

DRIVEWAY & SIDEWALK EXAM REFERENCE PACKET

A driveway/sidewalk contractor is any person/company constructing or repairing any driveway located on any part of the street, parking lot or other public property, or a setback of the curb along any public street or sidewalk.



HELPFUL LINKS

[Ordinance Pertaining to Sidewalk Contractor](#)

[ADA Compliance Course](#)

[Classification List](#)

[Accela Citizen Access Portal](#)

[Paving & ADA Curb Ramps Standards](#)

[Storm Water Construction Standards](#)

ADA CERTIFICATION

Any applicant applying for a sidewalk contractor's license must obtain an [ADA Certification](#) from Oklahoma City Community College (OCCC) before applying for the Sidewalk Contractor's License. This certification is valid for three years and is available both in person or online.

For more information on taking this course, contact 405-682-7814.

OBTAINING A SIDEWALK & DRIVEWAY LICENSE

START THE APPLICATION

Applications are now available through the Accela Citizen Access Portal (ACA Portal). Start your application by uploading the required documents listed below.

- Photo ID
- Valid ADA Certificate or Card

Additional documentation is required after passing the written exam.

For more information on submitting an application, contact us at prequal@okc.gov

TAKE THE WRITTEN TEST

Once city staff receives notification of your application, a \$50 fee will be added to your account for the written test administered by Field Services. This test is administered on the first Monday of each month at 3735 SW 15th St. Building 2 (Inspection Services Building). Each failed test will require an additional \$50 fee.

Photo ID, license number, and proof of payment must be present to test.

For more information on this test or to reserve your spot, call 405-297-3571

FINISH THE APPLICATION

Once the written test has passed, upload the remaining documents and pay the \$75 application fee.

- Bond Assurance Letter
- Occupation Bond
- Certificate of Insurance

City staff will review documents and issue a conditional approval for a field test.

For more information on submitting an application, contact us at prequal@okc.gov

COMPLETE A FIELD TEST

Your first job is considered your field test and must be completed within six (6) months of the written examination. The field test will be completed under a ROWS- permit and is applied for through the [ACA Portal](#). Make sure to tell staff that this is for a field test. Call 405-297-3571 for inspections once completed.

For more information on how to submit a ROWS- permit for your field test, contact us at pwtechreview@okc.gov

PQ- LICENSE ISSUED

Once both the written and field tests have passed and all associated fees have been paid, City staff will review and issue your driveway/sidewalk license.

Reminder, Licenses are only valid for one year and must be renewed each year.

Application Fees

- \$50 Written Test
- \$75 Application Fee



Renewal Fee

- \$75 - Renewal Before Expiration Date
- \$150 - Renewal After Expiration Date (Within 90 days of Expiration)



CONTACT US

Prequalification

405-297-2581 prequal@okc.gov

Technical Review

405-297-2581 pwtechreview@okc.gov

Field Services

405-297-3571 fieldservices@okc.gov

PAYMENTS CAN BE MADE BY:



Your ACA Portal Account



Over the phone at 405-297-2525 Option #3



In person at our 420 W. Main St Business Center

DRIVEWAY & SIDEWALK EXAM REFERENCE PACKET

A driveway/sidewalk contractor is any person/company constructing or repairing any driveway located on any part of the street, parking lot or other public property, or a setback of the curb along any public street or sidewalk.



§ 50-136. - SIDEWALK CONTRACTOR PREQUALIFICATION REQUIRED.

"No person shall engage in business as a sidewalk contractor without a prequalification issued by the Prequalification Board. Any applicant for a sidewalk contractor's prequalification license must present proof of passing the sidewalk contractor's prequalification exam(s), present a current ADA certification, present proper picture identification, file of the required sidewalk contractor's bond and paying to the City Treasurer the sidewalk contractor's prequalification fee established in Chapter 60, the General Schedule of Fees. Any person not obtaining a prequalification hereunder within 90 days of passing the field test must re-apply for a new sidewalk contractor's prequalification, re-take and pass the sidewalk contractor examines, and comply with the remaining provisions of this article. The ADA certification will be effective for three years from the last day of the ADA certification class. The prequalification holder must have a current ADA certification at time of application and any renewal of the sidewalk contractor's prequalification and whenever engaging in sidewalk construction work. Additionally, prequalification holder with a current ADA certification must be on site whenever sidewalk forms set, materials are poured or placed, and during City inspections."

important

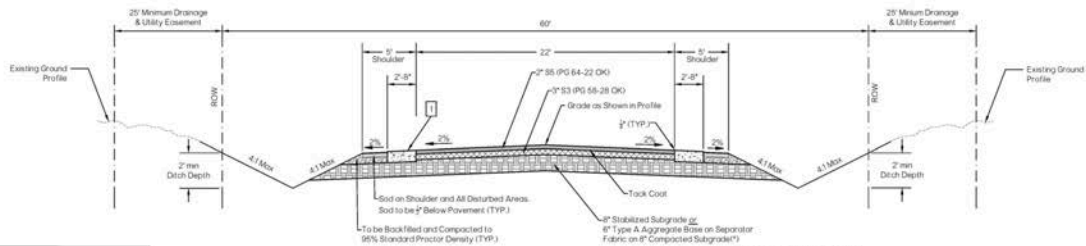
- In cold weather conditions, the temperature must be at least 35 degrees and rising with a forecast of 40 degrees
- Saw joints should be done within 24 hours
- You are required to clean and seal all joints
- It is not acceptable to leave debris on the street, sidewalk or any public way

IMPORTANT DEFINITIONS

- "Person" - as used in the chapter shall mean any individual, person, company, corporation, firm, association, partnership or any other legally established organization or entity.
- "Prequalification Review Board" as used in this chapter shall mean the Board established by resolution adopted by the City for the purpose of investigating, reviewing and considering the granting, renewing, suspending or revoking of prequalification. A copy of the resolution establishing the Prequalification Review Board is on file in the office of the City Clerk.
- "Private property" as used in this chapter shall mean any property other than property owned in fee or leased by the City or a trust or authority of which the City is a beneficiary. It is understood that certain portions of private property upon which the City or a trust or authority of which the City is a beneficiary has an easement, right-of-way or street is also within the definition of public property.
- "Public improvement" as used in this chapter shall mean any beneficial or valuable change or addition, betterment, enhancement or amelioration of or upon any real property, or interest therein, belonging to the City or a trust or authority of which the City is a beneficiary. Public improvement shall also include private work whenever all or a portion thereof will eventually be dedicated or provided for ownership, operation and/or maintenance to the City or a public trust or authority of which the City is a beneficiary.
- "Public property" as used in this chapter shall mean: (1) any real property, or interest therein, owned, managed, leased or operated by the City or a public trust or authority of which the City is a beneficiary; (2) any real property, or interest therein, upon which the City or a public trust or authority of which the City is a beneficiary has a right-of-way, easement or street; (3) any public right-of-way, easement or street; and (4) any real property, or interest therein, which will become public property after or upon the completion and acceptance of the work.

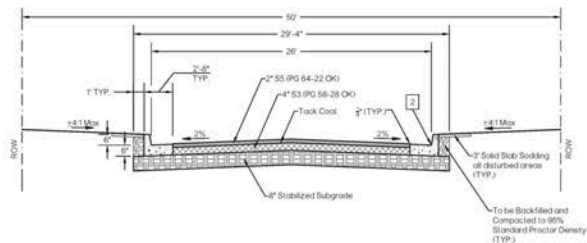


Inspections for driveways and sidewalk construction should be called in within 24 hours.



**TYPICAL SECTION
LOCAL RESIDENTIAL RURAL ROADWAY
R-A and R-A2 Zoning Districts
• 100 •**

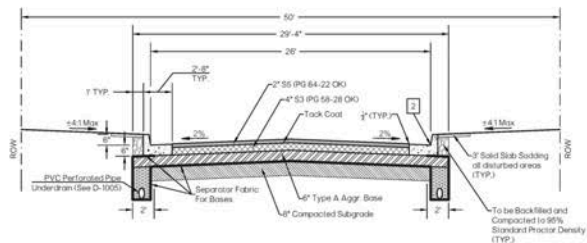
LEGEND	
	Compacted Subgrade
	Backfill
	Soaking
	Cement Treated Base or S3 (PG 58-28 OK)
	Leveling Course



**TYPICAL SECTION
26' HOT MIX ASPHALT PAVING
(STABILIZED SUBGRADE)
LOCAL RESIDENTIAL
• 101 •**

1. Rabbion Curb (See Detail D-200C)
2. Concrete Curb and Gutter (See Detail D-200C)

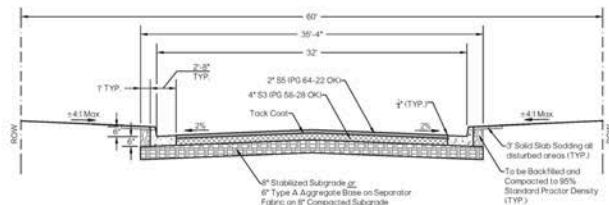
RESIDENTIAL ASPHALT NOTE:
1. S3 BASE COURSES SHALL USE BINDER GRADE PG 58-28 OK WITH A MAXIMUM OF 15% RECLAIMED ASPHALT PAVEMENT (RAP).
2. S5 SURFACE COURSE SHALL USE BINDER GRADE PG 64-22 OK WITH A VIRGIN MIX (NO RAP).
3. COURSE DESIGN MIXES, INCLUDING ACCEPTABLE TEST RESULTS, INDICATING A FINAL PERFORMANCE GRADE OF PG 64-22 OK MAY BE REQUIRED PRIOR TO APPROVAL OF A MIX FOR USE IN THE CITY OF OKLAHOMA CITY.



NOTE: Edge Drain Location to be Determined by the City Engineer. Refer to Pavement Edge Drain Sheet for Details. (See Detail Number D-100S.)

**TYPICAL SECTION
26' HOT MIX ASPHALT PAVING
(AGGREGATE BASE)
LOCAL RESIDENTIAL
• 102 •**

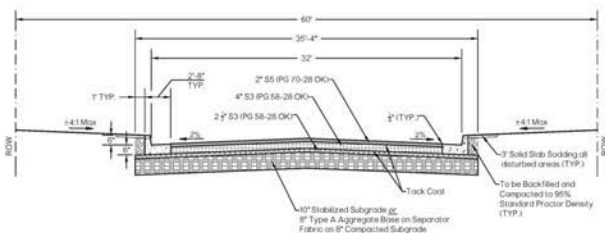
Detail Number
D-100A



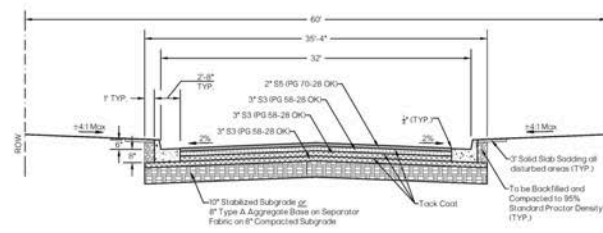
**TYPICAL SECTION
32' HOT MIX ASPHALT PAVING
RESIDENTIAL COLLECTOR
• 110 •**

RESIDENTIAL TYPICAL NOTE:
1. S3 BASE COURSES AND S5 SURFACE COURSES SHALL USE BINDER GRADE PG 58-28 OK WITH A MAXIMUM OF 15% RECLAIMED ASPHALT PAVEMENT (RAP).
2. S5 SURFACE COURSE SHALL USE BINDER GRADE PG 64-22 OK WITH A VIRGIN MIX (NO RAP).
3. COURSE DESIGN MIXES, INCLUDING ACCEPTABLE TEST RESULTS, INDICATING A FINAL PERFORMANCE GRADE OF PG 64-22 OK MAY BE REQUIRED PRIOR TO APPROVAL OF A MIX FOR USE IN THE CITY OF OKLAHOMA CITY.

LEGEND	
	Compacted Subgrade
	Backfill
	Soaking
	Cement Treated Base or S3 (PG 58-28 OK)
	Leveling Course



**TYPICAL SECTION
32' HOT MIX ASPHALT PAVING
COMMERCIAL
• 111 •**



**TYPICAL SECTION
32' HOT MIX ASPHALT PAVING
INDUSTRIAL
• 112 •**

COMMERCIAL/INDUSTRIAL TYPICAL NOTE:
1. S3 BASE COURSES SHALL USE BINDER GRADE PG 58-28 OK WITH A MAXIMUM OF 15% RECLAIMED ASPHALT PAVEMENT (RAP).
2. S5 SURFACE COURSE SHALL USE BINDER GRADE PG 70-28 OK WITH A VIRGIN MIX (NO RAP).
3. COURSE DESIGN MIXES, INCLUDING ACCEPTABLE TEST RESULTS, INDICATING A FINAL PERFORMANCE GRADE OF PG 64-22 OK MAY BE REQUIRED PRIOR TO APPROVAL OF A MIX FOR USE IN THE CITY OF OKLAHOMA CITY.

**STANDARD TYPICAL SECTIONS
ASPHALTIC PAVING**

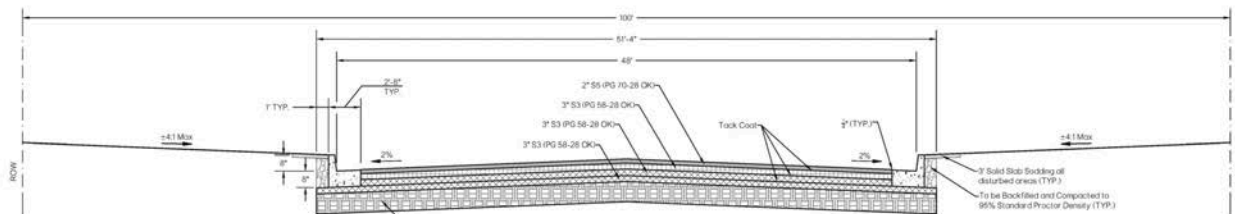
Detail Number
D-100B



APPROVED BY: [Signature]
DATE: 3/9/2023
DRAWN: OWC-PW-688
SHEET: 3/9/2023

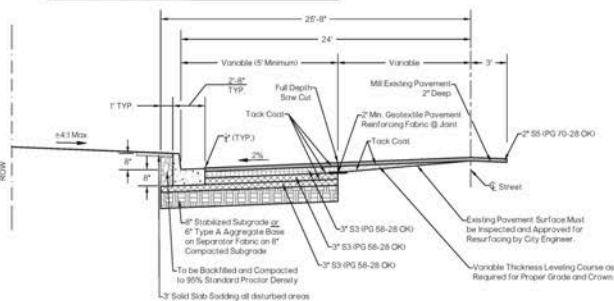
STANDARD TYPICAL SECTIONS
ASPHALTIC PAVING

Detail Number
D-100C

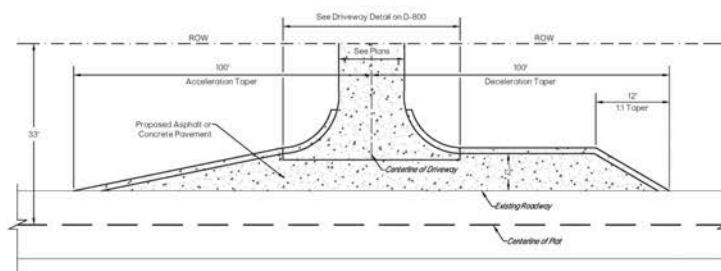


LEGEND	
SS (PG 70-28 OK)	Compacted Subgrade
S3 (PG 64-22 OK) or S3 (PG 58-28 OK)	Backfill
S3 (PG 58-28 OK)	Sodding
P.C. Concrete	Cement Treated Base or S3 (PG 58-28 OK)
Stabilized Subgrade or Type A Aggregate Base	Leveling Course
Type A Aggregate Base (95% SPD Compacted)	

TYPICAL SECTION
48' HOT MIX ASPHALT PAVING
ARTERIAL
• 120 •

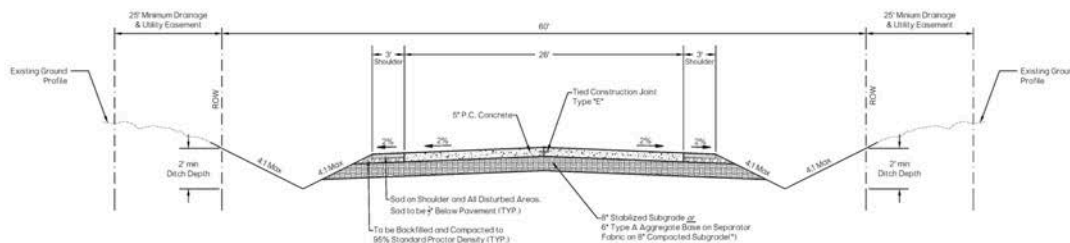


TYPICAL SECTION
VARIABLE WIDENING HOT MIX ASPHALT PAVING
• 130 •



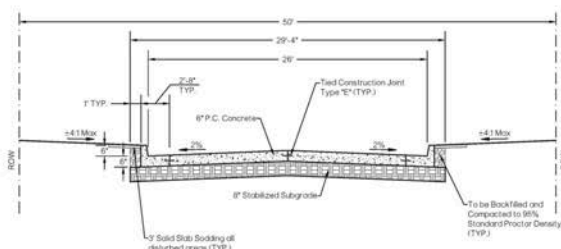
TYPICAL SECTION
RURAL 2-LANE DRIVEWAY ACCESS
• 140 •

ARTERIAL WIDENING TYPICAL NOTE
1. S3 BASE COURSE SHALL USE BINDER GRADE PG 58-28 OK WITH A MAXIMUM OF 10% RECLAIMED ASPHALT PAVEMENT (RAP).
2. S3 SURFACE COURSE SHALL USE BINDER GRADE PG 70-28 OK WITH A VIRGIN MIX (NO RAP).
3. COURSE DESIGN MIXES, INCLUDING ACCEPTABLE TEST RESULTS, INDICATING A FINAL PERFORMANCE GRADE OF PG 64-22 OK MAY BE REQUIRED PRIOR TO APPROVAL OF A MIX FOR USE IN THE CITY OF OKLAHOMA CITY.

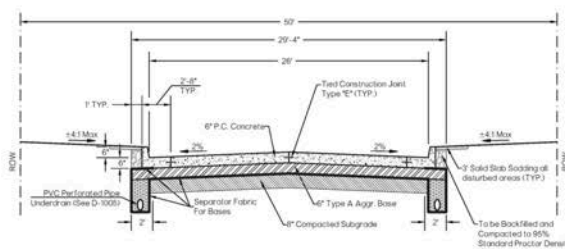


TYPICAL SECTION
LOCAL RESIDENTIAL RURAL ROADWAY
R-A and R-A2 Zoning Districts
• 200 •

LEGEND	
SS (PG 70-28 OK) or SS (PG 64-22 OK)	Compacted Subgrade
S3 (PG 58-28 OK)	Backfill
P.C. Concrete	Sodding
Stabilized Subgrade or Type A Aggregate Base	Cement Treated Base or S3 (PG 58-28 OK)
Type A Aggregate Base (95% SPD Compacted)	Leveling Course



TYPICAL SECTION
26' P.C. CONCRETE PAVING
(STABILIZED SUBGRADE)
LOCAL RESIDENTIAL
• 201 •



NOTE: Edge Drain Location to be Determined by the City Engineer. Refer to Pavement Edge Drain Sheet for Details. (See Detail Number D-1005.)

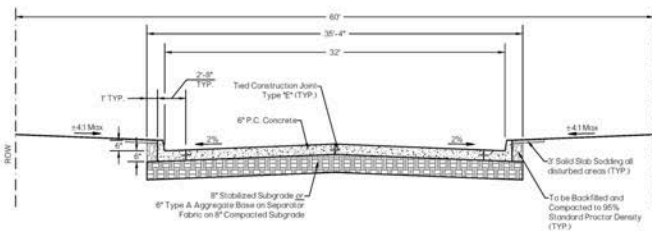
TYPICAL SECTION
26' P.C. CONCRETE PAVING
(AGGREGATE BASE)
LOCAL RESIDENTIAL
• 202 •



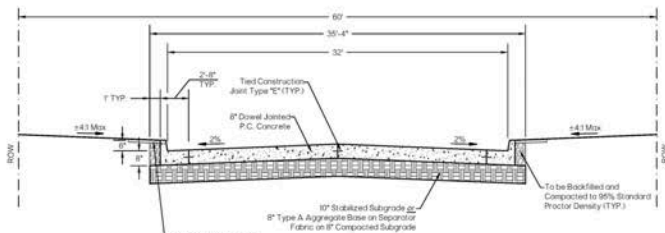
APPROVED BY: [Signature]
DATE: 3/9/2023
DRAWN: OWC-PW-688
SHEET: 3/9/2023

STANDARD TYPICAL SECTIONS
P.C. CONCRETE PAVING

Detail Number
D-300A

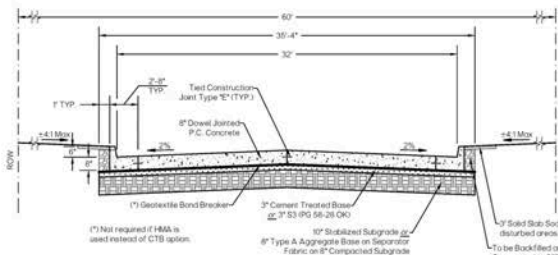


TYPICAL SECTION
32' P.C. CONCRETE PAVING
RESIDENTIAL COLLECTOR
• 210 •

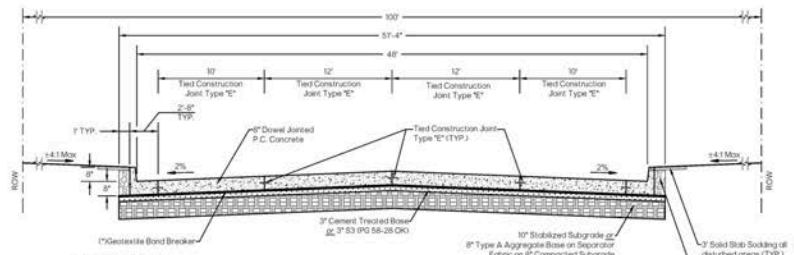


TYPICAL SECTION
32' P.C. CONCRETE PAVING
COMMERCIAL
• 211 •

LEGEND	
55 (PG 70-28 OK) or 55 (PG 64-22 OK)	Compacted Subgrade
53 (PG 58-28 OK)	Backfill
P.C. Concrete	Sodding
Stabilized Subgrade or Type A Aggregate Base	Cement Treated Base or 53 (PG 58-28 OK)
Type A Aggregate Base (95% SD Compaction)	Leveling Course



TYPICAL SECTION
32' P.C. CONCRETE PAVING
INDUSTRIAL
• 212 •



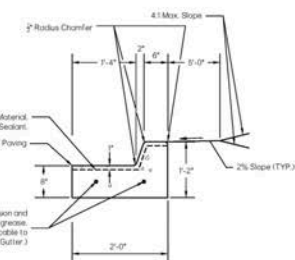
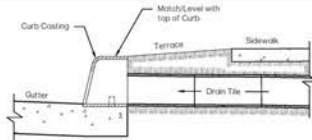
TYPICAL SECTION
48' P.C. CONCRETE PAVING
ARTERIAL
• 220 •



EXPLANATION OF DIMENSIONS
TOP DIMENSION R-3262-3
BOTTOM DIMENSION R-3262-4

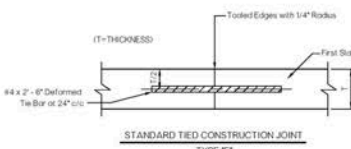


STORM WATER CURB OPENINGS
NEENAH R-3262-3 & R-3262-4

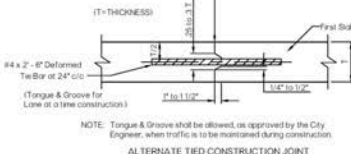


NOTE: Maximum spacing of 1/2" Expansion Joints to be 100' c/c with Contraction Joints 10' - 20' apart to match Driveway Returns. Expansion Joint spacing not applicable to slip formed Curb and Gutter.

CONCRETE CURB & GUTTER DETAIL FOR DOWNSLOPE



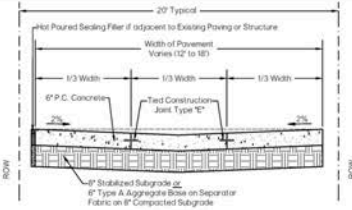
STANDARD TIED CONSTRUCTION JOINT
TYPE "E"



ALTERNATE TIED CONSTRUCTION JOINT
TYPE "E"

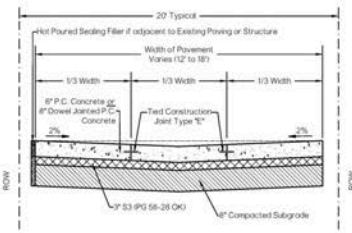
NOTE: Tongue & Groove shall be allowed, as approved by the City Engineer, when traffic is to be maintained during construction.

* For use in residential street only, unless otherwise approved by City Engineer.



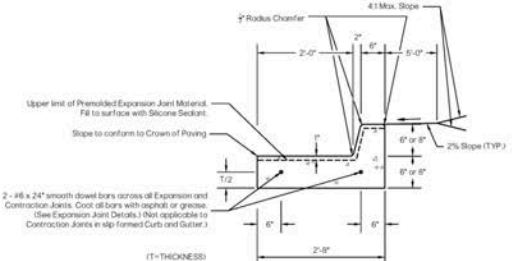
TYPICAL SECTION
P.C. CONCRETE ALLEY PAVING
LOCAL RESIDENTIAL
• 230 •

NOTE: Transverse Joints at 10' MAX.



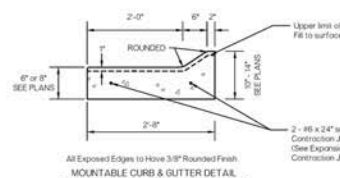
TYPICAL SECTION
P.C. CONCRETE ALLEY PAVING
COMMERCIAL/INDUSTRIAL
• 231 •

NOTE: Transverse Joints at 10' MAX.



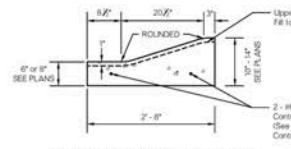
NOTE: Maximum spacing of 1/2" Expansion Joints to be 100' c/c with Contraction Joints 10' - 20' apart to match Driveway Returns. Expansion Joint spacing not applicable to slip formed Curb and Gutter.

BARRIER CURB & GUTTER DETAIL
(TYPE 1)



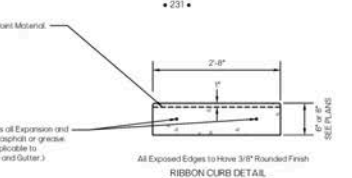
SPECIAL MOUNTABLE CURB & GUTTER DETAIL
(TYPE 2)

* For use in residential street only, unless otherwise approved by City Engineer.



SPECIAL MOUNTABLE CURB & GUTTER DETAIL
(TYPE 3)

* For use in residential street only, unless otherwise approved by City Engineer.



RIBBON CURB DETAIL
(TYPE 4)

* For use in residential street only.

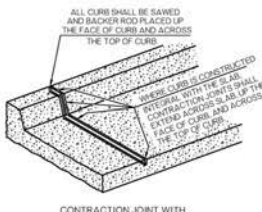
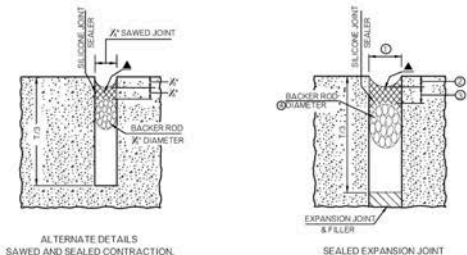
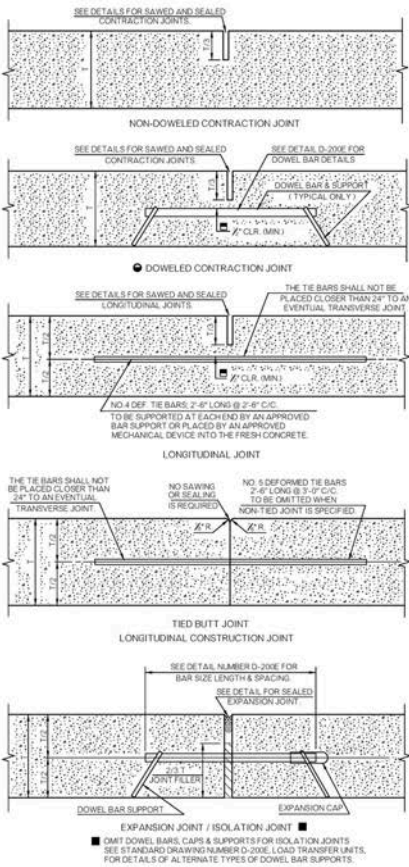
CURBS FOR P.C. CONCRETE PAVEMENT NOTE:
1. #4 Ties are 2'-0" long and are required at 24" centers if Curb & Gutter are cast integrally with the P.C. Concrete street pavement. Longitudinal Construction Joints on Local and Collector streets only, with the approval of the City Engineer, be Built Type Joints with Ties.



APPROVED: [Signature]
DATE: 3/9/2023
DESIGNED: [Signature]
CHECKED: [Signature]
DRAWN: OMC-PW-SRB

LONGITUDINAL, EXPANSION AND
CONTRACTION JOINTS DETAILS

Detail Number
D-2000



EXPANSION JOINT / ISOLATION JOINT TREATMENT TABLE			
JOINT WIDTH ①	SEALANT RECESS DEPTH ②	SILICONE SEALANT THICKNESS ③	BACKER ROD DIAMETER ④
INCHES	INCHES	INCHES	INCHES
3/4"	3/4"	3/4"	3/4"
1"	1"	1"	1"
1 1/2"	1 1/2"	1 1/2"	1 1/2"
2"	2"	2"	2"

DETAILS FOR SEALED EXPANSION / ISOLATION JOINT
EXPANSION OR ISOLATION JOINT WIDTH SHALL BE 1/2" UNLESS OTHERWISE SPECIFIED ON THE PLANS. TABLE VALUES AS SHOWN THIS TABLE, SHALL BE USED IN THOSE SPECIFIED CASES.

- GENERAL NOTES**
- ALL CONSTRUCTION AND MATERIALS REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE OKC STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS.
 - ONLY SILICONE SEALANT MEETING REQUIREMENTS OF THE OKC STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS SHALL BE ACCEPTABLE FOR USE.
 - ALL JOINTS SHALL BE CLEANED IN ACCORDANCE WITH THE OKC STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS. WATER FLUSHING AND AIR CLEANING OF JOINT SHALL BE IN ONLY ONE DIRECTION FORWARD. SANDBLASTING SHALL BE PERFORMED IN TWO PASSES, ONE FOR EACH FACE OF THE JOINT.
 - THE SHAPE FACTOR COMBINED WITH JOINT CLEANNESS IS THE CRITICAL COMBINATION NECESSARY TO GUARANTEE DESIRED BONDING AND FUNCTION OF SEALED JOINTS. NO TOLERANCE EXCEPT THOSE SHOWN HERE WILL BE ALLOWED.
 - THE JOINT SHAPE FACTOR IS DEFINED AS THE FINAL PRESSED SHAPE OF THE SILICONE MATERIAL. THE TOOLING OPERATOR WILL FINALLY PRESS THE FRESHLY APPLIED MATERIAL INTIMATELY AGAINST THE CUT SIZES OF THE RECESS AND THE BACKER ROD SURFACES. THE REQUIRED SHAPE ON TOP AND BOTTOM OF THE SILICONE ALLOWS THE SEALANT TO PROPERLY FLEX BUT MAINTAIN ADHERENCE TO THE PAVING.
 - ON JOINTED PORTLAND CEMENT CONCRETE PAVEMENTS, DOWELED CONTRACTION JOINTS SHALL BE USED ON DRIVING LANES ONLY. CONCRETE SHOULDERS SHALL NOT BE DOWELED UNLESS SPECIFIED ON THE PLANS.
 - LONGITUDINAL JOINTS BETWEEN PAVEMENT AND TIED CONCRETE SHOULDERS SHALL NOT BE SAWED OR SEALED UNLESS OTHERWISE SHOWN ON THE PLANS.
 - ON ALL SAWED JOINTS, THE RECESS DEPTH SHALL CLEAR DOWEL BARS, TIE BARS AND/OR REINFORCING STEEL BY A MINIMUM OF 1/2".
 - CONTRACTION JOINTS IN JOINTED P.C. PAVEMENT SHALL BE AT APPROXIMATELY 30'-0" CENTERS, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

JOINT REHABILITATION TREATMENT TABLE				
JOINT WIDTH ①	DEPTH OF CUT ②	SEALANT RECESS DEPTH ③	SILICONE SEALANT THICKNESS ④	BACKER ROD DIAMETER ⑤
INCHES	INCHES	INCHES	INCHES	INCHES
3/4"	1/2"	3/4" MIN.	3/4"	3/4"
1"	1/2"	3/4" MIN.	3/4"	3/4"
1 1/2"	1/2"	3/4" MIN.	3/4"	3/4"
2"	1/2"	3/4" MIN.	3/4"	3/4"
OVER 2"	OVER 2"	—	—	1 1/2"

JOINT REHABILITATION - POLYMER SEALANT

JOINT REHABILITATION TREATMENT TABLE				
JOINT WIDTH ①	DEPTH OF CUT ②	SEALANT RECESS DEPTH ③	SILICONE SEALANT THICKNESS ④	BACKER ROD DIAMETER ⑤
INCHES	INCHES	INCHES	INCHES	INCHES
3/4"	1/2"	3/4"	3/4"	3/4"
1"	1/2"	3/4"	3/4"	3/4"
1 1/2"	1/2"	3/4"	3/4"	3/4"
2"	1/2"	3/4"	3/4"	3/4"
OVER 2"	OVER 2"	—	—	1 1/2"

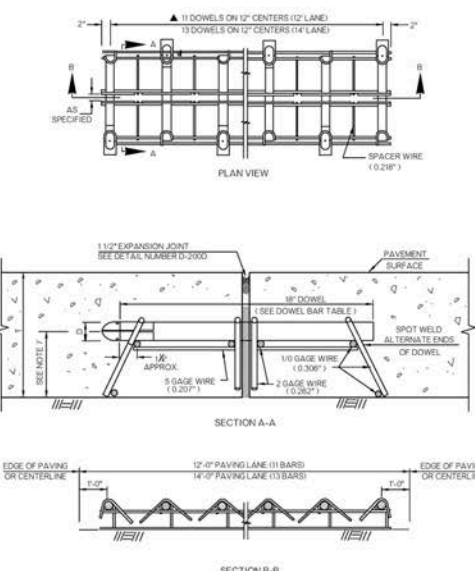
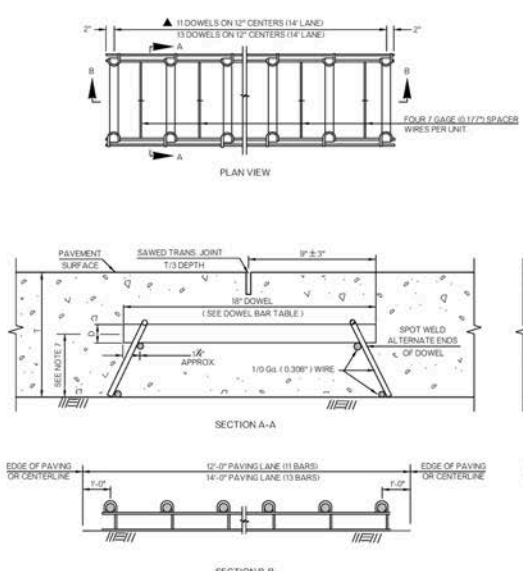
JOINT REHABILITATION - SILICONE SEALANT



APPROVED: [Signature]
DATE: 3/9/2023
DESIGNED: [Signature]
CHECKED: [Signature]
DRAWN: OMC-PW-SRB

LOAD TRANSFER UNITS FOR
CONCRETE PAVEMENT JOINTS
DETAILS

Detail Number
D-2000



DOWEL BARS				
SPACING & SIZE DATA	(1)	(2)	(3)	(4)
SPACING	SPACING	SPACING	SPACING	SPACING
7'-0"	12"	18"	12"	12"
10'-0"	12"	18"	12"	12"

DOWEL DIAMETER WILL BE DETERMINED BY THE SLAB DEPTH. 1" FOR THE NORMAL DEPTH WHEN SLAB DEPTH IS 18" OR LESS. 1 1/2" FOR THE NORMAL DEPTH WHEN SLAB DEPTH IS 20" OR MORE. THE CALCULATED NORMAL DEPTH WILL BE SHOWN ON THE PLANS.

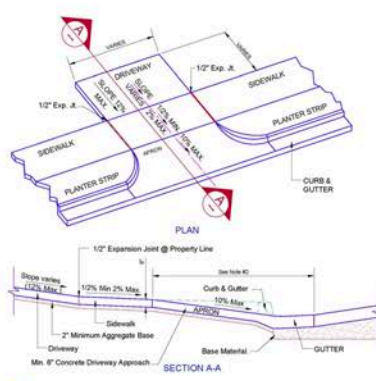
- GENERAL NOTES**
- ALL CONSTRUCTION AND MATERIALS REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE OKC STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS.
 - ANY DEVICE USED FOR SUPPORTING DOWELS SHALL HAVE SUFFICIENT RIGIDITY AND BE HELD IN PLACE DURING CONCRETE PLACEMENT SO THAT DOWELS WILL BE IN SPECIFIED POSITION IN THE FINISHED PAVEMENT. ANY DEVICE NOT PRODUCING THE SPECIFIED RESULTS SHALL BE REJECTED.
 - PRODUCER AND CONTRACTOR SHALL AVOID PATENT INFRINGEMENT OF THE BASKET AND SHALL SAVE THE CITY HARMLESS IN THE USE OF ANY BASKET.
 - THE CONTRACTOR MAY SELECT THE TYPE OF BASKET TO BE USED. AFTER THE SELECTION IS MADE, THE SAME TYPE BASKET SHALL BE USED THROUGHOUT THE PROJECT, UNLESS APPROVED OTHERWISE BY THE CITY ENGINEER.
 - COLD-DRAWN STEEL WIRE USED FOR DOWEL BASKETS SHALL BE ACCEPTED BY VISUAL FIELD INSPECTION, AS PROVIDING SUFFICIENT DOWEL BAR SUPPORT DURING PAVING PROCESS.
 - DOWEL BARS SHALL BE GRADE 60 PLAIN BARS. DOWEL BARS SHALL BE CENTERED ON THE BASKET REGARDLESS OF THE WIDTH OF THE BASKET OR THE LENGTH OF THE DOWEL BAR.
 - THE HEIGHT OF THE LOAD TRANSFER UNIT (MEASURED TO THE CENTER OF THE DOWEL BAR FROM THE PAVEMENT SURFACE) SHALL BE 1/2 THE THICKNESS OF THE PAVEMENT, PLUS OR MINUS 1/2 THE DIAMETER OF DOWEL BAR OF THE UNIT.
 - DOWEL BARS SHALL HAVE A SHOP APPLIED EPOXY COATING OVER THEIR ENTIRE LENGTH (ENDS EXCEPTED). ADDITIONALLY, DOWELS SHALL BE COMPLETELY COATED WITH A FORM RELEASE AGENT (OR APPROVED EQUIVALENT BOND BREAKER) APPLIED IN THE FIELD, IMMEDIATELY PRIOR TO PAVING. THE FORM RELEASE AGENT SHALL NOT BE ALLOWED TO EVAPORATE FROM THE BARS PRIOR TO PAVING.
 - FOR EXPANSION JOINTS, THE DOWEL BARS SHALL HAVE EXPANSION CAPS WITH A MINIMUM 1" AND A MAXIMUM 2" AIR SPACE IN THE END OF THE EXPANSION CAPS (EXPANSION JOINT ASSEMBLY).
 - THE CONTRACTOR SHALL DEMONSTRATE TO THE CITY ENGINEER A STAKING PATTERN THAT SHALL SECURE ALL DOWEL BASKETS SUCH THAT THE FINAL DOWEL POSITION IS WITHIN SPECIFICATION LIMITS.
 - FOR EXPANSION JOINTS, IN ADDITION TO THE SUPPORTS INDICATED, THE CONTRACTOR SHALL PROVIDE BUTTABLE INSTALLING DEVICES AND SUCH ADDITIONAL STAKES AS MAY BE REQUIRED TO HOLD THE JOINT FILLER VERTICAL AND SECURELY IN PLACE AND POSITION. THE CONTRACTOR WILL ALSO BE REQUIRED TO SATISFACTORILY FORM THE UPPER PORTION OF THE JOINT FOR RECEIVING THE SEAL. SEE ATTACHED DETAIL NUMBER D-2000.



APPROVED BY: [Signature]
DATE: 05-12-23
VISC: [Signature]
CITY ENGINEER
DRAWN: [Signature]
DATE: 02-05-13

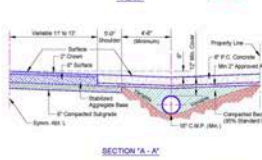
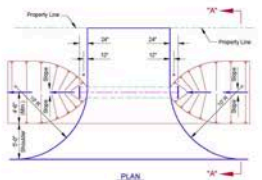
STANDARD TYPICAL SECTIONS DRIVEWAY DETAILS

Drawing Number
D-300

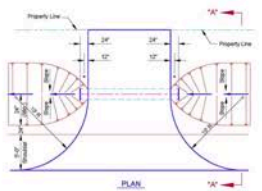


- NOTES:
1. A 5' - 0" minimum radius is approved for one & two family residences not abutting a limited access or major street. All other Driveways will have a 10' - 0" minimum radius.
 2. The Driveway Contractor shall saw out & remove the complete Curb & Gutter section. Saw cuts shall be 2" or 1/3 the depth of the gutter, whichever is greater. Saw cuts shall include the top & base of curb as well as the gutter. Saw cuts shall be made prior to the removal of concrete.
 3. If a gutter holds water prior to any construction by driveway Contractor, he should notify the City Engineer of the situation before doing any work. The completed driveway work will not be accepted if the gutter holds water due to poor construction by the Contractor.
 4. It is recognized that this driveway detail will not cover every possible situation encountered in construction. Additional expansion joints will be required as needed.
 5. Clean and seal all joints and saw cuts in accordance with standard specifications.
 6. Longitudinal joint required for drives 18' wide & greater. Saw cut 2" deep and fill with silicone sealant. Transverse Joints Required at 10' Maximum Spacing.
 7. Do not turn radius in front of adjacent property without written permission from adjacent property owner.
 8. Commercial or industrial driveway approaches may be thicker or approved by the City Engineer.

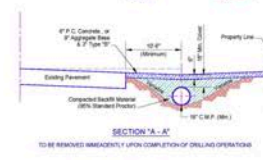
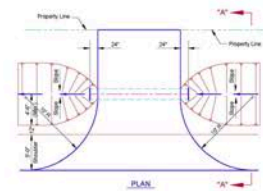
DRIVEWAY DETAILS
+710'



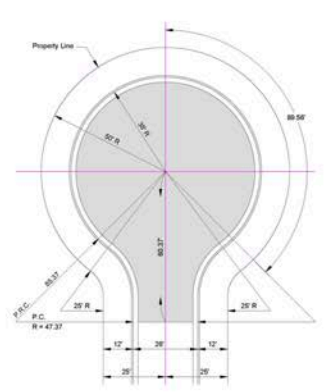
DRIVEWAY DETAILS FOR RURAL ESTATES DEVELOPMENT
+331'



DRIVEWAY DETAILS FOR AGRICULTURAL ESTATES
R-1 ZONING
+331'



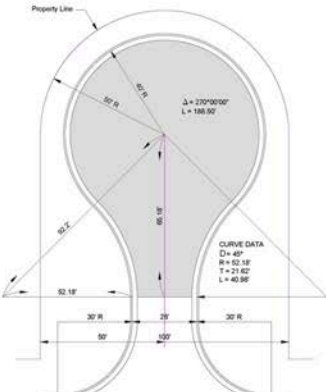
TEMPORARY DRIVEWAY DETAILS
FOR OIL FIELD DEVELOPMENT ACCESS
+342'



MATERIAL IN SAC BEYOND P.C.
331.5 S.Y. ASPHALTIC CONCRETE
987.9 S.Y. P.C. CONCRETE
548.9 S.Y. BASE (10' Back of Curb)
253.52 L.C. CURB

CURVE DATA
 $\Delta = 40^\circ$
 $R = 47.37'$
 $T = 19.82'$
 $L = 37.20'$

STANDARD CUL-DE-SAC -- 38' R

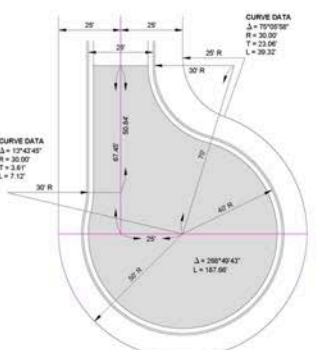


P.C. CONCRETE
279.46 L.F. CONCRETE & GUTTER
663.32 S.Y. P.C. CONCRETE
792.10 S.Y. BASE (includes to 10' Back of Curb)

ASPHALTIC CONCRETE
279.46 L.F. CONCRETE & GUTTER
663.32 S.Y. ASPHALTIC CONCRETE
792.10 S.Y. BASE (includes to 10' Back of Curb)

CURVE DATA
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 $R = 52.18'$
 $T = 21.62'$
 $L = 40.98'$

STANDARD CUL-DE-SAC -- 40' R

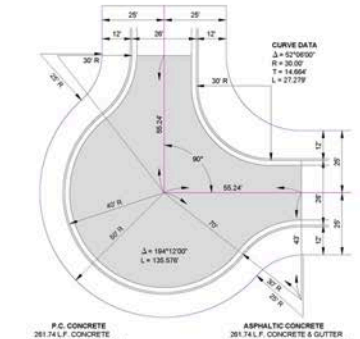


P.C. CONCRETE
288.94 L.F. CONCRETE & GUTTER
684.40 S.Y. P.C. CONCRETE
795.75 S.Y. BASE (includes to 10' Back of Curb)

ASPHALTIC CONCRETE
288.94 L.F. CONCRETE & GUTTER
684.40 S.Y. ASPHALTIC CONCRETE
795.75 S.Y. BASE (includes to 10' Back of Curb)

CURVE DATA
 $\Delta = 170^\circ 00' 00''$
 $R = 30.00'$
 $T = 2.61'$
 $L = 7.12'$

OFF-SET CUL-DE-SAC

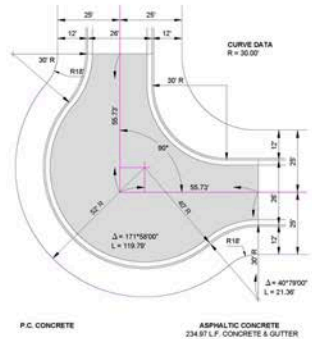


P.C. CONCRETE
281.74 L.F. CONCRETE & GUTTER
678.66 S.Y. P.C. CONCRETE
863.10 S.Y. BASE (includes to 10' Back of Curb)

ASPHALTIC CONCRETE
281.74 L.F. CONCRETE & GUTTER
678.66 S.Y. ASPHALTIC CONCRETE
863.10 S.Y. BASE (includes to 10' Back of Curb)

CURVE DATA
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 $R = 30.00'$
 $T = 14.666'$
 $L = 27.279'$

90° CUL-DE-SAC

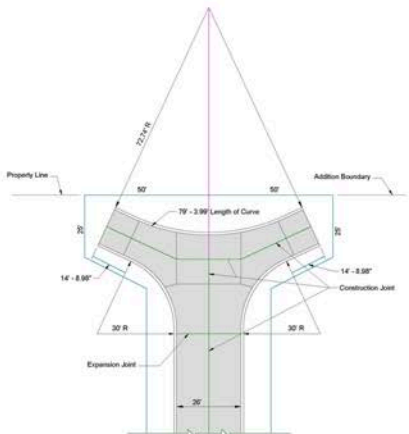


P.C. CONCRETE
27.64 L.F. curb/gutter or 10' offset.
Approx. 91 to similar area.

ASPHALTIC CONCRETE
27.64 L.F. CONCRETE & GUTTER

CURVE DATA
 $R = 30.00'$

90° CUL-DE-SAC



STANDARD "T" TURN AROUND

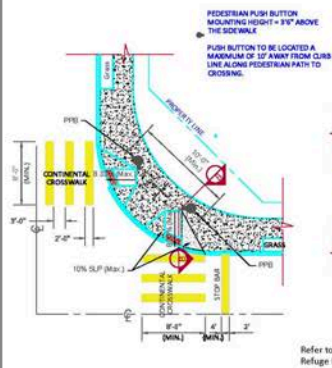


APPROVED BY: [Signature]
DATE: 02-05-13
VISC: [Signature]
CITY ENGINEER
DRAWN: [Signature]
DATE: 02-05-13

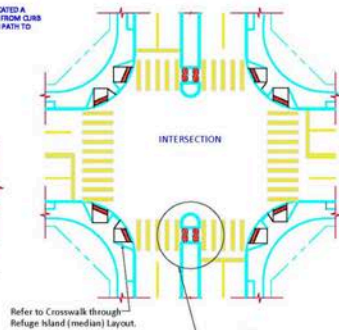
STANDARD DETAILS FOR CUL-DE-SACS

Drawing Number
D-400

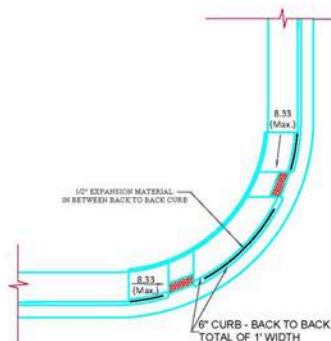
Drawing Number
D-500



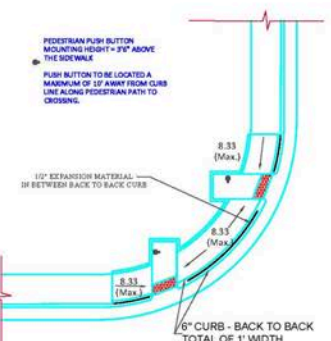
**CURB RAMP
TYPE "A"**



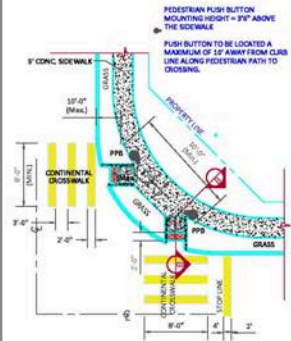
**INTERSECTION WITH
REFUGE ISLANDS LAYOUT**



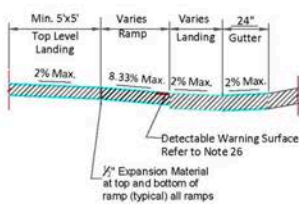
**BACK OF CURB RAMP
WITHOUT PEDESTRIAN PUSH BUTTON
TYPE "G"**



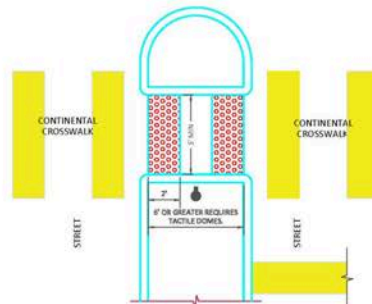
**BACK OF CURB RAMP
WITH PEDESTRIAN PUSH BUTTON
TYPE "G"**



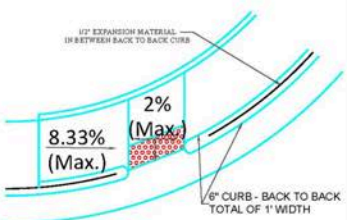
**CURB RAMP
TYPE "B"**
See Detail 1 & Detail 2 (Sheet B)



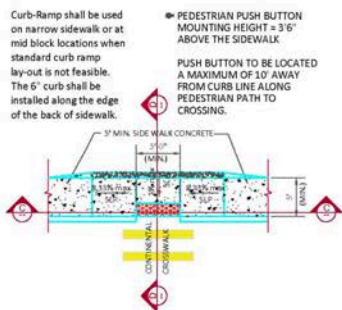
SECTION B-B



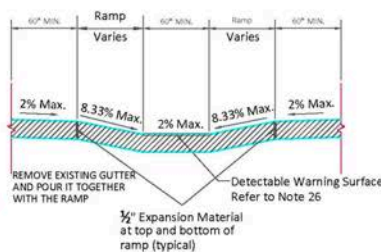
**STANDARD CROSSWALK THROUGH
MEDIAN LAYOUT
TYPE "C"**



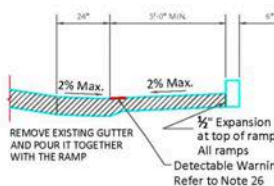
**DETAIL OF
TYPE "G"
RAMP**



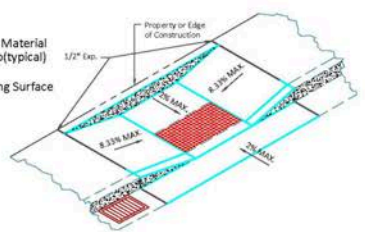
**PARALLEL CURB RAMP
TYPE "D"**



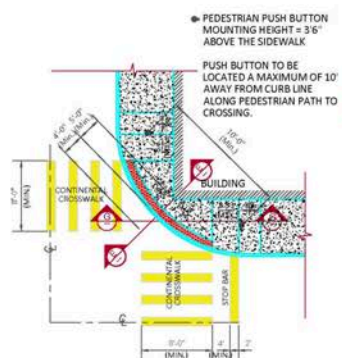
SECTION C-C



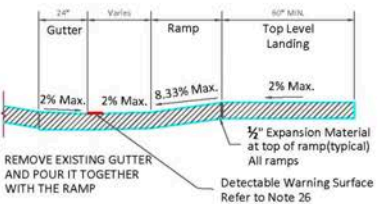
SECTION D-D
See Detail 2 for Isometric View



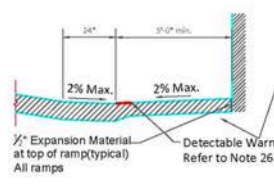
DETAIL 2 TYPE D
Isometric



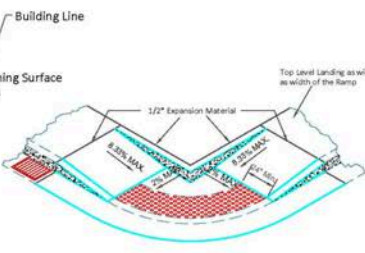
**RADIUS CURB RAMP
TYPE "E"**
See Detail 3 for Isometric View
Written approval by the City Engineer is required.



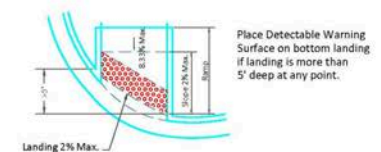
**SECTION G-G
TYPE "E"**



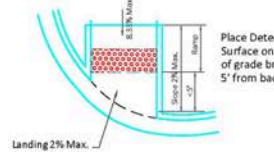
**SECTION E-E
TYPE "E"**
See Detail 3 for Isometric View



DETAIL 3 TYPE E
Isometric

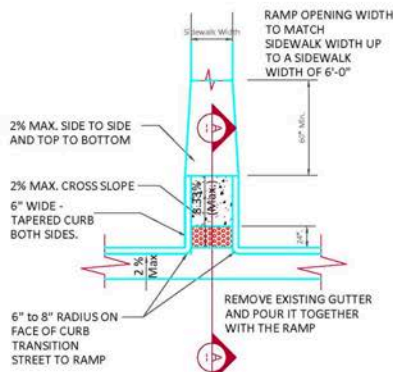


DETAIL 1

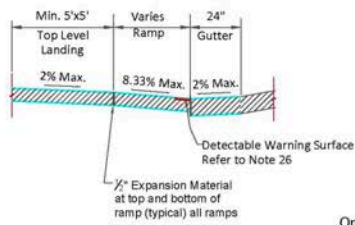


DETAIL 2





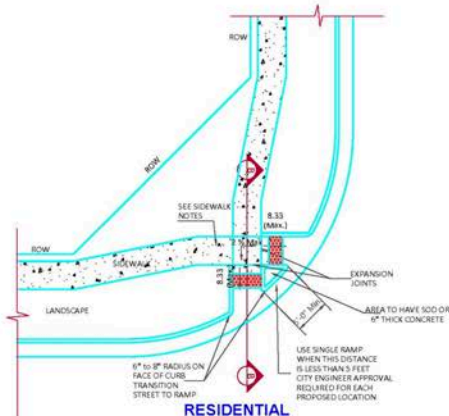
METHOD OF TRANSITIONING A RAMP WITH DIE OUT CURBS



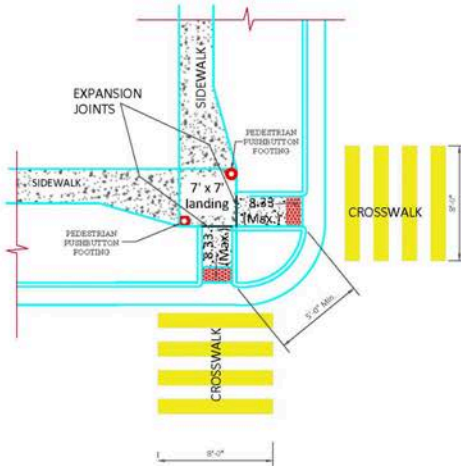
SECTION A-A

Omit tactile domes on Commercial Driveways

ARTERIAL / MINOR STREET RAMPs (OR COMMERCIAL DRIVES)



RESIDENTIAL CURB RAMP TYPE "F"

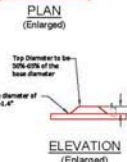
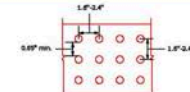


SHARED LANDING AT SIGNALIZED INTERSECTIONS

DETAIL 1

Detectable Warning Surface Specifications:

- Must provide a Visual Contrast.
- Raised Tactile surfaces used for way finding.
- Detectable Warning Surface shall be installed in a manner such that the domes are parallel to the direction of pedestrian travel.
- Install the Detectable Warning Surface beginning at back of curb.



DETECTABLE WARNING SURFACE PATTERN LAYOUT

**ADA CURB RAMP DETAILS
RESIDENTIAL STREETS
COMMERCIAL DRIVES**

Drawing Number
D-750
C

The City of
Oklahoma City
Public Works Department
Engineering Division



APPROVED BY: [Signature]
DATE: 08/12/2023
BY: [Signature]
CITY ENGINEER
DRAWN: [Signature]
DATE: [Signature]

ADA CURB RAMP DETAILS

Drawing Number
D-750
D

Sidewalk Notes:

1. All work must meet current Americans with Disabilities Act (ADA) requirements.
2. Minimum sidewalk width shall be as follows: residential, 5'-0" at curb, 4'-0" at property line; commercial, 6'-0" at curb, 5'-0" at property line.
3. Sidewalk cross slope shall be a maximum of 2% and a minimum of 1/2% cross slope.
4. Whenever the width of the sidewalk is less than 5'-0", a 5' x 5' passing area with a maximum 2% slope and minimum 1/2% slope in any direction at intervals of 200' shall be installed.
5. Whenever changing direction in a sidewalk, install a 5' x 5' passing area with maximum 2% slope and minimum 1/2% slope in any direction.
6. Objects such as tree branches, signs, water fountains, etc. shall not protrude into the sidewalk more than 4" at the heights between 27" and 80".
7. Sidewalk shall be constructed of 4" thick concrete with medium broom finish on top of 2" of 1 1/2" crusher run, 3/4" rock screenings, 1 1/2" clean recycled concrete or approved equal. Developers of Residential Neighborhoods are allowed the usage of 2" of sand instead of the required crusher run.
8. All obstructions into the walk, such as power poles, hydrants, sign posts, etc. must have at least 48" of clear travel space around the obstruction.
9. Sidewalk running grade shall not exceed 5% unless the sidewalk is contained in the R-O-W and then cannot exceed the general grade established for the adjacent street.

General Notes:

10. Any deviation from the standard curb-ramp plans shall be approved by the City Engineer or his designee on a case by case basis.
11. The standard curb-ramp drawings supersede all previous drawings and shall be a part of the new curb ramp standard drawings.
12. All alternate ramps shall be approved by the City Engineer or his designee prior to construction.
13. Seal all sawed joints on sidewalks, landings and ramps. Width of expansion joint shall be 1/2"

Pedestrian Signals Notes:

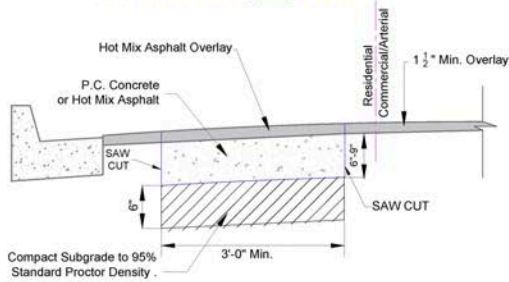
14. Push button must be located adjacent to and accessible from a landing.
15. A clear space of 30" x 48" minimum dimension must be next to the push button.
16. Maximum reach to a push button can not exceed 10".

Curb Ramp Notes:

17. A curb ramp is defined as the entire concrete surface which includes the ramp and flared sides. The minimum 4' wide center portion, including the Detectable Warning Surface, shall have a sloped plane of 8.33% (1:12) maximum, and cross slope, not to exceed 2%. The "flared side" of the ramp shall lie on a slope of 10% (1:10) maximum measured along the curb. The curb ramp shall have a surface tolerance of 1/4" per 10 foot straight edge maximum.
18. The ramp center line and path of travel should be parallel to the sidewalk whenever possible. The full width of the ramp shall lie within the crosswalk area. It is desirable that the location of the ramp be as close as possible to the center of the crosswalk.
19. Curb Ramps shall not exceed 15' in length unless otherwise directed by the City Engineer.
20. Existing utility boxes and covers shall be adjusted flush with the curb ramp surface and shall not straddle any change in plane or material. Existing utility box frames and covers shall have matching surface finish on the entire frame and cover. New utility boxes shall not be placed within the accessible pathway.
21. The surface of the curb ramp and Detectable Warning Surface material shall be stable, firm and slip resistant. The concrete curb ramp surface shall be medium broom finished transverse to the axis of the ramp and shall be slightly rougher than the finish of the adjacent sidewalk surface.
22. A level landing 5'-0" deep, with a 2% maximum slope in each direction shall be provided at the upper end of each curb ramp to allow safe egress from the ramp surfaces. The width of the level landing shall be at least as wide as the width of the ramp. A clear space of a minimum of 30" wide x 48" deep shall be provided at pedestrian push buttons at signalized crossings. This space may be contained in the landing.
23. Existing vertical utility poles or street light poles may be incorporated into the flared sides, if necessary. The vertical obstruction shall be a minimum of 6' away from edge of the ramp. Pedestrian crosswalks push button poles, fire department call boxes and other poles with activated devices, may not be placed in the curb-ramp at any time. No new vertical obstructions may be located in the curb ramp or the accessible pathway.
24. Ramp opening shall be the same width as the sidewalk up to 6'-0" wide.
25. Curb Ramp shall be constructed with 8" thick concrete at collector and arterial streets; and with 6" thick concrete at residential streets. All on top of 2" of 1 1/2" crusher run, 3/4" rock screenings, 1 1/2" recycled concrete or approved equal. The 6" thick concrete will extend the maximum length of 8' from the face of curb and the 8" thick concrete will extend the maximum length of 8' from the face of curb. The remainder of the ramp will be constructed of 4" thick concrete and paid as sidewalk. All landings and incidental connections will be paid as sidewalk and will be constructed of 4" thick concrete. A 6" concrete curb will be constructed on each side of the ramp where 1:10 concrete slopes are not used.
26. For new construction all Detectable Warning Surfaces are to be set in concrete. Surface applied domes require special written approval by the City Engineer.
27. Curb ramp pay items shall only be used at street intersections, signalized driveways or alleys with tactile domes.
28. Where feasible, ramps shall align in such a way that the pedestrian travel path shall provide a direct path to corresponding ramp. Ramps that require pedestrians to change direction of travel in the street or driveway shall require City Engineer approval.
29. Where a ramp ties into an existing curb and gutter, the entire curb and gutter shall be removed and replaced extending 2 feet past the width of the ramp on each side.

PAVEMENT REPAIR DETAILS

HOT MIX ASPHALT (HMA) OVERLAY

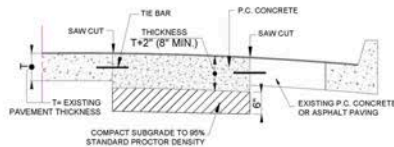


NOTES:

- Pavement repairs includes removal of Asphalt or P.C. Concrete Pavement depending on existing conditions, saw cut should be included in price.
- Hot Mix Asphalt shall meet density-specification

PAVEMENT REPAIR DETAILS

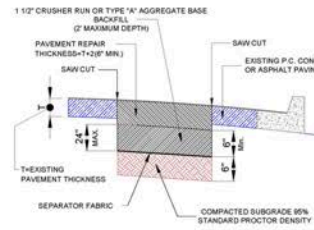
P.C. CONCRETE PAVING



NOTES:

- Remove existing concrete paving, to be included in price. Partial panel replacement not permitted, saw cut should be included in price.
- When utility trench is the reason for pavement repair, see typical permanent repair section for details on reinforcing steel, backfill material, and trench width, etc.
- Tie bars to be 1" dia, deformed bars (11" dia. for pavement 8" thick and greater) 18" length and spaced at 18" centers. Anchored with epoxy.
- For Transverse joints, use smooth bars with same dimensions as in note #3. Only One end anchored with epoxy.
- Concrete panel to be double sawed 6" apart to protect the pavement edge during excavation.
- Use black colored concrete when repairing asphalt paving. Use Soloman Color's Color #920 and apply at 25 lbs per 2 CY of concrete.

EXISTING ASPHALT OR CONCRETE BASE REPAIR DETAIL

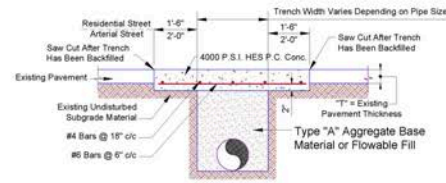


NOTES:

- Excavation and aggregate base backfill begins at the bottom of the existing pavement and extends downward to a maximum depth of 2 feet.
- The contractor shall not begin the backfill operation until measurement of the excavation has been made and agreed upon by the engineer and the contractor.
- Backfill material will be placed in lifts not to exceed six inches (6") and compacted to 95% Standard Proctor Density.
- Subgrade compaction saw cut and separator fabric will not be paid for separately. Include cost in price bid for other items of work.
- Use black colored concrete when repairing asphalt paving. Use Soloman Color's Color #920 and apply at 25 lbs per 2 CY of concrete.

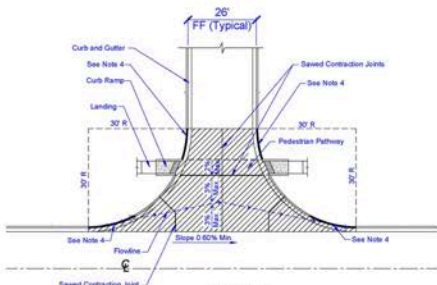
UTILITY PAVEMENT CUT AND PERMANENT TRENCH REPAIR

TYPICAL REPAIR SECTION FOR CITY STREET



NOTES:

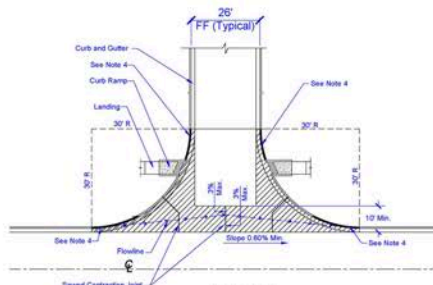
- Aggregate base to be compacted 95% Standard Proctor Density in 6" lifts.
- The City Engineer may require full P.C. Concrete panel replacement depending on street location and functional classification.
- Thickness of repair shall be "T" + 2", but shall not be less than 10 inches.
- The cost of saw cut, removal, rebar and placement of compacted back fill to be included in price bid per square yard of repair unless otherwise stated in the contract documents.
- Use black colored concrete when repairing asphalt paving. Use Soloman Color's Color #920 and apply at 25 lbs per 2 CY of concrete.



**OPTION 1
CONCRETE VALLEY GUTTER**
FOR ASPHALT PAVED STREETS

NOTES:

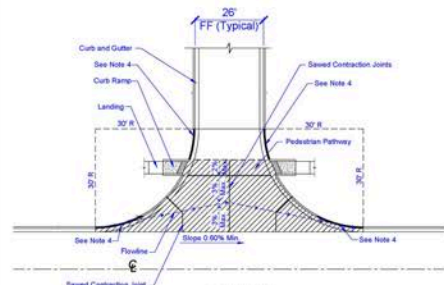
- Use Class AA 4000 psi (HES) Concrete, 8" Thick for Retrofit. Use Class A 3000 psi, 8" Thick for New Construction.
- Rebar #4 @ 12" CC.
- A=122.16 SY (Typical) Not Including Curb and Gutter.
- Remove and Replace 6" to 8" of Existing Curb and Gutter. Replace entire Curb and Gutter Radius if in Poor Condition.



**OPTION 2
CONCRETE VALLEY GUTTER**
FOR ASPHALT PAVED STREETS

NOTES:

- Use Class AA 4000 psi (HES) Concrete, 8" Thick for Retrofit. Use Class A 3000 psi, 8" Thick for New Construction.
- Rebar #4 @ 12" CC.
- A=73.27 SY (Typical) Not Including Curb and Gutter.
- Remove and Replace 6" to 8" of Existing Curb and Gutter. Replace entire Curb and Gutter Radius if in Poor Condition.

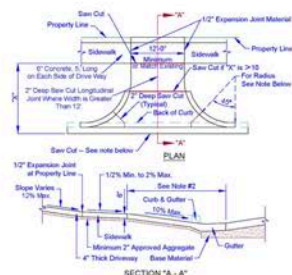


**OPTION 3
CONCRETE VALLEY GUTTER**
FOR ASPHALT PAVED STREETS

NOTES:

- Use Class AA 4000 psi (HES) Concrete, 8" Thick for Retrofit. Use Class A 3000 psi, 8" Thick for New Construction.
- Rebar #4 @ 12" CC.
- A=91.80 SY (Typical) Not Including Curb and Gutter.
- Remove and Replace 6" to 8" of Existing Curb and Gutter. Replace entire Curb and Gutter Radius if in Poor Condition.

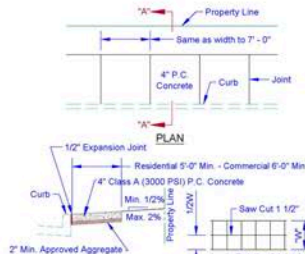
DRIVEWAY DETAIL



NOTES:

- A 5'-0" minimum radius is approved for one & two family residences not abutting a limited access or major street. All other Driveways will have a 10'-0" minimum radius.
- The Driveway Contractor shall saw cut & remove the complete Curb and Gutter section. Saw cuts shall be 2" or 1/3 the depth of the gutter, whichever is greater, include the top & face of curb as well as the gutter, be made prior to the removal of concrete, and be full depth for removal and 2" or 1/3 the depth for curb control, whichever is greater.
- If a gutter holds water prior to any construction by Driveway Contractor, he/she must notify the City Engineer of the situation before doing any work. The completed driveway work will not be accepted if the gutter holds water due to poor construction by the Contractor.
- It is recognized that the driveway detail will not cover every possible situation encountered in construction. Additional expansion joints will be required as needed.
- Clean and seal all joints and saw cuts in accordance with standard specifications.
- Longitudinal and Transverse joints, required for drives 12' wide & over. Saw cut 2" or 1/3 depth and fill with silicone sealant.
- Do not turn radius in front of adjacent property without written permission from adjacent property owner.
- When connecting a new sidewalk to an existing deep driveway, which cannot be made ADA compliant, the transition panel on each side of the driveway shall not be more than 2' in length, unless approved by the engineer.
- For a residential or commercial structure located below street level, the high point of the sidewalk where it crosses the driveway shall be at least 6" above the street gutter elevation.

DETAILS FOR SIDEWALK LOCATED AT CURB



NOTES:

- 1/2" x 4" premolded expansion material around Power Poles or other structures in walk, with at least 36" of clear travel space.
- Expansion joints maximum distance = 100'; use 1/2" x 4" premolded expansion material.
- Transverse contraction joints maximum distance = 5'; saw cut or Tool 1 1/2" deep.
- Saw cut joints within 24 hours or 12 hours if temperature is above 85°F.
- Use 1/2" x 4" premolded expansion material around Power Poles or other structures in walk, with at least 36" of clear travel space.
- Medium broom finish (transverse).
- Use edger tool on all edges.

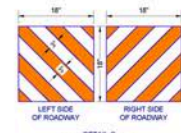
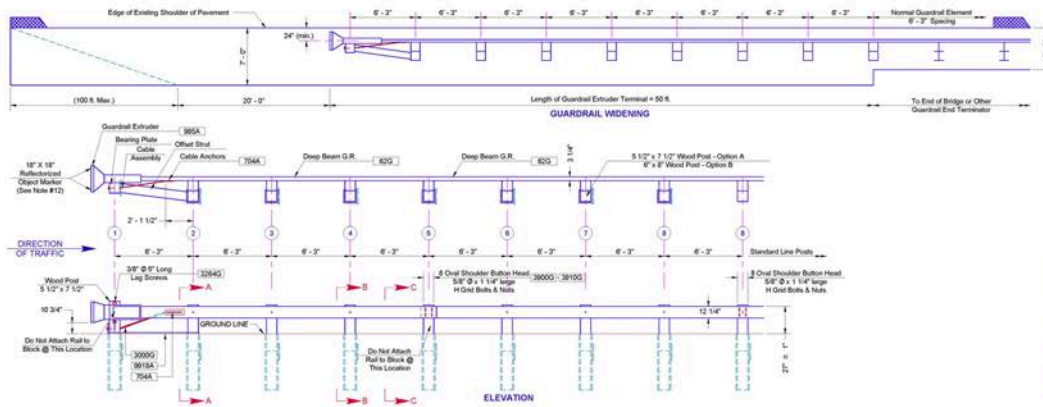
DETAILS FOR SIDEWALK LOCATED AWAY FROM CURB



NOTES:

- 1/2" x 4" premolded expansion material around Power Poles or other structures in walk, with at least 36" of clear travel space.
- Expansion joints maximum distance = 100'; use 1/2" x 4" premolded expansion material.
- Transverse contraction joints maximum distance = 5'; saw cut or Tool 1 1/2" deep.
- Saw cut joints within 24 hours or 12 hours if temperature is above 85°F.
- Medium broom finish (transverse).
- Use edger tool on all edges.





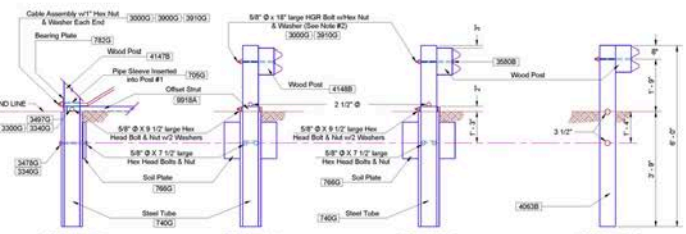
- DETAIL C**
REFLECTIVE MARKER
1. Reflective marker should be attached to the 18" x 18" end of the G. E. T. post to installation.
 2. Attachment surface should be thoroughly cleaned and dry before attaching marker.
 3. Attachment adhesive should be free of air bubbles with all edges free of air bubbles with all edges firmly bonded.

GENERAL NOTES

1. All construction and material requirements shall be in accordance with the Oklahoma Department of Transportation 1980 Standard Specifications and applicable Special provisions covering Guardrail Extruder Terminal.
2. All bolts, nuts, cable anchors, groundline cables and bearing plates shall be galvanized in accordance with section 722 of the Standard Specifications for Highway Construction, 1988 edition.
3. Guardrail components shall meet the applicable standards of "A Guide to Standardized Highway Rail Hardware", prepared and approved by the AASHTO/ASTRA/ACC Joint Cooperative Committee, Technical Bulletin Number 288.
4. The steel tubes shall not protrude more than 4" above the ground (measured along a 5 foot chord). The grading may be necessary to meet this requirement.
5. The steel tubes may be driven with an approved driving head. They shall not be driven with the road post in the hole. If the steel tubes are placed in drilled holes, the backfill material must be compacted to insure no settlement of hole.
6. When rock excavation is encountered, a 12" diameter post hole, 20 inches deep, may be used if approved by the Engineer. Gravel material will be placed in the bottom of the hole approximately 2 1/2" deep to provide drainage. The steel tube sleeves may be field cut to 20 inches in length, placed in the hole and backfilled with adequately compacted material excavated from the hole.
7. The breakaway cable assembly must be tested. A locking device, (no grips or channel lock pins) should be used to prevent the cable from loading when lightning rods.
8. The wood blocks shall be "hot rolled" into the rectangular wood posts to prevent them from turning when the wood shakes.
9. For each installation, the rail tubes and posts shall be installed at the proper ground elevation behind the curb. The posts will then require new holes to be field drilled to accommodate the rail to post connection. The posts shall be installed at the proper height of the rail above the gutter pan. The recess post length above the rail will be removed if directed by the Engineer.
10. When the guardrail extruder terminal is installed as the end treatment for the MDSF installation, the MDSF will be tapered at a rate of 50 to 1, over the 50 foot GET system, to prevent the extruder head from encroaching on the shoulder. The taper may be decreased or eliminated for specific installations if directed by the Engineer. A 25 to 1 taper rate will be used at each section, beginning at post number one (commenced for each section no greater than 4 inches in height). See Details A & B.
11. Extruder type terminals shall be installed behind the curb. The posts shall be installed at the proper ground elevation behind the curb. The posts will then require new holes to be field drilled to accommodate the rail to post connection. The posts shall be installed at the proper height of the rail above the gutter pan. The recess post length above the rail will be removed if directed by the Engineer.
12. Extruder approach and (18" x 18" face) shall be covered by a Type I Object Marker of simulated Type III Object Marker (cable reflector sheathing) with used to be located in the price of extruder terminal. See Detail C.
13. The 50 inch flat washer is used under the rail behind the post only.
14. No weather is used at the rail.
15. The breakaway posts of lengths #5, 6, 7 & 8 may be as shown in Option B without foundation tubes. Posts at locations #1, 2, 3 & 4 must use foundation tubes.
16. Wood posts are required with the guardrail extruder terminal (GET).
17. See additional information on the widening typical section.
18. See Standard GRAU/LATEST REVISION.

G. E. T. BILL OF MATERIALS

Code #	Qty.	DESCRIPTION
620	1	1 Deep Beam Guardrail (12 Ga.)
620	1	2 Deep Beam Guardrail (12 Ga.)
7400	8	4 Steel Tube - 6" x 8" x 5/8" x 3/16"
7400	8	4 Soil Plate - 18" x 24" x 1/4"
41478	8	4 Wood Posts - 5 1/2" x 7 1/2" x 40"
41488	7	7 Wood Posts - 5 1/2" x 7 1/2" x 14"
7400	1	1 Pipe Sleeve - 2" standard pipe x 5 1/2"
7420	1	1 Bearing Plate - 8" x 8" x 5/8"
7544	1	1 Cable Anchor
20000	1	1 Cable Assembly
92184	1	1 Other Detail
9654	1	1 Guardrail Extruder
40638	4	4 Wood Posts - 6" x 8" x 72"
Code #	Qty.	HARDWARE
34780	16	8 5/8" x 7 1/2" Hex Head Bolt (Soil Plates)
34870	8	4 5/8" x 9 1/2" Hex Head Bolt (Top of tubes)
33000	11	11 5/8" Washer G. end of Tubes 1 & 2 (7 Posts)
33600	7	7 5/8" x 18" H. G. R. Post (Box Posts 2 thru 8)
33600	16	16 5/8" x 1 1/4" H. G. R. Spline Bolt
33400	47	35 5/8" H.G.R. Nut (SPL - 16 Tubes - 12, GR-16)
33440	2	2 3/8" x 9" Lag Screws
33100	2	2 1" Hex Nut (Anchor Cable)
38000	2	2 1" Washer (Anchor Cable)
31178	1	1 Reflective Object Marker (18" x 18")



BASIS OF PAYMENT

ITEM #	ITEM	UNIT
623.06-05	G. E. T. GUARDRAIL END SECTN	EACH

The City of Oklahoma City
Public Works Department
Engineering Division

DATE: 02-07-13
VSC
02-07-13

GUARDRAIL EXTRUDER TERMINAL

Drawing Number
D-600

TYPICAL REPAIR SECTION FOR CITY STREET



P.C. CONCRETE PAVING

- NOTES:

1. Remove existing concrete paving, to be included in price. Partial panel replacement not permitted, saw cut should be included in price.
2. When utility trench is the reason for pavement repair, see typical permanent repair section for details on reinforcing steel, backfill material. and trench width, etc.
3. Tie bars to be 1" dia. deformed bars (1 1/2" dia. for pavement 8" thick and greater) 18" length and spaced at 18" centers. Anchored with epoxy.
4. For Transverse joints, use smooth bars with same dimensions as in note #3. Only One end anchored with epoxy
5. Concrete panel to be double sawed 6" apart to protect the pavement edge during excavation.
6. Use black colored concrete when repairing asphalt paving. Use Soloman Color's Color #920 and apply at 25 lbs per 2 CY of concrete.