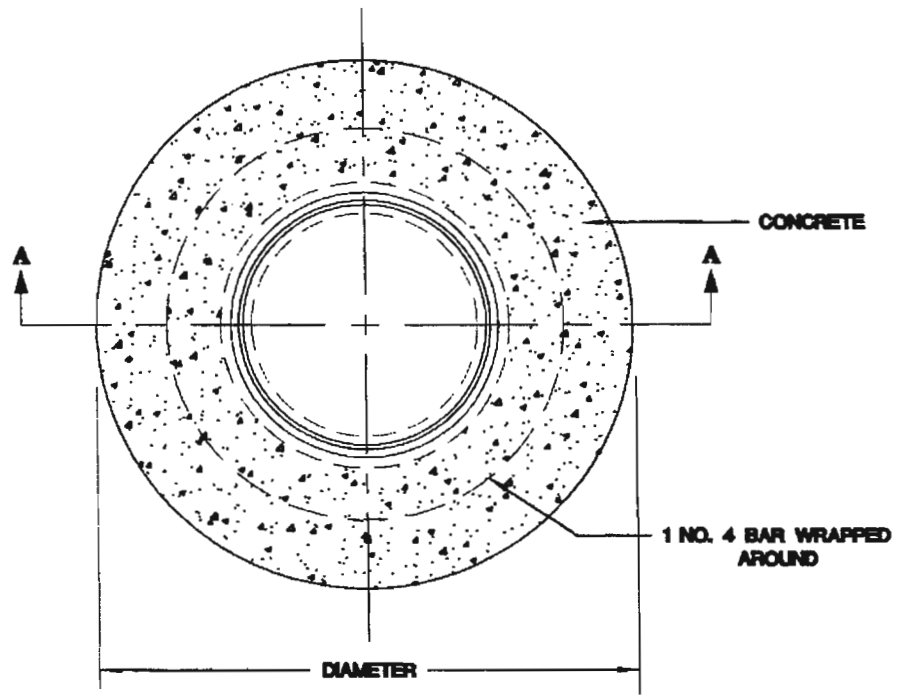
NOTE:
 1. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

| SPECIFICATION REFERENCE | |
|-------------------------|---------------------------------|
| 501 | CONCRETE |
| 609 | CATCH BASINS, MANHOLES & INLETS |
| | |
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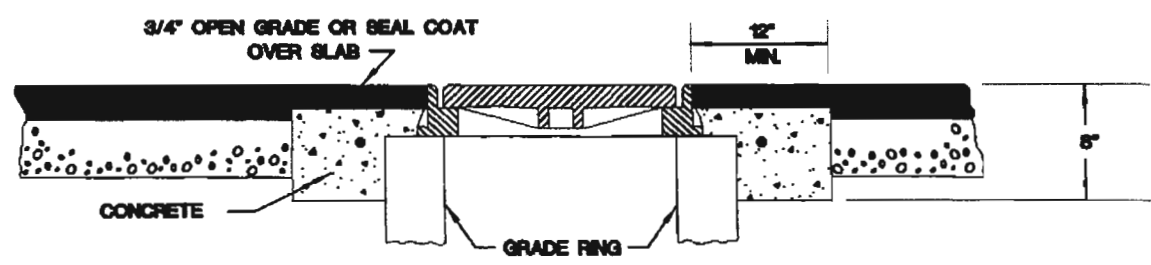
**UNIFORM STANDARD DRAWINGS
 CLARK COUNTY AREA**

**PRECAST MANHOLE TEES
 30" RING AND COVER**

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|---------------|---------------|---------------|
| DATE 11/10/05 | DWG. NO. 407A | PAGE NO. 107A |
|---------------|---------------|---------------|



PLAN

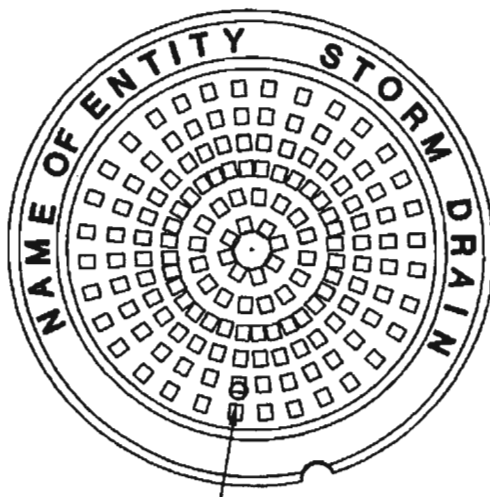


SECTION A-A

NOTES:

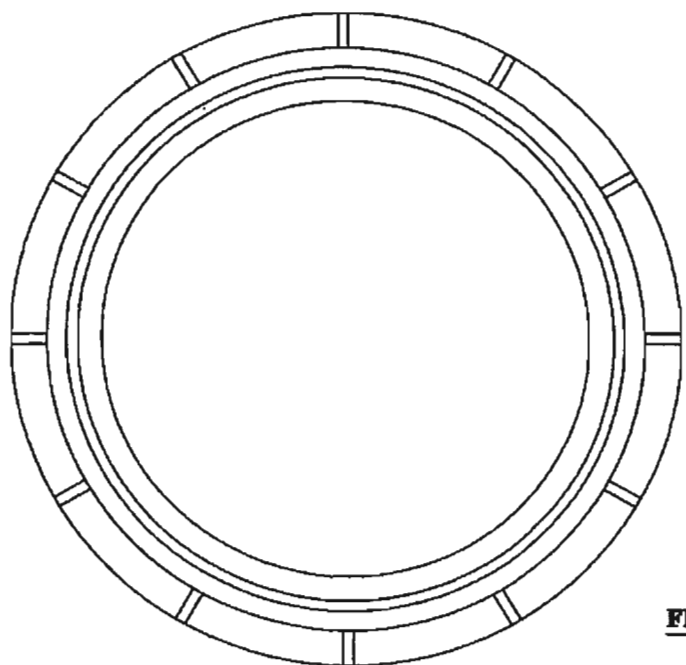
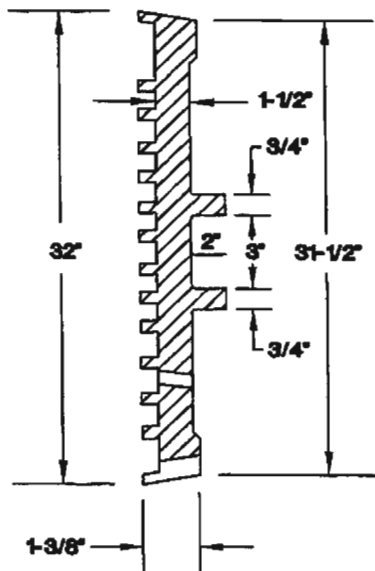
1. CONCRETE COLLAR TO BE CONSTRUCTED 1/8" BELOW SURFACE OF DENSE GRADE WHERE OPEN GRADE IS NOT USED.
2. CONCRETE COLLAR NOT REQUIRED IN UNINCORPORATED CLARK COUNTY RESIDENTIAL STREETS LESS THAN 80' R/W WIDTH.
3. THE USE OF 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

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|--------------------------------|-------------------|---|---------------|---------------|
| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | | |
| 501 | CONCRETE | CONCRETE COLLAR AROUND MANHOLES 30" RING AND COVER | | |
| 505 | REINFORCING STEEL | | | |
| | | | | |
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| | | DATE 11/10/05 | DWG. NO. 408A | PAGE NO. 108A |

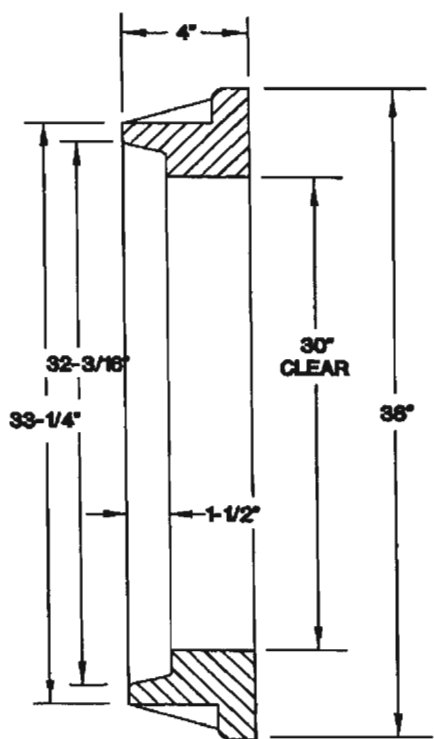


T DIA. VENT HOLE

COVER



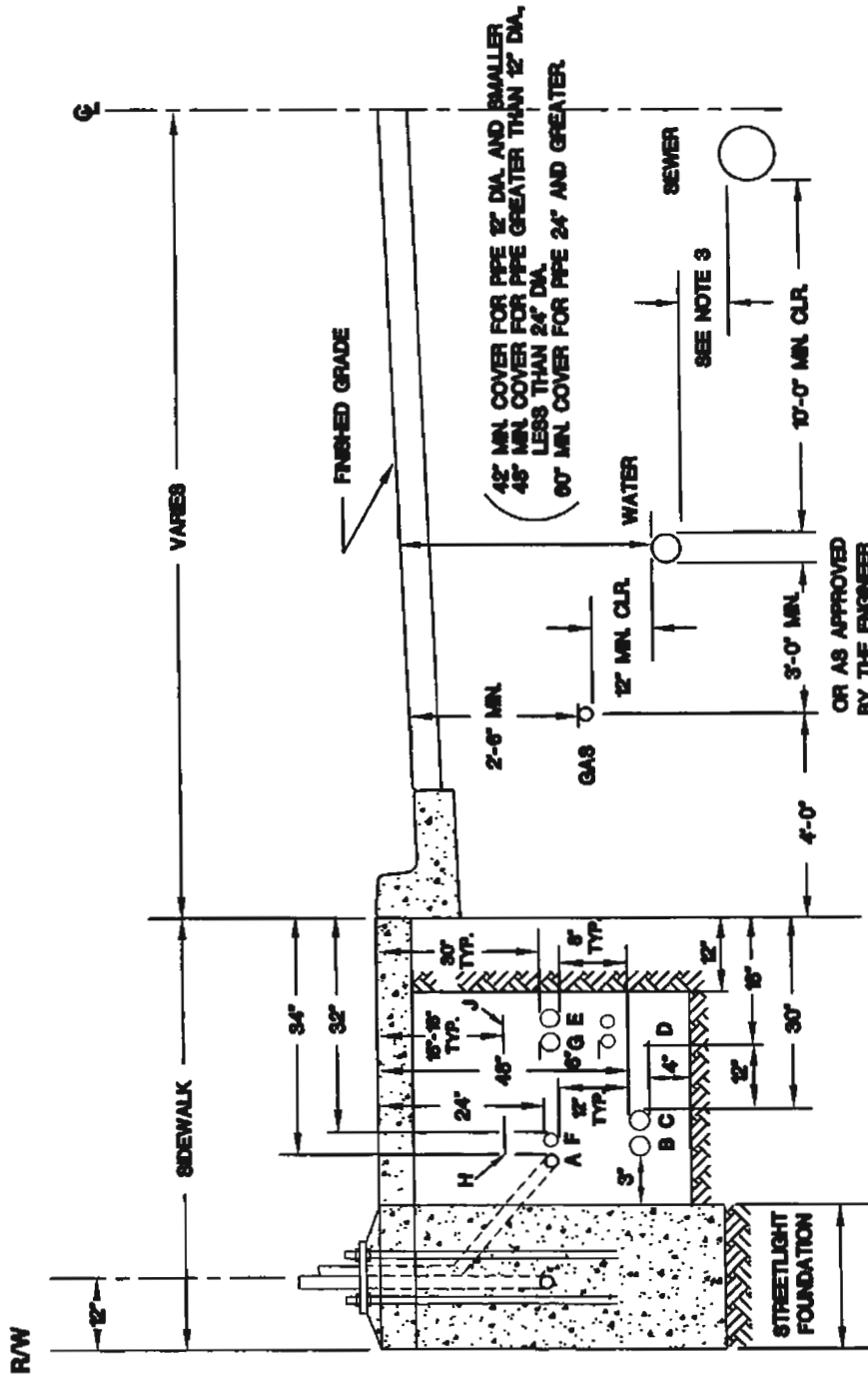
FRAME



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.

| | | | |
|--------------------------------|----------------------|--|---------------|
| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | |
| 712 | MISCELLANEOUS METALS | STANDARD MANHOLE 30" COVER AND RING | |
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| | | DATE 11/10/05 | DWG. NO. 409A |
| | | PAGE NO. 109A | |

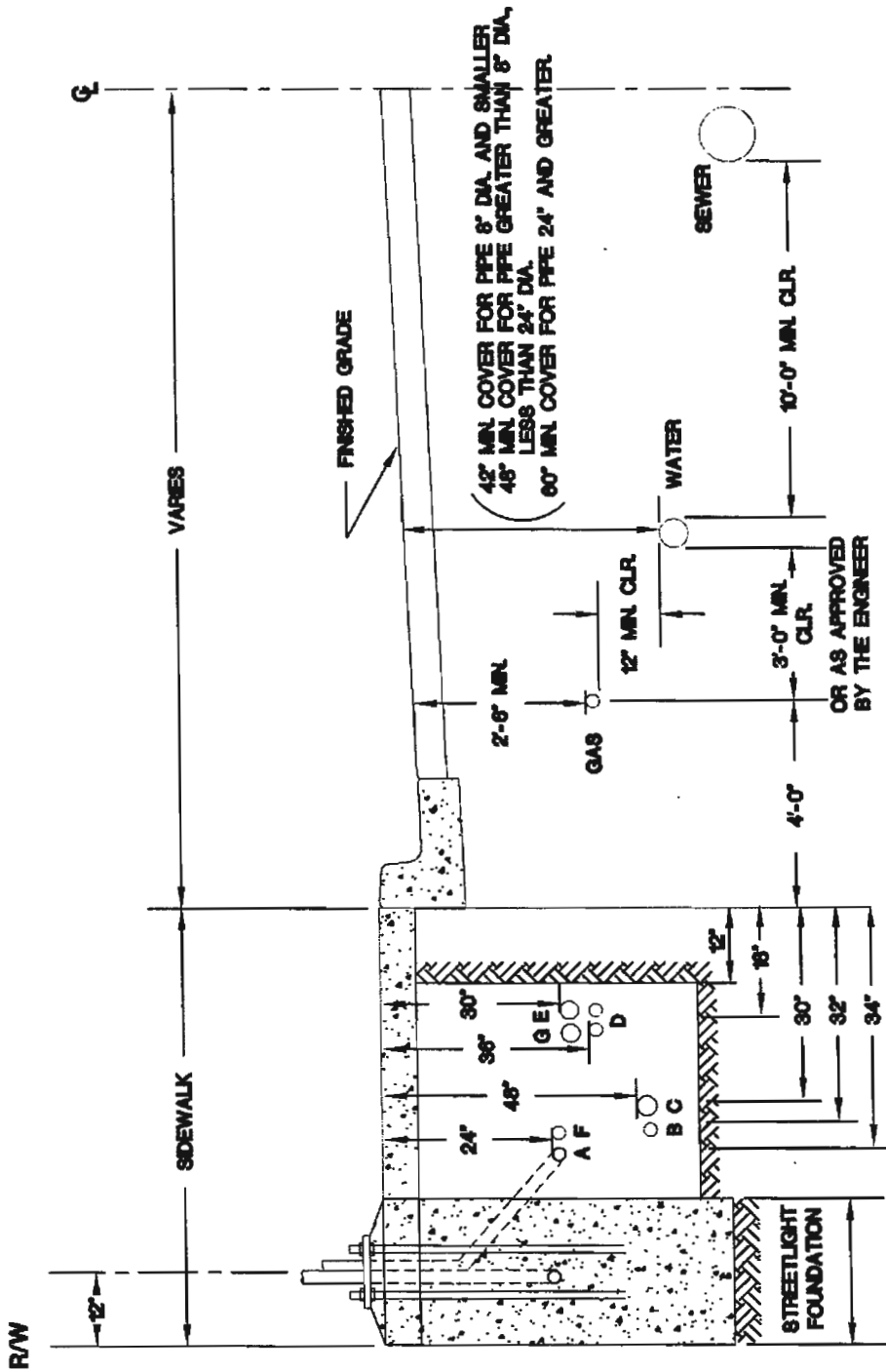


NOTES

1. SEWER MAY BE LOCATED ON OTHER SIDE OF CENTERLINE AS TERRAIN DICTATES.
2. STREETLIGHT FOUNDATIONS SHALL BE LOCATED BEHIND SIDEWALK FOR SIDEWALK WIDTHS LESS THAN 6 FEET PER STANDARD DRAWING NO. 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 SURVEYOR GUIDELINES.

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

| | | |
|--------------------------------|---|--------------|
| SPECIFICATION REFERENCE | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | |
| | TYPICAL UNDERGROUND UTILITY LOCATIONS IN RESIDENTIAL STREETS WITH 60 FEET OR LESS RIGHT-OF-WAY | |
| | DATE 2-9-06 | DWG. NO. 501 |



- NOTE:**
SEWER MAY BE OTHER SIDE OF CENTERLINE AS TERRAIN DICTATES.
- A. STREETLIGHT CONDUIT
 - B. POWER COMPANY SECONDARY
 - C. POWER COMPANY PRIMARY
 - D. TELEPHONE CONDUITS
 - E. CABLE T.V. CONDUIT
 - F. TRAFFIC SIGNAL CONDUIT
 - G. OTHER COMMUNICATIONS CONDUIT

| | | | |
|--------------------------------|--|--|---------------|
| SPECIFICATION REFERENCE | | UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA | |
| | | TYPICAL UNDERGROUND UTILITY LOCATIONS IN STREETS WITH GREATER THAN 60 FEET RIGHT-OF-WAY | |
| | | DATE 2-9-06 | DWG. NO. 501A |