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## REVISIONS
- REVISED DRIVEWAY DESIGNS TO INCLUDE TAS APPROVED WALK AREAS (7-990)
- REVISED DRIVEWAY DESIGNS TO INCLUDE TAS APPROVED WALK AREAS (7-990)
### MISCELLANEOUS

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<td>Street Light Equipment Details</td>
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<td>Vane Type Cast Iron Grate</td>
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### REVISIONS

Revised ramp designs to conform to TAS requirements (7-99)
MONOLITHIC MEDIAN NOSE

SECTION B-B

SECTION A-A
PAVING DETAILS

DRIVEWAY TURNOUTS

ALL STREETS

NOTES:
1. ALL LAYED DAMN LIMITS SHALL BE SEAL WITH EZ-7 OR APPROVED GENERAL GAP SEALANT.
2. JOINTS ON DAMN LIMITS WILL BE REQUIRED AT CENTERLINE OF DRIVEWAY, AT INTERSECTIONS, AND AT APPROXIMATE LIMITS FOR DRIVEWAYS WIDER THAN 12'.
3. FEATURES TO MATCH PROPOSED WALLS WILL BE BUILT MONOLITHIC WITH THE DRivE.
4. JOINTS ON TRANSITION TO 80'S AND 90'S SHALL BE UNSEEN FOR FULL LENGTH OF THE DRivE.
5. KEYWAY LIMITS WILL CONFORM WITH LIMITS OF 1' CURB.
6. KEYWAY LIMITS WILL NOT EXTEND THROUGH DRIVE EXCEPT AS PROVIDED FOR NOTES 5 AND 6 BELOW FOR CENCRAL LINE DRIVEWAY JOINTS.
7. KEYWAY LIMITS WILL NOT EXTEND THROUGH KEYWAY, DRIVE WILL NOT BE TIED TO PAVEMENT.
8. CENTERLINE JOINTS WILL BE REQUIRED AT CENTERLINE OF ALL DRIVEWAYS LESS THAN 24' WIDE. ADDITIONAL JOINTS WILL BE REQUIRED AT EQUAL SPACINGS FOR DRIVEWAYS WIDER THAN 24'.
9. BUILT OFFSETS MONOLITHIC DRIVEWAY TURNOUTS TO MATCH DRIVE. PROPOSED WALLS WILL BE TREATED TO PAVEMENT.
10. EAVEMENTS WILL NOT EXTEND THROUGH EAVEMENT TRANSITION TO 80'S AND 90'S OR TO THE CURB WITH THE RETURN DRIVE. PROPOSED WALLS WILL BE TREATED TO PAVEMENT.
11. EXPANSION JOINTS AT THE PROPERTY LINE.
12. PLANNED GRADES OF DAMN LIMITS WILL BE CONSTRUCTED ON 15' SPACINGS FOR DRIVEWAYS AS MEASURED FROM THE BACK OF CURB. EXPANSION JOINTS WILL BE PLANTED AT THE PROPERTY LINE FOR ALL DRIVEWAYS WIDER THAN 24'.
13. EXPANSION JOINTS WILL BE ADJUSTED IN LOCATION TO LINE UP WITH DRIVeway DEPth.

SECTION A-A

SECTION C-C

SECTION B-B

Paving Details

Department of Public Works & Transportation
City of Dallas, Texas

Design, Drafting, & Construction Supervision
City of Dallas, Texas

Date: [Date]
Page No: [Page No]
NOTE: THE GRADE Break AT THE BURGER LINE & AT ANY POINT EXCEPT 5 FEET OF THE BURGER LINE MAY NOT EXCEED 1% PERCENT UNLESS A VERTICAL CURVE IS PROVIDED.

SPECIAL DRIVEWAY TURNOUT DETAIL
LOCAL STREETS

SPECIAL DRIVEWAY TURNOUTS
ONLY FOR DRIVEWAYS CONSTRUCTED 5 FEET OFF THE LOT LINE
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CITY OF DALLAS, TEXAS

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SPECIAL DRIVEWAY TURNOUT DETAIL
LOCAL STREETS

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DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CITY OF DALLAS, TEXAS

NOTE: THE GRADE Break AT THE BURGER LINE & AT ANY POINT EXCEPT 5 FEET OF THE BURGER LINE MAY NOT EXCEED 1% PERCENT UNLESS A VERTICAL CURVE IS PROVIDED.
HALF SECTIONS—REINFORCED CONCRETE PAVEMENT AND CURBS

ALL BASES FOR 2'-6" TO BE NO. 3 TRANSVERSE BARS TO BE SPACED ON 2'-0" CENTERS. ALL CURBS TO BE PARALLELOGRAM IN SECTION AND SYMMETRICAL ABOUT CENTERLINE. ALL BASES TO BE TREATED FOR "H" 1.5 X 1.5

(ALTERNATE DESIGN USING PARABOLIC SECTIONS)

TABLE OF CROWN HEIGHTS AND ORDINATES FOR VARIOUS PARABOLIC SECTIONS

<table>
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<tr>
<td>28&quot;</td>
<td>6.00</td>
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GENERAL NOTES FOR ALL TYPES OF REINFORCED CONCRETE PAVEMENT OR BASE—ARTERIAL, COLLECTOR, & LOCAL

1. ALL SURFACE COMPACTOR UNDER STREET PAVEMENT SHALL BE 18" STICKY PROCTOR DENSITY

2. THE MINIMUM COMPRESSIVE STRENGTH OF CEMENT AT 28 DAYS SHALL BE AS INDICATED ON THE PLANS. NO. 3 TRANSVERSE BARS TO BE SPACED ON 2'-0" CENTERS.

3. CURB AND GUTTER REINFORCEMENT SHALL BE NO. 4 BARS EXCEPT SUCH SPECIFICATIONS AS MIGHT BE LOWERED TO MATCH EXISTING CONDITIONS.

4. CURB AND GUTTER REINFORCEMENT SHALL BE NO. 4 BARS IN ALL CASES IN EACH BLEND OF STRENGTH SPECIFIED ON THE PLANS. NO. 3 TRANSVERSE BARS TO BE SPACED ON 2'-0" CENTERS.

5. CURB AND GUTTER REINFORCEMENT SHALL BE NO. 4 BARS EXCEPT SUCH SPECIFICATIONS AS MIGHT BE LOWERED TO MATCH EXISTING CONDITIONS.

6. CURB AND GUTTER REINFORCEMENT SHALL BE NO. 4 BARS EXCEPT SUCH SPECIFICATIONS AS MIGHT BE LOWERED TO MATCH EXISTING CONDITIONS.

7. CURB AND GUTTER REINFORCEMENT SHALL BE NO. 4 BARS EXCEPT SUCH SPECIFICATIONS AS MIGHT BE LOWERED TO MATCH EXISTING CONDITIONS.

8. CURB AND GUTTER REINFORCEMENT SHALL BE NO. 4 BARS EXCEPT SUCH SPECIFICATIONS AS MIGHT BE LOWERED TO MATCH EXISTING CONDITIONS.

9. CURB AND GUTTER REINFORCEMENT SHALL BE NO. 4 BARS EXCEPT SUCH SPECIFICATIONS AS MIGHT BE LOWERED TO MATCH EXISTING CONDITIONS.

10. CURB AND GUTTER REINFORCEMENT SHALL BE NO. 4 BARS EXCEPT SUCH SPECIFICATIONS AS MIGHT BE LOWERED TO MATCH EXISTING CONDITIONS.

11. CURB AND GUTTER REINFORCEMENT SHALL BE NO. 4 BARS EXCEPT SUCH SPECIFICATIONS AS MIGHT BE LOWERED TO MATCH EXISTING CONDITIONS.
REINFORCEMENT SHALL BE NO. 5 BARS
CBD SEPARATE CURB & GUTTER
SCALE 1"=1'-0"

REINFORCEMENT SHALL BE AS NOTED
CBD INTEGRAL CURB
SCALE 1"=1'-0"

REINFORCEMENT SHALL BE AS NOTED
CBD INTEGRAL CURB & GUTTER
SCALE 1"=1'-0"

PROPERTY LINE OR BLDG. LINE
WARP LINE

SECTION A-A
NO SCALE

NOTES:
1. STANDARD PAYMENT FORMS ARE TO BE USED.

2. BARS WITHIN 24" BOUNDS "D" MUST BE PROTECTED WITH A 2 IN. RUBBER ROLLER.

3. USE PROPER CONSTRUCTION DETAILS WHERE REQUIRED.

SECTION B-B
NO SCALE

NOTES:
1. NO SPECIAL REQUIREMENTS.

NOTE: SEE PAGE 2004 FOR REINFORCEMENT DETAIL.

TYPICAL SIDEWALK
SCALE 1"=1'-0"

NOTE: TAPPED JOINTS FOR REINFORCEMENTS GUTTER GLUE CURB.

CBD INTEGRAL CURB & GUTTER
SCALE 1"=1'-0"

REINFORCEMENT SHALL BE AS NOTED
CBD INTEGRAL CURB
SCALE 1"=1'-0"

CBD SEPARATE CURB & GUTTER
FOR REPLACEMENT OF MID-BLOCK SECTIONS TO MATCH EXISTING
NO SCALE

CBD PAVEMENT REPLACEMENT
SCALE 1"=6'
NO SCALE

CBD DETAIL FOR SHALLOW DEPRESSION INLETS
SCALE 1"=1'-0"
NOTE: SEE PAGE 2004 FOR REINFORCEMENT DETAILS

CITY OF DALLAS, TEXAS
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
DESIGN DRAWN DATE FIL No. PAGE NO.
C.C.W. AREA 25D 1 1007

APPROVED

DATE

MISCELLANEOUS DETAILS
SPECIAL DETAILS

REMARKS OF REINFORCED CONCRETE CURB WILL BE ADDED TO RCP.

NOTE: SEE PAGE 2004 FOR REINFORCEMENT DETAILS.

CBD DETAIL FOR SHALLOW DEPRESSION INLETS
SCALE 1"=1'-0"
NOTE: SEE PAGE 2004 FOR REINFORCEMENT DETAILS
FOOT INLETS
TOTAL STEEL FOR 4'-6" STUOUD DEPTH

WEIGHT OF STEEL MAY VARY WITH INCREASED DEPTH OF STEEL BY 14.01# PER EACH 1/2' FOOT OF EXTRA DEPTH.

USEFUL 10'-0" PROW VIEW FOR CONSTRUCTION JOINTS WITH BLOCKOUT MEXS FOR CONCRETE PAVEMENT

PLAN VIEW - WPEL PROW STREET

SECTION A-A
FALSE BOTTOM WITH BARRED MEXS

SECTION B-B
PLAN

SECTION E-E & HALF SECTION ELEVATION

GENERAL NOTES
1. CONCRETE FOR INLET CONSTRUCTION SHALL BE CLASS H4 OR CEMENT GRADE 2AL WITH MAXIMUM SIZE 4" OF AGGREGATE.
2. Bars perpendicular to street pipes shall be spaced as shown on plans or as directed by the engineer.
3. Structural excavation will not be a separate pay item.
4. All exposed faces around inlet concrete will be dropped 1/2".
5. Inlet cover & frame shall be the same size of 8" as pipe lateral.
6. See sheet 200 for general alignment to inlet detail.
7. Control joints as shown for integral concrete pavement.
8. Drainage components using excess of all interior concrete, concrete stormwater will be provided with no exceed by the contractor.

DRAINAGE DETAILS
"14'-FOOT" CURB INLET
STANDARD DEPTH 4 FEET 6 INCHES
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CITY OF DALLAS, TEXAS
DESIGN
designer
DATE
PREPARED
Reviewed
approving

2003
Section with Asphaltic Concrete Pavement

Section with Reinforced Concrete Pavement

GENERAL NOTES:
1. All concrete to be placed and compacted in accordance with applicable industry standards.
2. Reinforcement must be used in accordance with local codes.
3. Special provisions may be required for drainage installations in certain areas.
4. Additional sections may be required for special applications.
5. All connections must be made in accordance with applicable codes and standards.
6. All concrete to be placed and compacted in accordance with industry standards.
7. Final width of the finished concrete pavement must be determined by the contractor.
8. Final width of the finished concrete pavement must be determined by the contractor.
9. All concrete to be placed and compacted in accordance with industry standards.

DRAINAGE DETAILS
SLOTTED DRAINS
IN STREETS AND ALLEYS
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CITY OF DALLAS, TEXAS

SECTION THROUGH DRIVE

SECTION THROUGH VALLEY

Section 3 With Reinforced Concrete Pavement

Pavement Transition at End of Slotted Drain

Water must not be allowed to flow through property.

NOTE: FOR SHALLOW 3/8" BURNT CHANNELS

WHERE SLOTTED DRAIN MAY BE SUSPECT, APPLIANCE FLOW WILL BE REQUIRED.

REINFORCED CONCRETE PAVEMENT

SECTIONS WITH ASPHALTIC CONCRETE PAVEMENT

Pavement Transition at End of Slotted Drain

Water must not be allowed to flow through property.

NOTE: FOR SHALLOW 3/8" BURNT CHANNELS

WHERE SLOTTED DRAIN MAY BE SUSPECT, APPLIANCE FLOW WILL BE REQUIRED.

SECTIONS WITH ASPHALTIC CONCRETE PAVEMENT

Pavement Transition at End of Slotted Drain

Water must not be allowed to flow through property.

NOTE: FOR SHALLOW 3/8" BURNT CHANNELS

WHERE SLOTTED DRAIN MAY BE SUSPECT, APPLIANCE FLOW WILL BE REQUIRED.

SECTION THROUGH VALLEY

ALERTA, PARKING LOT, ETC.
TYPE A STORM SEWER MANHOLE

ELEVATION

SECTION A-A

CAST IRON MANHOLE FRAME AND COVER

TYPE B STORM SEWER MANHOLE

ELEVATION

SECTION A-A

NOTES:
1. PREFabricated Vehicles of Equivalent Strength may be Substituted with the Approval of the Engineer.
2. Concrete Shell to be a minimum compressive strength of 4000 lbs.
3. Belows Lined in Bitumen or High Performance Liner, Laterals, Drives No.
4. Belows to be Lined at the Contracted Price and Made of Concrete.
5. Concrete Shell to be made from the Pattern and approved by the Engineer.
6. Founders' Bets shall be placed in the center of the Manhole, Vertical.
7. Sections and Seawalls to be placed in the center of the Manhole, Horizontally.
8. A drain basin under concrete shell may be placed along the outside of the Manhole, Horizontally.

SECTION C-C

DRainage Details
MANHOLES AND FITTINGS
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CITY OF DALLAS, TEXAS
CONSTRUCTION JOINT
FOR NORMAL CHANNEL

PARTIAL CHANNEL LINING SECTION

TRANSVERSE EXPANSION JOINT

NOTE: WEEPING SPACES 15' 0. C. LONU1T
LIC ACTED FILL:
WHERE FLL REMOVED)
(80 % DENSTY)

3" WEEP HOLES
B0Tm WDTH
10'
MNlUM
PARTIAL CHANNEL LINING SECTION
SLEEVE FOR DOWEL
SHb+
HAVE 3/8" MA. BARS SPACED 21" C. TO C.
Ali WDE
DIWETER
OF 3/4'
AMJ
WL SERVE AS
DOWELS.
DOWELS' TO BE
SHALL
BE
5
LONC--, ASPHALT C0ATF.D FOR

(2" ON
TM
FREE END

TRANSVESSE EXPANSION JOINT
MOTES' 1. ALL CONSTRUCnION SHXL BE IN COWOWTY WlTH MlRRENT CITY
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DALLAS GENERAL SPECFICATIDNS.
2. CONSTRWTKM JORIT SWOW FOR CONVEMIENCE ONLY - MONOLITHC
CONSTRVCTDN MY
8E
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3. ALL REIWORCHG STEEL
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BE
.4
AMI
SPACED 12" C. TO C. B0M
WAYS UNLESS OTWHWlSE PECRRD.
4. CMICREE SHbLL HAVE A COMPRESSl'r'E STRENGTH OF 3000. Ai
28
DAYS
AND
SWL CONTlUN A MI34 OF 5 SACKS
M'
CEhBENT
PER CUBIC YARD.
5. SDE
SLOPES WALL BE NO STEEPER
MAN
2-1.
6. TOP OF CURB OF PIjACENT &.LEY
OH
STREET
15
MMIWU OF
2'PBOVi
100
YEM W.
7. V5E
A SMOOTH TROWEL FfflISH
CW
BOTTOM PND SLOPED SURFACES.USE Of?MNPIRY
SURFACE FINISH
OW
MRTEK
SURFACES.
8. WMN
SOUD RKX IS ENCOUMTERED BY
NORM&
MANNEL SECTION. REMOVE
6" DEPTH
OF
SOLD ROCK PND REPLACE WlTH
6" DEPTH
OF
CRUSHED ROW
FOUNDATW BELOW PROPOSED CHPMJEL STRUCTURE.

DRAINAGE DETAILS

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CITY OF DALLAS, TEXAS

NOTE: 1. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH CURRENT CITY OF
DALLAS GENERAL SPECIFICATIONS.
2. ALL CONSTRUCTION MYES BE 15' 0. C. LONG TM
LIC ACTED FILL:
WHERE FLL REMOVED)
(80 % DENSTY)

3" WEEP HOLES
B0Tm WDTH
10'
MNlUM
PARTIAL CHANNEL LINING SECTION
SLEEVE FOR DOWEL
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MAN
2-1.
6. TOP OF CURB OF PIjACENT &.LEY
OH
STREET
15
MMIWU OF
2'PBOVi
100
YEM W.
7. V5E
A SMOOTH TROWEL FfflISH
CW
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SURFACE FINISH
OW
MRTEK
SURFACES.
8. WMN
SOUD RKX IS ENCOUMTERED BY
NORM&
MANNEL SECTION. REMOVE
6" DEPTH
OF
SOLD ROCK PND REPLACE WlTH
6" DEPTH
OF
CRUSHED ROW
FOUNDATW BELOW PROPOSED CHPMJEL STRUCTURE.
LA PLAN VIEW

PLAN VIEW
TWO GRATE INLET
NO SCALE

SECTION B-B

PLAN VIEW
FOUR GRATE INLET
NO SCALE

SECTION C-C

PLAN VIEW
SIX GRATE INLET
NO SCALE

SECTION D-D

PLAN VIEW
EIGHT GRATE INLET
NO SCALE

SECTION E-E

1. LATERAL MAY ENTER SLT AT ANY GRADE.
2. EXCAVATION TO BE CONDUCTED.
3. EXTRA DEPTH MAY BE PROVIDED.
4. TYPE "T" GRATES SHALL BE USED AS SHOWN ON SHEET NO. 808.
5. PVC PIPE AT BUSINESS FOR STEEL DETAILS.

G R A T E  I N L E T S  G R A T E  D E T A I L S
CITY OF DALLAS, TEXAS
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION

FRAME DETAIL

SECTION C-C

SECTION F-F

SECTION A-A
### Standard Retaining Wall

#### Design A to K

**High Footing Pressure (H.F.P.)**

**Department of Public Works & Transportation**

**City of Dallas, Texas**

**Design, Date, and File No.**

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<th>Date</th>
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<td>2/4/01</td>
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<td>3001</td>
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#### Standard Retaining Wall

- **Length of Panel**: 36 ft
- **Footing Depth**: 3 ft
- **Average Height of Panel**: 10 ft
- **Design**: 2-panel, scouring or sloped surfacing

**Footings**

- **Concrete Mix**: 3,000 psi

**Materials**

- **Concrete**: 3,000 psi
- **Steel**: 50,000 psi

**Construction Notes**

- **Spacing**: 6" on center
- **Reinforcement**: 4" on center
- **Forms**: 6" on center
- **Backfill**: 9" on center

**Elevations**

- **Top of Wall at High End**: 10 ft
- **Level**: 0 ft

**Sections**

- **Section A**: 2" x 2"
- **Section B**: 2" x 2"
GENERAL NOTES FOR RETAINING WALLS, ALL TYPES (U.N.O.)

1. Retaining Walls shall be constructed of pre-cast concrete units or units having equivalent strength and durability. Pre-cast concrete units shall be a minimum of 1000 psi multinational concrete.

2. All retaining walls shall be designed to meet the load requirements of the applicable building code and the engineer's specifications.

3. All retaining walls shall be designed to meet the load requirements of the applicable building code and the engineer's specifications.

4. All retaining walls shall be designed to meet the load requirements of the applicable building code and the engineer's specifications.

5. All retaining walls shall be designed to meet the load requirements of the applicable building code and the engineer's specifications.

6. Expansion Joints shall be pre-cast concrete units or units having equivalent strength and durability. Pre-cast concrete units shall be a minimum of 1000 psi multinational concrete.

7. All expansion joints shall be pre-cast concrete units or units having equivalent strength and durability. Pre-cast concrete units shall be a minimum of 1000 psi multinational concrete.

8. All expansion joints shall be pre-cast concrete units or units having equivalent strength and durability. Pre-cast concrete units shall be a minimum of 1000 psi multinational concrete.

9. All expansion joints shall be pre-cast concrete units or units having equivalent strength and durability. Pre-cast concrete units shall be a minimum of 1000 psi multinational concrete.
MODIFIED ALLEY TURNOUT

DETAIL "A"

DETAIL "B"

DETAIL "C"

DETAIL "D"

SECTION A-A
(DETAIL "D")
ALLEY AT A TURN PROFILE

DETAL "E"

DETAL "F"

DETAL "G"

DETAL "H"

DETAL "I"

DETAL "K"

STANDARD ALLEY PAVING
ALLEY ANGLES AND INTERSECTIONS
PAVING AND RIGHT-OF-WAY DETAILS
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CITY OF DALLAS, TEXAS

This is an approved alternative to a 90° turn at an alley in the area on the west side of the curve. Use of this alternative requires the approval of the Director of Public Works."
DOUBLE LEG STREETSCAPE SIGNAL FOUNDATION

WATER LINE STREETSCAPE SIGNAL FOUNDATION

TOP VIEW

CONCRETE FOUNDATION

BACK VIEW

TRAFFIC LANE LINE MARKINGS (Typical)

TRAFFIC LANE LINE MARKINGS

PAVEMENT MARKINGS

35' LOCAL & COLLECTOR STREETS

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CITY OF DALLAS, TEXAS

NOTES:

1. 3/8" THICK STEEL PLATE, TEMPLATED WITH HOLES 5/16" GREATER THAN ANCHOR BOLT.
2. CONCRETE TO BE 3000 PSI OR ABOVE, WITH MIN. 3" L.C. OR CLASS B OR CLASS C AS DEFINED IN "TMC TYPICAL CONSTRUCTION AND SPECIFICATIONS" OR "THE IRRIGATION INDUSTRY STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION - CITY OF DALLAS".
3. ALL CONCRETE PLACED IN A FOUNDATION SHALL BE ORIENTED AS INDICATED ON THE INTERSECTION CONSTRUCT LAYOUT.
4. EACH ANCHOR BOLT SHANK SHALL PROTECT 1/2" TO 1/2" ABOVE THE FOUNDATION.
5. ALL STEEL REINFORCEMENT BARS SHALL BE OF INTERMEDIATE GRADE.

TRAFFIC SIGNALS

FOUNDATION DETAILS

DATE:
STANDARD LEFT TURN LANE MARKINGS

DUAL LEFT TURN LANE MARKINGS

TYPICAL CROSSWALK LAYOUT

TYPICAL PAVEMENT MARKING DETAILS

NO SCALE
NOTES:

ALL DIMENSIONS ARE : 1/4" UNLESS OTHERWISE SHOWN.

GENERAL NOTES:
THE PAVEMENT UPON WHICH THE LANE AND CHANNEL MARKERS AND JIGGLE BAR TILES ARE TO BE PLACED SHALL BE PREPARED SUBJECT TO THE APPROVAL OF THE ENGINEER TO INSURE PROPER CLEANING OF THE PAVEMENT SURFACE.

MARKERS SHALL BE PLACED AT SUCH OTHER LOCATIONS AS SHOWN ON THE PLAN AND PROFILE SHEETS OR WHERE DIRECTED BY THE ENGINEER.

MARKERS SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY, THEY ARE NOT INTENDED TO SPECIFY ANY PARTICULAR PRODUCT.

SECTION A
PAVEMENT LANE MARKERS
REFLECTORIZED

SECTION B
PAVEMENT LANE MARKERS
REFLECTORIZED

SECTION C
JIGGLE BAR TILES
NONREFLECTIVE

SECTION D
JIGGLE BAR TILES
REFLECTORIZED

NOTE:

NO SCALE

NOTE: TOLERANCES IS 1/4" UNLESS OTHERWISE SPECIFIED

TWO-WAY REFLECTIVE CERAMIC CHANNEL MARKER, YELLOW COLOR W/ YELLOW REFLECTORS

ONE-WAY REFLECTIVE CERAMIC CHANNEL MARKER, YELLOW OR WHITE COLOR

NOTE: ALL DIMENSIONS ARE : 1/4" UNLESS OTHERWISE SHOWN.

GENERAL NOTES:
THE PAVEMENT UPON WHICH THE LANE AND CHANNEL MARKERS AND JIGGLE BAR TILES ARE TO BE PLACED SHALL BE PREPARED SUBJECT TO THE APPROVAL OF THE ENGINEER TO INSURE PROPER CLEANING OF THE PAVEMENT SURFACE.

MARKERS SHALL BE PLACED AT SUCH OTHER LOCATIONS AS SHOWN ON THE PLAN AND PROFILE SHEETS OR WHERE DIRECTED BY THE ENGINEER.

MARKERS SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY, THEY ARE NOT INTENDED TO SPECIFY ANY PARTICULAR PRODUCT.
OUTPUT CONDUIT CUTS SHALL NOT BE MORE THAN THE DIAMETER OF THE CONDUIT USED.

2. All work associated with tying conduit into an existing foundation shall be done without interfering with the operation of the signal.

3. The exposed part of each anchor bolt shall be cut so that it is flush with the concrete base. The concrete base shall be placed in the hole around the base of the plate. The concrete shall be placed so that it is at least 2" thick.

4. A foundation plate shall be provided for the plate opening. The foundation plate shall be level and securely tied to the existing foundation. The foundation plates shall be provided by the contractor.

5. All washers and nuts needed to complete the installation shall be provided by the contractor.
LOOP DETECTOR INSTALLATION DETAILS

1. INSTALLATION OF LOOP DETECTORS IS TO BE MADE IN THE SHORTEST TIME PRACTICAL IN ORDER TO MINIMIZE DELAY TO TRAFFIC.

2. SAW CUTS SHOULD BE MADE WITH A CONCRETE SAW FORMING STRAIGHT LINES WITH LOOSE MATERIAL REMOVED. THE CUT SHALL BE CLEAN AND DRY WHEN THE SEALING COMPOUND IS PLACED. WHEN A SAW CROSSES A TRANSVERSE EXPANSION JOINT, LOWER THE DEPTH BY 2" WHEN THE SAW IS CENTERED OVER THE EXPANSION JOINT.

3. WIRING OF TYPE 3 LOOPS ONLY -- QUADRAPOLE LOOP WIRE SHALL HAVE 2 CONDUCTOR SHIELDED COPPER TYPE 3 LOOP HAVE 2 CONDUCTOR SHIELDED COPPER OVER 201 SHEATLD HAVE 2 TURNS OF 14 AWG XHHW WIRE. WATERTIGHT SOLDERED CONNECTION OF 14 AWG COPPER WIRE.

4. WIRING OF TYPE 3 LOOPS ONLY -- QUADRAPOLE LOOP WIRE SHALL HAVE 2 ADDITIONAL TURNS. POWERHEADS OF TYPE 2 AND TYPE 4 LOOPS SHALL HAVE 2 ADDITIONAL TURNS.

5. SOLDER ALL CONNECTIONS AND SEAL THEM WITH A WATERPROOF WRAPPING.
ELEVATION - TYPICAL BRIDGE RAILING

SCALE: 3" = 1'-0"

GENERAL CONSTRUCTION NOTES:
1. ALL POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
2. ALL POSTS SHALL BE IN CONCRETE EXCEPT FOR THE PRECAST CONCRETE WINGS. POSTS TO BE PLACED 1' IN CONCRETE OR ON CONCRETE BASE."S" WITH 2" WIDE EXPANSION JOINT."S"
3. ALL POSTS SHALL BE IN CONCRETE OR ON CONCRETE BASE."S" WITH 2" WIDE EXPANSION JOINT."S"
4. CLAMP BAR DETAILS AND WASHERS SHALL BE STAINLESS STEEL. ALL CLAMP BAR DETAILS TO BE INSTALLED IN CONCRETE.
5. POST AND SPICE TUBES SHALL BE EXTENDED ALUMINUM "S" "S" "S" "S" "S" "S"
6. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
7. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
8. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
9. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
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11. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
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16. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
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18. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
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20. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
21. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
22. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
23. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
24. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
25. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
26. POSTS SHALL BE CAST ALUMINUM TUBE 3/4" O.D., WALL Thickness 3/16". ALL TUBES SHALL BE EQUALLY TALL AND LOCATION OF CASTING HOLE TO BE DETERMINED BY CONCRETE PROJECTS ENGINEERING.
**TMS RAIL SECTION 15 TO BE TWISTED THROUGH 90° IN THE FIELD**

**GUMO RAIL DIRECTION OF TRAFFIC**

Approach Section Overrun Item 6-7 - Rail Splice

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**POST CONNECTION STEEL POST**

Rail Splice

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**POST CONNECTION WOOD POST**

Wood Post

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**GENERAL NOTES**

1. Exposed ends of rails shall be protected from damage by means of protective sleeves or other equivalent means.

2. The top of the terminal anchor post assembly and all steel fittings therein shall be galvanized as shown.

3. When rock is encountered or shown on the plans, the diameter of the holes and the type of post shall be as directed by the engineer. Timber post shall not be cemented.

4. The terminal anchor post shall be installed in concrete to a depth of at least 3'-6".

5. Where rock is encountered or shown on the plans, the diameter of the holes shall be as shown. All anchor posts shall be installed in concrete, top to top, with a minimum of 1' of rods exposed.

6. The terminal anchor post shall be installed in concrete with a minimum of 1' of rods exposed.

7. The terminal anchor post shall be installed in concrete to a depth of at least 3'-6".

8. The terminal anchor post shall be installed in concrete with a minimum of 1' of rods exposed.

9. A minimum depth of 3'-6" shall be considered.

10. Wood post shall be treated as approved by the engineer.

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**NOTE:** Variations in post spacing and/or the use of anchor posts or shims may be required by the engineer in order to accommodate the required rail connection to structures.
NOTE. USE A RMSET 4160 MMK

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BARRIER FREE RAMP DETAIL
AT INTERSECTING STREET
WALK ABUTTING CURB
N.T.S.

NOTE:
PAVERS WILL HAVE DETECTABLE WARNING RAYS CONSISTS
OF PAVERS TRUNCATED DOMES WITH A DIAMETER OF 6 IN.
AND A CENTER-TO-CENTER SPACING OF NORMAL 23 IN.
AND SHALL BE DISTANCED FROM CURB EDGES.
PAVERS WILL BE DETECTABLE BY TOUCH.

NOTE:
PAVERS WILL HAVE DETECTABLE WARNING RAYS CONSISTS
OF PAVERS TRUNCATED DOMES WITH A DIAMETER OF 6 IN.
AND A CENTER-TO-CENTER SPACING OF NORMAL 23 IN.
AND SHALL BE DISTANCED FROM CURB EDGES.
PAVERS WILL BE DETECTABLE BY TOUCH.

1. SIDEWALK LUGS, KEYWAYS AND SUBGRADE STABILIZATION SHALL BE REQUIRED WITH ALL
BARRIER FREE RAMPS AGAINST STREET CURBS, SEE PAGE 903 FOR DETAIL SHOWING
SIDEWALK LUG DIMENSIONS.

2. DESIGNS SHOWN ARE FOR 6" CURBS. DIMENSIONS MUST BE INCREASED PROPORTIONATELY
FOR CURBS WITH HEIGHT GREATER THAN 6".

3. STREETS ON STEEP GRADE WILL REQUIRE LONGER TRANSITION ON UPGRADE SIDE.

4. LOCATION OF BARRIER FREE RAMP MAY BE SHIFTED TO CLEAR OBSTRUCTIONS.

5. IN CBD AREA, WARNING PATTERN ON EXISTING SIDEWALK SHALL BE FOLLOWED ON
NEW SIDEWALK EXCEPT THRU THE RAMP AREA OR UNLESS OTHERWISE SPECIFIED
ON THE PLANS.

RAMP ONLY -- RED COLORED PAVERS
PER ADA SECTION 4.29.7

- 6" CONC. BAND
- NO EXPANSION MATERIAL
- PAVERS WILL HAVE DETECTABLE WARNING RAYS CONSISTS
OF PAVERS TRUNCATED DOMES WITH A DIAMETER OF 6 IN.
AND A CENTER-TO-CENTER SPACING OF NORMAL 23 IN.
AND SHALL BE DISTANCED FROM CURB EDGES.
PAVERS WILL BE DETECTABLE BY TOUCH.

BARRIER FREE RAMP
STRAIGHT CURB
N.T.S.

SECTION D-D
N.T.S.

SECTION H-H
N.T.S.

SECTION E-E
N.T.S.

ALLEY TURNOUT DETAIL
(WALK AWAY FROM CURB)
N.T.S.

ALLEY TURNOUT DETAIL
(WALK ABUTTING CURB)
N.T.S.
**Handrail for Steps**

**Steps**

- **Concrete**: 1.0
- **Concrete**: 1.25
- **Concrete**: 1.5
- **Concrete**: 1.75
- **Concrete**: 2.0

**Quantities for Long Steps (Feet)**

- **Concrete**: 1.0
- **Concrete**: 1.25
- **Concrete**: 1.5
- **Concrete**: 1.75
- **Concrete**: 2.0

**Expansion Joints**

- **Effective**: 0.0
- **Effective**: 0.25
- **Effective**: 0.5
- **Effective**: 1.0

**General Notes**

1. Concrete for steps to be class A concrete.
2. Handrail shall be not less than 0.5 feet high from the top of the tread to the bottom of the handrail.
3. Handrail shall be not less than 1 inch thick.
4. Handrail shall be designed and detailed according to the requirements of the applicable building code.
5. Expansion joints shall be a minimum of 0.5 inches.
6. Handrail shall be installed at the top of the step.
7. Handrail shall be a minimum of 0.5 feet high from the top of the tread to the bottom of the handrail.
8. Handrail shall be designed and detailed according to the requirements of the applicable building code.

**Gaps**

- **Expansion joint**: 0.5

**Expansion Joint Bars**

- **No. 3**: 12" Marine
- **No. 3**: 12" Marine

**General Notes**

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3. Handrail shall be not less than 1 inch thick.
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5. Expansion joints shall be a minimum of 0.5 inches.
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8. Handrail shall be designed and detailed according to the requirements of the applicable building code.

**General Notes**

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8. Handrail shall be designed and detailed according to the requirements of the applicable building code.
TYPICAL DOUBLE STREET LIGHT RISER DETAIL

Typical double street light riser detail used for the hot leg shall be suitable for direct burial. A bare conductor may be used for the neutral.

TYPICAL SERVICE RISER DETAIL

Typical service riser detail only. No conductor shall be used for the ground.

Insulated conductor used for the hot leg shall be suitable for direct burial. A bare conductor may be used for the neutral.

Insulated conductor used for the hot leg shall be suitable for direct burial.

INSTALL CONDUCTOR ADJACENT TO NORTH CURB OF MEDIAN ON STREETS THAT RUN EAST AND WEST. INSTALL CONDUCTOR ADJACENT TO THE WEST CURB OF MEDIAN ON STREETS THAT RUN NORTH AND SOUTH.

INSTALL WEATHERHEAD 5/8" STREET LIGHT FITTINGS AND CONDUIT TO HEAT SPECIFIED BY T.I.A.

INSTALL WEATHERHEAD 5/8" STREET LIGHT FITTINGS AND CONDUIT TO HEAT SPECIFIED BY T.I.A.

FOUR CONNECTING BOLTS SHOULD ACCOMMODATE IF BOLT CIRCLE OF POLE BASE PLATE

1/4" X 4" B印记 BOLT TO BE PROTECTED FROM TO INSTALLATION OF STANDARDS BY T.I.A.

4-1/4" X 4" BOLT TO BE PROTECTED FROM TO INSTALLATION OF STANDARDS BY T.I.A.

FOUR CONNECTING BOLTS SHOULD ACCOMMODATE IF BOLT CIRCLE OF POLE BASE PLATE

20 GAUGE COPPER PLATE 75" X 8"

3000 P.S.I. REINFORCED CONCRETE FOUNDATION

FOUNDATION FOR STREET LIGHT ONLY OR FOR COMBINATION STREET LIGHT AND TRAFFIC SIGNAL SEE DETAIL FOR ANCHOR BOLT CIRCLE REQUIREMENTS.

TRANSFORMER BASE DETAIL

TRANSFORMER BASE SHALL BE MOUNTED ON FOUNDATION WITH A 12" DIA BOLT CIRCLE.

3/8" BOLT CIRCLE-USED WHENEVER POLE IS MOUNTED DIRECTLY ON FOUNDATION.

17/8" BOLTS CIRCLE-USED WHENEVER TRANSFORMER BASE IS MOUNTED DIRECTLY ON FOUNDATION.

11/2" BOLT CIRCLE-USED WHENEVER TRANSFORMER BASE IS MOUNTED ON FOUNDATION.

3/8" BOLT CIRCLE-USED WHENEVER POLE IS MOUNTED DIRECTLY ON FOUNDATION.

ANCHOR BOLT CIRCLE REQUIREMENTS

FOR 30 STANDARDS

ANCHOR BOLT CIRCLE REQUIREMENTS

FOR 30 STANDARDS

ANCHOR BOLT CIRCLE REQUIREMENTS

FOR 30 STANDARDS

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